



# **FRAMEWORK AGREEMENT**

**For**

**CONSTRUCTION**



## **TABLE OF CONTENTS**

ARTICLE 1– ORDER OF PRECEDENCE AND DEFINITIONS

ARTICLE 2 - OWNER

ARTICLE 3 - CONTRACTOR

ARTICLE 4 – SPECIFICATIONS AND QUALITY

ARTICLE 5 - INSURANCE

ARTICLE 6 - LEGAL RESPONSIBILITY AND SAFETY

ARTICLE 7 - TIME

ARTICLE 8 - PAYMENTS

ARTICLE 9 - CHANGES IN THE WORK

ARTICLE 10 - MISCELLANEOUS PROVISIONS

ARTICLE 11 - ACCEPTANCE

### **APPENDICES**

APPENDIX A – Owner or Company

APPENDIX B – Scope of Work and Payment Schedule

APPENDIX C - Contract Datasheet

APPENDIX D - Contractor Key Personnel and Subcontractors

APPENDIX E - Notices

APPENDIX F - Form of Invoice

APPENDIX G - Change Order Pricing

APPENDIX H - Change Order Request Form

APPENDIX I - Permits

APPENDIX J - Insurance Requirements

APPENDIX K - Lien and Waiver Release

APPENDIX L - Certificate of Substantial Completion

APPENDIX M - Certificate of Final Completion

APPENDIX N – Contractor Safety Requirements (separate document)

APPENDIX O - Background Check Policy (separate document)

APPENDIX P – AVANGRID Privacy and Data Security Rider

This DESIGN, SUPPLY AND INSTALLATION AGREEMENT (this "Agreement") is made this 12th day of November, 2020 by and between **Avangrid Service Company**, a Delaware corporation, with offices located at One City Center, 5<sup>th</sup> Floor, Portland, Maine 04101 ("Owner" or "Company") and [REDACTED] and covers the Contractor's performance of Work for the Owner, as provided hereunder, including all supplemental addenda hereto and all general and special provisions pertaining to the Work or materials therefore.

AVANGRID, an Affiliate of Owner, has full power to act as an agent for Owner, and for the purposes of this Agreement will act as Owner's representative. For good and valuable consideration, the Parties agree as follows:

### **ARTICLE 1 – ORDER OF PRECEDENCE AND DEFINITIONS**

1.1 This Agreement, its appendices and related purchase order(s) are complementary documents, and what is required by any one document shall be as binding as if required by all such documents. In the event of any inconsistency between the provisions of two or more documents, the order of supremacy (in descending order) shall be as follows:

- The purchase order;
- The Appendix A (Specifications and Schedule); and
- This Agreement and the remaining appendices in the order listed.

In the event of a conflict between a Drawing and another type of Specification, the Specification shall prevail.

1.2 "Affiliate" means with respect to a person or entity, any individual, corporation, partnership, firm, joint venture, association, Joint Stock Company, trust or other unincorporated organization, directly or indirectly controlling, controlled by, or under common control with, such person or entity. The term "control" shall mean the possession, directly or indirectly, of the power to direct the management or policies of a person or an entity. A voting interest of ten percent (10%) or more shall create a rebuttal presumption of control.

1.3 "Agreement Sum" means the total amount payable by the Owner to the Contractor for the performance of the Work under each applicable Purchase Order

1.4 "Agreement Time" means the period of time allotted in this Agreement to achieve Final Completion. The Agreement Time shall end at the Final Completion Date mentioned in Appendix C (Contract Datasheet).

"Drawings" means the drawings specified in Appendix A (Specifications and Schedule), including, but not limited to, final drawings prepared by Contractor which are approved by Owner for use during construction and show the design, location and dimensions of

the Work and include, if applicable, plans, elevations, sections, diagrams and other details as may be necessary or desirable to facilitate the effective, efficient and timely construction and commissioning of the Work.

- 1.5 “Energized” means operational, on-line and connected to the transmission system.
- 1.6 “Final Completion” means Substantial Completion has occurred, the Contractor has satisfactorily completed all of the items on the “punch-list”, the In-Service Date has been achieved, Owner has signed Appendix M (Certificate of Final Completion) and final payment is now due and owing.
- 1.7 “In-Service Date” means the date that Substantial Completion is achieved. Provided however, if the In-Service Date has not been achieved within sixty (60) days of Contractor’s Notice of Substantial Completion for reasons not attributable to Contractor, the In-Service Date shall be deemed to have been achieved upon expiration of that period.
- 1.8 “Project” means Owner’s as identified in the applicable Purchase Order in accordance to Schedule B of this Electric Construction Framework Agreement
- 1.9 “Schedule” means the schedule included in the applicable Purchase Order.
- 1.10 “Site” means the lands and improvements where the Project is located and the Work is to be installed, which lands and improvements are described in the Specifications.
- 1.11 “Site Access Date” means the site access date specified in the applicable Purchase Order or in any notice to Contractor of a revision of the Site Access Date.
- 1.12 “Specifications” means scope of work document(s), technical specifications, Drawings and performance requirements, as listed in Appendix A (Specifications and Schedule) or as incorporated (by reference or otherwise) into this Agreement.
- 1.13 “Subcontractor” means the Contractor’s subcontractors, and such subcontractors’ subcontractors to include subcontractors of all tiers.
- 1.14 “Substantial Completion” means delivery by the Contractor of factory test results and completion of site inspection, testing and commissioning and certification that the Work is functionally complete.
- 1.15 “Substantial Completion Date” means the date set forth in Appendix C (Contract Datasheet), which is the date by which Substantial Completion must be achieved.
- 1.16 “Warranty Period” has the meaning set forth in Appendix C (Contract Datasheet).

- 1.17 “Work” or “Services” or “Scope of Work” means all design and installation services, labor, tools, equipment and material:
- a) to be provided by Contractor; and
  - b) under the financial and legal responsibility of Contractor.

## **ARTICLE 2 - OWNER**

The Owner is the person or organization identified as such in this Agreement. The term Owner means the Owner or an authorized representative of the Owner.

- 2.1 Services Required of the Owner. Unless otherwise specified, the Owner will establish base lines necessary for the location of the principal component parts of the Work together with a suitable number of benchmarks relating to the Work.

The Owner shall secure and pay for easements for permanent structures or permanent changes in existing facilities.

- 2.2 Owner's Right to Correct Deficiencies. Subject to the Contractor’s warranty obligations set forth in Section 4.10, upon failure to perform the Work in accordance with this Agreement and after seven days' written notice to the Contractor during which period Contractor has failed to correct the failure, provided that if such failure is not capable of correction within such seven day period, Contractor has failed to submit a plan of correction reasonably acceptable to Owner within such period and diligently thereafter performed such plan to correction, the Owner may, without prejudice to any other remedy it may have, correct such deficiencies in Work intended to become a permanent part of the Project. In such case, an appropriate change order shall be issued deducting from the payments then or thereafter due the Contractor the cost of correcting such deficiencies. If the payments then or thereafter due the Contractor are not sufficient to cover such amount, the Contractor shall pay the difference to the Owner.

If, within the Warranty Period any of the Work is found to be defective or not in accordance with this Agreement, the Contractor shall correct it promptly according to its obligations under Section 4.10 after receipt of a written notice from the Owner to do so. The Owner shall give such notice promptly after discovery of the condition.

All such defective or non-conforming Work shall be removed from the Site if necessary and the Work shall be corrected to comply with this Agreement without cost to the Owner. The Contractor shall bear the cost of making good all work of separate contractors destroyed or damaged by such removal or correction.

If the Contractor does not remove such defective or nonconforming Work within a reasonable time fixed by written notice from the Owner, the Owner may remove it and may store the materials or equipment at the expense of the Contractor. If the Contractor does not pay the cost of such removal and storage within ten days thereafter, the Owner

may upon ten additional days written notice sell such materials or equipment at auction or at private sale and shall account for the net proceeds thereof, after deducting all the costs that should have been borne by the Contractor including compensation for additional architectural and/or engineering services. If such proceeds of sale do not cover all costs which the Contractor should have borne, the difference shall be charged to the Contractor and an appropriate change order shall be issued. If the payments then or thereafter due the Contractor are not sufficient to cover such amount, the Contractor shall pay the difference to the Owner.

2.3 Owner's Termination Rights. The Owner shall have the right to terminate this Agreement immediately upon written notice to the Contractor, if the Contractor:

- a) is adjudged as bankrupt, becomes insolvent, admits it cannot pay its debts or assigns its assets for the benefit of its creditors;
- b) commits a material breach of a provision of this Agreement or persistently disregards laws, ordinances, rules, regulations or orders of any public authority having jurisdiction; or
- c) fails to provide a qualified superintendent, enough properly skilled workmen or subcontractors, or proper materials, or fails to make prompt payment therefor.

In the event of termination of this Agreement by the Owner because of Contractor's default or breach wherein Contractor has failed to correct or submit a plan to correct such default or breach within the period specified in Section 2.2 (Owner's Right to Correct Deficiencies), the Owner may take possession of the Site and of all materials, equipment, tools, construction equipment and machinery thereon owned by the Contractor and may finish the Work by whatever method and means Owner may select subject to Owner's obligation to reasonably mitigate. In such case, the Contractor shall not be entitled to receive any further payment that may be due as provided by this Agreement, until the Work is finished.

If the unpaid balance of this Agreement Sum shall exceed the expense of finishing the Work, including compensation for additional managerial and administrative services, such excess shall be paid to the Contractor. If such expense shall exceed such unpaid balance, the Contractor shall pay the difference to the Owner.

For Owner's convenience, Owner may terminate this Agreement in whole or in part by giving the Contractor twenty-four (24) hours written notice. In such event, Owner shall make payment to the Contractor for all costs incurred prior to such termination reasonably allocable to the Work performed, under recognized accounting practices. This provision shall not be deemed to limit or otherwise affect the Owner's right to terminate this Agreement for breach or default by the Contractor.

- 2.4 Owner's Right to Suspend Work. The Owner may at any time suspend the Work or any part thereof, immediately and verbally for reasons of safety, or by giving reasonable notice to the Contractor in writing. The Work shall be resumed by the Contractor within ten (10) days after the date fixed in the written notice from the Owner to the Contractor to do so. The Owner shall reimburse the Contractor for reasonable expenses directly incurred by the Contractor in connection with the Work under this Agreement as a result of such suspension.

When the whole or any portion of the Work is suspended for any reason, the Contractor shall properly cover, secure, and protect or cause to be so protected, such Work as may be liable to sustain injury from any cause.

- 2.5 Owner's Right To Inspect Work. Except as may be otherwise provided herein, all Work furnished by the Contractor and all places where construction is carried on will be subject to inspection, examination and testing by the Owner at all times during the construction. The Owner has the right to reject defective Work including defective material and workmanship furnished by the Contractor, and require its correction subject to Contractor's warranty obligations set forth in Section 4.10. Rejected Work shall be corrected to conform to this Agreement without charge therefor. The Contractor shall promptly segregate and remove all rejected material from the Site.

The Contractor shall furnish promptly without additional charge, all reasonable facilities, labor and materials necessary for the safe and convenient inspection that may be required by the Owner. All inspection by the Owner will be performed in such manner as will not unnecessarily delay the Work.

Should it be considered necessary or advisable by the Owner at any time before Substantial Completion of the entire Work to make an examination of the Work already completed, by removing or tearing out same, the Contractor shall on request furnish all necessary facilities, labor, and materials to perform such examination. If the Work subject to such examination is found to be defective or non-conforming in any material respect, due to the fault of the Contractor or its Subcontractors, such uncovering or destruction and reconstruction shall be at the expense of the Contractor. If, however, such Work exposed and examined is found to be satisfactory, the Owner will pay the Contractor the cost of such uncovering or destruction and reconstruction.

- 2.6 Owner's Audit Rights. Owner reserves the right and Contractor shall allow Owner to audit, or cause to have audited, any and all items related to aspects of this Agreement to assure Contractor's compliance therewith. These items shall include, but not be limited to, property, books, records, and computerized data files. This provision shall remain in effect for two (2) years following final payment for the Work described in this Agreement. This provision does not apply to the calculations used to determine firm lump sum prices for Work performed under this Agreement except to the extent that knowledge of the amount of taxable portions of Contractor's invoicing is necessary.



### **ARTICLE 3 - CONTRACTOR**

The Contractor is the person or organization identified as such in this Agreement. The term "Contractor" means the Contractor or an authorized representative of Contractor.

- 3.1 **Review of Agreement.** The Contractor shall carefully study and compare the provisions of this Agreement and shall at once report to the Owner any error, inconsistency or omission Contractor may discover. The Contractor shall not be liable to the Owner for any damage resulting from any such errors, inconsistencies or omissions which are first reported to Owner. The Contractor shall do no work that is not in accordance with the Drawings or Specifications, as such may be modified or amended in accordance with the terms of this Agreement.
- 3.2 **Supervision.** All Work shall be done under the direct supervision of the Contractor. The Contractor shall be responsible for construction means, methods, techniques, procedures, and safety, and for coordinating all portions of the Work under this Agreement.
- 3.3 **Superintendent.** When required by Owner, the Contractor shall employ a qualified superintendent and any necessary assistants, who are acceptable to the Owner, to be in attendance at the Site during the progress of the Work. The superintendent shall have full authority to act on behalf of the Contractor and all communications given to the superintendent shall be considered as given to the Contractor.

Important communications shall be confirmed in writing. Other communications will be so confirmed upon written request, on a case-by-case basis, by the Owner. It shall be the responsibility of the superintendent to coordinate the Work of all the contractors. The superintendent shall be present on the Site at all times required to perform adequate supervision and coordination.

- 3.4 **Subcontracts.** The Contractor shall submit a list of those Work items which it plans to subcontract and the names of Subcontractors proposed for the Work. Subcontractors may not be changed except at the request or with the approval of the Owner. The Owner shall promptly notify the Contractor in writing if, after due investigation, Owner has reasonable objection to any Contractor on such list and does not accept him. Failure of the Owner to make objection promptly shall constitute acceptance of such Subcontractor.

If the Owner refuses to accept any Contractor on the list submitted by the Contractor, the Contractor shall submit an acceptable substitute and the Agreement Sum shall be increased or decreased by the difference in cost occasioned by such substitute and an appropriate change order shall be issued; however, no increase in the Agreement Sum

shall be allowed for any substitution unless the Contractor has acted promptly and responsively in submitting for acceptance any list or list of names as required.

The Contractor is responsible to the Owner for the acts and deficiencies of its Subcontractors, and any of their employees, to the same extent Contractor is responsible for the acts and deficiencies of Contractor's own employees. The Contractor shall obtain agreement from the Subcontractors that they will comply with the requirements of this Agreement.

Nothing contained in this Agreement shall create any contractual relationship between any Subcontractor and the Owner.

3.5 Contractor's Right To Terminate the Agreement. The Contractor may terminate this Agreement upon thirty (30) days' written notice to the Owner for any of the following reasons:

- a) if an order of any court or other public authority having jurisdiction, or any act of government caused the work to be stopped or suspended for a period of three months through no act or fault of the Contractor or Contractor's employees; or
- b) if the Owner should fail to pay the Contractor any undisputed sum within thirty days from the due date.

3.6 Emergencies. The Contractor shall perform any work and shall furnish and install any materials and equipment necessary during an emergency affecting the safety of persons and property. In all cases, Contractor shall notify the Owner of the emergency as soon as practicable, but shall not wait for instructions before proceeding to properly protect both life and property. Any additional compensation or extension of time claimed by the Contractor on account of emergency work shall be determined as provided in Article 9 for changes in the Work.

3.7 Removal of Equipment. In case of termination of this Agreement for any cause whatsoever, the Contractor, if notified to do so by the Owner, shall promptly remove any part or all of Contractor's equipment and supplies from the property of the Owner, failing which the Owner shall have the right to remove such equipment and supplies at the expense of the Contractor.

3.8 Cooperation. The Contractor shall cooperate with the Owner and any other contractors as directed by the Owner, who will establish the rights of the various interests involved. The Contractor shall properly connect and coordinate its Work with work done by others.

3.9 Use of Premises. The Contractor shall confine its apparatus, the storage of materials and the operations of its workmen to limits indicated by law, ordinances, permits and directions of the Owner and shall not unreasonably encumber the premises with its materials.

- 3.10 Layout of Work. It shall be the responsibility of the Contractor to lay out all structures and facilities and establish all grades for the same.
- 3.11 Information Required of Contractor. The Contractor shall promptly furnish weights, bills of material and such other data as are reasonably required by Owner. When required by Owner, the Contractor shall furnish instructions for the installation, operation, care and maintenance of, and lists of recommended spare parts, for the material or equipment. Unless otherwise specified, four copies of such data shall be furnished.
- 3.12 Independent Contractor. Contractor shall at all times be an independent contractor and be responsible for all acts or omissions of its own employees and Subcontractors. No act or instruction of Owner shall be deemed to be the exercise of supervision or control of performance hereunder.

#### **ARTICLE 4 – SPECIFICATIONS AND QUALITY**

- 4.1 Adequacy. Owner shall be responsible for the adequacy of the design and for the sufficiency of the Drawings and Specifications.
- 4.2 Discrepancies. Any discrepancies, inconsistencies, or ambiguities found between the Drawings and Specifications and the site conditions shall be immediately reported to the Owner's field engineering supervisor, who shall promptly correct such inconsistencies or ambiguities in the Drawings or Specifications in writing. Any Work done after such discovery or after the Contractor should have reasonably made such discovery, unless authorized in writing by Owner, will be done at the Contractor's risk.
- 4.2 Additional Instructions. Owner may issue additional instructions during the progress of the Work by means of Drawings or other media necessary to illustrate changes in the Work.
- 4.3 Copies Furnished to Contractor and Ownership. Unless otherwise provided, the Contractor will be furnished, free of charge, all required copies of Drawings and Specifications necessary for the execution of the Work. All Drawings, Specifications and copies thereof furnished by the Owner are and shall remain the Owner's property. They are not to be used on any other project and sets are to be returned to Owner on request at the completion of the Work. The Contractor shall keep one copy of all Drawings and Specifications regarding the Work in good order, available to the engineer and to engineer's representative.
- 4.4 By executing this Agreement, the Contractor represents that it has visited the Site, familiarized itself with the local conditions under which the Work is to be performed, and correlated its observations with all the requirements of this Agreement. The Owner assumes no responsibility whatsoever for ascertaining for the Contractor any facts which

the Contractor could have ascertained for itself through such investigation; provided however, the Contractor shall be entitled to rely on the accuracy of all Owner-provided data and information.

- 4.5 Materials and Labor. Unless otherwise specifically noted, the Contractor shall provide and pay for all materials, labor, equipment, tools, water, heat, utilities, transportation and other facilities necessary for the proper execution and completion of the Work. The Contractor is responsible for providing workers, who must have sufficient knowledge, skill, and experience to perform properly the work assigned to them. The Contractor shall at all times be responsible for the conduct and discipline of its employees and/or any Contractor or persons employed by Subcontractors.

Owner reserves the right to require the removal of any personnel of the Contractor who in Owner's opinion may be incompetent, careless, not qualified to perform the Work assigned, or who may have engaged in improper conduct.

- 4.6 Substitution. Certain products have been referred to by name and catalog number in this Agreement. No substitutes shall be made without prior written approval of the Owner.

- 4.7 Samples. All samples called for in this Agreement shall be furnished by the Contractor to illustrate materials, equipment or workmanship, and to establish standards by which the Work will be judged.

- 4.8 Shop Drawings. The Contractor shall provide shop drawings, setting schedules and other such drawings as may be necessary for the prosecution of the Work in the shop and in the field as required by the Specifications. Deviations from the Specifications shall be called to the attention of the Owner at the time of first submission of the Drawings. The Owner's approval of any Drawings shall not release the Contractor from responsibility for such deviations.

By approving and submitting shop Drawings, the Contractor thereby represents that Contractor has determined and verified all field measurements, field construction criteria, materials, catalog numbers and similar data, or will do so, and that it has checked and coordinated each shop Drawing with the requirements of the Work.

- 4.9 Cutting and Patching. The Contractor shall do all cutting, fitting or patching of its Work that may be required to make its several parts come together properly and fit it to receive or be received by work of other contractors shown upon the Drawings and Specifications for the completed structure or any other provisions of this Agreement.

Any cost caused by defective or ill-timed work shall be borne by the party responsible therefore. The Contractor shall not endanger any work by cutting, excavating or otherwise altering the Work and shall not cut or alter the work of any other contractor save with the consent of the Owner.

- 4.10 Warranty & Quality. Contractor warrants that the Work shall conform to the Specifications and be free from defect in design, material and workmanship and shall be fit for the purpose for which such Work is specified in this Agreement. Furthermore, Contractor warrants that all material and equipment supplied under this Agreement shall be new, free from defects and of the kind and quality required by the Specifications.
- 4.11 Contractor's warranty in Section 4.10. shall start:
- a) At the In-Service Date; or
  - b) Sixty (60) days following Substantial Completion, whichever occurs first, and end after the period indicated in Appendix C (Contract Datasheet).
- 4.12 If requested by Owner, Contractor shall furnish evidence as to the type and quality of Work supplied.
- 4.13 Contractor warrants that craft, technical, supervisory and professional personnel that are provided are highly qualified to perform the Work assigned and that the Work will be performed in accordance with this Agreement and any applicable law.
- 4.14 Following a written notice by Owner sent before the expiry of any warranties and guarantees under this Agreement, the Contractor shall be responsible for:
- a) the removal and replacement or modification of all Work which, in the opinion of Owner, is defective;
  - b) the restoration of all Work, and the work of others, which is disturbed or damaged in the course of removal and replacement or modification of the defective Work; and
  - c) all risks associated with:
    - i) the removal, including disposal and storage, of the defective Work; and
    - ii) the replacement or modification of the unsatisfactory Work, whether performed by the Contractor or by or on behalf of Owner.

The warranty period for any corrected Work shall be extended for a period not to exceed six (6) months beyond the original warranty period.

- 4.15 Contractor shall have no obligation hereunder with respect to any Work which (i) has been improperly repaired or altered without Contractor's approval; (ii) has been subjected to misuse, negligence or accident by someone other than Contractor or its Subcontractors; or (iii) has been used in a manner contrary to Contractor's instructions without Contractor's approval.
- 4.16 Tests. The Contractor shall ascertain by tests or otherwise as agreed to by Owner and Contractor that the Work is in full accordance with this Agreement. Where practicable, all tests shall be made at the place of manufacture. The Contractor shall provide all facilities, apparatus and labor reasonably required for tests and shall bear all of its own

expense thereof, except salaries and expenses of representatives of the Owner. The Contractor shall give the Owner at least seven (7) business days' advance written notice before shipment. Up to forty-eight (48) hours after receipt of such notice the Owner may require performance of tests to be witnessed by its representatives and/or require the Contractor to furnish three (3) certified copies of all tests for approval, prior to shipment. There shall be no additional charges for such witness tests or certified copies except as set forth in the Contractor's proposal. However, the Owner will bear the expense of tests conducted on its own premises, except salaries and expenses of representatives of the Contractor.

4.17 Packing and Marking. All material and equipment to be furnished by the Contractor shall be packed, crated or otherwise suitably protected to withstand shipment undamaged to the destination. Each package, crate or part shall be marked plainly with the name of the consignee, shipping destination, the Owner's order number, and such other markings as are required. Complete packing lists, one copy with each package and two (2) copies by mail to the Owner at time of shipment, shall be supplied showing contents and identity of each package.

4.19 Work Stoppage. Contractor's personnel shall not honor any union picket lines or strikes nor take part in any work slow down or stoppage nor refuse to report for work, unless such action is protected by any state or federal labor relations law. Notwithstanding the preceding sentence, Contractor shall retain the right to remove its employees from any situation it reasonably determines may pose an unreasonable health or safety risk. Except as set forth above, it shall be the obligation of the Contractor to supply a qualified work force. Owner may terminate this Agreement if Contractor fails to provide a qualified work force within 24 hours of Owner's notification to Contractor that a qualified work force has not been supplied.

## **ARTICLE 5 – INSURANCE**

5.1 Insurance. Supplier shall maintain insurance in accordance with the requirements as set forth in Appendix J. Supplier must maintain applicable insurance. An insurance certificate must be mailed to Customer prior to starting Services.

## **ARTICLE 6 - LEGAL RESPONSIBILITY AND SAFETY**

6.1 Indemnification. Contractor will indemnify, defend at its expense and hold harmless the Owner and its Affiliates, directors, officers, employees, and agents (the "Indemnitee") from and against any and all claims, demands, suits, losses, costs, fees, damages or expenses it may suffer, or for which it may be held liable, whether including, without limitation, reasonable expenses and attorneys fees incurred in the connection therewith, by reason of (A) any patent, trademark, or copyright infringement claim, or any design, device, process or procedure used, installed or provided by the Contractor or its agents or subcontractors under this Agreement; (B) any work-related accident or injury affecting

an employee, agent or subcontractor of the Contractor, arising in connection with work performed under this Agreement; (C) any claim by an agency or instrumentality of the federal, state or any local government, or by an employee, agent or subcontractor of the Contractor alleging that (i) the Indemnatee is required to maintain worker's compensation or unemployment or any other type of insurance upon any employee, agent or subcontractor of the Contractor; (ii) the Indemnatee is liable for tax payments or withholding with respect to any employee, agent or subcontractor of the Contractor; (iii) any employee, agent or subcontractor of the Contractor is entitled to receive employee benefits from the Indemnatee, including, without limitation, vacation, deferred compensation, medical, pension, 401(k) or any other benefit available to the Indemnatee's employees; and (iv) the Indemnatee is liable to any party, for any reason, due to the negligent performance of Services or omissions by an employee, agent or subcontractor of the Contractor; (D) bodily injury, including death, to any person or persons due to the negligent, reckless or willful actions or omissions of the Contractor or its agents or subcontractors; (E) damage to or destruction of any property, including loss of use thereof, due to the negligent, reckless or willful actions or omissions of the Contractor, or its agents or subcontractors. Individual employees, agents and subcontractors of the Contractor who are performing services for the Indemnatee under this Agreement shall be considered to be employees, agents or subcontractors of the Contractor for all purposes under this Agreement, notwithstanding any judicial or administrative determination that such employees, agents or subcontractors of the other party should be regarded as employees under applicable law. All actions of the employees, agents and subcontractors of the Contractor under this Agreement shall be deemed to be actions of the Contractor under these indemnities and this Agreement. In furtherance of the foregoing indemnification and not by way of limitation thereof, the Contractor hereby waives any defense or immunity it might otherwise have under applicable worker's compensation laws or any other statute or judicial decision (including, for Work or services to be conducted in Maine, without limitation, *Diamond International Corp. v Sullivan & Merritt, Inc.* 493 A2d. 1043 (Me 1985)) disallowing or limiting such indemnification, and the Contractor consents to a cause of action for indemnity.

- 6.2 Patents and Royalties. If any design, device, material or process covered by letters patent or copyright is used by the Contractor in Contractor's Work, Contractor shall provide for such use by legal agreement with the owner of the patent or a duly authorized licensee of such owner. The Contractor shall pay all royalties and license fees. The Contractor shall defend, indemnify and hold harmless the Owner from and against all liability, claims, and losses for infringement of any patent rights, except that the Owner shall be responsible for all such loss when a particular design, process or product of a particular manufacturer or manufacturers is specified by the Owner in the Specification, but if the Contractor has reason to believe that the design, process or product specified is an infringement of a patent, Contractor shall be responsible for such loss unless it promptly gives such information to the Owner. Contractor shall have no obligation hereunder and this provision shall not apply when any action is settled or otherwise terminated without the prior written consent of Contractor.

- 6.3 Permits. With the exception of Owner permits identified in Appendix C (Contract Datasheet), all permits, governmental fees and licenses necessary for the proper execution and completion of the Work shall be secured and paid for by the Contractor, unless otherwise specified in the agreement. In the event of a delay in the issuance of any Owner permit identified in Appendix C (Contract Datasheet), for causes not attributable to either of the parties, then it is agreed that, if necessary, a day for day delay in the schedule of performance shall be allowed as caused by such delayed permit issuance, together with an adjustment in the Agreement Sum due to such delay.
- 6.4 Compliance with Laws. The Contractor shall give all notices and comply with all federal, state and local laws, ordinances, rules, regulations and orders bearing on the performance of the Work. If the Contractor discovers that the Agreement (together with its appendices and related purchase order(s)) are at variance therewith in any respect, the Contractor shall promptly notify the Owner in writing, and any necessary changes shall be made by appropriate modification. If any regulation, law, rule, regulation, ordinance, by-law etc., and any derivatives including but not limited to permits, licenses or codes, coming into force after date of Contractor's bid should cause an increase of the Contractor's cost, then, with Owner's prior written consent (which consent shall not be unreasonably withheld) the Agreement Sum shall be adjusted by an amount equivalent to said increase.
- 6.5 Written Notice. Written notice shall be considered as duly served when delivered in person or sent by registered mail to the individual, member of the firm or officer of the corporation for whom it was intended, or to the last known business address.
- 6.6 Safety. See Appendix N (Contractors Safety Requirements) for Owner's Contractors Safety Requirements. Contractor is to follow these requirements at all times while performing work for Owner.

## **ARTICLE 7 - TIME**

- 7.1 Notice To Proceed. Following execution of this Agreement by the Owner and the Contractor, written notice to proceed with the Work shall be given by the Owner to the Contractor. The date to commence Work is the date established in the notice to proceed. If there is no notice to proceed, it shall be the date of this Agreement or such other date as may be specified by the Owner.
- 7.2 Schedule of Completion. Contractor shall perform the Work so that all of the milestone events are completed on or before the dates specified in Appendix A (Specifications and Schedule) for each milestone event.
- 7.3 Site Access Date. Contractor shall not enter or commence any portion of the Work on the Site until Owner notifies Contractor that all necessary clearances for the Work on Site have been obtained, which clearances should be granted on or before the Site Access



Date specified in Appendix C (Contract Datasheet). Owner shall promptly advise Contractor of any change in Site Access Date. Any material postponement of the Site Access Date will be deemed proper cause for equitable adjustment.

7.4 Substantial Completion. After Substantial Completion has been achieved, a Certificate of Substantial Completion shall be issued by the Owner. The Certificate does not relieve the Contractor of its obligation to complete all the Work including punch-list items as required to achieve Final Completion. It entitles the Owner to occupy the Work or designated portions thereof for the use for which it is specified. Title and risk of loss shall pass to Owner when Owner issues a Certificate of Substantial Completion or the Work is Energized, whichever comes first.

7.5 Progress and Completion. It is expressly understood by the Contractor and Owner that time is important in the performance of this Agreement.

The Contractor shall begin the Work on the date of commencement set forth in the written notice to proceed. The Contractor shall carry the Work forward expeditiously with adequate forces and shall complete it in accordance with the Schedule.

7.6 Delay Damages. If the Contractor neglects, fails, or refuses to complete the Work within the time specified for Substantial Completion in this Agreement, then the Contractor does hereby agree to pay to the Owner, as liquidated damages ("Delay Liquidated Damages") and not as a penalty, the sum of one half of one percent (0.5%) of the Agreement Sum per day for each calendar day beyond the Substantial Completion Date in this Agreement until Substantial Completion is achieved.

The said amount is fixed and agreed on by and between the Contractor and the Owner because of the impracticability and extreme difficulty of fixing and ascertaining the true value of the damages which the Owner will sustain by failure of the Contractor to complete the Work on time, such as loss of revenue, service charges, interest charges, delays caused to other construction activities of Owner by failure to perform this Contract, and other damages, some of which are indefinite and not susceptible of easy proof. The Delay Liquidated Damages amount is agreed to be a reasonable estimate of the amount of damages which the Owner will sustain and said amount shall be deducted from any monies due or that may become due to the Contractor. If monies owed to Contractor under this Agreement are insufficient to cover said Delay Liquidated Damages, then the Contractor shall pay the amount of the difference.

7.7 Unforeseen Conditions. In the event unforeseen conditions require an increase in the Owner's cost obligation of fifteen percent (15%) or more of the Agreement Sum, this Agreement will be modified or amended to reflect said increase. In the event it is determined that any change from the description of Work contained in this Agreement is required, written approval must be secured from the Owner prior to the beginning of such work.

Reimbursement for increased work and/or substantial change in the description of Work shall be limited to costs covered by written modification, change order, or extra work order approved by the Owner and subject to Appendix G (Change Order Pricing) and Appendix H (Change Order Request Form).

## **ARTICLE 8 - PAYMENTS**

- 8.1 **Pricing Terms.** The unit pricing and related price terms are as is stated in Appendix B (Agreement Sum and Payment Schedule) and the Purchase Orders issued by Owner under this Agreement contain the total amount payable by the Owner to the Contractor for the performance of the Work under this Agreement except as agreed in writing by Owner pursuant to an approved change order. The pricing terms in Appendix B to this Agreement are fixed. Any work additional to the Work shall be done on a fixed price basis or on a time and materials basis as agreed to in writing by the Owner and Contractor prior to the commencement of such additional work.

Before submitting the first invoice, the Contractor shall submit a complete breakdown of the Agreement Sum pertaining to the applicable Purchase order showing the value assigned to each part of the Work. Upon Owner's approval of the breakdown of the Agreement Sum, it shall be used only as a basis for the Contractor's invoice.

- 8.2 **Payments.** On or before the tenth day of each month, or as otherwise agreed by the parties in writing, the Contractor shall submit to the Owner an itemized invoice showing the percentage and value of the Work completed during the previous month, including materials received and stored on the job Site. Invoices shall be submitted utilizing American Institute of Architects (AIA) forms 702 and 703, as set forth in Appendix F (Form of Invoice) to this Agreement. Each invoice shall be accompanied by the Contractor's waiver and release in the form of Appendix K-1 or Appendix K-2 for final invoice.

Sixty (60) days after acceptance of the invoice, the Owner shall make payment to the Contractor of ninety percent (90%) of the undisputed amount. Payment may be withheld and may be paid directly to third parties in accordance with Section 8.3 if Contractor has failed to comply with its lien obligations under Section 8.5 herein.

Final payment shall be made Sixty (60) days after final acceptance of the Work but in no event later than seventy five (75) days from the In-Service Date unless Owner determines that Contractor has failed to achieve Final Completion during such time period.

The Contractor warrants that title to all Work covered by an invoice, whether incorporated in the Project or not, will pass to the Owner upon the receipt of such payment by the Contractor, free and clear of all liens, claims, security interests or encumbrances, hereinafter referred to in this Article 8 as "liens"; and that subject to

Owner's continued obligation to make payments owed, no Work covered by an invoice will have been acquired by the Contractor, or by any other person performing the Work at the Site or furnishing materials and equipment for the Work, subject to an agreement under which an interest therein or encumbrance thereon is retained by the seller or otherwise imposed by the Contractor, or its Subcontractors or suppliers.

- 8.3 Payments Withheld. The Owner may withhold, or, on account of subsequently discovered evidence, nullify the whole or part of any invoice to such extent as may be necessary to protect itself from loss on account of:
- a) defective Work not remedied;
  - b) third party claims filed or reasonable evidence indicating probable filing of such claims which Contractor has failed to remove within a reasonable period of time after receiving notice of such;
  - c) failure of the Contractor to make payments due to Subcontractors, its suppliers or employees;
  - d) reasonable indication that the Work will not be completed within the Agreement Time;
  - e) prosecution of Work that does not comply with this Agreement;
  - f) failure of the Contractor to submit estimates of partial payments, or lack of accurate supporting data;
  - g) invoicing which is incorrect; or
  - h) breach of any material term or condition of this Agreement.

When the above grounds are removed, or the Contractor provides a bond satisfactory to the Owner which will protect the Owner in the amount withheld, payment shall be made for such amounts withheld.

- 8.4 Payment Disclaimer. In no event shall payment or partial payment by Owner for any material or service rendered by Contractor be construed as Owner's acceptance of that material or service. Such payment by Owner to Contractor in no way releases Contractor from any of its obligations under this Agreement.
- 8.5 Final Completion and Final Payment. When the Contractor determines that the Work is substantially complete in accordance with this Agreement, the Contractor shall, together with Owner, prepare a punch-list of items to be completed or corrected by Contractor. The failure to include any items on such list does not alter the responsibility of the Contractor to complete all Work in accordance with this Agreement. When Contractor achieves Final Completion, upon receipt of written notice that the Work is ready for , final inspection and acceptance, and upon receipt of final invoice, the Owner will promptly make such inspection and, when Owner finds the Work conforming to this Agreement and this Agreement fully performed, Owner will make final payment in accordance with time periods set forth in Section 8.2.

The final payment (including the ten percent (10%) retainage) shall not become due until the Contractor submits to the Owner (i) an Affidavit that all Contractor's payrolls, bills for materials and equipment, and other indebtedness connected with the Work for which the Owner or its property might in any way be responsible, have been paid or otherwise satisfied, and (ii) consent of surety, if any, to final payment, and data establishing payment or satisfaction of all such obligations, such as receipts, releases and waivers of liens arising out of this Agreement, to the extent and in such form as indicated in Section 8.2 and Appendix forms K-1 or K-2, as applicable. If any subcontractor refuses to furnish a release or waiver required by the Owner, the Contractor may furnish a bond satisfactory to the Owner to indemnify him against any such lien. If any such lien remains unsatisfied after all payments are made, the Contractor shall refund to the Owner all moneys that the latter may be compelled to pay in discharging such lien, including all costs and reasonable attorney's fees provided that Contractor has failed to remove any such lien within a reasonable time after being notified of its filing.

If after Substantial Completion of the Work and occurrence of the In-Service Date, Final Completion thereof is materially delayed through no fault of the Contractor, the Owner shall, without terminating this Agreement, make payment of the balance due for that portion of the Work fully completed.

The making of final payment shall constitute a waiver of all claims by the Owner except those arising from:

- 1) outstanding liens;
- 2) faulty, defective, or nonconforming Work;
- 3) failure of the Work to comply with the requirements of this Agreement, or
- 4) terms of any warranties or guarantees required by this Agreement.

The acceptance of final payment shall constitute a waiver of all payment claims by the Contractor except those previously made in writing and still unsettled.

8.6 Financial Security for Performance. As financial security for Contractor's faithful performance of its obligations hereunder, Contractor shall furnish to Owner and keep in force during the term of this Agreement performance and payment bonds guaranteeing that the Contractor will perform its obligations under this Agreement and will pay for all labor and materials furnished for the Work, as well as make any payments required under this Agreement. Such bonds: (i) shall be issued in a form reasonably acceptable to Owner by a surety company licensed to transact business in the State of New York and named on the current list of surety companies acceptable on federal bonds; (ii) shall be submitted to the Owner for approval as to form; (iii) shall name the Owner as obligee; and (d) shall be in an amount equal to at least one hundred percent (100%) of the Agreement Sum (as

the same may be adjusted from time to time pursuant to this Agreement). The Contractor shall deliver the executed, approved bonds to the Owner prior to the commencement of the Work.

If at any time a surety company on any bonds is declared bankrupt, files a voluntary petition for bankruptcy, loses its right to transact business in New York, or is removed from the list of surety companies accepted on federal bonds, the Contractor or Subcontractor shall immediately notify the Owner, and within five (5) days thereafter, substitute an acceptable bond (or bonds) in such form as may be reasonably acceptable to Owner. If a surety company is, in the reasonable opinion of Owner, insolvent, the Contractor or Subcontractor shall within five (5) days after notice from Owner to do so, substitute an acceptable bond (or bonds) in such form as may be reasonably acceptable to Owner. Such replacement surety company and bond shall meet the requirements set forth in this Section 8.6. No further payments from the Owner shall be deemed due and owing nor shall they be made until the replacement surety company has furnished an acceptable bond to the Owner.

## **ARTICLE 9 - CHANGES IN THE WORK**

- 9.1 Change Orders. The Owner reserves the right to order changes in the Work through additions, deletions or other revisions. All such changes in the Work shall be authorized by change order, and shall be executed under the applicable conditions of this Agreement. The Agreement Sum and Agreement Time affected by the change shall be adjusted at the time the change order is executed.

A change order is a written order to the Contractor signed by the Owner, issued after the execution of this Agreement, authorizing a change in the Work and/or an adjustment in the Agreement Sum or Agreement Time. A change order may also be signed by the Contractor if the Contractor agrees to the adjustment in the Agreement Sum or the Agreement Time. The Agreement Sum and the Agreement Time may be changed only by a change order that is signed by both the Owner and the Contractor.

The cost or credit to the Owner resulting from a change in the Work shall be determined in one or more of the following ways:

- a) By mutual acceptance of a lump sum properly itemized;
- b) By unit prices stated in this Agreement or subsequently agreed upon; or
- c) By cost and a mutually acceptable fixed or percentage fee.

If unit prices are stated in Appendix G (Change Order Pricing) or subsequently agreed upon, and if the quantities originally contemplated are so changed in a proposed change order that application of the agreed unit prices to the quantities of work proposed will create a hardship on the Owner or the Contractor, the applicable unit prices shall be equitably adjusted to prevent such hardship. However, the Owner shall have the right to

adjust the quantities provided in this Agreement by as much as 20% without a corresponding change in the unit price for the item(s) involved.

- 9.2 Differing Site Conditions. Should concealed conditions encountered in the performance of the Work below the surface of the ground be at variance with the conditions indicated by this Agreement or should unknown physical conditions below the surface of the ground of an unusual nature differing materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in this Agreement be encountered, the Agreement Sum shall be equitably adjusted by change order upon claim by either party made within twenty (20) days after the first observance of the conditions.
- 9.3 Claims for Additional Costs. If the Contractor claims that additional costs are involved because of (i) any written interpretation of this Agreement issued by the Owner or (ii) any order by the Owner to stop the Work where the Contractor was not at fault, or (iii) any other event, the Contractor shall submit such claim by giving the Owner written notice thereof within seven (7) days after the occurrence of the event or of the time Contractor first becomes aware of the event giving rise to such claim. Such notice shall be in the format displayed in Appendix H (Change Order Request Form) and shall be given by the Contractor before proceeding to execute the Work, except in an emergency endangering life or property. No such claim for additional compensation shall be valid unless so made. Any change in the Agreement Sum resulting from such claim must be authorized by Owner in a change order.

#### **ARTICLE 10 - MISCELLANEOUS PROVISIONS**

- 10.1 Governing Law. This Agreement shall be governed by and construed according to the laws of the State of New York.
- 10.2 Non-Assignment. The Contractor shall not assign this Agreement in whole or in part nor any right hereunder without the prior written consent of Owner. The assignment by the Contractor of this Agreement or any interest therein, or of any money due or to become due by reason of the terms hereof without the prior written consent of Owner shall be void.
- 10.3 Cleaning Up. The Contractor shall at all times keep the premises free from accumulation of waste materials or rubbish caused by its operations. At the completion of the Work the Contractor shall remove from the Owner's property, and from all public and private property, all temporary structures, rubbish and waste materials, tools, construction equipment, machinery, and surplus materials, leaving the Site smooth, clean and true to line and grade.
- 10.4 Interest. Any moneys not paid when due to either party under this Agreement shall bear interest at the legal rate in force in the State of New York.

- 10.5 Arbitration. All claims, disputes and other matters in question arising out of, or relating to, this Agreement or the breach thereof, except for claims which have been waived by the making or acceptance of final payment as provided herein, shall be decided by arbitration in accordance with the Construction Industry Arbitration Rules of the American Arbitration Association then in force unless the parties mutually agree otherwise. Any arbitration proceedings shall take place in the State of New York. This agreement to arbitrate shall be specifically enforceable under the prevailing arbitration law. The award rendered by the arbitrators shall be final, and judgment may be entered upon it in accordance with applicable law in any court having jurisdiction thereof.

The Contractor shall not cause a delay of the Work because of the pendency of arbitration proceedings, but Contractor shall only continue working until the arbitrators shall have an opportunity to determine whether or not the Work shall continue during the pendency of the arbitration proceedings.

The demand for arbitration shall be filed in writing with the adverse party, and with the American Arbitration Association and shall be served by registered mail to the last known address of each. The demand shall be made within a reasonable time after the dispute has arisen. In no case, however, shall the demand be made later than the time of final payment, except as may be otherwise expressly stipulated in this Agreement.

In no case shall punitive damages be awarded to either party in any arbitration resulting from performance under this Agreement. Once the arbitral award is determined and, if applicable, apportioned, the prevailing party shall be entitled to receive reimbursement from the non-prevailing party of any amounts paid including attorney's fees and costs incurred hereunder in connection with the arbitration proceeding.

The award of the arbitrators shall be in writing and acknowledged like a deed to be recorded and a duplicate shall be delivered personally or by registered mail forthwith upon its rendition to each of the parties to the controversy and to the Owner. Judgment may be rendered upon the award by the federal court or the highest state court having jurisdiction to render same.

- 10.6 Separate Agreements. The Owner may award other agreements in connection with other portions of the Project. The Contractor shall cooperate with other contractors with regard to storage of materials and equipment and the execution of their work. It shall be the Contractor's responsibility to inspect all work by other contractors affecting its Work and to report to the Owner any irregularities which will not permit it to complete its Work in a satisfactory manner. The Contractor shall not be responsible for defects of which Contractor could not have known, which develop in the work of others after the Work is completed.

Should the Contractor cause damage to the work or property of any separate contractor on the Project, the Contractor shall, upon due notice, settle with such separate contractor

by agreement or arbitration, if Contractor will so settle. If such separate contractor sues the Owner or initiates an arbitration proceeding on account of any damage alleged to have been so sustained, the Owner shall notify the Contractor who shall defend such proceedings according to Contractor's indemnification obligations.

10.7 Taxes.

1. All payments of sales and use tax on all purchases of tangible personal property for resale to the Owner pursuant to this Agreement shall be made by the Contractor.
2. The Contractor, with respect to its own employees agrees to assume full responsibility for the payment of any federal or state payroll taxes, or contributions, for unemployment insurance, old age pensions, annuities, and the like, in conformity with existing social security laws, and to indemnify the Owner against any liability therefor.

10.8 Delivery of Material and Equipment. When it is the responsibility of the Contractor under this Agreement to unload material and equipment at the Work Site, such unloading shall be done expeditiously. If, in the opinion of the Owner, failure to so unload will interfere with the progress of the Work, the Owner may unload such material and equipment upon approval of the Contractor, at the Contractor's expense and the Contractor shall reimburse the Owner for the actual cost thereof plus overhead.

All loss or damage to the material or equipment to be furnished by the Contractor, shall be remedied by the Contractor up to the point of passage of risk of loss to Owner.

10.9 Wages and Hours. Wage rates established at the beginning of the Work will not be changed without the approval of the Owner. The Work will be performed on a 40-hour week basis insofar as possible and no overtime will be worked without prior approval of the Owner. This Section shall not be applicable in the event that this Agreement provides for a lump-sum or unit price agreement for the Work.

10.10 Work Records. It is understood and agreed that job accounting, job costs keeping and the scheduling and purchasing of materials to be made a part of the Work or incidental thereto will be carried on in accordance with the Owner's instructions. The Owner may have a field auditor representing it in the work office on the work Site for the purpose of facilitating the foregoing and the Contractor will give him such assistance and cooperation as the Owner shall require. All payrolls entering directly into the cost of the Work shall be carried in the name of the Contractor. This Section shall not be applicable to lump-sum or unit price portions of the Work.

10.11 Limitation of Liability. To the fullest extent permitted by law, Company shall not be liable for any special, indirect or consequential damages resulting in any way from the performance of the services hereunder.



- 10.12 Interference with Operations. Interference with normal operation of the Owner's plant or equipment, and that of all contractors or subcontractors on the work Site, shall be avoided wherever possible. The Contractor shall not operate any of the Owner's plant or equipment or control devices, or those of any other contractor or subcontractor on the work Site except at the direction of and under the direct supervision of the Owner.
- 10.13 Setoff. Owner may set off against amounts payable to Contractor under this Agreement any claim or charge it may have against Contractor.
- 10.14 Equal Opportunity. Contractor and each of its subcontractors (if any) shall abide by the requirements of 41 CFR 60-1.4(a), 60-300.5(a) and 60-741.5(a). These regulations prohibit discrimination against qualified individuals based on their status as protected veterans or individuals with disabilities, and prohibit discrimination against all individuals based on their race, color, religion, sex, sexual orientation, gender identity or national origin. Moreover, these regulations require that covered prime contractors and subcontractors take affirmative action to employ and advance in employment individuals without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, disability or veteran status. To the extent, if any, that the provisions of the following executive order and statutes, as amended or supplemented, along with their implementing regulations, apply to the performance of the Services by Supplier, the Supplier will comply with the applicable executive order, statutes and regulations : Section 202 of Executive Order 11246 (41 CFR § § 60, et seq.); Section 402 of the Vietnam Era Veterans Readjustment Act (41 CFR § § 60-250.1, et seq.); Section 503 of the Rehabilitation Act of 1973 (41 CFR § § 741.1, et seq.); and New York Executive Law §§ (5 NYCRR § § 140.1, et seq.). These regulations may require the Supplier to develop an Affirmative Action Compliance Program and file a standard Form 100 Report (EEO-1), or other reports, as prescribed. Contractor shall comply, to the extent applicable, with Executive Order 11246, the Vietnam Era Veterans Readjustment Assistance Act of 1974, the Rehabilitation Act of 1973, as amended, and any regulations, and reporting requirements implemented thereunder. The equal opportunity and affirmative action clauses contained in Title 41, Chapter 60, Sections 1.4, 250.4, and 741.3 of the Regulations of the U.S. Department of Labor, Office of Federal Contract Compliance, and any section or sections superseding or amending the same, are hereby incorporated by reference and made a part hereof as though fully set forth herein.
- 10.15 Entire Agreement. This Agreement constitutes the entire agreement between the parties for the Work to be performed hereunder, and supersedes any prior communications, whether written or oral, between the parties as to such services.

This Agreement may be executed in several counterparts, each of which shall be deemed to be an original, and such counterparts together shall constitute one and the same instrument.

- 10.16 Waiver. No waiver, alteration, consent, amendment or modification of any of the provisions of this Agreement shall be binding unless in writing and signed by a duly authorized representative of the party to be bound.
- 10.17 Rights, Privileges, Remedies. All rights, privileges and remedies afforded each of the parties hereto by this Agreement shall be deemed cumulative and the exercise of any one or more of such rights or remedies shall not be deemed a waiver of any other right, privilege or remedy provided for herein or available at law or in equity.
- 10.18 Failure to Complain. Unless otherwise provided in this Agreement, the failure of any party hereto to complain of any act or omission on the part of the other party hereto, no matter how long the same may continue, shall not be deemed a waiver by said party of any of its rights hereunder. No waiver by any party hereto at any time, express or implied, of any default or of any breach or modification of any provision of this Agreement shall be deemed a waiver of default, breach or modification of any other provision of this Agreement or a consent to any subsequent default, breach or modification.
- 10.19 Severability; Survival. In the event any provision hereof shall be declared invalid, that provision shall be deemed severable from the remaining provisions of this Agreement, which shall remain in full force and effect. All sections or provisions of this Agreement with terms containing obligations or duties which by their nature are to be or may be performed beyond any termination hereof, shall survive the termination of this Agreement without regard to the reason for termination, including, without limitation, provisions relating to indemnification, liability, confidentiality, warranty, etc.
- 10.20 Third Party Benefits. Except as may be specifically provided for herein, no provision of this Agreement is intended or is to be construed to be for the benefit of any third party.
- 10.21 Force Majeure; Impracticability; Excuse. Contractor shall not be charged with any liability for failure to perform when such failure is due to any cause beyond the control and without the fault or negligence of Contractor, except that adverse weather shall not be deemed a cause beyond the control of Contractor for purposes of this Agreement unless the adverse weather is unusually severe; and provided that the Contractor shall have used its reasonable best efforts, and rendered to Owner prompt notice in writing when it appears that such cause will result in non-performance under this Agreement. If any such non-performance shall threaten to impair Owner's ability to operate, Owner shall have the right at its option and without being under any liability to Contractor to cancel by notice in writing to Contractor the portion or portions of the Work so affected and to take such compensatory action as may be necessary. Correspondingly, except for the obligation to make payments owed for Work performed, Owner shall be excused for failure of performance herein due to any cause beyond its control and without its fault or negligence.

Owner and Contractor expressly agree, notwithstanding any provision in this Agreement to the contrary, that: (i) a COVID-19 pandemic exists worldwide as of the execution date

of this Agreement; (ii) the existence of such pandemic, and its effects, now, and for the duration of Contractor's performance under the Agreement, including, without limitation, effects upon pricing, schedule, quantities or specifications, if any, shall not be cause for Contractor to rely upon, invoke, or avail itself to, any rights or remedies under this Agreement, at law, or in equity, for a claim, or an adjustment to the price, schedule, quantities, specifications, or other material terms of this Agreement, including the rights and remedies set forth in the Force Majeure provision of this Agreement; (iii) the material terms of this Agreement, particularly terms relating to price, schedule, quantities, availability and specifications, take into consideration, and fully account for, the existence of such pandemic and its effects, now, and for the duration of Contractor performance under the Agreement; and (iv) such pandemic shall not render Contractor unable to fulfill any of its obligations under the Agreement, and Contractor shall not have any claim, action or cause of action against Owner in connection with such pandemic, including any claim for frustration of purpose, change in circumstances, economic balance or impossibility. This provision shall survive the completion or earlier termination of this Agreement.

- 10.22 Employee Solicitation. Contractor understands and acknowledges that Owner has expended and continues to expend significant time and expense in recruiting and training its employees and that the loss of employees would cause significant and irreparable harm to Owner. To the maximum extent permitted under applicable laws, the Contractor agrees and covenants not to directly or indirectly solicit, hire, or recruit, or attempt to solicit, hire, or recruit any employee who has been employed by the Owner or its Affiliates during the term of this Agreement, with whom Contractor has had contact in connection with the negotiation, execution, or performance of this Agreement (collectively, "Covered Employee"), or induce the termination of employment of any Covered Employee for a period of one (1) year, beginning on the employee's last day of employment with the Owner or one (1) year after the term of this Agreement, whichever is sooner in the applicable case, except with the prior written consent of the Owner, and Contractor shall not induce or attempt to induce, directly or through an agent or third party, any such Covered Employee to leave the employ of the Owner or its Affiliates. As used herein, the term "Affiliate" shall mean any person or entity controlling, controlled by, or under common control with the Owner through majority stock or other ownership interest, direct or indirect. Notwithstanding the foregoing, nothing in this clause shall either (i) limit Contractor from employing any person who contacts Contractor on his or her own initiative and without any solicitation by Contractor specifically directed to such employee, or (ii) directly or indirectly prohibit or restrict either party from soliciting or hiring another party's current or future employees to the extent such prohibition or restriction is prohibited or impermissible under applicable laws.
- 10.23 Ethics. Contractor shall comply with the AVANGRID Suppliers' Code of Ethics ("Suppliers' Code of Ethics") in connection with its performance under this Agreement. The Suppliers' Code of Ethics can be found at the AVANGRID website ([www.avangrid.com](http://www.avangrid.com)).

- 10.24 Performance Monitoring. Company will evaluate Contractors performance by utilizing Contractor corrective action reports and Contractor performance evaluation reports. The Contractor must provide upon request the OSHA incident rate and Experience modification rate for Company's review. The Company's project manager will evaluate the Contractor's performance upon the conclusion of the Work by completing the specified report. The Company will continuously monitor the Contractor's performance. Performance by a Contractor that is less than desirable may potentially eliminate this Contractor from bidding on future projects and/or lump sum projects.
- 10.25 Continuous Improvement. Continuous improvement is the foundation of this Agreement. Contractor warrants that it will pass on to Company in the form of price reductions in material costs and the like. Contractor likewise will use its best efforts to improve continuously its performance in all areas. In particular, Contractor will evaluate opportunities for cost/price reductions on items and services ordered and to be ordered and communicate them promptly to Company. Contractor has specifically identified target cost reductions of 2% beyond the prices shown in Appendix B for the initial Term, and agrees to work diligently with Company personnel toward attainment of this objective. Contractor is expected to advance its economies of production, service, service delivery, material handling and technical prowess at least as fast as other competitors in its industry, and to offer the price and performance benefits of those improvements to Company, as soon as they become available."
- 10.26 No Dispute. Contractor covenants that it is not aware of any pending billing dispute or other contractual dispute (pursuant to current contracts or contracts no longer in effect) or any pending or threatened litigation between Contractor and/or any of Contractor's affiliates and Company and/or and of Company's affiliates.
- 10.27 Contractor Security Requirements. Contractor is to comply with Company's Contractor Security Requirements in its performance of its Work for Company under this agreement.

Company Information:

(1) The term "Company Information" means all information, in any form: (i) furnished or made available directly or indirectly to Contractor by Company or its Affiliates, or otherwise obtained by Contractor from Company or its Affiliates, or (ii) obtained from Company or Company's Affiliates in connection with the performance of the Services.

(2) Company Information shall be and remain the property of Company or its Affiliate(s), as appropriate. Contractor shall not possess or assert any lien or other right against or to Company Information. No Company Information, or any part thereof, shall be sold, assigned, leased, or otherwise disposed of or to third parties by the Contractor or commercially exploited by or on behalf of Contractor, its employees, or agents.

(3) Upon Company's request, the termination or expiration of this Agreement for any reason (including termination for cause) or, with respect to any particular Company Information, on such earlier date that the same shall be no longer required by Contractor in order to render the Services, Contractor shall promptly return to Company such Company Information (including copies thereof) in a form reasonably requested by Company or, if Company so elects, shall destroy such Company Information.

(4) Contractor shall not use Company Information for any purpose other than to render the Services.

(5) Contractor shall establish and maintain safeguards against the destruction, loss, alteration, or unauthorized use of Company Information which are equivalent to those "best practices" employed within the Contractor's industry.

(6) Contractor shall be familiar with and comply with the requirements of the NERC CIP- 004 for projects at NYSEG and RGE bulk electric substations (>230Kv). The specific CIP Standard follows:

CIP-004 Excerpt:

R3. Personnel Risk Assessment --The Contractor shall have a documented personnel risk assessment program, in accordance with federal, state, provincial, and local laws, and subject to existing collective bargaining unit agreements, for personnel having authorized cyber or authorized unescorted physical access. A personnel risk assessment shall be conducted pursuant to that program prior to such personnel being granted such access except in specified circumstances such as an emergency. The personnel risk assessment program shall at a minimum include:

- i. R3.1. The Contractor shall ensure that each assessment conducted include, at least, identity verification (e.g., Social Security Number verification in the U.S.) and seven-year criminal check. The Contractor may conduct more detailed reviews, as permitted by law and subject to existing collective bargaining unit agreements, depending upon the criticality of the position.
- ii. R3.2. The Contractor shall update each personnel risk assessment at least every seven years after the initial personnel risk assessment or for cause.
- iii. R3.3. The Contractor shall document the results of personnel risk assessments of its personnel having authorized cyber or authorized unescorted physical access to critical cyber assets, and that personnel risk assessments of contractor and service vendor personnel with such access are conducted pursuant to Standard CIP-004.

10.28 Publicity. In no event shall Owner's or its Affiliates' names and/or logo or the name and/or logo of it's parent company be used (whether such use be written or verbal),

duplicated, or reproduced by any means whatsoever without the prior written permission of the Owner.

All inquiries by any governmental, business, or other entity, including media, regarding any Work performed or to be performed by Contractor for Owner shall be directed by Contractor to Owner for response.

- 10.29 Utilization of Small Business Concerns. Supplier and subcontractors of all tiers must comply with section 52.219-8 of the Federal Acquisition Regulation. This policy requires that small business concerns, veteran-owned small business concerns, service-disabled veteran-owned small business concerns, HUBZone small business concerns, small disadvantaged business concerns, women-owned small business, Alaskan Native Corporation, and Indian tribe concerns shall have the maximum practicable opportunity to participate in the performance of Services.
- 10.30 Small Business Subcontracting Plan. Some or all of the Goods and Services provided hereunder may be used in a contract with the federal government and, therefore, may be subject to the requirements of FAR section 52.219-9. If applicable, each Supplier (except small business concerns) whose contract is expected to exceed \$650,000 (\$1,500,000 for construction) and has subcontracting possibilities is required to submit an acceptable subcontracting plan to the Customer. The plan shall include spending goals with businesses that are defined by the U.S. Small Business Administration as small, women-owned small, veteran-owned small, service-disabled veteran-owned small, HUBZone, small disadvantaged (SDB), Alaskan Native Corporations, and Indian tribes. If the Supplier fails to submit a plan within the time limit prescribed by the Customer, Customer may terminate this Agreement.

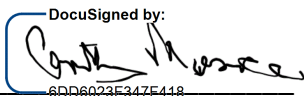
The Supplier assures that the clause entitled "Small Business Subcontracting Plan" will be included in all subcontracts, that offer further subcontracting opportunities, and all subcontractors (except small business concerns) who receive subcontracts in excess of \$650,000 (\$1,500,000 for construction) will be required to adopt a plan similar to this plan.

**ARTICLE 11 – ACCEPTANCE**

This Agreement is accepted by the authorized representatives of the Owner and Contractor:

**OWNER**

Avangrid Service Company

DocuSigned by:  
  
6DD6023F347E418...



Signature

Anthony Marone

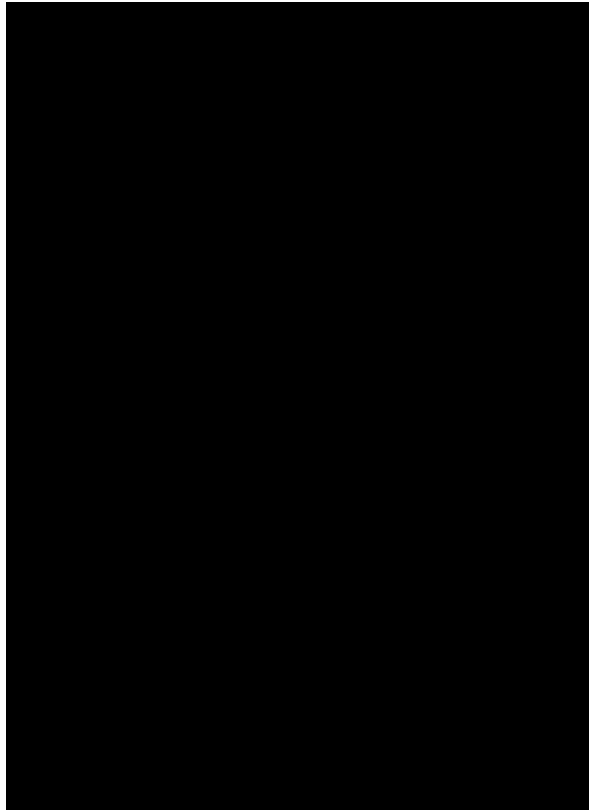
Print

President & CEO

Title

12/10/2020

Date



**OWNER**

Avangrid Service Company

DocuSigned by:  
  
4EC6C84E790A41A...

Signature

Robert Fitzgerald

Print

VP - Controller AGR Networks

Title

12/11/2020

Date



APPENDIX A

Owner or Company

Companies

**Central Maine Power Company**

Augusta General Office  
83 Edison Drive, Augusta, Maine 04336

**New York State Electric & Gas Corporation**

89 East Avenue  
Rochester, New York 14649

**Rochester Gas and Electric Corporation**

89 East Avenue  
Rochester, New York 14649

**UIL Holdings Corp.**

180 Marsh Hill Rd  
Orange, CT 06477



## **APPENDIX B**

### Scope of Work and Payment Schedule

#### **Scope of Work**

With this proposal AVANGRID is soliciting pricing for basic routine Electric Construction Services for Transmission, Overhead Distribution, Civil Underground Distribution and Substation facilities based on Electric Construction PayCUs for all four of its Network Affiliates: Central Maine Power, New York State Electric and Gas, Rochester Gas & Electric and United Illuminating. In addition, Fully-Loaded Labor and Equipment Rates for Electric Construction Services for unusual or non-routine work, including emergency restoration services, are being solicited for all four of its Network Affiliates.

#### **TRANSMISSION AND DISTRIBUTION GENERAL INSTRUCTIONS**

- PayCUs are a way to describe standard construction units of production accomplished for AVANGRID. They are to be used for routine Project and Program Work.
- Each activity must be completed in compliance with AVANGRID and applicable national (FERC/ NERC/IEEE/ANSI/ACI/ASSHTO/NESC) standards as well as local, state, city, and federal laws and guidelines. The standard reference is included to help direct the contractor to the appropriate AVANGRID standard, with that said all of the AVANGRID TM or Operating Company standards apply to all of the PayCU described in this document.
- Storm Stand-By, Overtime and Premium time will be compensated by the applicable PayCUs or Labor/Equipment Rates and no payment will be rendered for activities not approved by the Company.
- "Non-routine" work items not covered through PayCUs will be handled with a Time and Equipment (T&E) Not-To-Exceed (NTE) approach. For non-routine work, specific details will be provided once the work is released from engineering and one or more suppliers will be allowed to evaluate the work and provide a T&E NTE bid using the pre-established Hourly and Equipment rates provided in this RFP.
- Invoicing against purchase orders on the construction framework agreement shall occur on a completion of the project or end of the month.
- All materials provided by the Contractor (either as part of the PayCU pricing or part of the material markup clause) shall be delivered to job site.  
**Commencement of any Project under this agreement is not to occur until a purchase order has been released specific to that project.**

## AVANGRID T&D REFERENCE PRICE

Each T&D PayCU should be priced to include:

- Administration, Supervision, and Management,
- Delays (including weather),
- Environmental Compliance --Matting for right-of-ways shall be provided by the Company or added to the quote request if, and when, required by an environmental permit. Incidental matting (fiberglass or equivalent) for backyard/rear property access will be the responsibility of the Contractor and is included in the activity price,
- Estimating,
- Fuel,
- Labor and equipment required to complete each task over the life of the contract,
- Miscellaneous consumable materials --T&D Materials are not included in the activity costs but consumable items are. T&D Materials shall be delivered to the Contractor's staging site by the Company or supply vendor. Sighting of poles is the Company's preferred practice,
- Local or County Road Permit when required,
- Profit,
- Restoration for all non-underground distribution and transmission activities,
- Safety compliance,
- Spoils removal unless spoils are contaminated,
- General traffic and pedestrian protection where traffic PayCUs are not utilized,
- Immediate work site protection,
- Travel --Show-up site is to be secured when travel is outside a 50-mile radius of the original or previous work location,
- All Travel expenses (food, lodging, vehicle, etc.)
- Temporary restroom facilities
- Setting up working grounds when necessary,
- As-built documentation.

## TRANSMISSION AND DISTRIBUTION PAYCU BASIC DEFINITIONS

- **Highway** - Work associated with functional locations accessible by typical wheeled equipment after consideration of incidental matting,
- **Wheeled Distribution Equipment** - Includes bucket trucks, digger derricks, pick-up trucks, pole trailers, and puller / tensioners (or equivalent equipment) used in the performance of electric line work. Larger equipment necessary to perform work on taller structures greater than 55-feet is considered specialized equipment,
- **Off-Road** - Work associated with functional locations (i.e. backyards, right-of-way, rear property or other locations) not accessible with wheeled distribution equipment. Off-Road work can be performed with typical off-road equipment or by climbing methods,
- **Off-Road Distribution Equipment** - Includes backyard machines and mini track equipment (or their equivalent) used in the performance of electric line

distribution work. Larger track equipment necessary to access difficult right-of-ways or taller structures greater than 55-feet is considered specialized equipment,

- **Program Work** - Routine work driven by inspection or asset management programs. Program Work often includes pole or material replacement work within a defined Service Area,
- **Specialized Equipment** - Equipment not typically used in the performance of electric line distribution work either on the Highway or Off-Road. Specialized Equipment pricing is captured in the Equipment Tab.
- **Standard Project** - Recurring capital work of the Company that specifies the usual way to build common facilities based on existing AVANGRID standards. Standard projects are used as the reference for both building Network Infrastructures and defining the specific activities to be performed,
- **"Supplied by the Contractor under the material markup clause"**- These materials may be supplied by the Contractor, but the details will be design specific and the Contractor will be provided the part number etc. during the time of issuance of a proposal for the individual work package in question. At this time the Contractor shall supply the quoted price of these materials and apply their markup percentage bid as part of this RFP.
  - NOTE: Unless specifically stated that the material will use the Contractor markup clause, the Contractor shall assume that the price of material in their supply to be included in the PayCU pricing.
- **Transmission and Distribution Consumables**- In general the material supplied has been provided to help the Contractor understand what major materials the Owner will supply. In addition, a non-binding list of what is generally expected to be consumables and must be included in the PayCU price is provided below. Note the general idea is that if a consumable is needed to do a job and it is not mentioned in this list the bidder shall assume its price is to be included in the PayCU (i.e. it is intent of the Owner that the Contractor deliver complete and functional units of production):
  - Tape (all types),
  - Drill bits and taps/dies,
  - Porta band blades,
  - Wire/cable identification tags,
  - Rags,
  - Extension cords,
  - All tooling/equipment,
  - Rain Equipment,
  - Drinking water (none available),
  - Penetrox,
  - Tie Wraps,
  - Caulking,
  - Duct Seal/Foam Sealant,
  - Batteries for equipment,
  - Wire nuts (as needed),
  - Miscellaneous mounting hardware, nuts, bolts etc.,
  - Brushes/applicators,
  - Safety Items,
    - Safety glasses,
    - Hardhats,

- Gloves (work and cut resistant),
  - Hi-visibility vests,
  - Ear plugs,
  - First aid kit,
  - Safety harness,
  - FR coveralls/clothing,
  - Safety grounds (Contractor to supply their own).
- **Transmission Cold** - Is activity performed de-energized; with ground(s) established,
  - **Transmission Hot** - Is activity performed energized and may include removal of the original structure as part of the installation of the new structure.
  - **Office & Corporate Overhead** - the fixed cost associated with operation of the corporate or main office, plant, equipment, and staffing maintained by a contractor for general business operations & according with ASTM E2083 classification.

## TRANSMISSION AND DISTRIBUTION PROJECTS

### Overhead and URD:

For overhead transmission and distribution line work, the Contractor shall:

1. Utilize the approved Dig Safe/UFPO process,
2. Provide all labor, supervision, tools, vehicles, and equipment required to complete referenced work,
3. Receive and store material in a protected fashion and is responsible to replace lost or stolen materials once it has been released to their care,
4. Field office at a Company approved location as required,
5. For Off-Road Transmission Projects Clearing and Access-Survey, staking (for structures, guy anchors, foundations, etc.), mark/flag, clear, trim, and grub new rights of way, construct and maintain access roads, fabrication areas; crane pads will be quoted using Labor and Equipment Rates,
6. For all Off-Road Projects that require an environmental permit to ensure environmental protection and erosion control -Construct and maintain water bars, corduroy roads, culverts, drainage ditches, field tile, timber bridges will be quoted using Labor and Equipment Rates,
7. Transmission and Distribution, Pole and Anchor PayCUs do not include Rock Hole Drilling. A separate PayCU is provided for this activity,
8. Transmission and Distribution Framing-Includes Single Pole, H-Frame, Horizontal and Vertical Construction, Cable Poles Framed to the Riser and Transmission/Distribution Under-Build as well as Cross-Arm, Fiberglass Arm, and Stand-Off's, Single Phase, Delta, Three Phase configurations are included,
9. Transmission and Distribution Conductor Pulling, String, Sagging, Splice and Clip phase, static and optical fiber, ground wires and hanging transformers is typical for most projects,
10. Grounding - Grounding including temporary requirements for wire pulling,
11. Demolition and removal of existing facilities often includes conductors, poles, towers, insulators, hardware, guy wires, and anchors,
12. Private Property Restoration,

13. As Built Documentation -Return of Shop Papers and Sketches/Drawings that accurately reflect the material utilized on the job and conditions in the field,
14. Voltages: Residential and Commercial Services 120 -480v single and three phase, line voltages are 4800v -345kv,
15. Conduct live (energized) and dead (de-energized) work per OSHA Standards.

Civil and Network Underground:

For underground transmission and distribution line work, the Contractor shall:

1. Utilize the approved Dig Safe/UFPO process,
2. Provide all labor, supervision, tools, vehicles, and equipment required to complete referenced work,
3. Receive and store material in a protected fashion and is responsible to replace lost or stolen materials,
4. Conduct material handling, reel handling, spooling,
5. Pump out manholes,
6. Clean and thread ducts,
7. Pull in conductor conduit and direct bury,
8. Splice conductor,
9. Install new duct in pavement and earth,
10. Remove and scrap existing conductor,
11. Implement traffic control,
12. Conduct private property restoration,
13. As Built Documentation -Return of Shop Papers and Sketches/Drawings that accurately reflect the material utilized on the job and conditions in the field,
14. Voltages: Residential and Commercial Services 4kV -345kV,
15. Conduct live (energized) and dead (de-energized) work per OSHA Standards,
16. Excavate/backfill trenches, manholes, vaults and perform directional borings.

Emergency Restoration:

The Contractor shall support AVANGRID in an emergency situation where a possible impact to the safety and reliability of the electric system might occur.

Restoration efforts shall include:

- Emergency Restoration Labor
  1. Each worker shall come prepared with all necessary Personal Protective Equipment (PPE)including rubber goods and Flame Retardant (FR)clothing in compliance with OSHA standards,
  2. A bucket crew shall consist of two Fully Qualified (FQ) lineman,
  3. A digger crew shall consist of two Fully Qualified (FQ) lineman,
  4. Full Qualified (FQ) Lineman shall climb and work on both distribution and transmission structures. Variations from this guideline require prior approval,
  5. At a minimum, FQ lineman shall glove voltages up to and including 15kV live at all Network Affiliates. Variations from this guideline require prior approval,

6. At a minimum, FQ lineman shall hot stick 12kV and 34kV live at RG&E and 34kV live at NYSEG and CMP. Variations from this guideline require prior approval,
  7. FQ Lineman shall arrive with, and be familiar with, safe operation of chain saws to perform vegetation clearing as necessary. Proper PPE for chain saw operation shall be provided,
  8. FQ Lineman shall be prepared to work in both urban, rural and mountainous environments,
  9. Each Contractor shall assign an onsite single point of contact for the duration of the storm,
  10. Each crew shall follow OSHA safety standards and work practices,
  11. Groups of crews shall be aware that they could be split into smaller working groups,
  12. Crews shall move expediently from staging locations to the work site(s),
  13. After the first 24-hrs, crews shall work 17-hours and rest 7-hours for the duration of the event. Daily they shall pack lunches prior to reporting for duty and eat mid-shift meals at the job site or work headquarters. Crews shall not expect to eat all meals at a restaurant,
  14. Crews shall be expected to work in inclement weather,
  15. Contractors are responsible for the safety of their workforce.
- Emergency Restoration Equipment
    1. Vehicles shall be equipped with necessary hand tools including live line tools and legal work zone protection generally accepted for distribution line work for transmission voltages 34kV and below,
    2. Conductor grounds shall also be included in each crew complement,
    3. Vehicles shall be equipped with chainsaws and/or stick saws for T&D vegetation clearing,
    4. Bucket trucks shall be of 45' class or greater unless otherwise agreed upon,
    5. Vehicles shall be equipped for occasional off-road use. Tire chains are to be available for snow and ice conditions. Working lights shall be available for night work,
    6. Each crew complement shall come equipped with cell phones and GPS equipment,
    7. Sufficient distribution materials shall be stocked on each vehicle prior to arrival. Job specific materials will be provided as necessary.
  - Emergency Restoration Administration
    1. Contractors shall submit rosters for approval prior to departure. Labor resources not requested or approved will not be paid,
    2. Contractors shall complete specific roster sheets and provide the name of the crew lead/foreman including their cell phone number,
    3. Contractors shall provide an Estimated Time of Arrival (ETA) when crews will arrive on site and ready to work an initial 24-hr shift before rotating to a 17-hrs work/7-hrs rest schedule.,
    4. Contractors shall notify the company immediately if their ETA changes,
    5. Site reporting rosters shall match the crew roster sent prior to departure,

6. Utility industry retirees are acceptable but must be able to perform all duties of a journeyman lineman including distribution and transmission climbing,
7. Sending excessive numbers of apprentices and non-qualified line personnel shall be avoided. Variations from this guideline require prior approval,
8. The contractor shall not send clerical and ancillary employees or bill for their services. Variations from this guideline require prior approval,
9. Invoices shall be remitted within 10 days of work completion or the release of crews from the property,
10. Invoices shall include signed time sheets with work location and broken down by employee and equipment used,
11. Contractors will not be compensated for equipment not requested or approved,
12. Receipts shall be included for all ancillary expenses including tolls.

#### **SUBSTATION GENERAL INSTRUCTIONS**

- PayCUs describe standard construction work accomplished for AVANGRID. They are to be used for routine Project and Program Work,
- Each activity must be completed in compliance with AVANGRID and national (IEEE/ANSI/ACI) standards as well as local, state, city, and federal laws and guidelines. The referenced standard column is included to help direct the Contractor to the appropriate AVANGRID standard, with that said all of the AVANGRIDTM standards apply to all of the PayCUs described in this document,
- "Non-routine" work items not possible to be covered through PayCUs will be handled as described in TM 2.73.25 SUBSTATIONS and TRANSMISSION LINESCONSTRUCTION PayCU UNITS.
- Invoicing against POs on the construction framework agreement shall occur on a monthly basis. Aesthetic landscaping tasks (usually installed to comply with permitting requirements) outside of normal seeding/mulching (for example planting shrubs, bushes, trees, etc.) will be handled on a T&M NTE basis.
- All materials provided by the Contractor (either as part of the PayCU pricing or part of the material markup clause) shall be delivered to job site.
- TM2.73.15 is AVANGRID's standard substation construction requirements. Following document shall be used in conjunction with the PayCUs to allow the contractor to understand the required scope of work:
  - TM2.73.15 .AVANGRID's standard substation construction requirements
  - Avangrid Testing and Commissioning Philosophy.
- PayCUs shall be bid assuming working in an energized substation. This includes time and care to avoid safety and reliability issues during all work.

#### **AVANGRID SUBSTATION PRICE**

Each Substation PayCU should be priced to include:

- Administration, Supervision, and Management,
- Delays (including weather),

- Environmental Compliance --Matting for right-of-ways will be provided by the company if required by environmental permit,
- Estimating,
- Fuel,
- Labor and equipment required to complete each task over the life of the contract,
- Miscellaneous consumable materials --Consumable materials shall be supplied by the Contractor and the price for consumables shall be included in the PayCU pricing attached,
- Profit,
- Safety compliance,
- Spoils removal unless spoils are contaminated,
- General traffic and pedestrian protection,
- Work area protection,
- QA/QC Costs-All work completed is expected to be delivered in a 100% correct state. The Contractor's internal quality procedures should be priced within the PayCUs.
- As-built drawing markups for two sets of field drawings (any changes/errors noted in the field shall be properly marked in red/green format on the prints),
- Auxiliary support equipment/devices are expected to be delivered to the Company in an operational status. While the final commissioning checks will be the responsibility of others, the Company expects items such as HVAC, unit heaters, fire alarm system, receptacles/lighting, etc. will be delivered to the commissioning firm by the Contractor in a confirmed/operational state and initial IED programming completed to do so,
- Cleaning, polishing, painting and other cosmetic tasks to deliver a visually complete product.

#### **AVANGRID SUBSTATION COMPANY SUPPLIED MATERIALS**

In general, the following equipment will be supplied by AVANGRID for Substation Projects (actual project requirements may vary):

- Power Transformers,
- Circuit Breakers,
- Switches,
- Capacitive Coupled Voltage Transformers,
- Station Service Transformers,
- Current Transformers,
- Voltage Transformers,
- Potential Transformers,
- Lightning Arrestors,
- Relays/HMI/RTU/IEDS,
- P&C Cabinets,
- Control House,
- DC Station Battery,
- DC Battery Charger,
- Capacitor Banks,
- Voltage Regulators (as required),



- Wave Traps,
- Line Tuning Units,
- Standby Generators.

#### AVANGRID SUBSTATION MATERIAL DETAILS

General Substation Material Details supplied by Contractor:

- **"Owner Supplied"** - The Owner will supply the material and deliver to the job site,
- **"Supplied by the Contractor"** - These materials will be supplied by the Contractor and shall be included in the bid price for the PayCUs,
- **"Supplied by the Contractor under the material markup clause"** - These materials may be supplied by the Contractor, but the details will be design specific and the Contractor will be provided the part number etc. during the time of issuance of a proposal for the individual work package in question. At this time the Contractor shall supply the quoted price of these materials and apply their markup percentage bid as part of this RFP.
  - NOTE: Unless specifically stated that the material will use the Contractor markup clause, the Contractor shall assume that the price of material in their supply to be included in the PayCU pricing.
- **Capacitor Banks** - All materials to be provided by the Owner. The Contractor shall completely assemble on foundation. Note that the foundation and grounding are separate PayCUs,
- **Transformers** - Contractor to assemble Owner procured power transformer after it is delivered to site. Oil to be supplied by the Owner, but effort to fill transformer with oil to be provided by the Contractor. Note that these are strictly the mechanical efforts. Foundation, grounding, wiring, primary connections, etc. will all be handled by separate PayCUs,
- **Circuit Breakers** - Contractor to assemble breakers and mount on foundations. Note that these are strictly the mechanical efforts. Foundation, grounding, wiring, primary connections, etc. will all be handled by separate PayCUs,
- **Switches** - Contractor to assemble switches and mount to the steel structure. These PayCUs assume delivery of a mechanically complete/functional switch. The tasks under the PayCUs shall include all required adjustments, setting of stops, verifications of proper engagement of each set of contacts, final piercing of all pipes and linkages etc. Note that these are strictly the mechanical efforts. Foundation, grounding, wiring, primary connections, etc. will all be handled by separate PayCUs,
- **Battery** - Contractor to mechanically install battery and charger. For both rack and cabinet system batteries shall be individually installed and secured, with battery connections and sensor connections assembled by the Contractor. These materials will be owner supplied. In addition, the Contractor shall ground the battery system to the control house ground using Owner supplied wire. The Contractor shall supply required grounding connectors in the PayCU pricing. External AC/DC connections (back to AC/DC system), cable pulls, terminations, etc. will be handled by separate PayCUs,
- **Control House Electrical Devices** - Individual PayCUs for mounting electrical devices assumes the mechanical effort of mounting the equipment, dressing it out as required, and any miscellaneous hardware required to do so are included. In addition, the Contractor shall ground these devices to the control house ground using Owner supplied wire. The Contractor shall supply the required grounding connectors in the PayCU pricing. In addition, for basic electrical devices the Contractor shall

supply electrical boxes for switches, outlets, smoke detectors, etc. in the PayCU price. Separate PayCUs shall be used for pricing Unistrut installs, EMT conduit installations, cable pulls and terminations, etc.

- **Fencing** - All materials required to construct fencing shall be included in PayCU. This shall include but is not limited to pipes, posts, fabric, barbed wire, brackets and supports, tension wire (as applicable), gates, hinges, latches etc. as outlined in the TM standards. Fence post foundations will generally be handled under the pier type foundation PayCU and the grounding will be handled under the grounding PayCUs,
- **Concrete Foundations** - For all foundations with the TM standard referenced, the Contractor shall include anchor bolts and rebar pricing in the PayCUs (except for those with complex anchor cage designs which are typically supplied by the steel manufacturer). For the PayCUs that are general in nature and don't reference a specific design the rebar and anchor bolts will be treated as material and receive the quoted markup. In addition, each foundation PayCU price includes the required excavation, backfill and stone topping per the TM standards,
- **Substation Consumables** - In general the material supplied has been provided to help the Contractor understand what major materials the Owner will supply. In addition, a non-binding list of what is generally expected to be consumables and must be included in the PayCU price is provided below. Note the general idea is that if a consumable is needed to do a job and it is not mentioned in this list the bidder shall assume its price is to be included in the PayCU (i.e. it is intent of the Owner that the Contractor deliver complete and functional units of production):
  - Tape (all types),
  - Drill bits and taps/dies,
  - Porta band blades,
  - Wire/cable identification tags,
  - Rags,
  - Extension cords,
  - All tooling/equipment,
  - Rain Equipment,
  - Drinking water (none available),
  - Penetrox,
  - Tie Wraps,
  - Caulking,
  - Duct Seal/Foam Sealant,
  - Batteries for equipment,
  - Wire nuts (as needed),
  - Miscellaneous mounting hardware, nuts, bolts etc.,
  - Brushes/applicators,
  - Safety Items,
    - Safety glasses,
    - Hardhats,
    - Gloves (work and cut resistant),
    - Hi-visibility vests,
    - Ear plugs,
    - First aid kit,
    - Safety harness,
    - FR coveralls/clothing,
    - Safety grounds (Contractor to supply their own).

## **SUBSTATION PROJECTS**

The work the Contractor shall complete within substations shall include but not be limited to the following:

1. Installation of below grade equipment within the substation including but not limited to: foundations, control conduits, manholes, power ducts, ground grids,
2. Installation of substation equipment and associated equipment including but not limited to: high voltage circuit breakers, power transformers, disconnect switches, motor operators, instrument transformers,
3. Fabricate all structural steel and bus work per specifications provided from the Owner,
4. Installation of substation fences,
5. Installation and termination of power cable: 4kv -345kv,
6. Installation and termination of control cables; <600 volt,
7. Installation of switchboards and wiring of associated control equipment including but not limited to:  
AC systems, AC throw-over switches, DC systems, battery banks, battery chargers, and fiber optic cable/devices,
8. Complete finish grade of station to match existing or per specification,
9. Removal of all old equipment where applicable,
10. Secure required material where applicable,
11. As-Built Documentation -Return of Shop Papers and Sketches/Drawings that accurately reflect the material utilized on the job and conditions in the field.

## **AVANGRID ENGINEERING STANDARDS**

### Standards Reference:

AVANGRID's technical standards have been provided as attachments to the RFP for:

- Substation,
- Transmission,
- Distribution.

For requirements where PayCUs have been requested with no reference to AVANGRID Technical manuals, the Contractor shall utilize industry standards as well as reasonable experience.

## **AVANGRID PRE-PLANNING MEETING**

Prior to beginning each project associated with this RFP a Pre-Project Planning meeting must be held with the initiating work group to review the scope of the project, its associated documentation, specific AVANGRID Standards and to determine which

organization will be responsible for key items or activities. Items to be discussed should include, but not be limited to:

1. AVANGRID provides:

- All necessary drawings and AVANGRID Standards,
- Owner provided transmission and distribution materials,
- Owner provided substation materials,
- Supply:
  - Field Construction Quality Coordinator (FCC) for single circuit projects to oversee field work and sign off completed milestones to support payment of invoice,
  - Field Construction Manager (FCM) for multifaceted project to coordinate complex field work and sign off completed milestones to support payment of invoice.

2. Contractor Responsibilities:

- Obtaining permission from land owners for access and parking if necessary,
- Obtaining staging area as needed,
- Restoring to all private and public property damaged in the course of work,
- Contacting Dig Safe for excavation,
- Flagging when necessary,
- Providing everything not included in the AVANGRID responsibilities above necessary to complete project such as consumable materials, tools, labor and equipment,
- Replacing of all stock that is lost, damaged or stolen from their possession,
- Providing daily work plans and progress reports to the FCC or FCM,
- Establish the level of details necessary to accurately reflect the material utilized on the job and conditions in the field and who is to receive the As-Built Documentation,
- Schedule in Gantt chart format for the entire work,
- Cashflow in Excel format for the entire work.

3. When/how to obtain written change order approval from the Division or Project Manager for project changes before proceeding,

4. Special Work Schedule Requirements:

- Schedule work hours to support customer needs or,
- Road or lane closure limitations.

5. Permit Compliance:

- State or County DOT,
- Environmental.

6. Outage Plans:

- Short outages necessary for individual transformer replacements or,
- Placing recloser or breaker on Do-Not-Reclose for personnel protection while protecting circuit from large scale outages.

7. Plans for scrap return,

8. Safety concerns should be noted, such as:

- Job will be done near energized equipment,
- Rules for working on an energized hot circuit,

- Location of grounds,
  - Holding/releasing mark-ups through the course of the project.
9. **Commencement of any Project under this agreement is not to occur until a Purchase Order has been issued to the Contractor.**

#### AVANGRID Performance Clause

AVANGRID intends to establish the following four performance metrics with each Contractor awarded a Framework Agreement from this RFP,

1. Customer satisfaction,
2. Adherence to AVANGRID Engineering/Construction Standards,
3. Timely completion of assigned work, as-builds and corresponding invoicing,
4. Contractor crew caused line outage/customer outages/inadvertent operations.

For this agreement, each performance measure will carry a potential penalty of \$10,000 per occurrence for 1, 2, and 3 plus \$15,000 per category 4. Transmission, Distribution and Substation work penalties maybe calculated separately for a multiphase project and will be applied following a Root Cause Analysis led by the AVANGRID Network Affiliate Director, key company stakeholders and Supplier Management

Please see the listing below of appendices to the RFP:

- Appendix A Substation Projects PayCU Workbook
- Appendix B Transmission PayCU Workbook
- Appendix C Distribution PayCU Workbook
- Appendix D AVANGRID Substation Standards
- Appendix E AVANGRID Transmission Standards
- Appendix F AVANGRID Distribution Standards
- Appendix G AVANGRID Substation Construction Specifications
- Appendix H AVANGRID Transmission Construction Specifications
- Appendix I AVANGRID Environmental Standards
- Appendix J AVANGRID Safety Standards

#### **Payment Schedule**

Payment Terms: Net 60 Days  
Pricing valid through 2023

## Substation PayCU Dictionary:

PayCU Reference	PayCU Section	PayCU Category	Title	Description	Standards	Additional Information	Unit	QTY
SSIG1001	Construction - Inground	Mobilization/Demobilization	Mob/Demob < \$35K	For standard small tools/labor Mobilization necessary to commence work is based on the size of the project being assigned. This unit is used for Mobilization for projects less than \$35K. Once the pricing sheet is completed and agreed to by the Company's Representative this unit will be applied to obtain mobilization dollars. This unit also includes Demobilization. Mobilization costs of wheeled equipment is to be included in work activities.	TM2.73.15 Construction Standards		EACH	1
SSIG1002	Construction - Inground	Mobilization/Demobilization	Mob/Demob \$36K to \$100K	For standard equipment/labor Mobilization necessary to commence work is based on the size of the project being assigned. This unit is used for Mobilization for projects equal to or greater than \$36K but less than \$101K. Once the pricing sheet is completed and agreed to by the Company's Representative this unit will be applied to obtain mobilization dollars. This unit also includes Demobilization. Mobilization costs of wheeled equipment is to be included in work activities.	TM2.73.15 Construction Standards		EACH	1
SSIG1003	Construction - Inground	Mobilization/Demobilization	Mob/Demobn \$101K > \$250K	For standard equipment/labor Mobilization necessary to commence work is based on the size of the project being assigned. This unit is used for Mobilization for projects equal to or greater than \$101K but less than \$251K.. Once the pricing sheet is completed and agreed	TM2.73.15 Construction Standards		EACH	1

				to by the Company's Representative this unit will be applied to obtain mobilization dollars. This unit also includes Demobilization. Mobilization costs of wheeled equipment is to be included in work activities.				
SSIG1004	Construction - Inground	Mobilization/Demobilization	Mob/Demobn \$251K > \$500K	For standard equipment/labor Mobilization necessary to commence work is based on the size of the project being assigned. This unit is used for Mobilization for projects equal to or greater than \$251K but less than \$500K. Once the pricing sheet is completed and agreed to by the Company's Representative this unit will be applied to obtain mobilization dollars. This unit also includes Demobilization. Mobilization costs of wheeled equipment is to be included in work activities.	TM2.73.15 Construction Standards		EACH	1
SSIG1005	Construction - Inground	Mobilization/Demobilization	Mob/Demobn Small Tools & Equipment and Manpower	For standard equipment/labor Mobilization necessary to commence work for subcontractors similar to testing and commissioning crews. Once the pricing sheet is completed and agreed to by the Company's Representative this unit will be applied to obtain mobilization dollars. This unit also includes Demobilization. Mobilization costs of equipment is to be included in work activities. This may be used for some work such testing & commissioning in a substation	TM2.73.15 Construction Standards		EACH	1

SSIG1006	Construction - Inground	Conduit	Install Manhole 7' X 14'	<p>Install Manhole or Pull Box for underground cable system, includes excavation and restoration of opening.</p> <p>Supply and install 2 sets of frames/lids and risers for each manhole. Racking for all 4 sides shall be included with 12 total per manhole.</p> <p>Materials:</p> <p>Contractor to supply manhole, backfill, stone, racking, lids, frames, risers, grout, waterproofing, etc.</p>	TM2.73.15 Section 31 71 19 Manhole and Duct Bank	Top of manhole to be set 4ft below the surface	EACH	1
SSIG1007	Construction - Inground	Conduit	Install Manhole 7' X 7'	<p>Install Manhole or Pull Box for underground cable system, includes excavation and restoration of opening.</p> <p>Supply and install 2 sets of frames/lids and risers for each manhole. Racking for all 4 sides shall be included with 10 total per manhole.</p> <p>Materials:</p> <p>Contractor to supply manhole, backfill, stone, racking, lids, frames, risers, grout, waterproofing, etc.</p>	TM2.73.15 Section 31 71 19 Manhole and Duct Bank	Top of manhole to be set 4ft below the surface	EACH	1
SSIG1008	Construction - Inground	Conduit	Install Pull Box	<p>Install Manhole or Pull Box for underground cable system, includes excavation and restoration of opening.</p> <p>Materials:</p>	TM2.73.15 Section 31 71 19 Manhole and Duct Bank		EACH	1



				Contractor to supply manhole, backfill, stone, etc.				
SSIG1009	Construction - Inground	Conduit	Excavation for Conduit/Duct Bank Installation	Excavate and prepare trench for single or multiple conduit installation. Spoils to be used as backfill material. Compaction of subgrade is included. Shoring shall be provided if necessary based on soil conditions.  Materials:  Bedding stone or sand will be CONTRACTOR supplied.	TM2.71.13 TM2.73.15 Section 31 71 19 Manhole and Duct Bank		CY	1
SSIG1010	Construction - Inground	Duct Bank	Concrete Backfill for Duct Bank	Installation of concrete backfill for duct bank. Formwork is included in the cost.  Materials:  Contractor to supply all materials.	TM2.73.15 Section 31 71 19 Manhole and Duct Bank		CY	1
SSIG1011	Construction - Inground	Duct Bank	Sand Bedding for Duct Bank	Supply and Installation of sand bedding for backfill for duct bank.  Materials:  Contractor to supply all materials.	TM2.73.15 Section 31 71 19 Manhole and Duct Bank		CY	1
SSIG1012	Construction - Inground	Conduit	Supply and Install 3/4" to 1 1/2" Schedule 40 PVC Conduit	Install PVC conduit per linear foot for each conduit. This includes all spacers for more than one conduit in trench.  Materials:	TM2.71.13		LF	1

				Conduit to be contractor supplied.				
SSIG1013	Construction - Inground	Conduit	Supply and Install FITTINGS for direct buried 3/4" to 1 1/2" Schedule 40 PVC Conduit	<p>Install each fitting for conduit installation. Cleaning and glue required for each fitting shall be included.</p> <p>Materials:</p> <p>Fittings to be contractor supplied.</p>	TM2.71.14		EACH	1
SSIG1014	Construction - Inground	Conduit	Supply and Install SWEEPS for direct buried 3/4" to 1 1/2" Schedule 40 PVC Conduit	<p>Install sweep for end of conduit run. Cleaning and glue required for each sweep shall be included.</p> <p>Materials:</p> <p>Sweep to be contractor supplied.</p>	TM2.71.15		EACH	1
SSIG1015	Construction - Inground	Conduit	Supply and Install 2" to 4" Schedule 40 PVC Conduit	<p>Install PVC conduit per linear foot for each conduit. This includes all spacers for more than one conduit in trench.</p> <p>Materials:</p> <p>Conduit to be contractor supplied.</p>	TM2.71.16		LF	1
SSIG1016	Construction - Inground	Conduit	Supply and Install FITTINGS for direct buried 2" to 4" Schedule 40 PVC Conduit	<p>Install each fitting for conduit installation. Cleaning and glue required for each fitting shall be included.</p> <p>Materials:</p>	TM2.71.17		EACH	1

				Fittings to be contractor supplied.				
SSIG1017	Construction - Inground	Conduit	Supply and Install SWEEPS for direct buried 2" to 4" Schedule 40 PVC Conduit	Install sweep for end of conduit run. Cleaning and glue required for each sweep shall be included.  Materials:  Sweep to be contractor supplied.	TM2.71.18		EACH	1
SSIG1018	Construction - Inground	Conduit	Supply and Install 5" to 6" Schedule 40 PVC Conduit	Install PVC conduit per linear foot for each conduit. This includes all spacers for more than one conduit in trench.  Materials:  Conduit to be contractor supplied.	TM2.71.19		LF	1
SSIG1019	Construction - Inground	Conduit	Supply and Install FITTINGS for direct buried 5" to 6" Schedule 40 PVC Conduit	Install each fitting for conduit installation. Cleaning and glue required for each fitting shall be included.  Materials:  Fittings to be contractor supplied.	TM2.71.20		EACH	1
SSIG1020	Construction - Inground	Conduit	Supply and Install SWEEPS for direct buried 5" to 6" Schedule 40 PVC Conduit	Install sweep for end of conduit run. Cleaning and glue required for each sweep shall be included.  Materials:  Sweep to be contractor supplied.	TM2.71.21		EACH	1

SSIG1021	Construction - Inground	Conduit	Supply and Install 3/4" to 1 1/2" Rigid Metallic Conduit	<p>Install rigid metal conduit in trench per linear foot for each conduit. This includes all spacers for more than one conduit in trench. Cleaning and threading is included in this scope.</p> <p>Materials:</p> <p>Conduit to be contractor supplied.</p>	TM2.71.23	LF	1
SSIG1022	Construction - Inground	Conduit	Supply and Install FITTINGS for direct buried 3/4" to 1 1/2" Rigid Metallic Conduit	<p>Install each fitting for conduit installation. Cleaning and threading required for each fitting shall be included.</p> <p>Materials:</p> <p>Fittings to be contractor supplied.</p>	TM2.71.24	EACH	1
SSIG1023	Construction - Inground	Conduit	Supply and Install Sweeps for direct buried 3/4" to 1 1/2" Rigid Metallic Conduit	<p>Install sweep for end of conduit run. Cleaning and threading required for each sweep shall be included.</p> <p>Materials:</p> <p>Sweep to be contractor supplied.</p>	TM2.71.25	EACH	1
SSIG1024	Construction - Inground	Conduit	Supply and Install 2" to 4" Rigid Metallic Conduit	<p>Install rigid metal conduit in trench per linear foot for each conduit. This includes all spacers for more than one conduit in trench. Cleaning and threading is included in this scope.</p> <p>Materials:</p> <p>Conduit to be contractor supplied.</p>	TM2.71.26	LF	1

SSIG1025	Construction - Inground	Conduit	Supply and Install FITTINGS for direct buried 2" to 4" Rigid Metallic Conduit	<p>Install each fitting for conduit installation. Cleaning and threading required for each fitting shall be included.</p> <p>Materials:</p> <p>Fittings to be contractor supplied.</p>	TM2.71.27	EACH	1
SSIG1026	Construction - Inground	Conduit	Supply and Install SWEEPS for direct buried 2" to 4" Rigid Metallic Conduit	<p>Install sweep for end of conduit run. Cleaning and threading required for each sweep shall be included.</p> <p>Materials:</p> <p>Sweep to be contractor supplied.</p>	TM2.71.28	EACH	1
SSIG1027	Construction - Inground	Conduit	Supply and Install 5" to 6" Rigid Metallic Conduit	<p>Install rigid metal conduit in trench per linear foot for each conduit. This includes all spacers for more than one conduit in trench. Cleaning and threading is included in this scope.</p> <p>Materials:</p> <p>Conduit to be contractor supplied.</p>	TM2.71.29	LF	1
SSIG1028	Construction - Inground	Conduit	Supply and Install FITTINGS for direct buried 5" to 6" Rigid Metallic Conduit	<p>Install each fitting for conduit installation. Cleaning and threading required for each fitting shall be included.</p> <p>Materials:</p> <p>Fittings to be contractor supplied.</p>	TM2.71.30	EACH	1

SSIG1029	Construction - Inground	Conduit	Supply and Install SWEEPS for direct buried 5" to 6" Rigid Metallic Conduit	Install sweep for end of conduit run. Cleaning and threading required for each sweep shall be included.  Materials:  Sweep to be contractor supplied.	TM2.71.31		EACH	1
SSIG1030	Construction - Inground	Containment	Install Catch Basins	Excavate area, install catch basin & piping, leak test catch basin  Materials:  Catch Basin, piping tie in/fitting, backfill, stone, etc. will be contractor supplied.	TM2.71.17 Substation Oil Containment	4'x4'x4' catch basin with up to 2 pipe connections and 1 lid/frame	EACH	1
SSIG1031	Construction - Inground	Demolition	Removal of substation infrastructure	Removal of substation infrastructure per CY. Material to be loaded into truck or dumpster for hauling to landfill.	TM2.73.15 Construction Standards	Demo includes use of mini excavator with hoe attachment. Demolition of exposed concrete only.	CY	1
SSIG1032	Construction - Inground	Drainage	Install 12" Drainage Piping	Excavate area, install piping, backfill and compact area. Backfill using native material.  Materials:  Piping, bedding stone, etc. will be contractor supplied.	TM2.71.09 Yard & Fencing		LF	1
SSIG1033	Construction - Inground	Duct Bank	Install Type Size A Typical Cable Trench	Installation of Type A cable trench in a substation including excavation, precast cable trench, covers, backfill and surface restoration.	TM2.71.13		LF	1

				Materials: Contractor to supply all materials.				
SSIG1034	Construction - Inground	Duct Bank	Install Type Size B Typical Cable Trench	Installation of Type B cable trench in a substation including excavation, precast cable trench, covers, backfill and surface restoration.  Materials: Contractor to supply all materials.	TM2.71.13		LF	1
SSIG1035	Construction - Inground	Duct Bank	Install Type Size C Typical Cable Trench	Installation of Type C cable trench in a substation including excavation, precast cable trench, covers, backfill and surface restoration.  Materials: Contractor to supply all materials.	TM2.71.13		LF	1
SSIG1036	Construction - Inground	Duct Bank	Install Type Size D Typical Cable Trench	Installation of Type D cable trench in a substation including excavation, precast cable trench, covers, backfill and surface restoration.  Materials: Contractor to supply all materials.	TM2.71.13		LF	1

SSIG1037	Construction - Inground	Earthwork	General Fill	Deliver Material, grading, compaction, testing, and surveying. Delivery up to 20 miles.  Materials:  Contractor to supply all material	TM2.71.09, TM 31.22.00		CY	1
SSIG1038	Construction - Inground	Earthwork	General Fill	Deliver Material, grading, compaction, testing, and surveying. Delivery up to 50 miles  Materials:  Contractor to supply all material	TM2.71.09, TM 31.22.00		CY	1
SSIG1039	Construction - Inground	Earthwork	Subgrade Fill	Deliver Material, grading, compaction, testing, and surveying. Delivery up to 20 miles.  Materials:  Contractor to supply all material	TM2.71.09 Yard & Fencing, TM2.73.15 Substation Construction Standards Section 31 22 00 Site Grading		CY	1
SSIG1040	Construction - Inground	Earthwork	Subgrade Fill	Deliver Material, grading, compaction, testing, and surveying. Delivery up to 50 miles  Materials:  Contractor to supply all material	TM2.71.09 Yard & Fencing, TM2.73.15 Substation Construction Standards Section 31 22 00 Site Grading		CY	1
SSIG1041	Construction - Inground	Earthwork	Gravel Surface	Deliver Material, grading, compaction, testing, and surveying. Delivery up to 20 miles.  Materials:	TM2.71.09 Yard & Fencing, TM2.73.15 Substation Construction Standards Section 31 22 00 Site Grading		CY	1



				Contractor to supply all material			
SSIG1042	Construction - Inground	Earthwork	Gravel Surface	Deliver Material, grading, compaction, testing, and surveying Delivery up to 50 miles  Materials: Contractor to supply all material	TM2.71.09 Yard & Fencing, TM2.73.15 Substation Construction Standards Section 31 22 00 Site Grading		CY 1
SSIG1043	Construction - Inground	Earthwork	Gravel Base	Deliver Material, grading, compaction, testing, and surveying. Delivery up to 20 miles.  Materials: Contractor to supply all material	TM2.71.09 Yard & Fencing, TM2.73.15 Substation Construction Standards Section 31 22 00 Site Grading		CY 1
SSIG1044	Construction - Inground	Earthwork	Gravel Base	Deliver Material, grading, compaction, testing, and surveying. Delivery up to 50 miles  Materials: Contractor to supply all material	TM2.71.09 Yard & Fencing, TM2.73.15 Substation Construction Standards Section 31 22 00 Site Grading		CY 1
SSIG1045	Construction - Inground	Earthwork	Sand Bedding	Deliver Material, Excavation, grading, backfill, compaction, testing, and surveying. Delivery up to 20 miles.  Materials: Contractor to supply all material	TM2.71.09 Yard & Fencing, TM2.73.15 Substation Construction Standards Section 31 22 00 Site Grading		CY 1

SSIG1046	Construction - Inground	Earthwork	Sand Bedding	Deliver Material, Excavation, grading, backfill, compaction, testing, and surveying. Delivery up to 50 miles  Materials:  Contractor to supply all material	TM2.71.09 Yard & Fencing, TM2.73.15 Substation Construction Standards Section 31 22 00 Site Grading		CY	1
SSIG1047	Construction - Inground	Earthwork	Geotextile fabric-road and yard reinforcement, filter and segregation	Deliver Material, Roll out Material, Anchor. Delivery up to 20 miles.  Materials:  Contractor to supply all material	TM2.71.09 Yard & Fencing, TM2.73.15 Substation Construction Standards Section 31 22 00 Site Grading		SF	1
SSIG1048	Construction - Inground	Earthwork	Geotextile fabric-road and yard reinforcement, filter and segregation	Deliver Material, Roll out Material, Anchor. Delivery up to 50 miles  Materials:  Contractor to supply all material	TM2.71.09 Yard & Fencing, TM2.73.15 Substation Construction Standards Section 31 22 00 Site Grading		SF	1
SSIG1049	Construction - Inground	Earthwork	Crushed Stone	Deliver Material, grading, compaction, testing, and surveying. Delivery up to 20 miles.  Materials:  Contractor to supply all material	TM2.71.09 Yard & Fencing, TM2.73.15 Substation Construction Standards Section 31 15 40 Crushed Stone Surfacing		CY	1
SSIG1050	Construction - Inground	Earthwork	Crushed Stone	Deliver Material, grading, compaction, testing, and surveying. Delivery up to 50 miles  Materials:  Contractor to supply all material	TM2.71.09 Yard & Fencing, TM2.73.15 Substation Construction Standards Section 31 15 40 Crushed Stone Surfacing		CY	1

SSIG1051	Construction - Inground	Earthwork	Stone Topping	<p>Deliver Material, grading, compaction, testing, and surveying. Delivery up to 20 miles.</p> <p>Materials:</p> <p>Contractor to supply all material</p>	<p>TM2.71.09 Yard &amp; Fencing, TM2.73.15 Substation Construction Standards Section 31 22 00 Site Grading</p>	CY	1
SSIG1052	Construction - Inground	Earthwork	Stone Topping	<p>Deliver Material, grading, compaction, testing, and surveying. Delivery up to 50 miles</p> <p>Materials:</p> <p>Contractor to supply all material</p>	<p>TM2.71.09 Yard &amp; Fencing, TM2.73.15 Substation Construction Standards Section 31 22 00 Site Grading</p>	CY	1
SSIG1053	Construction - Inground	Earthwork	Riprap	<p>Deliver Material, placement and surveying. Delivery up to 50 miles.</p> <p>Materials:</p> <p>Contractor to supply all material</p>	<p>TM2.71.09 Yard &amp; Fencing, TM2.73.15 Substation Construction Standards Section 31 22 00 Site Grading</p>	CY	1
SSIG1054	Construction - Inground	Earthwork	Sand Seal	<p>Deliver Material, grading, compaction, testing, and surveying</p> <p>Materials:</p> <p>Contractor to supply all material</p>	<p>TM2.71.09 Yard &amp; Fencing, TM2.73.15 Substation Construction Standards Section 31 22 00 Site Grading</p>	SY	1
SSIG1055	Construction - Inground	Earthwork	Sand Seal	<p>Deliver Material, grading, compaction, testing, and surveying. Delivery up to 50 miles</p> <p>Materials:</p>	<p>TM2.71.09 Yard &amp; Fencing, TM2.73.15 Substation Construction Standards Section 31 22 00 Site Grading</p>	SY	1

				Contractor to supply all material				
SSIG1056	Construction - Inground	Earthwork	Trap Rock	<p>Deliver Material, grading, compaction, testing, and surveying. Delivery up to 50 miles</p> <p>Materials: Contractor to supply all material</p>	<p>TM2.71.09 Yard &amp; Fencing, TM2.73.15 Substation Construction Standards Section 31 22 00 Site Grading</p>		CY	1
SSIG1057	Construction - Inground	Earthwork	General Excavation	<p>Preparation of site including survey, BMPs, underground utility locating, excavation and loading spoils into suitable containers or backfilling other excavations</p> <p>Materials: Contractor to supply all materials including silt fence and BMPs.</p>	<p>TM2.73.15 Construction Standards</p>		CY	1
SSIG1058	Construction - Inground	Earthwork	Sump Pumps/dewatering systems	<p>Supply, install and maintenance of dewatering system for excavations.</p> <p>Materials: Contractor to supply all material and equipment</p>	<p>TM2.73.15 Construction Standards Section 31 23 19 Dewatering</p>	<p>Up to 3" gas or electric pump per week</p>	Per Week	1

SSIG1059	Construction - Inground	Earthwork	Vacuum Excavation	<p>Preparation of site including survey, BMPs, underground utility locating, excavation by vacuum methods and storage of spoils on site.</p> <p>Materials:</p> <p>Contractor to supply all materials including silt fence and BMPs.</p>	TM2.73.15 Construction Standards	Unit is based on air excavation and reuse of spoils as backfill. Hydro excavation will be paid under same CY unit and hauling of waste will be paid under separate PayCU	CY	1
SSIG1060	Construction - Inground	Earthwork	Hand Excavation	<p>Preparation of site including survey, BMPs, underground utility locating, excavation by hand methods and storage of spoils on site.</p> <p>Materials:</p> <p>Contractor to supply all materials including silt fence and BMPs.</p>	TM2.73.15 Construction Standards	Reuse of spoils as backfill	CY	1
SSIG1061	Construction - Inground	Earthwork	Rock Excavation -- No Blasting	<p>Excavation of rock, or solid obstructions greater than 1 CY in size, that require the use of a hoe ram, jack hammers, air drills, rock splitters or chemically expanding agents and loading spoils into suitable containers for transportation.</p> <p>Materials:</p> <p>Contractor to supply chemically expanding agents if used.</p>	TM2.73.15 Construction Standards		CY	1

SSIG1062	Construction - Inground	Earthwork	Back fill with flowable fill or CLSM	<p>Supply and install flowable fill or CLSM per NYSDOT standard.</p> <p>Materials:</p> <p>Contractor to supply flowable fill or CLSM from certified ready-mix concrete plant.</p>	TM2.73.15 Construction Standards		CY	1
SSIG1063	Construction - Inground	Earthwork	Saw Cutting	<p>Saw cut existing pavement.</p> <p>Materials:</p> <p>No material required.</p>	TM2.71.13		LF	1
SSIG1064	Construction - Inground	Earthwork	Back fill	<p>Reuse existing material to back fill, compact, grade. 3rd party testing required. Include corresponding item for 3rd party testing.</p> <p>Materials:</p> <p>No material required.</p>	TM2.73.15 Construction Standards		CY	1
SSIG1065	Construction - Inground	Earthwork	Back fill with select fill	<p>Supply and install select fill, compact, grade. 3rd party testing required. Include corresponding item for 3rd party testing.</p> <p>Materials:</p> <p>Contractor to supply select fill with laboratory testing.</p>	TM2.73.15 Construction Standards		CY	1

SSIG1066	Construction - Inground	Earthwork	Crushed stone	<p>Supply and install crushed stone for bedding, backfill, or stone surface course, compact, grade. 3rd party testing required. Include corresponding item for 3rd party testing.</p> <p>Materials:</p> <p>Contractor to supply crushed stone with laboratory testing and required geotextile fabrics.</p>	TM2.73.15 Construction Standards Section 31 15 40 - Crushed Stone Surfacing		CY	1
SSIG1067	Construction - Inground	Environmental Controls	Install Erosion Control Berm	<p>Excavation, Staking, Placement, Maintenance, Delivery and Removal</p> <p>Materials:</p> <p>Contractor to supply all material</p>	TM2.71.09 Yard & Fencing		LF	1
SSIG1068	Construction - Inground	Environmental Controls	Install Straw Bale	<p>Includes all Labor, rebar/stakes, Maintenance, placement and removal</p> <p>Materials:</p> <p>Contractor to supply all material</p>	TM2.71.09 Yard & Fencing		LF	1
SSIG1069	Construction - Inground	Environmental Controls	Install Check Dam	<p>Includes all Labor, delivery, excavation, backfill, grading and survey</p> <p>Materials:</p> <p>Contractor to supply all material</p>	TM2.71.09 Yard & Fencing		CY	1

SSIG1070	Construction - Inground	Environmental Controls	Install soil/bark mix	delivery, grading/spreading  Materials: Contractor to supply all material	TM2.71.09 Yard & Fencing		CY	1
SSIG1071	Construction - Inground	Environmental Controls	Install topsoil stockpile	Includes silt fencing around pile, delivery, excavation, and vegetation or cover  Materials: Contractor to supply all material	TM2.71.09 Yard & Fencing		CY	1
SSIG1072	Construction - Inground	Environmental Controls	Install erosion control mesh	Includes all anchoring, netting, roll out and placement  Materials: Contractor to supply all material	TM2.71.09 Yard & Fencing		SF	1
SSIG1073	Construction - Inground	Environmental Controls	Install Silt Fence	Includes all stakes, filter cloth, embedment excavation, compaction, maintenance and placement  Materials: Contractor to supply all material	TM2.71.09 Yard & Fencing		LF	1
SSIG1074	Construction - Inground	Environmental Controls	Install Grass Lined Channel	Includes all excavation, grading, surveying, anchoring, netting, roll out and placement  Materials: Contractor to supply all material	TM2.71.09 Yard & Fencing		SY	1



SSIG1075	Construction - Inground	Environmental Controls	Install Culvert Inlet/Outlet Protection	Includes all excavation, backfill, compaction, material placement and maintenance  Materials: Contractor to supply all material	TM2.71.09 Yard & Fencing		Each	1
SSIG1076	Construction - Inground	Environmental Controls	Install Erosion Control Swale	Excavate, Grade, Compact & Seed  Materials: Contractor to supply all material	TM2.71.09 Yard & Fencing		SY	1
SSIG1077	Construction - Inground	ITEM DELETED						
SSIG1078	Construction - Inground	Firewalls	Install Pre-Cast Firewall	Excavate area, compact subgrade, install concrete footing, backfill and compact area, install firewall panels and columns, and all bracing and shoring. Use Column & Panel Designs  Materials: Concrete, firewall panels, bracing and shoring, backfill, and stone will be contractor supplied. Rebar and columns will be contractor supplied.	TM2.71.63 Use ACI and Industry Standard Guidelines	Per 12in thick wall 10ft long and 15ft tall. Including foundation per 10ft section	LF	1
SSIG1079	Construction - Inground	Firewalls	Install Cast in Place Firewall	Excavate area, compact subgrade, formwork, install rebar, anchor bolts and concrete.  Materials:	TM2.71.63 Use ACI and Industry Standard Guidelines	Per 12in thick wall 10ft long and 15ft tall. Including foundation per 10ft section	LF	1

				Contractor to supply all materials (concrete, rebar, anchor bolts, etc.)				
SSIG1080	Construction - Inground	Foundation	Install 34.5/46kV Cap Bank concrete foundation	Excavate area, compact subgrade, formwork, install rebar, anchor bolts and concrete. Backfill with native soil.  Materials:  Contractor to supply all materials (concrete, rebar, anchor bolts, etc.)	TM2.62.00 69kV & Below Reinforced Concrete Foundation Standards  TM2.61.02 - 34.5 kV Capacitor Bank Foundation	Price shall include the cost of foundation(s) applicable to the TM noted in the Standards column. Multiple foudations will count as (1) Each for the set.	Each	1
SSIG1081	Construction - Inground	Foundation	Install 115kV Cap Bank concrete foundation	Excavate area, compact subgrade, formwork, install rebar, anchor bolts and concrete. Backfill with native soil.  Materials:  Contractor to supply all materials (concrete, rebar, anchor bolts, etc.)	TM2.71.00 115KV & Above Reinforced Concrete Foundation Standards  TM2.71.06 115kV - Capacitor Bank (Up to 50MVA) 115kV - Capacitor Bank (Up to 50MVA)	Price shall include the cost of foundation(s) applicable to the TM noted in the Standards column. Multiple foudations will count as (1) Each for the set.	Each	1
SSIG1082	Construction - Inground	Foundation	Install 345kV Cap Bank concrete foundation	Excavate area, compact subgrade, formwork, install rebar, anchor bolts and concrete. Backfill with native soil.  Materials:  Contractor to supply all materials (concrete, rebar, anchor bolts, etc.)	TM2.71.00 115KV & Above Reinforced Concrete Foundation Standards  TM2.71.06 115kV - Capacitor Bank (Up to 50MVA) 115kV -	Price shall include the cost of foundation(s) applicable to the TM noted in the Standards column. Multiple foudations will count as (1) Each for the set.	Each	1

					Capacitor Bank (Up to 50MVA)			
SSIG1083	Construction - Inground	Foundation	Install 15.5kV & 34.5kV Vacuum Circuit Breaker concrete foundation	Excavate area, compact subgrade, formwork, install rebar, anchor bolts and concrete. Backfill with native soil.  Materials:  Contractor to supply all materials (concrete, rebar, anchor bolts, etc.)	TM2.62.00 69kV & Below Reinforced Concrete Foundation Standards  TM2.61.11 15kV- 38kV Vacuum Breaker Foundation	Price shall include the cost of foundation(s) applicable to the TM noted in the Standards column. Multiple foudations will count as (1) Each for the set.	Each	1
SSIG1084	Construction - Inground	Foundation	Install 15.5kV & 34.5kV Vacuum Circuit Breaker concrete foundation - Double Pier	Excavate area, compact subgrade, formwork, install rebar, anchor bolts and concrete. Backfill with native soil.  Materials:  Contractor to supply all materials (concrete, rebar, anchor bolts, etc.)	SFD-BAA-AC TM2.62.00 69kV & Below Reinforced Concrete Foundation Standards  TM2.61.11 15kV- 38kV Vacuum Breaker Foundation	Price shall include the cost of foundation(s) applicable to the TM noted in the Standards column. Multiple foudations will count as (1) Each for the set.	Each	1
SSIG1085	Construction - Inground	Foundation	Install 72kV SF6 Circuit Breaker concrete foundation	Excavate area, compact subgrade, formwork, install rebar, anchor bolts and concrete. Backfill with native soil.  Materials:  Contractor to supply all materials (concrete, rebar, anchor bolts, etc.)	TM2.62.00 69kV & Below Reinforced Concrete Foundation Standards  TM2.61.12 72k GOP Breaker	Price shall include the cost of foundation(s) applicable to the TM noted in the Standards column. Multiple foudations will count as (1) Each for the set.	Each	1

SSIG1086	Construction - Inground	Foundation	Install 115kV SF6 or IPO Circuit Breaker concrete foundation	Excavate area, compact subgrade, formwork, install rebar, anchor bolts and concrete. Backfill with native soil.  Materials:  Contractor to supply all materials (concrete, rebar, anchor bolts, etc.)	TM2.71.00 115kV & Above Reinforced Concrete Foundation Standards  TM2.71.07 115kV IPO Power Circuit Breaker	Price shall include the cost of foundation(s) applicable to the TM noted in the Standards column. Multiple foundations will count as (1) Each for the set.	Each	1
SSIG1087	Construction - Inground	Foundation	Install 230kV SF6 Circuit Breaker concrete foundation	Excavate area, compact subgrade, formwork, install rebar, anchor bolts and concrete. Backfill with native soil.  Materials:  Contractor to supply all materials (concrete, rebar, anchor bolts, etc.)	TM2.71.00 115kV & Above Reinforced Concrete Foundation Standards  TM2.71.02 230kV GOP Breaker	Price shall include the cost of foundation(s) applicable to the TM noted in the Standards column. Multiple foundations will count as (1) Each for the set.	Each	1
SSIG1088	Construction - Inground	Foundation	Install 345kV SF6 Circuit Breaker concrete foundation	Excavate area, compact subgrade, formwork, install rebar, anchor bolts and concrete. Backfill with native soil.  Materials:  Contractor to supply all materials (concrete, rebar, anchor bolts, etc.)	TM2.71.00 115kV & Above Reinforced Concrete Foundation Standards  TM2.71.02 230kV GOP Breaker	Price shall include the cost of foundation(s) applicable to the TM noted in the Standards column. Multiple foundations will count as (1) Each for the set.	Each	1
SSIG1089	Construction - Inground	Foundation	Install 34/12kV (14) MVA Transformer concrete foundation	Excavate area, compact subgrade, formwork, install rebar, anchor bolts and concrete. Backfill with native soil.  Materials:  Contractor to supply all materials (concrete, rebar, anchor bolts, etc.)	TM2.62.00 69kV & Below Reinforced Concrete Foundation Standards  TM2.61.01-2 34-12kV 10-14 Transformer	Price shall include the cost of foundation(s) applicable to the TM noted in the Standards column. Multiple foundations will count as (1) Each for the set.	Each	1

SSIG1090	Construction - Inground	Foundation	Install 34/12kV (37) MVA Transformer concrete foundation	Excavate area, compact subgrade, formwork, install rebar, anchor bolts and concrete. Backfill with native soil.  Materials:  Contractor to supply all materials (concrete, rebar, anchor bolts, etc.)	TM2.62.00 69kV & Below Reinforced Concrete Foundation Standards  TM2.61.01-1 34-12kV 20-37 Transformer	Price shall include the cost of foundation(s) applicable to the TM noted in the Standards column. Multiple foundations will count as (1) Each for the set.	Each	1
SSIG1091	Construction - Inground	Foundation	Install 115-34.5kV Transformer concrete foundation	Excavate area, compact subgrade, formwork, install rebar, anchor bolts and concrete. Backfill with native soil.  Materials:  Contractor to supply all materials (concrete, rebar, anchor bolts, etc.)	TM2.71.00 115kV & Above Reinforced Concrete Foundation Standards  TM2.71.05 115-34.5kV 50mVA Transformer	Price shall include the cost of foundation(s) applicable to the TM noted in the Standards column. Multiple foundations will count as (1) Each for the set.	Each	1
SSIG1092	Construction - Inground	Foundation	Install 69kV bay structure foundation	Excavate area, compact subgrade, formwork, install rebar, anchor bolts and concrete. Backfill with native soil.  Materials:  Contractor to supply all materials (concrete, rebar, etc.)	TM2.62.01 Standard Foundation Detail 69KV Bay Structure	Price shall include the cost of foundation(s) applicable to the TM noted in the Standards column. Multiple foundations will count as (1) Each for the set.	Each	1
SSIG1093	Construction - Inground	Foundation	Install 69kV strain tower foundation	Excavate area, compact subgrade, formwork, install rebar, anchor bolts and concrete. Backfill with native soil.  Materials:  Contractor to supply all materials (concrete, rebar, etc.)	TM2.71.99 - Foundation Detail 69kV Strain Tower	Price shall include the cost of foundation(s) applicable to the TM noted in the Standards column. Multiple foundations will count as (1) Each for the set.	Each	1

SSIG1094	Construction - Inground	Foundation	Install 15kV bay structure foundation	Excavate area, compact subgrade, formwork, install rebar, anchor bolts and concrete. Backfill with native soil.  Materials:  Contractor to supply all materials (concrete, rebar, etc.)	TM2.62.02 Distribution Bus Conf Structures	Price shall include the cost of foundation(s) applicable to the TM noted in the Standards column. Multiple foundations will count as (1) Each for the set.	Each	1
SSIG1095	Construction - Inground	Foundation	Install 34.5/46kV 1 PH. VT stand foundation	Excavate area, compact subgrade, formwork, install rebar, anchor bolts and concrete. Backfill with native soil.  Materials:  Contractor to supply all materials (concrete, rebar, etc.)	TM2.62.014 34.5 kV 1PH VT Foundation & TM2.62.21 46 kV Single PH VT FDN	Price shall include the cost of foundation(s) applicable to the TM noted in the Standards column. Multiple foundations will count as (1) Each for the set.	Each	1
SSIG1096	Construction - Inground	Foundation	Install 34.5/46kV 3 PH. VT stand foundation	Excavate area, compact subgrade, formwork, install rebar, anchor bolts and concrete. Backfill with native soil.  Materials:  Contractor to supply all materials (concrete, rebar, etc.)	TM2.62.012 34.5 kV 3PH VT & TM2.62.22 46kV 3PH VT FDN		Each	1
SSIG1097	Construction - Inground	Foundation	Install 115kV CCVT, LA, WT, bus support and switch stand foundations	Excavate area, compact subgrade, formwork, install rebar, anchor bolts and concrete. Backfill with native soil.  Materials:  Contractor to supply all materials (concrete, rebar, etc.)	TM2.71.93, TM2.71.94, TM2.71.95, TM2.71.96, TM2.71.97, TM2.71.98, TM2.71.99, TM2.71.100, TM2.71.101, TM2.71.102, TM2.71.103 & TM2.71.123		Each	1

SSIG1098	Construction - Inground	Foundation	Install 230kV CCVT, LA, WT, bus support and switch stand foundations	Excavate area, compact subgrade, formwork, install rebar, anchor bolts and concrete. Backfill with native soil.  Materials:  Contractor to supply all materials (concrete, rebar, etc.)	TM2.71.73, TM2.71.82, TM2.71.83, TM2.71.84, TM2.71.86, TM2.71.87, TM2.71.88, TM2.71.89, TM2.71.90, TM2.71.91, TM2.71.107, TM2.71.122 & TM2.71.124		Each	1
SSIG1099	Construction - Inground	Foundation	Install 230kV line termination foundation	Excavate area, compact subgrade, formwork, install rebar, anchor bolts and concrete. Backfill with native soil.  Materials:  Contractor to supply all materials (concrete, rebar, etc.)	TM2.71.81 Foundation Detail 230kV Substation Line Termination STR.	Price shall include the cost of foundation(s) applicable to the TM noted in the Standards column. Multiple foundations will count as (1) Each for the set.	Each	1
SSIG1100	Construction - Inground	Foundation	Install 115kV line termination foundation	Excavate area, compact subgrade, formwork, install rebar, anchor bolts and concrete. Backfill with native soil.  Materials:  Contractor to supply all materials (concrete, rebar, etc.)	TM2.71.92 Foundation Detail 115kV Substation Line Termination STR.	Price shall include the cost of foundation(s) applicable to the TM noted in the Standards column. Multiple foundations will count as (1) Each for the set.	Each	1

SSIG1101	Construction - Inground	Foundation	Install 115/230kV 60'/65' static mast foundation	Excavate area, compact subgrade, formwork, install rebar, anchor bolts and concrete. Backfill with native soil.  Materials:  Contractor to supply all materials (concrete, rebar, etc.)	TM2.71.104 Foundation Detail 115kV Tubular Static Mast, TM2.61.32 60' Lightening Mast	Price shall include the cost of foundation(s) applicable to the TM noted in the Standards column. Multiple foundations will count as (1) Each for the set.	Each	1
SSIG1102	Construction - Inground	Foundation	Install Small Control House (24'-6"x12') concrete foundation	Excavate area, compact subgrade, formwork, install rebar, anchor bolts and concrete. Backfill with native soil.  Materials:  Contractor to supply all materials (concrete, rebar, etc.)	TM2.61.00  TM2.71.08  TM2.71.08-1		Each	1
SSIG1103	Construction - Inground	Foundation	Install Medium Control House (43'-6"x22') concrete foundation	Excavate area, compact subgrade, formwork, install rebar, anchor bolts and concrete. Backfill with native soil.  Materials:  Contractor to supply all materials (concrete, rebar, etc.)	TM2.61.00  TM2.71.08, TM2.71.08-2		Each	1
SSIG1104	Construction - Inground	Foundation	Install Large Control House (61'-6"x26') concrete foundation	Excavate area, compact subgrade, formwork, install rebar, anchor bolts and concrete. Backfill with native soil.  Materials:  Contractor to supply all materials (concrete, rebar, etc.)	TM2.61.00  TM2.71.08, TM2.71.08-3		Each	1



SSIG1105	Construction - Inground	Foundation	Install Slab type foundation	Excavate area, compact subgrade, install concrete footing, backfill and compact area. Slab Foundation shall not exceed 1.5' depth  Materials:  Concrete, backfill and stone will be contractor supplied. Rebar, drop in anchor bolts, drill in anchors, etc. will be contractor supplied.	Use ACI and Industry Standard Guidelines		CY	1
SSIG1106	Construction - Inground	Foundation	Install Drilled Caisson Foundation - 30" to 36"	Excavate area, install rebar and concrete, backfill/compact area and restore landscape. Quantity will be measured in LF depth.  Materials:  Concrete and rebar cage will be contractor supplied, anchor cage will be contractor supplied.	Use ACI and Industry Standard Guidelines	Not to exceed 25' depth	LF	1
SSIG1107	Construction - Inground	Foundation	Install Drilled Caisson Foundation - 42" to 48"	Excavate area, install rebar and concrete, backfill/compact area and restore landscape. Quantity will be measured in LF depth.  Materials:  Concrete and rebar cage will be contractor supplied, anchor cage will be contractor supplied.	Use ACI and Industry Standard Guidelines	Not to exceed 25' depth	LF	1
SSIG1108	Construction - Inground	Foundation	Install Drilled Caisson Foundation - 60" to 72"	Excavate area, install rebar and concrete, backfill/compact area and restore landscape. Quantity will be measured in LF depth.  Materials:	Use ACI and Industry Standard Guidelines	Not to exceed 25' depth	LF	1

				Concrete and rebar cage will be contractor supplied, anchor cage will be contractor supplied.				
SSIG1109	Construction - Inground	Foundation	Rock Removal for Drilled Caisson Foundation	Rock removal for rock removal or anchoring into bedrock.  Labor and equipment is CONTRACTORS responsibility.	Use ACI and Industry Standard Guidelines		CY	1
SSIG1110	Construction - Inground	Foundation	Station Service Transformer Cast in Place Foundation	Excavate area, compact subgrade, install concrete footing, backfill and compact area. Cast in place foundations used for this foundation have typical dimensions of 6'x 6'x 2' thick.  Materials:  Concrete, backfill and stone will be contractor supplied. Rebar, anchor bolts, drill in anchors, etc. will be contractor supplied.	Use ACI and Industry Standard Guidelines		CY	1
SSIG1111	Construction - Inground	Foundation	Station Service Transformer Precast Foundation	Excavate area, compact subgrade, install concrete footing, backfill and compact area. Precast concrete vaults used for this foundation have typical dimensions of 6'x6'x4' deep. Contains knockouts around perimeter.  Materials:  Concrete, backfill and stone will be contractor supplied. Rebar,	RGE Distribution Standard for Precast Transformer Foundations		Each	1

				anchor bolts, drill in anchors, etc. will be contractor supplied.				
SSIG1112	Construction - Inground	Foundation	Battery Foundation - Outdoor Battery	Excavate, install pre-cast foundation, backfill, same as above, includes four - 4" conduit sweeps under new foundation and conduits to perimeter of foundation.	TM2.73.15 Construction Standards		Each	1
SSIG1113	Construction - Inground	Foundation	Install Rock Anchor	Excavate area, drill & grout holes, install anchor, pour concrete footing, backfill and compact area  Materials:  Rock Anchors will be contractor supplied.	Use ACI and Industry Standard Guidelines	4ft long depth for anchor	EACH	1
SSIG1114	Construction - Inground	Foundation	Reinforcing bars (all sizes)	Fabricate, supply, and install reinforcing steel.  Materials:  Contractor to supply all reinforcing steel and welded wire mesh including support bars, bolsters, chairs, standoffs and bricks. Reinforcing steel shall have mill certifications.	TM2.73.15 Construction Standards	For additional rebar required beyond standard design	LBS	1
SSIG1115	Construction - Inground	Foundation	Formwork	Supply and install formwork for concrete placement  Materials:	TM2.73.15 Construction Standards	For additional formwork required beyond standard foundation design.	SF	1

				Contractor to supply all formwork				
SSIG1116	Construction - Inground	Foundation	Concrete 4500 psi	<p>Supply, place and finish concrete, point and patch exposed surfaces,. Includes 3rd party testing required per specifications.</p> <p>Materials:</p> <p>Contractor to supply all redi-mix concrete, curing materials and patching materials as needed.</p>	<p>TM2.61.02 - 34.5 kV Capacitor Bank Foundation</p> <p>TM2.73.15 Construction Standards Section 03 30 00 - Cast-In-Place Concrete</p>	For additional concrete required beyond standard foundation design. For miscellaneous concrete pours.	CY	1
SSIG1116_1	Construction - Inground	Foundation	Winter Weather Concrete Adder	<p>Additional cost associated with placing and curing concrete in colder weather. Includes any cost from concrete supplier and the use of insulated blankets during curing. Contractor to supply all labor and material necessary. Paid per CY.</p>	<p>TM2.73.15 Construction Standards Section 03 30 00 - Cast-In-Place Concrete</p>		CY	1
SSIG1117	Construction - Inground	Grounding	Install direct buried Ground wire	<p>Prepare opening and install 4/0 copper ground wire for a Substation ground grid. Per linear foot, note connections are a separate line PID. Depth of 24". Backfill with native soil.</p> <p>Materials:</p> <p>Owner will supply wire. Connectors will be contractor supplied. Contractor to supply backfill, stone, etc.</p>	<p>TM2.71.77 Substation Grounding</p> <p>TM2.71.09 Yard and Fencing</p>		LF	1

SSIG1118	Construction - Inground	Grounding	Install Cable Trench Grounding	<p>Install each 4/0 copper ground wire inside the entire length of the cable trench and connect to Substation ground grid at crossings. Supply and install any fasteners used to secure the cable to the walls.</p> <p>Note that grounding connectors are included in separate PayCU.</p> <p>Materials:</p> <p>Owner will supply wire. Contractor responsible for ground cable supports fasteners.</p>	<p>TM2.71.78 Grounding TM2.71.09 Yard and Fencing</p>	LF	1
SSIG1119	Construction - Inground	Grounding	Install Substation Fence Line Post Grounding	<p>Install 4/0 copper ground wire from Substation ground grid to fence line post. Install 2/0 copper ground wire to fabric and barbed wire.</p> <p><u>Includes all grounding connectors from fence to ground grid.</u></p> <p>Materials:</p> <p>Owner will supply wire. Connectors will be contractor supplied.</p>	<p>TM2.71.78 Grounding TM2.71.09 Yard and Fencing</p>	EACH	1

SSIG1120	Construction - Inground	Grounding	Install Substation Fence Corner Post Grounding	<p>Install 4/0 copper ground wire from Substation ground grid to fence corner post. Install 2/0 copper ground wire from bottom to fabric and barbed wire on top.</p> <p><u>Includes all grounding connectors from fence to ground grid.</u></p> <p>Materials:</p> <p>Owner will supply wire. Connectors will be contractor supplied.</p>	TM2.71.78 Grounding TM2.71.09 Yard and Fencing	EACH	1
SSIG1121	Construction - Inground	Grounding	Install Substation Entrance Gate Grounding	<p>Install 4/0 copper ground wire from Substation ground grid to a typical Substation entrance Gate. Install 2/0 copper ground wire from bottom to fabric and barbed wire on top. Includes all ground braids and connectors.</p> <p><u>Includes all grounding connectors from fence to ground grid.</u></p> <p>Materials:</p> <p>Owner will supply wire. Connectors/braids will be contractor supplied.</p>	TM2.71.78 Grounding TM2.71.09 Yard and Fencing	EACH	1
SSIG1122	Construction - Inground	Grounding	Install Substation Personnel Gate Grounding	<p>Install 4/0 copper ground wire from Substation ground grid to a typical Substation Personnel entrance Gate. Install 2/0 copper ground wire on bottom to fabric and barbed wire on top. Includes all ground braids and connectors.</p>	TM2.71.78 Grounding TM2.71.09 Yard and Fencing	EACH	1

				<p><u>Includes all grounding connectors from fence to ground grid.</u></p> <p>Materials:</p> <p>Owner will supply wire. Connectors/braids will be contractor supplied.</p>				
SSIG1123	Construction - Inground	Grounding	Install Ground Well	<p>Install Ground Well, price per linear foot of well depth. Includes all connectors and ties back to main substation grid.</p> <p>Materials:</p> <p>Owner will supply wire. Connectors will be contractor supplied.</p>	TM2.71.78 Grounding	No greater than 6" diameter and 8 FT depth for ground well.	LF	1
SSIG1124	Construction - Inground	Grounding	Install Fence Grounding near Overhead 115kV and above Lines	<p>Ground all posts to ground grid within 10 feet of an OH power line.</p> <p><u>Includes all grounding connectors from fence to ground grid.</u></p> <p>Materials:</p> <p>Owner will supply wire. Connectors will be contractor supplied.</p>	TM2.71.78 Grounding TM2.71.09 Yard and Fencing		Each	1
SSIG1125	Construction - Inground	Grounding	Install Ground Rod	<p>Install 3/4" 10 foot copper Ground Rod, include all connectors and ties back to main grid.</p>	TM2.71.78 Grounding		Each	1

				Materials: Owner will supply wire. Connectors and ground rods will be contractor supplied.				
SSIG1126	Construction - Inground	Grounding	Install Grounding Connector - High Compression	Install High compression grounding connector for main grid (all structure/element ground connections are included in other PIDs)  Materials: Connectors will be contractor supplied.	TM2.71.78 Grounding		Each	1
SSIG1127	Construction - Inground	Grounding	Install Grounding Connector - Exothermic Weld	Install exothermic weld type grounding connector for main grid (all structure/element ground connections are included in other PIDs)  Materials: All material supplied by contractor.	TM2.71.78 Grounding		Each	1
SSIG1128	Construction - Inground	Roads/Sidewalk	Asphalt Paving	All excavation, surveying, grading, compaction, testing, delivery and placement of concrete, labor and materials. All 3rd party testing shall be included in this scope.  Materials: Contractor to supply all material	TM 2.71.09 All applicable NYS DOT Specifications		TONS	1



SSIG1129	Construction - Inground	Roads/Sidewalk	Granite Curb	<p>All excavation, surveying, grading, compaction, testing, delivery and placement of concrete, labor and materials. All 3rd party testing shall be included in this scope.</p> <p>Materials:</p> <p>Contractor to supply all material</p>	<p>TM 2.71.09 All applicable NYS DOT Specifications</p>	LF	1
SSIG1130	Construction - Inground	Roads/Sidewalk	Mill 1 1/2" and Pave Asphalt top course	<p>All excavation, surveying, grading, compaction, testing, delivery and placement of asphalt, labor and materials. All 3rd party testing shall be included in this scope.</p> <p>Materials:</p> <p>Contractor to supply all material</p>	<p>TM 2.71.09 All applicable NYS DOT Specifications</p>	SY	1
SSIG1131	Construction - Inground	Roads/Sidewalk	Concrete Paving	<p>All excavation, surveying, grading, compaction, testing, delivery and placement of concrete, labor and materials. Maximum Distance 20 Miles. All 3rd party testing shall be included in this scope.</p> <p>Materials:</p> <p>Contractor to supply all material</p>	<p>TM 2.71.09 All applicable NYS DOT Specifications</p>	CY	1
SSIG1132	Construction - Inground	Site Prep	Clearing & Grubbing	<p>Clearing of trees, shrubs, first foot of material, rocks, undergrowth and deadwood</p> <p>Materials:</p> <p>Contractor to supply all material</p>	<p>TM2.71.09 Yard &amp; Fencing, TM2.73.15 Substation Construction Standards Section 31 11 00 Clear and Grub</p>	SY	1

SSIG1133	Construction - Inground	Site Prep	Site Grading/Compaction of Subgrade	Grading, rolling, testing and surveying . All 3rd party testing shall be included in the scope if necessary for compaction.  Materials:  Contractor to supply all material	TM2.71.09 Yard & Fencing, TM2.73.15 Substation Construction Standards Section 31 22 00 Site Grading		SY	1
SSIG1134	Construction - Inground	Site Prep	Landscaping - Seed and Mulch	Excavate, Compact, Grade & Seed/Mulch with Straw . All 3rd party testing shall be included in the scope.  Materials:  Contractor to supply all material	TM2.71.09 Yard & Fencing		SY	1
SSIG1135	Construction - Inground	Spoils	Loading of spoils into dumpsters on site.	Includes labor and equipment to load dumpsters . Disposal fees and dumpster costs will be paid by OWNER.  Materials:  Plastic to line dumpsters	TM2.73.15 Construction Standards Section 01 45 23 Testing and Inspecting Services		CY	1
SSIG1136	Construction - Inground	Spoils	Hauling of Clean Spoils in Triaxle Dump Truck to Approved Landfill.	Labor and equipment to haul material to approved landfill. Includes any plastic if necessary to line truck. Round trip mileage will be used for payment and will be measured by shortest route from project site to landfill. Truck to be loaded to allowable weight per NYSDOT regulations and shall be full before leaving the jobsite.	TM2.73.15 Construction Standards Section 01 45 23 Testing and Inspecting Services NYSDOT Standards		Per Mile	1
SSIG1137	Construction - Inground	Station Security	Install Substation Chain Link Fence	Install 8ft tall Chain link fence with posts with 45 deg barbed wire. Major material to be installed supplied by Contractor.	TM2.71.09 Substation Yard & Fencing		LF	1

					TM2.71.78 Fence and Grounding			
SSIG1138	Construction - Inground	Station Security	Install Substation Personnel Gate	Install 3' personnel gate. Major material to be installed supplied by Contractor.	TM2.71.09 Substation Yard & Fencing TM2.71.78 Fence and Grounding		Each	1
SSIG1139	Construction - Inground	Station Security	Install Substation Fence Gate	Install 8' x 20' ft chain link fence gate. Major material to be installed supplied by Contractor.	TM2.71.09 Substation Yard & Fencing TM2.71.78 Fence and Grounding		Each	1
SSIG1140	Construction - Inground	Station Security	Install Substation Gate pre-cast concrete threshold	Install Gate concrete threshold. Major material to be installed supplied by Contractor.	TM2.71.09 Substation Yard & Fencing TM2.71.78 Fence and Grounding		Each	1
SSIG1141	Construction - Inground	Station Security	Install Substation access road vehicle gate	Install access road vehicle gate. Major material to be installed supplied by Contractor.	TM2.71.09 Substation Yard & Fencing TM2.71.78 Fence and Grounding		Each	1
SSIG1142	Construction - Inground	Station Security	Remove Substation Chain Link Fence	Remove 8ft tall Chain link fence with 45 deg barbed wire	TM2.71.09 Substation Yard & Fencing		LF	1
SSIG1143	Construction - Inground	Station Security	Remove Substation Personnel Gate	Remove 3' personnel gate.	TM2.71.09 Substation Yard & Fencing		Each	1
SSIG1144	Construction - Inground	Station Security	Remove Substation Fence Gate	Remove 8x20 ft chain link fence gate.	TM2.71.09 Substation Yard & Fencing		Each	1
SSIG1145	Construction - Inground	Station Security	Remove Substation Gate concrete threshold	Remove Gate concrete threshold	TM2.71.09 Substation Yard & Fencing		Each	1
SSIG1146	Construction - Inground	Station Security	Remove Substation access road vehicle gate	Remove access road vehicle gate	TM2.71.09 Substation Yard & Fencing		Each	1

SSIG1147	Construction - Inground	Station Security	Install Non-Conductive Fence	Install Non-Conductive Fence (Darkgray) 8ft Tall. All material supplied and installed by Contractor.	TM2.73.15 Construction Specifications Substation		LF	1
SSAG1429	Construction - Above Ground	Mobilization/Demobilization	Mob/Demob < \$35K	For standard small tools/labor Mobilization necessary to commence work is based on the size of the project being assigned. This unit is used for Mobilization for projects less than \$35K. Once the pricing sheet is completed and agreed to by the Company's Representative this unit will be applied to obtain mobilization dollars. This unit also includes Demobilization. Mobilization costs of wheeled equipment is to be included in work activities.	TM2.73.15 Construction Standards		EACH	1
SSAG1430	Construction - Above Ground	Mobilization/Demobilization	Mob/Demob \$36K to \$100K	For standard equipment/labor Mobilization necessary to commence work is based on the size of the project being assigned. This unit is used for Mobilization for projects equal to or greater than \$36K but less than \$101K. Once the pricing sheet is completed and agreed to by the Company's Representative this unit will be applied to obtain mobilization dollars. This unit also includes Demobilization. Mobilization costs of wheeled equipment is to be included in work activities.	TM2.73.15 Construction Standards		EACH	1
SSAG1431	Construction - Above Ground	Mobilization/Demobilization	Mob/Demobn \$101K > \$250K	For standard equipment/labor Mobilization necessary to commence work is based on the size of the project being assigned. This unit is used for Mobilization for projects equal to or greater than \$101K but less than \$251K.. Once the pricing sheet is completed and agreed	TM2.73.15 Construction Standards		EACH	1

				to by the Company's Representative this unit will be applied to obtain mobilization dollars. This unit also includes Demobilization. Mobilization costs of wheeled equipment is to be included in work activities.				
SSAG1432	Construction - Above Ground	Mobilization/Demobilization	Mob/Demobn \$251K > \$500K	For standard equipment/labor Mobilization necessary to commence work is based on the size of the project being assigned. This unit is used for Mobilization for projects equal to or greater than \$251K but less than \$500K. Once the pricing sheet is completed and agreed to by the Company's Representative this unit will be applied to obtain mobilization dollars. This unit also includes Demobilization. Mobilization costs of wheeled equipment is to be included in work activities.	TM2.73.15 Construction Standards		EACH	1
SSAG1433	Construction - Above Ground	Mobilization/Demobilization	Mob/Demobn Small Tools & Equipment and Manpower	For standard equipment/labor Mobilization necessary to commence work for subcontractors similar to testing and commissioning crews. Once the pricing sheet is completed and agreed to by the Company's Representative this unit will be applied to obtain mobilization dollars. This unit also includes Demobilization. Mobilization costs of equipment is to be included in work activities. This may be used for some work such testing & commissioning in a substation	TM2.73.15 Construction Standards		EACH	1

SSAG1000	Construction - Above Ground	AC/DC System, Control House	Install Battery Charger - 120/240V Input for battery systems.	Assemble and install battery system in control house. Includes all labor, material and equipment necessary to install equipment and ground properly. All batteries to be secured in cabinet and all wiring between batteries is included. Battery system and ground wire to be supplied by OWNER.	<p>INS 77.02.51 DC Battery and Charger Systems</p> <p>TM2.71.16 - 125VDC Station Battery &amp; Charger</p> <p>TM2.73.15 Construction Specifications Substation -</p> <p>Section 33 71 26 Transmission &amp; Distribution Equipment</p> <p>Section 33 72 33.43 Substation Batteries</p> <p>Section E1 - Commissioning Manuals</p>		EACH	1
SSAG1001	Construction - Above Ground	AC/DC System, Control House	Install Battery Cabinet - Battery cabinets up to 92 cells per cabinet.	Assemble and install battery system in control house. Includes all labor, material and equipment necessary to install equipment and ground properly. All batteries to be secured in cabinet and all wiring between batteries is included. Battery system and ground wire to be supplied by OWNER.	<p>INS 77.02.51 DC Battery and Charger Systems</p> <p>TM2.71.16 - 125VDC Station Battery &amp; Charger</p> <p>TM2.73.15 Construction Specifications Substation -</p> <p>Section 33 71 26 Transmission &amp; Distribution Equipment</p>		EACH	1

					<p>Section 33 72 33.43 Substation Batteries</p> <p>Section E1 - Commissioning Manuals</p>		
SSAG1002	Construction - Above Ground	AC/DC System, Control House	Install Battery Rack with Lead Acid Batteries	<p>Assemble and install battery system in control house. Includes all labor, material and equipment necessary to install equipment and ground properly. All batteries are to be filled and secured to rack. All wiring between batteries is included. Battery system and ground wire to be supplied by OWNER.</p>	<p>INS 77.02.51 DC Battery and Charger Systems</p> <p>TM2.71.16 - 125VDC Station Battery &amp; Charger</p> <p>TM2.73.15 Construction Specifications Substation -</p> <p>Section 33 71 26 Transmission &amp; Distribution Equipment</p> <p>Section 33 72 33.43 Substation Batteries</p> <p>Section E1 - Commissioning Manuals</p>	EACH	1

SSAG1003	Construction - Above Ground	AC/DC System, Control House	Install Outdoor Battery Cabinet	Deliver, assemble and install battery system in substation yard. includes all labor, material and equipment necessary to install equipment. All batteries are to be filled and secured in cabinet. All wiring between batteries, cabinets and SCADA systems are to be included. Functional tests of the equipment are to be included in the installation. Battery system to be supplied by OWNER.	INS-77.02.51 TM2.73.15 Construction Specifications Substation		EACH	1
SSAG1004	Construction - Above Ground	AC/DC System, Control House	Commissioning of Battery Cabinet	Testing and commissioning to include testing of wiring, component tests, and functional tests per E1 - Commissioning Manual.	Section E1 - Commissioning Manuals		EACH	1
SSAG1005	Construction - Above Ground	AC/DC System, Control House	Commissioning of Battery Charger	Testing and commissioning to include testing of wiring, component tests, and functional tests per E1 - Commissioning Manual.	Section E1 - Commissioning Manuals		EACH	1
SSAG1006	Construction - Above Ground	AC/DC System, Control House	Install AC Panelboard	Supply and Install AC Panelboard up to 400A to wall. Includes up to 40 - 15 AMP breakers	INS 50.44.05 ACDC Auxiliary Services Switchboards  TM2.73.15 Construction Specifications Substation -  Section - Control House AC Panelboards  Section E1 - Commissioning Manuals		EACH	1



SSAG1007	Construction - Above Ground	AC/DC System, Control House	Install DC Panelboard	Mount DC Fusable Panelboard to wall . Material Supplied by Contractor	INS 50.44.05 ACDC Auxiliary Services Switchboards  TM2.73.15 Construction Specifications Substation -  Section - Control House DC Panelboards  Section E1 - Commissioning Manuals	EACH	1
SSAG1008	Construction - Above Ground	AC/DC System, Control House	Install DC MCCB Panelboard	Mount DC MCCB Panelboard to wall. Material Supplied by Contractor	INS 50.44.05 ACDC Auxiliary Services Switchboards  TM2.73.15 Construction Specifications Substation -  Section - Control House DC Panelboards  Section E1 - Commissioning Manuals	EACH	1

SSAG1009	Construction - Above Ground	AC/DC System, Control House	Install Manual Transfer Switch	Install manual transfer switch. Transfer Switch (up to 400A) Supplied by Contractor. Equipment to be installed in a control / power house	<p>INS 50.44.05 ACDC Auxiliary Services Switchboards</p> <p>TM2.73.15 Construction Specifications Substation -</p> <p>Section 33 72 45 - Control House Basic Electrical Requirements</p> <p>Section 33 72 57 - Control House AC Station Service</p> <p>Section E1 - Commissioning Manuals</p>	EACH	1
SSAG1010	Construction - Above Ground	AC/DC System, Control House	Install Automatic Transfer Switch	Install automatic transfer switch. Transfer Switch (up to 400A) Supplied by Contractor. Equipment to be installed in a control / power house	<p>INS 50.44.05 ACDC Auxiliary Services Switchboards</p> <p>TM2.73.15 Construction Specifications Substation -</p> <p>Section 33 72 45 - Control House Basic Electrical Requirements</p> <p>Section 33 72 57 - Control House AC Station Service</p> <p>Section E1 -</p>	EACH	1

					Commissioning Manuals			
SSAG1011	Construction - Above Ground	AC/DC System, Control House	Install AC/DC Surge Protector	Install surge protection device. Material Supplied by Contractor	INS 50.44.05 ACDC Auxiliary Services Switchboards Section E1 - Commissioning Manuals		EACH	1
SSAG1012	Construction - Above Ground	AC/DC System, Control House	Install AC Station Service Switchgear (bulk Power)	Supply and install AC Station Service Switchboard for single & three phase 400A and above. Materials to be provided by contractor	INS 50.44.05 ACDC Auxiliary Services Switchboards Section E1 - Commissioning Manuals		EACH	1
SSAG1013	Construction - Above Ground	AC/DC System, Control House	Install AC/DC Converter	Install AC/DC converter	INS 50.44.05 ACDC Auxiliary Services Switchboards Section E1 - Commissioning Manuals		EACH	1
SSAG1014	Construction - Above Ground	AC/DC System, Control House	Install 24/48/125VDC - 120VAC Junction Box	Supply and mount AC/DC junction box (up to 24x24) for additional MCCB's. All material Supplied by Contractor.	INS 50.44.05 ACDC Auxiliary Services Switchboards Section E1 - Commissioning Manuals		EACH	1

SSAG1015	Construction - Above Ground	AC/DC System, Control House	Install Control House Cable Trays up to 24" wide and up to 12' Height	Assemble and install Cable Trays in control buildings. All equipment, material and labor to install the cable tray using anchors in concrete or steel connections. Unistruts to be provided and installed by contractor. Includes installation of grounding cables and connections. Wire to be supplied by OWNER. All fittings including elbows and tees will be included in the Linear Foot measurement and measured along the centerline of the cable tray. Material Supplied by Contractor			Per Foot	1
SSAG1016	Construction - Above Ground	AC/DC System, Control House	Install Control House Cable Trays up to 48" wide and up to 12' Height	Assemble and install Cable Trays in control buildings. All equipment, material and labor to install the cable tray using anchors in concrete or steel connections. Unistruts to be provided and installed by contractor. Includes installation of grounding cables and connections. Wire to be supplied by OWNER. All fittings including elbows and tees will be included in the Linear Foot measurement and measured along the centerline of the cable tray. Material Supplied by Contractor			Per Foot	1
SSAG1017	Construction - Above Ground	AC/DC System, Control House	Install Control House Cable Trays up to 24" wide and over 12' Height	Assemble and install Cable Trays in control buildings. All equipment, material and labor to install the cable tray using anchors in concrete or steel connections. Unistruts to be provided and installed by contractor. Includes installation of grounding cables and connections. Wire to be			Per Foot	1

				supplied by OWNER. All fittings including elbows and tees will be included in the Linear Foot measurement and measured along the centerline of the cable tray. Material Supplied by Contractor				
SSAG1018	Construction - Above Ground	AC/DC System, Control House	Install Control House Cable Trays up to 48" wide and over 12' Height	Assemble and install Cable Trays in control buildings. All equipment, material and labor to install the cable tray using anchors in concrete or steel connections. Unistruts to be provided and installed by contractor. Includes installation of grounding cables and connections. Wire to be supplied by OWNER. All fittings including elbows and tees will be included in the Linear Foot measurement and measured along the centerline of the cable tray. Material Supplied by Contractor			Per Foot	1
SSAG1019	Construction - Above Ground	AC/DC System, Control House	Install Control House Cable Trays under Raised Floor in Control House	Assemble and install Cable Trays in control buildings under raised floor in control houses. All equipment, material and labor to install the cable tray using anchors in concrete or steel connections. Includes installation of grounding cables and connections. Unistruts to be provided and installed by contractor. Wire to be supplied by OWNER. All fittings including elbows and tees will be included in the Linear Foot measurement and measured along the centerline of the cable tray. Material Supplied by Contractor. Cost of raising and installing the floor should be included.			Per Foot	1

SSAG1020	Construction - Above Ground	AC/DC System, Control House	Install HVAC Thermostat	Mount Thermostat to wall. Thermostat to be contractor supplied. Electrical box and mounting hardware to be supplied by the contractor.	TM2.71.08		EACH	1
SSAG1021	Construction - Above Ground	AC/DC System, Control House	Install HVAC disconnect switch	Mount HVAC disconnect switch to wall. HVAC to be contractor supplied. Mounting hardware to be supplied by the contractor.	TM2.71.08		EACH	1
SSAG1022	Construction - Above Ground	AC/DC System, Control House	Install lighting switch	Install lighting switch. Contractor to supply lighting switch, electrical box, covers and mounting hardware.	TM2.71.08		EACH	1
SSAG1023	Construction - Above Ground	AC/DC System, Control House	Install duplex receptacle	Install duplex receptacle. Contractor to supply receptacle, electrical box, covers, and mounting hardware.	TM2.71.08		EACH	1
SSAG1024	Construction - Above Ground	AC/DC System, Control House	Install smoke detector	Install smoke detector. Smoke detector to be contractor supplied. Contractor to supply electrical box and mounting hardware.	TM2.71.08		EACH	1
SSAG1025	Construction - Above Ground	AC/DC System, Control House	Install fire extinguisher	Mount fire extinguisher to wall. Smoke detector to be contractor supplied. Contractor to supply mounting hardware.	TM2.71.08		EACH	1
SSAG1026	Construction - Above Ground	AC/DC System, Control House	Install fire alarm panel	Mount fire alarm panel to wall. Fire alarm panel to be contractor supplied. Contractor to supply mounting hardware.	TM2.71.08		EACH	1
SSAG1027	Construction - Above Ground	AC/DC System, Control House	Install fire alarm pull station	Mount fire alarm pull station to wall. Fire alarm pull station to be contractor supplied. Contractor to supply electrical box and mounting hardware.	TM2.71.08		EACH	1
SSAG1028	Construction - Above Ground	AC/DC System, Control House	Install fire alarm horn strobe	Mount fire alarm horn strobe to wall. Fire alarm horn strobe to be contractor supplied. Contractor to supply electrical box and mounting hardware.	TM2.71.08		EACH	1
SSAG1029	Construction - Above Ground	AC/DC System, Control House	Install Battery Exhaust System	Mount/Install/ground Battery Exhaust System. Battery Exhaust System to be contractor	TM2.71.08		EACH	1

				supplied. Owner to supply ground wire. Contractor to supply mounting hardware and grounding connectors.				
SSAG1030	Construction - Above Ground	ITEM DELETED						
SSAG1031	Construction - Above Ground	AC/DC System, Control House	Install Eyewash Station	Install Eyewash Station. Eyewash station to be contractor supplied. Contractor to supply mounting hardware.	TM2.71.08		EACH	1
SSAG1032	Construction - Above Ground	AC/DC System, Control House	Install Unit Heater	Install Unit Heater. Unit heater to be contractor supplied. Contractor to supply mounting hardware.	TM2.71.08		EACH	1
SSAG1033	Construction - Above Ground	AC/DC System, Control House	Install Below Cabinet Steel Support Frames	Install/assemble/ground Steel Framing below cabinets to provide additional structural support beyond the raised flooring. Steel support structure to be contractor supplied. Owner to supply ground wire. Contractor to supply mounting hardware and grounding connectors.	TM2.71.08		EACH	1
SSAG1034	Construction - Above Ground	AC/DC System, Control House	Install Raised Floor System	Install/assemble/ground Raised Floor System. Contractor to supply raised floor system and all mounting hardware. Owner to supply ground wire. Contractor to supply mounting hardware and grounding connectors.	TM2.71.08		Per Square Foot	1
SSAG1035	Construction - Above Ground	AC/DC System, Control House	Install contactor in control house (lighting etc.)	Install contactor in control house (lighting etc.) Electrical contactors/junction box to be contractor supplied. Owner to supply ground wire. Contractor to supply mounting hardware and grounding connectors.	TM2.71.08		EACH	1

SSAG1036	Construction - Above Ground	AC/DC System, Control House	Removal Rectifier Cabinet	Disassemble old system. Includes all labor, material and equipment necessary to remove equipment. All equipment to be stored in the substation for future disposal.	<p>INS 77.02.51 DC Battery and Charger Systems</p> <p>TM2.71.26 - 48VDC Battery &amp; Charger</p> <p>TM2.73.15 Construction Specifications Substation -</p> <p>Section 33 71 26 Transmission &amp; Distribution Equipment</p> <p>Section 33 72 33.43 Substation Batteries</p>		EACH	1
SSAG1037	Construction - Above Ground	AC/DC System, Control House	Removal Battery Cabinet or Rack System	Disassemble old system. Includes all labor, material and equipment necessary to remove equipment. All equipment to be stored in the substation for future disposal.	<p>INS 77.02.51 DC Battery and Charger Systems</p> <p>TM2.71.16 - 125VDC Station Battery &amp; Charger</p> <p>TM2.73.15 Construction Specifications Substation -</p> <p>Section 33 71 26 Transmission &amp; Distribution Equipment</p> <p>Section 33 72 33.43 Substation Batteries</p>		EACH	1



SSAG1038	Construction - Above Ground	AC/DC System, Control House	Install Diesel Generator	<p>Install emergency standby Generator. All materials to be owner supplied. Price shall include use up to 30 TON crane for setting the equipment. Equipment will be delivered to site and set on pad from trailer.</p> <p>DRAWING REFERENCE: Installation per design library</p>	INS 79.30.01	EACH	1
SSAG1039	Construction - Above Ground	Capacitor Bank	Install 230/345kV Cap Bank	<p>Assemble Cap Bank steel structure and install on foundation. Mount components (Capacitors, Reactor, VT's, SA's etc.). Above ground conduits, junction boxes, grounding and all miscellaneous materials are included and will be supplied as part of the Contractor scope. Cap Bank, main components and grounding cable supplied by Owner.</p> <p>DRAWING REFERENCE: Per Design Library Drawing</p>	<p>TM2.71.12 - 115KV Capacitor Bank Sizing</p> <p>TM2.73.15 Section 33 72 23 Substation Structures</p> <p>TM2.73.15 Section 33 71 26 Transmission &amp; Distribution Equipment</p>	EACH	1
SSAG1040	Construction - Above Ground	Capacitor Bank	Remove 34.5/46 kV Cap Bank	<p>Price includes all labor, material and equipment to perform the removal of the equipment. Removal includes, but not limited to, the following: removal of any minor equipment associated with CAP Bank, rigging of old equipment, placement on trailer, removal of cans if necessary. All material to be disposed by Avangrid. Contractor will not be responsible for the disposal of the CAP Bank's dielectric</p>		EACH	1

				<p>material as part of this PayCU. CAP Bank should be grounded while in a temporary location after removal.</p> <p>DRAWING REFERENCE:</p> <p>Per Removal Drawing</p>				
SSAG1041	Construction - Above Ground	Capacitor Bank	Remove 115 kV Cap Bank	<p>Price includes all labor, material and equipment to perform the removal of the equipment. Removal includes, but not limited to, the following: removal of any minor equipment associated with CAP Bank, rigging of old equipment, placement on trailer, removal of cans if necessary. All material to be disposed by Avangrid. Contractor will not be responsible for the disposal of the CAP Bank's dielectric material as part of this PayCU. CAP Bank should be grounded while in a temporary location after removal.</p> <p>DRAWING REFERENCE:</p> <p>Per Removal Drawing</p>			EACH	1
SSAG1042	Construction - Above Ground	Capacitor Bank	Remove 230/345 kV Cap Bank	<p>Price includes all labor, material and equipment to perform the removal of the equipment. Removal includes, but not limited to, the following: removal of any minor equipment associated with CAP Bank, rigging of old equipment, placement on trailer, removal of cans if necessary. All material to be disposed by Avangrid. Contractor will not be</p>			EACH	1

				<p>responsible for the disposal of the CAP Bank's dielectric material as part of this PayCU. CAP Bank should be grounded while in a temporary location after removal.</p> <p>DRAWING REFERENCE: Per Removal Drawing</p>				
SSAG1043	Construction - Above Ground	Capacitor Bank	Install 34.5kV Capacitor "Can"	<p>Install Capacitor "Can" on Capacitor Bank. "Can" to be supply by the Owner. All miscellaneous material to be supply as part of the Contractor scope. Capacitor "Can" supplied by Owner.</p> <p>DRAWING REFERENCE: Per Design Library Drawing</p>	TM2.61.05 - 34.5KV Capacitor Bank Sizing		EACH	1
SSAG1044	Construction - Above Ground	Capacitor Bank	Install 34.5/46kV Cap Bank	<p>Assemble Cap Bank steel structure and Install on foundation. Mount components (Capacitors, Reactor, VT's, SA's etc.). Above ground conduits, junctions boxes, grounding and all miscellaneous materials are included and will be supplied as part of the Contractor scope. Cap Bank, main components and grounding cable supplied by Owner.</p> <p>DRAWING REFERENCE: Per Design Library Drawing</p>	<p>TM2.61.05 - 34.5KV Capacitor Bank Sizing</p> <p>TM2.73.15 Section 33 72 23 Substation Structures</p> <p>TM2.73.15 Section 33 71 26 Transmission &amp; Distribution Equipment</p>		EACH	1

SSAG1045	Construction - Above Ground	Capacitor Bank	Install 115kV Cap Bank	<p>Assemble Cap Bank steel structure and Install on foundation. Mount components (Capacitors, Reactor, VT's, SA's etc.). Above ground conduits, junctions boxes, grounding and all miscellaneous materials are included and will be supplied as part of the Contractor scope. Cap Bank, main components and grounding cable supplied by Owner.</p> <p>DRAWING REFERENCE: Per Design Library Drawing</p>	<p>TM2.71.12 - 115KV Capacitor Bank Sizing</p> <p>TM2.73.15 Section 33 72 23 Substation Structures</p> <p>TM2.73.15 Section 33 71 26 Transmission &amp; Distribution Equipment</p>		EACH	1
SSAG1046	Construction - Above Ground	Circuit Breaker	Install 15.5kV Vacuum Circuit Breaker	<p>Price includes all labor, material and equipment to perform installation. Installation includes, but not limited to, the following: supply and install of safety grounds if necessary, off-load equipment, place in temporary location if necessary, clean before installation, final placement, grounds, ground mat/grid, terminals, power conductor/connections to breaker, 3/4" drop in anchor bolts, and ancillary devices. Installation shall follow manufacturer recommended procedures and installation details and BOM. Wiring checks on equipment shall be completed prior to equipment installation. All miscellaneous material to be supplied and installed as part of the Contractor's scope. Breaker tags to be provided and installed by the contractor. Up to 20ft of above grade conduit material to</p>	<p>TM2.62.07 - 15.5-38KV (Distribution) Vacuum Circuit Breakers</p> <p>TM2.73.15 Construction Specifications Substation -</p> <p>Section 33 72 23 - Substation Structures</p> <p>Section 33 71 26 - Transmission &amp; Distribution Equipment</p>		EACH	1

				<p>be included in each breaker install. Breaker and grounding wire supplied by owner.</p> <p>DRAWING REFERENCE:</p> <p>Installation drawing per design library</p>				
SSAG1047	Construction - Above Ground	Circuit Breaker	Install 38kV Vacuum Circuit Breaker	<p>Price includes all labor, material and equipment to perform installation. Installation includes, but not limited to, the following: supply and install of safety grounds if necessary, off-load equipment, place in temporary location if necessary, clean before installation, final placement, grounds, ground mat/grid, terminals, power conductor/connections to breaker, 3/4" drop in anchor bolts, and ancillary devices. Installation shall follow manufacturer recommended procedures and installation details and BOM. Wiring checks on equipment shall be completed prior to equipment installation. All miscellaneous material to be supplied and installed as part of the Contractor's scope. Up to 20ft of above grade conduit material to be included in each breaker install. Breaker tags to be provided and installed by the contractor. Breaker and grounding wire supplied by owner.</p>	<p>TM2.62.07 - 15.5-38KV (Distribution) Vacuum Circuit Breakers</p> <p>TM2.73.15 Construction Specifications Substation -</p> <p>Section 33 72 23 - Substation Structures</p> <p>Section 33 71 26 - Transmission &amp; Distribution Equipment</p>		EACH	1

				<p>DRAWING REFERENCE:</p> <p>Installation drawing per design library</p>				
SSAG1048	Construction - Above Ground	Circuit Breaker	Install 72.5kV SF6 Power Circuit Breaker	<p>Price includes all labor, material and equipment to perform installation. Installation includes, but not limited to, the following: supply and install of safety grounds if necessary, off-load equipment, place in temporary location if necessary, clean before installation, final placement, SF6 gasing, grounds, ground mat/grid, terminals, power conductor/connections to breaker, and ancillary devices. Installation shall follow manufacturer recommended procedures and installation details and BOM. Wiring checks on equipment shall be completed prior to equipment installation. All miscellaneous material to be supplied and installed as part of the Contractor's scope. Up to 20ft of above grade conduit material to be included in each breaker install. Breaker tags to be provided and installed by the contractor. Breaker and grounding wire supplied by owner.</p>	<p>TM2.62.06 - 72.5KV Zeroxing Power Circuit breaker</p> <p>TM2.73.15 Construction Specifications Substation -</p> <p>Section 33 72 23 - Substation Structures</p> <p>Section 33 71 26 - Transmission &amp; Distribution Equipment</p>		EACH	1

				<p>DRAWING REFERENCE:</p> <p>Installation drawing per design library</p>				
SSAG1049	Construction - Above Ground	Circuit Breaker	Install 145kV SF6 Power Circuit Breakers	<p>Price includes all labor, material and equipment to perform installation. Installation includes, but not limited to, the following: supply and install of safety grounds if necessary, off-load equipment, place in temporary location if necessary, clean before installation, final placement, SF6 gasing, grounds, ground mat/grid, terminals, power conductor/connections to breaker, and ancillary devices. Installation shall follow manufacturer recommended procedures and installation details and BOM. Wiring checks on equipment shall be completed prior to equipment installation. All miscellaneous material to be supplied and installed as part of the Contractor's scope. Up to 20ft of above grade conduit material to be included in each breaker install. Breaker tags to be provided and installed by the contractor. Breaker and grounding wire supplied by owner.</p>	<p>TM2.72.06 - 145KV IPO Power Circuit Breaker</p> <p>TM2.73.15 Construction Specifications Substation -</p> <p>Section 33 72 23 - Substation Structures</p> <p>Section 33 71 26 - Transmission &amp; Distribution Equipment</p>		EACH	1

				<p>DRAWING REFERENCE:</p> <p>Installation drawing per design library</p>				
SSAG1050	Construction - Above Ground	Circuit Breaker	Install 245kV SF6 Gang Operated Power Circuit Breakers	<p>Price includes all labor, material and equipment to perform installation. Installation includes, but not limited to, the following: supply and install of safety grounds if necessary, off-load equipment, place in temporary location if necessary, clean before installation, final placement, SF6 gasing, grounds, ground mat/grid, terminals, power conductor/connections to breaker, and ancillary devices. Installation shall follow manufacturer recommended procedures and installation details and BOM. Wiring checks on equipment shall be completed prior to equipment installation. All miscellaneous material to be supplied and installed as part of the Contractor's scope. Up to 20ft of above grade conduit material to be included in each breaker install. Breaker tags to be provided and installed by the contractor. Breaker and grounding wire supplied by owner.</p>	<p>TM2.72.04 - 245kV Gang Operated Circuit Breaker</p> <p>TM2.73.15 Construction Specifications Substation -</p> <p>Section 33 72 23 - Substation Structures</p> <p>Section 33 71 26 - Transmission &amp; Distribution Equipment</p>		EACH	1



				<p>DRAWING REFERENCE:</p> <p>Installation drawing per design library</p>				
SSAG1051	Construction - Above Ground	Circuit Breaker	Install 362kV SF6 IPO Power Circuit Breakers	<p>Price includes all labor, material and equipment to perform installation. Installation includes, but not limited to, the following: supply and install of safety grounds if necessary, off-load equipment, place in temporary location if necessary, clean before installation, final placement, SF6 gasing, grounds, ground mat/grid, terminals, power conductor/connections to breaker, and ancillary devices. Installation shall follow manufacturer recommended procedures and installation details and BOM. Wiring checks on equipment shall be completed prior to equipment installation. All miscellaneous material to be supplied and installed as part of the Contractor's scope. Up to 20ft of above grade conduit material to be included in each breaker install. Breaker tags to be provided and installed by the contractor. Breaker and grounding wire supplied by owner.</p>	<p>TM2.72.03 - 362KV IPO Power Circuit Breaker</p> <p>TM2.73.15 Construction Specifications Substation -</p> <p>Section 33 72 23 - Substation Structures</p> <p>Section 33 71 26 - Transmission &amp; Distribution Equipment</p>		EACH	1

				DRAWING REFERENCE: Installation drawing per design library				
SSAG1052	Construction - Above Ground	Circuit Breaker	Remove 15.5kV Circuit Breaker	<p>Price includes all labor, material and equipment to perform the removal of the equipment for relocation. Removal includes, but not limited to the following: removal of any minor equipment associated with the equipment, conductor, connectors, control cable connections, ground wire, etc. Contractor will not be responsible for the disposal of the oil (if any) and the breaker as part of this PayCU. Breaker should be grounded and on stable ground while in a temporary location after removal.</p> <p>DRAWING REFERENCE: Removal per drawing</p>	<p>TM2.62.07 - 15.5-38KV (Distribution) Vacuum Circuit Breakers</p> <p>TM2.73.15 Construction Specifications Substation -</p> <p>Section 33 72 23 - Substation Structures</p> <p>Section 33 71 26 - Transmission &amp; Distribution Equipment</p>		EACH	1
SSAG1053	Construction - Above Ground	Circuit Breaker	Remove 38kV Circuit Breaker	<p>Price includes all labor, material and equipment to perform the removal of the equipment for relocation. Removal includes, but not limited to the following: removal of any minor equipment associated with the equipment, conductor, connectors, control cable connections, ground wire, etc. Contractor will not be responsible for the disposal of</p>	<p>TM2.62.07 - 15.5-38KV (Distribution) Vacuum Circuit Breakers</p> <p>TM2.73.15 Construction Specifications Substation -</p>		EACH	1

				<p>the oil (if any) and the breaker as part of this PayCU. Breaker should be grounded and on stable ground while in a temporary location after removal.</p> <p>DRAWING REFERENCE:</p> <p>Removal per drawing</p>	<p>Section 33 72 23 - Substation Structures</p> <p>Section 33 71 26 - Transmission &amp; Distribution Equipment</p>			
SSAG1054	Construction - Above Ground	Circuit Breaker	Remove 72.5kV Power Circuit Breaker	<p>Price includes all labor, material and equipment to perform the removal of the equipment for relocation. Removal includes, but not limited to the following: removal of any minor equipment associated with the equipment, conductor, connectors, control cable connections, ground wire, etc. Contractor will not be responsible for the disposal of the oil (if any) and the breaker as part of this PayCU. Breaker should be grounded and on stable ground while in a temporary location after removal.</p> <p>DRAWING REFERENCE:</p> <p>Removal per drawing</p>	<p>TM2.62.06 - 72.5KV Zeroxing Power Circuit breaker</p> <p>TM2.73.15 Construction Specifications Substation -</p> <p>Section 33 72 23 - Substation Structures</p> <p>Section 33 71 26 - Transmission &amp; Distribution Equipment</p>		EACH	1
SSAG1055	Construction - Above Ground	Circuit Breaker	Remove 145kV Power Circuit Breakers	<p>Price includes all labor, material and equipment to perform the removal of the equipment for relocation. Removal includes, but not limited to the following: removal of any minor equipment associated with the equipment, conductor, connectors, control cable connections, ground wire, etc. Contractor will not be responsible for the disposal of the oil (if any) and the breaker as</p>	<p>TM2.72.06 - 145KV IPO Power Circuit Breaker</p> <p>TM2.73.15 Construction Specifications Substation -</p> <p>Section 33 72 23 - Substation</p>		EACH	1

				<p>part of this PayCU. Breaker should be grounded and on stable ground while in a temporary location after removal.</p> <p>DRAWING REFERENCE:</p> <p>Removal per drawing</p>	<p>Structures</p> <p>Section 33 71 26 - Transmission &amp; Distribution Equipment</p>			
SSAG1056	Construction - Above Ground	Circuit Breaker	Remove 245kV Power Circuit Breakers	<p>Price includes all labor, material and equipment to perform the removal of the equipment for relocation. Removal includes, but not limited to the following: removal of any minor equipment associated with the equipment, conductor, connectors, control cable connections, ground wire, etc. Contractor will not be responsible for the disposal of the oil (if any) and the breaker as part of this PayCU. Breaker should be grounded and on stable ground while in a temporary location after removal.</p> <p>DRAWING REFERENCE:</p> <p>Removal per drawing</p>	<p>TM2.72.04 - 245kV Gang Operated Circuit Breaker</p> <p>TM2.73.15 Construction Specifications Substation -</p> <p>Section 33 72 23 - Substation Structures</p> <p>Section 33 71 26 - Transmission &amp; Distribution Equipment</p>		EACH	1
SSAG1057	Construction - Above Ground	Circuit Breaker	Commissioning of 15kV and below Breakers	<p>Testing and commissioning to include component testing and functional tests per E1 - Commissioning Manual. Testing of relay settings and logic are not included in this scope.</p> <p>DRAWING REFERENCE:</p>	<p>Section E1 - Commissioning Manuals</p>		EACH	1

				Installation drawing per design library				
SSAG1058	Construction - Above Ground	Circuit Breaker	Commissioning of 35kV Breakers	<p>Testing and commissioning to include component testing and functional tests per E1 - Commissioning Manual. Testing of relay settings and logic are not included in this scope.</p> <p>DRAWING REFERENCE:</p> <p>Installation drawing per design library</p>	Section E1 - Commissioning Manuals		EACH	1
SSAG1059	Construction - Above Ground	Circuit Breaker	Commissioning of 115kV Breakers	<p>Testing and commissioning to include component testing and functional tests per E1 - Commissioning Manual. Testing of relay settings and logic are not included in this scope.</p> <p>DRAWING REFERENCE:</p> <p>Installation drawing per design library</p>	Section E1 - Commissioning Manuals		EACH	1
SSAG1060	Construction - Above Ground	Circuit Breaker	Commissioning of 230kV and Above Breakers	<p>Testing and commissioning to include component testing and functional tests per E1 - Commissioning Manual. Testing of relay settings and logic are not included in this scope.</p>	Section E1 - Commissioning Manuals		EACH	1

				DRAWING REFERENCE: Installation drawing per design library				
SSAG1061	Construction - Above Ground	Conduit	Schedule 40 PVC Conduit trade size 3/4"	Install above grade PVC conduits in Control Bldg/on structures, and includes all connections, fitting, bending, etc  MATERIAL REQUIREMENTS: Conduit and fittings to be contractor supplied.	TM2.71.13		Per Foot	1
SSAG1062	Construction - Above Ground	Conduit	Schedule 40 PVC Conduit trade size 1"	Install above grade PVC conduits in Control Bldg/on structures, and includes all connections, fitting, bending, etc  MATERIAL REQUIREMENTS: Conduit and fittings to be contractor supplied.	TM2.71.13		Per foot	1
SSAG1063	Construction - Above Ground	Conduit	Schedule 40 PVC Conduit trade size 1 1/4"	Install above grade PVC conduits in Control Bldg/on structures, and includes all connections, fitting, bending, etc  MATERIAL REQUIREMENTS: Conduit and fittings to be contractor supplied.	TM2.71.13		Per foot	1

SSAG1064	Construction - Above Ground	Conduit	Schedule 40 PVC Conduit trade size 1 1/2"	<p>Install above grade PVC conduits in Control Bldg/on structures, and includes all connections, fitting, bending, etc</p> <p>MATERIAL REQUIREMENTS:</p> <p>Conduit and fittings to be contractor supplied.</p>	TM2.71.13		Per foot	1
SSAG1065	Construction - Above Ground	Conduit	Schedule 40 PVC Conduit trade size 2"	<p>Install above grade PVC conduits in Control Bldg/on structures, and includes all connections, fitting, bending, etc</p> <p>MATERIAL REQUIREMENTS:</p> <p>Conduit and fittings to be contractor supplied.</p>	TM2.71.13		Per foot	1
SSAG1066	Construction - Above Ground	Conduit	Schedule 40 PVC Conduit trade size 3"	<p>Install above grade PVC conduits in Control Bldg/on structures, and includes all connections, fitting, bending, etc</p> <p>MATERIAL REQUIREMENTS:</p> <p>Conduit and fittings to be contractor supplied.</p>	TM2.71.13		Per foot	1
SSAG1067	Construction - Above Ground	Conduit	Schedule 40 PVC Conduit trade size 4"	<p>Install above grade PVC conduits in Control Bldg/on structures, and includes all connections, fitting, bending, etc</p> <p>MATERIAL REQUIREMENTS:</p> <p>Conduit and fittings to be contractor supplied.</p>	TM2.71.13		Per foot	1

SSAG1068	Construction - Above Ground	Conduit	Schedule 40 PVC Conduit trade size 5"	<p>Install above grade PVC conduits in Control Bldg/on structures, and includes all connections, fitting, bending, etc</p> <p>MATERIAL REQUIREMENTS:</p> <p>Conduit and fittings to be contractor supplied.</p>	TM2.71.13	Per foot	1
SSAG1069	Construction - Above Ground	Conduit	Schedule 40 PVC Conduit trade size 6"	<p>Install above grade PVC conduits in Control Bldg/on structures, and includes all connections, fitting, bending, etc</p> <p>MATERIAL REQUIREMENTS:</p> <p>Conduit and fittings to be contractor supplied.</p>	TM2.71.13	Per foot	1
SSAG1070	Construction - Above Ground	Conduit	Liquid tight/flexible metallic conduit trade size 3/4"	<p>Install above grade conduits in Control Bldg/on structures, and includes all connections, fitting, bending, etc</p> <p>MATERIAL REQUIREMENTS:</p> <p>Conduits and fittings to be contractor supplied.</p>	TM2.71.13	Per foot	1
SSAG1071	Construction - Above Ground	Conduit	Liquid tight/flexible metallic conduit trade size 1"	<p>Install above grade conduits in Control Bldg/on structures, and includes all connections, fitting, bending, etc</p> <p>MATERIAL REQUIREMENTS:</p> <p>Conduits and fittings to be contractor supplied.</p>	TM2.71.13	Per foot	1



SSAG1072	Construction - Above Ground	Conduit	Liquid tight/flexible metallic conduit trade size 1 1/4"	<p>Install above grade conduits in Control Bldg/on structures, and includes all connections, fitting, bending, etc</p> <p>MATERIAL REQUIREMENTS:</p> <p>Conduits and fittings to be contractor supplied.</p>	TM2.71.13	Per foot	1
SSAG1073	Construction - Above Ground	Conduit	Liquid tight/flexible metallic conduit trade size 1 1/2"	<p>Install above grade conduits in Control Bldg/on structures, and includes all connections, fitting, bending, etc</p> <p>MATERIAL REQUIREMENTS:</p> <p>Conduits and fittings to be contractor supplied.</p>	TM2.71.13	Per foot	1
SSAG1074	Construction - Above Ground	Conduit	Liquid tight/flexible metallic conduit trade size 2"	<p>Install above grade conduits in Control Bldg/on structures, and includes all connections, fitting, bending, etc</p> <p>MATERIAL REQUIREMENTS:</p> <p>Conduits and fittings to be contractor supplied.</p>	TM2.71.13	Per foot	1
SSAG1075	Construction - Above Ground	Conduit	Liquid tight/flexible metallic conduit trade size 2 1/2"	<p>Install above grade conduits in Control Bldg/on structures, and includes all connections, fitting, bending, etc</p> <p>MATERIAL REQUIREMENTS:</p> <p>Conduits and fittings to be contractor supplied.</p>	TM2.71.13	Per foot	1

SSAG1076	Construction - Above Ground	Conduit	Liquid tight/flexible metallic conduit trade size 3"	<p>Install above grade conduits in Control Bldg/on structures, and includes all connections, fitting, bending, etc</p> <p>MATERIAL REQUIREMENTS:</p> <p>Conduits and fittings to be contractor supplied.</p>	TM2.71.13	Per foot	1
SSAG1077	Construction - Above Ground	Conduit	Liquid tight/flexible metallic conduit trade size 4"	<p>Install above grade conduits in Control Bldg/on structures, and includes all connections, fitting, bending, etc</p> <p>MATERIAL REQUIREMENTS:</p> <p>Conduits and fittings to be contractor supplied.</p>	TM2.71.13	Per foot	1
SSAG1078	Construction - Above Ground	Conduit	Liquid tight/flexible metallic conduit trade size 5"	<p>Install above grade conduits in Control Bldg/on structures, and includes all connections, fitting, bending, etc</p> <p>MATERIAL REQUIREMENTS:</p> <p>Conduits and fittings to be contractor supplied.</p>	TM2.71.13	Per foot	1
SSAG1079	Construction - Above Ground	Conduit	Rigid Metallic Conduit trade size 3/4"	<p>Install above grade conduits in Control Bldg/on structures, and includes all connections, fitting, treading bending, etc</p> <p>MATERIAL REQUIREMENTS:</p> <p>Conduits and fittings to be contractor supplied.</p>	TM2.71.13	Per foot	1

SSAG1080	Construction - Above Ground	Conduit	Rigid Metallic Conduit trade size 1"	<p>Install above grade conduits in Control Bldg/on structures, and includes all connections, fitting, bending, etc</p> <p>MATERIAL REQUIREMENTS:</p> <p>Conduits and fittings to be contractor supplied.</p>	TM2.71.13	Per foot	1
SSAG1081	Construction - Above Ground	Conduit	Rigid Metallic Conduit trade size 1 1/4"	<p>Install above grade conduits in Control Bldg/on structures, and includes all connections, fitting, bending, etc</p> <p>MATERIAL REQUIREMENTS:</p> <p>Conduits and fittings to be contractor supplied.</p>	TM2.71.13	Per foot	1
SSAG1082	Construction - Above Ground	Conduit	Rigid Metallic Conduit trade size 1 1/2"	<p>Install above grade conduits in Control Bldg/on structures, and includes all connections, fitting, bending, etc</p> <p>MATERIAL REQUIREMENTS:</p> <p>Conduits and fittings to be contractor supplied.</p>	TM2.71.13	Per foot	1
SSAG1083	Construction - Above Ground	Conduit	Rigid Metallic Conduit trade size 2"	<p>Install above grade conduits in Control Bldg/on structures, and includes all connections, fitting, bending, etc</p> <p>MATERIAL REQUIREMENTS:</p> <p>Conduits and fittings to be contractor supplied.</p>	TM2.71.13	Per foot	1

SSAG1084	Construction - Above Ground	Conduit	Rigid Metallic Conduit trade size 2 1/2"	<p>Install above grade conduits in Control Bldg/on structures, and includes all connections, fitting, bending, etc</p> <p>MATERIAL REQUIREMENTS:</p> <p>Conduits and fittings to be contractor supplied.</p>	TM2.71.13		Per foot	1
SSAG1085	Construction - Above Ground	Conduit	Rigid Metallic Conduit trade size 3"	<p>Install above grade conduits in Control Bldg/on structures, and includes all connections, fitting, bending, etc</p> <p>MATERIAL REQUIREMENTS:</p> <p>Conduits and fittings to be contractor supplied.</p>	TM2.71.13		Per foot	1
SSAG1086	Construction - Above Ground	Conduit	Rigid Metallic Conduit trade size 4"	<p>Install above grade conduits in Control Bldg/on structures, and includes all connections, fitting, bending, etc</p> <p>MATERIAL REQUIREMENTS:</p> <p>Conduits and fittings to be contractor supplied.</p>	TM2.71.13		Per foot	1
SSAG1087	Construction - Above Ground	Conduit	Rigid Metallic Conduit trade size 5"	<p>Install above grade conduits in Control Bldg/on structures, and includes all connections, fitting, bending, etc</p> <p>MATERIAL REQUIREMENTS:</p> <p>Conduits and fittings to be contractor supplied.</p>	TM2.71.13		Per Foot	1

SSAG1088	Construction - Above Ground	Conduit	Rigid Metallic Conduit trade size 6"	Install above grade conduits in Control Bldg/on structures, and includes all connections, fitting, bending, etc  MATERIAL REQUIREMENTS:  Conduits and fittings to be contractor supplied.	TM2.71.13		Per Foot	1
SSAG1089	Construction - Above Ground	Conduit	Conduit Removal - Any size above ground	Removal of linear feet of conduit - PVC, Rigid Metal or Flexible	TM2.71.13		Per Foot	1
SSAG1090	Construction - Above Ground	Control Cable	Install 600V/1000V SHIELED or NonSHIELED Control Cable #14 to #4 CU XLPE INS in CONDUITS	Price includes all labor, equipment and material required to perform installation of material. Cable identification is required. Cable Supplied by OWNER	INS56.35.01 Low Voltage Multicore Cables (1000V & Below)  TM2.71.75 Control Cable Guide  TM2.73.15 Construction Specifications Substation -  Section 33 71 26 - Transmission & Distribution Equipment  Section E1 - Commissioning Manuals		Per Foot	1

SSAG1091	Construction - Above Ground	Control Cable	Install 600V/1000V SHIELDED or NonSHIELDED Control Cable #2 to 4/0 CU XLPE INS in CONDUITS	Price includes all labor, equipment and material required to perform installation of material. Cable identification is required. Cable Supplied by OWNER	<p>INS56.35.01 Low Voltage Multicore Cables (1000V &amp; Below)</p> <p>TM2.71.75 Control Cable Guide</p> <p>TM2.73.15 Construction Specifications Substation -</p> <p>Section 33 71 26 - Transmission &amp; Distribution Equipment</p> <p>Section E1 - Commissioning Manuals</p>	Per Foot	1
SSAG1092	Construction - Above Ground	Control Cable	Install 600V/1000V SHIELDED or NonSHIELDED Control Cable 250 to 750MCM CU XLPE INS in CONDUITS	Price includes all labor, equipment and material required to perform installation of material. Cable identification is required. Cable Supplied by OWNER	<p>INS56.35.01 Low Voltage Multicore Cables (1000V &amp; Below)</p> <p>TM2.71.75 Control Cable Guide</p> <p>TM2.73.15 Construction Specifications Substation -</p> <p>Section 33 71 26 - Transmission &amp; Distribution Equipment</p>	Per Foot	1

					Section E1 - Commissioning Manuals		
SSAG1093	Construction - Above Ground	Control Cable	Install 600V/1000V SHIELDED or NonSHIELDED Control Cable #14 to #4 CU XLPE INS in CABLE TRAY	Price includes all labor, equipment and material required to perform installation of material. Cable tags and labels are required. Cable Supplied by OWNER	INS56.35.01 Low Voltage Multicore Cables (1000V & Below)  TM2.71.75 Control Cable Guide  TM2.73.15 Construction Specifications Substation -  Section 33 71 26 - Transmission & Distribution Equipment  Section E1 - Commissioning Manuals	Per Foot	1

SSAG1094	Construction - Above Ground	Control Cable	Install 600V/1000V SHIELED or NonSHIELED Control Cable #2 to 4/0 CU XLPE INS in CABLE TRAY	Price includes all labor, equipment and material required to perform installation of material. Cable tags and labels are required. Cable Supplied by OWNER	<p>INS56.35.01 Low Voltage Multicore Cables (1000V &amp; Below)</p> <p>TM2.71.75 Control Cable Guide</p> <p>TM2.73.15 Construction Specifications Substation -</p> <p>Section 33 71 26 - Transmission &amp; Distribution Equipment</p> <p>Section E1 - Commissioning Manuals</p>		Per Foot	1
SSAG1095	Construction - Above Ground	Control Cable	Install 600V/1000V SHIELED or NonSHIELED Control Cable 250 to 750MCM CU XLPE INS in CABLE TRAY	Price includes all labor, equipment and material required to perform installation of material. Cable tags and labels are required. Cable Supplied by OWNER	<p>INS56.35.01 Low Voltage Multicore Cables (1000V &amp; Below)</p> <p>TM2.71.75 Control Cable Guide</p> <p>TM2.73.15 Construction Specifications Substation -</p> <p>Section 33 71 26 - Transmission &amp; Distribution Equipment</p>		Per Foot	1



					Section E1 - Commissioning Manuals			
SSAG1096	Construction - Above Ground	Control Cable	Install 600V/1000V SHIELDED or NonSHIELDED Control Cable #14 to #4 CU XLPE INS in CABLE TRENCH	Price includes all labor, equipment and material required to perform installation of material. Removal and reinstallation of trench covers shall be included. Cable tags and labels are required. Cable Supplied by OWNER	INS56.35.01 Low Voltage Multicore Cables (1000V & Below)  TM2.71.75 Control Cable Guide  TM2.73.15 Construction Specifications Substation -  Section 33 71 26 - Transmission & Distribution Equipment  Section E1 - Commissioning Manuals	Per Foot	1	

SSAG1097	Construction - Above Ground	Control Cable	Install 600V/1000V SHIELDED or NonSHIELDED Control Cable #2 to 4/0 CU XLPE INS in CABLE TRENCH	Price includes all labor, equipment and material required to perform installation of material. Removal and reinstallation of trench covers shall be included. Cable tags and labels are required. Cable Supplied by OWNER	<p>INS56.35.01 Low Voltage Multicore Cables (1000V &amp; Below)</p> <p>TM2.71.75 Control Cable Guide</p> <p>TM2.73.15 Construction Specifications Substation -</p> <p>Section 33 71 26 - Transmission &amp; Distribution Equipment</p> <p>Section E1 - Commissioning Manuals</p>		Per Foot	1
SSAG1098	Construction - Above Ground	Control Cable	Install 600V/1000V SHIELDED or NonSHIELDED Control Cable 250 to 750MCM CU XLPE INS in CABLE TRENCH	Price includes all labor, equipment and material required to perform installation of material. Removal and reinstallation of trench covers shall be included. Cable tags and labels are required. Cable Supplied by OWNER	<p>INS56.35.01 Low Voltage Multicore Cables (1000V &amp; Below)</p> <p>TM2.71.75 Control Cable Guide</p> <p>TM2.73.15 Construction Specifications Substation -</p> <p>Section 33 71 26 - Transmission &amp; Distribution Equipment</p>		Per Foot	1

					Section E1 - Commissioning Manuals			
SSAG1099	Construction - Above Ground	Control Cable	Install #14 to #4 Cable Termination and Testing - Up to 1000V	Price includes all labor, equipment and material required to perform the landing of the wires to the terminal block. This includes the installation of a high quality ring-tongue terminal lug type with solid barrel or brazed seam and labels as per standards. Point to Point (Continuity) Check must be included in the scope of the job.	INS56.35.01 Low Voltage Multicore Cables (1000V & Below)  TM2.71.75 Control Cable Guide  TM2.73.15 Construction Specifications Substation -  Section 33 71 26 - Transmission & Distribution Equipment  Section E1 - Commissioning Manuals		EACH	1

<p>SSAG1100</p>	<p>Construction - Above Ground</p>	<p>Control Cable</p>	<p>Install #2 - 4/0 Cable Termination and Testing - Up to 1000V</p>	<p>Price includes all labor, equipment and material required to perform the landing of the wires to the terminal block. This includes the installation of a high quality ring-tongue terminal lug type with solid barrel or brazed seam and labels as per standards. Point to Point (Continuity) Check must be included in the scope of the job.</p>	<p>INS56.35.01 Low Voltage Multicore Cables (1000V &amp; Below)  TM2.71.75 Control Cable Guide  TM2.73.15 Construction Specifications Substation -  Section 33 71 26 - Transmission &amp; Distribution Equipment  Section E1 - Commissioning Manuals</p>		<p>EACH</p>	<p>1</p>
<p>SSAG1101</p>	<p>Construction - Above Ground</p>	<p>Control Cable</p>	<p>Install 250-750-MCM Termination and Testing - Up to 1000V</p>	<p>Price includes all labor, equipment and material required to perform the landing of the wires to the terminal block. This includes the installation of a high quality ring-tongue terminal lug type with solid barrel or brazed seam and labels as per standards. Point to Point (Continuity) Check must be included in the scope of the job.</p>	<p>INS56.35.01 Low Voltage Multicore Cables (1000V &amp; Below)  TM2.71.75 Control Cable Guide  TM2.73.15 Construction Specifications Substation -  Section 33 71 26 - Transmission &amp; Distribution Equipment</p>		<p>EACH</p>	<p>1</p>

					Section E1 - Commissioning Manuals			
SSAG1102	Construction - Above Ground	Control Cable	Grounding of Shielded Cable Ends	Isolation of equipment and relay turn downs will be performed by OWNER prior work starting and any testing.	INS56.35.01 Low Voltage Multicore Cables (1000V & Below)  TM2.71.75 Control Cable Guide  TM2.73.15 Construction Specifications Substation -  Section 33 71 26 - Transmission & Distribution Equipment  Section E1 - Commissioning Manuals		EACH	1
SSAG1103	Construction - Above Ground	Control Cable	Install Single Mode Fiber Optic Cable	Install Single Mode Fiber Optic Cable (pulls) per linear foot. Supply of material by Owner. 72 or 144 strand fiber.	TM2.71.75 Control Cable Guide  TM2.73.15 Construction Specifications Substation		Per Foot	1

					Section E1 - Commissioning Manuals			
SSAG1104	Construction - Above Ground	Control Cable	Install Single Mode Fiber Optic Cable fusion splice	Install Single Mode Fiber Optic Cable fusion splice (either an inline splice or splice of the ends). Fiber Optic terminators to be contractor supplied. Testing to be completed by contractor per Commissioning Manuals.	TM2.71.75 Control Cable Guide  TM2.73.15 Construction Specifications Substation  Section E1 - Commissioning Manuals		EACH	1
SSAG1105	Construction - Above Ground	Control Cable	Install Fiber Optic Cable Terminations and Testing	Install Fiber Optic Cable termination (assume a perterminated fiber cable). Fiber Optic pre-terminated cable to be contractor supplied. Testing to be completed by contractor per Commissioning Manuals.	TM2.71.75 Control Cable Guide  TM2.73.15 Construction Specifications Substation  Section E1 - Commissioning Manuals		EACH	1
SSAG1106	Construction - Above Ground	Control Cable	Install Fiber Optic Patch Panel/Fiber Junction Box	Install Fiber Optic Patch Panel/Fiber Junction Box. Material to be OWNER supplied. Testing to be completed by contractor per Commissioning Manuals.	TM2.71.75 Control Cable Guide  TM2.73.15 Construction Specifications Substation  Section E1 - Commissioning Manuals		EACH	1

SSAG1107	Construction - Above Ground	Control Cable	Install Fiber Optic Innerduct Conduit	Install 1" innerduct conduit (pulls) per linear foot. Supply of material by contractor.	<p>TM2.71.75 Control Cable Guide</p> <p>TM2.73.15 Construction Specifications Substation</p> <p>Section E1 - Commissioning Manuals</p>	Per Foot	1
SSAG1108	Construction - Above Ground	Control Cable	Fiber Cable Tray Installation	Assemble and install Control House Cable Trays 6X6 CHANNEL WITH SNAP-ON HINGE COVER in control buildings. All equipment, material and labor to install the cable tray supplied by CONTRACTOR.	<p>INS 46.99.00 Protection and Control Devices</p> <p>TM 2 71 P01 - General Relaying Philosophy for IUSA</p> <p>TM2.71.SI SCADA &amp; Integration</p> <p>TM2.73.15 Construction Specifications Substation -</p> <p>Section 33 71 26 - Transmission &amp; Distribution Equipment</p> <p>Section E1 - Commissioning Manuals</p>	Per Foot	1
SSAG1109	Construction - Above Ground	Control Cable	Install Coaxial Cable	Install Coaxial Cable, per foot. Contractor to supply all material. Testing to be completed by contractor per Commissioning Manuals.	<p>TM2.71.75 Control Cable Guide</p> <p>TM2.73.15 Construction</p>	per foot	1

					Specifications Substation			
					Section E1 - Commissioning Manuals			
SSAG1110	Construction - Above Ground	Control Cable	Install Coaxial Cable Terminations and Testing	Install Coaxial Cable Terminations. Contractor to supply all material. Testing to be completed by contractor per Commissioning Manuals.	TM2.71.75 Control Cable Guide  TM2.73.15 Construction Specifications Substation  Section E1 - Commissioning Manuals		EACH	1
SSAG1111	Construction - Above Ground	Control Cable	Install Serial Cable	Install Serial Cable, per foot. Contractor to supply all material. Testing to be completed by contractor per Commissioning Manuals.	TM2.71.75 Control Cable Guide  TM2.73.15 Construction Specifications Substation  Section E1 - Commissioning Manuals		per foot	1
SSAG1112	Construction - Above Ground	Control Cable	Install Serial Cable Terminations and Testing	Install Serial Cable Terminations. Contractor to supply all material. Testing to be completed by contractor per Commissioning Manuals.	TM2.71.75 Control Cable Guide  TM2.73.15 Construction Specifications Substation  Section E1 - Commissioning Manuals		Per Cable Termination (not per wire)	1



SSAG1113	Construction - Above Ground	Control Cable	Install Fiber Optic Cable - Pre-Connectorized	Install Fiber Optic Pre-connectorized and connections at both ends. Supply of material by Owner. Testing to be completed by contractor per Commissioning Manuals.	TM2.71.75 Control Cable Guide TM2.73.15 Construction Specifications Substation Section E1 - Commissioning Manuals	Per Foot	1
SSAG1114	Construction - Above Ground	Control Cable	Install Ethernet Cable - CAT 5/7 Type Cable	Install Ethernet Cable, per foot. Contractor to supply all material. Testing to be completed by contractor per Commissioning Manuals.	TM2.71.75 Control Cable Guide TM2.73.15 Construction Specifications Substation Section E1 - Commissioning Manuals	per foot	1
SSAG1115	Construction - Above Ground	Control Cable	Install Ethernet Cable Terminations and Testing - CAT 5/7 Type Cable	Install Ethernet Cable Terminations. Contractor to supply all material. Testing to be completed by contractor per Commissioning Manuals.	TM2.71.75 Control Cable Guide TM2.73.15 Construction Specifications Substation Section E1 - Commissioning Manuals	Per Cable Termination (not per wire)	1

SSAG1116	Construction - Above Ground	Control Cable	Remove 600/1000V SHIELDED or NonSHIELDED #14 to #6 Multi-Conductor Control Cable.	Removal of control cable/SIS wire/low voltage cable per foot. Located in either conduits, cable trench or cable trays.	INS56.35.01 Low Voltage Multicore Cables (1000V & Below)  TM2.71.75 Control Cable Guide  TM2.73.15 Construction Specifications Substation -  Section 33 71 26 - Transmission & Distribution Equipment	Per Foot	1
SSAG1117	Construction - Above Ground	Control Cable	Remove 600/1000V SHIELDED or NonSHIELDED #4 to 500MCM Multi-Conductor Control Cable.	Removal of control cable/SIS wire/low voltage cable per foot. Located in either conduits, cable trench or cable trays.	INS56.35.01 Low Voltage Multicore Cables (1000V & Below)  TM2.71.75 Control Cable Guide  TM2.73.15 Construction Specifications Substation -  Section 33 71 26 - Transmission & Distribution Equipment	Per Foot	1
SSAG1118	Construction - Above Ground	Control Cable	Remove Fiber Optic, Serial or Ethernet Cable	Remove Fiber Optic Cable (pulls) per linear foot	TM2.71.75 Control Cable Guide	Per Foot	1

SSAG1119	Construction - Above Ground	Control Cable	Remove Fiber Optic Innerduct Conduit	Remove Fiber optic innerduct per foot	TM2.71.75 Control Cable Guide		Per Foot	1
SSAG1120	Construction - Above Ground	CT/VT/CCVT	Install current transformer 69 kV	<p>Price includes all labor, material and equipment to perform installation. Installation includes, but not limited to, the following: supply/install of safety grounds if necessary, junction boxes, conduits, grounding per installation drawing. Main Equipment including Junction Box and grounding wire supplied by owner. Equipment Tag to be provided and installed by contractor.</p> <p>DRAWING REFERENCE: Installation per design library</p>	<p>INS 72.50.03 Current transformers for open terminal installations</p> <p>TM2.61.PT Power Transformer Protection</p> <p>TM2.73.15 Construction Specifications Substation -</p> <p>Section 33 71 26 Transmission &amp; Distribution Equipment.</p>		Per Current Transformer	1
SSAG1121	Construction - Above Ground	CT/VT/CCVT	Install current transformer 115 kV	<p>Price includes all labor, material and equipment to perform installation. Installation includes, but not limited to, the following: supply/install of safety grounds if necessary, junction boxes, conduits, grounding per installation drawing. Main Equipment including Junction Box and grounding wire supplied by owner. Equipment Tag to be provided and installed by contractor.</p> <p>DRAWING REFERENCE: Installation per design library</p>	<p>INS 72.50.03 Current transformers for open terminal installations</p> <p>TM2.61.PT Power Transformer Protection</p> <p>TM2.73.15 Construction Specifications Substation -</p> <p>Section 33 71 26 Transmission &amp;</p>		Per Current Transformer	1

					Distribution Equipment.		
SSAG1122	Construction - Above Ground	CT/VT/CCVT	Install current transformer 245 kV	<p>Price includes all labor, material and equipment to perform installation. Installation includes, but not limited to, the following: supply/install of safety grounds if necessary, junction boxes, conduits, grounding per installation drawing. Main Equipment including Junction Box and grounding wire supplied by owner. Equipment Tag to be provided and installed by contractor.</p> <p>DRAWING REFERENCE: Installation per design library</p>	<p>INS 72.50.03 Current transformers for open terminal installations</p> <p>TM2.61.PT Power Transformer Protection</p> <p>TM2.73.15 Construction Specifications Substation -</p> <p>Section 33 71 26 Transmission &amp; Distribution Equipment.</p>	Per Current Transformer	1

SSAG1123	Construction - Above Ground	CT/VT/CCVT	Install current transformer 345 kV	<p>Price includes all labor, material and equipment to perform installation. Installation includes, but not limited to, the following: supply/install of safety grounds if necessary, junction boxes, conduits, grounding per installation drawing. Main Equipment including Junction Box and grounding wire supplied by owner. Equipment Tag to be provided and installed by contractor.</p> <p>DRAWING REFERENCE: Installation per design library</p>	<p>INS 72.50.03 Current transformers for open terminal installations</p> <p>TM2.61.PT Power Transformer Protection</p> <p>TM2.73.15 Construction Specifications Substation -</p> <p>Section 33 71 26 Transmission &amp; Distribution Equipment.</p>		Per Current Transformer	1
SSAG1124	Construction - Above Ground	CT/VT/CCVT	Install Voltage Transformer 12-34.5-46 kV	<p>Price includes all labor, material and equipment to perform installation. Installation includes, but not limited to, the following: supply/install of safety grounds if necessary, junction boxes, 20 ft of conduit, grounding. Main Equipment and grounding wire supplied by owner. Equipment Tag to be provided and installed by contractor.</p> <p>DRAWING REFERENCE: Installation per design library</p>	<p>TM2.61.PT Power Transformer Protection</p> <p>TM2.73.15 Construction Specifications Substation -</p> <p>Section 33 71 26 Transmission &amp; Distribution Equipment.</p>		Per Voltage Transformer	1

SSAG1125	Construction - Above Ground	CT/VT/CCVT	Install Voltage Transformer 69 kV	<p>Price includes all labor, material and equipment to perform installation. Installation includes, but not limited to, the following: supply/install of safety grounds if necessary, junction boxes, 20 ft of conduit, grounding. Main Equipment and grounding wire supplied by owner. Equipment Tag to be provided and installed by contractor.</p> <p>DRAWING REFERENCE: Installation per design library</p>	<p>TM2.61.PT Power Transformer Protection</p> <p>TM2.73.15 Construction Specifications Substation -</p> <p>Section 33 71 26 Transmission &amp; Distribution Equipment.</p>	Per Voltage Transformer	1
SSAG1126	Construction - Above Ground	CT/VT/CCVT	Install Voltage Transformer 115 kV	<p>Price includes all labor, material and equipment to perform installation. Installation includes, but not limited to, the following: supply/install of safety grounds if necessary, junction boxes, 20 ft of conduit, grounding. Main Equipment and grounding wire supplied by owner. Equipment Tag to be provided and installed by contractor.</p> <p>DRAWING REFERENCE: Installation per design library</p>	<p>TM2.61.PT Power Transformer Protection</p> <p>TM2.73.15 Construction Specifications Substation -</p> <p>Section 33 71 26 Transmission &amp; Distribution Equipment.</p>	Per Voltage Transformer	1
SSAG1127	Construction - Above Ground	CT/VT/CCVT	Install voltage transformer 245 kV	<p>Price includes all labor, material and equipment to perform installation. Installation includes, but not limited to, the following: supply/install of safety grounds if necessary, junction boxes, 20 ft of conduit, grounding. Main Equipment and grounding wire supplied by owner. Equipment Tag to be provided and installed</p>	<p>TM2.61.PT Power Transformer Protection</p> <p>TM2.73.15 Construction Specifications Substation -</p>	Per Voltage Transformer	1

				by contractor.  DRAWING REFERENCE:  Installation per design library	Section 33 71 26 Transmission & Distribution Equipment.			
SSAG1128	Construction - Above Ground	CT/VT/CCVT	Install Voltage Transformer 345 kV	Price includes all labor, material and equipment to perform installation. Installation includes, but not limited to, the following: supply/install of safety grounds if necessary, junction boxes, 20 ft of conduit, grounding. Main Equipment and grounding wire supplied by owner. Equipment Tag to be provided and installed by contractor.  DRAWING REFERENCE:  Installation per design library	TM2.61.PT Power Transformer Protection  TM2.73.15 Construction Specifications Substation -  Section 33 71 26 Transmission & Distribution Equipment.		Per Voltage Transformer	1
SSAG1129	Construction - Above Ground	CT/VT/CCVT	Install Set of Three (3) Voltage Transformer 12-34.5-46 kV	Price includes all labor, material and equipment to perform installation. Installation includes, but not limited to, the following: supply/install of safety grounds if necessary, junction boxes, 20 ft of conduit, grounding. Main Equipment and grounding wire supplied by owner. Equipment Tag to be provided and installed by contractor.  DRAWING REFERENCE:  Installation per design library	TM2.61.PT Power Transformer Protection  TM2.73.15 Construction Specifications Substation -  Section 33 71 26 Transmission & Distribution Equipment.		Per Set of Three (3) Voltage Transformer	1

SSAG1130	Construction - Above Ground	CT/VT/CCVT	Install Set of Three (3) Voltage Transformer 69 kV	<p>Price includes all labor, material and equipment to perform installation. Installation includes, but not limited to, the following: supply/install of safety grounds if necessary, junction boxes, 20 ft of conduit, grounding. Main Equipment and grounding wire supplied by owner. Equipment Tag to be provided and installed by contractor.</p> <p>DRAWING REFERENCE: Installation per design library</p>	<p>TM2.61.PT Power Transformer Protection</p> <p>TM2.73.15 Construction Specifications Substation -</p> <p>Section 33 71 26 Transmission &amp; Distribution Equipment.</p>	Per Set of Three (3) Voltage Transformer	1
SSAG1131	Construction - Above Ground	CT/VT/CCVT	Install Set of Three (3) Voltage Transformer 115 kV	<p>Price includes all labor, material and equipment to perform installation. Installation includes, but not limited to, the following: supply/install of safety grounds if necessary, junction boxes, 20 ft of conduit, grounding. Main Equipment and grounding wire supplied by owner. Equipment Tag to be provided and installed by contractor.</p> <p>DRAWING REFERENCE: Installation per design library</p>	<p>TM2.61.PT Power Transformer Protection</p> <p>TM2.73.15 Construction Specifications Substation -</p> <p>Section 33 71 26 Transmission &amp; Distribution Equipment.</p>	Per Set of Three (3) Voltage Transformer	1
SSAG1132	Construction - Above Ground	CT/VT/CCVT	Install Set of Three (3) Voltage Transformer 245 kV	<p>Price includes all labor, material and equipment to perform installation. Installation includes, but not limited to, the following: supply/install of safety grounds if necessary, junction boxes, 20 ft of conduit, grounding. Main Equipment and grounding wire supplied by owner. Equipment Tag to be provided and installed</p>	<p>TM2.61.PT Power Transformer Protection</p> <p>TM2.73.15 Construction Specifications Substation -</p>	Per Set of Three (3) Voltage Transformer	1



				by contractor.  DRAWING REFERENCE:  Installation per design library	Section 33 71 26 Transmission & Distribution Equipment.			
SSAG1133	Construction - Above Ground	CT/VT/CCVT	Install Set of three (3) Voltage Transformer 345 kV	Price includes all labor, material and equipment to perform installation. Installation includes, but not limited to, the following: supply/install of safety grounds if necessary, junction boxes, 20 ft of conduit, grounding. Main Equipment and grounding wire supplied by owner. Equipment Tag to be provided and installed by contractor.  DRAWING REFERENCE:  Installation per design library	TM2.61.PT Power Transformer Protection  TM2.73.15 Construction Specifications Substation -  Section 33 71 26 Transmission & Distribution Equipment.		Per Set of Three (3) Voltage Transformer	1
SSAG1134	Construction - Above Ground	CT/VT/CCVT	Install CCVT 69 kV	Price includes all labor, material and equipment to perform installation. Installation includes, but not limited to, the following: supply/install of safety grounds if necessary, junction boxes, conduits, grounding per installation drawing. Main Equipment including Junction Box and grounding wire supplied by owner. Equipment Tag to be provided and installed by contractor.  DRAWING REFERENCE:	TM2.61.PT Power Transformer Protection  TM2.73.15 Construction Specifications Substation -  Section 33 71 26 Transmission & Distribution Equipment.		Per CCVT Transformer	1

				Installation per design library				
SSAG1135	Construction - Above Ground	CT/VT/CCVT	Install CCVT 115 kV	<p>Price includes all labor, material and equipment to perform installation. Installation includes, but not limited to, the following: supply/install of safety grounds if necessary, junction boxes, conduits, grounding per installation drawing. Main Equipment including Junction Box and grounding wire supplied by owner. Equipment Tag to be provided and installed by contractor.</p> <p>DRAWING REFERENCE: Installation per design library</p>	<p>TM2.61.PT Power Transformer Protection</p> <p>TM2.73.15 Construction Specifications Substation -</p> <p>Section 33 71 26 Transmission &amp; Distribution Equipment.</p>		Per CCVT Transformer	1
SSAG1136	Construction - Above Ground	CT/VT/CCVT	Install CCVT 245 kV	<p>Price includes all labor, material and equipment to perform installation. Installation includes, but not limited to, the following: supply/install of safety grounds if necessary, junction boxes, conduits, grounding per installation drawing. Main Equipment including Junction Box and grounding wire supplied by owner. Equipment Tag to be provided and installed by contractor.</p>	<p>TM2.61.PT Power Transformer Protection</p> <p>TM2.73.15 Construction Specifications Substation -</p> <p>Section 33 71 26 Transmission &amp; Distribution Equipment.</p>		Per CCVT Transformer	1

				DRAWING REFERENCE: Installation per design library				
SSAG1137	Construction - Above Ground	CT/VT/CCVT	Install CCVT 345 kV	Price includes all labor, material and equipment to perform installation. Installation includes, but not limited to, the following: supply/install of safety grounds if necessary, junction boxes, conduits, grounding per installation drawing. Main Equipment including Junction Box and grounding wire supplied by owner. Equipment Tag to be provided and installed by contractor.  DRAWING REFERENCE: Installation per design library	TM2.61.PT Power Transformer Protection  TM2.73.15 Construction Specifications Substation -  Section 33 71 26 Transmission & Distribution Equipment.		Per CCVT Transformer	1
SSAG1138	Construction - Above Ground	CT/VT/CCVT	Install Set of Three (3) CCVT 46 kV	Price includes all labor, material and equipment to perform installation. Installation includes, but not limited to, the following: supply/install of safety grounds if necessary, junction boxes, conduits, grounding per installation drawing. Main Equipment including Junction Box and grounding wire supplied by owner. Equipment Tag to be provided and installed by contractor.	TM2.61.PT Power Transformer Protection  TM2.73.15 Construction Specifications Substation -  Section 33 71 26 Transmission & Distribution Equipment.		Per Set of Three (3) Voltage Transformer	1

				DRAWING REFERENCE: Installation per design library				
SSAG1139	Construction - Above Ground	CT/VT/CCVT	Install Set of Three (3) CCVT 69 kV	Price includes all labor, material and equipment to perform installation. Installation includes, but not limited to, the following: supply/install of safety grounds if necessary, junction boxes, conduits, grounding per installation drawing. Main Equipment including Junction Box and grounding wire supplied by owner. Equipment Tag to be provided and installed by contractor.  DRAWING REFERENCE: Installation per design library	TM2.61.PT Power Transformer Protection  TM2.73.15 Construction Specifications Substation -  Section 33 71 26 Transmission & Distribution Equipment.		Per Set of Three (3) Voltage Transformer	1
SSAG1140	Construction - Above Ground	CT/VT/CCVT	Install Set of Three (3) CCVT 115 kV	Price includes all labor, material and equipment to perform installation. Installation includes, but not limited to, the following: supply/install of safety grounds if necessary, junction boxes, conduits, grounding per installation drawing. Main Equipment including Junction Box and grounding wire supplied by owner. Equipment Tag to be provided and installed by contractor.	TM2.61.PT Power Transformer Protection  TM2.73.15 Construction Specifications Substation -  Section 33 71 26 Transmission & Distribution Equipment.		Per Set of Three (3) Voltage Transformer	1

				<p>DRAWING REFERENCE:</p> <p>Installation per design library</p>				
SSAG1141	Construction - Above Ground	CT/VT/CCVT	Install Set of Three (3) CCVT 245 kV	<p>Price includes all labor, material and equipment to perform installation. Installation includes, but not limited to, the following: supply/install of safety grounds if necessary, junction boxes, conduits, grounding per installation drawing. Main Equipment including Junction Box and grounding wire supplied by owner. Equipment Tag to be provided and installed by contractor.</p> <p>DRAWING REFERENCE:</p> <p>Installation per design library</p>	<p>TM2.61.PT Power Transformer Protection</p> <p>TM2.73.15 Construction Specifications Substation -</p> <p>Section 33 71 26 Transmission &amp; Distribution Equipment.</p>		Per Set of Three (3) Voltage Transformer	1
SSAG1142	Construction - Above Ground	CT/VT/CCVT	Install Set of Three (3) CCVT 345 kV	<p>Price includes all labor, material and equipment to perform installation. Installation includes, but not limited to, the following: supply/install of safety grounds if necessary, junction boxes, conduits, grounding per installation drawing. Main Equipment including Junction Box and grounding wire supplied by owner. Equipment Tag to be provided and installed by contractor.</p>	<p>TM2.61.PT Power Transformer Protection</p> <p>TM2.73.15 Construction Specifications Substation -</p> <p>Section 33 71 26 Transmission &amp; Distribution Equipment.</p>		Per Set of Three (3) Voltage Transformer	1

				<p>DRAWING REFERENCE:</p> <p>Installation per design library</p>				
SSAG1143	Construction - Above Ground	CT/VT/CCVT	Install Slip Over Current transformer 12-34.5-46 kV for GIS applications in basement or under platfo	<p>Price includes all labor, material and equipment to perform installation. Installation includes, but not limited to, the following: supply/install of safety grounds if necessary, Junction Box, equipment necessary for access to the equipment, conduits, grounding per installation drawing. Main Equipment including Junction Box and grounding wire supplied by owner.</p> <p>DRAWING REFERENCE:</p> <p>Installation per design library</p>	<p>TM2.61.PT Power Transformer Protection</p> <p>TM2.73.15 Construction Specifications Substation -</p> <p>Section 33 71 26 Transmission &amp; Distribution Equipment.</p>		EACH	1
SSAG1144	Construction - Above Ground	CT/VT/CCVT	Remove Instrument Transformer CT/VT/CCVT 12-34.5-46 kV	<p>Price includes all labor, material and equipment to perform the removal of the equipment for relocation. Removal includes, but not limited to the following: removal of any minor equipment associated with the equipment, wiring removal, junction box removal, rigging, trailer, placement on trailer, etc. Contractor will not be responsible for the disposal of the oil (if any) and the equipment as part of this PayCU. Equipment should be grounded</p>			EACH	1

				<p>while in a temporary location after removal.</p> <p>DRAWING REFERENCE:</p> <p>Removal per drawing</p>				
SSAG1145	Construction - Above Ground	CT/VT/CCVT	Remove Instrument Transformer CT/VT/CCVT 69 kV	<p>Price includes all labor, material and equipment to perform the removal of the equipment for relocation. Removal includes, but not limited to the following: removal of any minor equipment associated with the equipment, wiring removal, junction box removal, rigging, trailer, placement on trailer, etc. Contractor will not be responsible for the disposal of the oil (if any) and the equipment as part of this PayCU. Equipment should be grounded while in a temporary location after removal.</p> <p>DRAWING REFERENCE:</p> <p>Removal per drawing</p>			EACH	1
SSAG1146	Construction - Above Ground	CT/VT/CCVT	Remove Instrument Transformer CT/VT/CCVT 115 kV	<p>Price includes all labor, material and equipment to perform the removal of the equipment for relocation. Removal includes, but not limited to the following: removal of any minor equipment associated with the equipment, wiring removal, junction box removal, rigging, trailer, placement on trailer, etc. Contractor will not be</p>			EACH	1

				<p>responsible for the disposal of the oil (if any) and the equipment as part of this PayCU. Equipment should be grounded while in a temporary location after removal.</p> <p>DRAWING REFERENCE: Removal per drawing</p>				
SSAG1147	Construction - Above Ground	CT/VT/CCVT	Remove Instrument Transformer CT/VT/CCVT 245 kV	<p>Price includes all labor, material and equipment to perform the removal of the equipment for relocation. Removal includes, but not limited to the following: removal of any minor equipment associated with the equipment, wiring removal, junction box removal, rigging, trailer, placement on trailer, etc. Contractor will not be responsible for the disposal of the oil (if any) and the equipment as part of this PayCU. Equipment should be grounded while in a temporary location after removal.</p> <p>DRAWING REFERENCE: Removal per drawing</p>			EACH	1



SSAG1148	Construction - Above Ground	CT/VT/CCVT	Remove Instrument Transformer CT/VT/CCVT 345 kV	<p>Price includes all labor, material and equipment to perform the removal of the equipment for relocation. Removal includes, but not limited to the following: removal of any minor equipment associated with the equipment, wiring removal, junction box removal, rigging, trailer, placement on trailer, etc. Contractor will not be responsible for the disposal of the oil (if any) and the equipment as part of this PayCU. Equipment should be grounded while in a temporary location after removal.</p> <p>DRAWING REFERENCE: Removal per drawing</p>			EACH	1
SSAG1149	Construction - Above Ground	CT/VT/CCVT	Testing and Commissioning of CT/VT/CCVT 12-34.5-46 kV	<p>Price includes all labor, material and equipment to perform testing and commissioning of the equipment. All requirements per Avangrid commissioning documentation shall be followed during commissioning.</p> <p>REFERENCE: Section E1 - Commissioning Manuals</p>	<p>TM2.73.15 Construction Specifications Substation -</p> <p>Section 33 71 26 Transmission &amp; Distribution Equipment.</p> <p>Section E1 - Commissioning Manuals</p>		EACH	1
SSAG1150	Construction - Above Ground	CT/VT/CCVT	Testing and Commissioning of CT/VT/CCVT 69 kV	<p>Price includes all labor, material and equipment to perform testing and commissioning of the equipment. All requirements per Avangrid commissioning documentation shall be followed during commissioning.</p>	<p>TM2.73.15 Construction Specifications Substation -</p> <p>Section 33 71 26 Transmission &amp;</p>		EACH	1

				REFERENCE: Section E1 - Commissioning Manuals	Distribution Equipment. Section E1 - Commissioning Manuals			
SSAG1151	Construction - Above Ground	CT/VT/CCVT	Testing and Commissioning of CT/VT/CCVT 115kV	Price includes all labor, material and equipment to perform testing and commissioning of the equipment. All requirements per Avangrid commissioning documentation shall be followed during commissioning.  REFERENCE: Section E1 - Commissioning Manuals	TM2.73.15 Construction Specifications Substation -  Section 33 71 26 Transmission & Distribution Equipment.  Section E1 - Commissioning Manuals		EACH	1
SSAG1152	Construction - Above Ground	CT/VT/CCVT	Testing and Commissioning of CT/VT/CCVT 230kV and above	Price includes all labor, material and equipment to perform testing and commissioning of the equipment. All requirements per Avangrid commissioning documentation shall be followed during commissioning.  REFERENCE: Section E1 - Commissioning Manuals	TM2.73.15 Construction Specifications Substation -  Section 33 71 26 Transmission & Distribution Equipment.  Section E1 - Commissioning Manuals		EACH	1
SSAG1153	Construction - Above Ground	Insulator/Surge Arrester	Remove 12.47-34.5-46 kV Surge Arrester	Price includes all labor, material and equipment to perform the removal of the equipment for relocation. Removal includes, but not limited to the following: removal of any minor material associated with the equipment, rigging, trailer, placement on trailer, etc. Equipment should be			EACH	1

				grounded while in a temporary location after removal.				
SSAG1154	Construction - Above Ground	Insulator/Surge Arrester	Remove 69 kV Surge Arrester	Price includes all labor, material and equipment to perform the removal of the equipment for relocation. Removal includes, but not limited to the following: removal of any minor material associated with the equipment, rigging, trailer, placement on trailer, etc. Equipment should be grounded while in a temporary location after removal.			EACH	1
SSAG1155	Construction - Above Ground	Insulator/Surge Arrester	Remove 115 kV Surge Arrester	Price includes all labor, material and equipment to perform the removal of the equipment for relocation. Removal includes, but not limited to the following: removal of any minor material associated with the equipment, rigging, trailer, placement on trailer, etc. Equipment should be grounded while in a temporary location after removal.			EACH	1
SSAG1156	Construction - Above Ground	Insulator/Surge Arrester	Remove 245 kV Surge Arrester	Price includes all labor, material and equipment to perform the removal of the equipment for relocation. Removal includes, but not limited to the following: removal of any minor material associated with the equipment, rigging, trailer, placement on trailer, etc. Equipment should be grounded while in a temporary location after removal.			EACH	1
SSAG1157	Construction - Above Ground	Insulator/Surge Arrester	Remove 345 kV Surge Arrester	Price includes all labor, material and equipment to perform the removal of the equipment for relocation. Removal includes, but not limited to the following: removal of any minor material associated with the equipment,			EACH	1

				rigging, trailer, placement on trailer, etc. Equipment should be grounded while in a temporary location after removal.			
SSAG1158	Construction - Above Ground	Disconnect Switch	Install Switch CBL-T 12-46-69 kV	<p>Price includes all labor, material and equipment to perform installation. Installation includes, but not limited to, the following: supply and install of safety grounds if necessary, off-load equipment, place in temporary location if necessary, clean before installation, final placement, necessary adjustments and final piercing, linkage for switch operation, grounds, supply and install ground mat/grid, etc. Installation shall follow manufacturer recommended procedures and installation details and BOM. All miscellaneous material to be supplied and installed as part of the Contractor's scope, per installation drawing. Switch and grounding wire supplied by owner. Switch Tag to be provided and installed by contractor. Wiring and terms are not included in this unit.</p> <p>DRAWING REFERENCE:</p> <p>Installation drawing per design library</p>	<p>INS 74.00.02 - Disconnectors and earthing switches for outdoor installations</p> <p>TM2.62.17 - 69kV and Below Air Break Switches</p> <p>TM2.73.15 Construction Specifications Substation -</p> <p>Section 33 72 23 - Substation Structures</p> <p>Section 33 71 26 - Transmission &amp; Distribution Equipment</p>	EACH	1

SSAG1159	Construction - Above Ground	Disconnect Switch	Install Switch EC-1 34-46-69 kV	<p>Price includes all labor, material and equipment to perform installation. Installation includes, but not limited to, the following: supply and install of safety grounds if necessary, off-load equipment, place in temporary location if necessary, clean before installation, final placement, necessary adjustments and final piercing, linkage for switch operation, grounds, supply and install ground mat/grid, etc. Installation shall follow manufacturer recommended procedures and installation details and BOM. All miscellaneous material to be supplied and installed as part of the Contractor's scope, per installation drawing. Switch and grounding wire supplied by owner. Switch Tag to be provided and installed by contractor. Wiring and terms are not included in this unit.</p> <p>DRAWING REFERENCE:</p> <p>Installation drawing per design library</p>	<p>INS 74.00.02 - Disconnectors and earthing switches for outdoor installations</p> <p>TM2.62.17 - 69kV and Below Air Break Switches</p> <p>TM2.73.15 Construction Specifications Substation -</p> <p>Section 33 72 23 - Substation Structures</p> <p>Section 33 71 26 - Transmission &amp; Distribution Equipment</p>	EACH	1
----------	-----------------------------	-------------------	---------------------------------	---	--	------	---

SSAG1160	Construction - Above Ground	Disconnect Switch	Install Switch EV 34.5-46-69 kV	<p>Price includes all labor, material and equipment to perform installation. Installation includes, but not limited to, the following: supply and install of safety grounds if necessary, off-load equipment, place in temporary location if necessary, clean before installation, final placement, necessary adjustments and final piercing, linkage for switch operation, grounds, supply and install ground mat/grid, etc. Installation shall follow manufacturer recommended procedures and installation details and BOM. All miscellaneous material to be supplied and installed as part of the Contractor's scope, per installation drawing. Switch and grounding wire supplied by owner. Switch Tag to be provided and installed by contractor Wiring and terms are not included in this unit.</p> <p>DRAWING REFERENCE:</p> <p>Installation drawing per design library</p>	<p>INS 74.00.02 - Disconnectors and earthing switches for outdoor installations</p> <p>TM2.62.17 - 69kV and Below Air Break Switches</p> <p>TM2.73.15 Construction Specifications Substation -</p> <p>Section 33 72 23 - Substation Structures</p> <p>Section 33 71 26 - Transmission &amp; Distribution Equipment</p>	EACH	1
----------	-----------------------------	-------------------	---------------------------------	--	--	------	---

SSAG1161	Construction - Above Ground	Disconnect Switch	Install Switch EV-2 34.5-46-69 kV	<p>Price includes all labor, material and equipment to perform installation. Installation includes, but not limited to, the following: supply and install of safety grounds if necessary, off-load equipment, place in temporary location if necessary, clean before installation, final placement, necessary adjustments and final piercing, linkage for switch operation, grounds, supply and install ground mat/grid, etc. Installation shall follow manufacturer recommended procedures and installation details and BOM. All miscellaneous material to be supplied and installed as part of the Contractor's scope, per installation drawing. Switch and grounding wire supplied by owner. Switch Tag to be provided and installed by contractor. Wiring and terms are not included in this unit.</p> <p>DRAWING REFERENCE:</p> <p>Installation drawing per design library</p>	<p>INS 74.00.02 - Disconnectors and earthing switches for outdoor installations</p> <p>TM2.62.17 - 69kV and Below Air Break Switches</p> <p>TM2.73.15 Construction Specifications Substation -</p> <p>Section 33 72 23 - Substation Structures</p> <p>Section 33 71 26 - Transmission &amp; Distribution Equipment</p>	EACH	1
----------	-----------------------------	-------------------	-----------------------------------	---	--	------	---

SSAG1162	Construction - Above Ground	Disconnect Switch	Install SW EC-1V -115 kV	<p>Price includes all labor, material and equipment to perform installation. Installation includes, but not limited to, the following: supply and install of safety grounds if necessary, off-load equipment, place in temporary location if necessary, clean before installation, final placement, necessary adjustments and final piercing, linkage for switch operation, grounds, supply and install ground mat/grid, MOD installations including and not limiting with AC/DC wire connections, fiber optic and patch panel installation, etc. Installation shall follow manufacturer recommended procedures and installation details and BOM. All miscellaneous material to be supplied and installed as part of the Contractor's scope, per installation drawing. Switch and grounding wire supplied by owner. Switch Tag to be provided and installed by contractor. Wiring and terms are not included in this unit.</p> <p>DRAWING REFERENCE:</p> <p>Installation drawing per design library</p>	<p>INS 74.00.02 - Disconnectors and earthing switches for outdoor installations</p> <p>TM2.72.11 - HV &amp; EHV Air Break Switches 34.5kV through 345kV</p> <p>TM2.73.15 Construction Specifications Substation -</p> <p>Section 33 72 23 - Substation Structures</p> <p>Section 33 71 26 - Transmission &amp; Distribution Equipment</p>	EACH	1
----------	-----------------------------	-------------------	--------------------------	---	---	------	---



SSAG1163	Construction - Above Ground	Disconnect Switch	Install SW EV-3 - 245 kV	<p>Price includes all labor, material and equipment to perform installation. Installation includes, but not limited to, the following: supply and install of safety grounds if necessary, off-load equipment, place in temporary location if necessary, clean before installation, final placement, necessary adjustments and final piercing, linkage for switch operation, grounds, supply and install ground mat/grid, MOD installations including and not limiting with AC/DC wire connections, fiber optic and patch panel installation, etc. Installation shall follow manufacturer recommended procedures and installation details and BOM. All miscellaneous material to be supplied and installed as part of the Contractor's scope, per installation drawing. Switch and grounding wire supplied by owner. Switch Tag to be provided and installed by contractor. Wiring and terms are not included in this unit.</p> <p>DRAWING REFERENCE:</p> <p>Installation drawing per design library</p>	<p>INS 74.00.02 - Disconnectors and earthing switches for outdoor installations</p> <p>TM2.72.11 - HV &amp; EHV Air Break Switches 34.5kV through 345kV</p> <p>TM2.73.15 Construction Specifications Substation -</p> <p>Section 33 72 23 - Substation Structures</p> <p>Section 33 71 26 - Transmission &amp; Distribution Equipment</p>	EACH	1
----------	-----------------------------	-------------------	--------------------------	---	---	------	---

SSAG1164	Construction - Above Ground	Disconnect Switch	Install SW RDA 2V - 345 kV I	<p>Price includes all labor, material and equipment to perform installation. Installation includes, but not limited to, the following: supply and install of safety grounds if necessary, off-load equipment, place in temporary location if necessary, clean before installation, final placement, necessary adjustments and final piercing, linkage for switch operation, grounds, supply and install ground mat/grid, MOD installations including and not limiting with AC/DC wire connections, fiber optic and patch panel installation, etc. Installation shall follow manufacturer recommended procedures and installation details and BOM. All miscellaneous material to be supplied and installed as part of the Contractor's scope, per installation drawing. Switch and grounding wire supplied by owner. Switch Tag to be provided and installed by contractor. Wiring and terms are not included in this unit.</p> <p>DRAWING REFERENCE:</p> <p>Installation drawing per design library</p>	<p>INS 74.00.02 - Disconnectors and earthing switches for outdoor installations</p> <p>TM2.72.11 - HV &amp; EHV Air Break Switches 34.5kV through 345kV</p> <p>TM2.73.15 Construction Specifications Substation -</p> <p>Section 33 72 23 - Substation Structures</p> <p>Section 33 71 26 - Transmission &amp; Distribution Equipment</p>	EACH	1
----------	-----------------------------	-------------------	------------------------------	---	---	------	---

SSAG1165	Construction - Above Ground	Disconnect Switch	Install Switch EV-3-123 -115 kV	<p>Price includes all labor, material and equipment to perform installation. Installation includes, but not limited to, the following: supply and install of safety grounds if necessary, off-load equipment, place in temporary location if necessary, clean before installation, final placement, necessary adjustments and final piercing, linkage for switch operation, grounds, supply and install ground mat/grid, MOD installations including and not limiting with AC/DC wire connections, fiber optic and patch panel installation, etc. Installation shall follow manufacturer recommended procedures and installation details and BOM. All miscellaneous material to be supplied and installed as part of the Contractor's scope, per installation drawing. Switch and grounding wire supplied by owner. Switch Tag to be provided and installed by contractor Wiring and terms are not included in this unit.</p> <p>DRAWING REFERENCE:</p> <p>Installation drawing per design library</p>	<p>INS 74.00.02 - Disconnectors and earthing switches for outdoor installations</p> <p>TM2.72.11 - HV &amp; EHV Air Break Switches 34.5kV through 345kV</p> <p>TM2.73.15 Construction Specifications Substation -</p> <p>Section 33 72 23 - Substation Structures</p> <p>Section 33 71 26 - Transmission &amp; Distribution Equipment</p>	EACH	1
----------	-----------------------------	-------------------	---------------------------------	--	---	------	---

SSAG1166	Construction - Above Ground	Disconnect Switch	Install Switch + Grounding Switch EV-3-123 -115 kV	<p>Price includes all labor, material and equipment to perform installation. Installation includes, but not limited to, the following: supply and install of safety grounds if necessary, off-load equipment, place in temporary location if necessary, clean before installation, final placement, necessary adjustments and final piercing, linkage for switch operation, grounds, supply and install ground mat/grid, MOD installations including and not limiting with AC/DC wire connections, fiber optic and patch panel installation, etc. Installation shall follow manufacturer recommended procedures and installation details and BOM. All miscellaneous material to be supplied and installed as part of the Contractor's scope, per installation drawing. Switch and grounding wire supplied by owner. Switch Tag to be provided and installed by contractor. Wiring and terms are not included in this unit.</p> <p>DRAWING REFERENCE:</p> <p>Installation drawing per design library</p>	<p>INS 74.00.02 - Disconnectors and earthing switches for outdoor installations</p> <p>TM2.72.11 - HV &amp; EHV Air Break Switches 34.5kV through 345kV</p> <p>TM2.73.15 Construction Specifications Substation -</p> <p>Section 33 72 23 - Substation Structures</p> <p>Section 33 71 26 - Transmission &amp; Distribution Equipment</p> <p>Section E1 - Commissioning Manuals</p>	EACH	1
----------	-----------------------------	-------------------	--	---	---	------	---

SSAG1167	Construction - Above Ground	Disconnect Switch	Install Switch + Grounding Switch EV-3 - 245 kV	<p>Price includes all labor, material and equipment to perform installation. Installation includes, but not limited to, the following: supply and install of safety grounds if necessary, off-load equipment, place in temporary location if necessary, clean before installation, final placement, necessary adjustments and final piercing, linkage for switch operation, grounds, supply and install ground mat/grid, MOD installations including and not limiting with AC/DC wire connections, fiber optic and patch panel installation, etc. Installation shall follow manufacturer recommended procedures and installation details and BOM. All miscellaneous material to be supplied and installed as part of the Contractor's scope, per installation drawing. Wiring verification, Component and Functional Testing are part of the Contractor's Scope. Switch and grounding wire supplied by owner. Switch Tag to be provided and installed by contractor. Wiring and terms are not included in this unit.</p> <p>DRAWING REFERENCE:</p> <p>Installation drawing per design library</p>	<p>INS 74.00.02 - Disconnectors and earthing switches for outdoor installations</p> <p>TM2.72.11 - HV &amp; EHV Air Break Switches 34.5kV through 345kV</p> <p>TM2.73.15 Construction Specifications Substation -</p> <p>Section 33 72 23 - Substation Structures</p> <p>Section 33 71 26 - Transmission &amp; Distribution Equipment</p> <p>Section E1 - Commissioning Manuals</p>	EACH	1
----------	-----------------------------	-------------------	---	---	---	------	---

SSAG1168	Construction - Above Ground	Disconnect Switch	Install Switch + Grounding Switch RDA 2 - 362 kV	<p>Price includes all labor, material and equipment to perform installation. Installation includes, but not limited to, the following: supply and install of safety grounds if necessary, off-load equipment, place in temporary location if necessary, clean before installation, final placement, necessary adjustments and final piercing, linkage for switch operation, grounds, supply and install ground mat/grid, MOD installations including and not limiting with AC/DC wire connections, fiber optic and patch panel installation, etc. Installation shall follow manufacturer recommended procedures and installation details and BOM. All miscellaneous material to be supplied and installed as part of the Contractor's scope, per installation drawing. Switch and grounding wire supplied by owner. Switch Tag to be provided and installed by contractor. Wiring and terms are not included in this unit.</p> <p>DRAWING REFERENCE:</p> <p>Installation drawing per design library</p>	<p>INS 74.00.02 - Disconnectors and earthing switches for outdoor installations</p> <p>TM2.72.11 - HV &amp; EHV Air Break Switches 34.5kV through 345kV</p> <p>TM2.73.15 Construction Specifications Substation -</p> <p>Section 33 72 23 - Substation Structures</p> <p>Section 33 71 26 - Transmission &amp; Distribution Equipment</p>	EACH	1
----------	-----------------------------	-------------------	--	---	---	------	---

SSAG1169	Construction - Above Ground	Disconnect Switch	Remove ≤ 12.47 kV Disconnect Switch/Switcher	<p>Price includes all labor, material and equipment to perform the removal of the equipment. Removal includes, but not limited to, the following: removal of any minor equipment associated with the old equipment, rigging of old equipment, placement on trailer for future disposal by a third party. All oil/gas to be removed and disposed by Avangrid. Contractor will not be responsible for the disposal of the oil (if any) for switch/switcher as part of this PayCU. Swich/Switcher should be grounded while in a temporary location after removal.</p> <p>DRAWING REFERENCE: Removal per drawing</p>	<p>INS 74.00.02 - Disconnectors and earthing switches for outdoor installations</p> <p>TM2.62.17 - 69kV and Below Air Break Switches</p> <p>TM2.73.15 Construction Specifications Substation -</p> <p>Section 33 72 23 - Substation Structures</p> <p>Section 33 71 26 - Transmission &amp; Distribution Equipment</p>		EACH	1
SSAG1170	Construction - Above Ground	Disconnect Switch	Remove 34.5 kV Disconnect Switch/Switcher	<p>Price includes all labor, material and equipment to perform the removal of the equipment. Removal includes, but not limited to, the following: removal of any minor equipment associated with the old equipment, rigging of old equipment, placement on trailer for future disposal by a third party. All oil/gas to be removed and disposed by Avangrid. Contractor will not be responsible for the disposal of the oil (if any) for switch/switcher as part of this PayCU. Swich/Switcher should be grounded while in a temporary location after removal.</p>	<p>INS 74.00.02 - Disconnectors and earthing switches for outdoor installations</p> <p>TM2.62.17 - 69kV and Below Air Break Switches</p> <p>TM2.72.11 - HV &amp; EHV Air Break Switches 34.5kV through 345kV</p> <p>TM2.73.15 Construction</p>		EACH	1

				<p>DRAWING REFERENCE:</p> <p>Removal per drawing</p>	<p>Specifications Substation -</p> <p>Section 33 72 23 - Substation Structures</p> <p>Section 33 71 26 - Transmission &amp; Distribution Equipment</p>		
SSAG1171	Construction - Above Ground	Disconnect Switch	Remove 46 kV Disconnect Switch/Switcher	<p>Price includes all labor, material and equipment to perform the removal of the equipment. Removal includes, but not limited to, the following: removal of any minor equipment associated with the old equipment, rigging of old equipment, placement on trailer for future disposal by a third party. All oil/gas to be removed and disposed by Avangrid. Contractor will not be responsible for the disposal of the oil (if any) for switch/switcher as part of this PayCU. Swich/Switcher should be grounded while in a temporary location after removal.</p> <p>DRAWING REFERENCE:</p> <p>Removal per drawing</p>	<p>INS 74.00.02 - Disconnectors and earthing switches for outdoor installations</p> <p>TM2.62.17 - 69kV and Below Air Break Switches</p> <p>TM2.72.11 - HV &amp; EHV Air Break Switches 34.5kV through 345kV</p> <p>TM2.73.15 Construction Specifications Substation -</p> <p>Section 33 72 23 - Substation Structures</p> <p>Section 33 71 26</p>	EACH	1



					- Transmission & Distribution Equipment		
SSAG1172	Construction - Above Ground	Disconnect Switch	Remove 69 kV Disconnect Switch/Switcher	<p>Price includes all labor, material and equipment to perform the removal of the equipment. Removal includes, but not limited to, the following: removal of any minor equipment associated with the old equipment, rigging of old equipment, placement on trailer for future disposal by a third party. All oil/gas to be removed and disposed by Avangrid. Contractor will not be responsible for the disposal of the oil (if any) for switch/switcher as part of this PayCU. Switch/switcher should be grounded while in a temporary location after removal.</p> <p>DRAWING REFERENCE: Removal per drawing</p>	<p>INS 74.00.02 - Disconnectors and earthing switches for outdoor installations</p> <p>TM2.62.17 - 69kV and Below Air Break Switches</p> <p>TM2.72.11 - HV &amp; EHV Air Break Switches 34.5kV through 345kV</p> <p>TM2.73.15 Construction Specifications Substation -</p> <p>Section 33 72 23 - Substation Structures</p> <p>Section 33 71 26</p>	EACH	1

					- Transmission & Distribution Equipment		
SSAG1173	Construction - Above Ground	Disconnect Switch	Remove 115 kV Disconnect/Ground Switch/Switcher	<p>Price includes all labor, material and equipment to perform the removal of the equipment. Removal includes, but not limited to, the following: removal of any minor equipment associated with the old equipment, rigging of old equipment, placement on trailer for future disposal by a third party. All oil/gas to be removed and disposed by Avangrid. Contractor will not be responsible for the disposal of the oil (if any) for switch/switcher as part of this PayCU. Swich/Switcher should be grounded while in a temporary location after removal.</p> <p>DRAWING REFERENCE: Removal per drawing</p>	<p>INS 74.00.02 - Disconnectors and earthing switches for outdoor installations</p> <p>TM2.72.11 - HV &amp; EHV Air Break Switches 34.5kV through 345kV</p> <p>TM2.73.15 Construction Specifications Substation -</p> <p>Section 33 72 23 - Substation Structures</p> <p>Section 33 71 26 - Transmission &amp; Distribution Equipment</p>	EACH	1

SSAG1174	Construction - Above Ground	Disconnect Switch	Remove 230 kV Disconnect/Ground Switch/Switcher	<p>Price includes all labor, material and equipment to perform the removal of the equipment. Removal includes, but not limited to, the following: removal of any minor equipment associated with the old equipment, rigging of old equipment, placement on trailer for future disposal by a third party. All oil/gas to be removed and disposed by Avangrid. Contractor will not be responsible for the disposal of the oil (if any) for switch/switcher as part of this PayCU. Swich/Switcher should be grounded while in a temporary location after removal.</p> <p>DRAWING REFERENCE: Removal per drawing</p>	<p>INS 74.00.02 - Disconnectors and earthing switches for outdoor installations</p> <p>TM2.72.11 - HV &amp; EHV Air Break Switches 34.5kV through 345kV</p> <p>TM2.73.15 Construction Specifications Substation -</p> <p>Section 33 72 23 - Substation Structures</p> <p>Section 33 71 26 - Transmission &amp; Distribution Equipment</p>		EACH	1
SSAG1175	Construction - Above Ground	Disconnect Switch	Remove 345 kV Disconnect/Ground Switch/Switcher	<p>Price includes all labor, material and equipment to perform the removal of the equipment. Removal includes, but not limited to, the following: removal of any minor equipment associated with the old equipment, rigging of old equipment, placement on trailer for future disposal by a third party. All oil/gas to be removed and disposed by Avangrid. Contractor will not be responsible for the disposal of the oil (if any) for switch/switcher as part of this PayCU. Swich/Switcher should be grounded while in a temporary location after removal.</p>	<p>INS 74.00.02 - Disconnectors and earthing switches for outdoor installations</p> <p>TM2.72.11 - HV &amp; EHV Air Break Switches 34.5kV through 345kV</p> <p>TM2.73.15 Construction Specifications Substation -</p> <p>Section 33 72 23 - Substation</p>		EACH	1

				DRAWING REFERENCE: Removal per drawing	Structures Section 33 71 26 - Transmission & Distribution Equipment			
SSAG1176	Construction - Above Ground	Disconnect Switch	Testing and Commissioning of Disconnect Switch 15kV and below	Testing and commissioning to include testing of wiring, component tests, and functional tests per E1 - Commissioning Manual. Testing of relay settings and logic are not included in this scope.  DRAWING REFERENCE: Installation drawing per design library	Section E1 - Commissioning Manuals		EACH	1
SSAG1177	Construction - Above Ground	Disconnect Switch	Testing and Commissioning of Disconnect Switch 35-46kV	Testing and commissioning to include testing of wiring, component tests, and functional tests per E1 - Commissioning Manual. Testing of relay settings and logic are not included in this scope.  DRAWING REFERENCE: Installation drawing per design library	Section E1 - Commissioning Manuals		EACH	1

SSAG1178	Construction - Above Ground	Disconnect Switch	Testing and Commissioning of Disconnect Switch 115kV	<p>Testing and commissioning to include testing of wiring, component tests, and functional tests per E1 - Commissioning Manual. Testing of relay settings and logic are not included in this scope.</p> <p>DRAWING REFERENCE:</p> <p>Installation drawing per design library</p>	Section E1 - Commissioning Manuals	EACH	1
SSAG1179	Construction - Above Ground	Disconnect Switch	Testing and Commissioning of Disconnect Switch 230kV and above	<p>Testing and commissioning to include testing of wiring, component tests, and functional tests per E1 - Commissioning Manual. Testing of relay settings and logic are not included in this scope.</p> <p>DRAWING REFERENCE:</p> <p>Installation drawing per design library</p>	Section E1 - Commissioning Manuals	EACH	1
SSAG1180	Construction - Above Ground	Grounding	Install Structure Grounding	<p>Install 4/0 copper ground wire from Substation ground grid to structure. Includes all connectors. Existing structure to be grounded.</p> <p>MATERIAL REQUIREMENTS:</p> <p>Owner will supply wire. Connectors will be contractor supplied.</p>	TM2.71.78 Grounding	Per foot	1

SSAG1181	Construction - Above Ground	Grounding	Install Structure Grounding Mat	<p>Install ground mat and ground it from Substation ground grid using 4/0 copper ground wire. Includes all connectors.</p> <p>MATERIAL REQUIREMENTS:</p> <p>Owner will supply wire and ground mat. Connectors will be contractor supplied.</p>	TM2.71.78 Grounding		each	1
SSAG1182	Construction - Above Ground	Grounding	Install General Equipment Grounding	<p>Install 4/0 copper ground wire from Substation ground grid to equipment. Includes all connectors.</p> <p>Ground of existing equipment.</p> <p>MATERIAL REQUIREMENTS:</p> <p>Owner will supply wire. Connectors will be contractor supplied.</p>	TM2.71.78 Grounding		Per Equipment	1
SSAG1183	Construction - Above Ground	Grounding	Install Disconnect Switch grounding	<p>Install 4/0 copper ground wire from Substation ground grid to disconnect switch/operator. Includes all connectors and braids. Grounding of existing equipment</p> <p>MATERIAL REQUIREMENTS:</p> <p>Owner will supply wire. Connectors/braids will be contractor supplied.</p>	<p>TM2.71.18 Documentation &amp; Engineering Symbols</p> <p>TM2.71.78 Grounding</p>		Per Switch	1
SSAG1184	Construction - Above Ground	Grounding	Install Capacitor Bank Grounding	<p>Install 4/0 copper ground wire from Substation ground grid to structure, CT's and Arresters. Includes all connectors.</p> <p>Grounding of existing equipment</p>	TM2.71.78 Grounding		Per Cap Bank	1

				<p>MATERIAL REQUIREMENTS:</p> <p>Owner will supply wire. Connectors will be contractor supplied.</p>				
SSAG1185	Construction - Above Ground	Grounding	Install Conduit riser Grounding	<p>Install 4/0 copper ground wire from Substation ground grid to rigid steel (RGS) conduit. Includes all connectors.</p> <p>MATERIAL REQUIREMENTS:</p> <p>Owner will supply wire. Connectors will be contractor supplied.</p>	TM2.71.78 Grounding		Per Conduit Riser	1
SSAG1186	Construction - Above Ground	Grounding	Install junction box & enclosure Grounding	<p>Install 4/0 copper ground wire from Substation ground grid to junction box or equipment ground bar/lug. Includes all connectors. Grounding of existing equipment</p> <p>MATERIAL REQUIREMENTS:</p> <p>Owner will supply wire. Connectors will be contractor supplied.</p>	TM2.71.78 Grounding		Per Enclosure	1
SSAG1187	Construction - Above Ground	Grounding	Install non IPO Circuit Breaker Grounding	<p>Install 4/0 copper ground wire from Substation ground grid to breaker junction box and structure legs. Includes all connectors. Grounding of existing equipment</p> <p>MATERIAL REQUIREMENTS:</p>	TM2.71.78 Grounding		Per Breaker	1

				Owner will supply wire. Connectors will be contractor supplied.				
SSAG1188	Construction - Above Ground	Grounding	Install IPO Circuit Breaker Grounding	<p>Install 4/0 copper ground wire from Substation ground grid to Breaker junction box, control cabinets and structure legs. Includes all connectors. Grounding of existing equipment</p> <p>MATERIAL REQUIREMENTS:</p> <p>Owner will supply wire. Connectors will be contractor supplied.</p>	TM2.71.78 Grounding		Per Breaker	1
SSAG1189	Construction - Above Ground	Grounding	Install Vacuum Circuit Breaker Grounding	<p>Install 4/0 copper ground wire from Substation ground grid to breaker junction box and structure legs. Includes all connectors. Grounding of existing equipment</p> <p>MATERIAL REQUIREMENTS:</p> <p>Owner will supply wire. Connectors will be contractor supplied.</p>	TM2.71.78 Grounding		Per Breaker	1
SSAG1190	Construction - Above Ground	Grounding	Install Transformer Grounding	<p>Install 4/0 copper ground wire from Substation ground grid to Transformer ground pads. Install 4/0 copper ground wire from Transformer XO bushing to The Substation main ground grid. Install grounding wire and connectors for transformer foundation grating. Includes all</p>	TM2.71.78 Grounding		Per Transformer	1



				connectors. Grounding of existing equipment				
				MATERIAL REQUIREMENTS:  Owner will supply wire. Connectors will be contractor supplied.				
SSAG1191	Construction - Above Ground	Grounding	Install Station Service Transformer Grounding	Install 4/0 copper ground wire from Substation ground grid to Station Service Transformer ground pad and Surge Arrester. Includes all connectors.  MATERIAL REQUIREMENTS:  Owner will supply wire. Connectors will be contractor supplied.	TM2.71.78 Grounding		Per Station Service Transformer	1
SSAG1192	Construction - Above Ground	Grounding	Install Single Phase CCVT Grounding	Install 4/0 copper ground wire from Substation ground grid to Structure, Junc. Box and CCVT ground pad. Includes all connectors.  MATERIAL REQUIREMENTS:  Owner will supply wire. Connectors will be contractor supplied.	TM2.71.78 Grounding		Per CCVT	1
SSAG1193	Construction - Above Ground	Grounding	Install Three Phase CCVT Grounding	Install 4/0 copper ground wire from Substation ground grid to Structure, Junc. Box and CCVT ground pads. Includes Connectors	TM2.71.78 Grounding		Per set of 3 CCVTs	1

				<p>MATERIAL REQUIREMENTS:</p> <p>Owner will supply wire. Connectors will be contractor supplied.</p>				
SSAG1194	Construction - Above Ground	Grounding	Install Underground cable terminator with Arrester.	<p>Install 4/0 copper ground wire from Substation ground grid to Structure, Cable neutrals and Surge Arrester. Includes all connectors.</p> <p>MATERIAL REQUIREMENTS:</p> <p>Owner will supply wire. Connectors will be contractor supplied.</p>	TM2.71.78 Grounding		Per set of 3 UG Termination	1
SSAG1195	Construction - Above Ground	Grounding	Install Single Phase Instrument Transformer Grounding <=69kV	<p>Install 4/0 copper ground wire from Substation ground grid to Structure, Junc. Box and Equipment ground pad. Includes all connectors.</p> <p>MATERIAL REQUIREMENTS:</p> <p>Owner will supply wire. Connectors will be contractor supplied.</p>	TM2.71.78 Grounding		Per Instrument Transformer	1
SSAG1196	Construction - Above Ground	Grounding	Install <=69kV Three Phase Instrument Transformer Grounding	<p>Install 4/0 copper ground wire from Substation ground grid to Structure, Junc. Box and Equipment ground pads. Includes all connectors.</p> <p>MATERIAL REQUIREMENTS:</p> <p>Owner will supply wire.</p>	TM2.71.78 Grounding		Per set of three Instrument Transformers	1

				Connectors will be contractor supplied.				
SSAG1197	Construction - Above Ground	Grounding	Install Single Phase Instrument Transformer Grounding 115-345kV	<p>Install 4/0 copper ground wire from Substation ground grid to Structure, Junc. Box and Equipment ground pad. Includes all connectors.</p> <p>MATERIAL REQUIREMENTS:</p> <p>Owner will supply wire. Connectors will be contractor supplied.</p>	TM2.71.78 Grounding		Per Instrument Transformer	1
SSAG1198	Construction - Above Ground	Grounding	Install 115-345kV Three Phase Instrument Transformer Grounding	<p>Install 4/0 copper ground wire from Substation ground grid to Structure, Junc. Box and Equipment ground pads. Includes all connectors.</p> <p>MATERIAL REQUIREMENTS:</p> <p>Owner will supply wire. Connectors will be contractor supplied.</p>	TM2.71.78 Grounding		Per set of three Instrument Transformers	1
SSAG1199	Construction - Above Ground	Grounding	Install Regulator Grounding	<p>Install 4/0 copper ground wire from Substation ground grid to Regulator stand, ground pads and source load bushing. Includes all connectors.</p> <p>MATERIAL REQUIREMENTS:</p> <p>Owner will supply wire.</p>	TM2.71.78 Grounding		Per set of 3 Regulators	1

				Connectors will be contractor supplied.				
SSAG1200	Construction - Above Ground	Grounding	Install Lightning Mast Grounding	<p>Install 4/0 copper ground wire from Substation ground grid to Lightning Mast ground pad. Includes all connectors.</p> <p>MATERIAL REQUIREMENTS:</p> <p>Owner will supply wire. Connectors will be contractor supplied.</p>	TM2.71.78 Grounding		Per Lightning Mast	1
SSAG1201	Construction - Above Ground	Grounding	Install Static Wire Grounding	<p>Install 4/0 copper ground wire from Substation ground grid to static structure and static wire. Includes all connectors.</p> <p>MATERIAL REQUIREMENTS:</p> <p>Owner will supply wire. Connectors will be contractor supplied.</p>	TM2.71.78 Grounding		Per Static Wire	1
SSAG1202	Construction - Above Ground	Grounding	Install <=69kV Surge Arrester Grounding	<p>Install 4/0 copper ground wire from Substation ground grid to Surge Arrester ground pads. Includes all connectors.</p> <p>MATERIAL REQUIREMENTS:</p> <p>Owner will supply wire. Connectors will be contractor supplied.</p>	TM2.71.78 Grounding		Per Arrester	1

SSAG1203	Construction - Above Ground	Grounding	Install 115-345kV Surge Arrester Grounding	<p>Install 4/0 copper ground wire from Substation ground grid to Surge Arrester ground pads. Includes all connectors.</p> <p>MATERIAL REQUIREMENTS:</p> <p>Owner will supply wire. Connectors will be contractor supplied.</p>	TM2.71.78 Grounding	Per Arrester	1
SSAG1204	Construction - Above Ground	Grounding	Install Switchgear Grounding	<p>Install a copper ground bus for each switchgear cubicle assembly. Each section of the switchgear shall be grounded directly to this bus.</p> <p>MATERIAL REQUIREMENTS:</p> <p>Owner will supply wire. Connectors/ground bars will be contractor supplied.</p>	TM2.71.78 Grounding	Per Switchgear Bay	1
SSAG1205	Construction - Above Ground	Grounding	Install 2/0 copper halo grounding inside control building	<p>Includes the installation of all fittings and connections. Supply of 2/0 copper by owner, all others by contractor</p> <p>DRAWING REFERENCE:</p> <p>Installation per design library</p>	TM2.73.15 Construction Specifications Substation	LF	1
SSAG1206	Construction - Above Ground	Grounding	Install 4/0 copper halo grounding inside control building	<p>Includes the installation of all fittings and connections. Supply of 4/0 copper by owner, all others by contractor</p> <p>DRAWING REFERENCE:</p>	TM2.73.15 Construction Specifications Substation	LF	1

				Installation per design library				
SSAG1207	Construction - Above Ground	Grounding	Install 500MCM copper halo grounding inside control building	Includes the installation of all fittings and connections. Supply of 500MCM copper by owner, all others by contractor  DRAWING REFERENCE:  Installation per design library	TM2.73.15 Construction Specifications Substation		LF	1
SSAG1208	Construction - Above Ground	Grounding	Install 2" copper ground bar inside control building	Includes the installation of all fittings and connections. Supply of copper bar by owner, all others by contractor  DRAWING REFERENCE:  Installation per design library	TM2.73.15 Construction Specifications Substation		LF	1
SSAG1209	Construction - Above Ground	Grounding	Install 3" copper ground bar inside control building	Includes the installation of all fittings and connections. Supply of copper bar by owner, all others by contractor  DRAWING REFERENCE:  Installation per design library	TM2.73.15 Construction Specifications Substation		LF	1
SSAG1210	Construction - Above Ground	Insulator/Surge Arrester	Remove 12-34.5-46 kV Post Insulator	Price includes all labor, material and equipment to perform the removal of the equipment for relocation. Removal includes, but not limited to the following: removal of any minor material associated with the equipment,			Per Insulator	1

				rigging, trailer, placement on trailer, etc.				
SSAG1211	Construction - Above Ground	Insulator/Surge Arrester	Remove 69 kV post insulator	Price includes all labor, material and equipment to perform the removal of the equipment for relocation. Removal includes, but not limited to the following: removal of any minor material associated with the equipment, rigging, trailer, placement on trailer, etc.			Per Insulator	1
SSAG1212	Construction - Above Ground	Insulator/Surge Arrester	Remove 115 kV post insulator	Price includes all labor, material and equipment to perform the removal of the equipment for relocation. Removal includes, but not limited to the following: removal of any minor material associated with the equipment, rigging, trailer, placement on trailer, etc.			Per Insulator	1
SSAG1213	Construction - Above Ground	Insulator/Surge Arrester	Remove 245 kV Post Insulator	Price includes all labor, material and equipment to perform the removal of the equipment for relocation. Removal includes, but not limited to the following: removal of any minor material associated with the equipment, rigging, trailer, placement on trailer, etc.			Per Insulator	1
SSAG1214	Construction - Above Ground	Insulator/Surge Arrester	Remove 345 kV Post Insulator	Price includes all labor, material and equipment to perform the removal of the equipment for relocation. Removal includes, but not limited to the following: removal of any minor material associated with the equipment, rigging, trailer, placement on trailer, etc.			Per Insulator	1

SSAG1215	Construction - Above Ground	Insulator/Surge Arrester	Install Surge Arrester 12-34.5-46 kV	<p>Price includes all labor, material and equipment to perform installation. Installation includes, but not limited to, the following: supply/install of safety grounds if necessary, equipment necessary for access to the equipment, conduits, grounding per installation drawing. Component testing is part of the Contractor Scope Per AVANGRID PROTOCOL. Main Equipment and grounding wire supplied by owner.</p> <p>DRAWING REFERENCE: Installation per design library</p>	<p>INS 75.30.04.01 - Metal oxide surge arresters</p> <p>TM2.73.15 Construction Specifications Substation -</p> <p>Section 33 72 23 - Substation Structures</p> <p>Section 33 71 26 - Transmission &amp; Distribution Equipment</p>		Per Surge Arrestor	1
SSAG1216	Construction - Above Ground	Insulator/Surge Arrester	Install Surge Arrester 69 kV	<p>Price includes all labor, material and equipment to perform installation. Installation includes, but not limited to, the following: supply/install of safety grounds if necessary, equipment necessary for access to the equipment, conduits, grounding per installation drawing. Component testing is part of the Contractor Scope Per AVANGRID PROTOCOL. Main Equipment and grounding wire supplied by owner.</p> <p>DRAWING REFERENCE: Installation per design library</p>	<p>INS 75.30.04.01 - Metal oxide surge arresters</p> <p>TM2.73.15 Construction Specifications Substation -</p> <p>Section 33 72 23 - Substation Structures</p> <p>Section 33 71 26 - Transmission &amp; Distribution Equipment</p>		Per Surge Arrestor	1



SSAG1217	Construction - Above Ground	Insulator/Surge Arrester	Install Surge Arrester 115 kV	<p>Price includes all labor, material and equipment to perform installation. Installation includes, but not limited to, the following: supply/install of safety grounds if necessary, equipment necessary for access to the equipment, conduits, grounding per installation drawing. Component testing is part of the Contractor Scope Per AVANGRID PROTOCOL. Main Equipment and grounding wire supplied by owner.</p> <p>DRAWING REFERENCE: Installation per design library</p>	<p>INS 75.30.04.01 - Metal oxide surge arresters</p> <p>TM2.73.15 Construction Specifications Substation -</p> <p>Section 33 72 23 - Substation Structures</p> <p>Section 33 71 26 - Transmission &amp; Distribution Equipment</p>		Per Surge Arrestor	1
SSAG1218	Construction - Above Ground	Insulator/Surge Arrester	Install Surge Arrester 245 kV	<p>Price includes all labor, material and equipment to perform installation. Installation includes, but not limited to, the following: supply/install of safety grounds if necessary, equipment necessary for access to the equipment, conduits, grounding per installation drawing. Component testing is part of the Contractor Scope Per AVANGRID PROTOCOL. Main Equipment and grounding wire supplied by owner.</p> <p>DRAWING REFERENCE: Installation per design library</p>	<p>INS 75.30.04.01 - Metal oxide surge arresters</p> <p>TM2.73.15 Construction Specifications Substation -</p> <p>Section 33 72 23 - Substation Structures</p> <p>Section 33 71 26 - Transmission &amp; Distribution Equipment</p>		Per Surge Arrestor	1

SSAG1219	Construction - Above Ground	Insulator/Surge Arrester	Install Surge Arrester 345 kV	<p>Price includes all labor, material and equipment to perform installation. Installation includes, but not limited to, the following: supply/install of safety grounds if necessary, equipment necessary for access to the equipment, conduits, grounding per installation drawing,. Main Equipment and grounding wire supplied by owner.</p> <p>DRAWING REFERENCE: Installation per design library</p>	<p>INS 75.30.04.01 - Metal oxide surge arresters</p> <p>TM2.73.15 Construction Specifications Substation -</p> <p>Section 33 72 23 - Substation Structures</p> <p>Section 33 71 26 - Transmission &amp; Distribution Equipment</p>	Per Surge Arrester	1
SSAG1220	Construction - Above Ground	Insulator/Surge Arrester	Install Post Insulator 12-34.5-46 kV	<p>Price includes all labor, material and equipment to perform installation. Installation includes, but not limited to, the following: supply/install of safety grounds if necessary, equipment necessary for access to the equipment. Main Equipment and grounding wire supplied by owner.</p> <p>DRAWING REFERENCE: Installation per design library</p>	<p>INS 48.20.02 Ceramic support post insulators for outdoor installations</p> <p>TM2.73.15 Construction Specifications Substation -</p> <p>Section 33 72 23 - Substation Structures</p> <p>Section 33 71 26 - Transmission &amp; Distribution Equipment</p>	Per Post Insulator	1

SSAG1221	Construction - Above Ground	Insulator/Surge Arrester	Install Post Insulator 69 kV	<p>Price includes all labor, material and equipment to perform installation. Installation includes, but not limited to, the following: supply/install of safety grounds if necessary, equipment necessary for access to the equipment. Main Equipment and grounding wire supplied by owner.</p> <p>DRAWING REFERENCE: Installation per design library</p>	<p>INS 48.20.02 Ceramic support post insulators for outdoor installations</p> <p>TM2.73.15 Construction Specifications Substation -</p> <p>Section 33 72 23 - Substation Structures</p> <p>Section 33 71 26 - Transmission &amp; Distribution Equipment</p>		Per Post Insulator	1
SSAG1222	Construction - Above Ground	Insulator/Surge Arrester	Install Post Insulator 115 kV	<p>Price includes all labor, material and equipment to perform installation. Installation includes, but not limited to, the following: supply/install of safety grounds if necessary, equipment necessary for access to the equipment. Main Equipment and grounding wire supplied by owner.</p> <p>DRAWING REFERENCE: Installation per design library</p>	<p>INS 48.20.02 Ceramic support post insulators for outdoor installations</p> <p>TM2.73.15 Construction Specifications Substation -</p> <p>Section 33 72 23 - Substation Structures</p> <p>Section 33 71 26 - Transmission &amp; Distribution Equipment</p>		Per Post Insulator	1

SSAG1223	Construction - Above Ground	Insulator/Surge Arrester	Install Post Insulator 245 kV	<p>Price includes all labor, material and equipment to perform installation. Installation includes, but not limited to, the following: supply/install of safety grounds if necessary, equipment necessary for access to the equipment. Main Equipment and grounding wire supplied by owner.</p> <p>DRAWING REFERENCE: Installation per design library</p>	<p>INS 48.20.02 Ceramic support post insulators for outdoor installations</p> <p>TM2.73.15 Construction Specifications Substation -</p> <p>Section 33 72 23 - Substation Structures</p> <p>Section 33 71 26 - Transmission &amp; Distribution Equipment</p>		Per Post Insulator	1
SSAG1224	Construction - Above Ground	Insulator/Surge Arrester	Install Post Insulator 365 kV	<p>Price includes all labor, material and equipment to perform installation. Installation includes, but not limited to, the following: supply/install of safety grounds if necessary, equipment necessary for access to the equipment. Main Equipment and grounding wire supplied by owner.</p> <p>DRAWING REFERENCE: Installation per design library</p>	<p>INS 48.20.02 Ceramic support post insulators for outdoor installations</p> <p>TM2.73.15 Construction Specifications Substation -</p> <p>Section 33 72 23 - Substation Structures</p> <p>Section 33 71 26 - Transmission &amp; Distribution Equipment</p>		Per Post Insulator	1

SSAG1225	Construction - Above Ground	Insulator/Surge Arrester	Install Set of Three (3) Post Insulators 12-34.5-46 kV	<p>Price includes all labor, material and equipment to perform installation. Installation includes, but not limited to, the following: supply/install of safety grounds if necessary, equipment necessary for access to the equipment. Main Equipment and grounding wire supplied by owner.</p> <p>DRAWING REFERENCE: Installation per design library</p>	<p>INS 48.20.02 Ceramic support post insulators for outdoor installations</p> <p>TM2.73.15 Construction Specifications Substation -</p> <p>Section 33 72 23 - Substation Structures</p> <p>Section 33 71 26 - Transmission &amp; Distribution Equipment</p>		Per Set of post insulators	1
SSAG1226	Construction - Above Ground	Insulator/Surge Arrester	Install Set of Three (3) Post Insulators 69 kV	<p>Price includes all labor, material and equipment to perform installation. Installation includes, but not limited to, the following: supply/install of safety grounds if necessary, equipment necessary for access to the equipment. Main Equipment and grounding wire supplied by owner.</p> <p>DRAWING REFERENCE: Installation per design library</p>	<p>INS 48.20.02 Ceramic support post insulators for outdoor installations</p> <p>TM2.73.15 Construction Specifications Substation -</p> <p>Section 33 72 23 - Substation Structures</p> <p>Section 33 71 26 - Transmission &amp; Distribution Equipment</p>		Per Set of post insulators	1

SSAG1227	Construction - Above Ground	Insulator/Surge Arrester	Install Set of Three (3) Post Insulators 115 kV	<p>Price includes all labor, material and equipment to perform installation. Installation includes, but not limited to, the following: supply/install of safety grounds if necessary, equipment necessary for access to the equipment. Main Equipment and grounding wire supplied by owner.</p> <p>DRAWING REFERENCE: Installation per design library</p>	<p>INS 48.20.02 Ceramic support post insulators for outdoor installations</p> <p>TM2.73.15 Construction Specifications Substation -</p> <p>Section 33 72 23 - Substation Structures</p> <p>Section 33 71 26 - Transmission &amp; Distribution Equipment</p>		Per Set of post insulators	1
SSAG1228	Construction - Above Ground	Insulator/Surge Arrester	Install Set of Three (3) Post Insulators 245 kV	<p>Price includes all labor, material and equipment to perform installation. Installation includes, but not limited to, the following: supply/install of safety grounds if necessary, equipment necessary for access to the equipment. Main Equipment and grounding wire supplied by owner.</p> <p>DRAWING REFERENCE: Installation per design library</p>	<p>INS 48.20.02 Ceramic support post insulators for outdoor installations</p> <p>TM2.73.15 Construction Specifications Substation -</p> <p>Section 33 72 23 - Substation Structures</p> <p>Section 33 71 26 - Transmission &amp; Distribution Equipment</p>		Per Set of post insulators	1

SSAG1229	Construction - Above Ground	Insulator/Surge Arrester	Install Set of Three (3) Post Insulators 365 kV	<p>Price includes all labor, material and equipment to perform installation. Installation includes, but not limited to, the following: supply/install of safety grounds if necessary, equipment necessary for access to the equipment. Main Equipment and grounding wire supplied by owner.</p> <p>DRAWING REFERENCE: Installation per design library</p>	<p>INS 48.20.02 Ceramic support post insulators for outdoor installations</p> <p>TM2.73.15 Construction Specifications Substation -</p> <p>Section 33 72 23 - Substation Structures</p> <p>Section 33 71 26 - Transmission &amp; Distribution Equipment</p>		Per Set of post insulators	1
SSAG1230	Construction - Above Ground	Power Cables	Install #4 to 4/0 15kV/35kV Power Cables. Single Cable Per Conduit	<p>Price includes all labor, material and equipment to perform installation. Installation includes, but not limited to, the following: mule tape, pulling cable, lubricant, cable identification (labels &amp; tags). All safety requirements for access shall be included - means and methods included and to be determined by contractor. Power Cable, Clamps and Arms to be supplied by owner, installed by contractor. Cable Trench Cover removal and install by contractor. Delivery of cable to site (up to 50 miles) shall be included in the unit price.</p>	<p>TM2.61.24 Primary Cable 15kV-35kV</p> <p>TM2.73.15 Construction Specifications Substation -</p> <p>Section 33 71 26 - Transmission &amp; Distribution Equipment</p> <p>Section E1 - Commissioning Manuals</p>		Per Foot	1

SSAG1231	Construction - Above Ground	Power Cables	Install #4 to 4/0 15kV/35kV Power Cables. Paralleled Cable in Single Conduit	Price includes all labor, material and equipment to perform installation. Installation includes, but not limited to, the following: mule tape, pulling cable, lubricant, cable identification (labels & tags). All safety requirements for access shall be included - means and methods included and to be determined by contractor. Power Cable, Clamps and Arms to be supplied by owner, installed by contractor. Cable Trench Cover removal and install by contractor. Delivery of cable to site (up to 50 miles) shall be included in the unit price.	<p>TM2.61.24 Primary Cable 15kV-35kV</p> <p>TM2.73.15 Construction Specifications Substation -</p> <p>Section 33 71 26 - Transmission &amp; Distribution Equipment</p> <p>Section E1 - Commissioning Manuals</p>		Per Foot	1
SSAG1232	Construction - Above Ground	Power Cables	Install 250-750 KCM 15KV/35kV Power Cables. Single Cable per Conduit	Price includes all labor, material and equipment to perform installation. Installation includes, but not limited to, the following: mule tape, pulling cable, lubricant, cable identification (labels & tags). All safety requirements for access shall be included - means and methods included and to be determined by contractor. Power Cable, Clamps and Arms to be supplied by owner, installed by contractor. Cable Trench Cover removal and install by contractor. Delivery of cable to site (up to 50 miles) shall be included in the unit price.	<p>TM2.61.24 Primary Cable 15kV-35kV</p> <p>TM2.73.15 Construction Specifications Substation -</p> <p>Section 33 71 26 - Transmission &amp; Distribution Equipment</p> <p>Section E1 - Commissioning Manuals</p>		Per Foot	1



SSAG1233	Construction - Above Ground	Power Cables	Install 250-750 KCM 15KV/35kV Power Cables. Paralleled Cable in single Conduit	Price includes all labor, material and equipment to perform installation. Installation includes, but not limited to, the following: mule tape, pulling cable, lubricant, cable identification (labels & tags). All safety requirements for access shall be included - means and methods included and to be determined by contractor. Power Cable, Clamps and Arms to be supplied by owner, installed by contractor. Cable Trench Cover removal and install by contractor. Delivery of cable to site (up to 50 miles) shall be included in the unit price.	<p>TM2.61.24 Primary Cable 15kV-35kV</p> <p>TM2.73.15 Construction Specifications Substation -</p> <p>Section 33 71 26 - Transmission &amp; Distribution Equipment</p> <p>Section E1 - Commissioning Manuals</p>	Per Foot	1
SSAG1234	Construction - Above Ground	Power Cables	Install 1000-1250 KCM 15KV/35kV Power Cables. Single Cable per Conduit	Price includes all labor, material and equipment to perform installation. Installation includes, but not limited to, the following: mule tape, pulling cable, lubricant, cable identification (labels & tags). All safety requirements for access shall be included - means and methods included and to be determined by contractor. Power Cable, Clamps and Arms to be supplied by owner, installed by contractor. Cable Trench Cover removal and install by contractor. Delivery of cable to site (up to 50 miles) shall be included in the unit price.	<p>TM2.61.24 Primary Cable 15kV-35kV</p> <p>TM2.73.15 Construction Specifications Substation -</p> <p>Section 33 71 26 - Transmission &amp; Distribution Equipment</p> <p>Section E1 - Commissioning Manuals</p>	Per Foot	1

SSAG1235	Construction - Above Ground	Power Cables	Install 1000-1250 KCM 15KV/35kV Power Cables. Paralleled Cable in single Conduit	Price includes all labor, material and equipment to perform installation. Installation includes, but not limited to, the following: mule tape, pulling cable, lubricant, cable identification (labels & tags). All safety requirements for access shall be included - means and methods included and to be determined by contractor. Power Cable, Clamps and Arms to be supplied by owner, installed by contractor. Cable Trench Cover removal and install by contractor. Delivery of cable to site (up to 50 miles) shall be included in the unit price.	<p>TM2.61.24 Primary Cable 15kV-35kV</p> <p>TM2.73.15 Construction Specifications Substation -</p> <p>Section 33 71 26 - Transmission &amp; Distribution Equipment</p> <p>Section E1 - Commissioning Manuals</p>		Per Foot	1
SSAG1236	Construction - Above Ground	Power Cables	Install #4 to 4/0 15KV/35kV Power Cables in Cable Trench	Price includes all labor, material and equipment to perform installation. Installation includes, but not limited to, the following: mule tape, pulling cable, lubricant, cable identification (labels & tags). All safety requirements for access shall be included - means and methods included and to be determined by contractor. Power Cable, Clamps and Arms to be supplied by owner, installed by contractor. Cable Trench Cover removal and install by contractor. Delivery of cable to site (up to 50 miles) shall be included in the unit price.	<p>TM2.61.24 Primary Cable 15kV-35kV</p> <p>TM2.73.15 Construction Specifications Substation -</p> <p>Section 33 71 26 - Transmission &amp; Distribution Equipment</p> <p>Section E1 - Commissioning Manuals</p>		Per Foot	1

SSAG1237	Construction - Above Ground	Power Cables	Install 250-750 KCM 15KV/35kV Power Cables in Cable Trench	Price includes all labor, material and equipment to perform installation. Installation includes, but not limited to, the following: mule tape, pulling cable, lubricant, cable identification (labels & tags). All safety requirements for access shall be included - means and methods included and to be determined by contractor. Power Cable, Clamps and Arms to be supplied by owner, installed by contractor. Cable Trench Cover removal and install by contractor. Delivery of cable to site (up to 50 miles) shall be included in the unit price.	<p>TM2.61.24 Primary Cable 15kV-35kV</p> <p>TM2.73.15 Construction Specifications Substation -</p> <p>Section 33 71 26 - Transmission &amp; Distribution Equipment</p> <p>Section E1 - Commissioning Manuals</p>	Per Foot	1
SSAG1238	Construction - Above Ground	Power Cables	Install 1000-1250 KCM 15KV/35kV Power Cables in Cable Trench	Price includes all labor, material and equipment to perform installation. Installation includes, but not limited to, the following: mule tape, pulling cable, lubricant, cable identification (labels & tags). All safety requirements for access shall be included - means and methods included and to be determined by contractor. Power Cable, Clamps and Arms to be supplied by owner, installed by contractor. Cable Trench Cover removal and install by contractor. Delivery of cable to site (up to 50 miles) shall be included in the unit price.	<p>TM2.61.24 Primary Cable 15kV-35kV</p> <p>TM2.73.15 Construction Specifications Substation -</p> <p>Section 33 71 26 - Transmission &amp; Distribution Equipment</p> <p>Section E1 - Commissioning Manuals</p>	Per Foot	1

SSAG1239	Construction - Above Ground	Power Cables	Install #4 to 4/0 15KV/35kV Power Cables in Cable Tray <12FT	Price includes all labor, material and equipment to perform installation. Installation includes, but not limited to, the following: mule tape, pulling cable, lubricant, cable identification (labels & tags). All safety requirements for access shall be included - means and methods included and to be determined by contractor. Power Cable, Clamps and Arms to be supplied by owner, installed by contractor. Delivery of cable to site (up to 50 miles) shall be included in the unit price.	TM2.61.24 Primary Cable 15kV-35kV TM2.73.15 Construction Specifications Substation - Section 33 71 26 - Transmission & Distribution Equipment Section E1 - Commissioning Manuals	Per Foot	1
SSAG1240	Construction - Above Ground	Power Cables	Install 250-750 KCM 15KV/35kV Power Cables in Cable Tray <12FT	Price includes all labor, material and equipment to perform installation. Installation includes, but not limited to, the following: mule tape, pulling cable, lubricant, cable identification (labels & tags). All safety requirements for access shall be included - means and methods included and to be determined by contractor. Power Cable, Clamps and Arms to be supplied by owner, installed by contractor. Delivery of cable to site (up to 50 miles) shall be included in the unit price.	TM2.61.24 Primary Cable 15kV-35kV TM2.73.15 Construction Specifications Substation - Section 33 71 26 - Transmission & Distribution Equipment Section E1 - Commissioning Manuals	Per Foot	1
SSAG1241	Construction - Above Ground	Power Cables	Install 1000-1250 KCM 15KV/35kV Power Cables in Cable Tray <12FT	Price includes all labor, material and equipment to perform installation. Installation includes, but not limited to, the following: mule tape, pulling cable, lubricant, cable identification (labels & tags). All safety requirements for access shall be included - means and methods included and to be	TM2.61.24 Primary Cable 15kV-35kV TM2.73.15 Construction Specifications Substation - Section 33 71 26	Per Foot	1

				determined by contractor. Power Cable, Clamps and Arms to be supplied by owner, installed by contractor. Delivery of cable to site (up to 50 miles) shall be included in the unit price.	- Transmission & Distribution Equipment  Section E1 - Commissioning Manuals			
SSAG1242	Construction - Above Ground	Power Cables	Install #4 to 4/0 15KV/35kV Power Cables in Cable Tray >12FT	Price includes all labor, material and equipment to perform installation. Installation includes, but not limited to, the following: mule tape, pulling cable, lubricant, cable identification (labels & tags). All safety requirements for access shall be included - means and methods included and to be determined by contractor. Power Cable, Clamps and Arms to be supplied by owner, installed by contractor. Delivery of cable to site (up to 50 miles) shall be included in the unit price.	TM2.61.24 Primary Cable 15kV-35kV  TM2.73.15 Construction Specifications Substation -  Section 33 71 26 - Transmission & Distribution Equipment  Section E1 - Commissioning Manuals		Per Foot	1
SSAG1243	Construction - Above Ground	Power Cables	Install 250-750 KCM 15KV/35kV Power Cables in Cable Tray >12FT	Price includes all labor, material and equipment to perform installation. Installation includes, but not limited to, the following: mule tape, pulling cable, lubricant, cable identification (labels & tags). All safety requirements for access shall be included - means and methods included and to be determined by contractor. Power Cable, Clamps and Arms to be supplied by owner, installed by contractor. Delivery of cable to site (up to 50 miles) shall be included in the unit price.	TM2.61.24 Primary Cable 15kV-35kV  TM2.73.15 Construction Specifications Substation -  Section 33 71 26 - Transmission & Distribution Equipment  Section E1 - Commissioning Manuals		Per Foot	1

SSAG1244	Construction - Above Ground	Power Cables	Install 1000-1250 KCM 15KV/35kV Power Cables in Cable Tray >12FT	Price includes all labor, material and equipment to perform installation. Installation includes, but not limited to, the following: mule tape, pulling cable, lubricant, cable identification (labels & tags). All safety requirements for access shall be included - means and methods included and to be determined by contractor. Power Cable, Clamps and Arms to be supplied by owner, installed by contractor. Delivery of cable to site (up to 50 miles) shall be included in the unit price.	TM2.61.24 Primary Cable 15kV-35kV TM2.73.15 Construction Specifications Substation - Section 33 71 26 - Transmission & Distribution Equipment Section E1 - Commissioning Manuals	Per Foot	1
SSAG1245	Construction - Above Ground	Power Cables	Splice #4 - 4/0 15kV/35kV Power Cable and Test	Price includes all labor, material and equipment to perform installation. Installation includes, but not limited to, the following: cable identification (labels & tags), manhole rigging and all traffic control requirements. All safety requirements for access to manhole shall be included. Delivery of splice kits to site shall be included in the unit price. Kit will be supplied by owner	TM2.61.24 Primary Cable 15kV-35kV TM2.73.15 Construction Specifications Substation - Section 33 71 26 - Transmission & Distribution Equipment Section E1 - Commissioning Manuals	Per unit/phase	1
SSAG1246	Construction - Above Ground	Power Cables	Terminate #4 - 4/0 15kV/35kV Power Cable and Test	Price includes all labor, material and equipment to perform installation. Installation includes, but not limited to, the following: cable identification (labels & tags), manhole rigging and all traffic control requirements. All safety requirements for access to manhole shall be included.	TM2.61.24 Primary Cable 15kV-35kV TM2.73.15 Construction Specifications Substation - Section 33 71 26	Per unit/phase	1

				Delivery of splice kits to site shall be included in the unit price. Kit will be supplied by owner	- Transmission & Distribution Equipment  Section E1 - Commissioning Manuals			
SSAG1247	Construction - Above Ground	Power Cables	Splice 250-750kCM 15kV/35kV Power Cable and Test	Price includes all labor, material and equipment to perform installation. Installation includes, but not limited to, the following: cable identification (labels & tags), manhole rigging and all traffic control requirements. All safety requirements for access to manhole shall be included. Delivery of splice kits to site shall be included in the unit price. Kit will be supplied by owner	TM2.61.24 Primary Cable 15kV-35kV  TM2.73.15 Construction Specifications Substation -  Section 33 71 26 - Transmission & Distribution Equipment  Section E1 - Commissioning Manuals		Per unit/phase	1
SSAG1248	Construction - Above Ground	Power Cables	Terminate 250-750kCM 15kV/35kV Power Cable and Test	Price includes all labor, material and equipment to perform installation. Installation includes, but not limited to, the following: cable identification (labels & tags), manhole rigging and all traffic control requirements. All safety requirements for access to manhole shall be included. Delivery of splice kits to site shall be included in the unit price. Kit will be supplied by owner	TM2.61.24 Primary Cable 15kV-35kV  TM2.73.15 Construction Specifications Substation -  Section 33 71 26 - Transmission & Distribution Equipment  Section E1 - Commissioning Manuals		Per unit/phase	1

SSAG1249	Construction - Above Ground	Power Cables	Splice 1000-1250 kCM 15KV/35kV Power Cables and Test	Price includes all labor, material and equipment to perform installation. Installation includes, but not limited to, the following: cable identification (labels & tags), manhole rigging and all traffic control requirements. All safety requirements for access to manhole shall be included. Delivery of splice kits to site shall be included in the unit price. Kit will be supplied by owner	TM2.61.24 Primary Cable 15kV-35kV  TM2.73.15 Construction Specifications Substation -  Section 33 71 26 - Transmission & Distribution Equipment  Section E1 - Commissioning Manuals	Per unit/phase	1
SSAG1250	Construction - Above Ground	Power Cables	Terminate 1000-1250 kCM 15KV/35kV Power Cables and Test	Price includes all labor, material and equipment to perform installation. Installation includes, but not limited to, the following: cable identification (labels & tags), manhole rigging and all traffic control requirements. All safety requirements for access to manhole shall be included. Delivery of splice kits to site shall be included in the unit price. Kit will be supplied by owner	TM2.61.24 Primary Cable 15kV-35kV  TM2.73.15 Construction Specifications Substation -  Section 33 71 26 - Transmission & Distribution Equipment  Section E1 - Commissioning Manuals	Per unit/phase	1
SSAG1251	Construction - Above Ground	Power Cables	Remove #4-4/0 15kV/35kV Power Cables.	Price includes all labor, material and equipment to perform removal. Removal includes, but not limited to, the following: safety grounds if necessary, confined entry safety measures, traffic control requirements, restoration of surrounding area and proper disposal following Avangrid guidelines.	TM2.61.24 Primary Cable 15kV-35kV  TM2.73.15 Construction Specifications Substation -  Section 33 71 26	Per Foot	1



					- Transmission & Distribution Equipment		
SSAG1252	Construction - Above Ground	Power Cables	Remove 250-750 15kV/35kV Power Cables.	Price includes all labor, material and equipment to perform removal. Removal includes, but not limited to, the following: safety grounds if necessary, confined entry safety measures, traffic control requirements, restoration of surrounding area and proper disposal following Avangrid guidelines.	TM2.61.24 Primary Cable 15kV-35kV TM2.73.15 Construction Specifications Substation - Section 33 71 26 - Transmission & Distribution Equipment	Per Foot	1
SSAG1253	Construction - Above Ground	Power Cables	Remove 1000-1250 15kV/35kV Power Cables.	Price includes all labor, material and equipment to perform removal. Removal includes, but not limited to, the following: safety grounds if necessary, confined entry safety measures, traffic control requirements, restoration of surrounding area and proper disposal following Avangrid guidelines.	TM2.61.24 Primary Cable 15kV-35kV TM2.73.15 Construction Specifications Substation - Section 33 71 26 - Transmission & Distribution Equipment	Per Foot	1

SSAG1254	Construction - Above Ground	Protective / Communication Device	Install protective relay, RTAC, SCADA control, GPS Clock, etc in existing panel or cabinet.	Install new relay in existing and secure to frame. All labor, equipment and minor materials required to perform installation are the contractors responsibility, Relay supplied by Owner.	<p>INS 46.99.00 Protection and Control Devices</p> <p>TM 2 71 P01 - General Relaying Philosophy for IUSA</p> <p>TM2.71.PK Bay Control</p> <p>TM2.73.15 Construction Specifications Substation -</p> <p>Section 33 71 26 - Transmission &amp; Distribution Equipment</p> <p>Section E1 - Commissioning Manuals</p>		Per Relay	1
SSAG1255	Construction - Above Ground	Protective / Communication Device	Install wiring for protective relay, RTAC, SCADA control, GPS Clock, etc in existing panel or cabine	Install new wiring for new relay in existing panel. Wiring to include all wiring from both ends including the relay and the first terminal block/test block. Terminal Block or Test Block installation also included. All labor, equipment and minor materials required to perform installation are the contractors responsibility. Point to point checks are to be included in the installation price. All other testing and commissioning by others. Relay and terminal blocks supplied by Owner.	<p>INS 46.99.00 Protection and Control Devices</p> <p>TM 2 71 P01 - General Relaying Philosophy for IUSA</p> <p>TM2.71.PK Bay Control</p> <p>TM2.73.15 Construction Specifications Substation -</p> <p>Section 33 71 26 - Transmission &amp;</p>		Per Wire	1

					Distribution Equipment Section E1 - Commissioning Manuals		
SSAG1256	Construction - Above Ground	Protective / Communication Device	Install Relay or TeleCommunications Cabinet	Install Relay Cabinet inside Control House. Relay cabinet supplied by Owner. Includes Testing as per Procedure 1000-E1-S04_SP_1 Protection and Control Cabinet	INS 46.99.00 Protection and Control Devices TM 2 71 P01 - General Relaying Philosophy for IUSA TM2.73.15 Construction Specifications Substation - Section 33 71 26 - Transmission & Distribution Equipment Section E1 - Commissioning Manuals	Per Cabinet	1

SSAG1257	Construction - Above Ground	Protective / Communication Device	Install Relay or TeleCommunications Cabinet - Outdoor Type	Install Relay Cabinet outside in substation yard. Relay cabinet supplied by Owner. Includes Testing as per Procedure 1000-E1-S04_SP_1 Protection and Control Cabinet	<p>INS 46.99.00 Protection and Control Devices</p> <p>TM 2 71 P01 - General Relaying Philosophy for IUSA</p> <p>TM2.73.15 Construction Specifications Substation -</p> <p>Section 33 71 26 - Transmission &amp; Distribution Equipment</p> <p>Section E1 - Commissioning Manuals</p>	Per Cabinet	1
SSAG1258	Construction - Above Ground	Protective / Communication Device	Install GPS Clock Antenna	Install new antenna on control house or existing structure. Mounting hardware to be CONTRACTOR supplied. All labor, equipment and minor materials required to perform installation are the contractors responsibility. Antenna supplied by OWNER.	<p>INS 46.99.00 Protection and Control Devices</p> <p>TM 2 71 P01 - General Relaying Philosophy for IUSA</p> <p>TM2.71.PK Bay Control</p> <p>TM2.73.15 Construction Specifications Substation -</p> <p>Section 33 71 26 - Transmission &amp; Distribution Equipment</p>	Per Wire	1

					Section E1 - Commissioning Manuals		
SSAG1259	Construction - Above Ground	Protective / Communication Device	Relay Removal	Remove existing relay or device in existing panel. All labor, equipment and materials required to perform removal are the CONTRACTORS responsibility. Point to point checks and are to be included in the removal price and required before removal.	INS 46.99.00 Protection and Control Devices  TM 2 71 P01 - General Relaying Philosophy for IUSA  TM2.71.PK Bay Control  TM2.73.15 Construction Specifications Substation -  Section 33 71 26 - Transmission & Distribution Equipment	Per Relay	1

SSAG1260	Construction - Above Ground	Protective / Communication Device	Relay Wiring Removal - Per Jumper	Remove existing wiring in existing panel. All labor, equipment and materials required to perform removal are the CONTRACTORS responsibility. Each jumper is from terminal block to terminal block for each wire. Point to point checks and are to be included in the removal price and required before removal.	INS 46.99.00 Protection and Control Devices  TM 2 71 P01 - General Relaying Philosophy for IUSA  TM2.71.PK Bay Control  TM2.73.15 Construction Specifications Substation -  Section 33 71 26 - Transmission & Distribution Equipment		Per Jumper	1
SSAG1261	Construction - Above Ground	Protective / Communication Device	Remove Relay Cabinet	Remove existing relay or device in existing panel. All labor, equipment and materials required to perform removal are the CONTRACTORS responsibility. List of wires and terminations to be removed will be done by OTHER.	INS 46.99.00 Protection and Control Devices  TM 2 71 P01 - General Relaying Philosophy for IUSA  TM2.73.15 Construction Specifications Substation -  Section 33 71 26 - Transmission & Distribution Equipment		Per Cabinet	1

SSAG1262	Construction - Above Ground	Protective / Communication Device	Install 115/230/345kV Wave Trap	Install 115/230/345kV <=3000A Line Trap on structure. All materials to be owner supplied.  DRAWING REFERENCE:  Installation per design library	IEEE/ANSI	Per Line Trap	1
SSAG1263	Construction - Above Ground	Protective / Communication Device	Install 115/230/345kV Line Tuner	Install 115/230/345kV Line Tuner on structure. Line Tuner to be owner supplied, hardware for mounting to be contractor supplied.  DRAWING REFERENCE:  Installation per design library	IEEE/ANSI	Per Line Tuner	1
SSAG1264	Construction - Above Ground	Rigid Bus/Conductor	Remove 336.4/477/795/1272/1590/2000 kCM Wire conductors	Price includes all labor, material and equipment to perform removals. Removal includes, but not limited to, the following: safety grounds, special tools if necessary, scaffolds.	TM2.72.68 IUSA Standard Connectors  TM2.71.53 Bus and Conductor Design  TM2.73.15 Construction Specifications Substation -  Section 33 72 23 Substation Structures  Section 33 71 26 Transmission & Distribution Equipment  Section 33 72 26 Substation Bus	Per Foot	1

					Assemblies		
SSAG1265	Construction - Above Ground	Rigid Bus/Conductor	Remove 2/3/4/5/6 in. SPS rigid tubular Bus	Price includes all labor, material and equipment to perform removal. Removal includes, but not limited to, the following: safety grounds if necessary, welding or torch certification, internal damping cable removal, hot work permits, restoration of surrounding area and proper disposal following Avangrid guidelines.	<p>TM2.72.68 IUSA Standard Connectors</p> <p>TM2.71.53 Bus and Conductor Design</p> <p>TM2.73.15 Construction Specifications Substation -</p> <p>Section 33 72 23 Substation Structures</p> <p>Section 33 71 26 Transmission &amp; Distribution Equipment</p> <p>Section 33 72 26 Substation Bus Assemblies</p>	Per Foot	1



SSAG1266	Construction - Above Ground	Rigid Bus/Conductor	Install 2/3/4 in. SPS rigid tubular Bus	<p>Price includes all labor, material and equipment to perform installation. Installation includes, but not limited to, the following: safety grounds if necessary, welding or equipment certification, internal damping cable. Conductor supplied by Owner.</p> <p>DRAWING REFERENCE: Installation per Design Library</p> <p>MATERIAL REQUIREMENTS: All materials to be owner supplied</p>	<p>TM2.72.68 IUSA Standard Connectors</p> <p>TM2.71.53 Bus and Conductor Design</p> <p>TM2.73.15 Construction Specifications Substation -</p> <p>Section 33 72 23 Substation Structures</p> <p>Section 33 71 26 Transmission &amp; Distribution Equipment</p> <p>Section 33 72 26 Substation Bus Assemblies</p>		Per Foot	1
SSAG1267	Construction - Above Ground	Rigid Bus/Conductor	Install 2/3/4 in. SPS rigid tubular Bus fitting using welded, crimped connections/fittings or bolted (where allowable)	<p>Price includes all labor, material and equipment to perform installation. Installation includes, but not limited to, the following: safety grounds if necessary, welding or equipment certification, internal damping cable. Conductor supplied by Owner.</p> <p>DRAWING REFERENCE: Installation per Design Library</p> <p>MATERIAL REQUIREMENTS:</p>	<p>TM2.72.68 IUSA Standard Connectors</p> <p>TM2.71.53 Bus and Conductor Design</p> <p>TM2.73.15 Construction Specifications Substation -</p> <p>Section 33 72 23 Substation Structures</p> <p>Section 33 71 26 Transmission &amp;</p>		Per Fitting	1

				All materials to be owner supplied	Distribution Equipment Section 33 72 26 Substation Bus Assemblies			
SSAG1268	Construction - Above Ground	Rigid Bus/Conductor	Install 5/6 in. SPS rigid tubular Bus	<p>Price includes all labor, material and equipment to perform installation. Installation includes, but not limited to, the following: safety grounds if necessary, welding or equipment certification, internal damping cable. Conductor supplied by Owner.</p> <p>DRAWING REFERENCE: Installation per Design Library</p> <p>MATERIAL REQUIREMENTS: All materials to be owner supplied</p>	<p>TM2.72.68 IUSA Standard Connectors</p> <p>TM2.71.53 Bus and Conductor Design</p> <p>TM2.73.15 Construction Specifications Substation -</p> <p>Section 33 72 23 Substation Structures</p> <p>Section 33 71 26 Transmission &amp; Distribution Equipment</p> <p>Section 33 72 26 Substation Bus Assemblies</p>		Per Foot	1

SSAG1269	Construction - Above Ground	Rigid Bus/Conductor	Install 5/6 in. SPS rigid tubular Bus welded or crimped connections/fittings	<p>Price includes all labor, material and equipment to perform installation. Installation includes, but not limited to, the following: safety grounds if necessary, welding or equipment certification, internal damping cable. Conductor supplied by Owner.</p> <p>DRAWING REFERENCE: Installation per Design Library</p> <p>MATERIAL REQUIREMENTS: All materials to be owner supplied</p>	<p>TM2.72.68 IUSA Standard Connectors</p> <p>TM2.71.53 Bus and Conductor Design</p> <p>TM2.73.15 Construction Specifications Substation -</p> <p>Section 33 72 23 Substation Structures</p> <p>Section 33 71 26 Transmission &amp; Distribution Equipment</p> <p>Section 33 72 26 Substation Bus Assemblies</p>		Per Fitting	1
SSAG1270	Construction - Above Ground	Rigid Bus/Conductor	Install 336.4/477/795/1272/1590/2000 kCM Wire conductors	<p>Price includes all labor, material and equipment to perform installation. Installation includes, but not limited to, the following: safety grounds, special tools, fittings, spacers if necessary, scaffolds. Conductor/fittings/spacers supplied by Owner.</p> <p>DRAWING REFERENCE: Installation per Design Library</p> <p>MATERIAL REQUIREMENTS:</p>	<p>TM2.72.68 IUSA Standard Connectors</p> <p>TM2.71.53 Bus and Conductor Design</p> <p>TM2.73.15 Construction Specifications Substation -</p> <p>Section 33 72 23 Substation Structures</p> <p>Section 33 71 26 Transmission &amp;</p>		Per Foot	1

				All materials to be owner supplied	Distribution Equipment Section 33 72 26 Substation Bus Assemblies			
SSAG1271	Construction - Above Ground	Rigid Bus/Conductor	Install 336.4/477/795/1272/1590/2000 kCM wire fittings or connections.	Price includes all labor, material and equipment to perform installation. Installation includes, but not limited to, the following: safety grounds, special tools, fittings, spacers if necessary, scaffolds. Conductor/fittings/spacers supplied by Owner.  DRAWING REFERENCE:  Installation per Design Library  MATERIAL REQUIREMENTS:  All materials to be owner supplied	TM2.72.68 IUSA Standard Connectors  TM2.71.53 Bus and Conductor Design  TM2.73.15 Construction Specifications Substation -  Section 33 72 23 Substation Structures  Section 33 71 26 Transmission & Distribution Equipment  Section 33 72 26 Substation Bus Assemblies		Per Fitting	1
SSAG1272	Construction - Above Ground	Station Lighting /Security /Protection	Install Metal Pole Wrap	Install corrosion resistant gauge no. Major material to be installed supplied by Owner. 6 tin sheet	TM2.61.29 Animal Protection IFU		Per Pole	1

				metal wrap on nearest transmission line pole(s) starting at 6'-0" above finish grade. Major material to be installed supplied by Owner.				
SSAG1273	Construction - Above Ground	Station Lighting /Security /Protection	Install animal electric fence	Install animal electric fence typically 4 feet from distribution structure and equipment. Major material to be installed supplied by Owner.	TM2.61.29 Animal Protection IFU		Per Panel	1
SSAG1274	Construction - Above Ground	Station Lighting /Security /Protection	Install animal electric fence Gate and control box	Install animal electric fence gate and control box. Major material to be installed supplied by Owner.	TM2.61.29 Animal Protection IFU		Per Gate	1
SSAG1275	Construction - Above Ground	Station Lighting /Security /Protection	Install insulator squirrel guard	Install squirrel guards on existing insulator. Major material to be installed supplied by Owner.	TM2.61.29 Animal Protection IFU		Per Guard	1
SSAG1276	Construction - Above Ground	Station Lighting /Security /Protection	Install Bushing Covers	Zone 1 insulation protection, install bush covers on major equipment bushings. Major material to be installed supplied by Owner.	TM2.61.29 Animal Protection IFU		Per Cover	1
SSAG1277	Construction - Above Ground	Station Lighting /Security /Protection	Install Insulated Conductors	Install insulated conductors on the bottom breaker disconnect switches and station service fuse cut-outs. Major material to be installed supplied by Owner.	TM2.61.29 Animal Protection IFU		Per foot	1
SSAG1278	Construction - Above Ground	Station Lighting /Security /Protection	Install Rotating Disc Assemblies	Install polycarbonate rotating disc assemblies on all incoming distribution phase and neutral conductors. Major material to be installed supplied by Owner.	TM2.61.29 Animal Protection IFU		Per Disc	1
SSAG1279	Construction - Above Ground	Station Lighting /Security /Protection	Install climbing spike strip	Zone 2 insulation protection, install animal climbing spike strips with mounting clips installed on all distribution structure columns immediately below the bottom of switching trusses. Major material to be installed supplied by Owner.	TM2.61.29 Animal Protection IFU		Per Strip	1
SSAG1280	Construction - Above Ground	Station Lighting /Security /Protection	Install Heat Shrinking Tape	Install self-fusing or heat-shrinking tape on energized areas of the bus with complex	TM2.61.29 Animal Protection IFU		Per Occurrence	1

				geometry. Major material to be installed supplied by Owner.				
SSAG1281	Construction - Above Ground	Station Lighting /Security /Protection	Install Insulation Hosing	Install animal guard split line hose insulation, for 12 kv & 34 kv electrical conductors. Major material to be installed supplied by Owner.	TM2.61.29 Animal Protection IFU		Per Conductor	1
SSAG1282	Construction - Above Ground	Station Lighting /Security /Protection	Install UV Resistant Animal Guard	Install animal guard uv resistant, high density polypropylene resin. Major material to be installed supplied by Owner.	TM2.61.29 Animal Protection IFU		Per UV Guard	1
SSAG1283	Construction - Above Ground	Station Lighting /Security /Protection	Install silicon sheets	Install animal guard silicon sheets for custom insulation covers, cut and fasten with push pins. Major material to be installed supplied by Owner.	TM2.61.29 Animal Protection IFU		Per Sheet	1
SSAG1284	Construction - Above Ground	Station Lighting /Security /Protection	Install Bus Support Cover	Install animal guard bus support cover for 12 kv & 34 kv station post type bus support insulator. Major material to be installed supplied by Owner.	TM2.61.29 Animal Protection IFU		Per Cover	1
SSAG1285	Construction - Above Ground	Station Lighting /Security /Protection	Install Polycarbonate Barrier	Install an energized and de-energized applied polycarbonate barrier. Nine component interconnecting spinning molded discs. Major material to be installed supplied by Owner.	TM2.61.29 Animal Protection IFU		Per Barrier	1
SSAG1286	Construction - Above Ground	Station Lighting /Security /Protection	Install Raychem guard barrier	Install animal guard barrier, Raychem BISG type. Major material to be installed supplied by Owner.	TM2.61.29 Animal Protection IFU		Per Barrier	1
SSAG1287	Construction - Above Ground	Station Lighting /Security /Protection	Install C.H. Fluorescent Light Fixture	Install fluorescent light fixture in Control House ceiling. Major material to be installed supplied by Owner.	TM2.71.11 Yard and Control House Lighting		Per Light	1
SSAG1288	Construction - Above Ground	Station Lighting /Security /Protection	Install AC entry Light Fixture	Install outdoor AC entry light Fixture. Major material to be installed supplied by Owner.	TM2.71.11 Yard and Control House Lighting		Per Light	1
SSAG1289	Construction - Above Ground	Station Lighting /Security /Protection	Install Lighted Exit Sign	Install indoor Lighted Exit Sign at door location. Major material to be installed supplied by Owner.	TM2.71.11 Yard and Control House Lighting		Per Light	1

SSAG1290	Construction - Above Ground	Station Lighting /Security /Protection	Install DC Incandescent Light Fixture	Install DC Incandescent light fixture in Control House ceiling. Major material to be installed supplied by Owner.	TM2.71.11 Yard and Control House Lighting		Per Light	1
SSAG1291	Construction - Above Ground	Station Lighting /Security /Protection	Install Metal Pole Perimeter Light	Install concrete foundation, 20 foot Metal Pole, perimeter Light fixture and conduit to the base of the pole. Major material to be installed supplied by Owner.	TM2.71.11 Yard and Control House Lighting		Per Light	1
SSAG1292	Construction - Above Ground	Station Lighting /Security /Protection	Install Metal Pole Perimeter and Security Light	Install concrete foundation, 20 foot Metal Pole, Terminal & Junction Box, Perimeter and Security Light fixtures and conduit. Major material to be installed supplied by Owner.	TM2.71.11 Yard and Control House Lighting		Per Light	1
SSAG1293	Construction - Above Ground	Station Lighting /Security /Protection	Install Double Work Light on existing steel structure	Install Terminal & Junction Box, Double work Light fixture and conduit on existing steel structure. Major material to be installed supplied by Owner.	TM2.71.11 Yard and Control House Lighting		Per Light	1
SSAG1294	Construction - Above Ground	Station Lighting /Security /Protection	Install Wood Pole Perimeter Light	Install Wood Pole, Terminal Box, Perimeter Light fixture and conduit. Major material to be installed supplied by Owner.	TM2.71.11 Yard and Control House Lighting		Per Light	1
SSAG1295	Construction - Above Ground	Station Lighting /Security /Protection	Install Wood Pole Perimeter and Work Light	Install Wood Pole, Terminal & Junction Boxes, Perimeter and Work Light fixtures and conduit. Major material to be installed supplied by Owner.	TM2.71.11 Yard and Control House Lighting		Per Light	1
SSAG1296	Construction - Above Ground	Station Lighting /Security /Protection	Install Security Enclosure	Install Security Enclosure 24"x24"x8" or Sized as Required. Major material to be installed supplied by Owner. Includes mounting bracket and conduit. Major material to be installed supplied by Owner.	TM2.71.11 Yard and Control House Lighting		Per Box	1
SSAG1297	Construction - Above Ground	Station Lighting /Security /Protection	Install Security Camera	Install and wire security camera. Major material to be installed supplied by Owner.			Per Camera	1
SSAG1298	Construction - Above Ground	Station Lighting /Security /Protection	Remove animal electric fence	Remove animal electric fence typically 4 feet from distribution structure and equipment.	TM2.61.29 Animal Protection IFU		Per Panel	1

SSAG1299	Construction - Above Ground	Station Lighting /Security /Protection	Remove animal electric fence Gate and control box	Remove animal electric fence gate and control box.	TM2.61.29 Animal Protection IFU		Per Gate	1
SSAG1300	Construction - Above Ground	Station Lighting /Security /Protection	Remove insulator squirrel guard	Remove squirrel guards on existing insulator.	TM2.61.29 Animal Protection IFU		Per Guard	1
SSAG1301	Construction - Above Ground	Station Lighting /Security /Protection	Remove Bushing Covers	Zone 1 insulation protection, Remove bush covers on major equipment bushings.	TM2.61.29 Animal Protection IFU		Per Cover	1
SSAG1302	Construction - Above Ground	Station Lighting /Security /Protection	Remove Insulated Conductors	Remove insulated conductors on the bottom breaker disconnect switches and station service fuse cut-outs.	TM2.61.29 Animal Protection IFU		Per Conductor	1
SSAG1303	Construction - Above Ground	Station Lighting /Security /Protection	Remove Rotating Disc Assemblies	Remove polycarbonate rotating disc assemblies on all incoming distribution phase and neutral conductors.	TM2.61.29 Animal Protection IFU		Per Disc	1
SSAG1304	Construction - Above Ground	Station Lighting /Security /Protection	Remove climbing spike strip	Zone 2 insulation protection, Remove animal climbing spike strips with mounting clips on all distribution structure columns.	TM2.61.29 Animal Protection IFU		Per Strip	1
SSAG1305	Construction - Above Ground	Station Lighting /Security /Protection	Remove Heat Shrinking Tape	Remove self-fusing or heat-shrinking tape on energized areas of the bus with complex geometry.	TM2.61.29 Animal Protection IFU		Per Occurrence	1
SSAG1306	Construction - Above Ground	Station Lighting /Security /Protection	Remove Insulation Hosing	Remove animal guard split line hose insulation, for 12 kv & 34 kv electrical conductors	TM2.61.29 Animal Protection IFU		Per Conductor	1
SSAG1307	Construction - Above Ground	Station Lighting /Security /Protection	Remove UV Resistant Animal Guard	Remove animal guard uv resistant, high density polypropylene resin.	TM2.61.29 Animal Protection IFU		Per UV Guard	1
SSAG1308	Construction - Above Ground	Station Lighting /Security /Protection	Remove silicon sheets	Remove animal guard silicon sheets for custom insulation covers, cut and fasten with push pins.	TM2.61.29 Animal Protection IFU		Per Sheet	1
SSAG1309	Construction - Above Ground	Station Lighting /Security /Protection	Remove Bus Support Cover	Remove animal guard bus support cover for 12 kv & 34 kv station post type bus support insulator.	TM2.61.29 Animal Protection IFU		Per Cover	1
SSAG1310	Construction - Above Ground	Station Lighting /Security /Protection	Remove Polycarbonate Barrier	Remove an energized and de-energized applied polycarbonate barrier. Nine component	TM2.61.29 Animal Protection IFU		Per Barrier	1



				interconnecting spinning molded discs.				
SSAG1311	Construction - Above Ground	Station Lighting /Security /Protection	Remove Raychem guard barrier	Remove animal guard barrier, Raychem BISG type.	TM2.61.29 Animal Protection IFU		Per Barrier	1
SSAG1312	Construction - Above Ground	Station Lighting /Security /Protection	Remove C.H. Fluorescent Light Fixture	Remove fluorescent light fixture in Control House ceiling	TM2.71.11 Yard and Control House Lighting		Per Light	1
SSAG1313	Construction - Above Ground	Station Lighting /Security /Protection	Remove AC entry Light Fixture	Remove outdoor AC entry light Fixture	TM2.71.11 Yard and Control House Lighting		Per Light	1
SSAG1314	Construction - Above Ground	Station Lighting /Security /Protection	Remove Lighted Exit Sign	Remove indoor Lighted Exit Sign at door location	TM2.71.11 Yard and Control House Lighting		Per Light	1
SSAG1315	Construction - Above Ground	Station Lighting /Security /Protection	Remove DC Incandescent Light Fixture	Remove DC Incandescent light fixture in Control House ceiling	TM2.71.11 Yard and Control House Lighting		Per Light	1
SSAG1316	Construction - Above Ground	Station Lighting /Security /Protection	Remove Metal Pole Perimeter Light	Remove concrete foundation, 20 foot Metal Pole, perimeter Light fixture and conduit to the base of the pole.	TM2.71.11 Yard and Control House Lighting		Per Light	1
SSAG1317	Construction - Above Ground	Station Lighting /Security /Protection	Remove Metal Pole Perimeter and Security Light	Remove concrete foundation, 20 foot Metal Pole, Terminal & Junction Box, Perimeter and Security Light fixtures and conduit.	TM2.71.11 Yard and Control House Lighting		Per Light	1
SSAG1318	Construction - Above Ground	Station Lighting /Security /Protection	Remove Wood Pole Perimeter Light	Remove Wood Pole, Terminal Box, Perimeter Light fixture and conduit.	TM2.71.11 Yard and Control House Lighting		Per Light	1
SSAG1319	Construction - Above Ground	Station Lighting /Security /Protection	Remove Wood Pole Perimeter and Work Light	Remove Wood Pole, Terminal & Junction Boxes, Perimeter and Work Light fixtures and conduit.	TM2.71.11 Yard and Control House Lighting		Per Light	1
SSAG1320	Construction - Above Ground	Station Lighting /Security /Protection	Remove Security Enclosure	Remove Security Enclosure 24"x24"x8" or Sized as Required. Includes mounting bracket and conduit.	TM2.71.11 Yard and Control House Lighting		Per Box	1
SSAG1321	Construction - Above Ground	Station Lighting /Security /Protection	Remove Security Camera	Remove security camera.	TM2.71.09 Substation Yard & Fencing		Per Camera	1

SSAG1322	Construction - Above Ground	Structure	Install 230kV double line termination structure	<p>Assemble and erect a steel 230kV line termination structure on concrete foundation. Estimated weight 60,000.00 lbs. Includes installation of OWNER supplied ground wire from ground grid to equipment. Connectors are CONTRACTORS scope.</p> <p>DRAWING REFERENCE: Per Design Library</p> <p>MATERIAL REQUIREMENTS: All materials to be owner supplied</p>	TM2.72.83 Erection & Steel Details 230KV Line Terminations Structure	Per Structure	1
SSAG1323	Construction - Above Ground	Structure	Install 345 kV line termination structure	<p>Assemble and erect a steel 345 kV line termination structure on concrete foundation. Estimated weight 65,000 lbs. Includes installation of OWNER supplied ground wire from ground grid to equipment. Connectors are CONTRACTORS scope.</p> <p>DRAWING REFERENCE: Per Design Library</p> <p>MATERIAL REQUIREMENTS: All materials to be owner supplied</p>	TM2.72.83 Erection & Steel Details 230KV Line Terminations Structure	Per Structure	1

SSAG1324	Construction - Above Ground	Structure	Install 345 kV double line termination structure	<p>Assemble and erect a steel 345 kV line termination structure on concrete foundation. Estimated weight 110,000 lbs. Includes installation of OWNER supplied ground wire from ground grid to equipment. Connectors are CONTRACTORS scope.</p> <p>DRAWING REFERENCE: Per Design Library</p> <p>MATERIAL REQUIREMENTS: All materials to be owner supplied</p>	TM2.72.83 Erection & Steel Details 230KV Line Terminations Structure	Per Structure	1
SSAG1325	Construction - Above Ground	Structure	Install 60' static lightning mast.	<p>Assemble and erect a steel tubular static mast on concrete foundation. Estimated weight 1,672.95 lbs. Includes installation of OWNER supplied ground wire from ground grid to equipment. Connectors are CONTRACTORS scope.</p> <p>DRAWING REFERENCE: Per Design Library</p> <p>MATERIAL REQUIREMENTS: All materials to be owner supplied</p>	TM2.62.26 Erection & Steel Details 60' Mast	Per Structure	1

SSAG1326	Construction - Above Ground	Structure	Install 34.5/46kV 3 PH. VT stand	<p>Assemble and erect a steel 34.5/46kV 3 PH. VT stand on concrete foundation. Includes installation of OWNER supplied ground wire from ground grid to equipment. Connectors are CONTRACTORS scope.</p> <p>DRAWING REFERENCE: Per Design Library</p> <p>MATERIAL REQUIREMENTS: All materials to be owner supplied</p>	<p>TM2.62.011 3PH VT Stand &amp; TM2.62.23 46kV 3PH VT FDN</p>	Per Structure	1
SSAG1327	Construction - Above Ground	Structure	Install 115/230kV 1 PH. CCVT stand	<p>Assemble and erect a steel 115/230kV 1 PH. CCVT stand on concrete foundation. Includes installation of OWNER supplied ground wire from ground grid to equipment. Connectors are CONTRACTORS scope.</p> <p>DRAWING REFERENCE: Per Design Library</p> <p>MATERIAL REQUIREMENTS: All materials to be owner supplied</p>	<p>TM2.72.57 Erection &amp; Steel Details 115KV 1PH. CCVT Stand, Erection &amp; Steel Details 230KV 1 PH. CCVT Stand</p>	Per Structure	1

SSAG1328	Construction - Above Ground	Structure	Install 115/230kV 1 PH. High/Low bus support stand	<p>Assemble and erect a steel 115/230kV 1 PH. High/Low bus support stand on concrete foundation. Includes installation of OWNER supplied ground wire from ground grid to equipment. Connectors are CONTRACTORS scope.</p> <p>DRAWING REFERENCE: Per Design Library</p> <p>MATERIAL REQUIREMENTS: All materials to be owner supplied</p>	TM2.72.76, TM2.72.91, TM2.72.63 & TM2.72.73	Per Structure	1
SSAG1329	Construction - Above Ground	Structure	Install 115/230kV 3 PH. High/Low bus support stand	<p>Assemble and erect a steel 115/230kV 3 PH. High/Low bus support stand on concrete foundation. Includes installation of OWNER supplied ground wire from ground grid to equipment. Connectors are CONTRACTORS scope.</p> <p>DRAWING REFERENCE: Per Design Library</p> <p>MATERIAL REQUIREMENTS: All materials to be owner supplied</p>	TM2.72.77, TM2.72.88, TM2.72.89 & TM2.72.79	Per Structure	1

SSAG1330	Construction - Above Ground	Structure	Install 115/230kV 3 PH. High/Low switch stand	<p>Assemble and erect a steel 115/230kV 3 PH. High/Low switch stand on concrete foundation.</p> <p>Includes installation of OWNER supplied ground wire from ground grid to equipment. Connectors are CONTRACTORS scope.</p> <p>DRAWING REFERENCE:</p> <p>Per Design Library</p> <p>MATERIAL REQUIREMENTS:</p> <p>All materials to be owner supplied</p>	TM2.72.81, TM2.72.93, TM2.72.92 & TM2.72.82	Per Structure	1
SSAG1331	Construction - Above Ground	Structure	Install 115/230kV 65' static lightning mast.	<p>Assemble and erect a steel tubular static mast on concrete foundation.</p> <p>Includes installation of OWNER supplied ground wire from ground grid to equipment. Connectors are CONTRACTORS scope.</p> <p>DRAWING REFERENCE:</p> <p>Per Design Library</p> <p>MATERIAL REQUIREMENTS:</p> <p>All materials to be owner supplied</p>	TM2.72.54 Erection & Steel Details 115KV Tubular Static Mast, TM2.72.94 230KV Tubular Static Mast	Per Structure	1
SSAG1332	Construction - Above Ground	Structure	Removal of 15kV bay Structure	Assemble and erect a steel 15kV bay structure on concrete	TM2.62.08 Standard	Per Structure	1

				foundation. Estimated weight 20,154 lbs	Erection and Steel			
SSAG1333	Construction - Above Ground	Structure	Removal of 15kV Regulator stand	Removal and disposal of a steel truss for 15kV Regulators. Estimated weight 782.26 lbs.	TM2.62.20 Standard Voltage Regulator Stand		Per Structure	1
SSAG1334	Construction - Above Ground	Structure	Removal of 34.5/46kV 1 PH. VT stand	Removal and disposal of a steel 34.5/46kV 1 PH. VT stand on concrete foundation. Estimated weight 484.6 lbs	TM2.62.013 Standard 1PH VT Foundation & TM2.62.24 46kV Single PH VT Stand		Per Structure	1
SSAG1335	Construction - Above Ground	Structure	Removal of 34.5/46kV 3 PH. VT stand	Removal and disposal of a steel 34.5/46kV 3 PH. VT stand on concrete foundation. Estimated weight 1,558 lbs	TM2.62.011 3PH VT Stand & TM2.62.23 46kV 3PH VT FDN		Per Structure	1
SSAG1336	Construction - Above Ground	Structure	Removal of 69kV bay structure	Removal and disposal of a steel 69kV bay structure on concrete foundation. Estimated weight 27,700.25 lbs	TM2.62.20 Standard Voltage Regulator Stand		Per Structure	1
SSAG1337	Construction - Above Ground	Structure	Removal of 69kV strain tower structure	Removal and disposal of a steel 69kV strain tower structure on concrete foundation. Estimated weight 14,411.69 lbs	TM2.72.80 Erection & Steel Details 69kV Strain Tower		Per Structure	1
SSAG1338	Construction - Above Ground	Structure	Removal of 115kV line termination structure	Removal and disposal of a steel 115kV line termination structure on concrete foundation. Estimated weight 30,153 lbs	TM2.72.55 Erection & Steel Details 115kV Line Termination Structure		Per Structure	1
SSAG1339	Construction - Above Ground	Structure	Removal of 230kV line termination structure	Removal and disposal of a steel 230kV line termination structure on concrete foundation. Estimated weight 38,955.44 lbs	TM2.72.83 Erection & Steel Details 230KV Line Terminations Structure		Per Structure	1
SSAG1340	Construction - Above Ground	Structure	Removal of 115/230kV 3 PH. CCVT/LAWT stand	Removal and disposal of a steel 115/230kV 3 PH. CCVT/LAWT stand on concrete foundation. Estimated weight 2,410.67 lbs	TM2.72.56, TM2.72.14, TM2.72.84 & TM2.72.62		Per Structure	1

SSAG1341	Construction - Above Ground	Structure	Removal of 115/230kV 1 PH. CCVT stand	Removal and disposal of a steel 115/230kV 1 PH. CCVT stand on concrete foundation. Estimated weight 571 lbs	TM2.72.57 Erection & Steel Details 115KV 1PH. CCVT Stand, Erection & Steel Details 230KV 1 PH. CCVT Stand	Per Structure	1
SSAG1342	Construction - Above Ground	Structure	Removal of 115/230kV 1 PH. Wave Trap stand	Removal and disposal of a steel 115/230kV 1 PH. Wave Trap stand on concrete foundation. Estimated weight 687.01 lbs	TM2.72.58 Erection & Steel Details 115kV 1PH. Wave Trap (3000A) Stand, TM2.72.86 Erection & Steel Details 230KV 1PH. Wave Trap (3000A) Stand	Per Structure	1
SSAG1343	Construction - Above Ground	Structure	Removal of 115/230kV 1 PH. High/Low bus support stand	Removal and disposal of a steel 115/230kV 1 PH. High/Low bus support stand on concrete foundation. Estimated weight 716.94 lbs	TM2.72.76, TM2.72.91, TM2.72.63 & TM2.72.73	Per Structure	1
SSAG1344	Construction - Above Ground	Structure	Removal of 115/230kV 3 PH. High/Low bus support stand	Removal and disposal of a steel 115/230kV 3 PH. High/Low bus support stand on concrete foundation. Estimated weight 2,271.94 lbs	TM2.72.77, TM2.72.88, TM2.72.89 & TM2.72.79	Per Structure	1
SSAG1345	Construction - Above Ground	Structure	Removal of 115/230kV 3 PH. High/Low switch stand	Removal and disposal of a steel 115/230kV 3 PH. High/Low switch stand on concrete foundation. Estimated weight 3,867 lbs	TM2.72.81, TM2.72.93, TM2.72.92 & TM2.72.82	Per Structure	1
SSAG1346	Construction - Above Ground	Structure	Removal of 115/230kV 65' static lightning mast.	Removal and disposal of a steel tubular static mast on concrete foundation. Estimated weight 1,812.37 lbs	TM2.72.54 Erection & Steel Details 115KV Tubular Static Mast, TM2.72.94 230KV Tubular Static Mast	Per Structure	1
SSAG1347	Construction - Above Ground	Structure	Removal of 60' static lightning mast.	Removal and disposal of a steel tubular static mast on concrete	TM2.62.26 Erection & Steel Details 60' Mast	Per Structure	1



				foundation. Estimated weight 1,672.95 lbs				
SSAG1348	Construction - Above Ground	Structure	Install 69kV bay structure	<p>Assemble and erect a steel 69kV bay structure on concrete foundation. Estimated weight 27,700.25 lbs . Includes installation of OWNER supplied ground wire from ground grid to equipment. Connectors are CONTRACTORS scope.</p> <p>DRAWING REFERENCE:</p> <p>Per Design Library</p> <p>MATERIAL REQUIREMENTS:</p> <p>All materials to be owner supplied</p>	TM2.62.20 Standard Voltage Regulator Stand		Per Structure	1
SSAG1349	Construction - Above Ground	Structure	Install 69kV bay structure addition	<p>Assemble and erect a steel 69kV bay structure addition on concrete foundation. Estimated weight 23,036.25 lbs. Includes installation of OWNER supplied ground wire from ground grid to equipment. Connectors are CONTRACTORS scope.</p> <p>DRAWING REFERENCE:</p> <p>Per Design Library</p> <p>MATERIAL REQUIREMENTS:</p> <p>All materials to be owner supplied</p>	TM2.62.00 TM2.62.00 34.54-46KV Sub-Transmission Bus Conf Structures Standard		Per Structure	1

SSAG1350	Construction - Above Ground	Structure	Install 69kV strain tower structure	<p>Assemble and erect a steel 69kV strain tower structure on concrete foundation. Estimated weight 14,411.69 lbs. Includes installation of OWNER supplied ground wire from ground grid to equipment. Connectors are CONTRACTORS scope.</p> <p>DRAWING REFERENCE: Per Design Library</p> <p>MATERIAL REQUIREMENTS: All materials to be owner supplied</p>	<p>TM2.72.80 Erection &amp; Steel Details 69kV Strain Tower</p>	Per Structure	1
SSAG1351	Construction - Above Ground	Structure	Install 115kV line termination structure	<p>Assemble and erect a steel 115kV line termination structure on concrete foundation. Estimated weight 30,153 lbs. Includes installation of OWNER supplied ground wire from ground grid to equipment. Connectors are CONTRACTORS scope.</p> <p>DRAWING REFERENCE: Per Design Library</p> <p>MATERIAL REQUIREMENTS: All materials to be owner supplied</p>	<p>TM2.72.55 Erection &amp; Steel Details 115kV Line Termination Structure</p>	Per Structure	1

SSAG1352	Construction - Above Ground	Structure	Install 115kV double line termination structure	<p>Assemble and erect a steel 115kV line termination structure on concrete foundation. Estimated weight 45,000 lbs. Includes installation of OWNER supplied ground wire from ground grid to equipment. Connectors are CONTRACTORS scope.</p> <p>DRAWING REFERENCE:  Per Design Library</p> <p>MATERIAL REQUIREMENTS:  All materials to be owner supplied</p>	TM2.72.55 Erection & Steel Details 115kV Line Termination Structure	Per Structure	1
SSAG1353	Construction - Above Ground	Structure	Install 230kV line termination structure	<p>Assemble and erect a steel 230kV line termination structure on concrete foundation. Estimated weight 38,955.44 lbs. Includes installation of OWNER supplied ground wire from ground grid to equipment. Connectors are CONTRACTORS scope.</p> <p>DRAWING REFERENCE:  Per Design Library</p> <p>MATERIAL REQUIREMENTS:  All materials to be owner supplied</p>	TM2.72.83 Erection & Steel Details 230KV Line Terminations Structure	Per Structure	1

SSAG1354	Construction - Above Ground	Transformer/Regulator	Install 10 kVA 110 BIL(kV) Single-Phase Conventional Transformer with 12470GRDY/7200 Primary Voltage	Price includes all labor, material and equipment to perform installation. Installation includes, but not limited to, the following: supply/install of safety grounds if necessary, equipment necessary for access to the equipment, conduits, grounding, etc. Refer to TM33 71 26 - Transmission & Distribution Equipment. Main Equipment and grounding wire supplied by owner.	<p>TM2.62.32 Station Service Transformers</p> <p>TM2.73.15 Construction Specifications Substation -</p> <p>Section 33 72 23 - Substation Structures</p> <p>Section 33 71 26 - Transmission &amp; Distribution Equipment</p> <p>Section E1 - Commissioning Manuals</p>		Per Transformer	1
SSAG1355	Construction - Above Ground	Transformer/Regulator	Install 25 kVA 110 BIL(kV) Single-Phase Conventional Transformer with 12470GRDY/7200 Primary Voltage	Price includes all labor, material and equipment to perform installation. Installation includes, but not limited to, the following: supply/install of safety grounds if necessary, equipment necessary for access to the equipment, conduits, grounding, etc. Refer to TM33 71 26 - Transmission & Distribution Equipment. Main Equipment and grounding wire supplied by owner.	<p>TM2.62.32 Station Service Transformers</p> <p>TM2.73.15 Construction Specifications Substation -</p> <p>Section 33 72 23 - Substation Structures</p> <p>Section 33 71 26 - Transmission &amp; Distribution Equipment</p> <p>Section E1 - Commissioning Manuals</p>		Per Transformer	1

SSAG1356	Construction - Above Ground	Transformer/Regulator	Install 50 kVA 110 or 200 or 250 BIL(kV) Single-Phase Conventional Transformer with 12470GRDY/7200 o	Price includes all labor, material and equipment to perform installation. Installation includes, but not limited to, the following: supply/install of safety grounds if necessary, equipment necessary for access to the equipment, conduits, grounding, etc. Refer to TM33 71 26 - Transmission & Distribution Equipment. Main Equipment and grounding wire supplied by owner.	<p>TM2.62.32 Station Service Transformers</p> <p>TM2.73.15 Construction Specifications Substation -</p> <p>Section 33 72 23 - Substation Structures</p> <p>Section 33 71 26 - Transmission &amp; Distribution Equipment</p> <p>Section E1 - Commissioning Manuals</p>		Per Transformer	1
SSAG1357	Construction - Above Ground	Transformer/Regulator	Install 50 kVA 200 or 250 BIL(kV) Three-Phase Steel Mounted Transformer with 34500GRDY/19920 or 4600	Price includes all labor, material and equipment to perform installation. Installation includes, but not limited to, the following: supply/install of safety grounds if necessary, equipment necessary for access to the equipment, conduits, grounding, etc. Refer to TM33 71 26 - Transmission & Distribution Equipment. Main Equipment and grounding wire supplied by owner.	<p>TM2.62.32 Station Service Transformers</p> <p>TM2.73.15 Construction Specifications Substation -</p> <p>Section 33 72 23 - Substation Structures</p> <p>Section 33 71 26 - Transmission &amp; Distribution Equipment</p> <p>Section E1 - Commissioning Manuals</p>		Per Transformer	1

SSAG1358	Construction - Above Ground	Transformer/Regulator	Install 150 kVA 200 or 250 BIL(kV) Three-Phase Padmount Transformer with 34500GRDY/19920 or 46000GRD	Price includes all labor, material and equipment to perform installation. Installation includes, but not limited to, the following: supply/install of safety grounds if necessary, equipment necessary for access to the equipment, conduits, grounding, etc. Refer to TM33 71 26 - Transmission & Distribution Equipment. Main Equipment and grounding wire supplied by owner.	<p>TM2.62.32 Station Service Transformers</p> <p>TM2.73.15 Construction Specifications Substation -</p> <p>Section 33 72 23 - Substation Structures</p> <p>Section 33 71 26 - Transmission &amp; Distribution Equipment</p> <p>Section E1 - Commissioning Manuals</p>		Per Transformer	1
SSAG1359	Construction - Above Ground	Transformer/Regulator	Install 300 or 250 kVA 200 or 250 BIL(kV) Three-Phase Padmount Transformer with 34500GRDY/19920 or 4	Price includes all labor, material and equipment to perform installation. Installation includes, but not limited to, the following: supply/install of safety grounds if necessary, equipment necessary for access to the equipment, conduits, grounding, etc. Refer to TM33 71 26 - Transmission & Distribution Equipment. Main Equipment and grounding wire supplied by owner.	<p>TM2.62.32 Station Service Transformers</p> <p>TM2.73.15 Construction Specifications Substation -</p> <p>Section 33 72 23 - Substation Structures</p> <p>Section 33 71 26 - Transmission &amp; Distribution Equipment</p> <p>Section E1 - Commissioning Manuals</p>		Per Transformer	1

SSAG1360	Construction - Above Ground	Transformer/Regulator	Install 100 kVA 550 BIL(kV) Single-Phase Large Instrument Transformers with 11500GRDY/66400 Primary	Price includes all labor, material and equipment to perform installation. Installation includes, but not limited to, the following: supply/install of safety grounds if necessary, equipment necessary for access to the equipment, conduits, grounding, etc. Refer to TM33 71 26 - Transmission & Distribution Equipment. Main Equipment and grounding wire supplied by owner.	<p>TM2.62.32 Station Service Transformers</p> <p>TM2.73.15 Construction Specifications Substation -</p> <p>Section 33 72 23 - Substation Structures</p> <p>Section 33 71 26 - Transmission &amp; Distribution Equipment</p> <p>Section E1 - Commissioning Manuals</p>		Per Transformer	1
SSAG1361	Construction - Above Ground	Transformer/Regulator	Install 300 kVA 1300 BIL(kV) Single-Phase Large Instrument Transformers with 345000GRDY/199186 Prima	Price includes all labor, material and equipment to perform installation. Installation includes, but not limited to, the following: supply/install of safety grounds if necessary, equipment necessary for access to the equipment, conduits, grounding, etc. Refer to TM33 71 26 - Transmission & Distribution Equipment. Main Equipment and grounding wire supplied by owner.	<p>TM2.62.32 Station Service Transformers</p> <p>TM2.73.15 Construction Specifications Substation -</p> <p>Section 33 72 23 - Substation Structures</p> <p>Section 33 71 26 - Transmission &amp; Distribution Equipment</p> <p>Section E1 - Commissioning Manuals</p>		Per Transformer	1

SSAG1362	Construction - Above Ground	Transformer/Regulator	Install Voltage Regulator	Install Voltage Regulator. All materials to be owner supplied.  DRAWING REFERENCE:  Installation per design library	TM2.62.10		Per Regulator	1
SSAG1363	Construction - Above Ground	Transformer/Regulator	Removal Voltage Regulator	Price includes all labor, material and equipment to perform the removal of the equipment. Removal includes, but not limited to, the following: removal of any minor equipment associated with the old equipment, rigging of old equipment, placement on trailer for disposal by a third party. All oil/gas to be removed and disposed by Avangrid. All permits shall be obtained by contractor when necessary.	TM2.62.32 Station Service Transformers  TM2.73.15 Construction Specifications Substation -  Section 33 72 23 - Substation Structures  Section 33 71 26 - Transmission & Distribution Equipment		Per Regulator	1
SSAG1364	Construction - Above Ground	Transformer/Regulator	Remove 10 kVA 110 BIL(kV) Single-Phase Conventional Transformer with 12470GRDY/7200 Primary Voltage	Price includes all labor, material and equipment to perform the removal of the equipment. Removal includes, but not limited to, the following: removal of any minor equipment associated with the old equipment, rigging of old equipment, placement on trailer for disposal by a third party. All oil/gas to be removed and disposed by Avangrid. All permits shall be obtained by contractor when necessary.	TM2.62.32 Station Service Transformers  TM2.73.15 Construction Specifications Substation -  Section 33 72 23 - Substation Structures  Section 33 71 26 - Transmission & Distribution Equipment		Per Transformer	1



SSAG1365	Construction - Above Ground	Transformer/Regulator	Remove 25 kVA 110 BIL(kV) Single-Phase Conventional Transformer with 12470GRDY/7200 Primary Voltage	Price includes all labor, material and equipment to perform the removal of the equipment. Removal includes, but not limited to, the following: removal of any minor equipment associated with the old equipment, rigging of old equipment, placement on trailer for disposal by a third party. All oil/gas to be removed and disposed by Avangrid. All permits shall be obtained by contractor when necessary.	<p>TM2.62.32 Station Service Transformers</p> <p>TM2.73.15 Construction Specifications Substation -</p> <p>Section 33 72 23 - Substation Structures</p> <p>Section 33 71 26 - Transmission &amp; Distribution Equipment</p>		Per Transformer	1
SSAG1366	Construction - Above Ground	Transformer/Regulator	Remove 50 kVA 110 or 200 or 250 BIL(kV) Single-Phase Conventional Transformer with 12470GRDY/7200 or	Price includes all labor, material and equipment to perform the removal of the equipment. Removal includes, but not limited to, the following: removal of any minor equipment associated with the old equipment, rigging of old equipment, placement on trailer for disposal by a third party. All oil/gas to be removed and disposed by Avangrid. All permits shall be obtained by contractor when necessary.	<p>TM2.62.32 Station Service Transformers</p> <p>TM2.73.15 Construction Specifications Substation -</p> <p>Section 33 72 23 - Substation Structures</p> <p>Section 33 71 26 - Transmission &amp; Distribution Equipment</p>		Per Transformer	1

SSAG1367	Construction - Above Ground	Transformer/Regulator	Remove 50 kVA 200 or 250 BIL(kV) Three-Phase Steel Mounted Transformer with 34500GRDY/19920 or 46000	Price includes all labor, material and equipment to perform the removal of the equipment. Removal includes, but not limited to, the following: removal of any minor equipment associated with the old equipment, rigging of old equipment, placement on trailer for disposal by a third party. All oil/gas to be removed and disposed by Avangrid. All permits shall be obtained by contractor when necessary.	TM2.62.32 Station Service Transformers TM2.73.15 Construction Specifications Substation - Section 33 72 23 - Substation Structures Section 33 71 26 - Transmission & Distribution Equipment	Per Transformer	1
SSAG1368	Construction - Above Ground	Transformer/Regulator	Remove 150 kVA 200 or 250 BIL(kV) Three-Phase Padmount Transformer with 34500GRDY/19920 or 46000GRDY	Price includes all labor, material and equipment to perform the removal of the equipment. Removal includes, but not limited to, the following: removal of any minor equipment associated with the old equipment, rigging of old equipment, placement on trailer for disposal by a third party. All oil/gas to be removed and disposed by Avangrid. All permits shall be obtained by contractor when necessary.	TM2.62.32 Station Service Transformers TM2.73.15 Construction Specifications Substation - Section 33 72 23 - Substation Structures Section 33 71 26 - Transmission & Distribution Equipment	Per Transformer	1

SSAG1369	Construction - Above Ground	Transformer/Regulator	Remove 300 or 250 kVA 200 or 250 BIL(kV) Three-Phase Padmount Transformer with 34500GRDY/19920 or 46	Price includes all labor, material and equipment to perform the removal of the equipment. Removal includes, but not limited to, the following: removal of any minor equipment associated with the old equipment, rigging of old equipment, placement on trailer for disposal by a third party. All oil/gas to be removed and disposed by Avangrid. All permits shall be obtained by contractor when necessary.	<p>TM2.62.32 Station Service Transformers</p> <p>TM2.73.15 Construction Specifications Substation -</p> <p>Section 33 72 23 - Substation Structures</p> <p>Section 33 71 26 - Transmission &amp; Distribution Equipment</p>		Per Transformer	1
SSAG1370	Construction - Above Ground	Transformer/Regulator	Remove 100 kVA 550 BIL(kV) Single-Phase Large Instrument Transformers with 11500GRDY/66400 Primary V	Price includes all labor, material and equipment to perform the removal of the equipment. Removal includes, but not limited to, the following: removal of any minor equipment associated with the old equipment, rigging of old equipment, placement on trailer for disposal by a third party. All oil/gas to be removed and disposed by Avangrid. All permits shall be obtained by contractor when necessary.	<p>TM2.62.32 Station Service Transformers</p> <p>TM2.73.15 Construction Specifications Substation -</p> <p>Section 33 72 23 - Substation Structures</p> <p>Section 33 71 26 - Transmission &amp; Distribution Equipment</p>		Per Transformer	1

SSAG1371	Construction - Above Ground	Transformer/Regulator	Remove 300 kVA 1300 BIL(kV) Single-Phase Large Instrument Transformers with 345000GRDY/199186 Primar	Price includes all labor, material and equipment to perform the removal of the equipment. Removal includes, but not limited to, the following: removal of any minor equipment associated with the old equipment, rigging of old equipment, placement on trailer for disposal by a third party. All oil/gas to be removed and disposed by Avangrid. All permits shall be obtained by contractor when necessary.	TM2.62.32 Station Service Transformers TM2.73.15 Construction Specifications Substation - Section 33 72 23 - Substation Structures Section 33 71 26 - Transmission & Distribution Equipment	Per Transformer	1
SSAG1372	Construction - Above Ground	System Verification Testing	Breaker Control Functional Verification	Perform schematic/elementary diagram vs wiring verification and functional testing of breaker control and alarm circuits	IUSA Test and Commissioning Manual - ANSI/NETA ATS 2009	Per element	1
SSAG1373	Construction - Above Ground	System Verification Testing	Motor Operated Switch Control Functional Verification	Perform schematic/elementary diagram vs wiring verification and functional testing of motor operated switch control and alarm circuits	IUSA Test and Commissioning Manual - ANSI/NETA ATS 2009	Per element	1
SSAG1374	Construction - Above Ground	System Verification Testing	Capacitor Breaker Control Functional Verification	Perform schematic/elementary diagram vs wiring verification and functional testing of breaker control and alarm circuits	IUSA Test and Commissioning Manual - ANSI/NETA ATS 2009	Per element	1
SSAG1375	Construction - Above Ground	System Verification Testing	Transformer LTC Control Functional Verification	Perform schematic/elementary diagram vs wiring verification and functional testing of Transformer LTC control and alarm circuits	IUSA Test and Commissioning Manual - ANSI/NETA ATS 2009	Per element	1
SSAG1376	Construction - Above Ground	System Verification Testing	Fire Alarm Control Functional Verification	Perform wirig checks, schematic/elementary diagram vs wiring verification and functional testing of fire alarm control and alarm circuits	IUSA Test and Commissioning Manual - ANSI/NETA ATS 2009	Per element	1

SSAG1377	Construction - Above Ground	System Verification Testing	Breaker Control Functional Verification w/Func settings	With functional test relay settings pre-loaded, perform schematic/elementary diagram vs wiring verification and functional testing of breaker control and alarm circuits	IUSA Test and Commissioning Manual - ANSI/NETA ATS 2009		Per element	1
SSAG1378	Construction - Above Ground	System Verification Testing	Motor Operated Switch Control Functional Verification w/Func settings	With functional test relay settings pre-loaded, perform schematic/elementary diagram vs wiring verification and functional testing of motor operated switch control and alarm circuits	IUSA Test and Commissioning Manual - ANSI/NETA ATS 2009		Per element	1
SSAG1379	Construction - Above Ground	System Verification Testing	Capacitor Breaker Control Functional Verification w/Func settings	With functional test relay settings pre-loaded, perform schematic/elementary diagram vs wiring verification and functional testing of breaker control and alarm circuits	IUSA Test and Commissioning Manual - ANSI/NETA ATS 2009		Per element	1
SSAG1380	Construction - Above Ground	System Verification Testing	Transformer LTC Control Functional Verification w/Func settings	With functional test relay settings pre-loaded, perform schematic/elementary diagram vs wiring verification and functional testing of Transformer LTC control and alarm circuits	IUSA Test and Commissioning Manual - ANSI/NETA ATS 2009		Per element	1
SSAG1381	Construction - Above Ground	System Verification Testing	DC System Control Functional Verification	Perform schematic/elementary diagram vs wiring verification and functional testing of DC transfer controls, charging, and alarm circuits	IUSA Test and Commissioning Manual - ANSI/NETA ATS 2009		Per element	1
SSAG1382	Construction - Above Ground	System Verification Testing	AC System Control Functional Verification	Perform schematic/elementary diagram vs wiring verification and functional testing of AC circuit controls, and alarm circuits	IUSA Test and Commissioning Manual - ANSI/NETA ATS 2009		Per element	1
SSAG1383	Construction - Above Ground	System Verification Testing	HMI Functional Verification w/Functional configuration	With functional configuration pre-loaded, perform schematic/elementary diagram vs wiring verification and functional testing of system element controls and alarm circuits i.e. breakers, switches....	IUSA Test and Commissioning Manual - ANSI/NETA ATS 2009		Per element	1

SSAG1384	Construction - Above Ground	System Verification Testing	GIS SwitchGear	With functional test relay settings pre-loaded, perform schematic/elementary diagram vs wiring verification and functional testing of switchgear cubical control and alarm circuits	IUSA Test and Commissioning Manual - ANSI/NETA ATS 2009		Per Cubical	1
SSAG1385	Construction - Above Ground	System Verification Testing	Voltage Transformer Control Functional Verification	Perform schematic/elementary diagram vs wiring verification and functional testing of Voltage Transformer validate turns ratio and output to meet system requirements and connection to relay or meter.	IUSA Test and Commissioning Manual - ANSI/NETA ATS 2009		Per element	1
SSAG1386	Construction - Above Ground	System Verification Testing	Current Transformer Control Functional Verification	Perform schematic/elementary diagram vs wiring verification and functional testing of Current Transformer validate turns ratio, tap positions, output and connection to relay or meter.	IUSA Test and Commissioning Manual - ANSI/NETA ATS 2009		Per element	1
SSAG1387	Construction - Above Ground	System Verification Testing	HMI Functional Verification	Without functional configuration, perform schematic/elementary diagram vs wiring verification and functional testing of system element control and alarm circuits.	IUSA Test and Commissioning Manual - ANSI/NETA ATS 2009		Per element	1
SSAG1388	Construction - Above Ground	System Equipment Testing	Grounding	The inspection and testing of the installed ground grid	IUSA Test and Commissioning Manual 1000-E1-S01_YS_1		Per element	1
SSAG1389	Construction - Above Ground	System Equipment Testing	Fence	The inspection and testing of the Substation Perimeter Fencing	IUSA Test and Commissioning Manual 1000-E1-S01_YS_2		Per foot	1
SSAG1390	Construction - Above Ground	System Equipment Testing	Oil Containment System	purpose of the inspections and testing is to determine that the Oil Containment System conforms to AVG construction drawings and complies with manufacturer, NETA (InterNational Electrical Testing Association Inc.) and IEEE (Institute of Electrical and	IUSA Test and Commissioning Manual 1000-E1-S01_YS_3		Per square Yard	1

				Electronics Engineers) specifications.				
SSAG1391	Construction - Above Ground	System Equipment Testing	Power Fuse	purpose of the inspections and testing is to determine that the Power Fuse conforms to AVG construction drawings and complies with manufacturer, NETA (InterNational Electrical Testing Association Inc.) and IEEE (Institute of Electrical and Electronics Engineers) specifications.	IUSA Test and Commissioning Manual 1000-E1-S02_FI_1		Per element	1
SSAG1392	Construction - Above Ground	System Equipment Testing	Recloser	purpose of the inspections and testing is to determine that the recloser conforms to AVG construction drawings and complies with manufacturer, NETA (InterNational Electrical Testing Association Inc.) and IEEE (Institute of Electrical and Electronics Engineers) specifications.	IUSA Test and Commissioning Manual 1000-E1-S02_FI_2		Per element	1
SSAG1393	Construction - Above Ground	System Equipment Testing	Circuit Switcher	purpose of the inspections and testing is to determine that the circuit switcher conforms to AVG construction drawings and complies with manufacturer, NETA (InterNational Electrical Testing Association Inc.) and IEEE (Institute of Electrical and Electronics Engineers) specifications.	IUSA Test and Commissioning Manual 1000-E1-S02_FI_3		Per element	1
SSAG1394	Construction - Above Ground	System Equipment Testing	Vacuum Circuit Breaker	purpose of the inspections and testing is to determine that the vacuum circuit breaker conforms to AVG construction drawings and complies with manufacturer, NETA (InterNational Electrical Testing Association Inc.) and IEEE (Institute of Electrical and Electronics Engineers) specifications.	IUSA Test and Commissioning Manual 1000-E1-S02_FI_4		Per element	1

SSAG1395	Construction - Above Ground	System Equipment Testing	Oil Circuit Breaker	purpose of the inspections and testing is to determine that the oil circuit breaker conforms to AVG construction drawings and complies with manufacturer, NETA (InterNational Electrical Testing Association Inc.) and IEEE (Institute of Electrical and Electronics Engineers) specifications.	IUSA Test and Commissioning Manual 1000-E1-S02_FI_5	Per element	1
SSAG1396	Construction - Above Ground	System Equipment Testing	Gas Circuit Breaker	purpose of the inspections and testing is to determine that the gas circuit breaker conforms to AVG construction drawings and complies with manufacturer, NETA (InterNational Electrical Testing Association Inc.) and IEEE (Institute of Electrical and Electronics Engineers) specifications.	IUSA Test and Commissioning Manual 1000-E1-S02_FI_6	Per element	1
SSAG1397	Construction - Above Ground	System Equipment Testing	Synchro Close Gas Circuit Breaker (Bushing Cap)	purpose of the inspections and testing is to determine that the Synchro Close Gas Circuit Breaker conforms to AVG construction drawings and complies with manufacturer, NETA (InterNational Electrical Testing Association Inc.) and IEEE (Institute of Electrical and Electronics Engineers) specifications.	IUSA Test and Commissioning Manual 1000-E1-S02_FI_7	Per element	1
SSAG1398	Construction - Above Ground	System Equipment Testing	Airbreak Switch (w/wo Motor Operator)	purpose of the inspections and testing is to determine that the air break switch conforms to AVG construction drawings and complies with manufacturer, NETA (InterNational Electrical Testing Association Inc.) and IEEE (Institute of Electrical and Electronics Engineers) specifications.	IUSA Test and Commissioning Manual 1000-E1-S02_SW_1	Per element	1



SSAG1399	Construction - Above Ground	System Equipment Testing	Hookswitch disconnect switch	purpose of the inspections and testing is to determine that the hook switch disconnect switch conforms to AVG construction drawings and complies with manufacturer, NETA (InterNational Electrical Testing Association Inc.) and IEEE (Institute of Electrical and Electronics Engineers) specifications.	IUSA Test and Commissioning Manual 1000-E1-S02_SW_2		Per element	1
SSAG1400	Construction - Above Ground	System Equipment Testing	Coupling capacitor voltage transformer	purpose of the inspections and testing is to determine that the Coupling capacitor voltage transformer conforms to AVG construction drawings and complies with manufacturer, NETA (InterNational Electrical Testing Association Inc.) and IEEE (Institute of Electrical and Electronics Engineers) specifications.	IUSA Test and Commissioning Manual 1000-E1-S02_IT_1		Per element	1
SSAG1401	Construction - Above Ground	System Equipment Testing	Potential transformer	purpose of the inspections and testing is to determine that the potential transformer conforms to AVG construction drawings and complies with manufacturer, NETA (InterNational Electrical Testing Association Inc.) and IEEE (Institute of Electrical and Electronics Engineers) specifications.	IUSA Test and Commissioning Manual 1000-E1-S02_IT_2		Per element	1
SSAG1402	Construction - Above Ground	System Equipment Testing	Current transformer	purpose of the inspections and testing is to determine that the current transformer conforms to AVG construction drawings and complies with manufacturer, NETA (InterNational Electrical Testing Association Inc.) and IEEE (Institute of Electrical and Electronics Engineers) specifications.	IUSA Test and Commissioning Manual 1000-E1-S02_IT_3		Per element	1

SSAG1403	Construction - Above Ground	System Equipment Testing	Transformer and Breaker CT,s	purpose of the inspections and testing is to determine that the transformer and breaker current transformers conforms to AVG construction drawings and complies with manufacturer, NETA (InterNational Electrical Testing Association Inc.) and IEEE (Institute of Electrical and Electronics Engineers) specifications.	IUSA Test and Commissioning Manual 1000-E1-S02_IT_4	Per element	1
SSAG1404	Construction - Above Ground	System Equipment Testing	138,115kV 2 WDG Transformer with load tap changer	purpose of the inspections and testing is to determine that the 138,115kV 2 WDG Transformer with load tap changer conforms to AVG construction drawings and complies with manufacturer, NETA (InterNational Electrical Testing Association Inc.) and IEEE (Institute of Electrical and Electronics Engineers) specifications.	IUSA Test and Commissioning Manual 1000-E1-S02_RE_1	Per element	1
SSAG1405	Construction - Above Ground	System Equipment Testing	345,230KV Auto w Tertiary transformer with a load tap changer	purpose of the inspections and testing is to determine that the 345,230KV Auto w Tertiary transformer with a load tap changer conforms to AVG construction drawings and complies with manufacturer, NETA (InterNational Electrical Testing Association Inc.) and IEEE (Institute of Electrical and Electronics Engineers) specifications.	IUSA Test and Commissioning Manual 1000-E1-S02_RE_2	Per element	1
SSAG1406	Construction - Above Ground	System Equipment Testing	Capacitor Bank	purpose of the inspections and testing is to determine that the capacitor bank conforms to AVG construction drawings and complies with manufacturer, NETA (InterNational Electrical Testing Association Inc.) and IEEE (Institute of Electrical and Electronics Engineers) specifications.	IUSA Test and Commissioning Manual 1000-E1-S02_RE_3	Per element	1

SSAG1407	Construction - Above Ground	System Equipment Testing	Reactor, Power	purpose of the inspections and testing is to determine that the power reactor conforms to AVG construction drawings and complies with manufacturer, NETA (InterNational Electrical Testing Association Inc.) and IEEE (Institute of Electrical and Electronics Engineers) specifications.	IUSA Test and Commissioning Manual 1000-E1-S02_RE_4		Per element	1
SSAG1408	Construction - Above Ground	System Equipment Testing	Reactor, Inrush	purpose of the inspections and testing is to determine that the inrush reactor conforms to AVG construction drawings and complies with manufacturer, NETA (InterNational Electrical Testing Association Inc.) and IEEE (Institute of Electrical and Electronics Engineers) specifications.	IUSA Test and Commissioning Manual 1000-E1-S02_RE_5		Per element	1
SSAG1409	Construction - Above Ground	System Equipment Testing	Recloser Control	purpose of the inspections and testing is to determine that the recloser control conforms to AVG construction drawings and complies with manufacturer, NETA (InterNational Electrical Testing Association Inc.) and IEEE (Institute of Electrical and Electronics Engineers) specifications.	IUSA Test and Commissioning Manual 1000-E1-S02_OA_1		Per element	1
SSAG1410	Construction - Above Ground	System Equipment Testing	Surge arrester (this and fuses could be grouped,Protection)	purpose of the inspections and testing is to determine that the surge arrester conforms to AVG construction drawings and complies with manufacturer, NETA (InterNational Electrical Testing Association Inc.) and IEEE (Institute of Electrical and Electronics Engineers) specifications.	IUSA Test and Commissioning Manual 1000-E1-S02_OA_2		Per element	1
SSAG1411	Construction - Above Ground	System Equipment Testing	Busses, (Rigid, strain, Connectors)	purpose of the inspections and testing is to determine that the substation power busses conforms to AVG construction	IUSA Test and Commissioning Manual 1000-E1-S02_OA_3		Per element	1

				drawings and complies with manufacturer, NETA (InterNational Electrical Testing Association Inc.) and IEEE (Institute of Electrical and Electronics Engineers) specifications.				
SSAG1412	Construction - Above Ground	System Equipment Testing	Regulator, Voltage	purpose of the inspections and testing is to determine that the voltage regulator conforms to AVG construction drawings and complies with manufacturer, NETA (InterNational Electrical Testing Association Inc.) and IEEE (Institute of Electrical and Electronics Engineers) specifications.	IUSA Test and Commissioning Manual 1000-E1-S02_OA_4		Per element	1
SSAG1413	Construction - Above Ground	System Equipment Testing	HV Power Cable	purpose of the inspections and testing is to determine that the high voltage power cables conforms to AVG construction drawings and complies with manufacturer, NETA (InterNational Electrical Testing Association Inc.) and IEEE (Institute of Electrical and Electronics Engineers) specifications.	IUSA Test and Commissioning Manual 1000-E1-S02_OA_5		Per element	1
SSAG1414	Construction - Above Ground	System Equipment Testing	Wave Trap	purpose of the inspections and testing is to determine that the carrier wave trap conforms to AVG construction drawings and complies with manufacturer, NETA (InterNational Electrical Testing Association Inc.) and IEEE (Institute of Electrical and Electronics Engineers) specifications.	IUSA Test and Commissioning Manual 1000-E1-S02_OA_6		Per element	1
SSAG1415	Construction - Above Ground	System Equipment Testing	Line Tuning Unit	purpose of the inspections and testing is to determine that the LTU conforms to AVG construction drawings and complies with manufacturer, NETA (InterNational Electrical	IUSA Test and Commissioning Manual 1000-E1-S02_OA_7		Per element	1

				Testing Association Inc.) and IEEE (Institute of Electrical and Electronics Engineers) specifications.				
SSAG1416	Construction - Above Ground	System Equipment Testing	Battery (NiCad)	purpose of the inspections and testing is to determine that the NiCad Battery conforms to AVG construction drawings and complies with manufacturer, NETA (InterNational Electrical Testing Association Inc.) and IEEE (Institute of Electrical and Electronics Engineers) specifications.	IUSA Test and Commissioning Manual 1000-E1-S03_CH_1		Per battery	1
SSAG1417	Construction - Above Ground	System Equipment Testing	Battery Lead Acid	purpose of the inspections and testing is to determine that the lead acid battery conforms to AVG construction drawings and complies with manufacturer, NETA (InterNational Electrical Testing Association Inc.) and IEEE (Institute of Electrical and Electronics Engineers) specifications.	IUSA Test and Commissioning Manual 1000-E1-S03_CH_2		Per battery	1
SSAG1418	Construction - Above Ground	System Equipment Testing	Battery (Lithium Ion)	purpose of the inspections and testing is to determine that the Lithium Ion Battery conforms to AVG construction drawings and complies with manufacturer, NETA (InterNational Electrical Testing Association Inc.) and IEEE (Institute of Electrical and Electronics Engineers) specifications.			Per battery	1
SSAG1419	Construction - Above Ground	System Equipment Testing	Battery charger (Arga)	purpose of the inspections and testing is to determine that the battery charger conforms to AVG construction drawings and complies with manufacturer, NETA (InterNational Electrical Testing Association Inc.) and IEEE (Institute of Electrical and Electronics Engineers) specifications.	IUSA Test and Commissioning Manual 1000-E1-S03_CH_3		Per charger	1

SSAG1420	Construction - Above Ground	System Equipment Testing	AC Distribution System	purpose of the inspections and testing is to determine that the AC distribution system conforms to AVG construction drawings and complies with manufacturer, NETA (InterNational Electrical Testing Association Inc.) and IEEE (Institute of Electrical and Electronics Engineers) specifications.	IUSA Test and Commissioning Manual 1000-E1-S03_CH_4	Per System	1
SSAG1421	Construction - Above Ground	System Equipment Testing	Automatic Transfer Switch	purpose of the inspections and testing is to determine that the automatic transfer switch conforms to AVG construction drawings and complies with manufacturer, NETA (InterNational Electrical Testing Association Inc.) and IEEE (Institute of Electrical and Electronics Engineers) specifications.	IUSA Test and Commissioning Manual 1000-E1-S03_CH_5	Per switch	1
SSAG1422	Construction - Above Ground	System Equipment Testing	DC Distribution System	purpose of the inspections and testing is to determine that the DC distribution system conforms to AVG construction drawings and complies with manufacturer, NETA (InterNational Electrical Testing Association Inc.) and IEEE (Institute of Electrical and Electronics Engineers) specifications.	IUSA Test and Commissioning Manual 1000-E1-S03_CH_6	Per system	1
SSAG1423	Construction - Above Ground	System Equipment Testing	Control House Ancillary Systems	purpose of the inspections and testing is to determine that the Control House Ancillary Systems conforms to AVG construction drawings and complies with manufacturer, NETA (InterNational Electrical Testing Association Inc.) and IEEE (Institute of Electrical and Electronics Engineers) specifications.	IUSA Test and Commissioning Manual 1000-E1-S03_CH_7	Per system	1

SSAG1424	Construction - Above Ground	System Equipment Testing	Lighting, AC, DC, Exit	purpose of the inspections and testing is to determine that the Lighting, AC, DC, Exit fixtures conforms to AVG construction drawings and complies with manufacturer, NETA (InterNational Electrical Testing Association Inc.) and IEEE (Institute of Electrical and Electronics Engineers) specifications.	IUSA Test and Commissioning Manual 1000-E1-S03_CH_8		Per fixtures	1
SSAG1425	Construction - Above Ground	System Equipment Testing	Temp controls	purpose of the inspections and testing is to determine that the temperature controls conforms to AVG construction drawings and complies with manufacturer, NETA (InterNational Electrical Testing Association Inc.) and IEEE (Institute of Electrical and Electronics Engineers) specifications.	IUSA Test and Commissioning Manual 1000-E1-S03_CH_9		Per control	1
SSAG1426	Construction - Above Ground	System Equipment Testing	FIRE ALARMS	purpose of the inspections and testing is to determine that the fire alarms conforms to AVG construction drawings and complies with manufacturer, NETA, NETA (InterNational Electrical Testing Association Inc.) and IEEE (Institute of Electrical and Electronics Engineers) specifications.	IUSA Test and Commissioning Manual 1000-E1-S03_CH_10		Per system	1
SSAG1427	Construction - Above Ground	System Equipment Testing	Security Systems, Hardware	purpose of the inspections and testing is to determine that the security system and hardware conforms to AVG construction drawings and complies with manufacturer, NETA (InterNational Electrical Testing Association Inc.) and IEEE (Institute of Electrical and Electronics Engineers) specifications.	IUSA Test and Commissioning Manual 1000-E1-S03_CH_11		Per system	1

PayCU Reference	NY West	NY East	CT
SSIG1001			
SSIG1002			
SSIG1003			
SSIG1004			
SSIG1005			
SSIG1006			
SSIG1007			
SSIG1008			
SSIG1009			
SSIG1010			
SSIG1011			
SSIG1012			
SSIG1013			
SSIG1014			
SSIG1015			
SSIG1016			
SSIG1017			
SSIG1018			
SSIG1019			
SSIG1020			
SSIG1021			
SSIG1022			
SSIG1023			
SSIG1024			
SSIG1025			
SSIG1026			
SSIG1027			
SSIG1028			
SSIG1029			
SSIG1030			
SSIG1031			
SSIG1032			
SSIG1033			
SSIG1034			
SSIG1035			
SSIG1036			
SSIG1037			
SSIG1038			
SSIG1039			
SSIG1040			
SSIG1041			



SSIG1042	
SSIG1043	
SSIG1044	
SSIG1045	
SSIG1046	
SSIG1047	
SSIG1048	
SSIG1049	
SSIG1050	
SSIG1051	
SSIG1052	
SSIG1053	
SSIG1054	
SSIG1055	
SSIG1056	
SSIG1057	
SSIG1058	
SSIG1059	
SSIG1060	
SSIG1061	
SSIG1062	
SSIG1063	
SSIG1064	
SSIG1065	
SSIG1066	
SSIG1067	
SSIG1068	
SSIG1069	
SSIG1070	
SSIG1071	
SSIG1072	
SSIG1073	
SSIG1074	
SSIG1075	
SSIG1076	
SSIG1077	
SSIG1078	
SSIG1079	
SSIG1080	
SSIG1081	
SSIG1082	
SSIG1083	
SSIG1084	
SSIG1085	

SSIG1086	
SSIG1087	
SSIG1088	
SSIG1089	
SSIG1090	
SSIG1091	
SSIG1092	
SSIG1093	
SSIG1094	
SSIG1095	
SSIG1096	
SSIG1097	
SSIG1098	
SSIG1099	
SSIG1100	
SSIG1101	
SSIG1102	
SSIG1103	
SSIG1104	
SSIG1105	
SSIG1106	
SSIG1107	
SSIG1108	
SSIG1109	
SSIG1110	
SSIG1111	
SSIG1112	
SSIG1113	
SSIG1114	
SSIG1115	
SSIG1116	
SSIG1116_1	
SSIG1117	
SSIG1118	
SSIG1119	
SSIG1120	
SSIG1121	
SSIG1122	
SSIG1123	
SSIG1124	
SSIG1125	
SSIG1126	
SSIG1127	
SSIG1128	

SSIG1129	
SSIG1130	
SSIG1131	
SSIG1132	
SSIG1133	
SSIG1134	
SSIG1135	
SSIG1136	
SSIG1137	
SSIG1138	
SSIG1139	
SSIG1140	
SSIG1141	
SSIG1142	
SSIG1143	
SSIG1144	
SSIG1145	
SSIG1146	
SSIG1147	
SSAG1429	
SSAG1430	
SSAG1431	
SSAG1432	
SSAG1433	
SSAG1000	
SSAG1001	
SSAG1002	
SSAG1003	
SSAG1004	
SSAG1005	
SSAG1006	
SSAG1007	
SSAG1008	
SSAG1009	
SSAG1010	
SSAG1011	
SSAG1012	
SSAG1013	
SSAG1014	
SSAG1015	
SSAG1016	
SSAG1017	
SSAG1018	
SSAG1019	

SSAG1020	
SSAG1021	
SSAG1022	
SSAG1023	
SSAG1024	
SSAG1025	
SSAG1026	
SSAG1027	
SSAG1028	
SSAG1029	
SSAG1030	
SSAG1031	
SSAG1032	
SSAG1033	
SSAG1034	
SSAG1035	
SSAG1036	
SSAG1037	
SSAG1038	
SSAG1039	
SSAG1040	
SSAG1041	
SSAG1042	
SSAG1043	
SSAG1044	
SSAG1045	
SSAG1046	
SSAG1047	
SSAG1048	
SSAG1049	
SSAG1050	
SSAG1051	
SSAG1052	
SSAG1053	
SSAG1054	
SSAG1055	
SSAG1056	
SSAG1057	
SSAG1058	
SSAG1059	
SSAG1060	
SSAG1061	
SSAG1062	
SSAG1063	

SSAG1064	
SSAG1065	
SSAG1066	
SSAG1067	
SSAG1068	
SSAG1069	
SSAG1070	
SSAG1071	
SSAG1072	
SSAG1073	
SSAG1074	
SSAG1075	
SSAG1076	
SSAG1077	
SSAG1078	
SSAG1079	
SSAG1080	
SSAG1081	
SSAG1082	
SSAG1083	
SSAG1084	
SSAG1085	
SSAG1086	
SSAG1087	
SSAG1088	
SSAG1089	
SSAG1090	
SSAG1091	
SSAG1092	
SSAG1093	
SSAG1094	
SSAG1095	
SSAG1096	
SSAG1097	
SSAG1098	
SSAG1099	
SSAG1100	
SSAG1101	
SSAG1102	
SSAG1103	
SSAG1104	
SSAG1105	
SSAG1106	
SSAG1107	

SSAG1108	
SSAG1109	
SSAG1110	
SSAG1111	
SSAG1112	
SSAG1113	
SSAG1114	
SSAG1115	
SSAG1116	
SSAG1117	
SSAG1118	
SSAG1119	
SSAG1120	
SSAG1121	
SSAG1122	
SSAG1123	
SSAG1124	
SSAG1125	
SSAG1126	
SSAG1127	
SSAG1128	
SSAG1129	
SSAG1130	
SSAG1131	
SSAG1132	
SSAG1133	
SSAG1134	
SSAG1135	
SSAG1136	
SSAG1137	
SSAG1138	
SSAG1139	
SSAG1140	
SSAG1141	
SSAG1142	
SSAG1143	
SSAG1144	
SSAG1145	
SSAG1146	
SSAG1147	
SSAG1148	
SSAG1149	
SSAG1150	
SSAG1151	

SSAG1152	
SSAG1153	
SSAG1154	
SSAG1155	
SSAG1156	
SSAG1157	
SSAG1158	
SSAG1159	
SSAG1160	
SSAG1161	
SSAG1162	
SSAG1163	
SSAG1164	
SSAG1165	
SSAG1166	
SSAG1167	
SSAG1168	
SSAG1169	
SSAG1170	
SSAG1171	
SSAG1172	
SSAG1173	
SSAG1174	
SSAG1175	
SSAG1176	
SSAG1177	
SSAG1178	
SSAG1179	
SSAG1180	
SSAG1181	
SSAG1182	
SSAG1183	
SSAG1184	
SSAG1185	
SSAG1186	
SSAG1187	
SSAG1188	
SSAG1189	
SSAG1190	
SSAG1191	
SSAG1192	
SSAG1193	
SSAG1194	
SSAG1195	

SSAG1196	
SSAG1197	
SSAG1198	
SSAG1199	
SSAG1200	
SSAG1201	
SSAG1202	
SSAG1203	
SSAG1204	
SSAG1205	
SSAG1206	
SSAG1207	
SSAG1208	
SSAG1209	
SSAG1210	
SSAG1211	
SSAG1212	
SSAG1213	
SSAG1214	
SSAG1215	
SSAG1216	
SSAG1217	
SSAG1218	
SSAG1219	
SSAG1220	
SSAG1221	
SSAG1222	
SSAG1223	
SSAG1224	
SSAG1225	
SSAG1226	
SSAG1227	
SSAG1228	
SSAG1229	
SSAG1230	
SSAG1231	
SSAG1232	
SSAG1233	
SSAG1234	
SSAG1235	
SSAG1236	
SSAG1237	
SSAG1238	
SSAG1239	



SSAG1240	
SSAG1241	
SSAG1242	
SSAG1243	
SSAG1244	
SSAG1245	
SSAG1246	
SSAG1247	
SSAG1248	
SSAG1249	
SSAG1250	
SSAG1251	
SSAG1252	
SSAG1253	
SSAG1254	
SSAG1255	
SSAG1256	
SSAG1257	
SSAG1258	
SSAG1259	
SSAG1260	
SSAG1261	
SSAG1262	
SSAG1263	
SSAG1264	
SSAG1265	
SSAG1266	
SSAG1267	
SSAG1268	
SSAG1269	
SSAG1270	
SSAG1271	
SSAG1272	
SSAG1273	
SSAG1274	
SSAG1275	
SSAG1276	
SSAG1277	
SSAG1278	
SSAG1279	
SSAG1280	
SSAG1281	
SSAG1282	
SSAG1283	

SSAG1284	
SSAG1285	
SSAG1286	
SSAG1287	
SSAG1288	
SSAG1289	
SSAG1290	
SSAG1291	
SSAG1292	
SSAG1293	
SSAG1294	
SSAG1295	
SSAG1296	
SSAG1297	
SSAG1298	
SSAG1299	
SSAG1300	
SSAG1301	
SSAG1302	
SSAG1303	
SSAG1304	
SSAG1305	
SSAG1306	
SSAG1307	
SSAG1308	
SSAG1309	
SSAG1310	
SSAG1311	
SSAG1312	
SSAG1313	
SSAG1314	
SSAG1315	
SSAG1316	
SSAG1317	
SSAG1318	
SSAG1319	
SSAG1320	
SSAG1321	
SSAG1322	
SSAG1323	
SSAG1324	
SSAG1325	
SSAG1326	
SSAG1327	

SSAG1328	
SSAG1329	
SSAG1330	
SSAG1331	
SSAG1332	
SSAG1333	
SSAG1334	
SSAG1335	
SSAG1336	
SSAG1337	
SSAG1338	
SSAG1339	
SSAG1340	
SSAG1341	
SSAG1342	
SSAG1343	
SSAG1344	
SSAG1345	
SSAG1346	
SSAG1347	
SSAG1348	
SSAG1349	
SSAG1350	
SSAG1351	
SSAG1352	
SSAG1353	
SSAG1354	
SSAG1355	
SSAG1356	
SSAG1357	
SSAG1358	
SSAG1359	
SSAG1360	
SSAG1361	
SSAG1362	
SSAG1363	
SSAG1364	
SSAG1365	
SSAG1366	
SSAG1367	
SSAG1368	
SSAG1369	
SSAG1370	
SSAG1371	

SSAG1372	
SSAG1373	
SSAG1374	
SSAG1375	
SSAG1376	
SSAG1377	
SSAG1378	
SSAG1379	
SSAG1380	
SSAG1381	
SSAG1382	
SSAG1383	
SSAG1384	
SSAG1385	
SSAG1386	
SSAG1387	
SSAG1388	
SSAG1389	
SSAG1390	
SSAG1391	
SSAG1392	
SSAG1393	
SSAG1394	
SSAG1395	
SSAG1396	
SSAG1397	
SSAG1398	
SSAG1399	
SSAG1400	
SSAG1401	
SSAG1402	
SSAG1403	
SSAG1404	
SSAG1405	
SSAG1406	
SSAG1407	
SSAG1408	
SSAG1409	
SSAG1410	
SSAG1411	
SSAG1412	
SSAG1413	
SSAG1414	
SSAG1415	

SSAG1416	
SSAG1417	
SSAG1418	
SSAG1419	
SSAG1420	
SSAG1421	
SSAG1422	
SSAG1423	
SSAG1424	
SSAG1425	
SSAG1426	
SSAG1427	

		STRAIGHT TIME HOURLY			
		NY WEST	NY EAST	MAINE	CONNECTICUT
Pay Item Description	UNIT	Hourly Labor Price	Hourly Labor Price	Hourly Labor Price	Hourly Labor Price
General Foreman	Man-Hour				
Foreman	Man-Hour				
Working General Foreman	Man-Hour				
Journey Lineman	Man-Hour				
7th Apprentice Lineman	Man-Hour				
6th Apprentice Lineman	Man-Hour				
5th Apprentice Lineman	Man-Hour				
4th Apprentice Lineman	Man-Hour				
3rd Apprentice Lineman	Man-Hour				
2nd Apprentice Lineman	Man-Hour				
1st Apprentice Lineman	Man-Hour				
Journey Substation Technician	Man-Hour				
7th Apprentice Substation Technician	Man-Hour				
6th Apprentice Substation Technician	Man-Hour				
5th Apprentice Substation Technician	Man-Hour				
4th Apprentice Substation Technician	Man-Hour				
3rd Apprentice Substation Technician	Man-Hour				
2nd Apprentice Substation Technician	Man-Hour				

1st Apprentice Substation Technician	Man-Hour
Journey Relay Technician	Man-Hour
7th Apprentice Relay Technician	Man-Hour
6th Apprentice Relay Technician	Man-Hour
5th Apprentice Relay Technician	Man-Hour
4th Apprentice Relay Technician	Man-Hour
3rd Apprentice Relay Technician	Man-Hour
2nd Apprentice Relay Technician	Man-Hour
1st Apprentice Relay Technician	Man-Hour
Digger Machine Operator	Man-Hour
Back-Hoe Operator	Man-Hour
General Equipment Operator	Man-Hour
Flagman	Man-Hour
Chief Mechanic	Man-Hour
Mechanic 1st Class	Man-Hour
Mechanic 2nd	Man-Hour
Mechanic Helper	Man-Hour
Truck driver Tractor Trailer	Man-Hour
Lineman Ground Man	Man-Hour
Ground man Truck Driver	Man-Hour
Ground man 3rd Year	Man-Hour
Ground man 2nd Year	Man-Hour
Ground man 1st Year	Man-Hour
Scaffolder	Man-Hour
Carpenter	Man-Hour
Steel Worker/Fabricator	Man-Hour
Concrete Fabricator	Man-Hour
Mason	Man-Hour
Surveyor	Man-Hour
Commercial Electrician	Man-Hour

Commercial Apprentice Electrician	Man-Hour
Machinist	Man-Hour
Welder	Man-Hour
Sheet Metal Fabricator	Man-Hour
Rigger	Man-Hour
Directional Drill Operator	Man-Hour
Laborer - Semiskilled	Man-Hour
Driver - Workman	Man-Hour
Crane Operator	Man-Hour
Fiber Optic Splicer	Man-Hour
Cable Splicer	Man-Hour
Material Handler	Man-Hour
<b>Pay Item Description</b>	<b>UNIT</b>
General Foreman	Man-Hour
Foreman	Man-Hour
Working General Foreman	Man-Hour
Journey Lineman	Man-Hour
7th Apprentice Lineman	Man-Hour
6th Apprentice Lineman	Man-Hour
5th Apprentice Lineman	Man-Hour
4th Apprentice Lineman	Man-Hour
3rd Apprentice Lineman	Man-Hour
2nd Apprentice Lineman	Man-Hour
1st Apprentice Lineman	Man-Hour
Journey Substation Technician	Man-Hour
7th Apprentice Substation Technician	Man-Hour
6th Apprentice Substation Technician	Man-Hour
5th Apprentice Substation Technician	Man-Hour
4th Apprentice Substation Technician	Man-Hour

3rd Apprentice Substation Technician	Man-Hour
2nd Apprentice Substation Technician	Man-Hour
1st Apprentice Substation Technician	Man-Hour
Journey Relay Technician	Man-Hour
7th Apprentice Relay Technician	Man-Hour
6th Apprentice Relay Technician	Man-Hour
5th Apprentice Relay Technician	Man-Hour
4th Apprentice Relay Technician	Man-Hour
3rd Apprentice Relay Technician	Man-Hour
2nd Apprentice Relay Technician	Man-Hour
1st Apprentice Relay Technician	Man-Hour
Digger Machine Operator	Man-Hour
Back-Hoe Operator	Man-Hour
General Equipment Operator	Man-Hour
Flagman	Man-Hour
Chief Mechanic	Man-Hour
Mechanic 1st Class	Man-Hour
Mechanic 2nd	Man-Hour
Mechanic Helper	Man-Hour
Truck driver Tractor Trailer	Man-Hour
Lineman Ground Man	Man-Hour
Ground man Truck Driver	Man-Hour
Ground man 3rd Year	Man-Hour
Ground man 2nd Year	Man-Hour
Ground man 1st Year	Man-Hour
Scaffolder	Man-Hour
Carpenter	Man-Hour
Steel Worker/Fabricator	Man-Hour
Concrete Fabricator	Man-Hour
Mason	Man-Hour



Surveyor	Man-Hour
Commercial Electrician	Man-Hour
Commercial Apprentice Electrician	Man-Hour
Machinist	Man-Hour
Welder	Man-Hour
Sheet Metal Fabricator	Man-Hour
Rigger	Man-Hour
Directional Drill Operator	Man-Hour
Laborer - Semiskilled	Man-Hour
Driver - Workman	Man-Hour
Crane Operator	Man-Hour
Fiber Optic Splicer	Man-Hour
Cable Splicer	Man-Hour
Material Handler	Man-Hour
<b>Pay Item Description</b>	<b>UNIT</b>
General Foreman	Man-Hour
Foreman	Man-Hour
Working General Foreman	Man-Hour
Journey Lineman	Man-Hour
7th Apprentice Lineman	Man-Hour
6th Apprentice Lineman	Man-Hour
5th Apprentice Lineman	Man-Hour
4th Apprentice Lineman	Man-Hour
3rd Apprentice Lineman	Man-Hour
2nd Apprentice Lineman	Man-Hour
1st Apprentice Lineman	Man-Hour
Journey Substation Technician	Man-Hour
7th Apprentice Substation Technician	Man-Hour
6th Apprentice Substation Technician	Man-Hour

5th Apprentice Substation Technician	Man-Hour
4th Apprentice Substation Technician	Man-Hour
3rd Apprentice Substation Technician	Man-Hour
2nd Apprentice Substation Technician	Man-Hour
1st Apprentice Substation Technician	Man-Hour
Journey Relay Technician	Man-Hour
7th Apprentice Relay Technician	Man-Hour
6th Apprentice Relay Technician	Man-Hour
5th Apprentice Relay Technician	Man-Hour
4th Apprentice Relay Technician	Man-Hour
3rd Apprentice Relay Technician	Man-Hour
2nd Apprentice Relay Technician	Man-Hour
1st Apprentice Relay Technician	Man-Hour
Digger Machine Operator	Man-Hour
Back-Hoe Operator	Man-Hour
General Equipment Operator	Man-Hour
Flagman	Man-Hour
Chief Mechanic	Man-Hour
Mechanic 1st Class	Man-Hour
Mechanic 2nd	Man-Hour
Mechanic Helper	Man-Hour
Truck driver Tractor Trailer	Man-Hour
Lineman Ground Man	Man-Hour
Ground man Truck Driver	Man-Hour
Ground man 3rd Year	Man-Hour
Ground man 2nd Year	Man-Hour
Ground man 1st Year	Man-Hour
Scaffolder	Man-Hour
Carpenter	Man-Hour
Steel Worker/Fabricator	Man-Hour

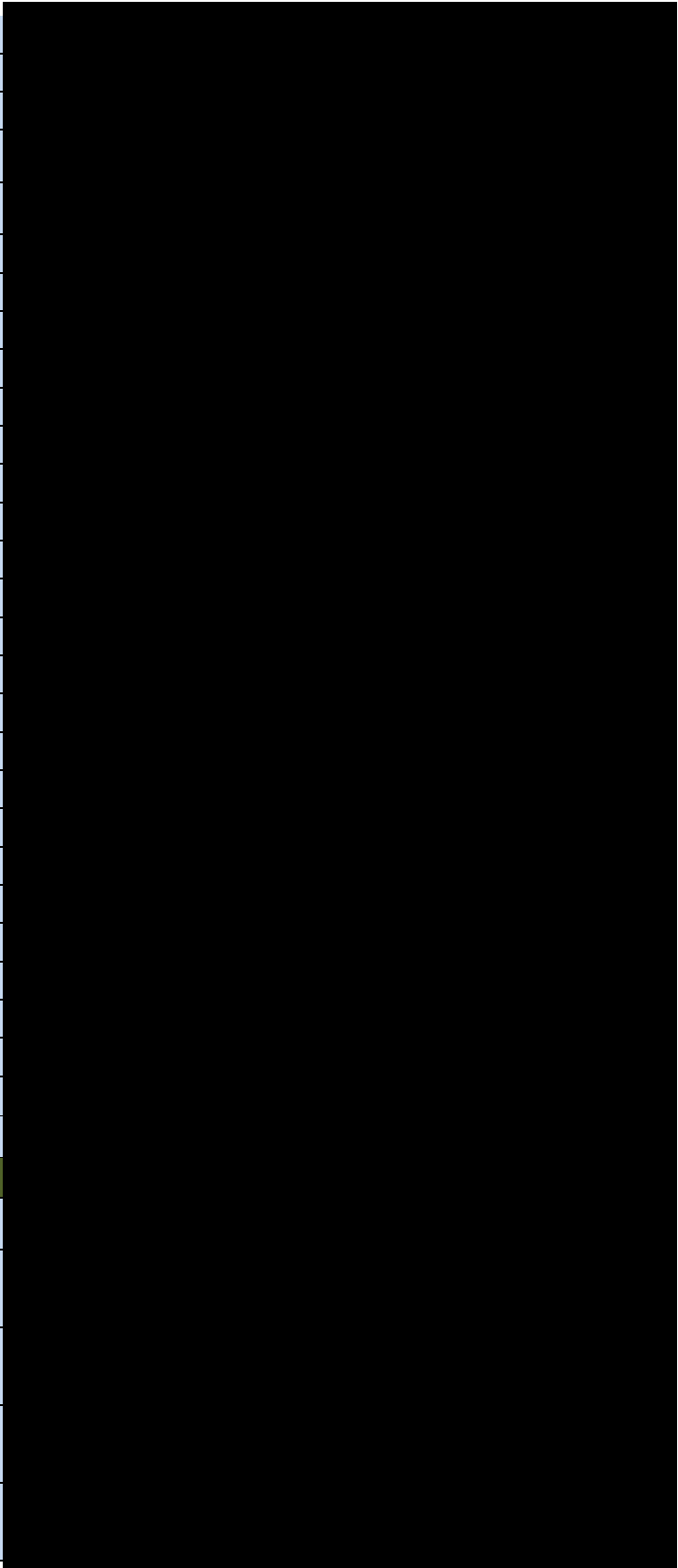
Concrete Fabricator	Man-Hour	
Mason	Man-Hour	
Surveyor	Man-Hour	
Commercial Electrician	Man-Hour	
Commercial Apprentice Electrician	Man-Hour	
Machinist	Man-Hour	
Welder	Man-Hour	
Sheet Metal Fabricator	Man-Hour	
Rigger	Man-Hour	
Directional Drill Operator	Man-Hour	
Laborer - Semiskilled	Man-Hour	
Driver - Workman	Man-Hour	
Crane Operator	Man-Hour	
Fiber Optic Splicer	Man-Hour	
Cable Splicer	Man-Hour	
Material Handler	Man-Hour	

		NY WEST	NY EAST	MAINE	CONNECTICUT
PAY ITEM DESCRIPTION	UNIT	EQUIPMENT PRICE	EQUIPMENT PRICE	EQUIPMENT PRICE	EQUIPMENT PRICE
10 ton crane	Equip./Hr				
30 ton crane	Equip./Hr				
50 ton crane	Equip./Hr				
60 ton wire press	Equip./Hr				
ATV 4WD	Equip./Hr				
ATV 6 by 6	Equip./Hr				
Backhoe-4ws ext.1/2	Equip./Hr				
Backhoe-Trk 3/4 yd	Equip./Hr				
Bucket Truck - 39' Bucket	Equip./Hr				
Bucket truck - 55' Bucket	Equip./Hr				
Bucket truck - 70' Bucket	Equip./Hr				
Cable Plow	Equip./Hr				
Compressor - Tow Behind	Equip./Hr				
Crew Cab Truck 3/4 ton	Equip./Hr				
D4H Bulldozer or equiv	Equip./Hr				

D6 equivalent bulldozer	Equip./Hr
D8 equivalent bulldozer	Equip./Hr
Digger derrick	Equip./Hr
Digger truck with ledge bore attached	Equip./Hr
Directional Drill	Equip./Hr
Excavator Mini -Track/Crawl	Equip./Hr
Excavator-Track/Crawl (up to 25,000lbs)	Equip./Hr
Flashers/Barricades	Equip./Hr
Telescopic Forklift 10,000lbs	Equip./Hr
Fusion Machine-> 4"	Equip./Hr
Fusion Machine-2"-4"	Equip./Hr
Generator-4-5k watts	Equip./Hr
Generator- 10KW	Equip./Hr
Hoe Ram Attachment for mini-excavator	Equip./Hr
Hot stick trailer	Equip./Hr
Low Boy Trailer with Truck	Equip./Hr
Man lift - 4WD - Up to 40'	Equip./Hr
Man lift - 4WD - Up to 80'	Equip./Hr
Man lift - 4WD - Up to 120'	Equip./Hr
Material lift bucket truck	Equip./Hr
Office Trailer 20FT - Fully Furnished	Equip./Hr
Office Trailer 40FT - Fully Furnished	Equip./Hr
Pole trailer	Equip./Hr
Portable Toilet Rental	Equip./Hr
Pump-3"centr.w/hoses	Equip./Hr
Road Plates - 10' x 20'	Equip./Hr
Semi-Trailer Truck	Equip./Hr
Skid Steer with bucket and forks	
Storage Container - 40ft Conex	Equip./Hr
Track bucket 125 foot handler	Equip./Hr
Track bucket 85 foot handler	Equip./Hr
Track bucket, 55' foot handler	Equip./Hr
Track digger	Equip./Hr
Trailer - 20FT equipment	Equip./Hr
Trencher	Equip./Hr
Truck Line or Main	Equip./Hr
Tri-axle Dump Truck with Driver	Equip./Hr
Truck-10yd dmp w/dr	Equip./Hr
Truck-6yd dump w/dr	Equip./Hr
Truck-Cbl. Reel/Winc	Equip./Hr

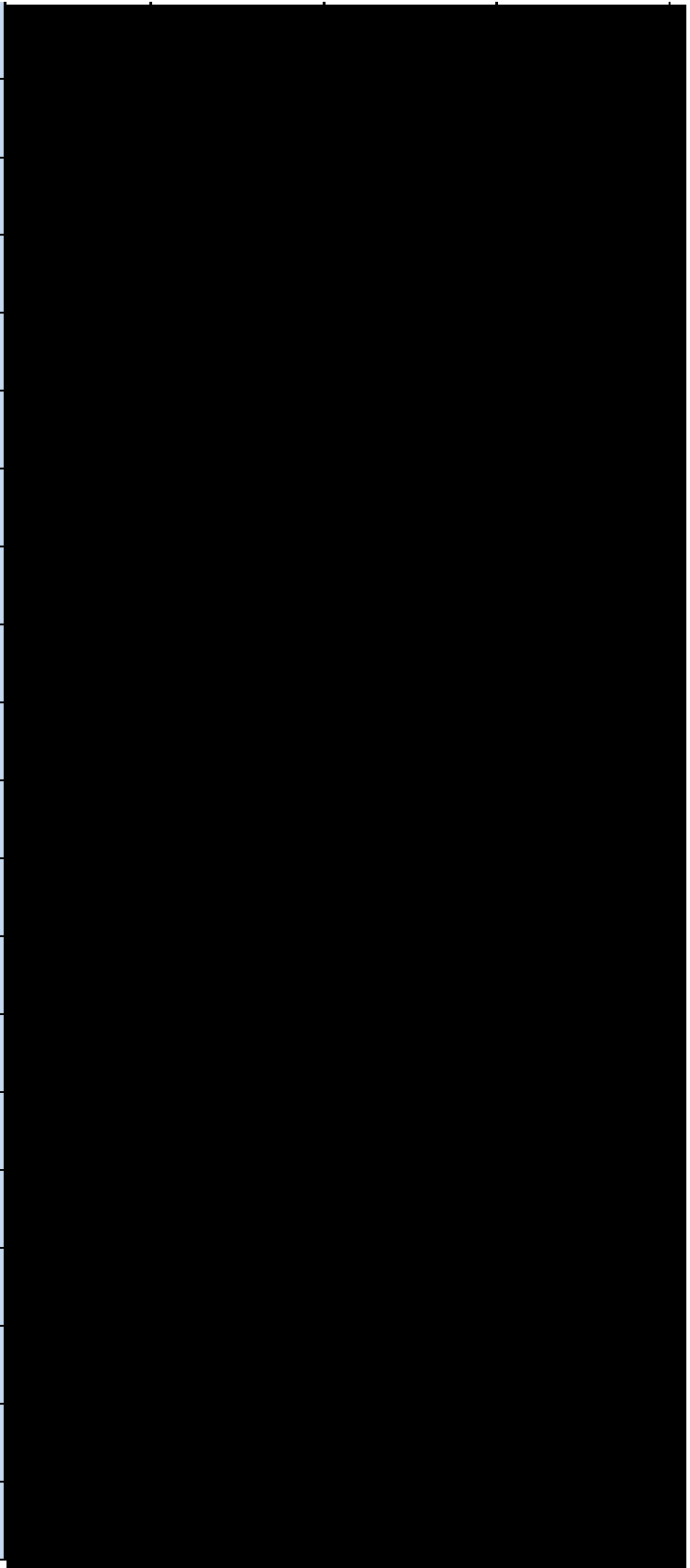
Truck-Pick Up	Equip./Hr
Truck-Stake Body	Equip./Hr
Welding Truck	Equip./Hr
Wire puller (hydra dyne)	Equip./Hr
3 reel trailer	Equip./Hr
Wire trailer	Equip./Hr
PAY ITEM DESCRIPTION	UNIT
10 ton crane	Equip./DAY
30 ton crane	Equip./DAY
50 ton crane	Equip./DAY
60 ton wire press	Equip./DAY
ATV 4WD	Equip./DAY
ATV 6 by 6	Equip./DAY
Backhoe-4ws ext. 1/2	Equip./DAY
Backhoe-Trk 3/4 yd	Equip./DAY
Bucket Truck - 39' Bucket	Equip./DAY
Bucket truck - 55' Bucket	Equip./DAY
Bucket truck - 70' Bucket	Equip./DAY
Cable Plow	Equip./DAY
Compressor - Tow Behind	Equip./DAY
Crew Cab Truck 3/4 ton	Equip./DAY
D4H Bulldozer or equiv	Equip./DAY
D6 equivalent bulldozer	Equip./DAY
D8 equivalent bulldozer	Equip./DAY
Digger derrick	Equip./DAY
Digger truck with ledge bore attached	Equip./DAY
Directional Drill	Equip./DAY
Excavator Mini -Track/Crawl	Equip./DAY
Excavator-Track/Crawl (up to 25,000lbs)	Equip./DAY
Flashers/Barricades	Equip./DAY
Telescopic Forklift 10,000lbs	Equip./DAY
Fusion Machine-> 4"	Equip./DAY
Fusion Machine-2"-4"	Equip./DAY
Generator-4-5k watts	Equip./DAY
Generator- 10KW	Equip./DAY
Hoe Ram Attachment for mini-excavator	Equip./DAY
Hot stick trailer	Equip./DAY
Low Boy Trailer with Truck	Equip./DAY
Man lift - 4WD - Up to 40'	Equip./DAY

Man lift - 4WD - Up to 80'	Equip./DAY
Man lift - 4WD - Up to 120'	Equip./DAY
Material lift bucket truck	Equip./DAY
Office Trailer 20FT - Fully Furnished	Equip./DAY
Office Trailer 40FT - Fully Furnished	Equip./DAY
Pole trailer	Equip./DAY
Portable Toilet Rental	Equip./DAY
Pump-3"centr.w/hoses	Equip./DAY
Road Plates - 10' x 20'	Equip./DAY
Semi-Trailer Truck	Equip./DAY
Skid Steer with bucket and forks	Equip./DAY
Storage Container - 40ft Conex	Equip./DAY
Track bucket 125 foot handler	Equip./DAY
Track bucket 85 foot handler	Equip./DAY
Track bucket, 55' foot handler	Equip./DAY
Track digger	Equip./DAY
Trailer - 20FT equipment	Equip./DAY
Trencher	Equip./DAY
Truck Line or Main	Equip./DAY
Tri-axle Dump Truck with Driver	Equip./DAY
Truck-10yd dmp w/dr	Equip./DAY
Truck-6yd dump w/dr	Equip./DAY
Truck-Cbl. Reel/Winc	Equip./DAY
Truck-Pick Up	Equip./DAY
Truck-Stake Body	Equip./DAY
Welding Truck	Equip./DAY
Wire puller (hydra dyne)	Equip./DAY
3 reel trailer	Equip./DAY
Wire trailer	Equip./DAY
PAY ITEM DESCRIPTION	UNIT
10 ton crane	Equip./WEEK
30 ton crane	Equip./WEEK
50 ton crane	Equip./WEEK
60 ton wire press	Equip./WEEK



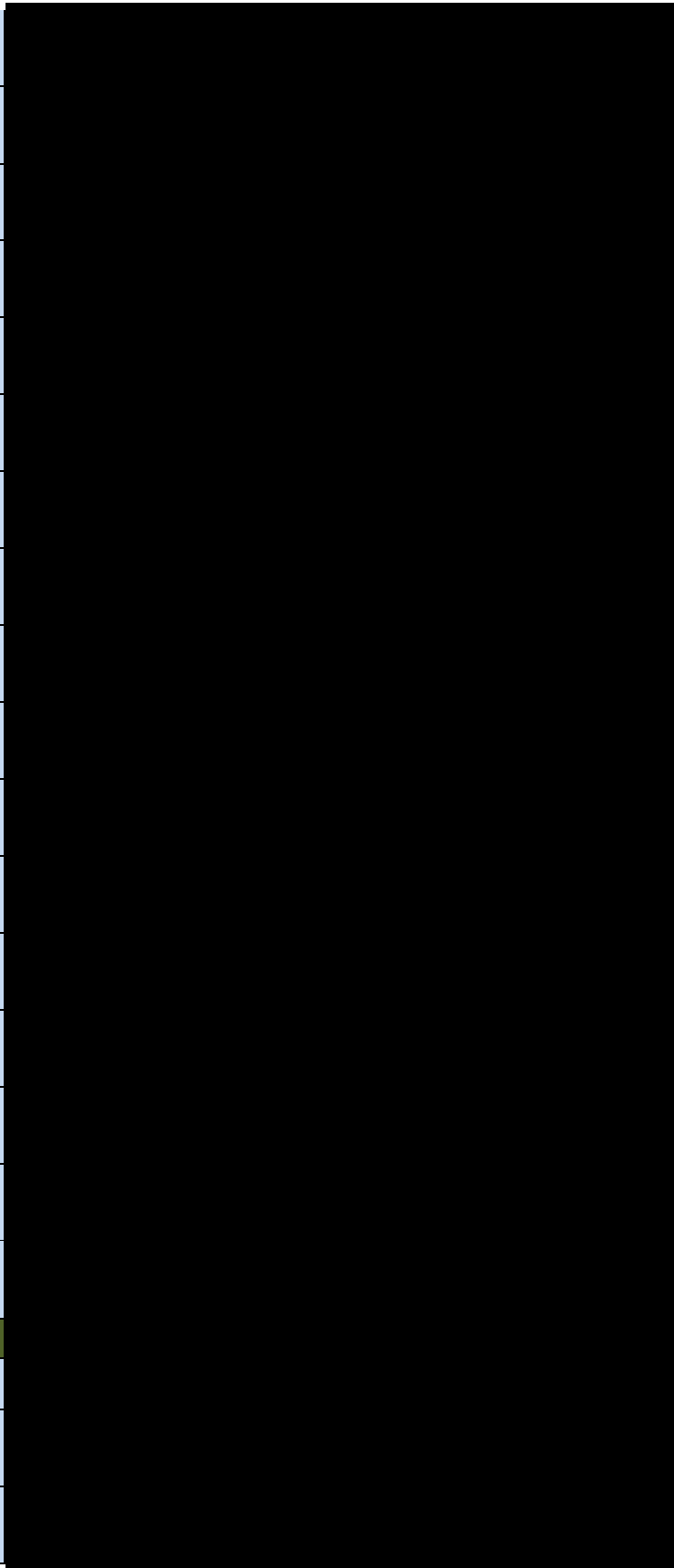
ATV 4WD	Equip./WEE K
ATV 6 by 6	Equip./WEE K
Backhoe-4ws ext. 1/2	Equip./WEE K
Backhoe-Trk 3/4 yd	Equip./WEE K
Bucket Truck - 39' Bucket	Equip./WEE K
Bucket truck - 55' Bucket	Equip./WEE K
Bucket truck - 70' Bucket	Equip./WEE K
Cable Plow	Equip./WEE K
Compressor - Tow Behind	Equip./WEE K
Crew Cab Truck 3/4 ton	Equip./WEE K
D4H Bulldozer or equiv	Equip./WEE K
D6 equivalent bulldozer	Equip./WEE K
D8 equivalent bulldozer	Equip./WEE K
Digger derrick	Equip./WEE K
Digger truck with ledge bore attached	Equip./WEE K
Directional Drill	Equip./WEE K
Excavator Mini -Track/Crawl	Equip./WEE K
Excavator-Track/Crawl (up to 25,000lbs)	Equip./WEE K
Flashers/Barricades	Equip./WEE K
Telescopic Forklift 10,000lbs	Equip./WEE K

Fusion Machine-> 4"	Equip./WEE K
Fusion Machine-2"-4"	Equip./WEE K
Generator-4-5k watts	Equip./WEE K
Generator- 10KW	Equip./WEE K
Hoe Ram Attachment for mini- excavator	Equip./WEE K
Hot stick trailer	Equip./WEE K
Low Boy Trailer with Truck	Equip./WEE K
Man lift - 4WD - Up to 40'	Equip./WEE K
Man lift - 4WD - Up to 80'	Equip./WEE K
Man lift - 4WD - Up to 120'	Equip./WEE K
Material lift bucket truck	Equip./WEE K
Office Trailer 20FT - Fully Furnished	Equip./WEE K
Office Trailer 40FT - Fully Furnished	Equip./WEE K
Pole trailer	Equip./WEE K
Portable Toilet Rental	Equip./WEE K
Pump-3"centr.w/hoses	Equip./WEE K
Road Plates - 10' x 20'	Equip./WEE K
Semi-Trailer Truck	Equip./WEE K
Skid Steer with bucket and forks	Equip./WEE K
Storage Container - 40ft Conex	Equip./WEE K



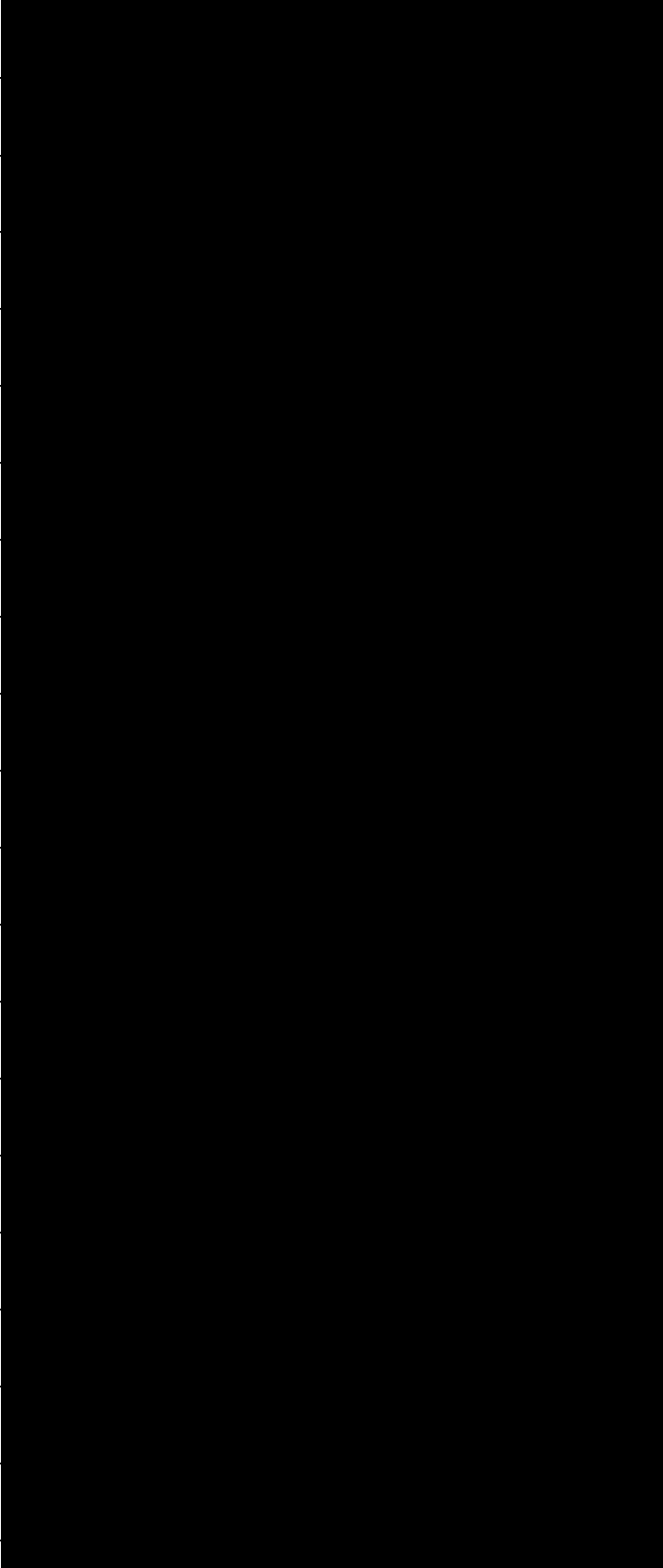


Track bucket 125 foot handler	Equip./WEEK
Track bucket 85 foot handler	Equip./WEEK
Track bucket, 55' foot handler	Equip./WEEK
Track digger	Equip./WEEK
Trailer - 20FT equipment	Equip./WEEK
Trencher	Equip./WEEK
Truck Line or Main	Equip./WEEK
Tri-axle Dump Truck with Driver	Equip./WEEK
Truck-10yd dmp w/dr	Equip./WEEK
Truck-6yd dump w/dr	Equip./WEEK
Truck-Cbl. Reel/Winc	Equip./WEEK
Truck-Pick Up	Equip./WEEK
Truck-Stake Body	Equip./WEEK
Welding Truck	Equip./WEEK
Wire puller (hydra dyne)	Equip./WEEK
3 reel trailer	Equip./WEEK
Wire trailer	Equip./WEEK
PAY ITEM DESCRIPTION	UNIT
10 ton crane	Equip./MONTH
30 ton crane	Equip./MONTH



50 ton crane	Equip./MONTH
60 ton wire press	Equip./MONTH
ATV 4WD	Equip./MONTH
ATV 6 by 6	Equip./MONTH
Backhoe-4ws ext.1/2	Equip./MONTH
Backhoe-Trk 3/4 yd	Equip./MONTH
Bucket Truck - 39' Bucket	Equip./MONTH
Bucket truck - 55' Bucket	Equip./MONTH
Bucket truck - 70' Bucket	Equip./MONTH
Cable Plow	Equip./MONTH
Compressor - Tow Behind	Equip./MONTH
Crew Cab Truck 3/4 ton	Equip./MONTH
D4H Bulldozer or equiv	Equip./MONTH
D6 equivalent bulldozer	Equip./MONTH
D8 equivalent bulldozer	Equip./MONTH
Digger derrick	Equip./MONTH
Digger truck with ledge bore attached	Equip./MONTH
Directional Drill	Equip./MONTH
Excavator Mini -Track/Crawl	Equip./MONTH
Excavator-Track/Crawl (up to 25,000lbs)	Equip./MONTH

Flashers/Barricades	Equip./MONTH
Telescopic Forklift 10,000lbs	Equip./MONTH
Fusion Machine-> 4"	Equip./MONTH
Fusion Machine-2"-4"	Equip./MONTH
Generator-4-5k watts	Equip./MONTH
Generator- 10KW	Equip./MONTH
Hoe Ram Attachment for mini-excavator	Equip./MONTH
Hot stick trailer	Equip./MONTH
Low Boy Trailer with Truck	Equip./MONTH
Man lift - 4WD - Up to 40'	Equip./MONTH
Man lift - 4WD - Up to 80'	Equip./MONTH
Man lift - 4WD - Up to 120'	Equip./MONTH
Material lift bucket truck	Equip./MONTH
Office Trailer 20FT - Fully Furnished	Equip./MONTH
Office Trailer 40FT - Fully Furnished	Equip./MONTH
Pole trailer	Equip./MONTH
Portable Toilet Rental	Equip./MONTH
Pump-3"centr.w/hoses	Equip./MONTH
Road Plates - 10' x 20'	Equip./MONTH
Semi-Trailer Truck	Equip./MONTH



Skid Steer with bucket and forks	Equip./MONTH
Storage Container - 40ft Conex	Equip./MONTH
Track bucket 125 foot handler	Equip./MONTH
Track bucket 85 foot handler	Equip./MONTH
Track bucket, 55' foot handler	Equip./MONTH
Track digger	Equip./MONTH
Trailer - 20FT equipment	Equip./MONTH
Trencher	Equip./MONTH
Truck Line or Main	Equip./MONTH
Tri-axle Dump Truck with Driver	Equip./MONTH
Truck-10yd dmp w/dr	Equip./MONTH
Truck-6yd dump w/dr	Equip./MONTH
Truck-Cbl. Reel/Winc	Equip./MONTH
Truck-Pick Up	Equip./MONTH
Truck-Stake Body	Equip./MONTH
Welding Truck	Equip./MONTH
Wire puller (hydra dyne)	Equip./MONTH
3 reel trailer	Equip./MONTH
Wire trailer	Equip./MONTH

## APPENDIX C

**Contract Datasheet****(TO BE COMPLETED FOR EACH PO ISSUED)**

<b>Section</b>	<b>Item</b>	<b>Contract Data</b>
	Contract Currency	US Dollars (USD)
	Warranty Period	Two (2) years
	Owner Permits	See Appendix I (Permits)
1.11	Site Access Date	[Date]
1.15	Substantial Completion Date	[Date]
1.4	Final Completion Date	[Date]
	Project e-mail	<<project manager's email address>>

**APPENDIX D**

**Contractor's Key Personnel and Subcontractors  
(TO BE COMPLETED FOR EACH PO ISSUED)**

**Potential Site Works Sub-Contractors:**

Civil Design:

Civil Works:

Installation:

Other Considerations:

**APPENDIX E**

Notices

Along with all other correspondence requirements included in this Construction Agreement, any notice, request, approval or other document required or permitted to be given under this Master Agreement shall be in writing and shall be deemed to have been sufficiently given when delivered in person or deposited in the U.S. Mail, postage prepaid, addressed as specified herein or to such other address or addresses as may be specified from time to time in a written notice given by such party. The parties shall acknowledge in writing the receipt of any such notice delivered in person.

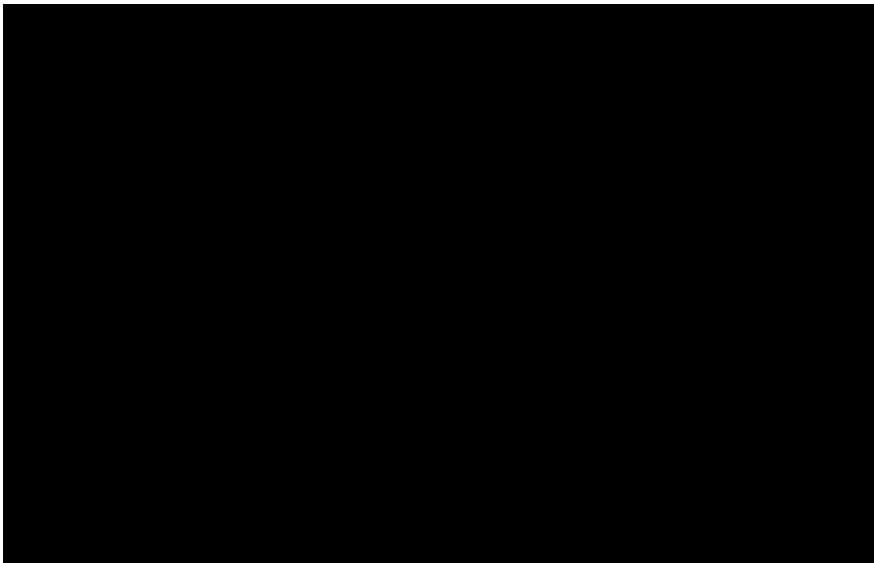
All communications to AVANGRID shall be directed to:

AVANGRID Service Company  
Contract Administration  
89 East Avenue  
Rochester, NY 14649  
Phone: 585-724-8028  
Fax: 585-771-2820

CC:

Jeremy Dalton – Process and Technology - Manager – Contract Administration  
1300 Scottsville Road  
Rochester, NY 14624 Telephone 585-771-4016  
Email - [Jeremy.Dalton@rge.com](mailto:Jeremy.Dalton@rge.com)

All communications to Supplier shall be directed to:



**APPENDIX F**

Form of Invoice



**Application and Certificate for Payment Construction Manager-Adviser Edition**

<b>TO OWNER:</b>	<b>PROJECT:</b>	<b>APPLICATION NO:</b>	<b>Distribution to:</b>
		<b>PERIOD TO:</b>	OWNER <input type="checkbox"/>
			CONSTRUCTION MANAGER <input type="checkbox"/>
<b>FROM CONTRACTOR:</b>	<b>VIA CONSTRUCTION MANAGER:</b>	<b>CONTRACT DATE:</b>	ARCHITECT <input type="checkbox"/>
	<b>VIA ARCHITECT:</b>	<b>PROJECT NOS:</b>	CONTRACTOR <input type="checkbox"/>
			FIELD <input type="checkbox"/>
			<input type="checkbox"/>

**CONTRACT FOR:**

**CONTRACTOR'S APPLICATION FOR PAYMENT**

Application is made for payment, as shown below, in connection with the Contract Continuation Sheet, AIA Document G703, is attached.

1. ORIGINAL CONTRACT SUM \$

2. Net change by Change Orders \$

3. CONTRACT SUM TO DATE (Line 1 + 2) \$

4. TOTAL COMPLETED & STORED TO DATE (Column G on G703) \$

5. RETAINAGE:

a. % of Completed Work (Column D + E on G703) \$

b. % of Stored Material (Column F on G703) \$

Total Retainage (Lines 5a + 5b or Total in Column I of G703) \$

6. TOTAL EARNED LESS RETAINAGE (Line 4 less Line 5 Total) \$

7. LESS PREVIOUS CERTIFICATES FOR PAYMENT (Line 6 from prior Certificate) \$

8. CURRENT PAYMENT DUE \$

9. BALANCE TO FINISH, INCLUDING RETAINAGE (Line 3 less Line 6) \$

The undersigned Contractor certifies that to the best of the Contractor's knowledge, information and belief the Work covered by this Application for Payment has been completed in accordance with the Contract Documents, that all amounts have been paid by the Contractor for Work for which previous Certificates for Payment were issued and payments received from the Owner, and that current payment shown herein is now due.

**CONTRACTOR:**

By: \_\_\_\_\_ Date: \_\_\_\_\_

State of: \_\_\_\_\_

County of: \_\_\_\_\_

Subscribed and sworn to before me this \_\_\_\_\_ day of \_\_\_\_\_

Notary Public: \_\_\_\_\_

My Commission expires: \_\_\_\_\_

**CERTIFICATE FOR PAYMENT**

In accordance with the Contract Documents, based on on-site observations and the data comprising this application, the Construction Manager and Architect certify to the Owner that to the best of their knowledge, information and belief the Work has progressed as indicated, the quality of the Work is in accordance with the Contract Documents, and the Contractor is entitled to payment of the AMOUNT CERTIFIED.

AMOUNT CERTIFIED \$

(Attach explanation if amount certified differs from the amount applied. Initial all figures on this Application and on the Continuation Sheet that are changed to conform with the amount certified.)

**CONSTRUCTION MANAGER:**

By: \_\_\_\_\_ Date: \_\_\_\_\_

**ARCHITECT:**

By: \_\_\_\_\_ Date: \_\_\_\_\_

This Certificate is not negotiable. The AMOUNT CERTIFIED is payable only to the Contractor named herein. Issuance, payment and acceptance of payment are without prejudice to any rights of the Owner or Contractor under this Contract.

CHANGE ORDER SUMMARY	ADDITIONS	DEDUCTIONS
Total changes approved in previous months by Owner	\$	\$
Total approved this Month	\$	\$
TOTALS	\$	\$
NET CHANGES by Change Order	\$	\$

**CAUTION:** You should sign an original AIA Contract Document, on which this text appears in RED. An original assures that changes will not be obscured.  
 AIA Document G702/CMa™ - 1992. Copyright © 1992 by The American Institute of Architects. All rights reserved. **WARNING:** This AIA™ Document is protected by U.S. Copyright Law and International Treaties. Unauthorized reproduction or distribution of this AIA™ Document, or any portion of it, may result in severe civil and criminal penalties, and will be prosecuted to the maximum extent possible under the law. Purchasers are permitted to reproduce ten (10) copies of this document when completed. To report copyright violations of AIA Contract Documents, e-mail The American Institute of Architects' legal counsel, copyright@aia.org



**Continuation Sheet**

AIA Document G702, APPLICATION AND CERTIFICATION FOR PAYMENT, containing Contractor's signed certification is attached. In tabulations below, amounts are stated to the nearest dollar. Use Column I on Contracts where variable retainage for line items may apply.

**APPLICATION NO:**

**APPLICATION DATE:**

**PERIOD TO:**

**ARCHITECT'S PROJECT NO:**

A	B	C	D		E	F	G	H	I
ITEM NO.	DESCRIPTION OF WORK	SCHEDULED VALUE	WORK COMPLETED		THIS PERIOD	MATERIALS PRESENTLY STORED (NOT IN D OR F)	TOTAL COMPLETED AND STORED TO DATE (D+E+F)	BALANCE TO FINISH (C - G)	RETAINAGE (F VARIABLE RATE)
			FROM PREVIOUS APPLICATION (D + E)						

**CAUTION:** You should sign an original AIA Contract Document, on which this text appears in RED. An original assures that changes will not be obscured.  
 AIA Document G703™ - 1992. Copyright © 1993, 1995, 1996, 1997, 1970, 1978, 1993 and 1992 by The American Institute of Architects. All rights reserved. **WARNING:** This AIA™ Document is protected by U.S. Copyright Law and International Treaties. Unauthorized reproduction or distribution of this AIA™ Document, or any portion of it, may result in severe civil and criminal penalties, and will be prosecuted to the maximum extent possible under the law. Purchasers are permitted to reproduce ten (10) copies of this document when completed. To report copyright violations of AIA Contract Documents, e-mail The American Institute of Architects' legal counsel, copyright@aia.org



**APPENDIX G**

Change Order Pricing

**1. General**

Contractor’s requests for Change Orders and proposals submitted by Contractor in response to a request for a proposal from Owner or Program Manager, including components thereof that involve Subcontractors (including any and all other lower tier sub-Subcontractors) shall be priced in accordance with this Appendix G, Pricing of Changes, unless otherwise directed by Owner. Owner has the right to select which of the methods of pricing changes in this Appendix is to apply to each Change Order or prospective Change Order. The options are:

- fixed price lump sum
- fixed unit price
- time and material

**2. Fixed Price Lump Sum**

Proposals for work to be undertaken on a fixed price lump sum basis shall follow the requirements set out herein for changes undertaken on either unit price basis or time and material basis, or a combination of both (Contractor to select the method), except that quantities of time, work and materials, and applicable rates and prices shall be estimated or chosen by Contractor prior to execution of the work. As part of its proposal for each change, Contractor shall submit details similar to those required by Sections 3 and 4, of this Appendix, as applicable.

**3. Fixed Unit Price**

**3.1** The following **Table of Unit Prices for Defined Scopes of Work** shall be used for determining the price of all Change Orders where the fixed unit price method is selected by Owner and the scope of the changed work is described in the Table.

The unit prices set forth in the **Table of Unit Prices for Defined Scopes of Work** include all direct and indirect costs to Contractor of furnishing and installing the item, including all associated engineering and design costs, maintenance, fuel, delivery and installation charges, premiums for shift or night work, Site and off-site time-related costs, transport costs, taxes, overhead and markups (including for Work performed by Subcontractors, any handling or other administrative charge or mark-up of Contractor), and profits. Unit prices are firm through Final Completion.

**Table of Unit Prices for Defined Scopes of Work**

	<i>To be Developed from RFP Proposal Form</i>	
--	---	--

**3.2. Labor.** If any change using unit prices, in whole or in part, involves labor not associated with work addressed in the **Table of Unit Prices for Defined Scopes of Work** in Section 3.1, the following hourly labor rates shall be used as the unit pricing of labor. Overtime and holiday rates apply only upon direction of Owner or Program Manager that the applicable work shall be undertaken at times that attract such rates. Holiday rates shall only apply to holidays for employees of the Contractor as demonstrated by submittal by Contractor of documentation acceptable to Program Manager and approved. Overtime and holiday

rates apply only to hours actually worked on the changed work. Unit prices are firm through Final Completion.

**Table of Labor Rates for Changes Undertaken on Unit Price Basis Where Change Involves Labor Not Associated With Work Addressed in Unit Pricing for Defined Scopes Of Work.**

<i>To be Developed from RFP Proposal Form</i>			
---	--	--	--

Any unit prices for labor not identified on the above Table shall be established consistent with the methodology used for pricing time and materials change orders in Section 4.

**3.3. Equipment.** If any change using unit prices, in whole or in part, involves equipment not associated with work addressed in the **Table of Unit Prices for Defined Scopes of Work** in Section 3.1, the equipment rates below shall be used as the unit pricing of equipment. Unit costs for labor associated with the operation of such equipment are not included in such equipment rates, and shall be determined in accordance with the table for labor in Section 3.2 above. Rates in the Table include for fuel and maintenance, including inspections and tests and ready-for-work start-up procedures. Standby rates shall be used only if Contractor mobilizes equipment to the Site pursuant to a Change Order, such equipment is maintained in operating condition, and Program Manager directs Contractor in writing not to use such equipment. Unit prices are firm through Final Completion.

<i>To be Developed from RFP Proposal Form</i>			
---	--	--	--

Any unit prices for equipment not identified on the above Table shall be established consistent with the methodology used for pricing time and materials change orders in Section 4 of this Appendix.

**3.4. Materials.** If any change using unit prices, in whole or in part, involves materials not associated with work addressed in the **Table of Unit Prices for Defined Scopes of Work** in Section 3.1, the Material costs shall reflect Contractor's net, verifiable, anticipated cost for the purchase of the material needed for the extra Work, including delivery charges.

**4. Time and Material**

Where the time and material price method is selected by Owner, Contractor shall perform such authorized extra Work for the sum of:

- (i) the actual cost of direct labor (working foremen, journeymen, apprentices, helpers) that undertook the extra work;
- (ii) the actual cost of labor burden associated with (i);
- (iii) the actual cost of material used in performing the extra Work;
- (iv) the computed cost or actual cost of rental of major equipment;
- (v) actual costs of additional general liability insurance and performance bond
- (vi) the Markup Percentage Fee applied to items (i), (ii), (iii) and (iv)

without any charge for administration and supervision including management, superintendents and general foremen, and the cost of or rental cost of small tools and minor equipment (defined as having a purchase price of less than \$1,000).

Owner and Contractor may agree in advance in a Change Order on a maximum price for Work priced on such basis, and Owner shall not be liable for amounts in excess of that maximum.

*(i) Direct Labor*

Labor costs included for self-performed work shall be based on the actual cost (excluding bonuses or other discretionary compensation) per hour paid by Contractor for those workers undertaking the extra Work.

*(ii) Labor Burden*

Allowable labor burden shall be defined as employer's net actual cost of payroll taxes (FICA, Medicare, SUTA, FUTA), net actual cost for employer's cost of union benefits (or other usual and customary fringe benefits (excluding bonuses or other discretionary compensation) if the employees are not union employees); and net actual cost to employer for worker's compensation insurance taking into consideration adjustments for experience modifiers, premium discounts, dividends, rebates, expense constants, assigned risk pool costs and net cost reductions due to policies with deductibles for self-insured losses and assigned risk rebates. Contractor shall reduce its standard payroll tax percentages to properly reflect the effective cost reduction due to the estimated impact of the annual maximum wages subject to payroll taxes.

*(iii) Materials*

Material costs shall reflect Contractor's net actual, verifiable, cost for the purchase and delivery of the material needed for the extra Work and shall include for any discounts, preferential pricing and rebates available to Contractor.

*(iv) Equipment*

*Contractor-owned or Subcontractor-owned.* Allowable "bare" equipment rental rates shall be the monthly rate listed in the most current publication of The DataQuest Blue Book divided by 176 to arrive at a maximum hourly rate to be applied to the actual hours of equipment usage, to which shall be added operating costs needed to undertake the extra Work

*Contractor-rented or Subcontractor-rented.* Allowable costs are the appropriate, verifiable, market rental rates for rental of major equipment needed to undertake the extra Work.

*(v) General Liability Insurance and Performance Bond*

Time and materials computations shall account for Contractor's net increase in comprehensive general liability insurance costs and costs for performance bond furnished by Contractor to Owner as a result of the extra Work. No Markup Percentage Fee is to be applied to increases in such insurance costs or performance bond costs.

*(vi) Markup Percentage Fee*

For any Work performed directly by Contractor and/or any Subcontractor (regardless of tier), the maximum Markup Percentage Fee shall be a single markup percentage not-to-exceed five percent (5%) of the net direct cost (excluding taxes) of (i) direct labor; (ii) allowable labor burden costs; (iii)

the net cost of material; (iv) computed cost or actual rental cost of equipment including operating costs

and

for Work performed by lower tier contractors, the maximum, aggregate Markup Percentage Fee allowable to Contractor and/or Subcontractor(s) directly supervising the lower tier contractor's work shall not exceed three percent (3%) of the net cost (excluding taxes) of all approved Work performed by all Subcontractors combined. (For the avoidance of doubt, this is a single markup and not separate markups for Contractor and supervising Subcontractor.)

The Markup Percentage Fee compensates Contractor for all costs and expenses incurred by Contractor and Subcontractors of all tiers in undertaking the extra work other than the amounts and/or costs identified and directly accounted for in (i), (ii), (iii), and (iv) above and provides for Contractor's profit and Subcontractors' (of all tiers) profit. Such costs and expenses include but are not limited to:

- Site field overhead and time-related costs and expenses;
- Site office overhead and time-related costs and expenses;
- local or branch office overhead costs and expenses;
- home office overhead costs and expenses;
- cost and expenses including those for Change Orders of management, superintendents, general foremen, estimating, shop drawings, permits, engineering, submittals, coordinating with others, purchasing, expediting, legal, finance and accounting, management information systems, computers and software, consultants not identified as subcontractors, administrative functions;
- record keeping and verification methods for time and materials;
- insurances except as specifically permitted;
- transport costs for management, superintendents, general foremen or others;
- warranty expenses and costs;
- cost of payment and performance bonds furnished by subcontractors to Contractor;
- the cost for the use of small tools (tools and equipment (power or non-power) with an individual purchase cost of less than \$1,000)

Record keeping forms and verification methods for time and materials Work shall be subject to approval of the Program Manager.


If requested by Program Manager, Contractor shall provide, and shall cause each Subcontractor at any tier to provide, evidence of its labor costs and a breakdown of its labor burden costs or estimates.

## **5. Equipment**

The aggregate equipment charges for any single piece of Contractor-owned or Subcontractor-owned equipment used in all Work under Change Orders priced on fixed unit price or time and material basis shall be limited to the fair market value of the piece of equipment when the first Change Order is priced using fixed unit price or time and material involving usage of that piece of equipment.

**APPENDIX H**

Change Order Request Form  
(Sample)

		<b>CHANGE ORDER REQUEST</b>		
 NYSEG Public Utility Service		P.O. Number:	39980	
		Contract Title:	Transmission Lines	
		Contract No.:	CUN-MPRP-SS-0300	
		COR No.:	00001	
		COR Title:	Design COR	
		Date: September 01, 2009		
From: Contractor XYZ Contracting 123 Main St Anytown, MD 20601 Phone: (202) 555-9842		To: <input type="text"/> Central Electric Power Company 83 Edison Drive Augusta, MD 20815 Phone: (202) 555-4085		
Change Sign Number: 00001		Reason Code:		
Description of Change:				
<b>SUMMARY</b>				
		<b>BREAKDOWN OF WORK</b>		
Item	Description of Work	Quantity	Unit Price	Net Amount
0001	Labor Expense & Material	:	\$1,000.00	\$: 100.00
<b>TOTAL :</b>				<b>\$1,000.00</b>

## **APPENDIX I**

### Permits

#### **1. General**

Contractor is responsible for verifying that all Permits, whether provided by Contractor or Owner, have been issued and are in force prior to initiation of any Work covered by such Permits and that Contractor and all its employees are familiar with the requirements and restrictions of all permits, regardless of whether or not such information is specifically called out by the Owner.

#### **2. Contractor Permits**

Contractor shall secure and maintain, at Contractor's sole cost and expense (including costs of preparation, any filing fees and/or charges, and any bonds or other performance assurance), all Permits (other than Owner Permits) for the Work, including, but not limited to, permits required for over-the-road delivery of materials as applicable.

Responsibilities of any other permits that arise shall be mutually agreed upon by the project team in accordance with responsibilities of the Work.

#### **3. Owner Permits**

Owner shall secure and maintain, at Owner's sole cost and expense (including costs of preparation, any filing fees and/or charges, and any bonds or other performance assurance), Permits listed in 3.1.

##### **3.1 Listing of Permits**

**APPENDIX J**

Insurance Requirements

Before commencing Services, the Supplier shall procure and maintain at its own expense for a period of two years beyond completion of the Services, the insurance types, limits, terms, and conditions listed in Section 1 below. The amounts as specified are minimums only. The actual amounts above the minimums shall be determined by the Supplier. In addition, for any Services that are authorized to be subcontracted, the supplier shall require each subcontractor to procure and maintain all insurance as outlined in section one.

**IF YOU DO NOT HAVE A CURRENT CERTIFICATE ON FILE WITH CUSTOMER** prior to commencement of Services, Certificates of Insurance evidencing supplier's and/or subcontractor's possession of insurance as outlined in Section 1 shall be filed with Customer for its review.

Certificates of Insurance should be mailed to the Procurement Department at the following address:

**AVANGRID Service Company  
Procurement Department/Insurance Cert.  
89 East Avenue  
Rochester, NY 14649-0001**

**1. Required Insurance Coverage's and Minimum Amounts**

Each insurance policy shall be placed with an insurance company licensed to write insurance in the State where the Services are to be performed and shall have an A.M. Best's Rating of not less than "B+" and a policyholder surplus of at least \$25,000,000.

Each insurance policy, except Workers' Compensation and Employers' Liability, shall be endorsed to add Customer as an additional insured. All insurance where Customer is an additional insured must contain provisions which state that the policy will respond to claims or suits by Customer against the Supplier/Consultant/ Labor supplier/etc. In addition, Customer should be notified of any reduction in the aggregate policy limits.

Each policy shall be endorsed to provide a minimum of thirty (30) days prior written notice of cancellation, intent not to renew, or material change in coverage.

Each policy shall be endorsed to provide a breach of warranty clause.

In the event Supplier and/or Subcontractor has a policy(ies) written on a "claims-made" basis, such insurance shall provide for a retroactive date not later than the commencement of Services under this agreement. In addition, the Supplier and/or Subcontractor will guarantee future coverage for claims arising out of events occurring during the course of this agreement.

All of the insurance required hereunder will be primary to any or all other insurance coverage in effect for Customer.

- 1.1 Workers' Compensation and Employers' Liability Insurance in accordance with the statutory requirements of the State of New York. For Services that are conducted outside of New York State, the minimum limit for Employers' Liability Insurance should be \$500,000 each accident, \$500,000 disease-policy limit, \$500,000 disease-each employee.
- 1.2 Automobile Liability insuring any auto, all owned autos, hired autos, and non-owned autos with a bodily injury and property damage combined single limit of \$5,000,000 per occurrence.
- 1.3 General Liability (Comprehensive or Commercial Form), including coverage for Premises/Operations, Underground/ Explosion & Collapse Hazard, Products/Completed Operations, Contractual Liability specifically insuring the attached Indemnity Agreement, Independent Contractors, Broad Form Property Damage, and Personal Injury, in the amount of \$5,000,000 per occurrence and \$5,000,000 aggregate.

The amount of insurance may be satisfied by purchasing primary coverage in the minimum (or greater) amounts specified or by purchasing a separate excess Umbrella Liability policy together with lower limit primary coverage.

Each General and/or Umbrella Liability Insurance policy shall be endorsed with the following Cross Liability clause: In the event of claims being made by reason of personal and/or bodily injuries suffered by any employee or employees of one insured hereunder for which another insured hereunder is or may be liable, then this policy shall cover such insured against whom a claim is made or may be made in the same manner as if separate policies had been issued to each insured hereunder, except with respect to limits of insurance. In the event of claims being made by reason of damage to property belonging to any insured hereunder for which another insured is or may be liable, then this policy shall cover such insured against whom a claim is made or may be made in the same manner as if separate policies had been issued to each insured hereunder, except with respect to the limits of insurance.

- 1.4 **Professional Liability Insurance** where if the Work includes design responsibilities, whether for design of permanent work or for "means-and-methods" or other reasons,



prior to the commencement of the Work, the Contractor shall, and shall cause its applicable Subcontractors to, provide Professional Liability Insurance, including evidence thereof, for claims that arise from the acts, errors, or omissions of the Contractor, such Subcontractor, or any party acting on behalf of the Contractor, in the provision of professional services, in an amount no less than \$5,000,000 for lead Design Professionals, \$1,000,000 for Sub Design Professionals.

The policy shall be effective (retroactively, if applicable) from the date of commencement of all professional activities in connection with the Work until six (6) years after the completion date of the project or the expiration of the applicable statute of repose of the State in which the Project is located (whichever is greater/longer).

Coverages shall include:

- No exclusions for delays in Project completion and cost overruns.
- Insurance shall be primary and non-contributory.
- Policy shall include a provision that written notice to the carrier during the policy period of a circumstance that could result in a claim preserves coverage for a claim subsequently arising from the circumstance.
- No exclusion for mold, fungus, asbestos, pollutants, etc. The Contractor is required to notify the Owner of any claims occurring during the Policy Period if such claims could reduce the amount of coverage available to the Owner.

A Professional Liability Policy will not be required for means-and-methods if such coverage is specifically provided under Contractor's Commercial General Liability Policy and satisfactory evidence is provided to Owner to show same.

**1.5 Pollution Liability Insurance** covering losses caused by pollution conditions that arise from Contractor's operations including on-site, off-site and in-transit exposures, and loading and unloading. Coverage to include bodily injury, personal injury, sickness, disease sustained by any person, including death; property damage or destruction, including loss of use; clean-up costs; property damage including loss of use of damaged property or property not physically injured or destroyed, including diminution of value and Natural Resources damages; defense costs including costs, charges and expenses incurred in investigation, adjustment or defense of claims; and broad-form contractual liability coverage. Contractual liability shall not contain limiting endorsements. Coverage limits shall not be less than \$5,000,000 per occurrence and \$5,000,000 annual aggregate.

The policy must be endorsed to include Owner as additional insureds on a primary and non-contributory basis and shall also be endorsed to include a waiver of subrogation in favor of the Owner where Contractor may provide services or work under this Agreement.

None of the requirements contained herein as to types, limits and approval of insurance coverage to be maintained by Supplier or Subcontractors are intended to, nor shall they in any manner limit or qualify the liabilities and obligations assumed by Supplier or Subcontractor under this agreement.

**APPENDIX K-1**

Lien and Waiver Release

**TO ACCOMPANY EACH INVOICE  
[LETTERHEAD OF CONTRACTOR]**

DATE: [REDACTED]

TO:

[INSERT ADDRESS]

- 1 ("Company" or "Owner") and [REDACTED] ("Contractor") have entered into an Agreement, dated [REDACTED], (the "Agreement"), pursuant to which Contractor is to provide services in connection with (the "Project").
2. Section 8.2 of the Agreement provides, among other things, that, each invoice shall be accompanied by (i) the Contractor's waiver and release, subject to payment of the invoice by the Owner, of liens and claims relating to Work for which the Invoice or any prior invoice have been submitted, and (ii) a certificate that the Site, Work, materials and equipment described in the invoice and in all previous invoices are free and clear of all liens other than any liens extinguished upon receipt of payment by Contractor of such invoice. Contractor provides this instrument in order to satisfy the requirements of the aforesaid Section 8.2 in relation to Contractor's invoice no. [to be inserted] dated [to be inserted] (the "Invoice").

NOW THEREFOR:

1. Capitalized terms used and not defined herein shall have the meaning assigned to them in the Agreement.
2. Subject to payment by Company to Contractor of the sum of [REDACTED], which sum represents the full amount due to Contractor under the Invoice less Retainage and less Punchlist withholding, if any, Contractor irrevocably waives its right to file, releases and relinquishes any lien, claim or security interest relating to Work for which the Invoice is submitted or any prior invoice has been submitted; provided, however, that no such waiver shall apply to unresolved claims submitted in writing to Company prior to the date of this Waiver and Release. Contractor hereby authorizes Company to file an amendment for any financing statement on file with respect to Company, the Work, the Project or the Site if (a) Contractor is the secured party of record with respect to such

financing statement and (b) the amendment releases from the collateral under such financing statement any collateral released by this instrument from any lien, security interest or claim in favor of Contractor, or with respect to which Contractor waived its right to file any lien, security interest or claim.

3. Contractor certifies that:

- 3.1 All amounts that were due and payable in connection with the Work or the Project under invoices issued prior to the Invoice have been paid by Company save in relation to Retainage and Punchlist Withholding, if any, which Contractor acknowledges that Company is withholding in accordance with Sections 3.9 and Section 4.4 of the Agreement and (b) [REDACTED] under Invoices Nos. [REDACTED], which are subject to dispute with Company.
- 3.2 Contractor has not directly or indirectly created any Contractor Lien relating to the Work, the Project, the Site or any part thereof or interest therein;
- 3.3 Contractor has promptly paid and discharged any Contractor Liens which, it suffered to be created by any Subcontractor, employee, laborer, mechanic, materialman or other supplier of goods or services relating to the Work, the Project, the Site or any part thereof or interest therein, except to the extent Lien Security has been provided by Contractor in connection therewith; and
- 3.4 Title to all Work is free and clear of any and all liens, claims, charges, security interests, encumbrances and rights of Persons other than Company arising as a result of any actions or failure to act of Contractor, its Subcontractors, or their employees or representatives, except to the extent Lien Security has been provided by Contractor in connection therewith.
- 3.5 THIS WAIVER OF LIENS AND CLAIMS SHALL BE GOVERNED BY, CONSTRUED AND ENFORCED IN ACCORDANCE WITH, THE LAW OF THE STATE OF NEW YORK (WITHOUT GIVING EFFECT TO THE PRINCIPLES THEREOF RELATING TO CONFLICTS OF LAW).

IN WITNESS WHEREOF, Contractor has duly executed this instrument on the day and year first written above.

[Contractor's Name]

By: \_\_\_\_\_  
Name: \_\_\_\_\_  
Title: \_\_\_\_\_

State of \_\_\_\_\_  
County of \_\_\_\_\_

The foregoing instrument was acknowledged before me this (date) by (name of officer or agent, title of officer or agent) of (name of corporation acknowledging) a (state or place of incorporation) corporation, on behalf of the corporation.

(Signature of person taking acknowledgment)

(Title or rank)

(Serial number, if any)

**APPENDIX K-2**

**FINAL FORM OF WAIVER AND RELEASE  
[LETTERHEAD OF CONTRACTOR]**

DATE: [ ]

TO: [INSERT ADDRESS]

WHEREAS:

1 ("Company" or "Owner") and [ ] ("Contractor") have entered into an Agreement, dated as of [ ], (the "Agreement"), pursuant to which Contractor is/ was to provide construction services in connection with [Project Name & Number] Project (as more fully described in the Agreement, the "Project").

2. Article [number] of the Agreement provides, among other things, that, the Retainage shall not be paid to Contractor until Contractor submits an affidavit that all payrolls, bills for materials and equipment and other indebtedness connected with the Work have been paid or otherwise satisfied, and provides releases and waivers of liens arising out of the Agreement from itself and all Subcontractors with subcontract value in excess of \$10,000.

NOW THEREFORE:

1. Capitalized terms used and not defined herein shall have the meaning assigned to them in the Agreement.

2. Contractor hereby irrevocably waives its right to file, releases, and relinquishes any lien, security interest, or claim for payment (whether in tort, for breach of contract, pursuant to Law, in equity or otherwise) relating to Company, the Work, or the Project. Contractor hereby authorizes Company to file a termination statement for any financing statement on file with respect to Company, the Work, or the Project if Contractor is the secured party of record with respect to such financing statement.

3. Subject to Company's payment of the Retainage in the amount of \$\_\_\_\_\_, Contractor certifies that:

3.1 All amounts that were due and payable by Company in connection with the Work and the Project have been paid.

3.2 Contractor has not directly or indirectly created, incurred, assumed or suffered to be created by it or any Subcontractor, employee, laborer, mechanic, materialman, or other supplier of goods or services any Contractor Lien relating to the Work, the Project, or any part thereof or interest therein, except to the extent Lien Security has been provided by Contractor in connection therewith;

3.3 Contractor has promptly paid and discharged any Contractor Liens which, notwithstanding Section 3.2 hereof, it has directly or indirectly created or suffered to be created by it or any Subcontractor, employee, laborer, mechanic, materialman, or other supplier of goods or services

relating to the Work, the Project, or any part thereof or interest therein, except to the extent Lien Security has been provided by Contractor in connection therewith; and

3.4 Title to all Work is free and clear of any and all liens, claims, charges, security interests, encumbrances and rights of persons for payment other than Company arising as a result of any actions or failure to act of Contractor, its Subcontractors, or their employees or representatives, except to the extent Lien Security has been provided by Contractor in connection therewith.

3.5 THIS WAIVER OF LIENS AND CLAIMS SHALL BE GOVERNED BY, CONSTRUED AND ENFORCED IN ACCORDANCE WITH, THE LAWS OF THE STATE OF NEW YORK (WITHOUT GIVING EFFECT TO THE PRINCIPLES THEREOF RELATING TO CONFLICTS OF LAW).

4. all Subcontractors and Persons that have provided labor, services, materials, supplies, Contractor's Equipment, Equipment, systems or machinery used in the performance of the Work have been paid all amounts which are due and owing them, with the exception of those amounts which are being disputed by Contractor in good faith, and Contractor has no knowledge of the existence of any other claim, actual or threatened by any Subcontractor or such Person, against Owner, Owner's property or all or any portion of the Equipment, Project, the Site or the existing facilities, other than claims for which Contractor has provided Lien Security.

IN WITNESS WHEREOF, the undersigned has duly executed this instrument on the day and year first written above

[Contractor's Name]

By: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

State of \_\_\_\_\_

County of \_\_\_\_\_

The foregoing instrument was acknowledged before me this (date) by (name of officer or agent, title of officer or agent) of (name of corporation acknowledging) a (state or place of incorporation) corporation, on behalf of the corporation.

(Signature of person taking acknowledgment)

(Title or rank)

(Serial number, if any)



**APPENDIX L**

Certificate of Substantial Completion

Date: \_\_\_\_\_

To: [Insert Address]

Ref: Certificate of Substantial Completion – [Project Name & Number] Project (“Agreement”) by and between (“Company” or “Owner”) and \_\_\_\_\_.

Contractor, by and through the undersigned officer, duly authorized to represent Contractor and execute and deliver this certificate (“Certificate”) to Owner, provides this Certificate to Owner under the Agreement. Capitalized terms used herein not otherwise defined shall have the meaning given such terms under the Agreement. Contractor hereby certifies to Owner as of the date hereof that the following are true and correct:

- (1) Substantial Completion of the Project was achieved on [date];
- (2) the Project is substantially complete in accordance with the Scope of Work, the Project Documents, and all required Governmental Authorizations and Permits, and is capable of commercial operation and safe operation for its intended purpose;
- (3) all Work required to be furnished by Contractor for the Project is substantially complete and all Equipment has been delivered to the Site and properly incorporated into the Project, except for Punchlist Items;
- (4) the Performance Tests and any other requirements necessary to demonstrate that the Project meets the Project Documents have been successfully completed and a certificate of the results, together with a copy of the reports of such test results have been provided to Owner;
- (5) the Punchlist Items, the schedule for competing the same and the estimated cost for completing the Punchlist, have been agreed to by Owner and Contractor;
- (8) all Subcontractors and Persons that have provided labor, services, materials, supplies, equipment, systems or machinery used in the performance of the Work have been paid all amounts which are due and owing them for the Project, with the exception of those amounts which are being disputed by Contractor in good faith, and Contractor has no knowledge of the existence of any other claim, actual or threatened by any Subcontractor or such Person, against Owner, Owner’s property or all or any portion of the Project, the Site or the existing facilities, other than claims for which Contractor has provided Lien Security; and



(9) the Project is capable of operation at expected operating levels in strict compliance with the terms of all operating Permits.

Executed on the day set forth in the first paragraph of this Certificate.

\_\_\_\_\_  
By: \_\_\_\_\_  
Name: \_\_\_\_\_  
Title: \_\_\_\_\_

CERTIFICATE ACCEPTED:

**Avangrid Service Company**

By: \_\_\_\_\_

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Title



**APPENDIX M**

Certificate of Final Completion

Date: \_\_\_\_\_

To: [Insert Address]

Ref: Certificate of Final Completion – [Project Name & Number] Project (“Agreement”) by and between (“Company” or “Owner”) and \_\_\_\_\_ (“Contractor”)

Contractor, by and through the undersigned officer, duly authorized to represent Contractor and execute and deliver this certificate (“Certificate”) to Owner, provides this Certificate to Owner under the Agreement. Capitalized terms used herein not otherwise defined shall have the meaning given such terms under the Agreement. Contractor hereby certifies to Owner as of the date hereof that the following are true and correct:

- (1) Substantial Completion of the Project was achieved on [date], and all Punchlist Items were completed on [date];
- (2) Contractor’ has performed site clean-up and restoration;
- (3) Contractor has provided and caused the Subcontractors to provide to Owner all affidavits, statements, waivers, releases and posted any security required under Appendix K-2 (Final Form of Waiver and Release);
- (4) Contractor has submitted to Owner and Owner has approved the final “as-built” drawings.
- (5) Contractor has obtained all Governmental Authorizations which are the responsibility of Contractor under the Agreement and has provided copies of the same to Owner; and
- (6) all Subcontractors and Persons that have provided labor, services, materials, supplies, Contractor’s Equipment, Equipment, systems or machinery used in the performance of the Work have been paid all amounts which are due and owing them, with the exception of those amounts which are being disputed by Contractor in good faith, and Contractor has no knowledge of the existence of any other claim, actual or threatened by any Subcontractor or such Person, against Owner, Owner’s property or all or any portion of the Equipment, Project, the Site or the existing facilities, other than claims for which Contractor has provided Lien Security.

Executed on the day set forth above.

\_\_\_\_\_  
By: \_\_\_\_\_  
Name: \_\_\_\_\_  
Title: \_\_\_\_\_

CERTIFICATE ACCEPTED:

**Avangrid Service Company**

By: \_\_\_\_\_

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Title



**APPENDIX N**

Contractor Safety Requirements

Please see separate document

“SSOP-IUSA.020 Contractor Safety Requirements.pdf”



SSOP-IUSA.020  
Contractor Safety Re

**APPENDIX O**

Contractor Background Policy

Please see separate document

“Contractor Background Check Rule - Avangrid Networks.pdf”



Contractor  
Background Check Ru

**APPENDIX P**

Avangrid Privacy and Data Security Rider

Please see separate document

This Privacy and Data Security Rider (the "Rider") is entered by [REDACTED] and **Avangrid Service Company**. For the purposes of this Rider **Avangrid Service Company** and any of its affiliates procuring or receiving services, works, equipment or materials under the Agreement shall be hereinafter referred to as the "CUSTOMER".

(a) Among other, the purpose of this Rider is to enable the VENDOR to Process on behalf of the CUSTOMER the Personal Data and Company Data necessary to comply with the purpose of the "Agreement" (as defined below), define the conditions under which the VENDOR will Process the Personal Data and Company Data to which it has access during the execution of the Agreement, and establish the obligations and responsibilities of the VENDOR derived from such Processing.

(b) The following definitions are relevant to this Rider:

(i) "Personal Data" means any information about an individual, including an employee, customer, or potential customer of CUSTOMER or its affiliates, including, without limitation: (A) any information that can be used to distinguish or trace an individual's identity, such as name, social security number, date and place of birth, mother's maiden name, biometric records, personal electronic mail address, internet identification name, network password or internet password; (B) "Sensitive Personal Data" as defined below; or (C) any other information that is linked or linkable to an individual, such as medical, educational, financial, and employment information, as well as cookie information and usage and traffic data or profiles, that is combined with any of the foregoing.

(ii) "Sensitive Personal Data" is that subset of Personal Data, including social security number, passport number, driver's license number, or similar identifier, or credit or debit card number, whose unauthorized disclosure or use could reasonably entail enhanced potential risk for the individual.

(iii) "Company Data" means any and all information concerning CUSTOMER and its affiliates and their respective business in any form, or to which the CUSTOMER or its affiliates have access, that requires reinforced protection measures, including but not limited to private or secret information, Personal Data, Cardholder Data, commercially sensitive information, Critical Infrastructure Information, strategic business information, credentials, encryption data, system and application access logs, or any other information that may be subject to regulation.

(iv) "Critical Infrastructure Information" means engineering, vulnerability, or detailed design information about proposed or existing critical infrastructure (physical or virtual) that (A) relates details about the production, generation, transmission, or distribution of energy; (B) could be useful to a person planning an attack on critical infrastructure; (C) is exempt from mandatory disclosure under the Freedom of Information Act; and (D) gives strategic information beyond the location of the critical infrastructure.

(v) "Processing" (including its cognate, "process") means any operation, action, error, omission, negligent act, or set of operations, actions, errors, omissions, or negligent acts that is performed upon Personal Data or Company Data, whether or not by automatic means, including, without limitation, collection, recording, organization, storage, access, adaptation, alteration, retrieval, consultation, retention, use, disclosure, dissemination, exfiltration, taking, removing, copying, making available, alignment, combination, blocking, deletion, erasure, or destruction.

(vi) "Data Security Breach" means: (A) the loss or misuse (by any means) of Personal Data or Company Data; (B) the inadvertent, unauthorized and/or unlawful Processing, corruption, modification, transfer, sale or rental of Personal Data or Company Data; or (C) any other act, omission or circumstance that compromises the security, confidentiality, or integrity of Personal Data or Company Data, including but not limited to incidents where Personal Data or Company Data has been damaged, lost, corrupted,

destroyed, or accessed, acquired, modified, used, or disclosed by any unauthorized person, by any person in an unauthorized manner, or for an unauthorized purpose.

(vii) “Technical and Organizational Measures” means security measures, consistent with the type of Personal Data or Company Data being Processed and the services being provided by VENDOR, to protect Personal Data or Company Data, which measures shall implement industry accepted protections which may include physical, electronic and procedural safeguards to protect the Personal Data or Company Data supplied to VENDOR against any Data Security Breach, and any security requirements, obligations, specifications or event reporting procedures set forth in this Rider or in any Schedule to this Rider. As part of such security measures, VENDOR shall provide a reasonably secure environment for all Personal Data and Company Data and any hardware and software (including servers, network, and data components) to be provided or used by VENDOR as part of its performance under the Agreement.

(viii) “Losses” shall mean all losses, liabilities, damages, and claims and all related or resulting costs and expenses (including, without limitation, reasonable attorneys’ fees and disbursements and costs of investigation, litigation, settlement, judgment, interest and penalties).

(ix) “Agreement” shall mean the Master Services Procurement Agreement, Master Materials Agreement or other agreement between CUSTOMER and VENDOR with respect to which this Rider is being entered.

(c) Personal Data and Company Data shall at all times remain the sole property of CUSTOMER, and nothing in this Rider or the Agreement will be interpreted or construed as granting VENDOR any license or other right under any patent, copyright, trademark, trade secret, or other proprietary right to Personal Data or Company Data. VENDOR shall not create or maintain data which are derivative of Personal Data or Company Data except for the purpose of performing its obligations under the Agreement and this Rider and as authorized by CUSTOMER.

(d) Regarding the Processing of Personal Data and Company Data, the parties agree that:

(i) VENDOR shall Process Personal Data and Company Data only on the instruction of CUSTOMER and in accordance with the Agreement, this Rider and privacy and security laws applicable to VENDOR’s services or VENDOR’s possession or Processing of Personal Data and Company Data. CUSTOMER hereby instructs VENDOR, and VENDOR hereby agrees, to Process Personal Data and Company Data only as necessary to perform VENDOR’s obligations under the Agreement and as further described below and for no other purpose. For the avoidance of doubt, (i) VENDOR shall not Process Personal Data or Company Data for any commercial purpose other than providing the services specified in the Agreement nor for any purpose outside the scope of the Agreement; and (ii) selling, renting, releasing, disclosing, disseminating, making available, transferring, or otherwise communicating orally, in writing, or by electronic or other means, Personal Data or Company Data for valuable consideration is prohibited.

(ii) With regards to Personal or Company, the parties agree that:

- The Processing activities that will be carried out by VENDOR are: Vendor activities in relation to the personal Data and Company Data: copies, deletes, reads, receives, stores and updates of drawings and documents required to complete the construction works.
- The categories of Personal or Company Data that will be Processed by VENDOR are: Public, Internal Use and Confidential.



- The categories of Personal Data subjects whose information will be processed by VENDOR are: Engineering specifications, drawings, technical documentation and electrical equipment data sheets as required to complete the construction works.
- The instructions for the Processing of Personal or Company Data are: implementation and execution of activities on AVANGRID's premises and remotely within the US in accordance with the applicable state and federal security and data protection laws. All drawings will be exchanged in the ProjectWise application.

(iii) VENDOR shall immediately inform the CUSTOMER if in VENDOR's opinion a Processing instruction given by CUSTOMER may infringe the privacy and security laws applicable to VENDOR's services or VENDOR's possession or Processing of Personal Data or Company Data.

(iv) In the event that the activities to be carried out by VENDOR under the Agreement do not require access to Personal Data, VENDOR, its employees and representatives shall be prohibited from accessing and Processing Personal Data. If they gain access to Personal Data, VENDOR shall immediately inform CUSTOMER. Notwithstanding the foregoing, any Processing of Personal Data by VENDOR shall be subject to the terms and conditions set forth in this Rider.

(e) As a condition to starting work, VENDOR's employees and other persons authorized, pursuant to the terms of this Rider, to Process Personal Data or Company Data shall acknowledge in writing their agreement to (i) comply with the terms of CUSTOMER's Acceptable Use Requirements set forth in Schedule C hereto, as such Acceptable Use Requirements may be modified or supplemented from time-to-time upon notice from the CUSTOMER, (ii) maintain the confidentiality of Personal Data and Company Data, and (iii) comply with any applicable Technical and Organizational Measures. In addition, VENDOR's employees and other authorized persons that access CUSTOMER's premises shall abide by CUSTOMER's physical security policies, rules and procedures.

(f) At all times during which VENDOR is Processing Personal Data or Company Data, VENDOR shall:

(i) Comply with all applicable privacy and security laws to which it is subject, or that are applicable to VENDOR's services or VENDOR's possession or Processing of Personal Data and/or Company Data, and not, by act or omission, place CUSTOMER or its affiliates in violation of any privacy or security law known by VENDOR to be applicable to them;

(ii) With regards to the Processing of Personal Data, maintain a record of Personal Data Processing activities carried out on behalf of CUSTOMER, which shall include at least:

- (A) The name and contact details of the VENDOR, any subcontractor, where applicable and as previously authorized by CUSTOMER, the CUSTOMER on whose behalf the VENDOR is Processing Personal Data, their respective representatives and, where applicable, the data protection officer;
- (B) The categories of Processing activities carried out on behalf of CUSTOMER;
- (C) Where applicable, international transfers of Personal Data to a third country or international organization, identifying the third country or international organization, and identification of appropriate safeguards;
- (D) A general description of the appropriate Technical and Organizational Measures that VENDOR is implementing relating to:

- The ability to ensure the continued confidentiality, integrity, availability and resilience of Personal Data Processing systems and services;
- The ability to quickly restore availability and access to Personal Data in the event of a physical or technical incident; and
- A process of regular verification, evaluation and assessment of the effectiveness of Technical and Organizational Measures to ensure the security of the Personal Data Processing;
- Pseudonymization and encryption of Personal Data;

(iii) Have in place appropriate and reasonable Technical and Organizational Measures to protect the security of Personal Data and Company Data and prevent a Data Security Breach, including, without limitation, a Data Security Breach resulting from or arising out of VENDOR's internal use, Processing or other transmission of Personal Data and Company Data, whether between or among VENDOR's subsidiaries and affiliates or any other person or entity acting on behalf of VENDOR. VENDOR shall implement Technical and Organizational Measures to ensure a level of security appropriate to the risk, taking into account the state-of-the-art, the costs of implementation, and the nature, scope, context and purposes of Processing, as well as, in connection with Personal Data, the risks of varying likelihood and severity for the rights and freedoms of data subjects. Without limiting the generality of the foregoing, the VENDOR will implement measures to:

- (A) Ensure the continued confidentiality, integrity, availability and resilience of Processing systems and services;
- (B) Quickly restore availability and access to Personal Data and Company Data in the event of a physical or technical incident;
- (C) Verify and evaluate, on a regular basis, the effectiveness of the Technical and Organizational Measures implemented;
- (D) Pseudonymize and encrypt Personal Data, where applicable; and
- (E) Safely secure or encrypt all Sensitive Personal Data, Critical Infrastructure Information and other information that relates to the operation or functionality of plants, factories, networks, or grids of the CUSTOMER or its affiliates or to which they have access, during storage or transmission;

(iv) Except as may be necessary in connection with providing services to CUSTOMER (and provided that immediately upon the need for such Personal Data and Company Data ceasing, such Personal Data or Company Data is immediately destroyed or erased), not use or maintain any Personal Data or Company Data on a laptop, hard drive, USB key, flash drive, removable memory card, smartphone, or other portable device or unit; and ensure that any such portable device or unit is encrypted.

(v) Notify CUSTOMER no later than one (1) day from the date of obtaining actual knowledge of any Data Security Breach, or from the date the VENDOR reasonable believes that a Data Security Breach has taken place, whatever is earlier, and at VENDOR's cost and expense, assist and cooperate with CUSTOMER concerning any disclosures to affected parties and other remedial measures as requested by CUSTOMER or required under applicable law. If the Data Security Breach involves Personal Data, the following information shall be provided as a minimum:

- (A) Description of the nature of the Data Security Breach, including, where possible,

the categories and approximate number of data subjects affected, and the categories and approximate number of Personal Data records affected;

- (B) Contact details of the data protection officer of the VENDOR, where applicable, or other contact person for further information;
- (C) Description of the possible consequences of the Data Security Breach or violations; and
- (D) Description of the measures taken or proposed to remedy the Data Security Breach, including, where appropriate, the measures taken to mitigate possible negative effects;

(vi) Assist and cooperate with CUSTOMER to enable CUSTOMER to comply with its obligations under any applicable privacy or security law, including but not limited to maintaining Personal Data and Company Data secured, responding to Data Security Breaches, and, where applicable, ensuring the rights of data subjects and carrying out Personal Data impact assessments;

(vii) Inform the CUSTOMER, if, where applicable, data subjects exercise their rights of access, rectification, erasure or objection, restriction of processing, data portability and not to be the subject to automated decisions by the VENDOR. The communication must be made immediately and in no case later than one (1) business day following the receipt of the request by VENDOR. VENDOR shall assist CUSTOMER, taking into account the nature of the Personal Data Processing, through appropriate Technical and Organizational Measures, and with any information that may be relevant to the resolution of the request;

(viii) Not use independent contractors or provide Personal Data or Company Data to independent contractors or other personnel that are not full-time employees of VENDOR without CUSTOMER's prior written approval;

(ix) Not disclose Personal Data or Company Data to any third party (including, without limitation, VENDOR's subsidiaries and affiliates and any person or entity acting on behalf of VENDOR) unless with respect to each such disclosure: (A) the disclosure is necessary in order to carry out VENDOR's obligations under the Agreement and this Rider; (B) VENDOR executes a written agreement with such third party whereby such third party expressly assumes the same obligations set forth in this Rider; (C) VENDOR has received CUSTOMER's prior written consent; (D) the Processing is carried out in accordance with the instructions of CUSTOMER, and (D) VENDOR shall remain responsible for any breach of the obligations set forth in this Rider to the same extent as if VENDOR caused such breach;

(x) Not permit any officer, director, employee, agent, other representative, subsidiary, affiliate, independent contractor, or any other person or entity acting on behalf of VENDOR to Process Personal Data or Company Data unless such Processing is in compliance with this Rider and is necessary to carry out VENDOR's obligations under the Agreement and this Rider. Personal Data and Company Data shall only be accessed by persons who need access to carry out VENDOR's obligations under the Agreement and this Rider and in accordance with the instructions of CUSTOMER; VENDOR shall provide appropriate privacy and security training to its employees and those persons authorized to Process Personal Data or Company Data.

(xi) Establish policies and procedures to provide all reasonable and prompt assistance to CUSTOMER in responding to all requests, complaints, or other communications received from any individual who is or may be the subject of any Personal Data Processed by VENDOR to the extent such request, complaint or other communication relates to VENDOR's Processing of such Personal Data;

(xii) Establish policies and procedures to provide all reasonable and prompt assistance to CUSTOMER in responding to any and all requests, complaints, or other communications received from any individual, government, government agency, regulatory authority, or other entity that is or may have an interest in the Personal Data or Company Data, exfiltration of Personal Data or Company Data, disclosure of Personal Data or Company Data, or misuse of Personal Data or Company Data to the extent such request, complaint or other communication relates to VENDOR's Processing of such Personal Data or Company Data;

(xiii) Not transfer any Personal Data or Company Data across a country border, unless directed to do so in writing by CUSTOMER, and VENDOR agrees that CUSTOMER is solely responsible for determining that any transfer of Personal Data or Company Data across a country border complies with the applicable laws and this Rider;

(g) At the time of the execution of this Rider, and at any time, upon CUSTOMER's request, VENDOR shall provide evidence that it has established and maintains Technical and Organizational Measures governing the Processing of Personal Data and Company Data appropriate to the Processing and to the nature of the Personal Data and Company Data.

(h) To the extent VENDOR maintains Personal Data and Company Data at its location, CUSTOMER shall have the right to conduct onsite inspections and/or audits (with no advance notice to VENDOR) of VENDOR's information security protocols, and VENDOR agrees to cooperate with CUSTOMER regarding such inspections or audits; provided, any such inspections or audits shall be conducted during normal business hours and in a manner so as to minimize any disruptions to VENDOR's operations. VENDOR will promptly correct any deficiencies in the Technical and Organizational Measures identified by CUSTOMER to VENDOR;

(i) VENDOR shall keep and make accessible to CUSTOMER, at any time, upon CUSTOMER's request, documentation that evidences compliance with the terms of this Rider. CUSTOMER may conduct audits and inspections, either directly or through a third party, and VENDOR agrees to cooperate with CUSTOMER regarding such audits;

(j) VENDOR shall cease Processing Personal Data and Company Data and return, delete, or destroy, or cause or arrange for the return, deletion, or destruction of, all Personal Data and Company Data subject to the Agreement and this Rider, including all originals and copies of such Personal Data and Company Data in any medium and any materials derived from or incorporating such Personal Data and Company Data, upon the expiration or earlier termination of the Agreement, or when there is no longer any legitimate business need (as determined by CUSTOMER) to retain such Personal Data and Company Data, or otherwise on the instruction of CUSTOMER, but in no event later than ten (10) days from the date of such expiration, earlier termination, expiration of the legitimate business need, or instruction. If applicable law prevents or precludes the return or destruction of any Personal Data or Company Data, VENDOR shall notify CUSTOMER of such reason for not returning or destroying such Personal Data and Company Data and shall not Process such Personal Data and Company Data thereafter without CUSTOMER's express prior written consent. VENDOR's obligations under this Rider to protect the security of Personal Data and Company Data shall survive termination of the Agreement.

(k) To the extent that VENDOR is afforded regular access in any way to "Cardholder Data" as defined below and for so long as it has such access, the following requirements shall apply with respect to the Cardholder Data; provided, that the parties do anticipate that VENDOR will have access to any Cardholder Data:

(i) VENDOR represents that it is presently in compliance and will remain in compliance with the Payment Card Industry Data Security Standard ("PCI Standard"), and all updates to PCI Standard,

developed and published jointly by American Express, Discover, MasterCard and Visa ("Payment Card Brands") for protecting individual credit and debit card account numbers ("Cardholder Data").

(ii) VENDOR acknowledges that Cardholder Data is owned exclusively by CUSTOMER, credit card issuers, the relevant Payment Card Brand, and entities licensed to process credit and debit card transactions on behalf of CUSTOMER, and further acknowledges that such Cardholder Data may be used solely to assist the foregoing parties in completing a transaction, supporting a loyalty program, providing fraud control services, or for other uses specifically required by law, the operating regulations of the Payment Card Brands, or this Agreement.

(iii) To the extent Cardholder Data is regularly maintained on the premises or property of VENDOR, VENDOR shall maintain a business continuity plan addressing the possibility of a potential disruption of service, disaster, failure or interruption of its ordinary business process, which business continuity plan provides for appropriate back-up facilities to ensure VENDOR can continue to fulfill its obligations under the Agreement.

(iv) VENDOR agrees that, in the event of a Data Security Breach arising out of or relating to VENDOR's premises or equipment contained thereon, VENDOR shall afford full cooperation and access to VENDOR's premises, books, logs and records by a designee of the Payment Card Brands to the extent necessary to perform a thorough security review and to validate VENDOR's compliance with the PCI Standards; provided, that such access that be provided during regular business hours and in such a manner so as to minimize the disruption of VENDOR's operations.

(l) VENDOR represents that the security measures it takes in performance of its obligations under the Agreement and this Rider are, and will at all times remain, at the highest of the following: (a) Privacy & IT Security Best Practices (as defined by ISO 27001/27002); and (b) any security requirements, obligations, specifications, or event reporting procedures set forth in Schedule A.

(m) In addition to any other insurance required to be provided by VENDOR hereunder, VENDOR shall also provide the Cyber-Insurance coverage meeting the requirements specified in Schedule B, attached hereto and made part hereof. VENDOR shall also comply with the terms and conditions in Schedule B as they relate to any insurance required to be provided by VENDOR pursuant to this Agreement.

(n) Notwithstanding anything in the Agreement or this Rider to the contrary, VENDOR shall indemnify, defend and hold CUSTOMER, its affiliates, and their respective employees, officers, representatives and contractors, harmless from and against all Losses caused by, resulting from, or attributable to VENDOR's breach or violation of applicable laws, regulations or any of the terms and conditions of this Rider. VENDOR's obligation to indemnify, defend, and hold harmless shall survive termination or expiration of the Agreement and this Rider.

(o) Failure by VENDOR to comply with any requirement of this Rider shall constitute a material breach of the Agreement and a VENDOR default thereunder. CUSTOMER shall be allowed to terminate the Agreement, and CUSTOMER shall have all rights and remedies provided by law or equity under the Agreement and this Rider.

\*\*\*

[Signature page follows]

IN WITNESS WHEREOF, CUSTOMER and VENDOR have caused their representatives to execute and deliver this Privacy and Data Security Rider.

CUSTOMER

VENDOR

By: \_\_\_\_\_  
Name:  
Title:  
Date:

By: \_\_\_\_\_  
Name:  
Title:  
Date:

By: \_\_\_\_\_  
Name:  
Title:  
Date:

*[Signature page to Privacy and Data Security Rider]*

Schedule A

**General Security Requirements**

(a) The following definitions are relevant to this General Security Requirements Schedule:

(i) "Cyber-infrastructure" means electronic information and communication systems and services, as well as the information contained therein. These systems, both those housed within facilities as well as those that are cloud-based, be they proprietary or third-party, in any manner, are comprised of hardware and software for processing (creating, accessing, modifying and destroying), storing (on magnetic, electronic or other formats) and sending (shared use and distribution) information, or any combination of said elements that include any type of electronic device such as, without limitation, standard computers (desktop/laptop) with internet connections, digital storage methods used on computers (e.g. hard drives), mobiles, smartphones, personal digital assistants, data storage media, digital and video cameras (including CCTV), GPS systems, etc.

(ii) "Protected Information" means Personal Data and Company Data as defined in the Rider.

(iii) Capitalized terms not otherwise defined in this Schedule shall have the meaning set forth in the Rider.

(b) VENDOR must, always, know the level of information protection that should be afforded to the Protected Information as well as the corresponding standards and applicable laws and regulations, and it shall adopt the Technical and Organizational Measures adequate thereto. VENDOR shall, at least, maintain Technical and Organizational Measures consistent with the type of Protected Information being processed and the services being provided by VENDOR, to secure Protected Information, which measures shall implement industry accepted protections which include physical, electronic and procedural safeguards to protect the Protected Information supplied to VENDOR against any Data Security Breach or other security incident, and any security requirements, obligations, specifications or event reporting procedures set forth in the Agreement, the Rider or this Schedule. As part of such security measures, VENDOR shall provide a secure environment for all Protected Information and any hardware and software (including servers, network, and data components) to be provided or used by VENDOR as part of its performance under the Agreement on which Protected Information is contained.

(c) When the scope of the Agreement implies the use or connection of VENDOR's Cyber-infrastructure to that of CUSTOMER, the VENDOR shall have reasonable Technical and Organizational Measures for its protection and for the prevention of any security incident.

(i) The connection between the CUSTOMER's and the VENDOR's network is not permitted, unless expressly agreed to in writing, in which case it must be done by establishing encrypted and authenticated virtual private networks, and the number of interconnection points between the two networks must be the minimum that is compatible with the required level of availability. The connection to the VENDOR's network shall be removed as soon as there is no need for it.

(ii) Direct user connections from the VENDOR to CUSTOMER's network are not permitted, unless authorized in writing by CUSTOMER and only for a limited period of time.

(iii) If the Agreement is fully or partially performed at the VENDOR's premises or property, the VENDOR must establish mechanisms and procedures for physical access to said premises or property to prevent unauthorised persons from accessing Cyber-infrastructure or Protected Information.

(d) VENDOR shall establish mechanisms and procedures for identifying, authenticating and controlling logical access necessary to prevent unauthorised persons from accessing its Cyber-infrastructure elements and CUSTOMER's Protected Information, and, in particular:

(i) VENDOR will have procedures based on the principle of least privilege when granting, assigning and withdrawing authorized access and permissions to its personnel or the personnel of its subcontractors, where applicable, including privileged users or administration taking into account the need for the use, the confidentiality of the Protected Information and the resources for the performance of their tasks;

(ii) VENDOR will maintain an updated inventory of the access granted and will withdraw access from personnel who cease working in connection with the Agreement within a period of less than twenty-four (24) hours. Credentials must always be encrypted when stored and transmitted; and

(iii) VENDOR shall have policies and procedures that ensure the strength of the passwords and that they are updated regularly. Passwords shall be changed during the installation processes of new hardware or software. VENDOR's default passwords shall be changed.

(e) VENDOR shall implement Technical and Organisational Measures necessary to ensure operational continuity under applicable service level agreements (including but not limited to contingency plans, backup and recovery procedures). In particular:

(i) VENDOR shall make backup copies of the Protected Information as frequently as is required for the services being provided by VENDOR and according to the nature of the data, establishing the appropriate procedures and mechanisms to ensure that the data can be retrieved, that only authorised VENDOR personnel can access it and that they are transferred and stored in such a way as to prevent access or manipulation by unauthorised persons; and

(ii) The same security measures shall apply to backups as to the original Protected Information.

(f) In the event that CUSTOMER has expressly authorized VENDOR to use its own IT equipment for accessing CUSTOMER's Cyber-infrastructure, the VENDOR shall guarantee and undertake that there are adequate security measures to protect the stationary or portable IT equipment and mobile devices used to access such Cyber-infrastructure or for storing, processing or transmitting the Protected Information, including but not limited to:

(i) Automatic locking if the device is left unattended for a certain period of time. User authentication will be required for unlocking.

(ii) Protection against malicious software and known vulnerabilities.

(iii) Updating the operating system as often as the vendor requires.

The VENDOR shall maintain an action procedure should the equipment or device be lost or stolen, ensuring, to the maximum extent possible that the event be communicated promptly, Protected Information be deleted safely in accordance with recognised standards, and access to CUSTOMER's systems or systems containing CUSTOMER's Protected Information be suspended.

Before equipment is reused or replaced, the VENDOR must protect, or if applicable remove, all the Protected Information stored on it, ensuring that unauthorised personnel or third parties cannot access or recover it.



(g) The VENDOR shall establish adequate procedures to guarantee protection against loss or unauthorised processing of files, computer media and paper documents containing Protected Information and guarantee that they are destroyed when the reasons for their creation no longer apply. Extracting data from a file and downloading it to a server or delivering it electronically is considered equivalent to computer media for the purposes of complying with these measures.

AVANGRID may request information concerning any Processing of Protected Information by the VENDOR.

(h) The VENDOR shall include security measures appropriate to the nature of the Protected Information Processed in developing, maintaining and testing the equipment that will be used to perform the services being provided by VENDOR. The VENDOR will adopt secure code development standards and ensure that no real data is used in test environments. If necessary, CUSTOMER's express written authorisation will be required, and the same security measures required for the work environment will be applied to these test environments.

(i) When the scope of the Agreement includes the supply of equipment and/or materials, the VENDOR shall prove that best security practices and standards have been applied for the design, fabrication, maintenance, and, where applicable, installation of the supplied equipment and/or materials, including its components.

For any such equipment and/or materials with information processing capacity or network connectivity options:

(i) The VENDOR shall provide evidence or certificates that guarantee design security, firmware/software updates and malware protection.

(ii) The VENDOR shall conduct periodic analyses of vulnerabilities and inform CUSTOMER about any necessary updates, especially those that affect security.

(iii) All internet connected devices shall be protected with adequately complex passwords that can be changed by CUSTOMER.

(iv) The configuration of devices, equipment and materials shall be adjustable exclusively according to AVANGRID's needs, and any unnecessary functionality deactivated. Should the VENDOR conduct any configuration, documentation to that effect shall be provided.

(j) The VENDOR shall implement a procedure to notify of and manage any Data Security Breach or security incidents, which it will disclose among its Personnel, and will act with special diligence in those cases involving critical elements of CUSTOMER's Cyber-infrastructure or Protected Information or when the reputation or legal responsibility of CUSTOMERS or the interests of the persons whose information is Processed may be affected.

(k) The Supplier shall immediately notify CUSTOMER of the existence of any security incident, even if it does not qualify as Data Security Breach, always within a maximum period of one (1) day after becoming aware of it, or if shorter, the shortest legal period, and shall assist and cooperate with CUSTOMER in terms of any necessary communication to third parties and other reasonable measures to remedy the situation when CUSTOMER requests it or as required by law.

Merely by way of example, the Supplier shall notify CUSTOMER the following:

(i) Access or attempts to access systems, equipment, applications, files, repositories, devices etc. by unauthorised persons or programs.

(ii) Disclosing or compromising protected Information including but not limited to credentials, authentication or encryption data.

(iii) Total or partial loss of data or information for any reason.

(iv) Uncontrolled distribution: sending information to people who should not receive it.

(v) Loss or removal of computer equipment or storage media, files, repositories or part of their contents.

(vi) Attacks caused by viruses / malicious software that may affect the exchange of information between the VENDOR and CUSTOMER.

(vii) Others: any irregularity or deficiency detected regarding compliance with the safety criteria indicated in this Schedule.

Schedule B

**Cyber-Insurance Requirements**

(a) VENDOR shall during the term of the Agreement have and maintain the following insurance coverage:

(i) Cyber Errors and Omissions Policy providing coverage, on a per occurrence basis, for acts, errors, omissions, and negligence of employees and contractors giving rise to potential liability, financial and other losses relating to data security and privacy, including cost of defense and settlement, in an amount of at least \$10 million dollars, which policy shall include coverage for all costs or risks associated with:

- 1) violations of data privacy or data security laws and regulations; and
- 2) cyber risks, including denial-of-service attacks, risks associated with malware and malicious code, whether designed to interrupt a network or provide access to private or confidential information; and
- 3) other risks specific to the work performed by VENDOR as shall be identified by CUSTOMER.

(ii) Such coverage shall be furnished by an insurance company with an A.M. Best Financial Strength Rating of A- or better, and which is otherwise reasonably acceptable to CUSTOMER.

(b) VENDOR warrants that the scope of all coverage evidenced to the CUSTOMER pursuant to this Agreement shall be the sole responsibility of the VENDOR to maintain at committed to levels required by this document and VENDOR, in any event of a loss, will take full responsibility for the payment of any policy deductible, self-insured retention, premium or retrospective premium obligation necessary to maintain coverage, and shall include coverage for any indemnification and hold harmless agreements made by the VENDOR pursuant to the Data Security Rider. VENDOR's failure to pay the applicable deductible, self-insured retention, or retrospective premium shall constitute a material breach of this Agreement, with damages equal to at least the amount of insurance lost or not provided due to such breach.

(c) All insurance coverage(s) provided by VENDOR pursuant to this Agreement shall be primary and non-contributing with respect to any other insurance or self-insurance which may be maintained by the CUSTOMER.

## Schedule C

### Acceptable Use Requirements

The intent of this Schedule is to document requirements as they pertain to the Acceptable Use of the Electronic Devices and Cyber-infrastructure of Avangrid, Inc. and any of its subsidiaries (hereinafter "Avangrid") by contractors, consultants or other third parties.

Employees and other persons acting on behalf of Avangrid vendors shall be required to read, acknowledge their understanding of, and commit to comply with these Avangrid Acceptable Use Requirements.

### Definitions

- A **User** is defined as any contractor, consultant or other third parties, including any employee of an Avangrid vendor, with access to or using Avangrid Electronic Devices or Cyber-infrastructure.
- **Cyber-infrastructure** Includes electronic information and communications systems and services, and the information contained in these systems and services. Those systems and services are composed of all hardware and software that process (creation, access, modification, and destruction), store (paper, magnetic, electronic, and all other media types), and communicate (sharing and distribution) information, or any combination of these elements.
- **Electronic Devices** include standard computer (workstation desktop/ laptop) with network connections, digital storage media used in standard computers (e.g. hard drives), telephone and voicemail systems, mobile phones, smartphones, tablets, Personal Digital Assistants (PDA), End Point Storage Devices (EPSD), digital and video cameras (including CCTV), mobile navigation systems, printers, photocopiers and scanners, fax machines, and all other similar of associated devices, etc.
  - **Avangrid Electronic Devices** are Electronic Devices owned and managed by Avangrid.
  - **Personally Owned Devices (POD)** are Electronic Devices (e.g. smart phones, tablets, laptops) privately owned and managed by Users.
  - **End Point Storage Devices (EPSD)** applies to the storage of data on devices that can be connected either by a USB drive, data cable or by wireless connection direct to any computing equipment within Avangrid, e.g. USB sticks, drives, thumb nails, pen drives, flash drives, memory cards, etc.

## 1. Requirements and Practices

### 1.1 Electronic Devices

Avangrid Electronic Devices and resources are property of Avangrid and may be provided to Users for the pursuit of their professional activity.

1.1.1 The determining authority and responsibility for issuance of an Electronic Device shall rest with the Avangrid Business Area Leader (BAL) or department hiring manager.

1.1.2 Avangrid Electronic Devices shall be provided to Users configured with the required security hardware and software protections.

- a. Compromising or interfering with the Electronic Devices' operating system, hardware, software or protection mechanisms is prohibited.
- 1.1.3 Users shall be responsible for the appropriate use of authorized Electronic Devices in accordance with their duties and responsibilities, including, but not limited to:
- a. Protecting Electronic Devices from misuse.
  - b. Logging off or protecting Electronic Devices with a screen and/or keyboard locking mechanism, when unattended and when not in use.
    - i. Desktop and laptop computers shall be switched off or hibernating when unattended for a period more than one hour and always at the end of the workday.
    - ii. Desktop and laptop computer screens shall be locked by Users always when unattended.
  - c. Taking the following preventative measures to ensure that any Electronic Devices used to connect to Avangrid's Cyber-infrastructure are physically secured by:
    - i. Protecting Avangrid assets from unauthorized access and use by others,
    - ii. Leaving Electronic Devices in secured locations (e.g. locked cabinet or drawer, locked rooms in locked buildings as applicable),
    - iii. Not leaving Electronic Devices in plain view in unattended vehicles,
    - iv. Not leaving Electronic Devices in vehicles overnight,
    - v. Carrying laptops as hand luggage when traveling,
    - vi. Positioning Electronic Devices so that they (and the information displayed) are not visible from outside a ground floor window, and
    - vii. Positioning the display screen of Electronic Devices such that it cannot be viewed by others in public places (e.g. train, aircraft, restaurants, etc.).
- 1.1.4 Users shall follow Avangrid procedures for immediately reporting lost, compromised, or stolen Electronic Devices.
- a. The User shall notify the Service (Help) Desk and their Avangrid contact.
- 1.1.5 User shall follow Avangrid procedures for the return of Avangrid owned Electronic Devices when the use of those devices is deemed no longer necessary.
- a. Users shall return all Avangrid Electronic Devices to their Avangrid contact immediately upon separation/ termination, which shall be responsible for collecting all Avangrid Electronic Devices.
- 1.1.6 The use of hot desks/ shared network access equipment shall be reserved for Users who do not regularly require the use of a portable Electronic Device (e.g. laptop) for their professional activities.

- a. Users of hot desks/shared network access shall have a current network login.

## **1.2 Connection to Avangrid Cyber-infrastructure**

**1.2.1** All Electronic Devices which connect to the Avangrid Cyber-infrastructure network shall be Avangrid approved assets which have been configured in accordance with Avangrid standard configurations.

- a. Non-Avangrid approved Electronic Devices shall not connect directly to the Avangrid Cyber-infrastructure (e.g. through Ethernet connection).
- b. Wireless connections from an Avangrid office shall only be accomplished through Avangrid Electronic Devices and the Avangrid supported wireless infrastructure.
- c. Guest wireless network accounts shall only be supplied on 'as-need-be-basis' following Avangrid approval processes.
- d. Remote desk connections shall only be supplied on 'as-need-be-basis' following Avangrid approval processes.

## **1.3 Use of Mobile Devices (for Remote Access)**

**1.3.1** The determining authority and responsibility for issuance of a mobile electronic device to perform Avangrid professional activities; access the Avangrid Cyber-infrastructure or store/transmit Avangrid information/data remotely shall rest with the Avangrid Business Area Leader (BAL) or department hiring manager.

- a. Users shall remotely access Avangrid's Cyber-infrastructure utilizing only authorized hardware, software and access control standards (e.g. Avangrid approved VPN technology for Avangrid Electronic Devices or Citrix client).
- b. At no time shall a remote User initiate two simultaneous connections to different networks (e.g., no split tunneling and no multi-homed connection).
- c. Avangrid issued SIM cards shall not be swapped or used in non-Avangrid issued Electronic Devices.
- d. Configuring a non-Avangrid issued Electronic Device for connection to the Avangrid corporate email system is strictly prohibited.
- e. Users should be aware that Avangrid may monitor emails sent from and to non-Avangrid issued devices.

## **1.4 Personally Owned Devices**

**1.4.1** The use of Personally Owned Devices for access to and/or handling of Avangrid information/data and Avangrid Cyber-infrastructure is prohibited.

## **1.5 Treatment of Software and Applications**

- 1.5.1 The acquisition and installation of software on Avangrid Electronic Devices shall be made using approved methods.
  - a. All access to company software and/or applications shall be subject to formal request and approval processes.
- 1.5.2 Users shall be prohibited from introducing or installing any unauthorized software, content or material.
- 1.5.3 The installation of any type of network access program peer (P2P) or similar (e.g., BitTorrent, Emule), as well as any other application for file sharing that could saturate Internet bandwidth, prevent access to other Users or slow down connections to technology and information resources is prohibited.
- 1.5.4 Intellectual property, licensing and regulatory requirements shall be observed always. Downloading, obtaining, copying or redistributing materials protected by copyright, trademark, trade secret or other intellectual property rights (including software, music, video, images) is prohibited, even where such material is to be used for the pursuit of the professional activity.
  - a. Where materials protected by copyright, trademark, trade secret or other intellectual property rights are required for the pursuit of an Avangrid professional activity the appropriate license/permission shall be obtained prior to use.

## 1.6 Treatment of Information/Data

- 1.6.1 Information/data assets obtained or created during the engagement with Avangrid are the property of Avangrid and shall be treated in accordance with the applicable Agreement and Data Security Rider.
- 1.6.2 The storage of Avangrid information/data on Personally Owned Devices or non-Avangrid controlled or authorized environments, including non-authorized Electronic Devices is prohibited. Users shall not store AVANGRID owned information/data on devices that are not issued by AVANGRID unless explicitly and contractually agreed by both parties.
- 1.6.3 Where access to Personal Data is part of a Users' professional role and responsibilities, access shall be treated in accordance with all applicable data protection and/or privacy law(s) and regulation(s) and under strict access and usage guidelines.
- 1.6.4 Corporate storage spaces and network resources shall be used for file storage and/or exchange of professional information.
- 1.6.5 Users shall store and share information/data in accordance with the terms and conditions with Avangrid and any applicable Data Security Rider.
- 1.6.6 Use of an End Point Storage Device (EPSD) (e.g. USB) shall be limited to those devices acquired through the Information Technology (IT) request process (e.g. ITSM/ServiceNow).
- 1.6.7 Printed information/data (hard copy) shall be:
  - a. Stored based on critically, e.g. hardcopy containing confidential and/or sensitive information/data shall be locked away when not required (or not in use).
  - b. Discarded, when no longer needed, based on criticality, e.g. confidential and/or sensitive

hardcopy shall be shredded.

- c. To be removed from printers, fax machines, copier rooms, and conference/ meeting rooms immediately.

## **1.7 User Access Credentials and Passwords**

**1.7.1** Requests for access shall be made following access provisioning procedures.

**1.7.2** Applications and network resources access shall be activated\deactivated in accordance with Avangrid activation\ deactivation procedures.

**1.7.3** Users requiring duly justified privileged access rights will be assigned a specific "Privileged User ID"

- a. Privileged User IDs shall be reviewed and confirmed at least semi-annually.
- b. Regular professional activities shall not be performed from a privileged ID.

**1.7.4** Users shall use strong, complex passwords and securely maintain secret authentication information (e.g. passwords, cryptographic keys, smart cards that produce authorization codes), including:

- a. Not sharing or disclosing their Avangrid credentials (log on IDs-user names and/or passwords) with others inside or outside the company.
- b. Keeping secret authentication information confidential, ensuring that it is not divulged to any other parties, including senior management and technical support.
- c. Not recording (e.g. on paper, software file or hand-held device) secret authentication information, unless this can be stored securely, and the method of storing has been approved (e.g. password vault) by Corporate Security.
- d. Changing secret authentication information when there is any indication of a possible compromise.
- e. Reporting any incidents or suspected compromises by following Avangrid incident reporting procedures.

## **1.8 Internet Use and Social Media**

**1.8.1** Avangrid may make available internet access to users depending on their role and responsibilities.

- a. Internet access shall be provided as a tool for business purposes, shall be used with moderation and shall be proportional to the work being undertaken.
- b. Access to restricted websites shall be enabled at the discretion of Avangrid and shall be provisioned following the security exception process.
- c. Only Avangrid approved surfing software shall be used to access the Internet.



- 1.8.2** A moderate and proportional use of the internet shall be allowed for non-professional activities, although web surfing is expressly prohibited for:
- a. Accessing or posting of any racist or sexual content or any material that is offensive or defamatory in nature.
  - b. Accessing games, downloading video, music (MP3 or another format), or downloading any other files not related to the Avangrid related responsibilities.
- 1.8.3** Limited and occasional use of Avangrid Electronic Devices and resources to engage in Social Networking<sup>1</sup> and Blogging<sup>2</sup> is acceptable, provided that:
- a. It is done in a professional and responsible manner.
  - b. It does not violate the Code of Ethics or any relevant Avangrid policy, procedure or rule.
  - c. It is not detrimental to Avangrid's best interests.
  - d. It does not interfere with regular work duties.
  - e. There is no breach of the prohibitions identified in these requirements.
- 1.8.4** Avangrid reserves the right to determine which websites and social media platforms can be accessible through Avangrid Electronic Devices or Cyber –infrastructure.

## **1.9 E-mail Use**

- 1.9.1** All information created, sent, or received via Avangrid's e-mail system(s), including all e-mail messages and electronic files shall be the property of Avangrid.
- 1.9.2** Avangrid reserves the right to monitor, inspect and access such emails and electronic files.
- 1.9.3** The forwarding of Avangrid owned information/data to a personal e-mail account is prohibited.
- 1.9.4** Removing or circumventing any of the security controls enforced on the company email system (e.g. SPAM filtering, automatic email disclaimers, etc.) is prohibited.
- 1.9.5** Users shall not permit others to use their e-mail accounts. Based on user established permissions; calendars and/or mailboxes may be shared.
- 1.9.6** Limited use of an Avangrid e-mail account for personal purposes shall be regarded as acceptable provided that:
- a. Use does not interfere with the normal performance of professional duties.
  - b. Messaging does not violate applicable laws, regulations, the Code of Ethics, or Avangrid

---

<sup>1</sup> Social Networking is the use of dedicated websites and applications to interact with other users or to find people with similar interests.

<sup>2</sup> Blogging: A blog is a website containing a writer's or group of writers' own experiences, observations, opinions, etc., Blogging is posting to that website.

policies.

c. Use is moderate both in terms of frequency and amount of memory and resources consumed.

**1.9.7** Avangrid e-mails or messages containing company information/ data shall not be forwarded to external parties except where there is a specific business 'need to know'.

**1.9.8** Avangrid electronic messaging shall not be used for transmitting, retrieving or storing any messages, files or attachments which constitute:

a. Harassing or discriminatory messages which relate to gender, race, sexual orientation, religion, disability or other characteristics protected by applicable laws and regulations.

b. Defamatory messages which adversely affect the reputation of a person or company.

c. Messages that violate copyright, trademark, trade secret or other intellectual property rights.

d. Obscene materials or images of a sexual nature.

e. Files or documents of an indeterminate origin or that, for any reason, may include computer viruses or in any way breach the security systems of the company or the recipient of the file or document, or may damage their IT systems.

f. Any material or images that might reasonably be expected to cause personal offense to the recipient.

g. Messages in violation of applicable laws, regulations, the Code of Ethics, or Avangrid policies.

**1.9.9** The retention period for e-mail messages shall be 18 months. Once the retention period has been reached, emails shall be automatically eliminated from the user's mailbox.

a. a. Users shall store messages and/or associated attachments in Avangrid provided network folders. Storage of messages and/or associated attachments on hard drives in .pst (personal mail folders) folders is prohibited.

**1.9.10** Users shall report suspicious email messages (e.g. spam, phishing, etc.) the Service (Help) Desk and/or using the reporting tool REPORTER, available in Outlook.

## **1.10 Incident reporting**

**1.10.1** Users shall immediately report any unusual activity, incident or suspected event following Avangrid incident reporting procedures (e.g. Service (Help) Desk, REPORTER, etc.)

## **1.11 Contract Termination**

**1.11.1** Avangrid Electronic Devices assigned to or in the possession of a User shall be returned to Avangrid on or before the contract termination date or whenever it is determined that the use of the Electronic Device is no longer necessary. This includes the return of facility access badges.

**1.11.2** Access to Cyber-infrastructure shall be deactivated (revoked) on or before a User's termination date in accordance with Avangrid access management processes.

## **2. No Expectation of Privacy**

All contents of the Avangrid Electronic Devices and Cyber-infrastructure are the property of the company. Therefore, Users should have no expectation of privacy whatsoever in any e-mail message, file, data, document, facsimile, telephone conversation, social media post, conversation, or any other kind or form of information or communication transmitted to, received, or printed from, or stored or recorded on Avangrid's Electronic Devices or Cyber-Infrastructure.

## **3. Monitoring**

3.1 Avangrid reserves the right to use monitoring controls, including software, to ensure compliance with these Acceptable Use Requirements document, and to record and/or monitor one or more Users' Electronic Devices and resources, e-mails and/or internet activity in accordance with regulatory and legal requirements.

- a. This includes the right to monitor, intercept, access, record, disclose, inspect, review, retrieve, print, recover or duplicate, directly or through third parties designated for such purpose, any information/data contained on and any uses of the Electronic Devices and Cyber-Infrastructure. Avangrid may store copies of such information/data for a period of time after they are created and may delete such copies from time to time without notice. Users consent to such monitoring by acknowledging these requirements and using the Electronic Devices and Cyber-Infrastructure.
- b. Accordingly, Users should not harbor any expectation of privacy in respect to the use of Avangrid Electronic Devices or Cyber-Infrastructure and should not consider the data contained on them as private.

4.2 Monitoring may take place at any time and without the need to notify or inform the User in advance, taking into consideration legal or regulatory limitations, where applicable.

## **4. Non Compliance**

Violation and non-conformance to this guidance by third party workers may result in appropriate actions, including contract termination.

List of Offers Received

