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REV Demonstration Project:  
Commercial Battery Storage

2019 4Q Quarterly Progress Report

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**Dated: January 31, 2020**

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## **1.0 EXECUTIVE SUMMARY**

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Consolidated Edison Company of New York, Inc. (“Con Edison” or the “Company”) submits this 4th quarterly report for 2019 on the progress of the Commercial Battery Storage REV Demonstration Project (the “Project”) it is implementing as part of the Reforming the Energy Vision (“REV”) proceeding, as required by the *Order Adopting Regulatory Policy Framework and Implementation Plan*, issued by the New York State Public Service Commission (“Commission”) on February 26, 2015.<sup>1</sup>

### **1.1 PROGRAM ACHIEVEMENTS**

On January 20, 2017, Con Edison submitted the Project for approval by Department of Public Service Staff (“DPS Staff”). On May 18, 2017, DPS Staff approved the Project. Con Edison filed an implementation plan for the Project with the Commission on June 15, 2017. In Q4 2019, the Company focused on customer acquisition and construction, integration of SCADA communications, and preparation for the NYISO pilot.

### **1.2 CYBERSECURITY AND PERSONALLY-IDENTIFIABLE INFORMATION PROTECTION**

Consistent with Commission policy related to cybersecurity and the protection of personally-identifiable information (“PII”), each partner agreement executed for the implementation of the Project includes specific protections related to cybersecurity and PII. This protection is critical in encouraging customers to sign up with new and innovative services offered by utilities.

### **1.3 ACCOUNTING PROCEDURE ESTABLISHED**

On February 16, 2016, in Case 15-E-0229, Con Edison filed an accounting procedure for the accounting and recovery of all REV demonstration project costs.<sup>2</sup> This accounting procedure establishes a standardized framework that will govern how the Company categorizes and allocates the costs of the REV demonstration

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<sup>1</sup> Case 14-M-0101, *Proceeding on Motion of the Commission in Regard to Reforming the Energy Vision*, Order Adopting Regulatory Policy Framework and Implementation Plan (issued February 26, 2015).

<sup>2</sup> Case 15-E-0299, *Petition of Consolidated Edison Company of New York, Inc. for Implementation of Projects and Programs that Support Reforming the Energy Vision*, General Accounting Procedure (issued February 16, 2016).

projects, and will facilitate analyzing each project to determine the overall financial benefits of the program to customers.

#### **1.4 COSTS, BENEFITS, AND OPERATIONAL SAVINGS**

Budget information for all of the Company's REV demonstration projects is being filed confidentially with the Commission, concurrently with the filing of this document. All costs filed are incremental costs needed to implement the projects. To date, no tax credits or grants have been available to reduce the net costs of the projects, but Con Edison will take advantage of such offsetting benefits when, they are available. Due to the early stage of implementation for the Project, there are no operational savings to report at this time.

#### **1.5 COMMERCIAL BATTERY STORAGE**

Using four sites, the Project seeks to demonstrate how distributed, front of the meter ("FTM") energy storage can provide transmission and distribution ("T&D") support, earn wholesale market revenues, and increase the market size of participating customers by aligning the interests of the Company, customers, and third-party developers. Con Edison is executing the Project in partnership with GI Energy and Smarter Grid Solutions.

In Q4 2019, Con Edison and GI Energy continued construction and commissioning for the first two sites. Both are expected to be operational in Q1 2020.

The Project team is planning for an application for a zoning variance for the third Project site, at 2900 Amboy Road in Staten Island, based on the zoning issue that arose earlier in 2019. As a contingency plan, GI Energy is evaluating several other sites as potential backups. GI Energy expects to decide between keeping the Amboy site or starting with a new site in Q1 2020, depending on which route will be faster for Project completion.

GI Energy finalized a lease agreement in Q4 2019 with a fourth site in Woodside, Queens (replacing the Department of Sanitation site that dropped) and it is likely that GIE will receive permit approvals to begin construction in Q1 2020.

Communications integration has been largely finalized for Con Edison dispatch capabilities from a desktop application and Con Edison's regional control centers. The Project team and the NYISO have set a date for the beginning of the NYISO pilot for Q1 2020.

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## **2.0 COMMERCIAL BATTERY STORAGE – QUARTERLY PROGRESS**

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### **2.1 DEMONSTRATION HIGHLIGHTS**

#### **2.1.1 Since Previous Quarter - Major Task Completion**

- Customer Acquisition: Project team finalized the lease option for the fourth site. The team has also identified potential backup locations for the third site that had begun construction but received an unexpected zoning determination from NYC Department of Buildings (“DOB”).
- Construction/Commissioning and Integration:
  - Caddell construction has secured approvals from DOB and Fire Department of New York (“FDNY”) for operation. Final interconnection approval expected in Q1 2020. Testing for SCADA control was completed.
  - City Island construction is complete and inspections from FDNY/DOB are scheduled for Q1 2020, along with interconnection testing. Communications testing scheduled for January 2020.
  - Woodside Letter of No Objection (“LONO”) from FDNY received in December 2019.
- Market Participation: Communications devices from the NYISO have been configured and installed. NYISO is working through a communications issue and Pilot start date scheduled for Q1 2020.

#### **2.1.2 Activities Overview**

Phase 1, Customer Acquisition: The team continued to pursue backup sites if the third site in Staten Island drops due to a DOB zoning ruling. GIE executed a lease option for the Woodside location in Q4 2019.

Phase 2, Construction/Commissioning and Integration:

- City Island construction is complete. Communications testing is scheduled for January, along with Con Edison SCADA testing. The Con Edison witness test is scheduled for the second week of February, in parallel with the three FDNY inspections for fire alarm, fire suppression, and sprinkler systems.
- The Caddell site has passed all its fire department inspections as of December 3, 2019. DOB final letter of acceptance was received on December 31, 2019. The Con Edison witness test took place on December 16, 2019 and a few follow up items are required. These will be completed in January. Once interconnection final acceptance is granted, this site will be operational. Con Edison SCADA final testing was completed.

- For the third site, 2900 Amboy, DOB has denied the permit application based on an unexpected zoning ruling. There is also a potential risk that the new school president has a different plan for the site; the GIE and Con Edison teams are following up on this. Construction and interconnection work are on hold and the Project team is evaluating options to obtain a variance or drop the site.
- The fourth site, Woodside, is expected to receive DOB permits for construction in Q1 2020. The LONO from FDNY was received and had slightly different requirements from past sites. GI Energy is working with its architect to meet these requirements. The interconnection study (“CESIR”) was received on December 23, 2019. GIE has submitted payment for interconnection upgrades.

Phase 3. Dispatch Optimization: SGS has developed the user interface for dispatch and has tested communications up to the Con Edison SCADA network, and Con Edison has access to the user interface now that the Caddell site is close to operation. Full communications functionality through SCADA was completed.

Phase 4, Market Participation: The NYISO delivered its communication hardware to Smarter Grid Solutions for configuration and installation and SGS has installed it at its server location. NYISO is now working through communications issues on its end. The Pilot is scheduled to start once two batteries are operational, likely in late February or March of 2020. Phase 4 has been materially delayed by the NYISO’s response to FERC Order 841 which delays battery market participation and dual participation to *no earlier than May 2020*.

### **2.1.3 Key Metrics**

In Q4 2019, the Project team continued customer acquisition activities and made significant progress on communications integration activities. The following data support these Phase 1 metrics (targets were set as 200 potential sites identified, 30 viable project sites, and four final project sites).

- Potential Sites Identified: 471 / 200 (target)
- Customers Approached: 396 / 471
- Customer Intake Forms Collected: 47 / 396
- Walkthroughs Conducted: 35 / 47

- Sites Selected for permitting: 5 / 4 (target)
- Sites with interval data: 5/ 20

### 2.1.4 Next Quarter Forecast

In Q1 2020, the Project team expects to have two operational sites. The team expects to make a decision to continue with the Amboy site or go to a backup site. The team expects to begin construction at the Woodside location.

The Project team plans to begin piloting operation of the batteries from the SGS user interface.

Dispatch Optimization (Phase 3) is expected to begin with the enrollment of the first two assets into the NYISO Pilot Program.

### 2.1.5 Checkpoints/Milestone Progress

| Checkpoint/Milestone                       | Timing*                | Status |
|--|------------------------|--------|
| Customer Acquisition                       | Phase 1 Midpoint / End |        |
| Construction/Commissioning and Integration | Phase 2 Midpoint / End |        |
| Dispatch Optimization                      | Phase 2 End            |        |
|  | Phase 3 Midpoint/End   |        |
| Market Participation                       | Phase 4 Quarterly      |        |

\*Detailed descriptions of the Phases can be found in the Appendices.

#### Legend

|             |                            |   |
|-------------|----------------------------|---|
| On Schedule | Delayed w/out Major Impact | Delayed or Stopped – Project Goals Impacted |
|-------------|----------------------------|---|

### 2.1.6 Planned Activities

#### 2.1.6.1 Customer Acquisition

Status: **Yellow**

**Expected Target by Phase 1 Midpoint:** Identification of 30 viable customer sites and a minimum of 20 sites for behind the meter (“BTM”) vs. FTM analysis

**Actual by Phase 1 Midpoint:** 30 viable customer sites identified, waiting on customer interval data to assess sites for BTM vs. FTM analysis

**Solutions/strategies in case of results below expectations:** In line with root-cause analysis, actions may include reassessing target, increasing marketing and outreach efforts, or adjusting monetization strategies to encourage improved customer acquisition efforts.

#### **2.1.6.2 Construction/Commissioning and Integration**

**Status:** Yellow

**Expected Target by Phase 2 End:** 4 MW/ 4 MWh installed storage across four sites

**Actual by Phase 2 Midpoint:** N/A

**Solutions/strategies in case of results below expectations:** The Project team will work to proactively manage any permitting restrictions that might delay construction and commissioning of project sites. The team will continually evaluate progress and adjust to back-up project sites if there is a site-specific issue.

#### **2.1.6.3 Dispatch Optimization**

**Status:** Green

**Expected Target by Phase 2 End:** Demonstrated aggregation and dispatchability of storage capacity

**Actual by Phase 2 End:** N/A

**Solutions/strategies in case of results below expectations:** In-line with root-cause analysis, actions may include systems upgrades, modified systems integration, and/or process review.

#### **2.1.6.4 Market Participation**

**Status:** Red

**Expected Target by Phase 3 End:** enrollment of batteries into NYISO markets

**Actual by Phase 3 End:** N/A

**Solutions/strategies in case of results below expectations:** The Project team will work with NYISO and other relevant stakeholders to identify alternative forms of battery participation, such as pilot projects. If no other suitable means exist, assets will continue to be dispatched to shadow NYISO markets and demonstrate the potential for revenues.

## 2.2 CHANGES TO THE PROJECT DESIGN

There were no changes to the Project design in Q4 2019.

## 2.3 WORK PLAN & BUDGET REVIEW

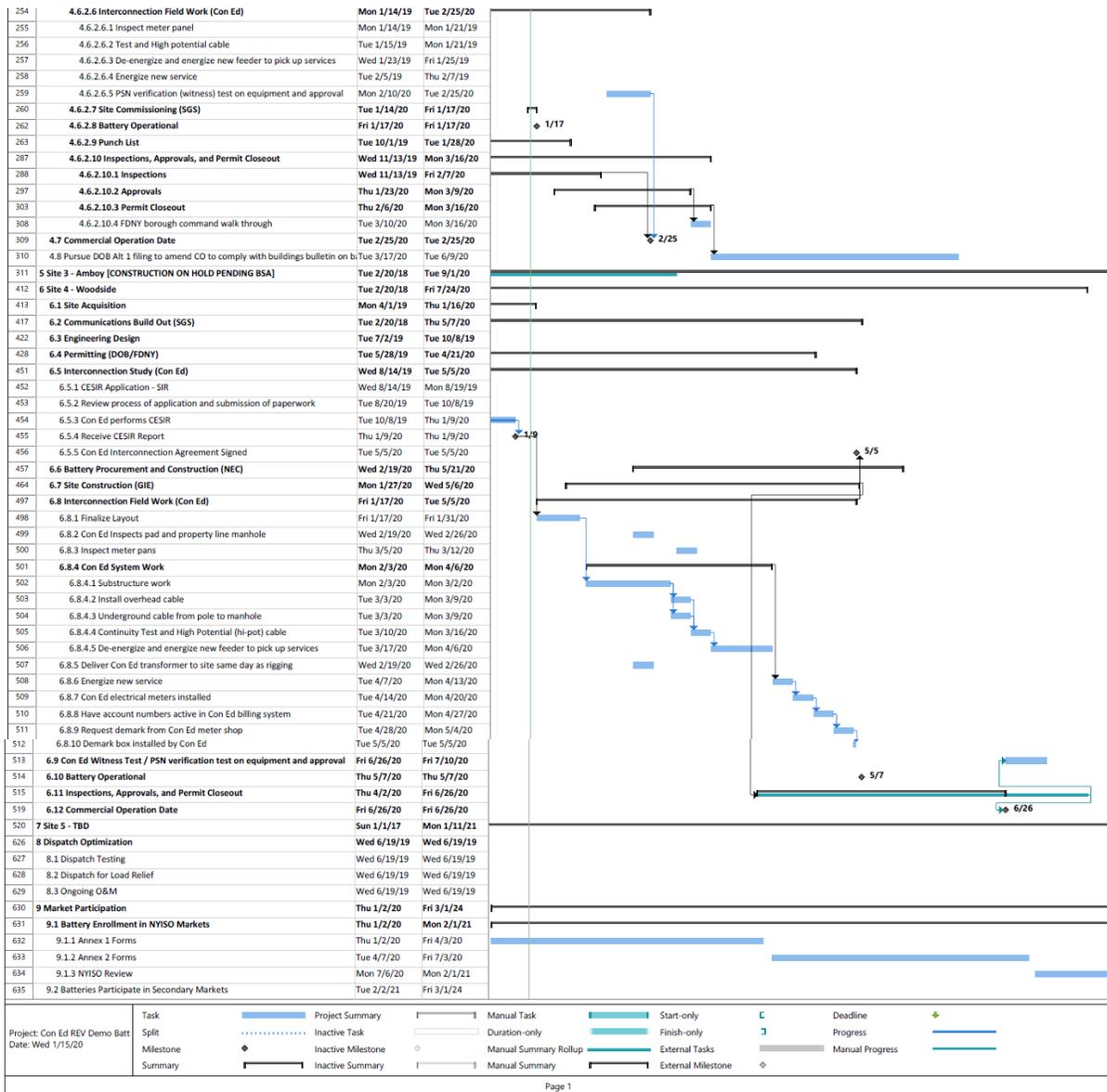
### 2.3.1 Phase Review

#### 2.3.1.1 Phase Progress

The Project team has completed Phase 0 (Project Planning) and continues to make progress on Phase 1 (Customer Acquisition), Phase 2 (Construction/Commissioning and Integration) and Phase 3 (Dispatch Optimization). The Project team anticipates Phase 1 will be completed in Q2 2020 with a decision on the Amboy site and finalization of lease with a backup site, if needed. Phase 2 will begin for the fourth site which is expected to receive permitting approval in Q1 2020.

### 2.3.2 Work Plan

| ID  | Task Name   | Start        | Finish       | Qtr 1, 2020 |     |     | Qtr 2, 2020 |     |     | Qtr 3, 2020 |  |  |
|-----|---|--------------|--------------|-------------|-----|-----|-------------|-----|-----|-------------|--|--|
|     |   |              |              | Jan         | Feb | Mar | Apr         | May | Jun | Jul         |  |  |
| 1   | 1 Pre-Contract Work   | Mon 1/2/17   | Tue 6/12/18  |             |     |     |             |     |     |             |  |  |
| 12  | 2 Communications Build Out (SGS)                                  | Thu 4/5/18   | Tue 9/17/19  |             |     |     |             |     |     |             |  |  |
| 31  | 3 Site 1 - Caddell  | Tue 2/20/18  | Fri 2/14/20  |             |     |     |             |     |     |             |  |  |
| 32  | 3.1 Site Acquisition  | Wed 6/13/18  | Tue 7/3/18   |             |     |     |             |     |     |             |  |  |
| 34  | 3.2 Design/Permitting (DOB/FDNY)                                  | Tue 2/20/18  | Wed 5/22/19  |             |     |     |             |     |     |             |  |  |
| 45  | 3.3 Contractor Bidding  | Fri 7/13/18  | Fri 10/26/18 |             |     |     |             |     |     |             |  |  |
| 55  | 3.4 Interconnection Study (Con Ed)                                | Tue 2/20/18  | Fri 3/22/19  |             |     |     |             |     |     |             |  |  |
| 61  | 3.5 Battery Procurement and Construction (NEC)                    | Mon 5/28/18  | Fri 1/3/20   |             |     |     |             |     |     |             |  |  |
| 71  | 3.6 Site Construction (GIE)                                       | Tue 8/14/18  | Fri 2/14/20  |             |     |     |             |     |     |             |  |  |
| 72  | 3.6.1 Pre-Battery Arrival   | Tue 8/14/18  | Wed 2/6/19   |             |     |     |             |     |     |             |  |  |
| 90  | 3.6.2 Post-Battery Arrival  | Tue 11/27/18 | Fri 2/14/20  |             |     |     |             |     |     |             |  |  |
| 91  | 3.6.2.1 NEC delivers battery                                      | Tue 11/27/18 | Tue 11/27/18 |             |     |     |             |     |     |             |  |  |
| 92  | 3.6.2.2 Civil Work  | Tue 11/27/18 | Thu 8/29/19  |             |     |     |             |     |     |             |  |  |
| 101 | 3.6.2.3 Mechanical Work   | Mon 7/29/19  | Fri 8/9/19   |             |     |     |             |     |     |             |  |  |
| 103 | 3.6.2.4 Electrical Work   | Wed 1/16/19  | Wed 5/29/19  |             |     |     |             |     |     |             |  |  |
| 112 | 3.6.2.5 Interconnection Field Work (Con Ed)                       | Wed 1/23/19  | Fri 1/17/20  |             |     |     |             |     |     |             |  |  |
| 113 | 3.6.2.5.1 Inspect meter panel / install meter equipment           | Wed 1/23/19  | Fri 1/25/19  |             |     |     |             |     |     |             |  |  |
| 114 | 3.6.2.5.2 Test and High potential cable                           | Fri 1/25/19  | Fri 2/1/19   |             |     |     |             |     |     |             |  |  |
| 115 | 3.6.2.5.3 De-energize and energize new feeder to pick up services | Fri 1/25/19  | Fri 2/1/19   |             |     |     |             |     |     |             |  |  |
| 116 | 3.6.2.5.4 Install meter and energize new service                  | Fri 2/1/19   | Fri 2/8/19   |             |     |     |             |     |     |             |  |  |
| 117 | 3.6.2.5.5 PSN verification (witness) test on equipment            | Mon 12/16/19 | Fri 1/17/20  |             |     |     |             |     |     |             |  |  |
| 118 | 3.6.2.6 Site Commissioning (SGS)                                  | Wed 6/19/19  | Wed 7/3/19   |             |     |     |             |     |     |             |  |  |
| 120 | 3.6.2.7 Battery Operational                                       | Tue 8/20/19  | Tue 8/20/19  |             |     |     |             |     |     |             |  |  |
| 121 | 3.6.2.8 Punch List  | Wed 7/17/19  | Mon 10/28/19 |             |     |     |             |     |     |             |  |  |
| 137 | 3.6.2.9 Inspections, Approvals, and Permit Closeout               | Tue 7/16/19  | Fri 2/14/20  |             |     |     |             |     |     |             |  |  |
| 170 | 3.7 Commercial Operation Date                                     | Fri 1/17/20  | Fri 1/17/20  |             |     |     |             |     |     |             |  |  |
| 171 | 4 Site 2 - City Island  | Tue 2/20/18  | Tue 6/9/20   |             |     |     |             |     |     |             |  |  |
| 172 | 4.1 Site Acquisition  | Wed 6/13/18  | Tue 7/3/18   |             |     |     |             |     |     |             |  |  |
| 174 | 4.2 Design/Permitting (DOB/FDNY)                                  | Tue 6/5/18   | Wed 12/18/19 |             |     |     |             |     |     |             |  |  |
| 186 | 4.3 Contractor Bidding  | Fri 7/13/18  | Fri 10/26/18 |             |     |     |             |     |     |             |  |  |
| 196 | 4.4 Interconnection Study (Con Ed)                                | Tue 2/20/18  | Fri 2/15/19  |             |     |     |             |     |     |             |  |  |
| 202 | 4.5 Battery Procurement and Construction (NEC)                    | Mon 5/28/18  | Fri 12/27/19 |             |     |     |             |     |     |             |  |  |
| 211 | 4.6 Site Construction (GIE)                                       | Tue 8/14/18  | Mon 3/16/20  |             |     |     |             |     |     |             |  |  |
| 212 | 4.6.1 Pre-Battery Arrival   | Tue 8/14/18  | Thu 1/17/19  |             |     |     |             |     |     |             |  |  |
| 227 | 4.6.2 Post-Battery Arrival  | Tue 11/27/18 | Mon 3/16/20  |             |     |     |             |     |     |             |  |  |
| 228 | 4.6.2.1 NEC delivers battery                                      | Tue 11/27/18 | Tue 11/27/18 |             |     |     |             |     |     |             |  |  |
| 229 | 4.6.2.2 Civil Work  | Thu 11/29/18 | Wed 1/8/20   |             |     |     |             |     |     |             |  |  |
| 243 | 4.6.2.3 Mechanical Work   | Wed 1/15/20  | Thu 1/23/20  |             |     |     |             |     |     |             |  |  |
| 245 | 4.6.2.4 Electrical Work   | Mon 12/17/18 | Wed 2/27/19  |             |     |     |             |     |     |             |  |  |
| 253 | 4.6.2.5 CCTV contractor to install system                         | Mon 10/28/19 | Mon 10/28/19 |             |     |     |             |     |     |             |  |  |



### 2.3.3 Updated Budget

Budget information is being filed confidentially with the Commission.

## 2.4 CONCLUSION

### 2.4.1 Lessons Learned

The team was successful in identifying nearly 150 percent of the customer identification target and successfully converted these leads to meet the viable site goal. However, the team encountered delays and difficulties in completing a site lease with New York City Department of Citywide Administrative Services (“DCAS”), the owner for the DSNY project site. While the team was unable to execute a lease due to the contract impasse, the Company continues to engage the City on a potential resolution for future projects. DCAS is a major land owner within the Con Edison service territory and could provide many beneficial sites for future storage projects. In addition, site leases are anecdotally becoming more competitive as more storage companies enter the market.

The DOB issued a bulletin on zoning treatment for “non-accessory” battery sites in 3Q 2019. This bulletin clarified the zoning treatment for FTM storage assets and will help developers identify feasible sites from a zoning perspective. However, it may also require a change in occupancy for any permit submittals. An “accessory” bulletin is expected and potentially a full revision of the NYC zoning code in relation to energy storage.

The DOB coordination between plan reviews and Office of Technical Certification and Research (“OTCR”) approvals can still be inconsistent in terms of sequencing. GIE is coordinating closely with both offices.

The team continues work on the analysis of BTM economics applied to the sites identified to this FTM project, as outlined in the Project Filing. The measurement of this metric has been delayed due to difficulty obtaining interval data and ongoing customer acquisition activities. The lack of interval data for the majority of viable project sites is an early indication that FTM model can be applied and scaled in locations that are unavailable for a BTM model.

The market participation rules for battery storage continue to evolve. The Project team continues to work with NYISO and other storage stakeholders to understand and inform these evolving rules. To this end, the Project team will be a test case for Q3 2020 battery aggregation rules. This collaboration will benefit not only the Project, but also enable the creation of a battery market in New York.

#### **2.4.2 Recommendations**

The Company recommends maintaining open lines of communication with the Mayor’s Office to understand the implications of zoning rules for this Project and the battery market in New York City in general.

## **2.5 INCLUDED APPENDICES**

The following appendices are included at the end of this Quarterly Progress Report:

Appendix A: Commercial Battery Storage Description of Phases

## Appendix A: Commercial Battery Storage Description of Phases

| Phase                                       | 0. Project Planning   | 1. Customer Acquisition  | 2. Construction / Commissioning and Integration  | 3. Dispatch Optimization  | 4. Market Participation  |
|---|---|--|--|---|--|
| <b>Milestone (Stage Gate to Next Phase)</b> | <i>Negotiations to be Completed</i> <ul style="list-style-type: none"> <li>• DPS approval</li> <li>• Partner contracts signed</li> </ul>                              | <i>Successfully execute leases for four customer sites</i> <ul style="list-style-type: none"> <li>• Final site selection</li> <li>• Execute customer lease contracts</li> </ul>  | <i>Install and commission 4.2 MW/4.4 MWh</i> <ul style="list-style-type: none"> <li>• Design approval</li> <li>• Obtain permits</li> <li>• Battery installation</li> <li>• System commissioning</li> </ul>                               | <i>Dispatch for load relief</i> <ul style="list-style-type: none"> <li>• Cyber-secure communication architecture</li> <li>• HMI functionality</li> <li>• Established NOC</li> </ul>   | <i>Assets participate in wholesale markets</i> <ul style="list-style-type: none"> <li>• Earn revenues in all market products available for battery participation</li> </ul>  |
| <b>Key Elements</b>                         | <ul style="list-style-type: none"> <li>• Letter of No Objection</li> <li>• Developer contracted</li> <li>• Third-party financing identified and contracted</li> </ul> | <ul style="list-style-type: none"> <li>• Customer lead identification</li> <li>• Complete site Walkthroughs</li> <li>• Complete viable site identification</li> <li>• Final site selection</li> <li>• Market analysis for FTM vs. BTM</li> </ul> | <ul style="list-style-type: none"> <li>• Interconnection and civil design</li> <li>• Interconnection application and study</li> <li>• Permitting</li> <li>• Communications integration</li> <li>• System testing and training</li> </ul> | <ul style="list-style-type: none"> <li>• Assets can be dispatched individually or in aggregate by each party</li> <li>• Fully integrated into SCADA with HMI functionality</li> <li>• Calculate T&amp;D benefit values</li> </ul> | <ul style="list-style-type: none"> <li>• Enroll in NYISO markets allowed today</li> <li>• Continue participation in DER roadmap proceedings to increase participation for ELRs</li> <li>• Quantify market revenues achievable under stacked value model</li> </ul> |
| <b>DER Categories</b>                       | N/A   | N/A  | <ul style="list-style-type: none"> <li>• Battery Storage</li> </ul>  | <ul style="list-style-type: none"> <li>• Battery Storage</li> <li>• DER Aggregation</li> </ul>  | <ul style="list-style-type: none"> <li>• Battery Storage</li> <li>• DER Aggregation</li> </ul>   |

## Commercial Battery Storage REV Demo Project

The **Commercial Battery Storage** project is designed to demonstrate how distributed, front of the meter (“FTM”) energy storage can be utilized to provide transmission and distribution (“T&D”) support, earn wholesale market revenues, and increase the market size of participating customers by aligning the interests of the Company, customers, and third-party developers. Con Edison is executing the Project in partnership with GI Energy and Smarter Grid Solutions.

Project Start Date: January 2017  
Project End Date: December 2020  
Budget: \$11.7M  
Q4 2019 Spend: *Filed Confidentially*  
Cumulative Spend: *Filed Confidentially (on budget)*

Phase 1: Customer Acquisition  
Ongoing

Phase 2: Construction and Commissioning  
Ongoing

Phase 3: Dispatch Optimization  
Ongoing

Phase 4: Market Participation  
Ongoing

### Lessons Learned: Customers

- Engagement with the City is ongoing and important to find potential resolution for future projects. The team was unable to execute a lease at a City site due to a contract impasse discovered after permitting was obtained.
- The lack of interval data for most viable project sites is an early indication that the FTM model can be applied and scaled in locations that cannot support a BTM model.
- Site leases are becoming more competitive with multiple storage companies offering leases

### Lessons Learned: Market

- The Project team is a test case for Q3 2020 battery aggregation rules. This collaboration will benefit the Project and the larger New York battery market.
- NYC DOB's zoning determination has clarified treatment for non-accessory uses

**Application of Lessons Learned:** *TBD based on City engagement and NYISO collaboration. Zoning considered carefully during site acquisition.*

**Issues Identified:** *A DSNY site that had received FDNY and DOB permits dropped out after conversations stalled on contract terms. A zoning determination from DOB could cause the loss of the third site. NYISO's response to FERC Order 841 delays battery market participation and dual participation to no earlier than Q4 2020.*

**Solutions Identified:** *Have identified potential replacement sites and exploring variance process timelines. Working with NYISO on pilot for market participation.*

**Recent Milestones:** *a) Caddell site received approval from DOB/FDNY b) Caddell site completed construction c) Woodside received FDNY LONO and interconnection study results d) Caddell SCADA communications complete e) NYISO communications hardware installed*

**Upcoming Milestones:** *First 2 sites operational (Q1 2020). Determine go/no-go for Amboy site and proceed with variance process or permit applications for a backup site (Q1 2020). Complete communications integration build out and control assets for City Island site (1Q 2020). Enroll two assets in NYISO pilot program (Q1 2020).*