

Data Access Framework

Green Button Connect User Agreement and Onboarding Process

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The Joint Utilities of New York

Case 20-M-0082 - In the Matter of the Strategic Use of Energy Related Data

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I. Introduction

In compliance with Ordering Clause 7 of the Public Service Commission's (Commission) April 15, 2021 Data Access Framework Order¹ (DAF Order), the Joint Utilities² submit a Green Button Connect (GBC) User Agreement (Section II of this filing) which includes the Data Quality and Integrity Standard categories adopted by the DAF Order. The Joint Utilities also submit the GBC Onboarding Process document (Section III of this filing). Although the Joint Utilities are in different places with respect to GBC implementation, we have developed a single GBC User Agreement and Onboarding Document to provide an easier experience to Energy Service Entities (ESEs).³

The GBC User Agreement includes both provisions that relate to ESEs' use of each utility GBC platform, as well as data quality targets and commitments applicable specifically to the Joint Utilities, as required by the DAF Order. The GBC Onboarding Process document includes processes and timelines for ESE onboarding that are applicable to both ESEs and the utility.

Importantly, consistent with the DAF Order, the GBC User Agreement does not include the "cybersecurity and privacy requirements necessary for GBC as those will be handled through the ESE Data Ready Certification (DRC) process and reflected in a Data Access Agreement (DAA), as described herein."⁴ Since the DRC process has not been developed, and the DAA does not yet exist, the Joint Utilities include references to both the existing ESE requirement to sign the Data Security Agreement (DSA) - including the Self-Attestation (SA), which must remain until the new DRC and DAA processes are in place, as well as

¹ Case 20-M-0082, *In the Matter of the Strategic Use of Energy Related Data* (IEDR Proceeding), Order Adopting a Data Access Framework and Establishing Further Process (issued April 15, 2021) (DAF Order).

² The Joint Utilities are (collectively and individually) Central Hudson Gas & Electric Corporation (Central Hudson), Consolidated Edison Company of New York, Inc. (Con Edison), National Fuel Gas Distribution Corporation (National Fuel), New York State Electric & Gas Corporation (NYSEG), Niagara Mohawk Power Corporation d/b/a National Grid, KeySpan Gas East Corporation d/b/a National Grid and The Brooklyn Union Gas Company d/b/a National Grid NY (collectively, National Grid), Orange and Rockland Utilities, Inc. (O&R), and Rochester Gas and Electric Corporation (RG&E). Central Hudson and National Fuel do not currently have GBC in place and at this time they do not intend to implement GBC in the future. Accordingly, Central Hudson and National Fuel are joining the other Joint Utilities in this filing to ensure compliance with Ordering Clause 7 of the DAF Order, but they do not intend to adopt the GBC User Agreement or Onboarding Document unless and until they implement GBC.

³ National Fuel has not implemented Advanced Metering Infrastructure (AMI) and Central Hudson has not implemented a full deployment of AMI, and as such, neither has adopted GBC. Central Hudson and National Fuel remain committed to maintaining customer consent communication channels for ESEs.

⁴ IEDR Proceeding, DAF Order, p. 51.

accounting for a future state where the ESE will have had to successfully complete the DRC process (along with signing the anticipated DAA).

In line with the Commission's intent of achieving improved utility customer engagement and ESE access to data, the Joint Utilities believe that continuous tracking and monitoring of GBC data performance will allow for further refinement and specificity of the GBC Data Quality and Integrity Standards.

The GBC Data Quality and Integrity Standards included in the GBC User Agreement (Appendix A) have been developed based on the standard categories in the DAF Order and currently available data in the GBC utility platforms, as well as available information and experience with GBC to date. However, some of the definitions may need to be updated after a GBC data performance evaluation period to further refine concepts such as *redundant data*, *types of data error*, and *types of issues*, and establish reasonable targets for maximum percentages and resolution times. For example, not all *data errors* and *issues* are the same. Therefore, response and resolution times can vary greatly depending on their nature - while some *data errors* or *issues* may be resolved within hours, others may take several days. Moreover, what constitutes a data error is also undefined. Without clarity on many of the definitions, actionable standards, with targets, cannot be reasonably determined for each of the metrics defined by the Commission in the DAF Order.

To avoid adopting the "worst case scenario" targets for response and resolution times of certain categories, the Joint Utilities propose to defer setting specific targets to a future GBC User Agreement update once GBC performance data is collected and evaluated. Accordingly, the Joint Utilities do not propose specific targets at this time in the following Data Quality and Integrity Standards:

Standard 2 - Maximum percentage of data that includes redundant or extraneous entries

Standard 3- Maximum percentage of data errors

Standard 6- Maximum amount of time to resolve a data error

Standard 9- [...] maximum time to respond to and resolve issues

For Standards 2, 3, and 6, the Joint Utilities propose that more refined definitions be developed and actual GBC performance data consistent with the refined definitions be

collected and evaluated over a period of time before establishing specific performance targets. For Standard 9, the Joint Utilities agree to provide technical support information and a maximum amount of time to respond to issues, however, the targets for maximum time to resolve issues will vary greatly depending on the *type of issue* and will require tracking and analyzing GBC performance before targets are established.

The Joint Utilities look forward to continued partnership with Department of Public Service Staff on developing refined and measurable Data Quality and Integrity Standards.

II. Green Button Connect (GBC) User Agreement

[Green Button Connect Utility Data Platform Name] Terms and Conditions

NOTICE: YOU ACKNOWLEDGE THAT YOU HAVE READ AND AGREE TO COMPLY WITH THE FOLLOWING TERMS AND CONDITIONS THAT GOVERN YOUR USE OF THE [UTILITY NAME] [GBC UTILITY DATA PLATFORM NAME]. IF YOU DO NOT AGREE TO COMPLY WITH THE [GBC UTILITY DATA PLATFORM NAME] TERMS AND CONDITIONS, DO NOT PROCEED WITH THE GREEN BUTTON CONNECT REGISTRATION PROCESS.

1. Introduction

By agreeing to these terms and conditions (“[GBC utility data platform name] Terms”), you acknowledge that you are aware of and agree to comply with the terms of all applicable state and federal laws and rules, and other consumer privacy rules and cybersecurity requirements referenced in the Data Security Agreement (DSA) and Self-Attestation (Exhibit A of the DSA) or the Data Access Agreement (DAA), as well as to comply with privacy rules, laws, and regulations referenced in the [utility name] Privacy Policy and [utility terms & conditions], which laws and rules are incorporated and made a part of these [GBC utility data platform name] Terms by reference and as the laws, rules orders and utility practices may change from time to time. Upon your completion of the Green Button Connect (GBC) Business Onboarding Process or Data Ready Certification to access GBC data through [utility name] [GBC utility data platform name] and your executed agreement to comply with the terms and conditions specified herein, the [GBC utility data platform name] Terms shall constitute the “GBC User Agreement” (this “Agreement”) between you and [utility name].

If you are using the [GBC utility data platform name] to provide utility products or services to [utility name] or its customers under a separate agreement with [utility name] or a contractor of [utility name], the terms and conditions of the separate contract with [utility name] or [utility name’s] contractor apply to the extent inconsistent with these [GBC utility data platform name] terms and conditions. The terms of this Agreement shall remain in force and apply for the duration of your use of the [GBC utility data platform name].⁵⁵ No utility data may be used to provide non-utility products or service to customers without the customer’s consent.

2. Definitions

The following terms shall have these defined meanings for purposes of this Agreement:

⁵⁵ The GBC Data Platform is a generic name, whereas some utilities may have a specific marketing name such as Share My Data Platform.

“Applicant” means the Energy Services Entity (ESE) registering to use the [GBC utility data platform name].

“Authorization End Date” means, as selected by customer, the date when on-going (future) data access is discontinued.

“Commission” means the New York Public Service Commission (PSC).

“Customer” means an agricultural, industrial, residential and/or small or medium commercial customer which receives electric and/or natural gas services from or on behalf of [utility name].

“Customer Data” means collectively, any and all data and information of or concerning any identified or identifiable Customer through GBC.

“Data Security Agreement” or “DSA” or “Data Access Agreement” or “DAA” means the terms and conditions, including cybersecurity and privacy requirements applicable to Applicant or ESE when seeking access to energy-related data.

“Data Ready Certification” or “DRC” means when the Applicant or ESE has completed the necessary requirements, received approval, and has an executed DAA which dictates what type of data the ESE can request, and how they can access it.

“Energy Services Entity” or “ESE” means an entity that provides energy or performs an energy-related service.

“Green Button Connect” or “GBC” provides a set of standards for allowing interoperable communications of energy usage and billing information between utilities and Applicant or ESE.

“Incident” means an actual or suspected breach or compromise of the privacy, security, confidentiality or integrity of (i) confidential and/or protected information (including, without limitation, Customer Data), (ii) the ([utility name] [GBC utility data platform name], or (iii) any other [utility name] information systems.

“UBP” means the Uniform Business Practices for DER as adopted and modified by the Commission.

3. Conditions of Participation

Upon your agreement to the [GBC utility data platform name] Terms and [utility name’s] acceptance of your GBC Onboarding process, including the verification of capability to access authorized customer data using the [GBC utility data platform name], you will be eligible for Customers to authorize release of their data to you via the [GBC utility data platform name] according to the limiting parameters specified by the Customers. In order to continue to use the [GBC utility data platform name] you agree that you and your representatives:

- (a) will not make any representations, warranties, or guarantees to Customers on behalf of [utility name];
- (b) will comply with all applicable federal, state and local laws and regulations (including, but not limited to laws and rules protecting customer privacy and regulating your professional status and licensing requirements, if any); all other applicable governmental laws, statutes, regulations; and Customer's consents, including any limitation thereon;
- (c) prior to and as a condition of Applicant's use of the [GBC utility data platform name] under this Agreement, Applicant will have completed the DSA and Self-Attestation (Exhibit A of the DSA) or Data Ready Certification process (including the execution of a DAA) and received approval of the Data Ready Certification;
- (d) will upon request provide [utility name], or its representatives, with copies of Applicant's terms of use/ terms of service and privacy and cyber-security policy and controls prior to Applicant's registration and use of the [GBC utility data platform name] pursuant to the [GBC utility data platform name] Terms and any subsequent revisions or updates to the foregoing.
- (e) will comply with this Agreement, the DSA and the DAA;
- (f) will implement Transport Layer Security for all exchanges with [utility name];
- (g) will incorporate industry standard controls into your service that prevent a 'Denial of Service' type of attack; and
- (h) will provide complete and valid information if requested by [utility name] any subsequent clarifying information in a reasonable and timely manner.

4. Indemnification

Indemnification provisions of the DSA or DAA are incorporated and made part of this Agreement by reference. In addition, Applicant shall indemnify, hold harmless [utility name] and its affiliates, and the directors, officers, employees, agents, consultants, contractors, subcontractors, or advisors of [utility name] and its affiliates from any liability, claims, demands, causes of actions, damages, or expenses resulting from disputes as a result from data errors, redundancy, delays on data transfer, or critical system failures associated with the [GBC utility data platform name].

5. Warranties and Warranty Disclaimer

The use of the [GBC utility data platform name], content and services available therein is at Applicant's sole risk. The [GBC utility data platform name], content and services available at the [GBC utility data platform name] are provided on an "as is" and "as available" basis. [utility name] expressly disclaims all warranties of any kind, express or implied, with respect to the [GBC utility

[data platform name], content and services available at the [GBC utility data platform name], including without limitation warranties of merchantability, fitness for a particular purpose, title, and non-infringement, and all warranties arising from course of dealing, usage or trade practice.

[utility name] makes no warranty that the [GBC utility data platform name], content or services will meet Applicant's requirements, or that the [GBC utility data platform name], content or services will be uninterrupted, timely, secure, current, accurate, complete or error free.

[utility name] does not guarantee or warrant that the [GBC utility data platform name] or any content or services will be free of infection from virus, worms, or other code that has contaminating or destructive properties. Applicant agrees that any content downloaded or otherwise obtained through the use of the [GBC utility data platform name] is at its own risk.

The warranty disclaimers set forth in this section do not apply to the extent prohibited by law.

6. Limitation of Liability

Except to the extent prohibited by applicable law, in no event shall [utility name] be liable for personal injury, property damage, or any incidental, special, direct, indirect, consequential, punitive or exemplary damages whatsoever, including, without limitation, damages for loss of profits, loss of data, loss of use, or loss of business opportunity, arising out of or related to your use or inability to use the [GBC utility data platform name], however caused, regardless of the theory of liability (contract, tort, or otherwise) and even if [utility name] has been advised of the possibility of such damages in advance. In no event shall [utility name's] total liability to Applicant for all damages (other than as may be required by applicable law in cases involving personal injury) exceed the amount of fifty dollars (\$50.00). The foregoing limitations will apply even if the above stated remedy fails of its essential purpose.

7. Customer Authorization/Consent

Applicant shall only access the specified Customer Data that a [utility name] customer has requested to be shared with Applicant over a determined period. Customers may revoke their authorization at any time. Applicant's access to any individual Customer Data will be revoked upon [utility name's] receipt of a request by a Customer or Customers to revoke their authorization. Applicant will NOT be notified by [utility name] when an authorization has been revoked by a Customer or Customers.

8. Term and Termination

[utility name] may terminate this Agreement immediately to the extent consistent with the applicable state, federal, and local laws and regulations and/or [utility name's] cyber security or customer privacy policies, controls or requirements, including removal of access to the [GBC utility data platform name] and any Customer Data to which this Agreement relates, upon the occurrence of any one of the following events (each a "Cause"):

(a) you fail to comply with any of the terms of this Agreement, the DSA, or the DAA;

(b) you infringe any intellectual property right of [utility name] or a third party, or engage in any other activities prohibited by law;

(c) you fail to comply with the [GBC utility data platform name] Terms as specified in this Agreement;

(d) your access to the [GBC utility data platform name] represents an imminent threat of damage to physical security, cyber-security or safe and reliable operation of [utility name]'s utility facilities or system; or

(e) Your authorization to receive access to any individual Customer's Data will also be revoked immediately upon [utility name] receipt of a request by a Customer or Customers to revoke authorization from said Customer(s). In such cases, you will NOT be notified by [utility name] of authorization revocations.

(f) [utility name's] termination under this section shall not prejudice any rights [utility name] may have under this Agreement or in law, equity or otherwise. Sections 4, 5, 6, 9, and 12 shall survive termination of the [GBC utility data platform name] Terms for any reason.

9. Property Rights

The [GBC utility data platform name] and all of its content are the property of, or used with permission by, [utility name] and are protected by copyright, trademark and other laws and may not be used except as permitted in (i) this Agreement (ii) the DSA and DAA.

Nothing contained on the [GBC utility data platform name] or this Agreement shall be construed as granting or conferring any rights, by license, or otherwise, expressly, implicitly, or otherwise, under any patents, copyrights, trade secrets, or other intellectual property rights of [utility name]. As set forth in the DSA and DAA, Applicant shall acquire no ownership interest in the Customer Data.

10. Discontinuance and Modification

[utility name] reserves the right to withdraw or amend the [GBC utility data platform name], and any service or content provided on the [GBC utility data platform name], in its sole discretion without notice. [utility name] will not be liable if for any reason all or any part of the [GBC utility data platform name] is unavailable at any time or for any period. From time to time, [utility name] may restrict access to some parts of the [GBC utility data platform name], or the entire [GBC utility data platform name], to users, including registered users.

11. Data Quality & Integrity Standards

1. Adherence to a standardized data format specific to the data access mechanism;

The [utility name] GBC data sharing mechanism adheres to and utilizes an Extensible Markup Language (XML) data format standards for Green Button Connect My Data, located at https://www.naesb.org/ESPI_Standards.asp and in [utility name] GBC Onboarding documents.

2. Maximum percentage of data that includes redundant or extraneous entries;

Data that includes redundant or extraneous entries where such data was sent in error and should be ignored.

The percentage will be calculated by the number of requests in the reporting period where redundant or extraneous data was provided by [utility name], divided by the total number of responses in the reporting period.

3. Maximum percentage of data errors;

Data errors are those directly associated with the data sharing mechanism including tagging of data with an incorrect timestamp or reading code. Data errors do not include issues associated with business processes (*e.g.*, a non-communicating meter does not provide data, or a customer is billed on the wrong service class due to a processing error).

The percentage will be calculated by the number of requests in the reporting period where erroneous data was provided by [utility name], divided by the total number of responses in the reporting period.

4. Maximum amount of time it will take to transfer data;

The following maximum amount of time to transfer data apply depending on the GBC transfer method:

- For synchronous data transfer, the ESE expects an immediate response from [utility name]. In these cases, the time to transfer data will be measured as the time the request is received by the [utility name] to the time the data transfer is completed by [utility name]. The maximum amount of time to transfer data for synchronous requests will be one (1) hour.⁶
- For asynchronous data transfer, the ESE submits a request for a larger set of data and does not expect an immediate response. Instead, the ESE waits for [utility name] to send a notification when the data is ready to be retrieved. In these cases, the time to transfer data will be measured as the time the request is received by [utility name] to the time [utility name]

⁶ The maximum response times are determined using the following factors:

- Maximum number of ESEs requesting data;
- Data requested for maximum number of accounts;
- Maximum period of data request (*i.e.*, 2 years for historic and 24 hours for real-time data).
- Dependency on our internal data system thus accounting for time taken for the end-to-end data flow.

sends a notification to the requestor indicating that the data is ready to be retrieved. The maximum amount of time to transfer data for asynchronous requests will be 24 hours.

5. Maximum amount of time to acknowledge a reported data error;

The maximum amount of time for [utility name] to acknowledge a reported data error (as defined in Standard 3) to an active authorized ESE [GBC utility data platform name] user is one (1) business day. The time will be measured from the time [utility name] identifies and confirms an error has occurred to the time [utility name] informs the ESEs of the error via the registered e-mail address.

6. Maximum amount of time to resolve a data error;

This standard refers to the maximum amount of time it takes [utility name] to resolve confirmed data errors. The time will be measured from the time [utility name] identifies and confirms an error has occurred to the time the [utility name] informs the ESEs that the error has been resolved via registered e-mail.

7. Notification of data access mechanism outage or downtime;

The [utility name] will notify active authorized ESEs [GBC utility data platform name] users of platform outages or downtime within up to four (4) business hours.

The notification time for [GBC utility data platform name] outage or downtime will be measured from the time [utility name] identifies and confirms an outage or downtime has or will occur, to the time the [utility name] informs the ESEs via the registered e-mail address.

8. Conformance to application standard, including third-party certification, if one exists, such as for GBC

This standard will track which [utility name] GBC data sets have been certified by a third party and indicate the name of the third party.

9. Technical support information, such as contact and maximum amount of time to respond to and resolve issues that arise.

[utility name] publishes GBC technical support contact information such as e-mail or another method of contact and regular business hours on the GBC public website. The standard response time to acknowledge submitted ESE inquiries via e-mail will be up to two (2) business days. Resolution times will vary and no target is provided at this time.

12. Miscellaneous

The Data Security Agreement (DSA) or Data Access Agreement (DAA), together with any necessary conforming changes, are incorporated and made a part of this Agreement by reference.

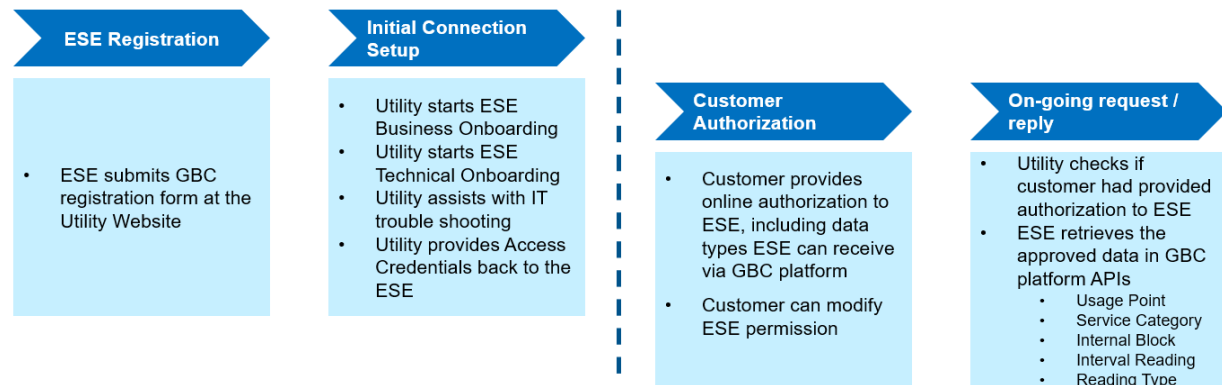
III. Green Button Connect (GBC) Onboarding Process

The purpose of this document is to provide a guide for Energy Service Entities (ESEs)/Applicants to the Green Button Connect (GBC) onboarding process, including estimated associated timelines for each step.

1. GBC Onboarding Overview

The end-to-end process for GBC platform onboarding involves four steps (Figure 1). After the initial two set-up steps, there is a break in the process until the Utility's customer(s) provide authorization to the ESE. Once the Data Ready Certification (DRC) process becomes operational, the ESE business onboarding process will no longer be required as the Data Access Agreement (DAA) - will replace the Data Security Agreement (DSA) and Self Attestation (SA) process.

Figure 1. GBC Platform Onboarding Process

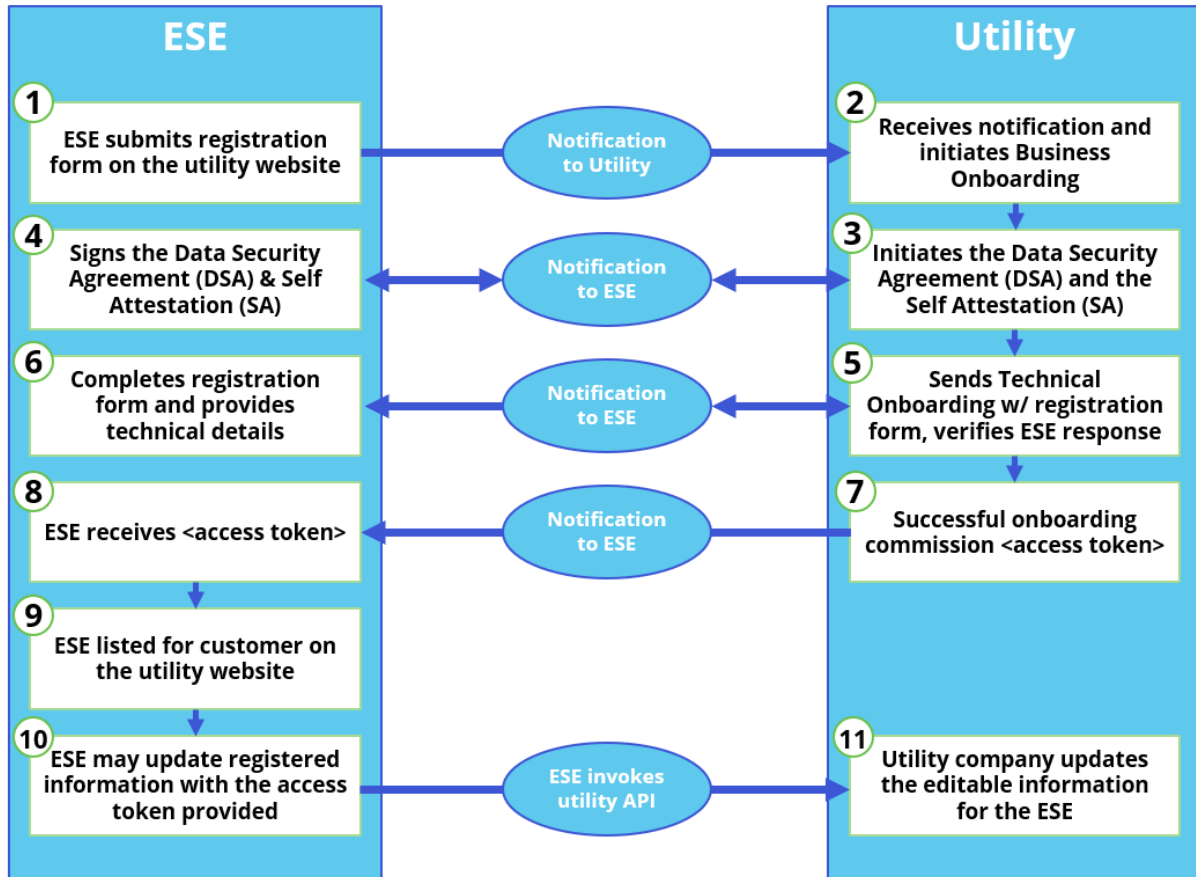


The following sections in the document describe each step in the GBC Platform Onboarding Process, providing details when a process step may be modified once the DRC process becomes available.

2. ESE Registration and Initial Connection Setup

Figure 2 portrays the ESE registration and the following business and technical onboarding handshake between the ESE and the Utility. Once the DRC process becomes operational, the Business Onboarding process described in steps 3 and steps 4, regarding DSA and the SA, will no longer be required in the GBC Onboarding process. An ESE with an active DRC may skip to the GBC Technical Onboarding, step 5, after ESE/Third Party registration.

Figure 2. GBC Initial Connection Setup



2.1 ESE Registration

- The GBC platform registration process allows the ESE to identify itself to the Utility as an entity that would like to access customer-authorized data and set up access to GBC's APIs for data transfer by submitting a GBC registration form.
- To register as an ESE in the GBC platform, the ESE needs to fill out the requested information in the GBC form and submit intent to become a GBC ESE.
- Links below for the **Con Edison, O&R, NYSEG, RG&E, and National Grid** Registration Forms:
 - ConEdison:** <https://www.coned.com/en/accounts-billing/share-energy-usage-data/become-a-third-party/registration-form>
 - O&R:** <https://www.oru.com/accounts-billing/share-energy-usage-data/become-a-third-party/registration-form>
 - NYSEG and RG&E:** a link is not available at this time as the Companies are developing the GBC platform.
 - National Grid:** <https://greenbutton.nationalgrid.com/third-party/register>
- The submission of the ESE/Third Party GBC registration form initiates an email notification to the Utility.

2.2 Initial Connection Setup

2.2.1 Business Onboarding

The steps below detail the Business Onboarding process as part of the ESE and the Utility handshake. The Business Onboarding process will be required until the DRC process becomes operational.

- a. Once the Utility receives a GBC registration form, a Utility representative will reach out to the ESE and send electronically the DSA and SA within five (5) business days.
- b. The ESE must sign the DSA⁷ and complete the SA (Exhibit A of the DSA) and send both back to the Utility for review.
 - A Utility representative or Cybersecurity Specialist may follow up with the ESE if additional information or clarification is needed regarding the DSA/SA
- c. The Utility representative will not start the ESE Technical Onboarding while the DSA/SA is pending.

2.2.2. Technical Onboarding

- a. Upon successful completion of the DSA and SA, a Utility representative will begin the Technical Onboarding process. The Utility representative will send the Technical Onboarding documents electronically, with an ESE registration form.
- b. The ESE must complete the ESE Registration form and send the form back to the Utility representative for technical onboarding to start.
 - The ESE is required to develop a website capable of accepting API authorization requests from the Utility websites. After completion, the Utility performs connectivity tests with the ESE to validate the process. The connectivity testing is done in a sandbox environment activated for the ESE.
 - The ESE will have 90 days to complete the Technical Onboarding, or the utility will take the ESE out of the queue and the GBC Onboarding will need to restart the process. If the ESE is inactive for 30 days, the utility will pause the application and remove it from the queue.
- c. Upon successful review and completion of the Technical Onboarding, the ESE will be authorized to access customer data for which they have received customer consent.
- d. The ESE will be added as potential party for customers to share their data with via the GBC Platform.

⁷ Currently, National Grid utilizes a check box to secure the ESE's acceptance of the DSA terms and conditions.

3. GBC Onboarding Process Outcomes

- a. If Approved, the ESE will receive a notification from a utility representative via the registered email address with the following information:
 - Application Information ID - The unique key to access ESE application information from the Utility's server
 - Access Credentials - from the Utility's authorization server to request the Utility's Customer Data
 - Registration Client URL – Using this URL, an ESE can view/update its information after a successful onboarding process
 - Registration Access Token - Using Application ID, URL and this token, the ESE can update some of its provided information after a successful GBC onboarding process
 - Data Custodian Bulk Request URL – Using this URL, the ESE can issue a “bulk” request for all customers that have been authorized with a matching {BulkID}
 - Authorization Server Token Endpoint – Using this URL, the ESE can generate token required to access GBC Data Platform Authorization and Data Access APIs.
 - Subscription Key – A key required by ESE to invoke any of the GBC Data Platform APIs
- a. The ESE will be added to the Utility GBC Data Platform website, under active ESE, for Utility customers to authorize them.
- b. The ESE will have to initiate an email notification to the Utility in case they wish to update any of their registered information.
- c. At this point, the Customer will be able to authorize the ESE to request its data.

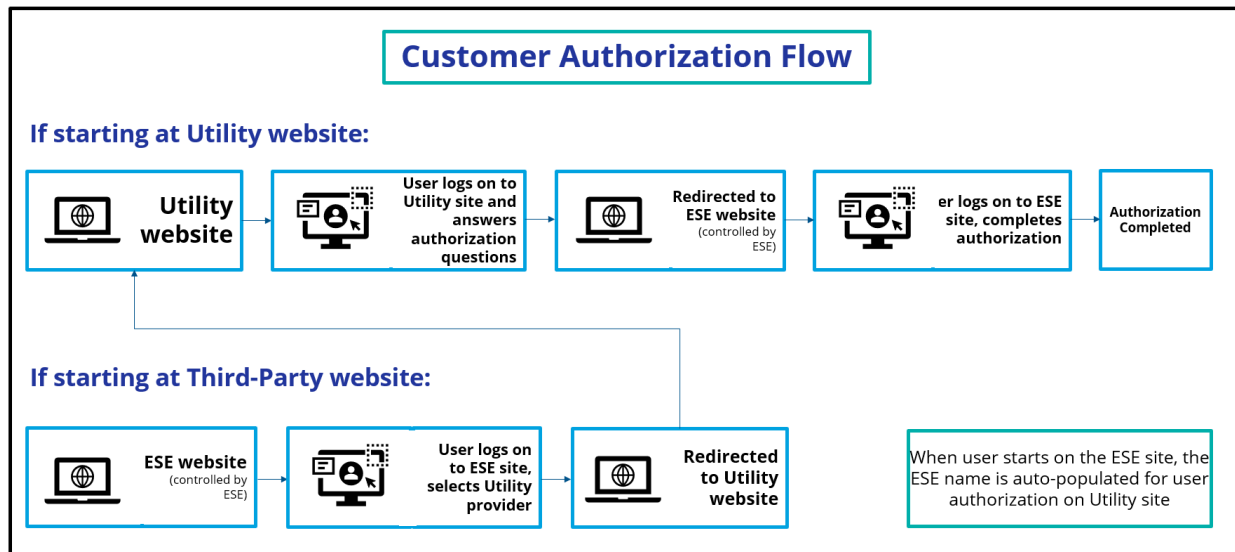
4. Customer Authorization – Utility's Website to ESE

A Customer authorizes a Registered ESE Party:

- a. Via starting at the Utility website
- b. Via starting at the ESE website

Figure 3 describes the steps taken by a Utility customer to authorize ESE access to their GBC Data via the Utility website or the ESE website.

Figure 3. GBC Customer Authorization Process



4.1 Customer Authorization from the Utility Website

The Customer Authorization process is specifically defined as part of the Green Button Standard. The high-level process flow is as follows:

1. Customer navigates to Utility's website
2. Customer logs into Utility's website
3. Customer navigates to GBC Data platform page
4. Customer selects a registered ESE to give explicit authorization to share their data
5. Customer is redirected to the ESE website
6. Customer logs into ESE website
7. Customer provides explicit authorization
8. Customer confirms authorization in ESE website

Per Green Button Standard, the customer authorization ends at the ESE website

Note: This process can also be initiated from the ESE website.

4.2 Customer Authorization from ESE Website

The Customer Authorization process is specifically defined as part of the Green Button Standard. The high-level process flow is as follows:

1. Customer navigates to the ESE website
2. Customer logs into the ESE website
3. Customer selects Utility from the ESE website
4. Customer is redirected to the Utility's website

5. Customer logs into Utility's website
6. Customer selects account to share data to ESE (the ESE name is auto-populated)
7. Customer is redirected again to the ESE website
8. Customer provides explicit authorization
9. Customer confirms authorization in the ESE website

Per Green Button Standard, the customer authorization ends at the ESE website.

4.3 After Successful Authorization

- All customers will receive a monthly report detailing the kind of information retrieved by the ESE from customer's account during the previous month.
- Customers will be able to update their authorizations by doing the following:
 - a. *Update or extend the end date of the authorization period.*
 - b. *Update authorization scope for data access.*
 - c. *Revocation or Expiration of authorization granted.*

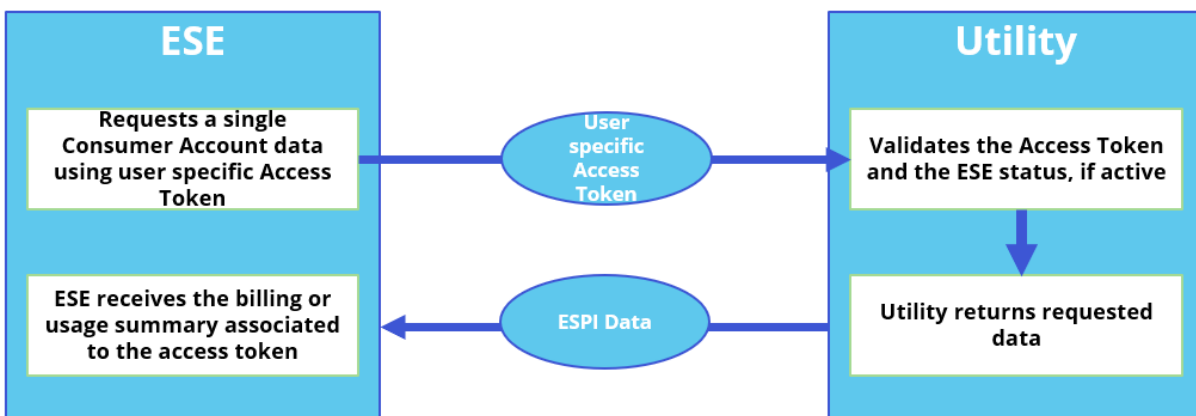
5. Exchange of Resources by Authorized ESE

Green Button Standard supports the below nature of requests for the exchange of resources by the authorized ESE:

5.1 Data Access – Synchronous Request

The Synchronous request allows the ESE to request data for a single Service Point and customer information for a single authorization. The service can only be utilized by the ESE that have received Customer Authorization.

Figure 4. ESE Synchronous Data Request



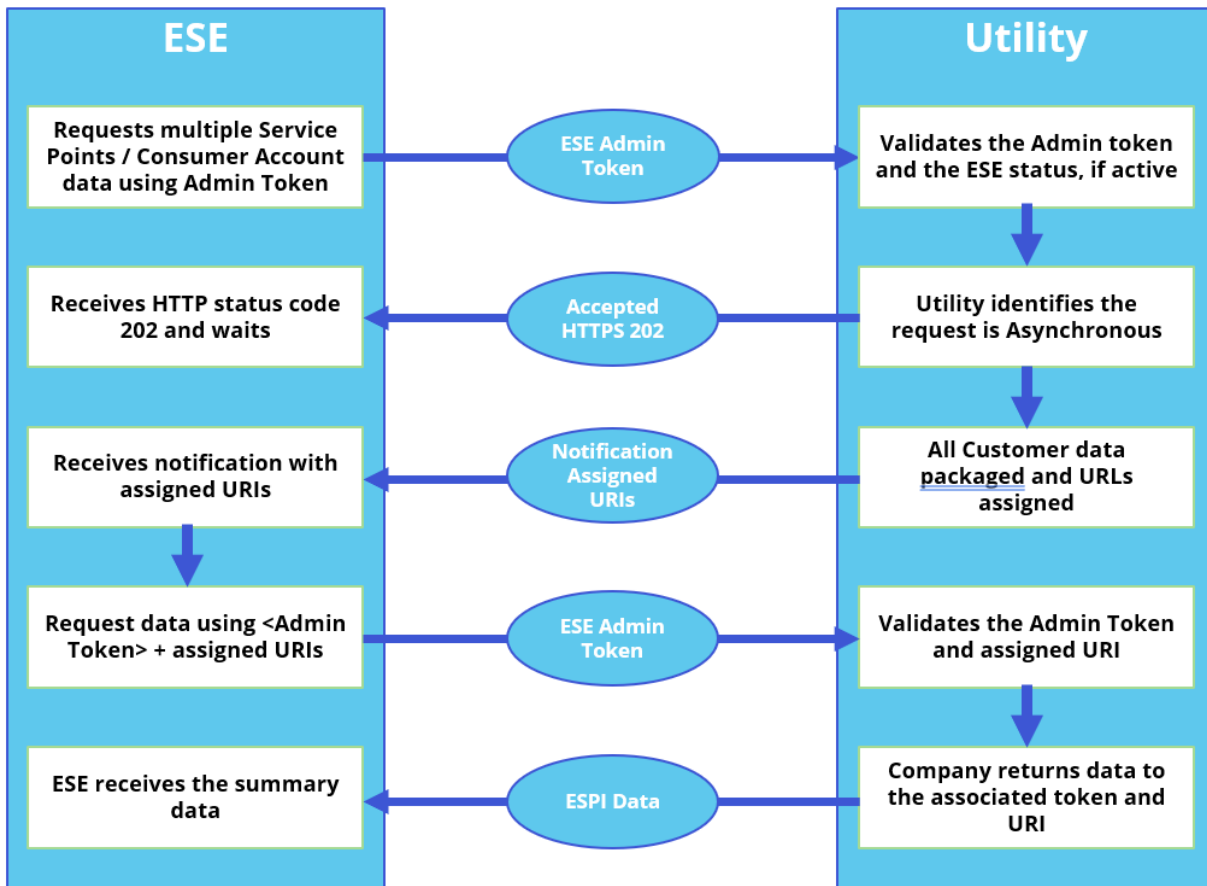
5.2 Data Access – Asynchronous Request

An asynchronous request allows the ESE to request multiple Service Points or customer information for multiple authorizations. The service requires the ESE to input the Admin Token received during Registration process.

Note:

- An asynchronous request's response (*i.e.*, data) is provided only to ESEs with valid notification URL. This response is available for ESE only for 48 hours. The ESE will have to re-initiate the GBC Platform asynchronous request to access required data.
- Real-Time asynchronous request's response received by the ESE will include data of last 24 hours (with a latency of 45 minutes) from the time request was processed by the GBC Data Platform system, irrespective of when the request was placed by the ESE.

Figure 5. ESE Asynchronous Data Request



5.3 ESE - Token Types

Each ESE will receive and use the tokens outlined below, following a successful customer authorization with the Utility.

6.3.1 ESE Admin – Access Token [Client Access Token]

- a. The ESE can generate this token following successful completion of the GBC onboarding process.
- b. This token can be used to retrieve data of all the customers who are actively authorized with the ESE. While the type of data being Usage / Billing / Real-Time / Retail Customer for each customer would be based on the scope of authorization granted to the ESE.

6.3.2 ESE User – Access Token [Access Token]

- c. The ESE receives this token following completion of the Customer Authorization process.
- d. This token can be used to retrieve a specific customer's Usage / Billing / Real-Time / Retail Customer data based on scope provided during authorization. This token cannot be shared across multiple authorizations.

6. ESE Application Termination

The Utility may terminate the registered ESE upon occurrence of any one of the following events:

- a. Poor business practices
- b. Data breaches
- c. Does not abide to the Data Security Agreement (DSA) or Data Access Agreement (DAA)
- d. Failure to complete testing within 90-day period

Once terminated, the ESE will no longer have access to any Customer's data (*i.e.*, all the customer authorizations for this ESE will be revoked and the ESE will no longer be a part of the GBC Data Platform).

If any of these actions are taken, the Utility will notify all the associated customers regarding the ESE termination.

Note: Once an authorization is revoked or expired, such action cannot be reversed by the Utility, and the customer will have to repeat the process of Authorization via the Website.