

Con Edison/Orange & Rockland Green Button Connect

Third-Party Technical Onboarding Document



conEdison



Orange & Rockland

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1. Objectives

The purpose of this document is to describe the process and relevant technical information required for third parties to onboard to Con Edison/Orange & Rockland GBC Connect My Data program.

2. Green Button Connect

2.1 Overview

Con Edison provides two approaches to access customer data.

2.1.1 Download My Data

The Green Button Download feature is accessible through a user-friendly interface on the Con Edison website. By logging in and visiting the energy usage section users can review and analyze up to one year of their energy consumption data presented in an easy-to-understand spreadsheet format. Additionally, users have the option to download detailed energy usage information, as recorded by their smart meter, in either CSV or XML formats. This document is intended to detail the Green Button Connect feature. It is important to distinguish this from Green Button Download.

Learn more [Download Your Energy Data | Con Edison](#)

2.1.2 Connect My Data

Green Button Connect My Data (CMD), the commonly known name for the component of the North American Energy Standards Board's (NAESB) **REQ.21 - Energy Services Provider Interface Model Business Practices** for the authorized sharing of usage data, is the energy-industry standard for enabling easy access to, and secure sharing of, utility-customer energy data.

- Machine to Machine data exchange
- Requires customer authorization for sharing data.
- High level overview of scopes and types of data exchanges (EUI/PII)

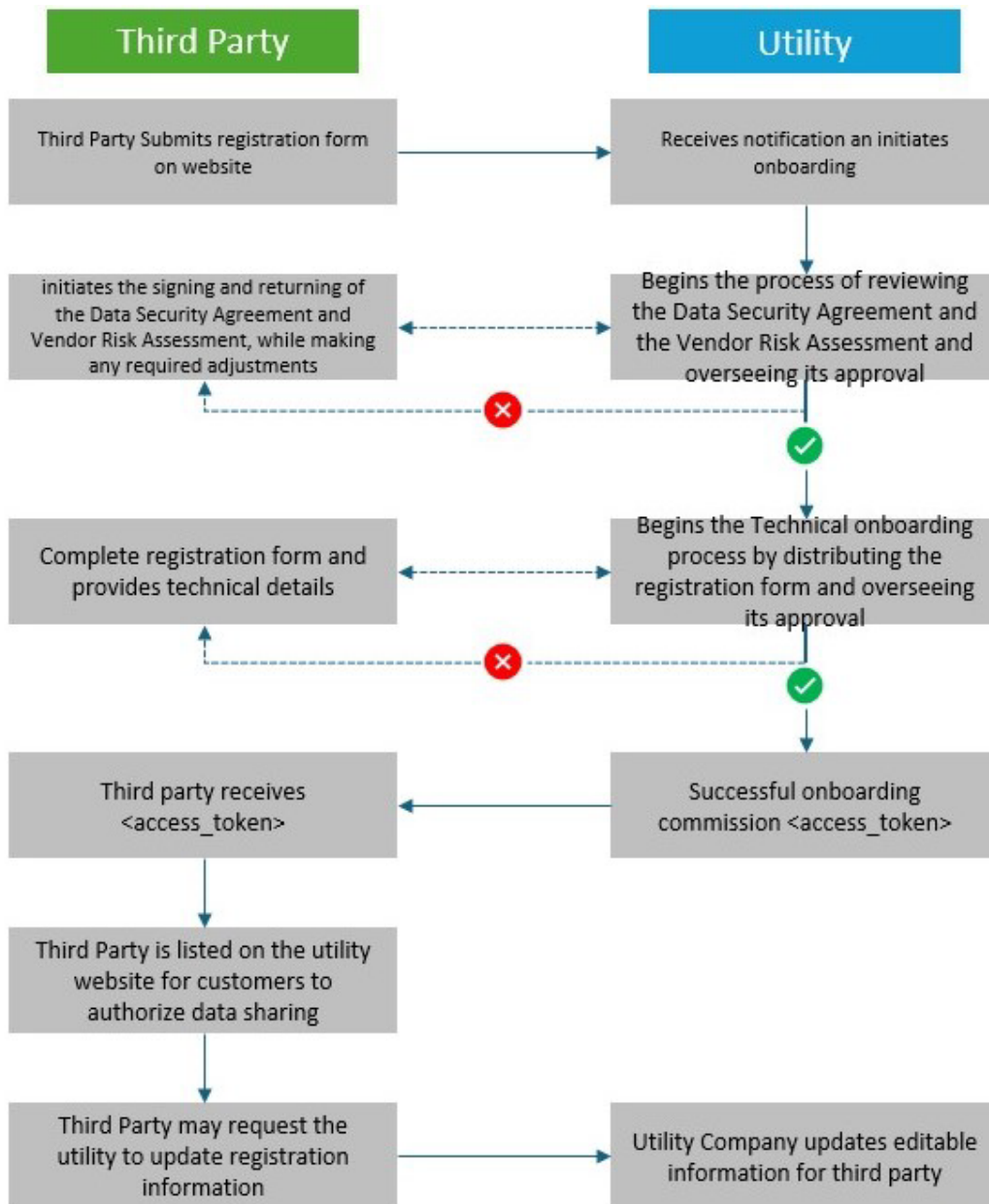
Learn more [Green Button Connect My Data® \(CMD\) - Green Button Alliance](#)

2.2 Connect My Data

To access customer data using GBC Connect My Data, third parties need to

- Register as a third party with Con Edison.
- Develop portal for customer authorization workflow.
- Use GBC APIs to access information.

The below diagram provides a high-level overview of the process:



2.2.1 Third Party Registration

Upon successful completion of Data security agreement, the Con Edison GBC technical onboarding team will electronically send the Technical Onboarding welcome package to the third-party vendor. This package consists of the following:

- GBC onboarding technical documentation
- Registration form

- Endpoint checklist (API's list)

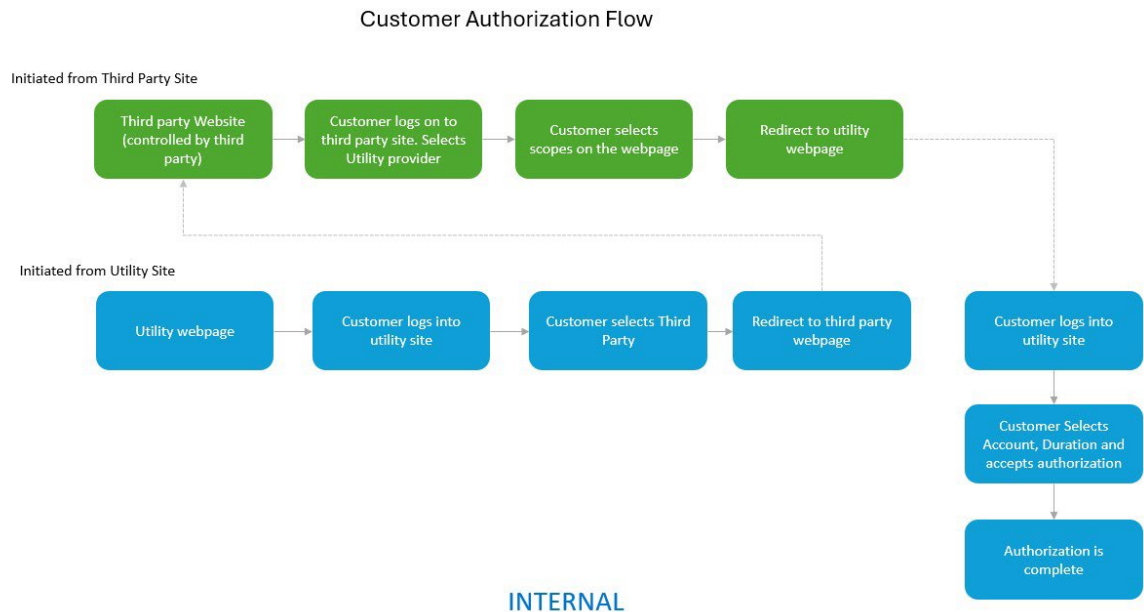
To utilize the GBC API, it's necessary to first acquire customer authorization. We expect third-party vendors to create their own websites for managing customer authorizations and storing responses from the GBC application.

To proceed with the technical onboarding process, the third party must share all relevant technical details with Con Edison's GBC technical onboarding team. This team, comprised of technical specialists, serves as a point of contact for third-party vendors to address any issues they may encounter during the onboarding process.

2.2.2 Implement Customer Authorization flow

Customers have the option to commence data authorization from either the third-party vendor's portal or the utility's website. Should the process be initiated on the utility's site, the customer will be redirected to "ThirdPartyUserPortalScreenURI" page mentioned in the registration form submitted by the third-party.

The following diagram displays the customer authorization flow:



When the user is redirected to the utility page from a third-party vendor portal, they will be presented with a screen to select the account, authorization duration and scope for the authorization. Customer will have the option to modify the scope for the authorization or decline the authorization request.

Sample of Customer Authorization Page

conEdison Account & Billing Services & Outages Save Energy & Money Clean Energy Q Search

Mock

Is requesting authorization to:

Access your account details, energy use, and bills.
This includes your account number, service address, rate plan, meter reading, and utility bill line items.

Data categories:

- Billing Data
- Consumption Data
- Customer Data

Share this service account data

Account Number

How long would you like to share your data?
Share until I revoke it

Want to know more about the data you are sharing? [Read the FAQs](#)

By checking this box, you agree to release your data to the authorized third-party company in accordance with the [Terms and Conditions](#)

DECLINE **ACCEPT**

When the customer accepts the authorization request from the third party to access the data, the customer will be redirected to third-party redirect URL with an authorization code. Third-party can use this authorization code to get the refresh token and access token from authorization server token endpoint.

2.2.3 Access Data Using GBC Connect My Data APIs

GBC Connect My Data APIs provide access to Application Information, Authorization, Energy Usage, Billing and Retail Customer data. Please refer to

Swagger API documentation and postman collection in Section 3.3 (GBC API Testing in Test Environment) for more details.

3. Technical onboarding Process

Technical onboarding process involves the following steps.

1. Onboarding third party in TEST environment.
2. Verifying customer authorization flow in TEST environment.
3. Verify TPs access to GBC APIs in TEST environment.
4. Onboarding third party in Production environment.

3.1 Third Party Registration in Test Environment

1. Registration Form - A third-party vendor must send the completed [Registration Form](#) with details of their application in test environment to Con Edison GBC Technical onboarding team to start the onboarding process.
2. Con Edison GBC technical onboarding team will set up the third-party on the GBC Share My Data platform based on the detail shared in the [Registration Form](#) Con Edison technical onboarding team will share registration information via email. Third party can retrieve client id and client secret using Application information Api.
3. **Note:** The third-party must notify Con Edison whenever there is a change to the registration information that was provided to Con Edison by emailing the updated registration form. Updated registration document should be emailed to dlsharemydatatech@coned.com
4. **Note:** All URLs in the registration form need to be accessible from Con Edison network and should support TLS 1.2 or higher version.
5. **Note:** Third-party vendors can request a mock customer authorization application code via an email to Con Edison GBC technical onboarding team (dlsharemydatatech@coned.com).

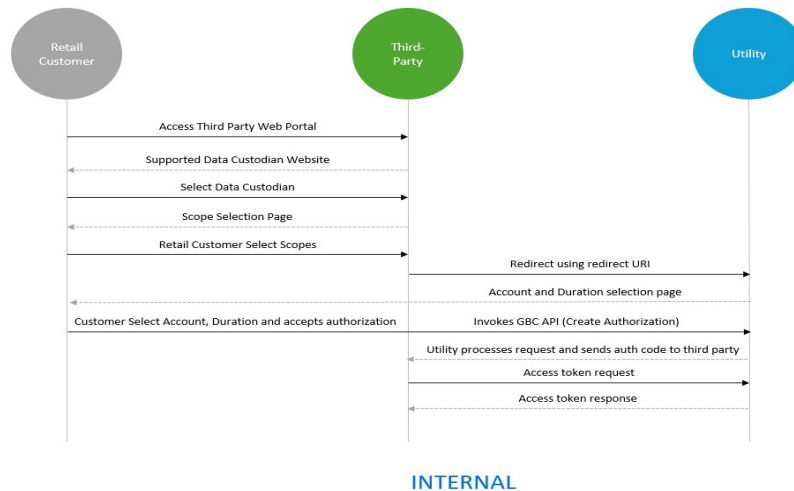
3.2 Customer Authorization Flow Testing in Test Environment

The third-party must notify Con Edison GBC technical onboarding team when they are ready to start the customer authorization testing. (Currently third-party vendors cannot access the GBC test environment. The Con Edison GBC technical onboarding team will assist in this process).

Customers have the option to commence data authorization from either the third-party vendor's portal or the utility's website.

3.2.1 Customer Initiates Authorization from third-party Portal

Below sequence diagram details the interaction when customer initiates authorization from third-party vendor portal



- **Customer Login:** The process begins with the customer logging into the third-party website, where they will choose their utility provider and select the types of data they consent to share.
- **Select Utility:** The customer selects their Utility provider (CECONY or ORU).
- **Scope Selection Page:** The retail customer begins the authorization process on the third-party portal where they can select one or more scopes to share.
- **Note:** Third Parties have the option to predefine these scopes. Here are two options:
 - i. Let the customer see and choose the scope.
 - ii. Send a predefined scope each time which will be used for authorization.
- **Redirection to Authorization server:** Depending on the customer's utility provider, the customer should be redirected to either Con Edison or ORU authorization server URL. Redirection URL shall include scope, client Id, redirect URI, state and response Type.

URL used for redirection will be:

```

{{base_url}}/oauth/authorize?scope=FB=1_3_4_5_7_8_10_15_16_51_53_56_57_58_60;IntervalDuration=Monthly_3600_900_300;BlockDuration=Monthly_Daily;HistoryLength=63072000;BR=<<Third-Party_BulkId>>&response_type=code&client_id=<<client_id>>&redirect_uri=<callbackURI>&state=<state>
  
```

Note: base_url value in the redirect URL will be different for Con Edison and ORU accounts. Also the value will be different in Test and Production.

For Test environment, Con Edison base_url will be <https://uat10.coned.com/en/> and ORU base_url will be <https://uat10.oru.com/en/>

For Production environment, Con Edison base_url will be <https://www.coned.com/en/> and ORU base_url will be <https://www.oru.com/en/>

Note: if any of the URL parameters are missing or wrong, customers will be redirected to an error page.

- When the user is redirected to Con Edison / ORU authorization server, the customer will be presented with the following options:
 - Verify and/or edit (only removal of selected scopes is permitted) the preselected scopes from the third-party portal.
 - Select their account number.
 - Select the duration of the authorization for their account.
 - Accept or decline the authorization.

Sample of Customer Authorization Page

conEdison Account & Billing Services & Outages Save Energy & Money Clean Energy Search

Mock

Is requesting authorization to:

Access your account details, energy use, and bills.
This includes your account number, service address, rate plan, meter reading, and utility bill line items.

Data categories:

- Billing Data
- Consumption Data
- Customer Data

Share this service account data ⓘ

Account Number: ▼

How long would you like to share your data?
Share until I revoke it ▼

Want to know more about the data you are sharing? [Read the FAQs](#)

By checking this box, you agree to release your data to the authorized third-party company in accordance with the [Terms and Conditions](#)

[DECLINE](#) **ACCEPT**

Once the customer makes their selections and accepts the authorization request, the customer will be redirected to the third-party redirect URL with an authorization code and state parameter value.

If the customer declines the authorization request, customer will be redirected to third-party redirect url with the following information

`{{Third-Party-Redirect_URI}}?error=access_denied&error_description=Customer denied authorization.&state=123`

- **Access token generation:** The third party should use the authorization code to make a request to the token endpoint to get the refresh token and access token for the customer authorization. This will complete the authorization process and activate the authorization record. During the authorization process, it is crucial to use the authorization code as soon as possible before it expires (1-minute expiry). Note: authorization code can be used only once to call the token endpoint.

The third-party vendor will use the following endpoint to generate access token during authorization process:

API: https://apit.coned.com/gbc/espi/1_1/oauth/token

POST https://apit.coned.com/gbc/espi/1_1/oauth/token
 Authorization: Basic <<base64 clientid:secret>>
 Accept: application/json
 Content-Type: application/x-www-form-urlencoded
 grant_type=authorization_code&code=
 <<authorization code>>&redirect_uri=<<redirect uri>>

Note: For Production environment, token URL will be:

https://api.coned.com/gbc/espi/1_1/oauth/Token

- **Authorization code flow response:**

```
{
  "access_token": "<<Access token>>",
  "refresh_token": "<<refresh_token>>",
  "token_type": "Bearer",
  "expires_in": 3600,
  "scope": "{{Scope granted by customer}}",
  "resourceURI": "<<resource URI>> ",
  "authorizationURI": "<< auth URI>>",
  "customerResourceURI": "<<cust URI>>"
}
```

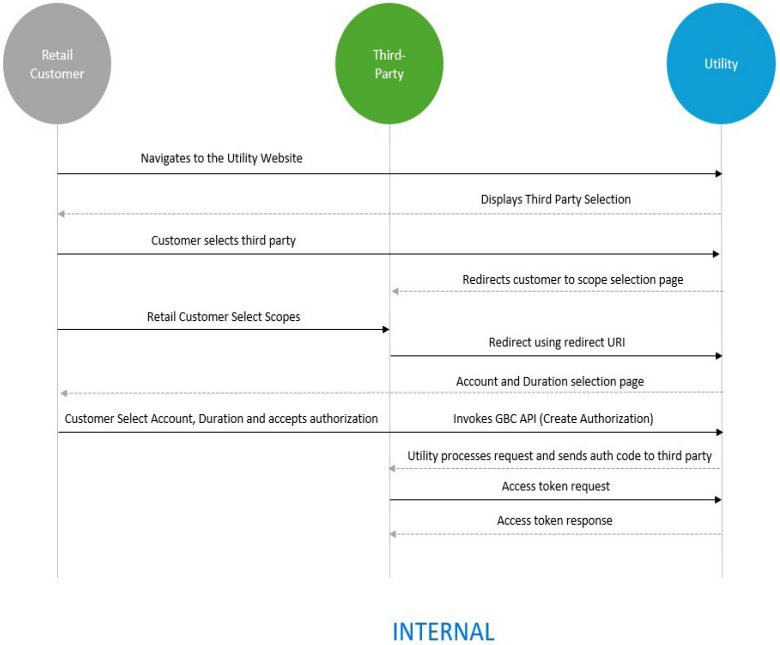
Note:

- Processing and storing of authorization response will be controlled by the third-party. We do not store the refresh token issue during authorization. If a third party loses the refresh token, the customer needs to revoke the authorization and re-issue a new authorization to the third party.

- The access token will be active for 1 hour from the time of its creation. To generate new access tokens, Third-Party will have to invoke the token API with the refresh token and their client credentials.
- Third-party should cache the access token and reuse the access token for subsequent API calls until the access token expires. Access token will be active for 1 hour.

3.2.2 Customer Initiates Authorization from Con Edison / ORU Portal

The following diagram outlines the steps that needed to be followed when the customer authorization begins at the utility's website.



- **Customer Login:** Customer logs into the Utility's website.
- **Third-Party Selection:** Customer navigates to the Share My Data page; server gives list of third parties. Customer then selects the authorized third party.
- **Redirection to Third-Party:** Customer is redirected to `thirdPartyUserPortalScreenURI` mentioned in the registration form submitted by the third-party. `DataCustodianID` parameter in the `thirdPartyUserPortalScreenURI` will be either `ConEdison` or `ORU` depending on the customer utility provider.
`{{thirdPartyUserPortalScreenURI }}?DataCustodianID=ConEdison`
- Customer logs onto Third-Party website.

- **Scope selection Webpage at Third Party website:** A customer can select one or more scopes from the scope page in the third-party website.

Note: Third Parties have the option to predefine these scopes. Here are two options:

- Let the customer see and choose the scope.
- Send a predefined scope each time which will be used for authorization.

Here's the sample image of scope selection page:

The screenshot shows a webpage titled "Third Party" with a "Select Authorization Scope:" section. It contains several radio button options, each followed by a scope name and a long alphanumeric string representing the scope parameters. The options are:

- Consumption Electricity Scope: FB=1_3_4_5;IntervalDuration=Monthly_3600_900_300;BlockDuration=Monthly_Daily;HistoryLength=63072000_86400;
- Consumption Electricity Net Scope: FB=1_3_4_7;IntervalDuration=Monthly_3600_900_300;BlockDuration=Monthly_Daily;HistoryLength=63072000_86400;
- Consumption Gas Scope: FB=1_3_4_10;IntervalDuration=Monthly_3600_900_300;BlockDuration=Monthly_Daily;HistoryLength=63072000_86400;
- Billing Information Without Cost Scope: FB=1_3_15;IntervalDuration=Monthly;BlockDuration=Monthly;HistoryLength=63072000;
- Billing Information With Cost Scope: FB=1_3_15_16;IntervalDuration=Monthly;BlockDuration=Monthly;HistoryLength=63072000;
- RetailCustomer Billing Account Scope: FB=51_53_56;
- RetailCustomer Meter Scope: FB=51_53_56_57_58_60;
- Custom Scope:

Below the options is an empty text input field.

- **Redirect to Utility:** Depending on the customer's utility provider, the customer should be redirected to either Con Edison or ORU authorization server URL. Redirection URL shall include scope, client Id, redirect URI, state and response Type.

URL used for redirection will be:

```

{{base_url}}/oauth/authorize?scope=FB=1_3_4_5_7_8_10_15_16_51_53_56_57_58_60;IntervalDuration=Monthly_3600_900_300;BlockDuration=Monthly_Daily;HistoryLength=63072000;BR=<<Third-Party_BulkId>>&response_type=code&client_id=<<client_id>>&redirect_uri=<callbackURI>&state=<state>

```

Note:

- *base_url* value in the redirect URL will be different for Con Edison and ORU accounts. Also, the value will be different in Test and Production.
 - For Test environment, Con Edison *base_url* will be <https://uat10.coned.com/en/> and ORU *base_url* will be <https://uat10.oru.com/en/>
 - For Production environment, Con Edison *base_url* will be <https://www.coned.com/en/> and ORU *base_url* will be <https://www.oru.com/en/>
 - BR value is same as the Application Information ID. This value should be obtained from the Get All Third-Party Applications endpoint within the Third-Party Registration and Update Folder.
 - *If any of the URL parameters are missing or wrong, customers will be redirected to an error page.*
- When the user is redirected to Con Edison / ORU authorization server, the customer will be presented with the following options:
 - Verify and/or edit (only removal of selected scopes is permitted) the preselected scopes from the third-party portal.
 - Select their account number.
 - Select the duration of the authorization for their account.
 - Accept or decline the authorization.

Sample of Customer Authorization Page

conEdison

Account & Billing Services & Outages Save Energy & Money Clean Energy Search

Mock

Is requesting authorization to:

Access your account details, energy use, and bills.
This includes your account number, service address, rate plan, meter reading, and utility bill line items.

Data categories:

- Billing Data
- Consumption Data
- Customer Data

Share this service account data ⓘ

Account Number

How long would you like to share your data?
Share until I revoke it

Want to know more about the data you are sharing? [Read the FAQs](#)

By checking this box, you agree to release your data to the authorized third-party company in accordance with the [Terms and Conditions](#)

[DECLINE](#) **ACCEPT**

Once the customer makes their selections and accepts the authorization request, the customer will be redirected to the third-party redirect URL with an authorization code and state parameter value.

If the customer declines the authorization request, customer will be redirected to third-party redirect url with the following information

```
{{Third-Party-Redirect_URI}}?error=access_denied&error_description=Customer denied authorization.&state=123
```

- **Access token generation:** The third party should use the authorization code to make a request to the token endpoint to get the refresh token and access token for the customer authorization. This will complete the authorization process and activate the authorization record. During the authorization process, it is crucial to use the authorization code as soon as possible before it expires (1-minute expiry). Note: authorization code can be used only once to call the token endpoint.

The third-party vendor will use the following endpoint to generate access token during authorization process:

API: https://apit.coned.com/gbc/espi/1_1/oauth/token

POST https://apit.coned.com/gbc/espi/1_1/oauth/token
 Authorization: Basic <<base64 clientid:secret>>
 Accept: application/json
 Content-Type: application/x-www-form-urlencoded
 grant_type=authorization_code&code=
 <<authorization code>>&redirect_uri=<<redirect uri>>

Note: For Production environment, token URL will be:

https://api.coned.com/gbc/espi/1_1/oauth/Token

- **Authorization code flow response:**

```
{
  "access_token": "<<Access token>>",
  "refresh_token": "<<refresh_token>>",
  "token_type": "Bearer",
  "expires_in": 3600,
  "scope": "{{Scope granted by customer}}",
  "resourceURI": "<<resource URI>> ",
  "authorizationURI": "<< auth URI>>",
  "customerResourceURI": "<<cust URI>>"
}
```

Note:

- Processing and storing of authorization response will be controlled by the third-party. We do not store the refresh token issue during authorization. If a third party loses the refresh

token, the customer needs to revoke the authorization and re-issue a new authorization to the third party.

- The access token will be active for 1 hour from the time of its creation. To generate new access tokens, Third-Party will have to invoke the token API with the refresh token and their client credentials.
- Third-party should cache the access token and reuse the access token for subsequent API calls until the access token expires. Access token will be active for 1 hour.

3.2.3 Functional Blocks and its description

[FB_01]	Usage Data common
[FB_03]	Usage Data Connect My Data
[FB_04]	Interval Reading
[FB_05]	Electricity Interval Meeting
[FB_07]	Net Electricity Meeting
[FB_08]	Forward and Reverse Electricity Metering
[FB_10]	Natural Gas Interval Meeting
[FB_15]	Usage Summary
[FB_16]	Usage Summary with cost
[FB_35]	Usage Data Bulk
[FB_51]	Retail Customer Common
[FB_53]	Retail Customer Connect My Data
[FB_56]	Retail Customer Billing Information
[FB_57]	Retail Customer Account-Agreement Information
[FB_58]	Retail Customer Service-location Information
[FB_60]	Retail Customer Meter Information
[FB_67]	Retail Customer Bulk

Table below shows sample representation of scope value for different use cases.

Scope Name	Scope Value
Consumption Electricity Scope	FB=1_3_4_5;IntervalDuration=Monthly_3600_900_300;BlockDuration=Monthly_Daily;HistoryLength=63072000;BR=000092
Consumption Electricity Net Scope	FB=1_3_4_7;IntervalDuration=Monthly_3600_900_300;BlockDuration=Monthly_Daily;HistoryLength=63072000;BR=000092
Consumption Gas Scope	FB=1_3_4_10;IntervalDuration=Monthly_3600_900_300;BlockDuration=Monthly_Daily;HistoryLength=63072000;BR=000092
Billing Information Without Cost Scope	FB=1_3_15;IntervalDuration=Monthly;BlockDuration=Monthly;HistoryLength=63072000;BR=000092
Billing Information With Cost Scope	FB=1_3_15_16;IntervalDuration=Monthly;BlockDuration=Monthly;HistoryLength=63072000;BR=000092
RetailCustomer Billing Account Scope	FB=51_53_56;BR=000092
RetailCustomer Meter Scope	FB=51_53_56_57_58_60;BR=000092
Consumption Forward Reverse Scope	FB=1_3_4_8;IntervalDuration=Monthly_3600_900_300;BlockDuration=Monthly_Daily;HistoryLength=63072000;BR=000092
Multiple Scopes combined	FB=1_3_4_5_7_8_10_15_16_51_53_56_57_58_60;IntervalDuration=Monthly_3600_900_300;BlockDuration=Monthly_Daily;HistoryLength=63072000;BR=000092

Following table lists the mandatory scope that needs to be included for the different use cases

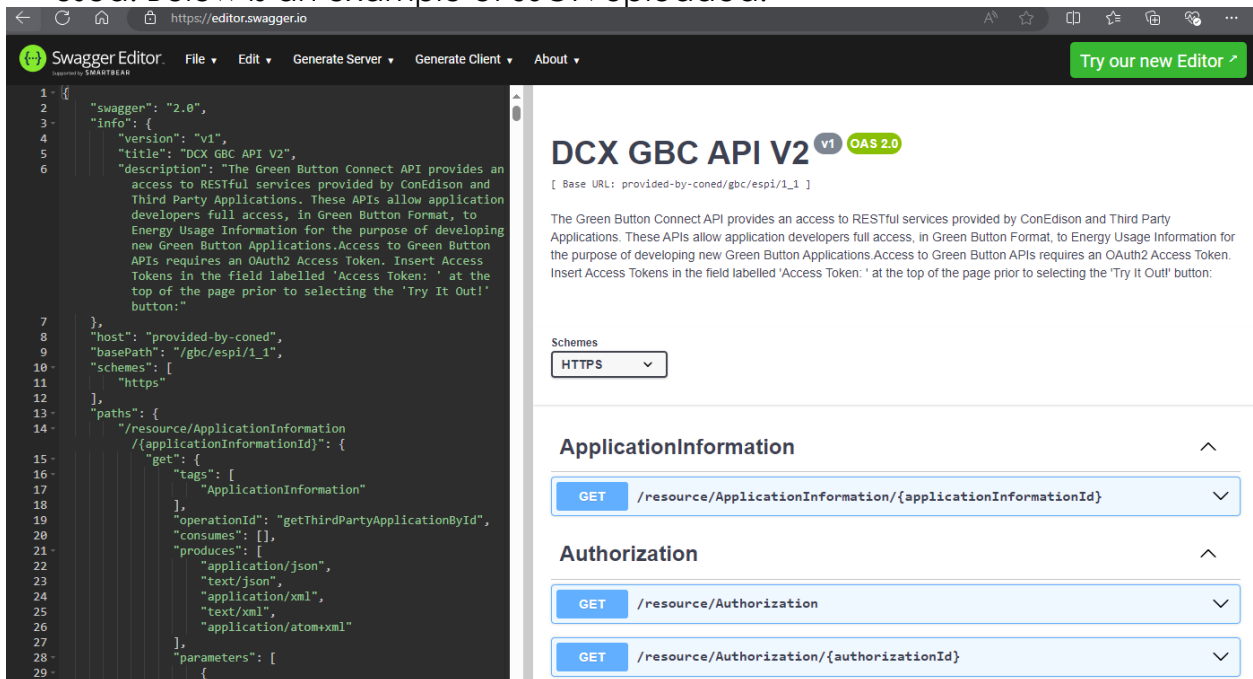
Scope	Mandatory
Consumption	1, 3, 4
Billing	1, 3
Retail Customer	51, 53

3.3 GBC API Testing in Test Environment

- Swagger Documentation

<https://edge-e-dcx-downloads-prod-gif6ega8bmh8crfh.a01.azurefd.net/gbc-api-defintions/swagger-cert.json?sp=r&st=2024-08-29T02:55:48Z&se=2031-08-29T10:55:48Z&spr=https&sv=2022-11-02&sr=b&sig=WAVltmTKe4OKqZW05je%2FUMTZSB5%2BdMk8FbgNHR%2FkCU%3D>

You can download the above definitions and render/upload in your choice of swagger viewer/editor. <https://editor.swagger.io> is commonly used. Below is an example of JSON uploaded.



- After successful customer authorization, the Third Party can proceed to test APIs. Third parties can import postman and environment collection available here for testing the api's:

Postman Collection:

<https://edge-e-dcx-downloads-prod-gif6ega8bmh8crfh.a01.azurefd.net/gbc-api-defintions/postman-collection.json?sp=r&st=2026-04-28T15:40:29Z&se=2031-08-29T23:55:29Z&spr=https&sv=2025-11-05&sr=b&sig=rrSK9xQA40bHLvHoXI9Q2N61Z2KDHANFrKJp3cMoygU%3D>

Postman Environment:

- The third party should call the resource URI in the batch response notification within 2 days of notification. After two days, the batch response will be deleted, and any attempt to access the batch response after two days will be like submitting a new batch request. Also, if within two days, batch request is called multiple times with same parameter values, API will respond with the cached response that was prepared for the original request.

3.3.2 Third Party Client Access token [CAT]

The Third-Party can generate client access token using the client Id and client Secret information in the application information. Application Information resource can be retrieved using the registration token shared via email after successful third-party onboarding.

Client Access Token can be used to retrieve data for all the customers who are actively authorized with the Third-Party. The type of data could be Usage, Billing, Account and Authorization resources based on the scope granted to the Third-Party during authorization.

Sample Request:

API: https://apit.coned.com/gbc/espi/1_1/oauth/token

POST https://apit.coned.com/gbc/espi/1_1/oauth/token

Authorization: Basic <<base64 encoded clientid:secret>>

Accept: application/json

Content-Type: application/x-www-form-urlencoded
grant_type=client_credentials&scope=FB=34_35

Note: For Production environment, token URL will be:

https://api.coned.com/gbc/espi/1_1/oauth/Token

3.3.3 Third Party User Access Token

Access token is specific to an authorization and can be used to retrieve Usage / Billing / Real-Time / Retail Customer data based on the scope authorized by customer during authorization process.

Sample Request:

API: https://apit.coned.com/gbc/espi/1_1/oauth/token

POST https://apit.coned.com/gbc/espi/1_1/oauth/token
Authorization: Basic <<base64 encoded lientid:secret>>
Accept: application/json
Content-Type: application/x-www-form-urlencoded
grant_type=refresh_token&refresh_token={refresh_token}
&scope=FB=1_3_4_5_7_10_15_16_51_53_56_57_58_60

Note: For Production environment, token URL will be:

https://api.coned.com/gbc/espi/1_1/oauth/Token

3.4 Third Party Registration in Production Environment

Upon successful completion of all testing stages, third-party vendors can progress to the production stage.

Third-party vendors are required to fill in the registration form with the production details.

Note: We will not be doing any customer authorization testing in production.

3.5 Con Edison and ORU Data Custodian

The registration process for Con Edison (ConEd) and Orange & Rockland Utilities (ORU) is identical. However, the Third-Party authorization needs to be directed to different utilities based on the specific account they intend to authorize. This means that depending on the account they're authorizing, the Third Party needs to route their authorization to the appropriate utility.

3. 6 Additional notes regarding third-party integration

3.6.1 Key Relationships Between Data Elements

Relationship	Cardinality	Explanation	Example
Account → Usage Point	1 to N	An account can have multiple service delivery points(Usage Points).	A customer has one account but owns a house and a store, each having separate electricity usage points.
Account → Reading Type	1 to N	An account can have multiple reading types defining how usage is measured.	An electricity account has Total Consumption (kWh) and Net Consumption (Solar export/import) reading types
Usage Point → Meter	1 to 1	Each Usage Point is linked to exactly one meter measuring the service location.	Each apartment in a building has its own electricity meter, even under one agreement.
Usage Point → Meter Reading	1 to N	Each Usage Point can have multiple meter readings over time.	A gas usage point produces monthly meter readings every billing cycle.
Meter Reading ID → Interval Block ID	1 to 1	Each meter reading is associated with one interval block containing time-based usage data.	A monthly electricity reading contains one interval block with 24 hourly readings per day.
Account → Customer Agreement	1 to N (Single Service: 1 to 1)	Accounts may have multiple agreements representing active services.	One account has two agreements: electricity + gas.
Customer Agreement → Usage Point	1 to N	Agreements can cover multiple service locations.	A commercial electricity agreement covers multiple warehouse

			locations under one contract.
--	--	--	-------------------------------

3.6.2 Access Token expiry, Token Caching

All access Token expire in 60 mins, and we recommend third parties to cache the access token and reuse them for subsequent calls for the same subscription within the expiration period.

Since the access token expires in 1 hour, we recommend that TPs store a timestamp in their system. This will help identify expired tokens, preventing unauthorized responses. Always obtain a new access token before making a new call if the current one has expired.

3.6.3 Rate Limits for APIs

Rate limiting is in place for the token endpoint (excluding authorization_code flow), and it will only allow 50 token API calls within one minute. For all other endpoints, no rate limit is in place currently.

3.6.4 Batch API response times.

Batch notification time can vary depending on the batch processing queue size. Typically, notifications are sent within one hour but when the system is under heavy load, batch responses can take up to 24 hours.

3.6.5 Refresh token expiry

If a refresh token is not used to acquire a new access token, refresh token will expire after one year. If the refresh token expires, third party needs to contact the customer to revoke the old authorization and re-authorize the account to get a new refresh token.

3.6.6 Real time APIs

Connect my data will continue to support real time APIs even though they are not part of the GBC V3.3 Standard.

3.6.7 Latency of data for real time and historic data

6. For commissioned and communicating, historical meters Interval data availability is
 - 80-90% within 24 hours

- 99% within 3 days
 - 99.8% within 7 days
7. For real time data, Meter Readings are available for last 24 hours. For Electricity data, data latency will be 45 minutes from the request processing time.

3.6.8 Data quality of real time and historical data

- Historical interval data represents finalized and validated information, while real-time data is considered provisional and unvalidated. A QualityOfReading value of 17 signifies good and validated data.
- Real time interval data are not billing quality data

3.6.9 Reading types for commercial, residential, and solar accounts

Historic Usage Data

Meter Readings are displayed per mentioned intervals for an Electricity or Gas account. The requested intervals should be within last 2 years of range from current date.

Customer Category	Usage Data Available
Electric Commercial Customers with AMI Meters	5-minute intervals
Electric Residential Customers with AMI Meters	15-minute intervals
Electric Customers with Legacy Interval Meters	15-minute intervals
All Gas Customers with AMI Meters	1-hour intervals
All customers with Non-Interval Meters	Monthly

Real-Time Usage Data

Meter Readings are from last 24 hours, only for Electricity data, with a latency of 45 minutes from the request processing time.

Customer Category	Usage Data Available
Electric Commercial Customers with AMI Meters	5-minute intervals
Electric Residential Customers with AMI Meters	15-minute intervals

Interval Blocks in EST/EDT:

Energy usage is recorded in 5-minute interval blocks. During daylight savings, the number of intervals per day may vary: 288 for normal 24-hour days, 276 for days when DST starts (23-hour day), and 300 for days when DST ends (25-hour day). API queries must always use UTC timestamps, calculated from local start/end times using the correct offset (UTC-5 for EST, UTC-4 for EDT).

Example Queries:

DST in effect (Sept 15, 2025)

API uses GMT-04:00

288 five-minute intervals (24 hours)

Example API with datetime: published-Min=2025-09-15T04:00:00Z&published-Max=2025-09-16T04:00:00Z

DST not in effect (Feb 15, 2025)

API uses GMT-05:00

288 five-minute intervals (24 hours)

Example API: published-Min=2025-02-15T05:00:00Z&published-Max=2025-02-16T05:00:00Z

DST ended (Nov 3, 2024)

300 five-minute intervals (extra hour)

Example API: published-Min=2024-11-03T04:00:00Z&published-Max=2024-11-04T05:00:00Z

DST started (Mar 9, 2025)

276 five-minute intervals (missing hour)

Example API: published-Min=2025-03-09T05:00:00Z&published-Max=2025-03-10T04:00:00Z

[3.6.10 Timeline expectation for finishing technical onboarding.](#)

The anticipated timeline for completing the onboarding process is between 30 to 60 days. This includes all necessary steps and procedures involved in getting fully set up and ready to proceed.

Third party needs to notify onboarding team via email (dsharemydatatech@coned.com) if they require additional time to complete the technical onboarding,

3.7 Onboarding Team Support

After receiving the technical onboarding welcome package, if the third-party has any questions or require additional information, they can request a meeting with the technical onboarding team by emailing to dsharemydatatech@coned.com

Reporting production issues: Third party can report any production issues via email to dsharemydatatech@coned.com.

4. Post onboarding

4.1 Registration Information Updates

In the event a third party need to update any fields associated to their registered information in a registration form, they need to update those fields and resend the completed registration form with updated fields.

5. KEY RESPONSIBILITIES – THIRD PARTY

The following are the Key responsibilities to be taken care of by the Third-Party during the Technical Onboarding process:

#	Key Responsibilities
1	The Third-Party will receive a Notification from the Utility to provide the required registration details.
2	The Third-Party will be responsible for: Ensuring the registration form contains the correct details and their website is set up as per the process mentioned above in this document Notifying the Utility representative with the completed registration form
3	The Third-Party Client Access Token and access tokens are active only for 1 hour. The Third party should cache the token value for an hour and reuse it. After an hour, the Third-Party will have to request a new token by providing the refresh token, once the Client credentials and Subscription ID are received after successful authorization.
4	The Retail Customer API provides Account ID information (Account number, Address – street, city, state,town, postal code) for the corresponding subscription ID. The Third-Party is required to map and maintain the Account ID for its usage data.
5	The Third-Party will always receive up to the last two years of historical usage / billing data. They can apply a date filter to select the time range for requesting any customer's data within a 2 year time frame. Real-Time data only corresponds to electricity usage data for the last 24 hours with a latency of 45 minutes from the request processing time.
6	The Third-Party, upon data exchange requests, will be provided with "NET" consumption data for Solar accounts and only "consumption" data for Non-Solar accounts.
7	ESCO charges, if applicable for the customer, will be included in the BillLastPeriod displayed in the billing information.
8	The Third-Party, as part of Data exchange for NYPA customer(s) can access historical and real-time consumption data.
9	Unit of measurement for gas consumption is (CCF).
10	Real time api's not applicable for gas services.

6. DOCUMENT REFERENCES

#	Document	Document link / Reference ID
1	REQ.21 – Energy Services Provider Interface	http://www.naesb.org/ESPI_Standards.asp
2	The OAuth 2.0 Authorization Framework, RFC 6749	http://www.ietf.org/rfc/rfc6749.txt
3	The OAuth 2.0 Authorization Framework: Bearer Token Usage, RFC 6750	http://www.ietf.org/rfc/rfc6750.txt

Power Of Ten Multiplier:

The powerOfTenMultiplier defines the scaling factor that must be applied to the raw reading value to obtain the actual consumption in the specified unit of measure (UOM). The powerOfTenMultiplier, defined at the ReadingType level, indicates how the integer value should be scaled.

How powerOfTenMultiplier Is Applied

The final consumption value is calculated using the following formula:

Actual Consumption = IntervalReading.value × (10 ^ powerOfTenMultiplier)

Power of Ten Multiplier	Description	Scale Applied
0	No scaling (base unit)	× 1
-3	Milli	× 10 ⁻³
3	Kilo	× 10 ³

Note:

- If UOM is 72 the GBC UOM Description is in Real energy, Watt hours, Wh
- If UOM is 119 the GBC UOM Description is in Volume, cubic feet, ft³
- Current Electric powerOfTenMultiplier = 3
- Current Gas powerOfTenMultiplier = 0

Example :

Reading Type has the below Response

<content type="xhtml">

```

<espi:ReadingType xmlns:espi="http://naesb.org/espi">
  <espi:accumulationBehaviour>4</espi:accumulationBehaviour>
  <espi:commodity>7</espi:commodity>
  <espi:flowDirection>1</espi:flowDirection>
  <espi:intervalLength>2592000</espi:intervalLength>
  <espi:kind>58</espi:kind>
  <espi:phase>0</espi:phase>
  <espi:powerOfTenMultiplier>-3</espi:powerOfTenMultiplier>
  <espi:uom>119</espi:uom>
</espi:ReadingType>
</content>
</entry>

```

Response from Interval Reading

```

<espi:IntervalReading>
  <espi:ReadingQuality>
    <espi:quality>17</espi:quality>
  </espi:ReadingQuality>
  <espi:timePeriod>
    <espi:duration>300</espi:duration>
    <espi:start>1767248400</espi:start>
  </espi:timePeriod>
  <espi:value>232</espi:value>
</espi:IntervalReading>

```

UOM (uom): 119

→ Volume, cubic feet (ft³)

PowerOfTenMultiplier: -3

→ Indicates that the raw value must be scaled using 10⁻³ (Milli)

IntervalReading value: 232

→ Raw integer value reported by the meter

So, Based on the calculation Actual value is $232 \times 10^{-3} = 0.232 \text{ ft}^3$

Response from Summary Bill

```
<espi:overallConsumptionLastPeriod>  
  <espi:powerOfTenMultiplier>0</espi:powerOfTenMultiplier>  
  <espi:uom>72</espi:uom>  
  <espi:value>4488000</espi:value>  
</espi:overallConsumptionLastPeriod>
```

From the above we see,

- **UOM:** 72 → Watt-hours (Wh)
- **powerOfTenMultiplier:** 0 → No scaling
- **Raw value:** 4,488,000

Calculation

$$4,488,000 \times 10^0 = 4,488,000 \text{ Wh}$$