OEB
Green Button - IWG

Independent (Industry-led) Working Group for the implementation of Green Button in Ontario

Co-Chairs: Eddie, Gary, Jeremy

IWG - Agenda for Today

- **OEB Staff Greeting**

- **Co Chairs - Eddie, Gary, Jeremy**

- **Administrative** (how is this going to work) – 5 minutes

- Review Sub Working Group Content

Administrative - General

- Our next meeting. One in August
- Etiquette. Be respectful and Asking Questions state company & name
- Best Practices - (at end of slide deck) represents the recommendation that the IWG will be making to the OEB. Any iterum conversations with the OEB does not represent approval/rejection of the "best practice"
- Next Meeting : Final submission for IWG document inclusion from Sub Working Group and Other priority items.
- IWG document is being worked on, draft to be delivered to OEB by early August (to include FAQ's and Best Practices and other material). Template review in this meeting
- Use of information with IWG - Public material - Under OEB Review

Independent Utility only (IUWG)
Sub - Working Group

- Co-Chairs Steve / Carrie / Warwick
- Separate Agenda / Discussion from Chair
  - Discuss / Provide Best Practices recommendations, Q&A, Issues list

Material may be provided at meeting

User Experience Sub-Working Group (IUXWG) (Mondays)

- Co-Chairs Michael / Karen
- Separate Agenda / Discussion from Co-Chairs
  - Discuss / Provide Best Practices recommendations, Q&A, Issues list

Material may be provided at meeting

Best Practices IUXWG / ITWG #12: Detailed handling of Account Information selection during authorization process - For Approval

Recommendation: The customer authorization screen should indicate to the customer the type of Account Information the Third Party application is requesting, as each scope parameter Function Block value requests different types of customer information. **See examples on the following slides.**
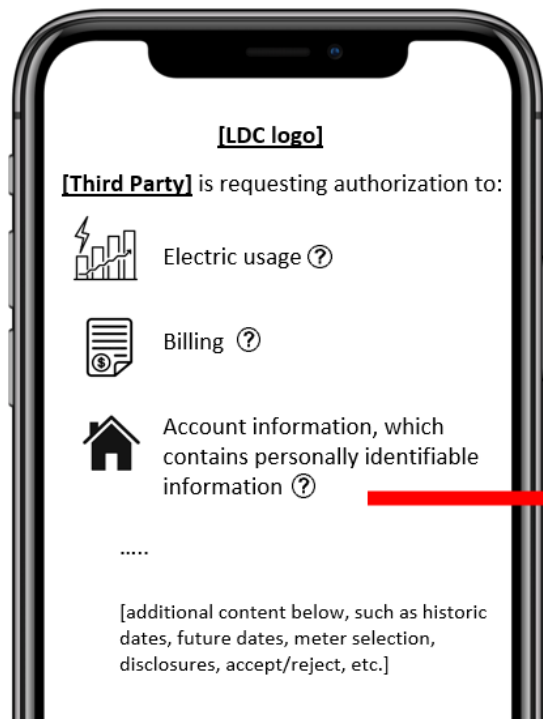
Why?

Since the Third Party may only be interested in some of the customer's Account Information, the customer should be aware of the type of Account Information being requested before they authorize the Third Party application access.
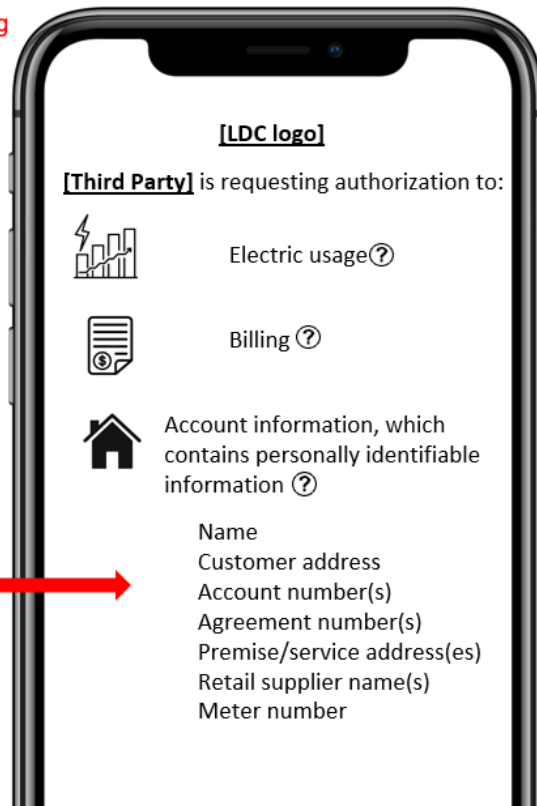
The customer may not want to provide the Third Party application with access to some Account Information being requested and should be able to selectively deny access based on the type of Account Information being requested by the Third Party application (note: if "noedit" is not selected by the Third Party).

ITWG #12 – example #1

Note: "noedit" <u>**has**</u> been chosen by the third party in this example, meaning that customers cannot modify the items, i.e. there are no checkboxes.
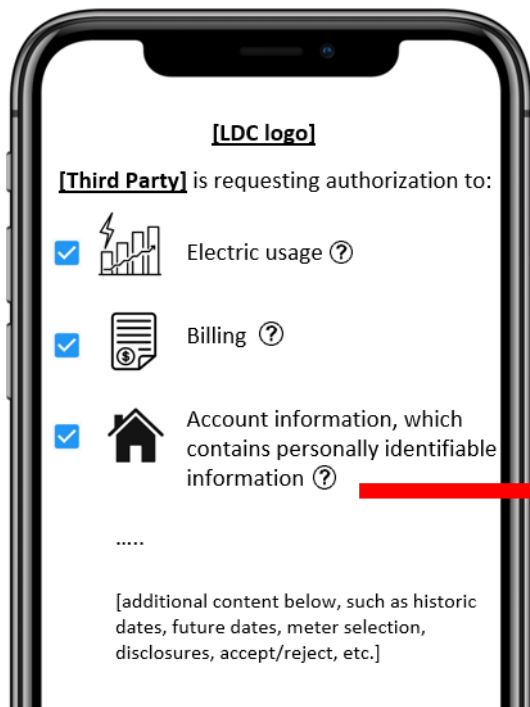

[LDC logo]

[Third Party] is requesting authorization to:

Electric usage ⑦

Billing ⑦

Account information, which contains personally identifiable information ⑦

.....

[additional content below, such as historic dates, future dates, meter selection, disclosures, accept/reject, etc.]

Expands when "?" clicked

[LDC logo]

[Third Party] is requesting authorization to:

Electric usage⑦

Billing ⑦

Account information, which contains personally identifiable information ⑦

Name
Customer address
Account number(s)
Agreement number(s)
Premise/service address(es)
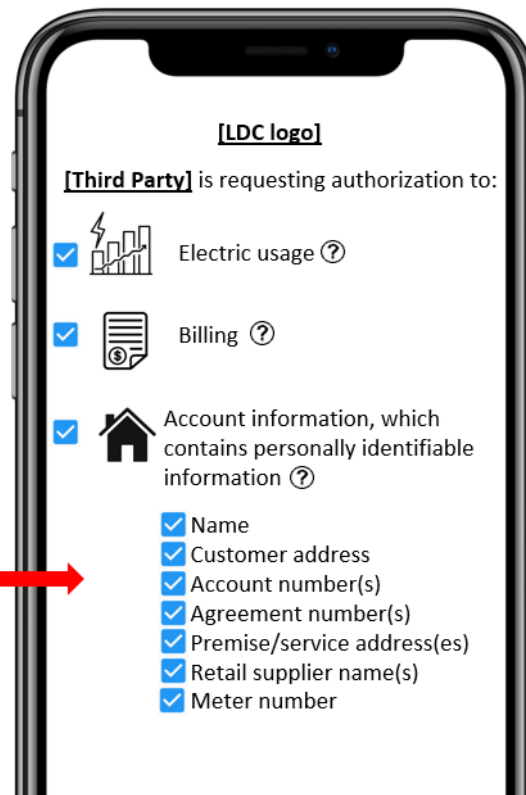Retail supplier name(s)
Meter number

Only the items requested by the third party will be shown here.

ITWG #12 – example #2

Note: "noedit" has **NOT** been chosen by the third party in this example, meaning that customers **CAN** modify the items.

[LDC logo]

[Third Party] is requesting authorization to:

☑ Electric usage ?

☑ Billing ?

☑ Account information, which contains personally identifiable information ?

.....

[additional content below, such as historic dates, future dates, meter selection, disclosures, accept/reject, etc.]

Expands when "?" clicked →

[LDC logo]

[Third Party] is requesting authorization to:

☑ Electric usage ?

☑ Billing ?

☑ Account information, which contains personally identifiable information ?

☑ Name
☑ Customer address
☑ Account number(s)
☑ Agreement number(s)
☑ Premise/service address(es)
☑ Retail supplier name(s)
☑ Meter number

Best Practices IUXWG #10: Standardized Letter of Authorization - Non-Consensus

Recommendation: In order to support large, multi-site customers, LDCs should accept a standardized letter of authorization (LOA) so that customers can fill out a single form and send it to multiple utilities for processing.

Why?

A standardized form provides (i) significant administrative efficiencies to larger customers spanning multiple utilities and (ii) consistency across Ontario's electricity providers

Opposing views

Utilities believe manual authorization forms should only be supported for customers without internet access, and a large volume of LOAs will become unmanageable and distracting from the core web-based Green Button

Utilities believe it is impractical to standardize the form given that each utility may have unique authentication requirements and legal terms and conditions

Technical Sub-Working Group (ITWG) — (Mondays)

- Co-Chairs Ryan / Don
- Separate Agenda / Discussion from Co-Chairs
  - Discuss / Provide Best Practices recommendations, Q&A, Issues list

Function Block Mapping Diagram - For Approval
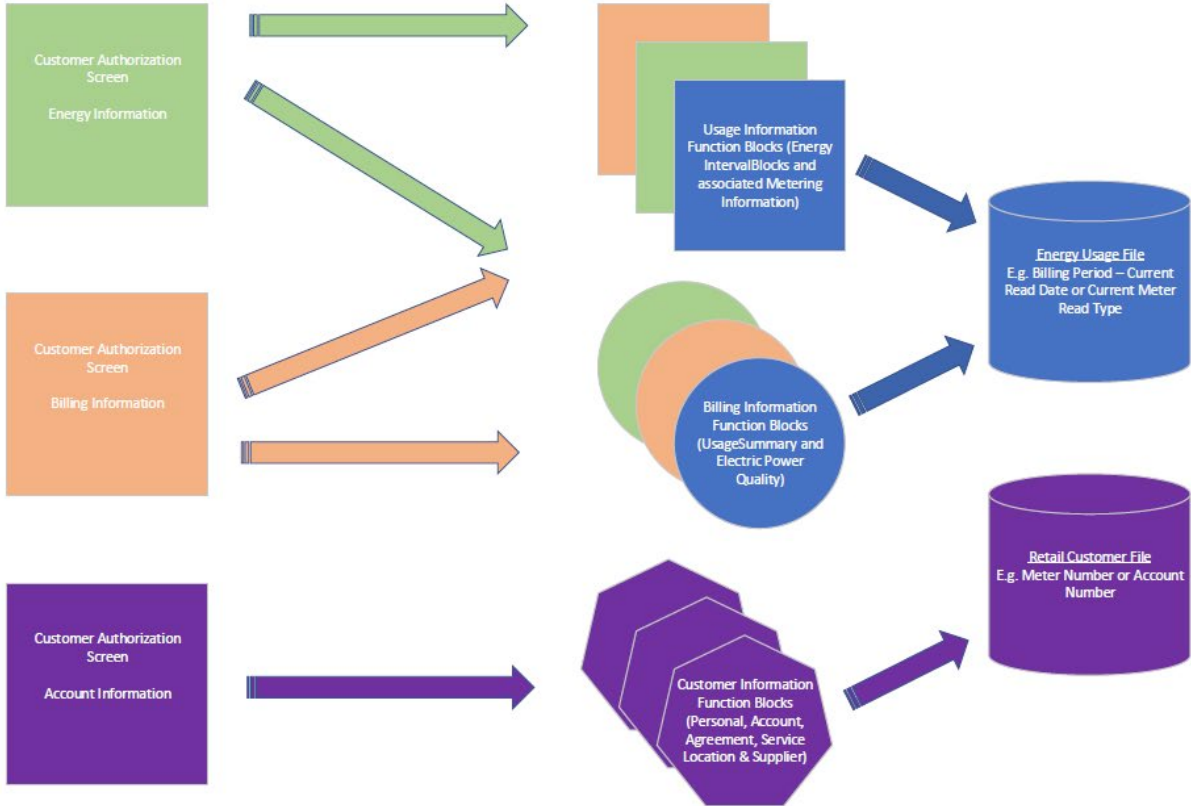
Function Block Mapping

For review and Approval

Bill Mapping

DMD & CMD Data Element Certification Requirements

ITWG-led FAQs (Technical)

- FAQs are provided to the Working Groups and Public for reference.
- FAQs are not an exhaustive list but are there to assist the industry.
- FAQs will be expanded on, added to, or changed from time to time as information evolves.
- FAQs are outputs from the IWG and should be considered as guidelines from the Industry.
- If a party sees that the FAQs are not correct or need revision, please contact the Co-Leads of the IWG.

Technical-Subgroup FAQs

Should the UUID be something common for all utilities?

- UUID values should be unique (to maintain anonymity) and MUST comply with [RFC 4122] *version 3* or *5* formatting requirements . Each ESPI resource (UsagePoint, ReadingType, Customer, etc.) is assigned a UUID value, which must always remain the same so vendors can match datasets.

Will we get handholding to understand the ESPI standard?

- Yes. It is the intent of the Technical Working Group to assist in understanding the ESPI standard.

Files we received are .xsd files. How can they be opened?

- .XSD files can be viewed using a browser or open-source XML file viewing tool (Notepad++, Code Browser, Microsoft XML Notepad, XmlPad).

Is there a privacy concern regarding 3rd parties having access to whether a customer is on OESP as presented on the bill? Does it need explicit consent?

- This should be addressed by the utility's privacy policy and explained as part of the authorization process.

Technical-Subgroup FAQs

Do we need only the REQ.21 standard or the entire 3.3 version?

- *Version 3.3* refers to the latest available version of the NAESB REQ.21 ESPI (a.k.a. Green Button) standard.

What are we looking to solve in these meetings when we're mostly going to be engaging third parties to implement Green Button?

- As the utility, you should understand the technical elements of the standard such that if your implementation vendor has questions, you can help clarify the requirement.

How do we report loss adjusted data?

- The NAESB ESPI standard provides a means to report loss adjusted data. The Technical Subgroup will provide guidance.

Must utilities include deposit information on-hand on the bill?

- Not unless it is commonly provided to the customer on the bill or online portals.   See ITWG recommendation #1.

Technical-Subgroup FAQs

For bundled charges on the bill, the regulation states that we may provide a breakout where possible. Do we have to provide this or just provide what is on the bull (summed up)?

- The breakout is not a requirement, unless the distributor provides this information today in the normal course of business. If you can supply it, the standard supports it. See Technical-Subgroup Recommendation #1.

How is BR scope parameter used (real example)?

- No real use case has been defined for the use of the BR scope parameter.

How far back in time do we need to provide historical data?

- 24 months from the time of request, or as much account and usage history is available at time of request if less than 24 months

Which block or objects Gas Usage and Utility Bill referred to in the schema? (In ESPI retail customer schema pdf document on page 21, 22. Need more clarification).

- Function Blocks 4, 10 and 15 for UsageSummary. 51-63 for Account Information.

Overall Independent Industry-led FAQs

- FAQs are provided to the Working Groups and Public for reference.
- FAQs are not an exhaustive list but are there to assist the industry.
- FAQs will be expanded on, added to, or changed from time to time as information evolves.
- FAQs are outputs from the IWG and should be considered as guidelines from the Industry.
- If a party sees that the FAQs are not correct or need revision, please contact the Co-Leads of the IWG.

General FAQs

Do I need to Buy the Standard?

- If you are an Ontario Electric or Natural Gas Utility or a vendor using the standard. YES. Also see NAESB Copyright

Where Can I find the Ontario Regulation?

- O. Reg. 633/21: ENERGY DATA

Can we do Bulk Registration?

- For a single utility YES GB -related. Across utilities NO. Section 3 (1) of the Regulation sets out that it is the account holder that may authorize the utility to share data with a third-party. The utility must be able to identify that it is the actual account holder that is making the request.

Where can I find OEB staff guidance related to Green Button implementation in Ontario?

- OEB Green Button Implementation

FAQs

When Do the Utilities have to have their systems Operational and Certified by GBA?

- Regulation states November 1, 2023

Does the ESPI (GB) standard handle Line Losses?

- Yes, there are fields for Line Losses.

Who needs to get Certified by the Green Button Alliance?

- All Ontario Utilities within the Regulation. Completed by November 1, 2023

How many options are there for Reading Quality (for the metered intervals)?

- There are 14 options and more can be proposed, if needed. This FAQ has been corrected (April 28) from the 19 originally stated (incorrectly).

FAQs

Is historical data required for former customers of a Utility?

- Utilities are not required to pass data on to previous customers even if they move within the Utility.

How Many times do I as a Utility need to certify?

- If they are separate platforms or tested separately you will have to pay separately (same time and using the same engine).

What is the cost of GBA Certification?

- DMD Cert+Test is US$3,000.
- CMD Cert+Test is US$3,200.
- The cost of DMD+CMD Cert+Cert+Test is US$3,700.

What consumption data will be made available by Utilities through GB: *e.g. unadjusted (metered) or adjusted (after application of Total Loss factor)***?**

- The Standard does hold these data sets. Each Utility is required to determine what data is available .

FAQs

Is DMD different than existing Green Button download available to customers right now?

- Most legacy Ontario GB DMD was not certified by Green Button Alliance. Likely, it will not be complaint. Reminder: the Ontario Government requires version 3.3 of NAESB ESPI.

How much time do utilities have before sending responses to a third party for the request of data?

- The IWG is setting out Best Practices. These will be worked on through industry engagement and activities through Sub Working Groups.

What is involved in GBA certification testing?

- Look on the GBA website https://www.greenbuttonalliance.org/testing for more information. It is part of Ontario's regulation requirement.

Do I need the NAESB v3.3 ESPI Standard to take part in the IWG or sub working Groups?

- No but you may need to purchase the Standard as required by regulation, law and or copyright requirements. The IWG is not the NAESB. We need to conform to the same rules as others (as required by laws and or Regulations).

FAQs

How will market wide "Best Practices" be produced and managed?

- The IWG will provide best practices. The outcomes of these best practices will be a result of a joint effort between the IWG and the Sub-Groups.

How do we deal with Privacy and Cyber Security as a Utility?

- The Standard is capable of managing interaction between the Utility and the Green Button User. Utilities still take on responsibilities as normally required.

How do we deal with Privacy and Cyber Security as a Vendor or third party?

- Your requirements are unchanged. Please refer to Government policies, regulations and guidelines.

For bundled charges on the bill, do Utilities have to provide this or just provide what is on the bill (summed up)?

- Breakout is not a requirement, unless the Utility provides this information today in the normal course of business. Providing the breakout in an one-off discussion with a customer, is not considered normal course of business.

FAQs

Can Vendors be GBA Certified?

- The GBA certification process is for Utilities. A Vendor to a Utility can be GBA Certified but Utilities using their products must still get certified.

When Can Utilities become GBA Certified?

- Utility implementations can enter the queue now; testing is live and being performed to ESPI v.3.3 with both Usage and Retail Customer Data components.

Where can I get Best Practices for Ontario Green Button implementation?

- The IWG is setting out Best Practices. These will be worked on through industry engagement and activities through Sub Working Groups.

Would it be helpful to have a centralized authorization/ authentication solution, where there is a single place for all utility customers / third parties in Ontario?

- It is not part of the existing implementation and is not a requirement under the regulation.

FAQs

Besides Utilities and Vendors to Utilities, what's NAESB's rule on when to obtain the standard?

- See the next Slide...

Can a utility deny a third party because they don't meet the requirements of the Utilities Terms and Conditions?

- Yes. but if T&C were overly restrictive or unduly punitive, 3rd parties can escalate to OEB through IRE system.

What happens if Utility A accepts a 3rd party and Utility B rejects them?

- If the third party has concern of a Utility rejecting them, they can go through IRE system to engage the OEB.

Besides Utilities and Vendors to Utilities, what's NAESB's rule on when to obtain the standard?

' *The NAESB copyright most definitely extends to third parties/vendors that would need access to the standard to produce Green Button / ESPI streams or files.*

We have segments in each of our quadrants for service companies and many member service companies that provide support [to] *the utilities, transmission providers, pipelines, local distribution companies, etc.*

At the very least, if a company/ individual is offering a "product/service" that conforms to the standard, then we expect the company/individual to have valid legal access to the standard. '
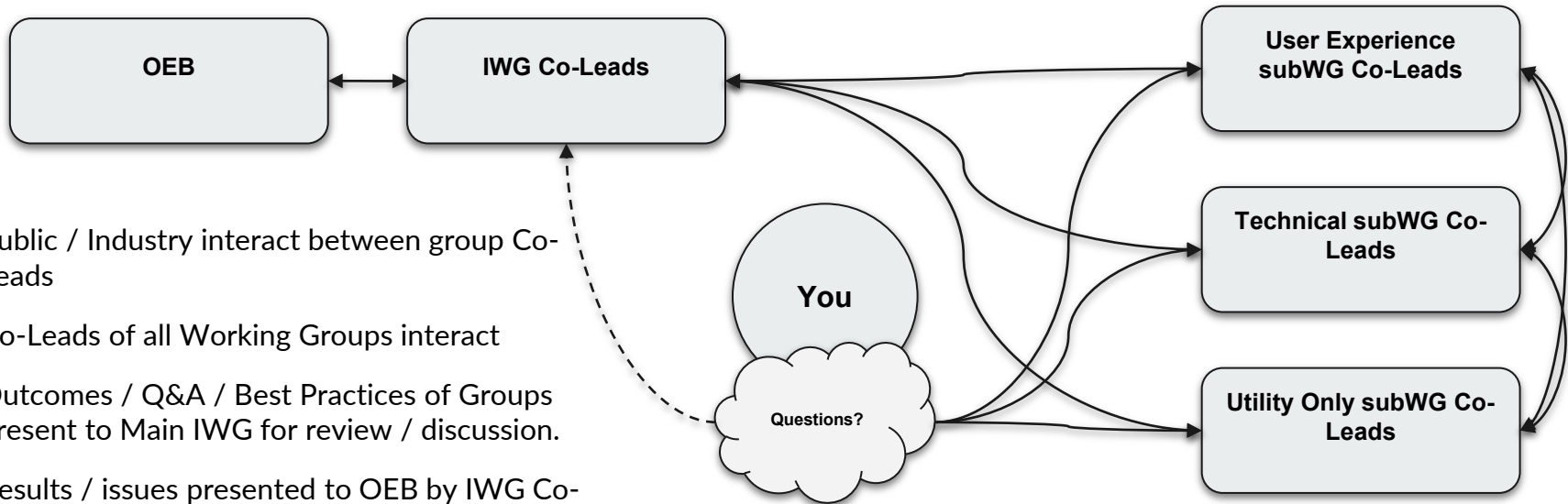
— Jonathan Booe, North American Energy Standards Board

IWG - Best Practices

○ The Following
- Are Best Practices that have been reviewed by the IWG
- Will be recommended to the OEB as IWG Best Practices

Inter-Working group Communications

- Public / Industry interact between group Co-Leads
- Co-Leads of all Working Groups interact
- Outcomes / Q&A / Best Practices of Groups present to Main IWG for review / discussion.
- Results / issues presented to OEB by IWG Co-Leads

OEB

IWG Co-Leads

User Experience subWG Co-Leads

Technical subWG Co-Leads

You

Questions?

Utility Only subWG Co-Leads

Best Practice Template (Sub Group ID)- No Consensus: - **For Sub working Group Co- Chairs to use for IWG Non agreement**

Recommendation: 'XXXX

Why?

1. XXX
2. XXX
3. XXX

Reason for no Consensus:

Note: It is preferred that all Best Practices be discussed at this IWG first and the Sub Group Co-Chairs attempt to get unanimous agreement first. Before submitting a No Consensus Best Practice

Best Practice is Defined Consensus - IWG

A guideline that is known (as shown by research and/or experience) to produce good or optimal outcomes if followed. A course of action that represents the most efficient or prudent course of action in a given business situation.

As this is the first iteration of Green Button in Ontario, these best practices draw from previous experience with similar systems or lessons learned from other jurisdictions.

The GB IWG will recommend the implementation of these best practices where LDCs are able to do so without undue burden or interfering with their other legislative/regulatory responsibilities, or where it contradicts other Utility Best Practices.

Best Practices Recommendation #1 IUWG Consensus - IWG

Recommendation: Utility Grid work / Service Outage information Requirements is not within scope of the Ontario Green Button implementation.

Why?

1. Outage information varies from one utility to the next, and not all utilities have software systems dedicated to the automated management of outage notifications
2. Outage information is provided to customers via existing channels, for example My Account customer portals and through social media.
3. Outage information is not identified within the NAESB ESPI standard

Best Practices Recommendation #2 IUWG Consensus - IWG

Recommendation: Providing Weather Data in Green Button format for Electric or Gas Utilities is not within scope of the Ontario Green Button implementation.

Why?
1. Weather data is provided on some customer portals, but the utility is not the source of this data, and it is not stored in the Utility systems. It is generally a real time API interface with Pelmorex (The Weather Network).
2. Providing weather data would add complexity and cost to the Green Button solution.

Best Practices Recommendation #3 IUWG
Not Required

Recommendation: Providing TOU to Tiered comparison in Green Button format is not within scope of the Ontario Green Button implementation.

Why?

1. Bill comparison between Tiered and TOU rates is a complex data analysis process. The algorithm calculates the cost differential based on a customer's historical usage at the current Tiered and TOU rates.
2. Green Button data being provided will allow a third party to develop the same features in their application if this is something that would add value to their product.
3. Consumers have existing tools to see a bill comparison, through the OEB rate comparison tool, or via existing Utility customer portals

Best Practices Recommendation #2 ITWG
Consensus - IWG

Recommendation: 'With respect to data request performance, the consensus is that "Historical Requests" would be processed by utilities as soon as possible based on current processing load. This means that it is expected that requests would be fulfilled near real-time or within a few hours if the request came at a peak time (precluding outage windows).'

Why?

1. There is a mechanism to alert 3rd parties to new data being available from a utility; therefore, it is expected that large data requests are not needed on a regular basis
2. Most utility systems utilize a batch cycle process, which means that data does not change, or is not made available on a continuous basis and therefore, does not require real-time response
3. Data integration methods for some utilities may be predicated on other 3rd parties (e.g. IESO MDM/R)

Best Practices Recommendation #4 IUWG:
Consensus - IWG

Recommendation #4: Under the Green Button Regulation, distributors are required to make energy usage and account holder information available in Green Button format. As a general principle, the information to be made available is information identified in the NAESB ESPI standard, and where the utility is the authoritative source of the data that is collected and made available to its customers in the normal course of its operations

Why?

1. Data requirements that are outside of the scope of Green Button could necessitate a utility having to make changes to their operational practices, with limited or no cost recovery.
2. Data that is not identified in the NAESB ESPI standard, cannot be provided within the context of the NAESB standard XML schemas.
3. Aside from commodity costs that Distributors bill and collect from consumers on behalf of Electricity Retailers, providing any third-party charges that appear on the bill but do not originate from the utility should not be considered within scope of the Ontario Green Button implementation.

Best Practices Recommendation #6 IUWG:
Consensus - IWG

Recommendation #6: Maintenance windows. Utilities should make best efforts to notify external parties of regularly scheduled maintenance windows, that would impact the ability of apps to retrieve data. Unscheduled emergency maintenance is not included in the notification process.

Why?

1. Will allow third parties to schedule routine maintenance to coincide with Utility maintenance windows, minimizing impact to consumers.
2. Third party vendors can communicate with consumers if the schedule is known in advance
3. The priority during emergency outages or outages outside of the Utility's control is on returning systems to normal operations.

Best Practices Recommendation #5 IUWG:
Consensus - IWG

Recommendation #5: Customer Notifications. Where the account holder has provided a valid email address, Utilities should send an initial authorization confirmation by email, but thereafter are not required to send periodic reminders to customers about the third parties they have authorized.

Why?

- The authorization form should advise the customer that third parties will have access to their data until such time as the customer revokes the authorization and advise the customer that they can revoke the authorization at any time.
- Customers should receive a confirmation by email after a successful authentication and authorization. This communication will allow the customer to review and validate their actions.
- Customers should be able to see which third parties they have authorized via the existing online customer portal, with links to documentation on how to amend or rescind an authorization.
- Notifications should align with utility current best practices to avoid customer confusion.

Best Practices Recommendation #6 IUWG:
Consensus - IWG

Recommendation #6: Real-time account balance information is not within scope of the Ontario Green Button Implementation.

Why?

- Utility CIS systems do not store a running account balance. The customer's current balance is calculated 'on the fly'.
- It is sufficient to provide the information that shows on the last published bill, i.e., Amount Owing.

Best Practices Recommendation ITWG
Consensus - IWG

Recommendation #3 : Electric consumption in IntervalBlocks should be reported as per the definition in the Retail Settlement Code, section 11.3

Why?
- This will provide consistency for all users of the data and ensure they do not have to adjust different periods of time or between data sets
- It will ensure consistency in how data is supplied by Green Button as compared to EBT purposes.

Best Practices recommendations from ITWG
Consensus - IWG

__Recommendation #4__: Pre-printed/pre-formatted information that is supplied as part of the utility bill but is static or mandatory in nature (e.g. HST registrant number, bill terminology definitions, E&OE terms, etc.) does not have to be supplied within the Green Button data loads.

__Why?__
- This information is standard for all of the customers in a given utility and may not be in electronic form (e.g. may be on pre-printed paper stock or pre-formatted design templates for e-bills)
- The information is not specific to each customer's account or energy usage
- The information is not relevant to 3rd parties consuming energy or account data for analytics purposes
- The information is available publicly through other means (e.g. "What does my bill mean" examples on utility websites) or to the customer directly through their regular bill

Best Practices recommendations approved by IUXWG
Non Consensus

<u>**Recommendation #1**</u>: A best practice is for LDCs to prevent inadvertent termination of data flows due to meter changeouts and "legitimate" account number changes (e.g. CIS upgrades).
<u>**Why?**</u>

- In the past, some commercial customers with hundreds/thousands of meters have experienced revocations of data-sharing without their knowledge
- Several LDCs are planning imminent upgrades to their CIS, and customers want to ensure their data-sharing is as seamless as possible

Non- Consensus Reason
- GB users also want the best practice to apply to utility mergers. Their rationale is that the administrative burden of ensuring continuity of consumption data should be the LDC's responsibility, not the customers'.
- LDCs disagreed, saying it is not always technically possible.
- IUXWG requests OEB guidance with additional input from all interested parties.

Best Practices recommendation from IUXWG & ITWG Consensus - IWG

<u>**Recommendation # 2**</u>: In Green Button Connect My Data, the customer experience begins at the third party's website. Then the user is redirected to the utility. If the customer is not already logged in to the utility, the customer must first authenticate, using the utility's standard procedure(s). Once authentication is successful, then the authorization screen should be one web page. Finally the user is redirected to the third party's website to complete the transaction. **Why?**
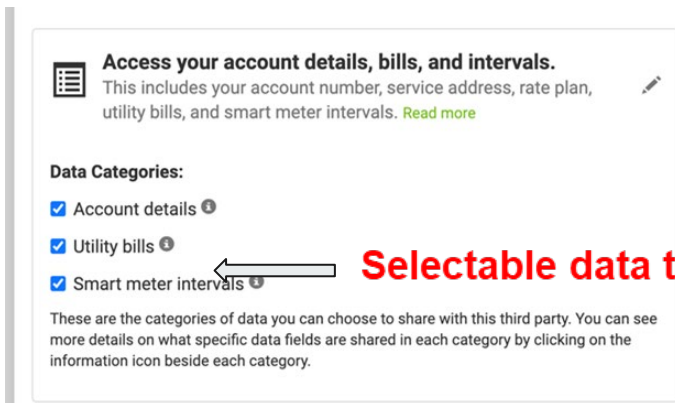
- In other jurisdictions, utilities designed very different user journeys without standardization
- Failing to be specific at the outset about the customer "flow" can result in customer confusion and wasted effort
- The latest GBCMD standard requires that customers begin the journey on the third party site

Best Practices recommendations from IUXWG Consensus - IWG

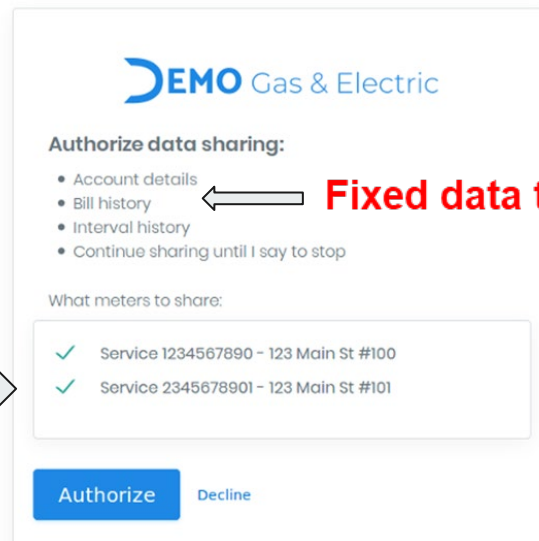**Recommendation #3**: Take it or Leave it.

Access your account details, bills, and intervals.
This includes your account number, service address, rate plan, utility bills, and smart meter intervals. Read more

Data Categories:
- ☑ Account details ⓘ
- ☑ Utility bills ⓘ
- ☑ Smart meter intervals ⓘ

These are the categories of data you can choose to share with this third party. You can see more details on what specific data fields are shared in each category by clicking on the information icon beside each category.

Selectable data types

DEMO Gas & Electric

Authorize data sharing:
- Account details
- Bill history
- Interval history
- Continue sharing until I say to stop

Fixed data types

What meters to share:

✓ Service 1234567890 - 123 Main St #100

✓ Service 2345678901 - 123 Main St #101

Authorize Decline

Meters/services are always selectable

Best Practices recommendations – approved by IUXWG & ITWG Consensus - IWG

<u>Recommendation #3</u>: **General description:** LDCs should support the concept of "take it or leave it" scopes of authorization that are presented to customers. Data types should be selectable or unselectable by the customer depending upon the third party's dynamic selection. (Note: This would not apply to meter/service selection, which must always be chosen by the customer.) See examples in previous slide.

Technical description: LDCs should support "noedit" as a parameter in "AdditionalScope." The third party may or may not include "AdditionalScope" in its authorization request, but if included, LDCs should honor it, making the data types fixed and unchangeable by the customer.

<u>Why?</u>

- If a third party requires, for example, 24 months of usage history to deliver their product, it doesn't make sense for the customer to unknowingly reduce the history to 3 months, rendering the product non-functional. (Note: if the customer moved in only 2 weeks ago, then only 2 weeks of history will be provided regardless.)
- A frustrating user experience would result in a back-and-forth between LDC and third party if the authorized scope is not sufficient for particular product being offered
- Other jurisdictions (California, New York) have adopted "noedit" as a best practice for this reason

Recommendation #4: Vocabulary of scope selection
Consensus - IWG

<u>Recommendation #4</u>: The presentation of data elements included in the customer authorization screen should be consolidated and standardized into the following categories:

o   "Electric usage"

o   "Gas usage"

o   "Billing"

o   "Account information, which contains personally identifiable information"

Additional explanation should be available with a ❓ icon, beside each item named above, with a more detail.

Note: Only the categories requested by the third party will appear. E.g., if "Billing" is not requested, it will not appear.

<u>Why</u>?

o   Reflects identified best practices in other jurisdictions

o   This will allow standardization in terminology between different utilities across the province

o   Provides clear, concise, consistent verbiage for customer authorization process in defining the data being shared

Example of electric-only utility:
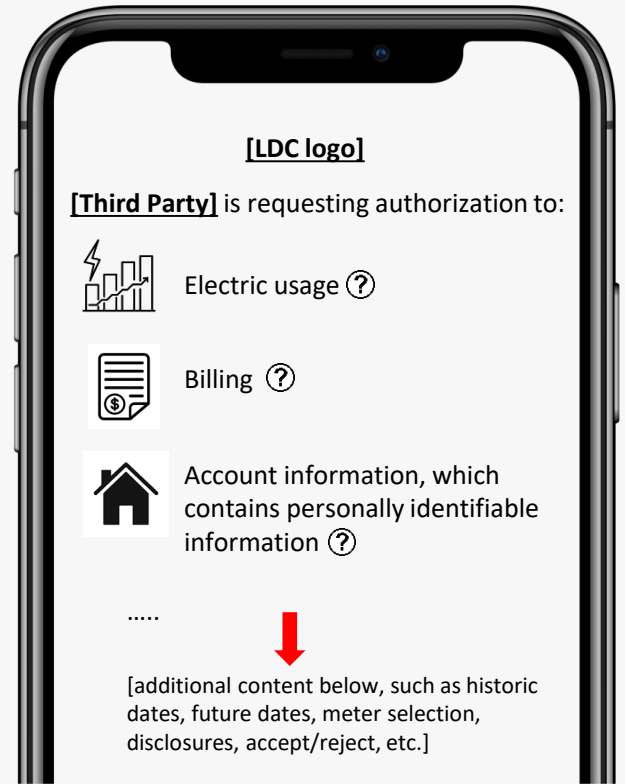
Best Practices Recommendation #7.1: alternate authentication Consensus - IWG

The Utility should provide an alternative digital process wherein a customer visiting the website will have the ability to identify themselves without requiring creation of an online account in the Utility's customer portal. The personal information required to establish identity should be consistent with the Utility's standard practices.

Why?

- Some customers who wish to share their data in Green Button format with a third party will not have an online account (My Account portal), nor a desire to register for one.
- Digital processes can be designed to accommodate an accountholder sharing their data via a "one-time login" or something similar.
- Establishing identity in this manner should not be more onerous than establishing identity in creating a "My Account," i.e. the personal information required should be consistent between these two methods.

Example of PG&E's one-time access. This is just an example.

Best Practices #7.2: offline authorizations - Consensus - IWG

 For customers without internet access, the Utility should establish both telephone and/or paper form-based processes whereby a customer can grant a data-sharing authorization (or revocation). For technical implementation of this recommendation, OAuth2.0 standards shall be followed, consistent with ITWG guidance. * In the case of telephone authorizations, Utility staff should assist the customer to meet the authentication and authorization requirements. (The intent of this recommendations is not to resolve or address the mechanism of bulk authorizations.)

* Telephone or paper methods will be available based on customer type following standard Utility practices. For example, Utilities may prescribe paper forms for large commercial customers but support telephone authorizations for residential customers.

Why?

- Green Button is a digital tool; however, we anticipate a small number of customers who do not have Internet access, will want to share their data with third parties. To ensure confidentiality and accountability in a telephone call, this is best handled by the Utility staff, who have access to the customer's information.
- Business customers may want to use paper forms to ensure that internal approvals are correctly obtained.

Bad Actors & Notifications - Discussion for Best Practices #8:

Issue: informing organizations/residential customers about bad actors
- What is the notification mechanism that a third party is a bad actor?
- What is the notification mechanism when a bad actor has been "reformed"?

Escalation model from other jurisdictions:

Proposal: Suspicion of wrongdoing (that falls short of third party suspension) should not trigger customer notifications. Suspension should trigger notification to third party. Termination triggers notifications to affected customers, third party. A "redeemed" third party should trigger notifications to third parties & affected customers.

Best Practices #5 - ITWG: Detailed Handling of Consent Form Rendering with 3rd Party Input - For Approval

Recommendation: If the OAuth 2.0 Authorization Server Authorize Endpoint request contains a scope parameter 'additionalScope=noEdit' element the customer should only be allowed to Deny or Authorize the request. They should not be able to make any modifications to the request on the Authorization screen.

Why?

- The use of the 'additionalScope=noEdit' element in the scope parameter indicates the data being requested is required by the Third Party application to function properly.
- Any additional data the customer Authorizes violates the OAuth 2.0 access token standard by granting the Third Party more authorization than they have requested.
- Any additional data the customer Authorizes the Third Party beyond what they are requesting will not be used by the Third Party application and may cause software issues
- Any reduction of the requested data by the customer likely will limit or prevent the Third Party application from properly functioning

Best Practices #6- ITWG: Detailed Handling of Appearance of "billing information" on Consent Form- For Approval

Recommendation: If the OAuth 2.0 Authorization Server Authorize Endpoint request does not contain scope parameter Function Blocks 15, 16, 27 or 28 (i.e. billing information function blocks), the customer's Authorization screen should not allow them to add or modify the Billing Information checkbox.

Why?

- The lack of any billing information function blocks in the scope parameter indicates the Third Party is not interested in Billing Information
- Addition of Billing Information by the customer violates the OAuth 2.0 access token standard by granting the Third Party more authorization than they have requested
- Addition of Billing Information by the customer provides additional data the Third Party application will not use and may cause software issues

Best Practices #7- ITWG: Detailed Handling of Appearance of "account information" on Consent Form- For Approval

 Recommendation: If the OAuth 2.0 Authorization Server Authorize Endpoint request contains a scope parameter without a Retail Customer Function Block (e.g., 51, 53-70) element, the customer's Authorization screen should not allow them to add or modify the Account Information checkbox

Why?

- The lack of Retail Customer Function Block elements in the scope parameter indicates the Third Party is not interested in Account Information
- Addition of Account Information by the customer violates the OAuth 2.0 access token standard by granting the Third Party more authorization than they have requested
- Addition of Account Information by the customer provides additional data the Third Party application will not use and may cause software issues

Best Practices #8- ITWG: Detailed Handling of Appearance of "Energy usage" on Consent Form- For Approval

Recommendation: If the OAuth 2.0 Authorization Server Authorize Endpoint request contains a scope parameter without an Energy Usage Function Block (e.g. 1, 3-12, 29, 34-40) element, the customer's Authorization screen should not allow them to add or modify the Energy Usage checkbox.

Why?

- The lack of Energy Usage Function Block elements in the scope parameter indicates the Third Party is not interested in Energy Usage information
- Addition of Energy Usage by the customer violates the OAuth 2.0 access token standard by granting the Third Party more authorization than they have requested
- Addition of Energy Usage Information by the customer provides additional data the Third Party application will not use and may cause software issues

Best Practices #9- ITWG: Detailed Handling of "account information" in Authorization Flow- For Approval

Recommendation: If the Customer removes Account Information from the Authorization screen before Authorizing access to the Third Party, the response from the Authorization Server Token Endpoint should not contain any Retail Customer Function Block values in the returned scope parameter, nor include a customerResourceURI element.

Why?

- The presence of a customerResourceURI element in the access token response provides the Third Party application greater authorization than indicated by the Customer
- The presence of Retail Customer Function Block values in the returned scope parameter provides the Third Party application greater authorization than indicated by the Customer

Best Practices #10- ITWG: Detailed Handling of "energy usage" in Authorization Flow- For Approval

Recommendation: If the Customer removes Energy Usage from the Authorization screen before Authorizing access to the Third Party, the response from the Authorization Server Token Endpoint should not contain any Energy Usage Function Block values in the returned scope parameter, nor include a resourceURI element.

Why?

-The presence of a resourceURI element in the access token response provides the Third Party application greater authorization than indicated by the Customer
-The presence of Energy Usage Function Block values in the returned scope parameter provides the Third Party application greater authorization than indicated by the Customer

Best Practices #11- ITWG: Detailed Handling of "billing information" in Authorization Flow- For Approval

Recommendation: If the Customer removes Utility Billing from the Authorization screen before Authorizing access to the Third Party, the response from the Authorization Server Token Endpoint should not contain Function Block 15, 16, 27 and 28 (i.e. billing information function blocks) values in the returned scope.

Why?

-The presence of billing information function block values in the returned scope parameter provides the Third Party application greater authorization than indicated by the Customer

IWG

Thank you for your participation

To reach out to the Co-Chairs - Email us