

Regulatory Proposal Notice:

Title: Regulatory Proposal for Province-Wide Implementation of Green Button

Update to Regulatory Proposal for Province-Wide Implementation of Green Button

The Ministry of Energy intends to extend the timing for bringing forward a proposed regulation to allow additional time for:

- development of implementation support documents informed by engagement with proposed working groups
- consideration of the feedback on the regulatory proposal received by stakeholders during the 54-day comment period.

Updates to the proposal as initially posted here on November 22, 2017, can be found below and include updates regarding the following:

- Timing for bringing forward a proposed regulation and its proposed in-force date
- Timing for proposed working groups to support the development of implementation support documents.

In addition, updates since November 22, 2017, can be found below regarding the following:

- Passage of the [*Stronger, Fairer Ontario Act \(Budget Measures\), 2017*](#), which included amendments to the *Green Energy Act, 2009* and the *Ontario Energy Board Act, 1998*
- Procurement of technical consulting services
- Status of Green Button Alliance's certification programs.

Description of Regulation:

The Ontario Ministry of Energy (ENERGY) is considering proposing a regulation to require electricity and natural gas utilities to implement Green Button Download My Data (DMD) and Connect My Data (CMD) by July 1, 2020. To implement Green Button, these utilities would be required to procure or develop a software platform and obtain Green Button DMD and CMD certification. Subject to any further required government approvals, the proposed regulation could come into force in early 2019.

The proposed regulation would be brought forward pending passage of proposed enabling legislative amendments to [*under the Green Energy Act, 2009 and Ontario Energy Board Act, 1998*](#) that were introduced by government on November 14, 2017 through Bill 177, *Stronger, Fairer Ontario Act (Budget Measures), 2017*. The proposed regulation would come into force on July 1, 2018, pending passage of the proposed enabling legislative amendments and approval of the regulation. In December 2017, the *Stronger, Fairer Ontario Act (Budget Measures), 2017* was passed, which, in part, introduced amendments to the *Green Energy Act, 2009* that enable Ontario to establish a regulatory framework for the province-wide implementation of Green Button Download My Data and Connect My Data.

A plain language description of the proposed regulation follows:

Definitions

Under the proposed regulation, ENERGY would seek to further define terms used in the proposed enabling legislative amendments. For example, ENERGY would seek to further define “energy” as electricity and natural gas, and an “energy provider” as a licensed electricity distributor or natural gas distributor. For greater clarity, ENERGY is considering further defining “natural gas distributors” as Enbridge Gas Distribution Inc., Union Gas Limited, **EPCOR Natural Gas Limited Partnership (formerly Natural Resource Gas Limited)**, Utilities Kitchener and Kingston Utilities. ENERGY would also seek to define “account holder” as a person or entity who has an account with an energy provider.

Through the proposed regulation, ENERGY would also seek to clarify the definition of “energy data” to align with all of the required data specified in the requirements for the DMD and CMD certification program.

Requirement to make energy data available

ENERGY would propose to require that energy providers make available to account holders all energy data necessary to meet the requirements for certification to Green Button DMD. At a minimum, this would mean providing account holders’ energy consumption quantities for discrete intervals. In addition, ENERGY would propose that energy providers make energy data available to third parties, subject to the consent of account holders, to meet the requirements for certification to Green Button CMD.

ENERGY would propose a deadline of July 1, 2020 for utility implementation of Green Button. Utility implementation would include the procurement or development of a software platform as well as obtaining Green Button DMD and Green Button CMD certification (see certification requirements outlined below).

Certification requirements

ENERGY would propose to require that energy providers obtain Green Button Data Custodian DMD certification and Green Button Data Custodian CMD certification through the Green Button Alliance (GBA) certification program.

Exemptions

Under the proposed regulation, ENERGY is considering exempting Hydro One Remotes Communities Inc., Attawapiskat Power Corporation, Fort Albany Power Corporation and Kashechewan Power Corporation from the proposed requirements due to the unique nature of their service territories and/or infrastructure.

Extensions

ENERGY would propose that the Ontario Energy Board (“Board”) may extend the time period as it determines is reasonable for when an energy provider would be required to comply with the proposed requirements. ENERGY would propose that an energy provider could seek an extension from the Board if there are technical or operational reasons or other special circumstances impacting the energy provider’s ability to meet the proposed requirements on time or cost-effectively.

Purpose of Regulation:

The purpose of the proposed regulation would be to mandate the implementation of Green Button DMD and CMD by electricity and natural gas utilities as the common standard for energy data and protocol for the secure transfer of energy data, upon authorization by the customer, to third parties of the customer’s choice.

The province-wide implementation of Green Button would be expected to:

- Support increased conservation and energy efficiency. Greater access to energy data is expected to encourage behavioural changes, such as reducing and shifting energy use, and energy efficiency retrofit improvements. In addition, allowing consumers to authorize the secure transfer of their data to a third party would facilitate the use of software and apps, making it easier for consumers to understand their energy data, and to identify opportunities for conservation and energy efficiency retrofits.
- Support energy reporting and benchmarking by removing barriers and reducing effort/cost for consumers who need access to their data to comply with O.Reg. 20/17 and O.Reg. 397/11 [under the Green Energy Act, 2009](#), which require large building owners and the broader public sector, respectively, to report annually on the energy consumption of their buildings. Because the energy data would be in a common format, software tools and apps could support the aggregation of data for multiple energy accounts, facilitating building-level reporting for multi-metered properties.
- Increase process efficiencies for consumers and third party service providers to access energy data from electricity and natural gas utilities.
- Reduce utility customer care effort and increase conservation program efficiencies and innovations for electricity and natural gas utilities (e.g. easier access to data to conduct audits and evaluate programs; innovations to existing programs based on increased consumer access to data).
- Create economic development opportunities by fostering the development of innovative and interactive energy management software tools and apps to make

the data available to customers in more engaging ways (e.g. gamification of energy data to drive greater customer awareness).

Other Information:

Background Information

Green Button Standard

Green Button is a data standard that can empower households and businesses with access to their utility data (i.e. Download My Data) and allow them to authorize the automatic, secure transfer of their own data from their utility to apps of their choice (i.e. Connect My Data).

Green Button originated in the United States as an industry-led effort that responded to a 2011 White House call-to-action to provide utility customers with easy and secure access to their energy usage information in a consumer-friendly and computer-friendly format.

In 2011, the North American Energy Standards Board (NAESB) published the Energy Services Provider Interface standard (ESPI), also known as the Green Button standard. Since that time, a working group of Green Button proponents and industry stakeholders have worked to evolve the standard developed new elements of Green Button implementation based on the experiences of early adopters. These new elements are expected to be proposed as an update to the NAESB ESPI standard this year. This “evolved” version is called the “Derived ESPI Implementation” and is managed by GBA. The Derived ESPI Implementation is used for Green Button DMD and CMD certification is based on the NAESB ESPI standard plus selected new elements, which is the basis for most and has been implemented by most utilities implementing utility implementations of Green Button DMD and CMD today.

Green Button is being adopted by utilities across North America. By adopting the Green Button standard, Ontario will be part of a growing North American market with access to energy management tools that use the Green Button standard.

Green Button Certification

GBA manages the certification program for Green Button DMD and Green Button CMD. Underwriters Laboratories (UL), a certification body based in the United States and accredited by the American National Standards Institute (ANSI), performs testing and verification services for GBA. Green Button DMD certification is currently available, and CMD certification is expected to be available by summer 2018 the end of the year. The DMD and CMD certification program is based on the Derived ESPI Implementation.

Green Button in Ontario

Through efforts since 2012, Ontario has become a leader in the implementation of Green Button in North America and was the first jurisdiction in Canada to announce the adoption of Green Button:

- Approximately 10 electricity utilities in Ontario have implemented Green Button DMD for their residential and small business customers, representing over 60% of Ontario's electricity customers. London Hydro has also implemented DMD for large commercial and industrial customers.
- Three electricity utilities (London Hydro, Whitby Hydro and Festival Hydro) have implemented Green Button CMD, and one electricity utility, Hydro One, has implemented CMD on a pilot basis for a segment of its customers.

The 2013 Long-Term Energy Plan (LTEP) promoted Green Button as a way to give consumers access to their electricity consumption data and connect with apps to help analyze and manage their electricity consumption. Green Button can also be applied to natural gas and water utility consumption data.

Between 2013 and 2015, ENERGY funded MaRS to coordinate a Green Button CMD Pilot to test the roll-out of the standard and Ontario's Reference Architecture. London Hydro successfully implemented Green Button CMD and Hydro One implemented CMD on a pilot basis.

In 2016, ENERGY consulted on a proposal to require Ontario's electricity, natural gas and water utilities to implement Green Button, and completed a cost-benefit analysis.

The cost-benefit analysis considered:

- Functional Option: DMD only (consumers could download their data from the utility website), both DMD and CMD (consumers would have the added capability to consent for their energy data to be shared with a third party of their choice).
- Utility type: Electricity, Natural Gas, Water.
- Implementation type:
 1. Single Integrated (hosted) – one hosted software platform for all utilities, incorporating one platform for each utility type.
 2. Multi-Integrated (hosted) – a limited number of hosted software platforms are used by all utilities.
 3. Non-Integrated (hosted) – each utility has the option to develop/procure its own hosted software platform.
 4. In-House – each utility develops its own platform on its own IT systems.

The cost-benefit analysis for the below scenario (electricity and natural gas utilities implement Green Button DMD and CMD through a multi-integrated approach)

concluded a net societal benefit:

- Combined DMD and CMD Implementation: the results show that implementing both DMD and CMD is more cost-effective, providing greater benefits than DMD alone.
- Electricity and Natural Gas Utility Implementation: the most cost-effective option is to implement Green Button for electricity and natural gas only.
 - Including water is also cost-effective from a societal level when combined with electricity and natural gas, but this is primarily because the benefits from implementing Green Button for electricity and natural gas outweigh the costs of implementing Green Button for water. The costs outweigh the benefits when considering water on its own.
- Multi-integrated (hosted) platforms: both single- and multi-integrated hosted options are equally cost-effective when implementing for electricity and natural gas utilities.

In June 2016, the 2016-2020 Climate Change Action Plan committed to expand the Green Button program province-wide to help more households and businesses conserve energy and water.

In the 2017 LTEP, Ontario reaffirmed its commitment to expand Green Button province-wide and announced its intention to propose legislation that would, if passed, allow Ontario to require electricity and natural gas utilities to implement Green Button DMD and CMD.

Additional Context for the Regulatory Proposal

Implementation of Proposed Regulation

In 2016, ENERGY consulted on a variety of implementation types (see above implementation types considered through the cost-benefit analysis). Under the proposed regulation, ENERGY would not intend to require a certain implementation type.

An energy provider would have the flexibility to choose the most cost-effective option for it to meet the requirement to make energy data available. An energy provider could choose to enter into a procurement process, contract or arrangement to acquire, use or develop a software platform – on its own or jointly with other energy providers to achieve greater economies of scale and cost efficiencies – or develop a software platform in-house.

Role of the Board

The proposed enabling legislative amendments, if passed, would enable the Board to use its existing authority and compliance mechanisms under the Ontario Energy Board Act, 1998 to ensure energy providers comply with the proposed requirements.

Under its existing authority, the Board would consider the need for changes to codes, rules and policies to facilitate the implementation of the proposed requirements.

An energy provider whose rates are regulated by the Board could seek to recover costs incurred to implement and administer Green Button through the existing rate application process, which is subject to the Board's existing requirements regarding economic prudence and cost-effectiveness. This approach would leverage the Board's established and transparent rate application process to ensure Green Button implementation costs are reasonable and in the interest of ratepayers.

Technical Working Groups and Documents to Support Implementation

ENERGY is seeking to procure technical consulting services to support the implementation of Green Button in Ontario. ENERGY posted a Request for Bids (RFB) "Request for Technical Advisory Services for Green Button Initiative" on BravoSolution from October 31, 2017 to December 1, 2017. ENERGY signed a contract with the successful bidder, Screaming Power Inc., on January 2, 2018.

~~Pending the passage of the proposed enabling legislative amendments and approval of the proposed regulation, the implementation support documents developed by the consultant would support the proposed regulatory requirement for electricity and natural gas utilities to implement Green Button. ENERGY posted a Request for Bids (RFB) "Request for Technical Advisory Services for Green Button Initiative" on BravoSolution on October 31, 2017. The RFB will be open until December 1, 2017.~~

The consultant ~~would~~ will be responsible for developing or updating a set of implementation support documents to guide Ontario electricity, natural gas and water utilities in implementing Green Button. ~~ENERGY is considering establishing three Technical Working Groups (one each for electricity, natural gas, and water utilities) to support the development and updating of these implementation support documents.~~

The implementation support documents are expected to include:

- Requirements Documents:
 - Documentation that provides an Ontario-specific interpretation of the existing elements of the Derived-ESPI Implementation, which would support consistent Green Button implementations across Ontario's electricity, natural gas and water utilities and compatibility with Green Button products and services.

- **Guidance Documents:**
 - Documentation that provides guidance for Ontario's electricity, natural gas and water utilities regarding how to implement Green Button DMD and CMD, including implementation steps, use cases and best practices.
 - These documents would support voluntary implementation by water utilities as well as provide guidance to solution providers (e.g. software design specification).

Pending approval of the proposed regulation, the implementation support documents would support the proposed regulatory requirement for electricity and natural gas utilities to implement Green Button.

Subject to any further required government approvals, ENERGY is planning to establish Technical Working Groups including representatives from the electricity, natural gas, and water sectors beginning in late summer 2018 to support the development and updating of these implementation support documents.

Public Consultation:

This proposal was posted for a 54 day public review and comment period starting November 29, 2017. Comments were to be received by January 22, 2018.

All comments received during the comment period are being considered as part of the decision-making process by the Ministry.

Please Note: All comments and submissions received have become part of the public record.

Other Public Consultation Opportunities:

ENERGY held consultations from March to July 2016 to support a cost-benefit analysis and to gather feedback on a draft policy proposal to require utilities to implement Green Button. Stakeholder feedback has been incorporated into a revised proposal presented in this posting.

ENERGY is not planning future public consultations or engagement opportunities on the regulatory proposal outside of this posting.