

# Roles and Responsibilities in the context of Ontario's Smart Grid

Ontario Smart Grid Forum  
Tuesday, March 9<sup>th</sup> 2010



- Neither the SGF Working Group nor the MEI working group record formal minutes of their meetings and any comments noted in slide deck are not meant to reflect any officially-adopted position or recommendation of either working group.

## **RECALL: Smart Grid Forum Meeting – February 22<sup>nd</sup>**

- The Forum reviewed a slide deck that examined the dimensions of the “roles and responsibilities” problem presented by smart grids – in terms of:
  - The 7 NIST domains of the smart grid;
  - The 8 NIST layers of Interoperability; and,
  - The emerging Ontario policy road map

## **RECALL: Smart Grid Forum Meeting – February 22<sup>nd</sup>**

- This presentation was originally presented to the February 22<sup>nd</sup> Smart Grid Forum to foster a discussion about the roles and responsibilities of Ontario's electricity sector organizations in the context of the smart grid and the emerging Ontario smart grid policy road map.
- During the Forum's discussion, certain amendments were proposed and these are reflected in this revised slide deck.
- **ACTION ITEM:** The Smart Grid Forum requested the Working Group, to review the responsibilities and accountabilities matrix contained in slides 15-19 and report back to the Forum's meeting on March 9<sup>th</sup>.

## Smart Grid Forum Working Group – March 2<sup>nd</sup>

- As requested by the Forum, the Working Group reviewed the responsibilities and accountabilities ('RACI') matrix, as amended at the February 22<sup>nd</sup> Forum meeting.
- The Working Group focused on those topic areas that the Forum did not have time to discuss at the February 22<sup>nd</sup> meeting – namely:
  1. “Consumer Control”
  2. “Utility Flexibility”
  3. “Adaptive Infrastructure”

## Smart Grid Forum Working Group – March 2<sup>nd</sup>

- The Working Group generally felt that the RACI matrix was a helpful tool to begin a structured discussion about roles and responsibilities. However, the group also felt that if there were to be future iterations of this exercise, other techniques might also be employed, including:
  - a hierarchical chart of authorities for each topic area; and/or
  - a more detailed matrix that separates the notion of “accountability” from “authority.”

## MEI Working Group – March 5<sup>th</sup>

- The Ministry of Energy and Infrastructure Working Group also examined the question of roles and responsibilities its March 5<sup>th</sup> meeting.
- Like SGF working group, there was considerable discussion around suitable techniques to identify gaps and overlaps in organizational jurisdiction and authority.
- The group generally felt that while the RACI matrix was effective at bringing structure to the discussion, the assignment of specific accountabilities will need to employ other approaches as well.

- Some of the additional approaches suggested by the MEI Working Group included:
  - **A delta analysis:**
    - which smart grid principles can make use of existing accountabilities/authorities?
    - Which ones are fundamentally new and unique to the topic of Smart Grids?
    - The group generally felt that existing industry roles and accountabilities should remain unchanged unless there was compelling reason to do otherwise.
  - **Task-oriented analysis:** The smart grid principles should be broken-out into their constituent tasks for the assignment of their roles and responsibilities.

- Other suggestions from the MEI working group:
  - Delineate accountabilities and responsibilities by type of policy instrument - example:
    - Accountabilities generally assigned by directive
    - Responsibilities generally assigned by regulation
  - Some smart grid principles may defy concise assignment accountabilities and responsibilities (but are still nonetheless useful in determining policy).
  - Principles that intersect with the topics of accommodating distributed generation and handling of smart grid data (customer and operational) warrant the closest scrutiny for assigning authorities, accountabilities and responsibilities.
  - Some members felt that “prosumers’ should be subdivided into producers and consumers.

- Responsibilities, Accountabilities, Consulted, Informed ('RACI') matrix (see Appendix) now reflects input from:
  - SGF – Feb. 22<sup>nd</sup>
  - SGF Working Group – Mar. 2<sup>nd</sup> ; and
  - MEI Working Group – Mar. 5<sup>th</sup>
- 24 smart grid principles statements
- 57 identified potential 'Accountabilities'
- 75 identified potential 'Responsibilities'

# Organizations ranked by number of accountabilities

Organization	Accountabilities	Responsibilities
Ontario Government	14	3
OEB	12	2
LDCs	7	17
Transmitters	5	11
IESO	4	11
OPA	4	5
Prosumers	4	4
Federal Government	4	4
OCE	1	3
Standards Organizations	1	2
Law enforcement and security services	1	1
Service Providers	0	12
Academia	0	0
Manufactures	0	0
Research and Development organizations	0	0
<b>Totals</b>	<b>57</b>	<b>75</b>

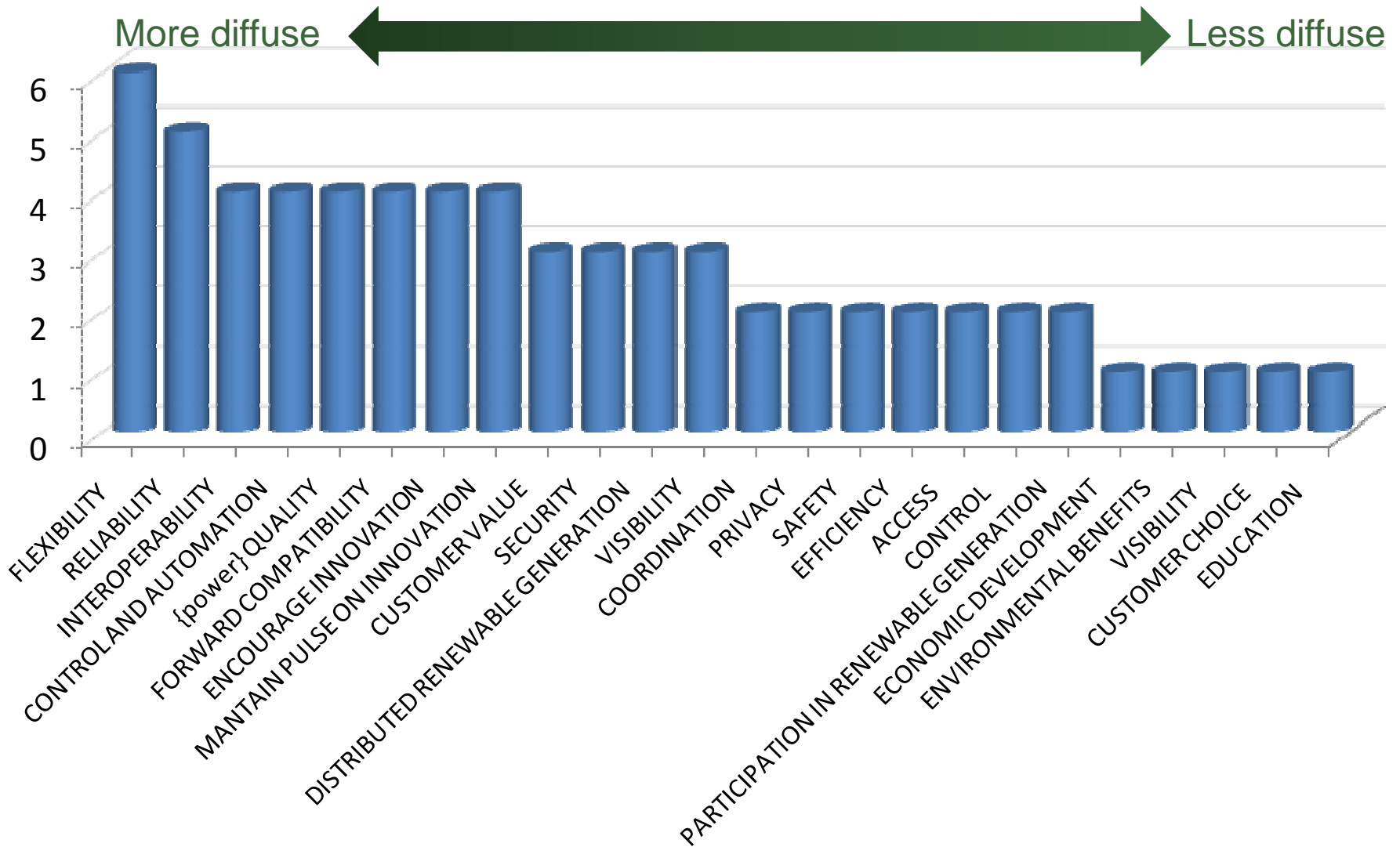
# Organizations ranked by number of responsibilities

Organization	Accountabilities	Responsibilities
LDCs	7	17
Service Providers	0	12
Transmitters	5	11
IESO	4	11
OPA	4	5
Prosumers	4	4
Federal Government	4	4
Ontario Government	14	3
OCE	1	3
OEB	12	2
Standards Organizations	1	2
Law enforcement and security services	1	1
Academia	0	0
Manufactures	0	0
Research and Development organizations	0	0
<b>Totals</b>	<b>57</b>	<b>75</b>

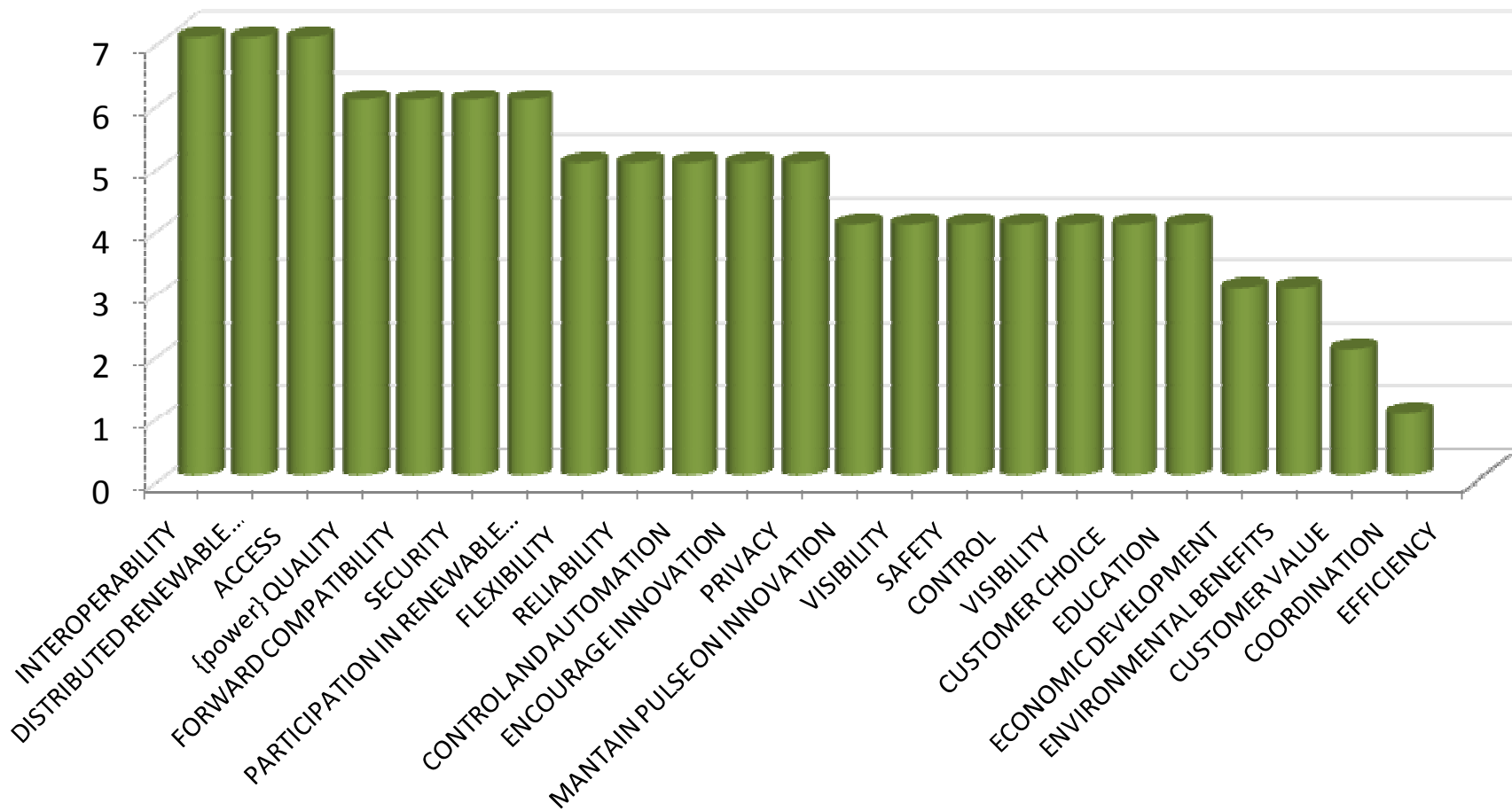
- Generally speaking, many members of the MEI working group were concerned about the high number of accountabilities in each principles area.
- Some members felt that the number of accountabilities for each principle should be brought down to as close to 1 accountable organization per principle as possible.
- This was felt by some as critical to maintaining both clear accountabilities and a commensurate level of authority for each organization.

# Diffusion of Accountabilities

**No. of Accountabilities - by Principle**



## No. of Responsibilities - by Principle



# APPENDIX

R.A.C.I. Matrix reflecting amendments and  
comments from **members of the:**

February 22<sup>nd</sup> SGF

March 2<sup>nd</sup> SGF Working Group

March 5<sup>th</sup> MEI Working Group

**RECALL: A ‘R.A.C.I.’ matrix assigns roles and responsibilities for each subject area in term of who is...**

- **‘R’ - Responsible:** Parties who are responsible for doing the work to achieve the policy goal.
- **‘A’ Accountable:** Parties who are accountable for achieving the policy goal and (usually) have decision making authority over the relevant policy itself.
- **‘C’ Consulted:** Parties that need to be consulted for the purposes of amending various aspects the framework (i.e. 2-way interaction).
- **‘I’ Informed:** Parties that need to be informed of various aspects of the framework.

**\*\*\*NOTE:** A given party can have any combination of the above roles in a given policy area.

- Revisions have been made to the R.A.C.I matrix from the version originally presented to the Forum on February 22<sup>nd</sup>:
  - **RED TEXT:** Amendments made by the Forum at the February 22<sup>nd</sup> meeting (see also, meeting minutes for further details)
  - **BLUE, UNDERLINED TEXT:** Amendments proposed by **various members at** the Working Group at the March 2<sup>nd</sup> meeting.
  - **GREEN TEXT:** Amendments proposed **by various members at** the MEI Working Group, March 5<sup>th</sup>.

# Broad Smart Grid Principles – cont'd

**“CUSTOMER VALUE:** the smart grid must provide benefits to electricity customers.”

	<b>Accountability</b>	<b>Responsibility</b>	<b>Consulted</b>	<b>Informed</b>
<b>CUSTOMER VALUE</b>	<ul style="list-style-type: none"> <li>•Prosumers</li> <li>•OEB</li> <li>•LDCs</li> </ul>	<ul style="list-style-type: none"> <li>•Prosumers</li> <li>•LDCs</li> </ul>	<ul style="list-style-type: none"> <li>•Prosumers</li> </ul>	<ul style="list-style-type: none"> <li>•Prosumers</li> </ul>

**“COORDINATION:** Smart grid implementation efforts should be coordinated by, among other means, coordinating smart grid plans among distributors, sharing information and results of pilot projects, and engaging in common procurements to achieve economies of scale.”

	<b>Accountability</b>	<b>Responsibility</b>	<b>Consulted</b>	<b>Informed</b>
<b>COORDINATION</b>	<ul style="list-style-type: none"> <li>•Ontario Government</li> <li>•OEB</li> </ul>	<ul style="list-style-type: none"> <li>•LDCs</li> </ul>	<ul style="list-style-type: none"> <li>???</li> </ul>	<ul style="list-style-type: none"> <li>???</li> </ul>

# Broad Smart Grid Principles – cont'd

**INTEROPERABILITY:** Adopt recognized industry standards that support the exchange of meaningful and actionable information between and among smart grid systems and enable common protocols for operation. Where no standards exist, support the development of new recognized standards.

	<b>Accountability</b>	<b>Responsibility</b>	<b>Consulted</b>	<b>Informed</b>
INTEROPERABILITY	<ul style="list-style-type: none"> <li>•OEB</li> <li>•Federal Government</li> <li>•Ontario Government</li> <li>•LDCs</li> </ul>	<ul style="list-style-type: none"> <li>•Standards Organizations</li> <li>•Service Providers</li> <li>•LDCs</li> <li>•OPA</li> <li>•Transmitters</li> <li>•Generators</li> <li>•IESO</li> </ul>	???	???

# Broad Smart Grid Principles – cont'd

**SECURITY:** Ensure both cybersecurity and physical security to protect data, access points, and the overall electricity grid from unauthorized access and malicious attacks.

	<b>Accountability</b>	<b>Responsibility</b>	<b>Consulted</b>	<b>Informed</b>
SECURITY	<ul style="list-style-type: none"> <li>•Standards Organizations</li> <li>•Ontario Government</li> <li>•Law enforcement and security services</li> </ul>	<ul style="list-style-type: none"> <li>•Service Providers</li> <li>•LDCs</li> <li>•Transmitters</li> <li>•Generators</li> <li>•IESO</li> <li>•Law enforcement and security services</li> </ul>	???	???

**PRIVACY:** respect and protect the privacy of customers. Integrate privacy requirements into smart grid planning and design from an early stage.

	<b>Accountability</b>	<b>Responsibility</b>	<b>Consulted</b>	<b>Informed</b>
PRIVACY	<ul style="list-style-type: none"> <li>•Ontario Government</li> <li>•OEB</li> </ul>	<ul style="list-style-type: none"> <li>•Service Providers</li> <li>•LDCs</li> <li>•Transmitters</li> <li>•Generators</li> <li>•IESO</li> </ul>	<ul style="list-style-type: none"> <li>•Prosumers</li> <li>•Privacy Commissioner</li> </ul>	•Prosumers

# Broad Smart Grid Principles – cont'd

**SAFETY:** Under all circumstances maintain, and in no way compromise, health and safety protections and improve electrical safety wherever practical.

	<b>Accountability</b>	<b>Responsibility</b>	<b>Consulted</b>	<b>Informed</b>
SAFETY	<ul style="list-style-type: none"> <li>•ESA</li> <li>•Ontario Government (Min. Of Labour)</li> </ul>	<ul style="list-style-type: none"> <li>•LDCs</li> <li>•Transmitters</li> <li>•Service Providers</li> <li>•Generators</li> </ul>	<ul style="list-style-type: none"> <li>•LDCs</li> <li>•Transmitters</li> <li>•Service Providers</li> <li>•Generators</li> </ul>	<ul style="list-style-type: none"> <li>•Prosumers</li> <li>•???</li> </ul>

**ECONOMIC DEVELOPMENT:** encourage economic growth and job creation within the province of Ontario. Actively encourage the development and adoption of smart grid products, services, and innovative solutions from Ontario-based sources.

	<b>Accountability</b>	<b>Responsibility</b>	<b>Consulted</b>	<b>Informed</b>
ECONOMIC DEVELOPMENT	<ul style="list-style-type: none"> <li>•Ontario Government</li> </ul>	<ul style="list-style-type: none"> <li>•OCE</li> <li>•Ontario Government</li> <li>•Ministry of Transport</li> </ul>	???	???

# Broad Smart Grid Principles – cont'd

**ENVIRONMENTAL BENEFITS:** Promote the integration of clean technologies, conservation, and more efficient use of existing technologies to reduce the environmental footprint of the electricity and transportation sectors

	<b>Accountability</b>	<b>Responsibility</b>	<b>Consulted</b>	<b>Informed</b>
ENVIRONMENTAL BENEFITS	<ul style="list-style-type: none"> <li>•Ontario Government</li> <li>•???</li> </ul>	<ul style="list-style-type: none"> <li>•LDCs</li> <li>•Manufacturers</li> <li>•OPA</li> </ul>	???	???

**EFFICIENCY:** Improve efficiency of grid operation, taking into account the cost-effectiveness of the electricity system.

	<b>Accountability</b>	<b>Responsibility</b>	<b>Consulted</b>	<b>Informed</b>
EFFICIENCY	<ul style="list-style-type: none"> <li>•Ontario Government</li> <li>•OEB</li> </ul>	???	???	???

**RELIABILITY:** Maintain reliability of the electricity grid and improve it wherever practical, including reducing the impact, frequency and duration of outages.

	Accountability	Responsibility	Consulted	Informed
RELIABILITY	<ul style="list-style-type: none"> <li>• IESO</li> <li>• LDC</li> <li>• Transmitters</li> <li>• OEB</li> <li>• ESA</li> </ul>	<ul style="list-style-type: none"> <li>• IESO</li> <li>• LDC</li> <li>• Transmitters</li> <li>• OEB</li> <li>• ESA</li> </ul>	<ul style="list-style-type: none"> <li>• IESO</li> <li>• LDC</li> <li>• Transmitters</li> <li>• Generators</li> <li>• Prosumers</li> </ul>	<ul style="list-style-type: none"> <li>• IESO</li> <li>• LDC</li> <li>• Transmitters</li> <li>• Generators</li> <li>• Prosumers</li> </ul>

## March 5<sup>th</sup> MEI Working Group Notes:

- **Many members of the group** felt that the OEB and the ESA have accountability for reliability,
- The group was divided as to whether or not the IESO, LDCs, and Transmitters were both accountable AND responsible for this topic.

**ACCESS:** Enable access to data by authorized parties who can provide customer value and enhance a customer’s ability to manage consumption and home energy systems.

	<b>Accountability</b>	<b>Responsibility</b>	<b>Consulted</b>	<b>Informed</b>
ACCESS	<ul style="list-style-type: none"> <li>•OEB</li> <li>•<a href="#">Ontario Government</a></li> </ul>	<ul style="list-style-type: none"> <li>•LDCs</li> <li>•Retailers</li> <li>•Service Providers</li> <li>•IESO</li> <li>•Smart Metering Entity</li> <li>•<a href="#">Transmitters</a></li> <li>•<a href="#">Generators</a></li> </ul>	<ul style="list-style-type: none"> <li>•LDCs</li> <li>•Retailers</li> <li>•Service Providers</li> <li>•IESO</li> <li>•Smart Metering Entity</li> <li>•<a href="#">Privacy Commissioner</a></li> </ul>	<ul style="list-style-type: none"> <li>•Manufacturers</li> </ul>

## March 2<sup>nd</sup> Working Group Notes:

- The accountabilities and responsibilities for data access should largely (if not completely) parallel those of the broader smart grid principle of “privacy”

**VISIBILITY:** Improve visibility of information, to and by customers, that can benefit the customer and the electricity system, such as electricity consumption, generation characteristics, and commodity price.

	<b>Accountability</b>	<b>Responsibility</b>	<b>Consulted</b>	<b>Informed</b>
VISIBILITY	<a href="#">Prosumers</a>	<ul style="list-style-type: none"> <li>•LDCs</li> <li>•Retailers</li> <li>•Service Providers</li> </ul>	<ul style="list-style-type: none"> <li>•Prosumers</li> <li>•<a href="#">LDCs</a></li> </ul>	<ul style="list-style-type: none"> <li>•Prosumers</li> <li>•<a href="#">Manufacturers</a></li> </ul>

## March 2<sup>nd</sup> Working Group Notes:

- Like the Smart Grid Forum, the Working Group observed that the objectives of “Privacy,” “Visibility” and “Access” are not always congruent with one another and need to be carefully managed. Competing objectives in these 3 areas will need to be balanced with one another.

**CONTROL:** Enable consumers to better control their consumption of electricity in order to facilitate active, simple, and consumer-friendly participation in conservation and load management.

	<b>Accountability</b>	<b>Responsibility</b>	<b>Consulted</b>	<b>Informed</b>
CONTROL	<a href="#">Prosumers</a> OEB	<ul style="list-style-type: none"> <li>•Service Providers</li> <li>•LDCs</li> <li>•OPA</li> <li>•IESO</li> </ul>	•Prosumers	<ul style="list-style-type: none"> <li>•Prosumers</li> <li>•<a href="#">Manufacturers</a></li> </ul>

## March 2<sup>nd</sup> SGF Working Group Notes:

- The group general felt that if other smart grid policies were working correctly, and the customer was given true 'choice' then they must ultimately bear accountability for the level of control they have through their own selection of smart grid products and services.

## •March 5<sup>th</sup> MEI Working Group Notes:

- Some members felt** that the OEB should be accountable for enabling prosumers.

**PARTICIPATION IN RENEWABLE GENERATION:** provide consumers with opportunities to provide services back to the electricity grid such as small-scale renewable generation and storage.

	<b>Accountability</b>	<b>Responsibility</b>	<b>Consulted</b>	<b>Informed</b>
PARTICIPATION IN RENEWABLE GENERATION	<ul style="list-style-type: none"> <li>•OPA</li> <li>•Ontario Government</li> </ul>	<ul style="list-style-type: none"> <li>•IESO</li> <li>•OPA</li> <li>•LDCs</li> <li>•<a href="#">Prosumers</a></li> <li>•<a href="#">Transmitters</a></li> <li>•<a href="#">Ontario Government</a></li> </ul>	<ul style="list-style-type: none"> <li>•IESO</li> <li>•OPA</li> <li>•LDCs</li> <li>•Prosumers</li> </ul>	<ul style="list-style-type: none"> <li>•Prosumers</li> <li>•<a href="#">Manufacturers</a></li> </ul>

## March 2<sup>nd</sup> Working Group Notes:

- The Working Group grappled with the notion as to whether or not “prosumers” bore the ultimate accountability for their own participation in renewable generation. After deliberations on this point, it was agreed that there is both a consultative and responsible role, but ultimate accountability rests with the government and the OPA.

**CUSTOMER CHOICE:** enable improved channels through which customers can interact with electricity service providers, and enable more customer choice.

	<b>Accountability</b>	<b>Responsibility</b>	<b>Consulted</b>	<b>Informed</b>
CUSTOMER CHOICE	<a href="#">Prosumers</a>	<ul style="list-style-type: none"> <li>•Service Providers</li> <li>•LDCs</li> <li>•Retailers</li> <li>•<a href="#">Manufacturers</a></li> </ul>	•Prosumers	<ul style="list-style-type: none"> <li>•Prosumers</li> <li>•<a href="#">Manufacturers</a></li> </ul>

**EDUCATION:** Actively educate consumers about opportunities for their involvement in generation and conservation associated with a smarter grid, and present customers with easily understood material that explains how to increase their participation in the smart grid and the benefits thereof.

	<b>Accountability</b>	<b>Responsibility</b>	<b>Consulted</b>	<b>Informed</b>
EDUCATION	<a href="#">Ontario Government</a>	<ul style="list-style-type: none"> <li>•<a href="#">LDCs</a></li> <li>•<a href="#">Service Providers</a></li> <li>•<a href="#">Manufacturers</a></li> <li>•<a href="#">Prosumers</a></li> </ul>	???	Prosumers

**DISTRIBUTED RENEWABLE GENERATION:** enable a flexible distribution system infrastructure that promotes increased levels of distributed renewable generation.

	<b>Accountability</b>	<b>Responsibility</b>	<b>Consulted</b>	<b>Informed</b>
DISTRIBUTED RENEWABLE GENERATION	<ul style="list-style-type: none"> <li>•OPA</li> <li>•Ontario Government</li> <li>•<a href="#">OEB</a></li> </ul>	<ul style="list-style-type: none"> <li>•IESO</li> <li>•OPA</li> <li>•LDCs</li> <li>•Generators</li> <li>•<a href="#">OEB</a></li> <li>•<a href="#">ESA</a></li> <li>•<a href="#">Transmitters</a></li> </ul>	<ul style="list-style-type: none"> <li>•IESO</li> <li>•OPA</li> <li>•LDCs</li> <li>•Generators</li> <li>•<a href="#">Prosumers</a></li> </ul>	<ul style="list-style-type: none"> <li>•<a href="#">Prosumers</a></li> </ul>

**VISIBILITY:** Improve network visibility of grid conditions for grid operations where a demonstrated need exists or will exist, including the siting and operating of distributed renewable generation.

	<b>Accountability</b>	<b>Responsibility</b>	<b>Consulted</b>	<b>Informed</b>
VISIBILITY	<ul style="list-style-type: none"> <li>•OPA</li> <li>•Ontario Government</li> <li>•<a href="#">OEB</a></li> </ul>	<ul style="list-style-type: none"> <li>•LDCs</li> <li>•IESO</li> <li>•<a href="#">OEB</a></li> <li>•Transmitters</li> </ul>	<ul style="list-style-type: none"> <li>•Prosumers</li> <li>•Service Providers</li> </ul>	<ul style="list-style-type: none"> <li>•Prosumers</li> <li>•Service Providers</li> </ul>

**CONTROL AND AUTOMATION** – Enable improved control and automation on the electricity grid where needed to promote distributed renewable generation. To the extent practical, move toward distribution automation such as a self-healing grid infrastructure to automatically anticipate and respond to system disturbances for faster restoration.

	<b>Accountability</b>	<b>Responsibility</b>	<b>Consulted</b>	<b>Informed</b>
CONTROL AND AUTOMATION	<ul style="list-style-type: none"> <li>•OEB</li> <li>•LDCs</li> <li>•IESO</li> <li>•Transmitters</li> </ul>	<ul style="list-style-type: none"> <li>•LDCs</li> <li>•IESO</li> <li>•Transmitters</li> <li>•Service Providers</li> <li>•<a href="#">OEB</a></li> </ul>	<ul style="list-style-type: none"> <li>•Prosumers</li> <li>•Service Providers</li> </ul>	<ul style="list-style-type: none"> <li>•Prosumers</li> <li>•Service Providers</li> </ul>

**QUALITY:** Maintain the quality of power delivered by the grid, and improve it wherever practical.

	<b>Accountability</b>	<b>Responsibility</b>	<b>Consulted</b>	<b>Informed</b>
{power} QUALITY	<ul style="list-style-type: none"> <li>•OEB</li> <li>•LDCs</li> <li>•<del>IESO</del></li> <li>•Transmitters</li> </ul>	<ul style="list-style-type: none"> <li>•LDCs</li> <li>•<del>IESO</del></li> <li>•Transmitters</li> <li>•Prosumers</li> <li>•Generatorrrs</li> <li>•Service Providers</li> </ul>	<ul style="list-style-type: none"> <li>•Prosumers</li> <li>•Manufacturers</li> </ul>	<ul style="list-style-type: none"> <li>•Prosumers</li> </ul>

**FLEXIBILITY** – provide flexibility within smart grid implementation to support future innovative applications, such as electric vehicles and energy storage.

	<b>Accountability</b>	<b>Responsibility</b>	<b>Consulted</b>	<b>Informed</b>
FLEXIBILITY	<ul style="list-style-type: none"> <li>•Ontario Government</li> <li>•OPA</li> <li>•<a href="#">OEB</a></li> <li>•<a href="#">IESO</a></li> <li>•<a href="#">LDCs</a></li> <li>•<a href="#">Transmitters</a></li> </ul>	<ul style="list-style-type: none"> <li>•LDCs</li> <li>•Transmitters</li> <li>•IESO</li> <li>•OPA</li> <li>•Service Providers</li> </ul>	<ul style="list-style-type: none"> <li>•Service Providers</li> <li>•Manufacturers</li> <li>•<a href="#">Research and Development organizations</a></li> </ul>	???

## March 2<sup>nd</sup> Working Group Notes:

- The Working group introduced the notion of “Research and Development” organizations that were not necessarily under the purview of government or specific private sector players (e.g. Public-private research ventures, research institutes, NGO’s, etc) and saw them playing an important role in several “adaptive infrastructure” policy areas.

**FORWARD COMPATIBILITY** – protect against technology lock-in to minimize stranded assets and investments and incorporate principles of modularity, scalability and extensibility into smart grid planning.

	<b>Accountability</b>	<b>Responsibility</b>	<b>Consulted</b>	<b>Informed</b>
FORWARD COMPATIBILITY	<ul style="list-style-type: none"> <li>• <a href="#">OEB</a></li> <li>• <a href="#">Federal Government</a></li> <li>• <a href="#">Ontario Government</a></li> <li>• <a href="#">LDCs</a></li> </ul>	<ul style="list-style-type: none"> <li>• LDCs</li> <li>• Transmitters</li> <li>• IESO</li> <li>• Service Providers</li> <li>• <a href="#">Standards Organizations</a></li> </ul>	<ul style="list-style-type: none"> <li>• Manufacturers</li> </ul>	???

## March 2<sup>nd</sup> Working Group Notes:

- While **some members of** the group felt that certain institutions have *implied* accountability to ensure that the smart grid is “forward compatible,” they also noted that direct accountabilities for this topic area have not yet been assigned.
- The accountabilities and responsibilities for forward compatibility should largely (if not completely) parallel those of the broader smart grid principle of “interoperability”

**ENCOURAGE INNOVATION** – Nest within smart grid infrastructure planning and development the ability to adapt to and actively encourage innovation in technologies, energy services and investment / business models.

	<b>Accountability</b>	<b>Responsibility</b>	<b>Consulted</b>	<b>Informed</b>
ENCOURAGE INNOVATION	<ul style="list-style-type: none"> <li>•Ontario Government</li> <li>•OCE</li> <li>•<a href="#">LDCs</a></li> <li>•<a href="#">Transmitters</a></li> </ul>	<ul style="list-style-type: none"> <li>•Ontario Government</li> <li>•OCE</li> <li>•Natural Resources Canada</li> <li>•Industry Canada</li> <li>•Academia</li> </ul>	<ul style="list-style-type: none"> <li>•Manufacturers</li> <li>•Academia</li> <li>•Industry Associations</li> <li>•<a href="#">Research and Development organizations</a></li> </ul>	???

**MAINTAIN PULSE ON INNOVATION** – encourage information sharing, relating to innovation and the smart grid, and ensure Ontario is aware of best practices and innovations in Canada and around the world.

	<b>Accountability</b>	<b>Responsibility</b>	<b>Consulted</b>	<b>Informed</b>
MANTAIN PULSE ON INNOVATION	<ul style="list-style-type: none"> <li>•Ontario Government</li> <li>•Natural Resources Canada</li> <li>•Industry Canada</li> <li>•<a href="#">LDCs</a></li> <li>•<a href="#">Transmitters</a></li> </ul>	<ul style="list-style-type: none"> <li>•Ontario Government</li> <li>•OCE</li> <li>•Natural Resources Canada</li> <li>•Industry Canada</li> <li>•Academia</li> </ul>	<ul style="list-style-type: none"> <li>•Manufacturers</li> <li>•Academia</li> <li>•Industry Associations</li> <li>•<a href="#">Research and Development organizations</a></li> </ul>	<ul style="list-style-type: none"> <li>•Standards Organizations</li> </ul>



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Power to Ontario.  
On Demand.

Thank you.