

Sector Evolution:

Utility Remuneration & Responding to DERs

Defining the Scope & Approach to Work Based
on Stakeholder Input

February 20, 2020

Purpose

- The purpose of this presentation is to:
 - Describe in detail the input received from stakeholders
 - Set out staff's current thinking on objectives, issues and guiding principles, etc. for each initiative
- At the end of this meeting, we hope stakeholders will:
 - See how their input has informed staff's current thinking
 - Have a common understanding of staff's current thinking on the goals and scope of these policy consultations
 - Be in a position to provide comments on the objectives, scope, etc. to assist the OEB in confirming scope
- In addition to feedback provided at today's meeting, stakeholders are invited to submit written comments by **March 20, 2020**

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Background: Impetus for Initiatives

- New and/or increasingly cost-effective technologies are changing the way energy can be produced, delivered and consumed
- Consumer-driven adoption:
 - Growing adoption among industrial and commercial customers
 - Eventually, residential uptake has potential to be significant
 - Adoption influenced by falling technology costs relative to grid supply costs and government policies
- Utility opportunities and risks:
 - Consumer adoption of technologies may change how energy systems are used
 - Technologies can enhance efficiency of utility service and/or displace conventional infrastructure
 - Creates opportunities for better service at lower cost but also exacerbates uncertainty risk
- Regulatory adaptation can help mitigate risks and help consumers benefit from emerging opportunities

Background: Stakeholder Input

- In July, the OEB issued a letter announcing its refreshed approach to its consultations on sector evolution
- Stakeholder meeting September 2019:
 - Heard stakeholders' views on objectives, scope and principles
 - Over 100 in-person and remote participants
 - 24 stakeholder presentations
- Written comments received October 2019:
 - Provision for written comments made in response to stakeholder requests
 - Opportunity to summarize views in light of discussion at the meeting
 - Comments received from 20 stakeholder groups

Who We Heard From (via presentations, written comments, transcripts)

- | | |
|--|---|
| 1. Advanced Energy Management Alliance | 24. Individual Consumer |
| 2. Alectra Utilities | 25. Industrial Gas Users Association |
| 3. Association of Major Power Consumers | 26. Infrastructure Energy |
| 4. Association of Power Producers of Ontario | 27. London Hydro |
| 5. Canadian Solar Industries Association | 28. London Property Management Association |
| 6. Canadian Manufacturers and Exporters | 29. Ministry of Energy |
| 7. City of Ottawa | 30. Niagara-on-the-Lake Hydro |
| 8. Consumers Council of Canada | 31. Ontario Home Builders Association |
| 9. Customized Energy Solutions | 32. Ontario Energy Association |
| 10. Distributed Resource Coalition | 33. Ontario Power Generation |
| 11. Electricity Distributors Association | 34. Ontario Society of Professional Engineers |
| 12. Electrical Vehicle Society | 35. Ontario Sustainable Energy Association |
| 13. Elexicon Energy | 36. Peak Power |
| 14. Enel X | 37. Pollution Probe |
| 15. Energy Probe | 38. Power Workers' Union |
| 16. Energy Storage Canada | 39. QUEST + Ontario CHP Consortium |
| 17. Environmental Defence | 40. School Energy Coalition |
| 18. Entegrus Powerlines | 41. Storage Power Solutions |
| 19. EPCOR | 42. Sussex Strategy |
| 20. Essex Power | 43. Toronto Hydro |
| 21. Hydro One Networks Inc. | 44. Vulnerable Energy Consumers Coalition |
| 22. Hydro Ottawa | 45. WSP Canada Advisory Services |
| 23. Independent Electricity System Operator | |

What We Heard

- Diversity of stakeholder views revealed the breadth and complexity of issues
- Comments generally fell into these categories:
 - **Principles** that should guide the development and selection of policy options
 - Benefits of articulating the **OEB's role and approach** to sector evolution
 - The need for clear **problem/need statements** outlining *why* we are doing this
 - **Objectives** each initiative should aim to achieve
 - **Issues and questions** each initiative should explore
 - The **scope** of each initiative to define what is *in* and what is *out*
 - Need for a transparent, efficient and inclusive **consultation process**, including a roadmap for next steps
 - Need for **coordination** with other related initiatives

A Note About Staff's Approach

- Throughout presentations, transcripts and written comments there is significant overlap between issues, objectives and principles
- What one stakeholder characterized as an objective, another characterized as a principle, while others identified as an issue
- In summarizing what we heard, staff has made best efforts to retain each stakeholder's 'categorization' of concepts
- However, staff's current thinking, based on what we heard, reflects the following:
 - A **guiding principle** is a *value, criterion* or *standard* that will be used to compare different policy options and develop a preferred approach
 - An **objective** is a specific *outcome* to be achieved by the policies being developed
 - An **issue** is a question or problem that either needs to be *considered* as policies are developed or needs to be *resolved* by the policy being developed

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Guiding Principles: What We Heard

- Stakeholders were generally supportive of the draft principles OEB staff included in the July invitation letter:
 - **Economic Efficiency and Performance:** The regulatory framework promotes economic efficiency, cost-effectiveness and long-term value for consumers
 - **Customer Focus:** The regulatory framework encourages cost containment, demonstrable value to customers, greater customer choice and control, and customer confidence in the sector; it also encourages efficient choices
 - **Stable yet Evolving Sector:** The regulatory framework maintains the opportunity for utilities to earn a fair return; it neither precludes alternative business models that may be desirable nor impedes the entry of new entities
 - **Regulatory Simplicity:** The regulatory framework is practical to administer in terms of cost and complexity while enabling appropriate oversight; it is predictable insofar as its rules and requirements are applied consistently in similar circumstances; it is also resilient, adaptable, flexible and sustainable
- Some stakeholders suggested modifications to the principles above
- Some new principles were also suggested

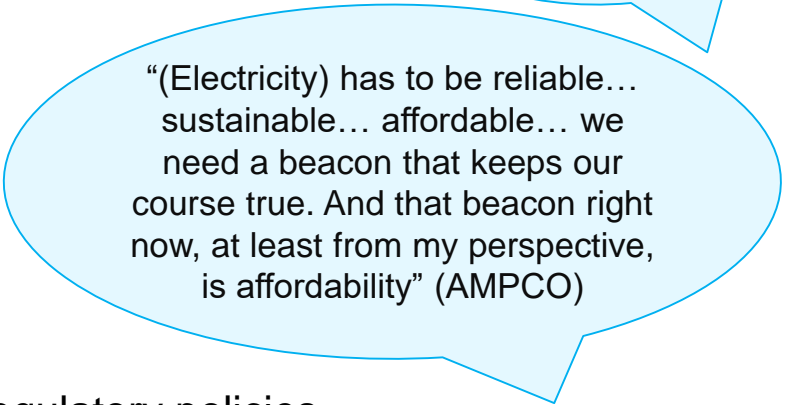
Guiding Principles: What We Heard

Stakeholder suggestions for additions and/or modifications to guiding principles generally fell into the following categories:

- Customers must come first
- Reliability and safety
- Beneficiary pays
- Enhance use of existing assets
- Economic efficiency and performance
- Competition
- Commit to traditional economic regulation and consumer protection
- Transparency
- Approach to consultation and developing regulatory policies



“It is important that we develop a policy framework that will endure for the benefit of all customers”
(Alectra)



“(Electricity) has to be reliable... sustainable... affordable... we need a beacon that keeps our course true. And that beacon right now, at least from my perspective, is affordability” (AMPCO)

Guiding Principles: Applying Input Received

A **guiding principle** is a *value, criterion or standard* used to compare different policy options and develop a preferred approach

- **Economic Efficiency and Performance:** The regulatory framework **focuses on outcomes and** promotes economic efficiency, cost-effectiveness, **safety, reliability, service quality** and long-term value for consumers.
- **Consumer Centric Customer Focus:** The regulatory framework **encourages prioritizes** cost containment, **and demonstrable value to customers consumers.**; **It enables** greater **customer consumer** choice and control **and empowers efficient investment decisions and behaviour.**, **and It increases consumer** ~~customer~~ confidence in the sector.; ~~it also encourages efficient choices~~
- **Stable yet Evolving Sector:** The regulatory framework **enables sector participants to adapt to change.** **It** maintains the opportunity for utilities to earn a fair return. **It** neither precludes alternative business models that may be desirable nor impedes the entry of new entities. **It encourages optimal use of existing assets, as new technologies and approaches to providing energy services are adopted.**
- **Regulatory Simplicity Effectiveness:** The regulatory framework is practical to administer in terms of cost and complexity while enabling appropriate oversight. It is predictable insofar as its rules and requirements are applied consistently in similar circumstances. It is also ~~resilient~~, adaptable, flexible and sustainable.

Guiding Principles: Staff's Current Thinking

Consumer Centric:

- The regulatory framework prioritizes cost containment and demonstrable value to consumers
- It enables greater consumer choice and control and empowers efficient investment decisions and behaviour
- It increases consumer confidence in the sector

Regulatory Effectiveness:

- The regulatory framework is practical to administer in terms of cost and complexity while enabling appropriate oversight
- It is predictable insofar as its rules and requirements are applied consistently in similar circumstances
- It is also adaptable, flexible and sustainable

Economic Efficiency and Performance:

- The regulatory framework focuses on outcomes and promotes economic efficiency, cost-effectiveness, safety, reliability, service quality and long-term value for consumers

Stable yet Evolving Sector:

- The regulatory framework enables sector participants to adapt to change
- It maintains the opportunity for utilities to earn a fair return
- It neither precludes alternative business models that may be desirable nor impedes the entry of new entities
- It encourages optimal use of existing assets, as new technologies and approaches to providing energy services are adopted

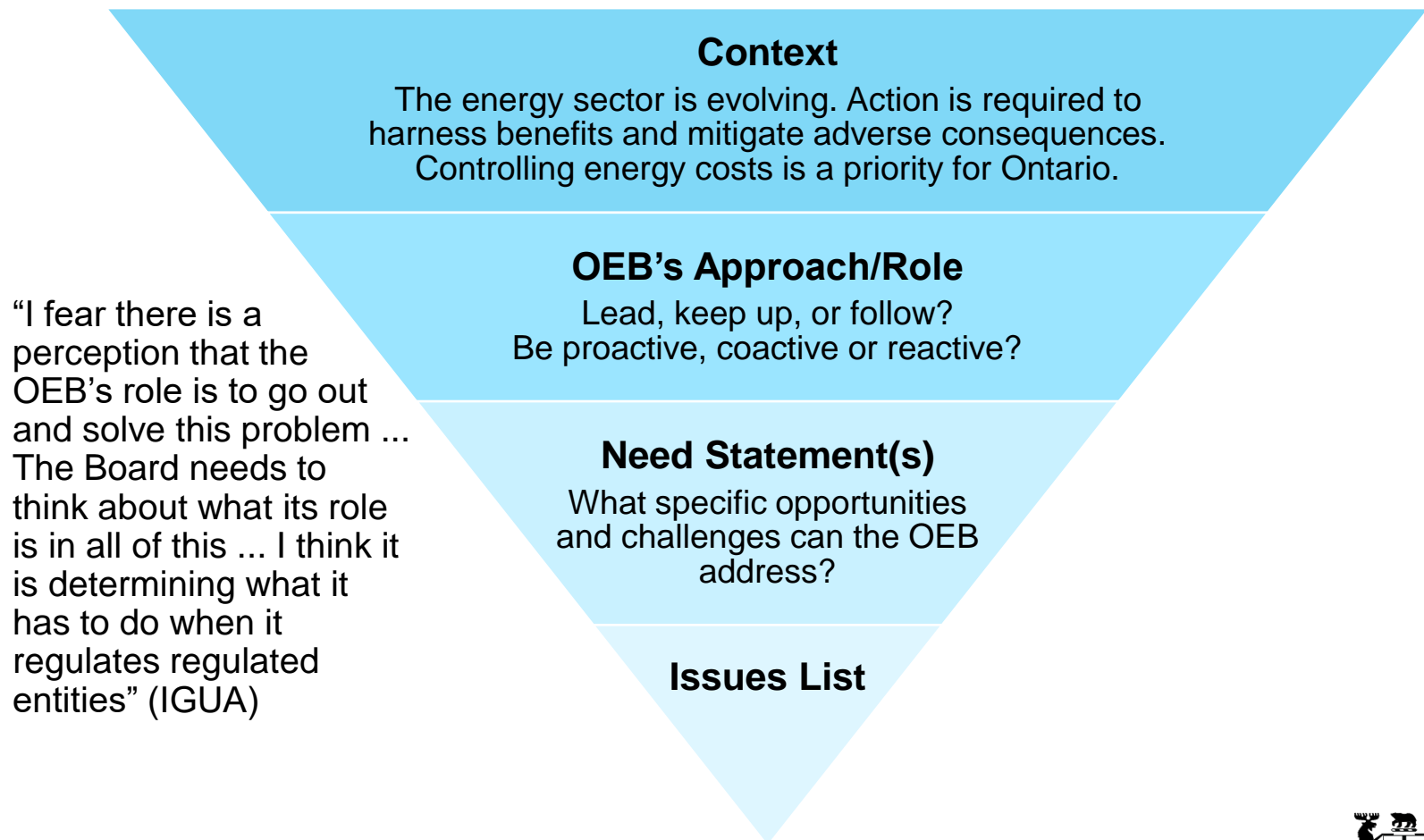
For discussion...

Has staff accurately captured stakeholders' input?

Are these guiding principles appropriate?

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OEB's Role in Response to Sector Evolution



OEB's Role & Approach: What We Heard

Advanced Energy Management Alliance

“The OEB and the sector should work towards a pro-active vision of the future of the distribution system based on the objectives of the province as well as the fundamental regulation principles”

Consumers Council of Canada

“...no matter what happens going forward, that the OEB has to continue to protect the interests of the customers. And if we're going to have evolving changes with respect to new technologies, that role is never going to go away”

Entegrus

“Entegrus reiterates its support of innovative DER projects and encourages a measured, incremental approach to broader DER implementation in Ontario”

Industrial Gas Users Association

“The role of an economic regulator should be to facilitate orderly evolution and adaptation, not to protect the utility from change, not to be an agent of change, but rather to address and remove barriers to change and let markets and technology and customers evolve”

OEB's Role & Approach: What We Heard

London Property Management Association

“The role of the OEB should be to facilitate the potential for DERs to provide customers with lower cost and more choice while maintaining or improving system reliability and safety.”

Power Workers Union

“...this initiative raises issues that are beyond the current mandate of the OEB... Many may require time and coordination with all stakeholders (including the IESO and Ministry). Taking time to get this right is important”

Pollution Probe

“The focus for these proceedings need to be on what consumers want and where the needs are heading, and how to adapt. *Enabling* consumers, not just protecting consumers, needs to be supported.”

School Energy Coalition

“The Board can take one of three positions with respect to major changes that are happening in the energy sector: lead, follow, or keep up.”

OEB's Role & Approach: Consultant Advice

London Economics International LLC:

- “Our role also is not to promote nor prevent DERs, but rather to examine whether the current framework is sufficient in light of the potentially rapid change that is taking place in the sector. So we don't presume that change is necessary, but rather that appropriate investigation is”

ICF:

- “Gain a clear understanding of what you are trying to accomplish and importantly, why you are trying to accomplish it... Avoid falling into that granular hole of “how” too soon... The process becomes one of incremental steps”

OEB's Approach: Staff's Current Thinking

The OEB should 'keep up' with sector evolution by:

- Continuing to investigate whether and how current approaches may need to adapt
- Taking incremental steps to evolve the regulatory framework
- Proactively identifying and addressing issues (not waiting until problems occur to act)

Rationale:

- 'Following' creates risk of excessive regulatory lag
 - Heightened risk of cost avoidance by some customers
 - Inadequate coordination of DER deployment and network modernization can delay and/or diminish potential benefits to consumers
- 'Leading' creates risk of prematurely committing to a path
 - Moving too quickly can increase risk of incurring higher than necessary costs for consumers
 - Pace, trajectory and new drivers of change are unknown

OEB's Role: Staff's Current Thinking

- Having regard to the [OEB's statutory objectives for natural gas and electricity](#), the role of OEB in responding to sector evolution should be to:
 - Engage and support the sector during a time of accelerating change
 - Take steps to adapt the regulatory framework now that certain fundamental assumptions upon which it was premised are no longer true (e.g. you cannot store electricity, generation is always large scale and centralized, load will always grow, demand is passive)
 - Help utilities adapt to change so consumers continue to be well-served
 - Focus on removing unwarranted barriers so the market can evolve
- The OEB's role should not be to:
 - Pick technology or market winners and losers
 - Promote or prevent DER
 - Protect utilities and consumers from change

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Need Statement: What We Heard

- Hydro One noted both consultations would benefit from a defined problem statement
 - In other words, what problem is each consultation intended to resolve?
 - The appropriate objectives and issues depend on the problem to be addressed
- Similarly, the London Property Management Association noted that we “need to develop a shared understanding of the issues and problems...”
- Staff agrees that articulating a statement that captures the need for action (need statement) will support a common understanding of *what* we are trying to achieve and *why*, before considering *how* to get there

Preliminary Need Statement: Remuneration

Opportunities & Challenges	Proposed Need Statements
<p>New options for delivering energy services are arising (e.g. NWA's, information and communication technologies, etc.)</p>	<p>There is a need for utilities to consider all viable and practicable options (e.g. less capital-intensive solutions) in order to pursue the most cost-effective ones, so that customer value is maximized</p>
<p>Uncertainty about technology adoption and the use of network services may make it more difficult to forecast load, system needs and costs (e.g. analysis of historical load may no longer provide meaningful forecasts)</p>	<p>There is a need for the regulator to continue to have appropriate information and tools to assess utility proposals to ensure that rates are set appropriately and incentives are effective</p> <p>There is a need to manage and appropriately allocate evolving risks to mitigate adverse consequences</p>
<p>Effective regulation requires continuous review and improvement</p>	<p>There is a need to review the OEB's approach to utility remuneration holistically, to integrate adjustments in response to sector evolution with improvements to the broader rate-setting framework</p>

For discussion...

Has staff accurately captured the opportunities and challenges for Utility Remuneration?

Are the preliminary need statements appropriate?

Preliminary Need Statement: DERs

Opportunities & Challenges	Proposed Need Statements
<p>Consumers are adopting DERs to meet their own energy needs (e.g. self-supply, storage, demand management)</p>	<p>There is a need for system planning and control to take into account DER adoption so that consumer value is maximized</p>
<p>Utilities can leverage DERs to meet system needs/provide utility services (e.g. non-wires alternatives, flexibility, resiliency)</p>	<p>There is a need for utilities to take advantage of DER assets when cost-effective to do so (regardless of who owns them) so that opportunities to achieve mutual benefits are captured and consumer value is maximized</p>
<p>Coordinated DER deployment can lead to mutual benefits for host customers and ratepayers</p>	<p>There is a need for sufficient information sharing (hosting capacity, beneficial locations etc.) between utilities, consumers and DER providers to encourage DER deployment where and when it has the greatest value</p>

For discussion...

Has staff accurately captured the opportunities and challenges for Responding to DERs?

Are the preliminary need statements appropriate?

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Objectives: What We Heard

Stakeholders identified a significant number of specific objectives, which staff sorted into the following categories:

- **Provide value for consumers** – most stakeholders agreed that providing value for consumers is the primary objective, however there were widely varying views on what constitutes ‘value’
- **Control costs for consumers** – some, particularly groups representing large electricity consumers, emphasized that controlling costs should be the overriding objective and prioritized above increasing choice, reliability etc.
- **Avoid stranded assets and optimize infrastructure** – many stakeholders agreed avoiding stranded assets is critical, however views diverged on whether DER adoption will be a help or hindrance
- **Consider all possible solutions** – putting non-wires alternatives and traditional assets on a level playing field was identified by several stakeholders
- **Determine true value of DER** – most called for a common understanding / transparency of the true costs and benefits of DER integration, views diverged on whether benefits would outweigh the costs in an Ontario context

Objectives: What We Heard

- **Provide clear investment signals** – some stakeholders identified the need to accurately reflect the value of DERs in rates and charges to ensure fair recovery of costs and provide signals for efficient investment decisions
- **Improve access to information** – many stakeholders agreed that improving access to information is a cross-cutting issue that could help achieve other objectives
- **Improve planning and coordination among sector participants** – the need to improve planning and identify impacts of DERs on current planning processes was raised by several stakeholders
- **Promote or facilitate competition** – several stakeholders were supportive of using competition where possible to deliver lower cost service to ratepayers; however some raised consumer protection concerns
- **Define roles and responsibilities** – the need to confirm the roles and responsibilities of utilities and other sector participants was identified by most; distributor ownership and operation of DERs was a particularly contentious issue

Objectives: Staff's Current Thinking

In staff's view, an **objective** is a specific *outcome* to be achieved by the policies being developed

- **Overarching:**
 - Strengthened utility focus on cost effectiveness and providing value for energy consumers as the sector evolves
 - Consumers continue to be appropriately protected as markets for energy services evolve; customer choice does not negatively impact others
- **Responding to DERs:**
 - DER adoption and integration enhances overall value to energy consumers
 - Utility infrastructure is optimally utilized as DER adoption grows; underutilized and stranded assets are minimized
- **Utility Remuneration:**
 - Utility incentives are effective at encouraging greater efficiencies and cost-effectiveness
 - Utilities consider all viable and practicable options for delivering utility services

For discussion...

Has staff accurately captured stakeholders' input?

Are these objectives appropriate?

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Issues Section Overview

An **issue** is a question or problem that either needs to be *considered* as policies are developed or needs to be *resolved* by the policy being developed...

- In many cases, stakeholders identified the same issues but had strongly differing opinions on them
- The following slides summarize the main categories of issues identified by stakeholders:
 - Working definition of DERs
 - DER value, costs and benefits
 - Cost recovery and investment signals
 - Planning and operation
 - Utility incentives and risk
 - Role of competition
 - Roles and responsibilities
 - Performance
 - Access to information
 - Underutilized/stranded assets
 - Change management

Issues: What We Heard

Working Definition of DER

Environmental Defence

“... how we define DERs for the purposes of this process ... is more of a functional question. And in our view energy efficiency should be included in the discussion.”

Energy Probe

DERs stands for distributed energy resources, which is customer-owned power generation devices, such as rooftop solar and power storage batteries, including batteries in plugged-in electric vehicles, and the salient point about DER is that DER integration is a method of allowing two-way flow of electricity between DERs and the power grid.

Vulnerable Energy Consumers Coalition

“...we seem to be talking about DER in different contexts... as a supply option that has been fully vetted through some integrated planning process... something that a customer chooses to do on their own behalf... people who want to connect to the system and supply DER and sell it into the market... each of them has to be approached differently in terms of are they providing benefits, who should bear the cost, and who should bear the risk.”

Issues: What We Heard

Working Definition of DER

A DER is any resource capable of providing energy services located at the distribution system level (in front or behind the meter)

- Distribution level generation and storage are DERs
- A controllable load can be a DER when it offers a service by committing in advance to adjust consumption in response to system needs at a specific time or location
- Energy efficiency does not have the same characteristics (e.g. system impacts) as DERs but may be relevant to specific issues and should be considered

Narrow Definition

Resources that inject into the distribution system, causing a two-way flow of power.

Use-Case Definition

Segment DERs by use case scenarios and/or how they impact the system to facilitate discussion of appropriate policy approaches.


Broad Definition

Resources that modify demand and/or inject into the system, including energy efficiency.

Issues: What We Heard

DER Value, Costs & Benefits

- How can we validate the business case for DERs in Ontario?
- How can we establish a common, evidence-based, understanding of the total costs and benefits of DER in Ontario?
- How should costs and benefits be measured/assessed from a system wide perspective?
- How might the value of DERs be revealed and monetized appropriately?
- How to appropriately define, value and compensate the services DERs can provide?



“...it is not clear how integrating DERs will decrease system costs”
(CME)

Issues: What We Heard

DER Value, Costs & Benefits cont'd

- Should a systematic method of accounting for DER system costs and benefits be established?
- To what extent, and how, should the value of externalities be reflected (e.g. flexibility, scalability, resiliency due to resource diversity, investment deferral, community preference etc.)?
- Should the regulator 'assign' or 'deem' value of certain types of costs and benefits? (i.e. proxy)
- How should we balance the short- and long-term costs and benefits of DERs?
- How might we enable multi-purpose DER through value stacking?

“DERs create a number of positive benefits that are not being properly accounted for” (Environmental Defence)

“Compensation for DER's... that reflect the full value of the grid/pipe services they provide, including localized benefits” (Storage Power Solutions)

Issues: What We Heard

Cost Recovery

- How to fairly allocate DER-related costs and benefits?
- How to minimize cross-subsidization as a result of DERs?
- How might rates better align with underlying costs?
- How should transmission rate design adapt to reflect increasing penetration of DERs?
- How should upstream DER benefits be addressed in rate recovery? (e.g. gx investment deferral due to dx DER project)

Investment Signals

- How to provide effective signals for efficient customer investment decisions/actions using rates and charges?
- How to provide effective rate structures (e.g. granular vs smoothed) for different types of customers?
- What information is needed to encourage efficient investment decisions and how can it be provided?

Cross-Cutting

Are new customer classes (e.g. DER/non-DER) and/or rate zones required?

Issues: What We Heard

Planning & Operation

- What new planning, procurement and operational functions are needed?
 - What should the transmission and distribution interface look like?
- How to encourage system planning and operation that optimizes existing assets and DERs? How to minimize underutilized/stranded assets?
 - How to support planning for flexibility by distributors and transmitters?
 - How to account for different planning lead times for DER versus conventional solutions?
 - How should DERs be 'controlled' to support system and asset optimization?
 - How to ensure all options are meaningfully considered? How best to source non-wires alternatives?
 - How might customer-owned DERs be leveraged?

Issues: What We Heard

Planning & Operation cont'd

- How to encourage better integration and coordination of planning (including between fuel types and among planning entities)?
 - How to reconcile local and bulk system needs/constraints?
 - How to account for upstream impacts on transmitters and host distributors?
 - How to coordinate centralized and decentralized planning to achieve cost-effectiveness?
 - How to encourage/accommodate community choice?

“There is a need to coordinate planning in a transparent manner that prioritizes the local resources and enables a clear understanding of the upstream and downstream impact to the system.”
(EDA)

Issues: What We Heard

Utility Incentives

- How to improve alignment between incentives and outcomes?
- How to provide utilities more flexibility to minimize costs for consumers?
- How to address inherent utility bias for capital investment?
- Are there ways to set prices, and hence profits, that are not tied to total spending?
- What shared savings mechanisms might be appropriate?
- How to reward efficiencies, however they are achieved?
- What is the best balance of requirements and incentives?

Risk

- What is the impact of DERs on utility risk profiles?
- How should risk models include uncertainty about future demand and system use?
- How to address increasing uncertainty risk?
- What cost of capital is appropriate as utility roles and risk profiles change?
- What are the impacts on utility credit ratings and ability to service debt?

Other

- What aspects of the current framework are working well/could be improved?
- In what circumstances should utilities be allowed to recover DER costs in rates?

Issues: What We Heard

Role of Competition

- In what circumstances are markets or regulation better at protecting consumers with respect to price, reliability, adequacy and sustainability of service?
- Will markets help or hinder optimization of distribution system investment?
- How can the OEB enable markets and competition?
- Are there new or evolving market failures the OEB needs to address?
- Is sector evolution resolving market failures that currently prompt OEB regulation? What activities are no longer monopolistic? What new activities belong with the monopoly distribution business?
- How should the ARC be modernized to better reflect the current (and future) structure of the sector? How might the ARC better support competition?
- Is the meter still an appropriate demarcation point?
- To what extent should the OEB enable customer choice? How?

Issues: What We Heard

Roles & Responsibilities

- What new functions are needed as a result of DERs/sector evolution?
 - How to avoid duplicating roles and responsibilities among distributors, transmitters, DER service providers, IESO?
 - What is the role of distributors in operating/dispatching DERs? What should utility 'control' of DERs entail?
- What mutual obligations are required between distributors and DER proponents?
 - Are DERs giving rise to a new type of 'customer' (distinct from consumers) to whom utilities should have defined obligations? Clear processes and service levels?
- What is the appropriate role/function of the distributor?
 - How should distributors respond to and remove barriers to innovation by others?
 - Should distributors be allowed to participate in competitive markets? Under what circumstances?
 - What new activities may be part of delivering 'distribution services' (e.g. dispatch, data management, customer responsive services and rate structures etc.)?
 - Under what conditions should utilities be able to invest in DERs or DER infrastructure?
 - What does the 'obligation to serve' mean going forward?

Issues: What We Heard

Roles & Responsibilities cont'd

- How to ensure consumers are treated fairly and consistently?
- Whether and how to provide consistent access to choice in relation to energy services?
- What consumer protection measures are needed for non-utility energy service providers?
- How to facilitate appropriate oversight and integration of micro grids/community energy systems?

Performance

- Are we measuring the right things under the current framework?
- What should we be measuring as the sector/regulatory framework evolves?

“...a proper evaluation of the performance of the current system against some of the challenges, so we can better scope where this process is going to take us”

(Ontario Energy Association)

Issues: What We Heard

Access to Information

- What information is needed to encourage efficient investment decisions, planning and operations; and how can it be provided?
- How should mutual data transparency between utilities and DERs be enabled?
 - What should be available to third parties to inform customer offerings (and at what cost)?
 - What should be available to distributors to understand system impacts and optimize asset use?
- What is the appropriate balance between information transparency and protecting consumer privacy, commercial sensitivity, and cybersecurity?
- How to enable 'actionable' information?

Underutilized/Stranded Assets

- How to minimize stranded assets?
- Who should pay the costs/bear the risk of underutilized/stranded assets?
- Under what conditions, if any, might intentional asset stranding be justified?

Change Management

- Identifying and pursuing short, medium, and long-term actions
- How to manage legacy DERs? (e.g. FIT, microFIT, net-metering)

Timeframe

- What timeframe applies to various issues? (e.g. near, medium long term costs and benefits, planning horizons etc.)

For discussion...

Has staff accurately captured stakeholders' input?

Are there any issues that have not been identified?

Staff's Preliminary Issues List

	Issue	Key Questions				
Remuneration	Incentives	What incentives (both penalties and rewards) are required for utilities to achieve desired outcomes? How to remove disincentives to optimize cost-saving trade-offs between capital and operational expenditures or utility and non-utility solutions?	Timeframe	Information Sharing	Stranded Assets	Change Management
	Risk	How to appropriately manage and allocate evolving risk?				
Both	Performance	What should be measured to assess performance?				
	Roles & Responsibilities <i>(incl. role of distributors)</i>	How to provide clarity and appropriate oversight of evolving functions within the sector? How might the role of distributors change (and what are the implications for remuneration)? How to protect consumers as provision of energy services evolves?				
DERs	Value, Cost & Benefits	How to establish a common, evidence-based, understanding of the costs and benefits of DER in Ontario?				
	Planning & Operations	How to encourage system planning and operation that optimizes assets, meaningfully considers all viable and practicable options, and results in least-cost/greatest value solutions? How to encourage better coordination of planning?				
	Cost Recovery & Investment Signals	How to allocate costs fairly among customers, align rates with underlying costs, and provide signals for efficient investment/system use? <i>Some issues will be addressed in Responding to DERs and some are being examined in pricing-related (RPP Roadmap) and C&I Rate Design initiatives. Coordination required.</i>				

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Preliminary Scope: Utility Remuneration

The Utility Remuneration initiative should explore:

- Determination of revenue requirement (assessment of efficient expenditure levels and reasonable return)
- Activities that attract a return for utilities
- Use of specific performance incentives (rewards and penalties tied to achievement of specific objectives)
- Managing and sharing risk (e.g. earning sharing, variance accounts etc.)
- Treatment of non-utility activities within the regulated utility (e.g. legislative restrictions/exemptions on business activities)
- Tools the regulator can develop/employ to support the above

It should not explore:

- Cost allocation
- Distribution rate design (separate consultation)
- Activity and program based benchmarking (separate consultation)
- Methods for determination of specific service charges

“Remuneration can mean different things to different people... it is unclear to us what aspects the OEB intends to review in this proceeding”
(Hydro One)

Preliminary Scope: Responding to DERs

The Responding to DERs initiative should explore:

- Common framework for identifying DER costs and benefits in Ontario
- Signals for investment and operation of DERs by third parties and consumers that promote efficient system use (only issues not addressed in initiatives below)
- Enabling DER services to the distribution system, including aligning with other initiatives on enabling DER services to the bulk system and directly to consumers
- Treatment of investments by utilities to enable/integrate DERs
- Enhancements to system planning
- Roles, responsibilities, rules and requirements for sector participants engaging in DER activities

It should not explore:

- Connection process and requirements (DER Connections Review underway)
- Distribution rate design (residential recently completed, C&I underway)
- Commodity pricing (RPP review and development of alternatives for Class B, Ministry's industrial pricing initiative)
- Enabling DER services to the bulk system (various IESO initiatives)
- Enabling DER services directly to consumers (competitive market)

“There is an increasing interconnectedness between electricity and natural gas systems... in this DER policy development, natural gas must continue to be part of the conversation”
(Enbridge)

What Does DER Integration Mean?

Regulatory

- Rules, requirements and rate-setting need to reflect presence of new resources
- This is the OEB's primary focus

Market

- Mechanisms are needed to appropriately compensate DERs for the services and value they deliver
- OEB's focus is the distribution level and maintaining alignment with the wholesale (IESO administered) and behind-the-meter (competitive, unregulated) markets

Technical

- Technical standards and interoperability requirements are needed to physically integrate DERs
- The OEB does not lead the development of these standards but sometimes reflects them in its codes and requirements

Relevant OEB Initiatives

Consultation	Stage
<p>DER Connections Review: To identify any barriers to the connection of DERs, and where appropriate to standardize and improve the connection process</p>	<p>Working group and sub-groups developing options for consideration</p>
<p>Distribution Rate Design: To improve the link between rates and cost drivers ensuring customers pay for their service commensurate with the value of the distribution system</p>	<p>Stakeholder comments received on Staff Report to the Board</p>
<p>“Smarter” Electricity Prices: To consider RPP reforms that provide more appropriate price signals to low-volume and other Class B electricity consumers, including alternative price designs for recovery of Global Adjustment from Class B consumers</p>	<p>RPP pilot data analysis underway to support development of options for consideration</p>
<p>Innovation Sandbox: Provides a streamlined, accessible way for innovators to test new ideas, products, services, and business models in the electricity and natural gas sectors</p>	<p>Up and running. Sandbox proposals may inform sector evolution policies</p>
<p>Activity and Program Based Benchmarking: Benchmarking tools available to the OEB will be factored into the Utility Remuneration framework</p>	<p>Stakeholder comments received on Staff Discussion Paper</p>

Relevant IESO Initiatives

Consultation

Innovation and Sector Evolution White Paper Series:

- Distributed Energy Resources: Models for Expanded Participation in Wholesale Markets
- Non-Wires Alternative Markets
- Transmission-Distribution Interoperability
- Consumer Preferences

Energy Efficiency Auction Pilot:

Intended to inform long-term discussions about enabling energy efficiency to compete to meet system needs through an appropriate market-based mechanism

Storage Design Project:

Answering key questions related to the participation of energy storage in the IESO administered markets, focusing on transmission and distribution connected energy storage resources that participates directly

Demand Response Working Group:

Deals with issues related to demand response (e.g. access to data, measurement and verification approaches)

IESO York Region Non-Wires Alternatives Demonstration Project/Other Technical Demonstration Projects

- Pilot to demonstrate procurement/operation of DERs to meet local and bulk system needs
- Other demonstration projects to evaluate technical capabilities of DERs


For discussion...

Is the preliminary scope appropriate?

1. Background
2. Guiding Principles
3. OEB's Role & Approach
4. Need for Action
5. Objectives
6. Issues
7. Defining the Scope
- 8. Consultation Process**
9. Appendix

Consultation Process: What We Heard


- Coordination of related initiatives underway in the sector needed to ensure consistency and facilitate efficient stakeholder engagement
- Demonstrable coordination between the OEB, IESO, Ministry of Energy, and other regulators (e.g. ESA) required
- Establish working groups to delve into key issues
- Issues should be prioritized and addressed in a measured and timely manner
- An evidence-based approach is used to develop regulatory policy options that are appropriate for Ontario



“We don’t want to get sort of paralyzed by those big questions where it makes sense to move forward with addressing issues in the near term” (IESO)

Preliminary Guiding Principles for Consultations

- Development of regulatory policies to support sector evolution is coordinated and consistent with other related OEB, IESO and Government initiatives
- Issues are prioritized and addressed in a measured and timely manner
- Development of regulatory policy options is informed by available evidence and empirical analysis
- Regulatory policy options are appropriate for Ontario



...energy policies must be informed by evidence-based research, as well as data, analysis, and comparative case studies (CME)

Consultation Process: Next Steps

- Meeting materials, including transcripts, will be posted on the OEB's website
- Written comments on staff's proposals are due **March 20, 2020**
- Subsequent steps will be identified following consideration of written comments
- Staff proposes the use of working groups to:
 - Delve into specific issues
 - Support the development of options

Thank you!

1. Background
2. Guiding Principles
3. OEB's Role & Approach
4. Need for Action
5. Objectives
6. Issues
7. Defining the Scope
8. Consultation Process
- 9. Appendix**

Terminology & Acronyms

Term	Definition
ARC	Affiliate Relationship Code
Consumer	All Ontarians who use energy now and in the future
Customer	A utility account holder / current ratepayer
C&I	Commercial and industrial
DER	Distributed energy resource
ESA	Electrical Safety Authority
IESO	Independent Electricity System Operator
NWA	Non-wires alternative
RPP	Regulated price plan

OEB Objectives (revised pending proclamation of new legislation)

Electricity

- To inform consumers and protect their interests with respect to prices and the adequacy, reliability and quality of electricity service
- To promote economic efficiency and cost effectiveness in the generation, transmission, distribution, sale and demand management of electricity and to facilitate the maintenance of a financially viable electricity industry
- To promote electricity conservation and demand management in a manner consistent with the policies of the Government of Ontario, including having regard to the consumer's economic circumstances
- To facilitate the implementation of a smart grid in Ontario
- To promote the use and generation of electricity from renewable energy sources in a manner consistent with the policies of the Government of Ontario, including the timely expansion or reinforcement of transmission systems and distribution systems to accommodate the connection of renewable energy generation facilities

Natural Gas

- To facilitate competition in the sale of gas to users
- To protect the interests of consumers with respect to prices and the reliability and quality of gas service
- To inform consumers and protect their interests with respect to prices and the reliability and quality of gas service
- To facilitate rational expansion of transmission and distribution systems
- To facilitate rational development and safe operation of gas storage
- To promote energy conservation and energy efficiency in accordance with the policies of the Government of Ontario, including having regard to the consumer's economic circumstances
- To facilitate the maintenance of a financially viable gas industry for the transmission, distribution and storage of gas
- To promote communication within the gas industry and the education of consumers

Guiding Principles: What We Heard

Principle	Who Said It
<p>Customers must come first</p> <ul style="list-style-type: none"> • “The four Cs” (customer cost, choice, control, and confidence) • Enable (empower) as well as protect consumers • Simple, understandable, actionable customer experience • Support customer and community choice in meeting energy needs • Protect from unnecessary costs • Value for customers • Customer service may need to include providing options and enabling choice • Protect customer investments in response to price signals, provide stability for customer investments • Utility costs reflect incremental value increase, limiting short term cost increases • Innovation must provide lower costs in the long run and/or new services • OEB legislative objectives -- to inform and protect consumers (etc.) and to promote economic efficiency (etc.) -- should drive its approach to these initiative • Make consumer choice and explicit utility obligation 	<p>AEMA, Alectra, APPrO, CanSIA, CME, EDA, Elexicon Energy, Energy Probe, Energy Storage Canada, Environmental Defence, Hydro One, Hydro Ottawa, LPMA, Niagara-on-the-Lake, OEA, Peak Power, Pollution Probe, Toronto Hydro</p>
<p>Reliability and safety</p> <ul style="list-style-type: none"> • DER assets must be planned/managed to complement system safety and reliability • Maintained in light of continued growth of two-way flow on the system • Cost reductions should be pursued that do not adversely affect safety and reliability • Safety is paramount • All DERs must be owned and operated in full compliance with all codes and standards and cybersecurity requirements 	<p>AEMA, Hydro One, EDA, Entegrus, LPMA, Peak Power, Pollution Probe, Storage Power Solutions</p>

Guiding Principles: What We Heard

Principle	Who Said It
<p>Beneficiary pays</p> <ul style="list-style-type: none"> • Minimize cross-subsidization • Fairness to participants and non-participants • User pays • Incentivize good system behaviour • Reflect complexity of system cost causation (e.g. system peaks) • DER costs should be based on coincident peaks • Rate design should be included to achieve efficiency while balancing impacts to non-participating customer groups 	<p>Alectra, Hydro One, IGUA, EDA, Energy Storage Canada, Energy Probe, Enbridge, LPMA, Niagara on the Lake, Peak Power, QUEST and CHP Consortium, Storage Power Solutions</p>
<p>Enhance use of existing assets</p> <ul style="list-style-type: none"> • Consider all distribution system costs and benefits including asset optimization/stranding • Encourage innovative use of regulated assets • Leverage existing assets and low cost of capital • Use of existing assets and infrastructure should be optimized before new assets are added, whenever possible • Optimize existing network assets and minimize stranded costs by extending their useful life via asset management principles that include explicit examination of all cost-effective alternatives, including NWA • Flexibility and scalability to protect against uncertainty • Flexibility for future DER integration 	<p>Alectra, EDA, Elexicon Energy, Energy Storage Canada, Hydro Ottawa, LPMA, OPG, Toronto Hydro, Storage Power Solutions</p>

Guiding Principles: What We Heard

Principle	Who Said It
<p>Economic efficiency & performance</p> <ul style="list-style-type: none"> • Incentivize and require (rather than encourage) economic efficiency and the lowest cost solution (consistent with reliability and safety) and appropriately accounts for all relevant costs and benefits • Empower least cost solutions • Value should be tangible, able to be tracked through utility scorecards • Technology neutral approach to supporting DER investments • Consider broader system costs and benefits of DERs • Compensation for DERs that reflect the full value of the services they provide, including localized benefits • Energy policies must be market-based and driven by the need to attract new investment, growth and jobs to the manufacturing sector; policies only adopted when full extent of economic and competitiveness impact is clearly taken into account 	<p>CanSIA, CME, Environmental Defence, OEA, Peak Power, Pollution Probe, Storage Power Solutions</p>
<p>Competition</p> <ul style="list-style-type: none"> • Regulate only where necessary, facilitate more competition and enable customer choice where possible • Promote competition to drive lowest cost solutions • Technology neutral, fuel agnostic • Level playing field between utility affiliates and other competitors • Pragmatic and customer first approach to competition • Enabled and encouraged wherever possible 	<p>AEMA, APPrO, CanSIA, Enbridge, Energy Probe, Environmental Defence, Hydro One, IESO, LPMA, OPG, SEC</p>

Guiding Principles: What We Heard

Principle	Who Said It
<p>Utilities should focus on utility services</p> <ul style="list-style-type: none"> • Fundamental regulatory principles should continue to apply to all utility investment (conventional and non-conventional) • Utilities should have a reasonable opportunity to recover prudently incurred costs of delivering utility services 	<p>IGUA, SEC</p>
<p>Commit to traditional economic regulation and consumer protection</p> <ul style="list-style-type: none"> • Apply traditional regulatory principles tailored to current situation • Cost recovery of innovative investments should follow existing standards • Apply traditional criteria of regulatory efficiency, economic efficiency and risk 	<p>Elexicon Energy, Hydro Ottawa, IGUA, Toronto Hydro</p>
<p>Transparency</p> <ul style="list-style-type: none"> • Transparent system costs • Information sharing should run both ways • Security is paramount • Open access and sharing of information • Information and data sharing platform to help integrate planning processes 	<p>Alectra, Unidentified male speaker, IESO, OPG, Storage Power Solutions</p>
<p>Energy must be affordable, reliable, transparent and sustainable</p> <ul style="list-style-type: none"> • Balance affordability, service (inclusive of reliability) and sustainability 	<p>CME, Elexicon Energy, Hydro Ottawa, Toronto Hydro</p>
<p>Privacy and cybersecurity (essential to customer trust)</p>	<p>Elexicon Energy, Hydro Ottawa, Toronto Hydro</p>

Guiding Principles: What We Heard

Principle	Who Said It
<p>Encourage energy efficiency</p>	<p>CanSIA</p>
<p>Encourage innovation by all industry participants</p> <ul style="list-style-type: none"> Promote and integrate innovation Use incentives to encourage DER investments 	<p>EDA, Entegrus, Pollution Probe</p>
<p>Universality may need to be revisited</p> <ul style="list-style-type: none"> Locational benefits of DERs may warrant different approaches to allocating costs and benefits; there might be instances where it makes sense to offer some programs/services in some areas or to some customers but not others Utility obligation to serve not absolute, utilities should have right to refuse DER connection 	<p>Enbridge, Energy Probe</p>
<p>Profits follow risk (no risk free investments)</p>	<p>Energy Probe</p>

Guiding Principles: What We Heard

Principle	Who Said It
<p>Durable, predictable, sustainable regulatory framework</p> <ul style="list-style-type: none"> • Clear rules and processes • Stable regulatory regime (impact on credit ratings etc.) • Opportunity to earn fair return maintained while encouraging desirable alternative business models, innovation, and the entry of new entities • Avoid rate design do-over which would increase regulatory uncertainty 	<p>Alectra, CanSIA, Entegrus, Environmental Deference, Hydro One, OPG, Toronto Hydro,</p>
<p>Regulatory simplicity, efficiency and effectiveness</p> <ul style="list-style-type: none"> • Simplicity not at the expense of efficiency and effectiveness • Eliminate unnecessary “red tape” • Respect previous and pending rate-applications 	<p>CME, OEA, OPG, Pollution Probe</p>
<p>Performance & outcome based regulatory framework</p>	<p>Storage Power Solutions</p>

Guiding Principles: What We Heard

Principle	Who Said It
<p>Ontario-specific approach</p> <ul style="list-style-type: none"> Regulation should reflect the Ontario ethic of public ownership, public procurement and public interest regulation 	Hydro One, Toronto Hydro
<p>Evidence-based approaches</p> <ul style="list-style-type: none"> Empirical Data analysis Comparative case studies 	Customized Energy Solutions, CME, Hydro One, Toronto Hydro
<p>Timeliness and responsiveness</p> <ul style="list-style-type: none"> Act on the ‘low-hanging fruit’ Address near term issues to avoid being paralyzed by big questions 	Sussex Strategy, IESO
<p>Coordination and Consistency</p> <ul style="list-style-type: none"> Coordinated, effective approach to policy development Consistency across OEB initiatives 	Peak Power
<p>Questions assumptions</p> <ul style="list-style-type: none"> In the face of disruption, take a fresh perspective on everything, nothing – even fundamental regulatory principles – should be set in stone Don’t let stability prevent consideration of massively different approaches (the smooth approach should not be favoured at the expense of the right one) 	SEC

Objectives: What We Heard

Objective	Who Said It
<p>Provide value for consumers</p> <ul style="list-style-type: none"> • Promote outcomes and innovation that delivers value for all Ontario consumers • Affordable, reliable and sustainable service for customers • Increase system safety, reliability and service quality • Provide a comprehensive regulatory framework to facilitate and support DERs while meeting objectives of low cost, safety, integrity and reliability • Protect consumers • Focus on serving the public interest • Ensure consumers are enabled and supported by their utilities • Customer centric approach ensures DER benefits realized by all consumers • Support expanded customer choice while realizing mutual benefits of DER adoption for all customers • Adapt to customer needs • Remove barriers to customers implementing energy solutions 	<p>AEMA, Alectra, CanSIA, CME, Energy Storage Canada, OEA, Pollution Probe, Storage Power Solutions</p>
<p>Control costs for customers</p> <ul style="list-style-type: none"> • Increase affordability of electricity • Reduce costs (rather than increase choice) • Reduce/do not increase total system cost • Ensure DER integration does not put upward pressure on costs • Incentivize/require lowest cost solutions • Address the largely fixed/committed cost structure of Ontario's electricity system • Lower energy bills and system costs 	<p>AMPCO, CME, Energy Probe, Environmental Defence, OEA, PWU</p>

Objectives: What We Heard

Objective	Who Said It
<p>Optimize infrastructure and avoid stranded assets</p> <ul style="list-style-type: none"> • Avoid stranded assets • Optimize existing infrastructure • Improve cost effectiveness for ratepayers • Maintain a viable and integrated grid that can provide a base level of service to all customers • Defer utility capital investments with DERs • Remove barriers to utilities to optimize system investments 	<p>Alectra, Distributed Resource Coalition, Enbridge, EV Society, IGUA, OEA, OPG</p>
<p>Consider all solutions</p> <ul style="list-style-type: none"> • Establish process for LDCs to pursue the most cost effective viable solutions (put NWA and traditional assets on a level playing field) • Address utility bias for capital investment • Determine how LDCs can earn a fair return on cost-effective NWA alternatives, irrespective of ownership model or entity delivering service • Identify and address regulations that unnecessarily limit the ability of DERs to provide wholesale and distribution services • Distributors should have the right to invest in DERs as a viable alternative to poles and wires • Establish method for comparing alternatives using lifecycle cost assessment 	<p>EDA, Energy Storage Canada, Essex Power, IESO, Pollution Probe</p>

Objectives: What We Heard

Objective	Who Said It
<p>Determine true value of DER</p> <ul style="list-style-type: none"> • Value DERs <u>appropriately</u> and transparently • Improve alignment between utility incentives and desired outcomes • Align price with underlying costs • Quantify/approximate value of certain externalities • Account for DER benefits (including system benefits); develop common categories of costs and benefits that DERs provide to electricity and natural gas systems • Reflect benefits of EVs • Develop mechanisms to compensate DERs for services they provide to the system • Reflect value of flexibility to minimize stranded assets • Assess DER options on a total system cost/benefit basis • Confirm methodology and principles to consistently assess the costs and benefits of DERs, based on their application and location 	<p>AEMA, APPrO, CME, Distributed Resource Coalition, Energy Storage Canada, Environmental Defence, EV Society, Hydro One, IGUA, LPMA, Peak Power, QUEST & Ontario CHP Consortium, Storage Power Solutions</p>
<p>Provide clear investment signals</p> <ul style="list-style-type: none"> • Align price with underlying costs • Enable customers to make the best BTM investment decisions • Provide price signals for DER investment and operation commensurate with value • Design rates to achieve efficiency • Ensure price signals reflect actual needs and drive cost benefits into the system • Distributors should have the ability to incent DER owners to follow price signals and recover those incentives • Ensure DER decisions are informed by appropriate price signals • Allow the net present value of DER projects to be monetized 	<p>CanSIA, CME, Environmental Defence, Essex Power, IESO, PWU, Storage Power Solutions</p>

Objectives: What We Heard

Objective	Who Said It
<p>Improve access to information</p> <ul style="list-style-type: none"> • Improve use of data • Enhance transparency • Improve access to distribution system information/data and decision-making • Seek opportunities to improve data collection and dissemination to support planning, operations and enable consumers and third parties to create value • Distributors should have the right (perhaps mandate) to implement technologies that create DER visibility • Create information transparency to support competition 	<p>AEMA, CanSIA, Energy Storage Canada, Essex Power, IESO, LPMA, OPG</p>
<p>Improve planning and coordination among sector participants</p> <ul style="list-style-type: none"> • Enable integrated planning • Enable community energy planning and empower community choice • Common understanding of technology capabilities, challenges and solutions • Understand how DERs will change system (planning, operation, capital needs, short/long term cost of service) • Planning recognizes the need to adapt to changing conditions • Establish a collaborative process to guide DER development and integration over time • Ensure Ontario's supply and demand balance clearly support need for added DER capacity 	<p>APPrO, CanSIA, CME, Energy Storage Canada, Pollution Probe</p>

Objectives: What We Heard

Objective	Who Said It
<p>Promote or facilitate competition</p> <ul style="list-style-type: none"> • Provide level playing field • Fair access to connect DERs • Do not expand utility service beyond the meter • Maximize competition in electricity markets • Transition from policy push to market pull for DERs • Formalize DER marketplace structure including linkages between accountable regulatory bodies • Maintain clear distinction between competitive and monopoly businesses • Encourage market place solutions and customer choice 	<p>AEMA, APPrO, EPCOR, IGUA, OPG</p>
<p>Define roles and responsibilities</p> <ul style="list-style-type: none"> • Confirm role of utilities and other sector participants • Define utility obligations to DERs and vice versa • Create standards for procurement, connections and information-sharing between IESO, regulated entities and DER providers • Reassess and clarify restrictions on utility business activities • Do not prevent utilities from deploying EV infrastructure where efficient and effective for consumers • Determine the appropriate role of distributors and others in DER integration at the distribution level from the starting point of consumer interests and ratepayer value • Remove barriers for new energy service providers rather than expand utility activity beyond the meter • Utility DER ownership should be permitted where it provides the greatest value to the grid 	<p>AEMA, Alectra, Distributed Resource Coalition, EDA, Entegrus, EV Society, IESO, IGUA, London Hydro, OPG, Pollution Probe,</p>

Objectives: What We Heard

Objective

Manage change

- Act on near term opportunities while being mindful of long-term implications
- Help utilities adapt but do not protect from change
- Provide a transparent, predictable, enduring regulatory framework (regulatory certainty), make incremental progress to prepare for higher DER penetration
- Examine the regulatory toolkit (rate design, connection requirements, rate-funded CDM to displace conventional assets)
- Facilitate fulsome discussion on tough questions so public record can inform important issues such as: LDC ownership model, valuation/compensation/pricing of DERs (locally and provincially), standby rates, safeguarding data, what happens after FIT/microFIT contracts expire)
- Let market choose winners and losers
- Work towards a pro-active vision of the future of the distribution system based on the objectives of the province as well as the fundamental regulatory principles

Who Said It

AEMA, APPrO, Hydro
Ottawa, IGUA, IESO,
LPMA

Objectives: What We Heard

Objective	Who Said It
<p>Common terminology</p> <ul style="list-style-type: none"> • Define DERs to ensure scope is clear • Create a definition for DERs that captures how they may impact the overall system / use cases • Define distribution services • Define customer • Establish a common understanding of technical challenges 	<p>AEMA, CanSIA, CME, EDA, Energy Probe, Entegrus, Hydro One, Hydro Ottawa, LPMA, OEA, Pollution Probe, PWU, Storage Power Solutions</p>
<p>Achieve climate change objectives</p> <ul style="list-style-type: none"> • Enhance resiliency 	<p>OEA, OSEA</p>
<p>Unsilence energy services and regulation</p>	<p>IGUA, OSPE</p>
<p>Encourage innovation</p> <ul style="list-style-type: none"> • Avoid penalizing innovation and efficiency • Encourage investment in future grid • Remove disincentives to innovative solutions • Promote innovation with a mix of carrots and sticks 	<p>London Hydro, OPG, Pollution Probe</p>
<p>Simplify regulation</p>	<p>OPG</p>
<p>Align with provincial government's vision for the energy sector and the OEB's legislative objectives</p>	<p>OEA</p>

Consultation Process: What We Heard

Process & Coordination	Who Said It
<p>Coordinate with other entities</p> <ul style="list-style-type: none"> • IESO & Ministry • Other relevant regulators (e.g. Measurement Canada, TSSA, ESA etc.) • Coordination should be visible to stakeholders and addressed in work plan 	<p>CanSIA, CME, CCC, IGUA, LPMA, OEA, OPG</p>
<p>Coordinate relevant initiatives</p> <ul style="list-style-type: none"> • DER Connections Review • C&I Rate Design • RPP Roadmap & Class B Pricing • Activity and Program Based Benchmarking • IESO DER and Market Renewal Initiatives • Coordination should be visible to stakeholders and addressed in work plan (explain how consultations will inform one another, 'connect the dots') 	<p>Alectra, CME, CCC, Entegrus, Environmental Defence, Hydro One, Hydro Ottawa, LPMA, Peak Power, Storage Power Solutions</p>
<p>Establish working groups</p> <ul style="list-style-type: none"> • To delve into specific issues and provide advice to the OEB • With clear timelines, objectives and obligations to report • Coordinate with one other on linkages and cross-cutting issues • Periodic check-ins with broader stakeholder community via technical conferences 	<p>Alectra, Energy Storage Canada, Hydro One, LPMA</p>
<p>Approach</p> <ul style="list-style-type: none"> • Decisions that are fundamentally about regulatory philosophy should await new OEB leadership; OEB staff should focus on immediate issues which are technical and rest almost entirely on factual evidence • Adopt a collaborative process to guide and define best practices for DER development and integration 	<p>APPRO, SEC</p>