

# Responding to DERs: The Role of EVs

Utility Remuneration and Responding to DERs

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Stakeholder Meeting – September 19, 2019

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# Electric Vehicle Society (EVS)

- **Mission:** To accelerate the adoption of electric vehicles (**EVs**) and shift the car culture towards an environmentally more sustainable future.
- **Membership:** Over 1,000 end-use, largely residential, individual electricity customers in 12 local chapters across Ontario
- More information is available at [www.evsociety.ca](http://www.evsociety.ca)



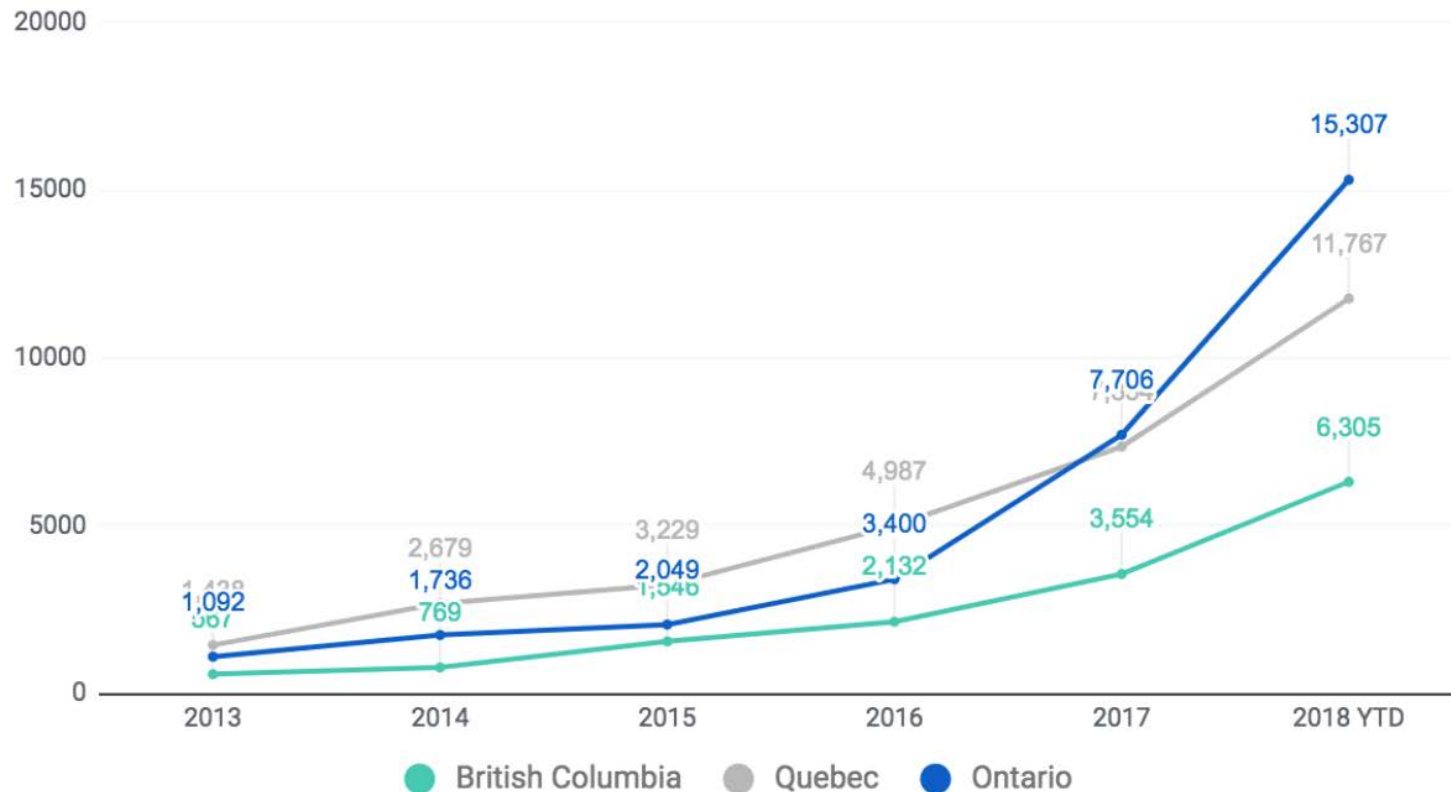
# Stakeholder Meeting: Organizing Questions

- What objectives should the Utility Remuneration and Responding to DERs initiatives aim to achieve?
- What specific problems or issues should each initiative address?
- What principles should guide the development and selection of policy options?



# Transportation electrification is growing

Annual Canadian PEV Sales by Province



- At Sept. 2018 rates, Canada was expected to see more EVs sold across the country in 2018 than the previous three years combined.
- The electric portion of new passenger car sales has risen to **8.3%** for all of Canada.

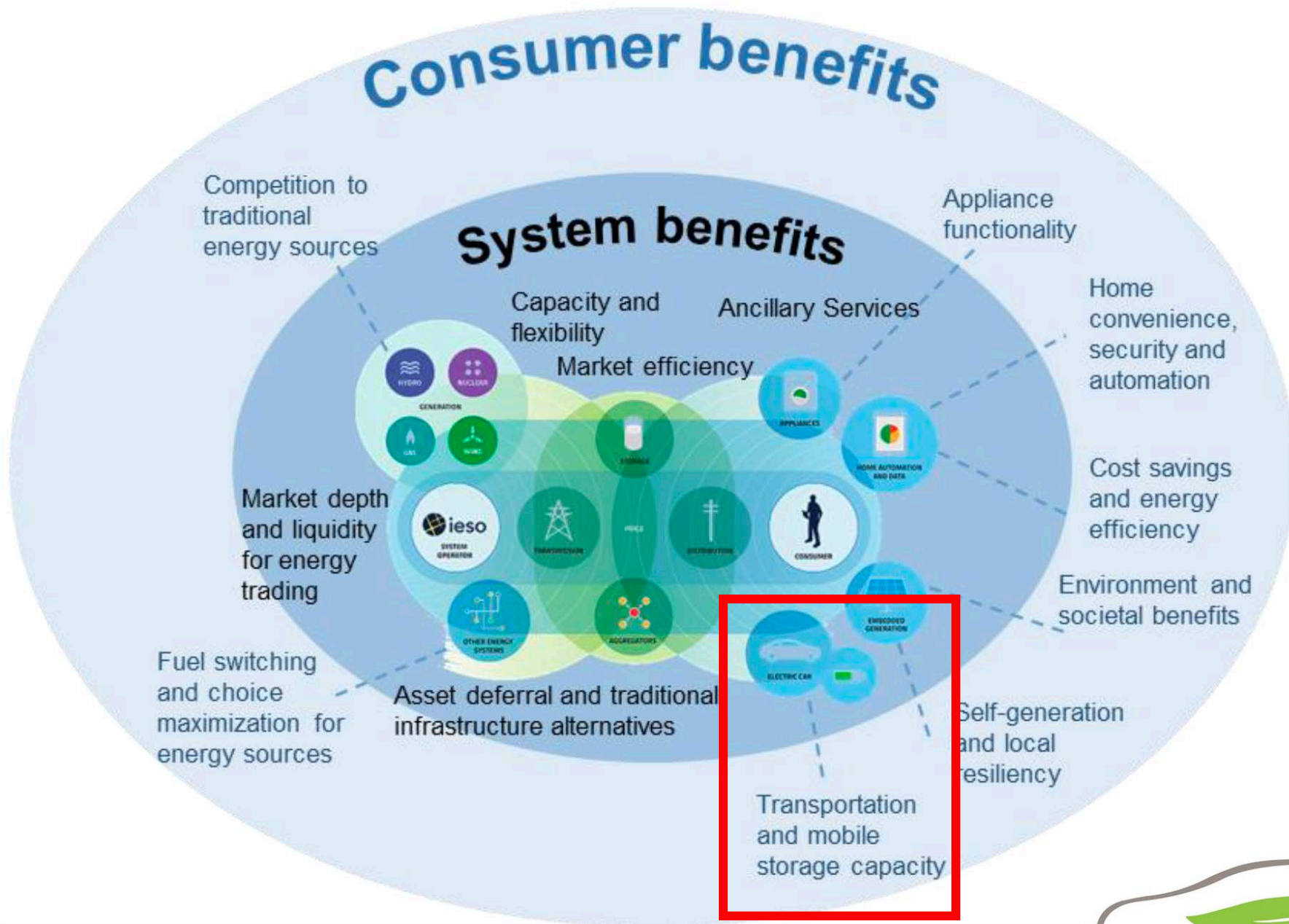
# DERs include EV-related DERs

- The IESO defines distributed energy resources (**DERs**) as follows:
  - DERs are electricity-producing resources or controllable loads that are connected to a local distribution system or connected to a host facility within the local distribution system.
  - DERs can include solar panels, combined heat and power plants, electricity storage, small natural gas-fuelled generators, **electric vehicles** and controllable loads (e.g., HVAC systems, electric water heaters).

# System and consumer benefits of DERs and EV-related DERs

- EVs provide system-wide benefits, provide increased capacity in a cost effective manner, and emissions reductions that benefit all consumers, whether or not they are EV owners
- DER and EV-related DER growth and integration are resulting in fundamental changes to the distribution grid that will impact several aspects of the electricity system, including:
  - electricity supply and demand, customer preferences, capital expenditures, operations and maintenance, load and productivity.
- Utility and non-utility investment in DERs, including EV-related DERs may produce enhanced system reliability, lower customer costs through deferred/paced system investments and improved flexibility





Source: Energy Transformation Network of Ontario, "Structural Options for Ontario's Electricity System in a High-DER Future: Potential implications for reliability, affordability, competition and consumer choice" (June 2019), available online at: <http://ieso.ca/Sector-Participants/IESO-News/2019/06/ETNO-releases-report-on-system-options-in-a-high-der-future>, page 9.

# Recommendations

- Reduce regulatory barriers to DERs, including EV-related DERs, by developing clear guidelines/rules and streamlining regulatory review
- Benefits of EVs should be considered fully in context of DER integration
- Utilities should not be prohibited from implementing EV DER infrastructure where efficient and effective for customers
- Re-assess and clarify regulatory restrictions on utility business activities and separation of regulated vs. competitive services
- Encourage deferred utility capital investment by advancing role of DERs as viable alternatives to traditional investment
- Develop mechanisms to compensate DERs, including EV-related DERs, for the services they provide to the electricity system
- Facilitate market-based solutions that respect consumer choices by increasing transparency





Thank you.

