

Stakeholder Comment Matrix – June 10, 2020

DER Roadmap



Date of Request for Comment: <u>June 10, 2020</u>	Contact: <u>██████████</u>
Period of Consultation: <u>June 10, 2020</u> through <u>July 10, 2020</u>	Phone: <u>██████████</u>
Comments From: <u>The Office of the Utilities Consumer Advocate</u>	Email: <u>██████████</u>
Date [yyyy/mm/dd]: <u>2020/06/07</u>	

Instructions:

1. Please fill out the section above as indicated.
2. Please respond to the questions below and provide your specific comments.
3. Email your completed comment matrix to stakeholderrelations@aeso.ca by **July 10, 2020**.

The AESO is seeking comments from Stakeholders with regard to the following matters:

Question	Answer
Did you identify any content gaps in the <i>DER Roadmap</i> ? If yes, please explain.	<p>In its outline for desired outcomes, the AESO highlights priorities that UCA’s experts InterGroup aligns with in its submissions in the DSI proceeding, including greater coordination between transmission and distribution planning processes, better alignment between price signals provided by respective transmission and distribution tariffs, and equitable treatment of transmission and distribution-connected generation. However, the AESO continues to maintain a strong emphasis on centralized aspects of the AIES in its outline for these desired outcomes, which creates an inherent risk to how the DER Roadmap evolves and the emphasis for its use. This concern is raised by the AESO’s statements about the value of transmission system without a corresponding reference highlighting the value of the distribution system, speaking primarily to the safety and reliability of the distribution system and the need for DER interconnection standards. The UCA highlights the following responses of the DER Roadmap by InterGroup to the Commission’s preliminary IRs in the DSI:</p> <ul style="list-style-type: none"> - In response to IR 008, InterGroup spoke to the need for distribution-specific consideration of the roadmap (p. 5 of 6) and shared the perspective that ISO tariff treatment should not overshadow an examination of how DER impact the operation of the distribution system (i.e. to which the vast majority of DER are connected). The general concern is that the AESO may be inclined to place greater emphasis on transmission and ISO tariffs, and therefore lose sight of the potential benefits associated with DER in a move towards greater reliance on decentralized generation (i.e. which invariable creates some competitive threat for centralized transmission-connected generation and transmission providers).

- In response to IR 010, InterGroup spoke to the narrower definition of DER used by the AESO in comparison to the definition used by some other jurisdictions, which include energy efficiency and demand response as DER measures (p. 7 of 9). InterGroup aligns in this respect with the position presented by Energy Efficiency Alberta in the DSI proceeding that feels that this narrow definition was driven by the AESO's transmission-centric view of the AIES. The AESO mentions a future initiative to address DSMR's but sets not timeline for such an initiative. The inclusion of DSMRs would definitely broaden the assessment of DERs and the value that they create for consumers.
- In response to IR 009 IR 009, InterGroup referenced the use of DER Roadmaps outlined by E3 in the written submission provided by Fortis (p. 6 of 10). InterGroup considers E3 proposal quite robust and flexible for creating a framework for a DER Roadmap that provides useful action points for all parties.
- InterGroup previously mentioned the use of DER roadmaps in its response submission (p. 20) for examining the evolving role of the DSO.
- The DER Roadmap clearly indicates that the AESO feels that greater clarity is required around ISO tariffs as they relate to DERS and substation fractioning. In many respects the priorities raised by the AESO in respect to ISO tariffs somewhat mirror those raised by the DFO's in their concern over the risks that behind-the-meter DER create for DFOs in regards to load masking. The AESO highlights this masking effect in its comments about contract capacity and totalizing of system access service on the transmission side of the T-D substation rather than the distribution feeder level and the potential erosion of the price signal for system access service. In this respect, the UCA aligns with the AESO and this need for greater clarity (i.e. support with facts). The AESO provided detail on its required approach to DTS and STS fractioning in Information Document No 2018-019T, which attempts to address the ISO's concerns, which has created additional concerns about cost allocations for DCG as highlighted by commentary around the Bull Creek Wind Facility in its February 2020 presentation (<https://www.aeso.ca/assets/Uploads/BluEarth-Renewables-Presentation-Feb.-27-2020.pdf>). This two pieces of information along with other information presented at the AESO Technical Session on substation fractioning held in February 2020 highlight the need for greater clarity and consensus on the matter.

Considering the similar impacts of both DER and DSMR at the transmission-distribution interface identified by the AESO in the roadmap, the UCA considers that it would be advisable to include DSMR rather than treat these technologies separately. DER penetration associated with residential, small commercial and farm consumers is still low and has minimal impact on the safety and reliability of the AIES, particularly small-scale microgeneration, EVs and behind-the-meter energy storage. However, it is important that the AESO clearly identify the costs and benefits as well as the impacts of DER at this level when considering market access and participation.

Even though the AESO acknowledges on page 22 some problematic areas related to the ISO Tariff, it does not mention current issues related to the potential for incorrect incentives, cost shifting and cross subsidization affecting residential consumers. The UCA has raised concerns with the 12-CP methodology, transmission credits, and the substation-fraction formula calculation as well. The UCA is in favor of DCG paying a fair share of transmission costs, The UCA recommends that DCGs pay a locationally differentiated connection charge that would encourage more efficient system development, and prevent "voltage shopping" and uneconomic bypass.

	<p>The current process for compensating distribution-connected generation (i.e. not including behind-the-meter micro-generation used for both self-supply and export) through DG credits is not presently based on principles of cost causation (i.e. or cost avoidance). There is no defined revenue stream or cost avoidance applicable to DG credits in the current structure. As a result, non-DG distribution customers are directly funding DG credits with minimal understanding or realization of related benefits. Consideration may be given to an avoided marginal cost basis for compensating DG owners that used avoided costs as the basis for determining the scale and type of credits provided to DG owners</p> <p>The UCA is concerned with possible issues with competition for substation capacity created by increased number of DCG connections. Micro-generators connection applications to the distribution grid are denied due to increased DCG connections, particularly transmission-sized projects that instead of connecting to the transmission system are connecting to the distribution system.¹ This creates an issue of discriminatory access that appears to originate largely because of the conflicting price signals provided by transmission and distribution tariffs, which is further aggravated by the rather arbitrary application of DG credits to distribution-connected generation that is intended for supply only (i.e. excluding micro-generation).</p> <p>The UCA is in favor of a “balanced approach” to rate design that promotes overall fairness and follows cost causation, and recognizes energy transition and the ongoing transformation of the utility sector. The traditional Bonbright principles need to be considered and applied in proper context of system characteristics and customer-focused rate design, recognizing a new world with high levels of DER, energy efficiency, and customer options for onsite backup supply.² The UCA aligns with recommendations made by Jim Lazar of the Regulatory Assistance Project (RAP) that sets out modern principles for smart rate design.³ Distribution rate designs focused around fixed customer charges will generally discourage the adoption of energy storage by consumers. Key benefits related to the management of capacity requirements for servicing peak energy consumption demands behind-the-meter will not be rewarded through fixed-price rate designs.</p> <p>It is the UCA’s view that any changes to acts, regulations and rules must balance the interests of consumers, utility investors and policy makers. The changes should provide more opportunities for customers to potentially reduce their electricity costs by installing DER (i.e. including energy efficiency, energy storage, electrification of transportation, space and water heating, etc.), and provide more clarity and consistent guidelines for new DER customers, while also mitigating potential cost impacts on other customers. The UCA is interested in what services should be regulated and how rate structures should be modified to encourage efficient and cost-effective use of the grid as well as new technologies and innovation. The ability to connect DER to the grid in a cost-effective and expedient manner is a key factor for supporting DER integration and creation of a market that encourages DER adoption.</p> <p>The present lack of visibility and control for customer-owned DER downplays potential benefits. Verification and quantification of DER benefits will require greater visibility on the grid through smart metering, advanced distribution management systems (“ADMS”) and distributed-energy-resource-management-systems (“DERMS”). Rate-based investments will likely be required in these areas to facilitate the integration of DER and providing meaningful realization of their benefits. In consideration of the intent of the Fair, Efficient, and Open Competition Regulation (FEOC), the UCA would like more clarity as to how the AESO feels DERS will disrupt the ancillary services market and impact load consumers.</p>
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¹ AUC Proceeding 24116Exhibit 24116_X0706, UCA-AUC-2020JUN03-009(c).

² AUC Proceeding 24116. Exhibit 24116_X0706, UCA-AUC-2020JUN03-004(a)

³ Lazar, J. and Gonzalez, W. (2015). *Smart Rate Design for a Smart Future*. Montpelier, VT: Regulatory Assistance Project. Available at: <http://www.raonline.org/document/download/id/7680>

Did you find value in the publication of the *DER Roadmap*? Would any additional information be helpful? How can it be improved?.

The publication makes clear that the AESO, in collaboration with the DFOs, will rely heavily on forecasting models to determine the impact and penetration levels of DER in the future. The UCA would like to know more about how the AESO hopes to improve its decision-making processes to include the most up to date forecasts possible to meet expected needs. Ultimately, out-dated forecasts can result in projects being built that may no longer be necessary and result in increased costs for consumers. The UCA recommends the AESO to explore options to avoid and mitigate risk of over-build (i.e. enhanced reliance of leading-edge indicators, project approvals, power contracts signed, actuals from EV sales, etc), and more stringent prudency tests during NID processes.

The UCA believes the AESO’s analysis of energy storage is not comprehensive. This relatively new technology, as per its definition, can be treated as both a load and generation entity depending whether it is charging or discharging. This can have an impact on investment and ultimately load customers given demand and supply related contract amounts as well as the funding allocation for construction. One objective of the DER Roadmap should be maximizing the benefits of energy storage. For this purpose, it is helpful to first understand the ways that the current regulatory and policy landscape treats storage systems to account for the benefits they may provide to the grid, including ancillary benefits. Energy storage systems have the potential to provide many benefits to the grid, such as lowering the price of electricity at peak demand times, and deferring or avoiding new capacity investments.

The UCA recommends the AESO include in its analysis the costs and benefits of different energy storage projects, including whether the project is expected to deliver any savings to ratepayers and how ratepayers will be benefiting from energy storage projects at the distribution level. Without behind-the-meter (“BTM”) energy storage it becomes rather difficult for micro-generation consumers to control the market value that they obtain from exporting energy to the grid because they lack control over the timing and quantity of energy that they make available to the market. The availability of surplus energy is generally dictated by the timing of peak self-generation output (i.e. sunny midday conditions) and behind-the-meter load (i.e. often at lower levels during periods of peak generation output). As a result, micro-generation consumers generally have minimal control to dispatch energy based on market conditions and therefore become “price takers” who are required to accept whatever price the market provides at the time they have surplus energy. Providing a meaningful market price signal to micro-generation customers therefore requires a longer-term approach with lesser emphasis on dynamic hourly pricing for exported energy.

The addition of energy storage will generally reduce energy exports to the grid as customers seek to maximize the “retail rate” benefit by consuming energy behind the meter and therefore reducing their costs for procuring energy from the grid. This trend may offset the intent of the move to net-billing based on wholesale energy rates if rate design continues to focus on energy consumption as the primary billing determinant.

The AESO has acknowledged that DER impacts reliability. In addition, the AESO stated that DERs, in general, do not require an enhancement or expansion of the transmission system. The proliferation of distributed-connected generation (DCGs) and potentially not limiting the amount of distributed-connected generation at the feeder-level, could result in transmission overbuild in the future, especially given market incentives such as transmission credits and net-metering practices which fail to appropriately recover costs aligned with benefits being received by the DCGs. The UCA welcomes the proposals to improve transmission system planning that include enhanced DER models and forecasts, but recommends being mindful of cost accountability and prudency of investments. When considering DER in both TX/Dx system planning, the UCA recommends maximizing the use of existing infrastructure and prioritization of new investments. The UCA recommends more visibility into transmission and distribution system planning in order to

	<p>verify that TFOs and DFOs are considering all relevant factors when planning their upgrades to the grid, including load forecasts, trends in technology, DER adoption, etc. Smart rate design aligns customer investment and operation of DER with system value. Smart regulations and policies – including the use of a transparent distribution planning process that examines potential non-wires solutions – can help reveal the true value of DER and unleash their full potential.</p>
<p>Do you have suggested changes to the activity timing in the <i>DER Roadmap</i> Integrated Plan? If yes, please be specific to why you would like to see the timing changed and what the suggested timing should look like.</p>	
<p>Are you aware of any recent DER research/resources/information that would provide the AESO more insight on this topic? If yes, please provide details or explain.</p>	<p>MIT:</p> <ul style="list-style-type: none"> - Utility of the Future: An MIT Energy Initiative response to an industry in transition. Full report can be found at: energy.mit.edu/uof <p>Smart Power Alliance (SEPA):</p> <ul style="list-style-type: none"> - Beyond the Meter. Recommended reading for a modern grid. - 51 State Perspectives <p>IREC:</p> <ul style="list-style-type: none"> - Guidebook for Distributed Energy Resource (DER) Interconnection https://irecusa.org/publications/guidebook-for-distributed-energy-resource-der-interconnection/ - Charging Ahead: Energy Storage Guide for Policymakers https://irecusa.org/publications/charging-ahead-energy-storage-guide-for-policymakers/ <p>APPA:</p> <ul style="list-style-type: none"> - Rate Design Options for Distributed Energy Resources, Prepared by Paul Zummo and James Cater for the American Public Power Association, NOVEMBER 2016 www.PublicPower.org - Residential consumers and the Electric Utility of the Future, Prepared by Janee Briesemeister with the assistance of Barbara R. Alexander for the American Public Power Association, JUNE 2016 <p>Institute for Policy Integrity - NEW YORK UNIVERSITY SCHOOL OF LAW - ELECTRICITY POLICY INSIGHTS: “Managing the Future of Energy Storage. Implications for Greenhouse Gas Emission”. April 2018</p> <p>Regulatory Assistance Program (RAP) https://www.raonline.org/</p> <ul style="list-style-type: none"> - Capturing more value from combinations of PV and other distributed-energy-resources, Full report available at: https://www.raonline.org/knowledgecenter/capturing-more-value-from-combinations-ofpv-and-other-distributed-energy-resources/ - Lazar, J. and Gonzalez, W. (2015). <i>Smart Rate Design for a Smart Future</i>. Montpelier, VT: Regulatory Assistance Project. Available at: http://www.raonline.org/document/download/id/7680

