

Q1. One challenge posed to the Alberta grid by IBR resources is the unstable nature in the weak grid (low short circuit ratio). what's the popular industrial solution using IBR control method?

A. Grid forming, Virtual SG/inertia, voltage support, etc. are some ideas being piloted.

Q2. Does the wind turbine need to be spinning in order to provide 40-50% of reactive power with zero active power output, or can this be achieved without the turbine spinning?

A. Technically, the grid side DC/AC can generate Q without turbine spinning.

Q3. Are the benefits of demand response somewhat limited for consumers compared to the significant advantages it offers utilities? For utilities, reducing peak load through demand response can greatly lower the system's capacity requirements. Is this truly the case?

A. Consumers can choose to minimize their utility demand to minimize their electricity cost. On-site generation and battery support can further this benefit by given the customer a greater control over when and how they are drawing power off the grid.

Like the Hydro One case, if the customer can carefully follow the price schedule, they can reduce energy cost and save money for sure.

Q4. Will demand response negatively impact DER connection on the same feeder?

A. I would say they work hand-in-hand. Once the operation of demand response can be coordinated with the DER output (e.g., based on the CTA-2045 and Zigbee on the smart meter), demand response can offer benefit to DER, e.g., by shifting some peak demand to high DER output periods (e.g., noon and early afternoon) to reduce generation curtailment. Also, frequency and voltage regulation can be provided by some demand response programs, e.g., the one for EV batteries with V2G capabilities.

Q5. Which UL1741 certificate is required? For example, UL1741 SA or UL1741SB?

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Q6. Can you provide a more detailed explanation of the criteria, such as limiting the DER power rating to less than 1/15 of the interconnecting customer's minimum load? Is this limitation primarily intended to mitigate the risks of islanding?

A. I believe here he is talking about customers connected to Eversource's Low Voltage Secondary Networks. For this unique type of distribution system, the typical industry approach is to not allow DER export of power into the utility (to ensure normal operation of equipment called Network Protectors). Therefore, customers are required to always have a minimum import of power. It looks like this is the criteria that Eversource uses to ensure customer import of power from the utility is maintained.

Q7. Do you require to turn >5 MW dg TURN OFF for N-1>?

- A. All DERs (regardless of size and type) should be on-line for our station level N-1 scenarios. We do not let them turn off.