DER Program for Utilities

Allen M. Freifeld
Demand Power Group Inc.
443.878.7155

Sample Use Cases

- Distribution system- wide load relief
- Targeted sub-area load relief (such as a given substation)
- Avoid service disruption and/or system upgrades
- Can be behind the meter or distribution system connected

Program Rules

- Utility establishes program rules such as:
- Enrollment
- Metering and telemetry requirements
- Protocols for calling an event
- Customer baseline
- Competitive auction
- Reservation payment (auction clearing price)and performance payment (per kwh and set by OEB)

Notice of Event

- Utility uses an All-call system giving sufficient advance notice of when it needs load reduction
- Phone call to participating parties and
- E-mail notification as well
- Notice goes to aggregator, which then notifies its resources.

Performance, Metering, and Telemetry

- Resources respond to notice by:
  - 1) curtailing usage(reducing load) or
  - 2) by serving load via a behind the meter device or
  - 3) injecting generation into the grid
- Interval metering required
- Curtailment data transmitted to utility following event via chosen communication method. (landline, IP, etc.)

Performance verification

- Choose a customer baseline load method
- Compare load during event to baseline to confirm curtailment (verification)

Curtailment Protocol

- Utility describes when it will call an event, such as;
- When load reaches 92% of the all-time peak or
- When load on a given substation reaches XXXX

Injection vs. Non- Injection

- Traditional DR – load reduction and no power injection to distribution grid.
- Behind the meter generation – local load served so no injection to distribution grid.
- Non-injection can be assured via logical controls or physical controls. Both methods have been used.
- Interconnection to distribution system – interconnection via OEB approved rules and injection into distribution grid.