

# Dominion Transmission and Market Integration White Paper

Version 1.5

## **Exchange Data for Load Flow Studies**

In order to adequately perform studies of the PJM system, certain modeling data is required from both transmission and generation owners. PJM Manual 05 “Power System Application Data” provides guidelines for the power system data that is required for regional planning studies. For a higher level overview of data requirements, refer to Attachment D of Manual M14B.

## **Load Shedding**

PJM modified the existing PJM EMS load dump calculator to institute changes to the Operating Agreement set forth in Schedule 1, Section 1.7.11 that state that “. . . the Office of Interconnection may not order a manual load dump in a Control Zone solely to address capacity deficiencies in another Control Zone.” Only Manual Load Dump requests for capacity deficiencies are addressed. A load dump request will only be initiated when all other emergency actions have been taken as identified in the PJM Emergency Procedures Manual (Manual 13).

The load dump calculation determines which Control Zone(s) is short based on real-time load and energy values from PJM EMS and capacity values received daily from the Capacity Adequacy Planning Department. Real-time energy values are used as a surrogate for available capacity because in a capacity shortage situation available capacity and energy should be close to equal. As set forth in Manual 13, all generation should be loaded to full capacity prior to implementing any load dump, therefore actual real-time energy output will be used to identify deficient Control Zones. Since most of the values used in the load dump calculation are real-time dynamic numbers, the calculation is performed in the PJM EMS. Load Serving Entities are able to designate within eCapacity that capacity resources are being used to serve load in a specific Control Zone. Similarly EES users are able to specify that an external energy schedule is designated for a specific Control Zone. Resources that are not designated for a specific Control Zone are considered an RTO resource for load dump calculation purposes and allocated across all Control Zones according to load ratio share. Only Control Zones that are determined to be deficient are assigned a share of a load dump request initiated due to RTO capacity deficiencies.

## **Demand Response**

1. Dominion Virginia Power customers will have an opportunity to apply for participation in the PJM Economic and Emergency Load Response Programs.
2. PJM will review such application to ensure that the qualifications for participation in the program are met, including verifying that the appropriate metering exists. PJM also confirms with the appropriate EDC and LSE whether the load that might be reduced is under other contractual obligation. Other such obligations may not preclude participation in the program, but may require special consideration by PJM such that appropriate settlements are made within the confines of the existing contract.
3. To avoid double compensation for reduction of load, Dominion, as the EDC, has determined that customers taking service under the following rate schedules will

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- not be eligible to participate in the Economic and /or Emergency Load Response Program during the on-peak periods of a Schedule 10 ‘A’ day. The On-Peak periods of a Schedule 10 ‘A’ day are defined in Dominion Virginia Power’s Schedule 10 tariff on file with the Virginia State Corporation Commission. The rate schedules that are not eligible during this period include, Schedule 10, Schedule 10VA, Schedule 132, Schedule 132U, Schedule 10U and Schedule 6VP.
4. To avoid double compensation for reduction of load, Dominion, as the EDC, has determined that customers under the following rate schedules will not be eligible to participate in the Economic and/or Emergency Load Response Program during a mandatory curtailment period as set forth in the respective tariff. The rate schedules that are not eligible during this period include: Schedule SG, Schedule SGVA, Schedule SGCM, Schedule SGCM-1, Schedule MSSG, Schedule CS, Schedule CSVA, Schedule CSCM, and Schedule 6C.
  5. To avoid double compensation for reduction of load, Dominion, as the EDC, has determined that customers under rate schedule RTP will not be eligible to participate in the Economic and/or Emergency Load Response Program during the period that the capacity adders are being applied.
  6. To avoid double compensation for reduction of load, Dominion, as the EDC, has determined that the customer under rate schedule NS will not be eligible to participate in the Economic and/or Emergency Load Response Program during the period that a Tier 1 or Tier 2 mandatory curtailment is in effect. During Tier 1 hours when a mandatory curtailment is not in effect, customers under rate schedule NS may participate in the PJM load response programs under the rules for customers with LMP based contracts.

## **Markets**

### **eMarket and UDS**

One day-ahead market will be cleared for the PJM RTO. The timeline for clearing the market and posting the results will remain the same based on Eastern Prevailing Time. Unit Dispatch System (“UDS”) requires a separate Load Forecast for each control zone.

The independent Market Monitor will propose specific market power mitigation measures that would be applied to the aggregate energy market if required.

### **Interface Pricing**

Upon the integration of Dominion and then followed by Duquesne, into the PJM market, the points at which external energy transactions are priced (interface pricing points) will change. The control areas directly connected to the expanded PJM market will be grouped as shown below, and only one OASIS source of an import/sink of an export will be available for each POR/POD. For example the OASIS POR/POD combination of POR- MEC and POD- IP will have only one Source- NORTHWEST and one Sink- SOUTHWEST available. The mapping of