Updated CEII – pages 3 & 4 of M14B

About Critical Energy Infrastructure Information (CEII[HCL1])

PJM Critical Energy Infrastructure Information Release Guidelines

Background

The Federal Energy Regulatory Commission ("FERC" or "Commission") considers the information filed in the FERC-715, Part 2, Part 3, and Part 6 (http://www.ferc.gov/legal/ceii-foia/ceii.asp) to be Critical Energy Infrastructure Information (CEII). This information contains electrical models, detailed one-line diagrams and analysis of the filer's actual transmission system including potential weaknesses of the filer's transmission system. PJM treats all such power flow and associated system modeling data as CEII. This includes all power flow models that are developed using or including filed data and related information used in transmission analysis such as contingency and monitored element files. ~~Power flows originating from PJM's operations systems are also considered CEII, however, p~~Power flows specifically configured for short circuit analysis that do not contain load and typical generation dispatch are not considered CEII. Regarding all types of PJM information, however, additional consideration must be given to whether or not PJM received or originated the information as Confidential Information prior to decisions regarding its release. Confidential information is discussed in PJM documents including the Operating Agreement §18.17 and the Open Access Transmission Tariff §§222 – 223. Power flows may but generally do not contain Confidential information. Confidential information of individual members, if any, will be redacted prior to release. Some PJM power flows are special cases that contain both confidential information and CEII. For example PJM power flows originating from system operations and used for near-term operational studies often contain confidential information in addition to CEII. These cases can only be obtained with authorization through the CEII process and authorization from the responsible Operating Committee and/ or working group.

The events of 2001 prompted the Commission to reconsider its previous policy of making the FERC form 715 report publicly available. Subsequent to September 11, 2001, the Commission removed from public files all documents likely to contain detailed specifications of facilities licensed or certified by the Commission. This restriction was later expanded to include information about proposed facilities as well as those already licensed or certificated by the Commission, excluding information that simply identified the location of the infrastructure. After the events of September 11, 2001, FERC Form 715 information became subject to CEII review prior to its release. In its October 2007 Order, the Commission issued revisions to the treatment of CEII and reclassified FERC Form No. 715, Parts 1, 4, and 5 as public. The remaining portions of the report are CEII. In the FERC Order Nos. 890 and 890A the Commission directed Transmission Providers to develop a process for handling CEII while implementing the Orders' requirements for open, transparent and participatory planning.

The PJM power flow information is a combination of CEII information filed or provided by a number of "owners" and additional information introduced by PJM, PJM Members, and non-members.

The Commission's treatment of CEII has evolved over a progression of Orders that must be read together to understand the procedures applicable to the determination and handling of CEII. In consideration of the multiple-owner nature, the sensitivity of the information, and the essential role of this information in PJM's Tariff procedures and participatory planning, PJM has implemented a process for handling and documenting such material. PJM's intent is to provide a process for eligible recipients to access CEII consistent with the Commission's standards for handling CEII material.

Procedure to Request Access to PJM CEII [HCL2]

PJM will act as the first point of contact to process CEII requests from Members, Interconnection Customers (as defined in the PJM OATT) or active participants in PJM's eFTR or eRPM markets. In addition, employees of other RTO's, ~~or~~ similar independent transmission organizations recognized by FERC, and NERC Planning Coordinators (interregional planning entity) may also come to PJM as a first point of contact for access to PJM CEII. PJM accommodates other RTO's and Planning Coordinators in order to carry out interregional planning responsibilities pursuant to applicable FERC orders and interregional planning agreements between and among the parties. These interregional planning entities, similar to PJM, are those that have primary responsibility for creating and protecting CEII and have their own FERC compliant processes for handling CEII in their possession. Interregional transmission planning creates the need for unique interregional business processes that accommodate Interconnection-wide exchange and sharing of CEII among eligible persons while enforcing the standards for non-disclosure of such information. When necessary, PJM establishes interregional CEII procedures that uphold the essential underlying tenants of PJM's process.

All CEII requests must be from individuals. Each individual who may view or discuss the requested CEII must complete the PJM process. To request CEII in PJM's possession, a requestor must complete a PJM CEII Request Form identifying the requestor and the need for and planned use of the requested information. The request must also be accompanied by an executed CEII Non-disclosure Agreement (NDA). These two PJM CEII documents are available from your PJM Planning contacts, the PJM CEII Contact in the NERC and Regional Coordination department or the Planning area of the PJM website. If a PJM Member or PJM Interconnection Customer desires to coordinate a consultant's access to CEII on behalf of the organization, the organization's authorized representative must submit an Authorization Form (in addition to the authorized representative's Request and CEII NDA) that identifies each individual consultant who may make individual requests for CEII on the organization's behalf. The consultant additionally must submit a Request Form and CEII NDA requesting access to the same information specified on the form of the organization's authorized representative. Entities who are not PJM members, Interconnection Customers, registered PJM auction participants, or employees of another RTO are encouraged to first seek authorization from FERC by following the procedures outlined at www.ferc.gov/legal/ceii-foia.asp.

Updated Baseline Voltage Analysis – page 20 of M14B

2.3.6 Baseline Voltage Analysis

Baseline voltage analysis parallels the thermal analysis. It uses the same power flow and examines all the same NERC category A ~~and~~, B, and C events. ~~Baseline voltage analysis does not examine category C or common mode outages.~~ Also, voltage criteria are examined for compliance. PJM examines system performance for both a voltage drop criteria and an absolute voltage criteria. The voltage drop is calculated as the decrease in bus voltage from the initial steady state power flow to the post-contingency power flow. The post-contingency power flow is solved with generators holding a local generator bus voltage to a pre-contingency level consistent with specific Transmission Owner specifications. In most instances this is the pre-contingency generator bus voltage. Additionally, all phase shifters, transformer taps, switched shunts, and DC lines are locked for the post-contingency solution. SVC's are allowed to regulate.

The absolute voltage criteria is examined for the same contingency set by allowing transformer taps, switched shunts and SVC's to regulate, locking phase shifters and allowing generators to hold steady state voltage criteria (generally an agreed upon voltage on the high voltage bus at the generator location.)

In all instances, specific Transmission Owner voltage criteria are observed. All violations are recorded and reported and tentative solutions will be developed. These study results will be presented to and reviewed with stakeholders.

Updated IROL Definition – page 71 of M14B, Attachment F

Interconnected Reliability Operating Limits[HCL3] are defined as:
An Interconnected Reliability Operating Limit (IROL) is defined as ~~the value (such as MW, MVAr, Amperes, Frequency, or Volts) derived from, the~~a ~~s~~System ~~o~~Operating ~~l~~Limit~~s, which~~ that, if ~~exceeded~~violated, could ~~expose a~~lead ~~widespread area of the bulk electric system~~ to instability, uncontrolled separation or ~~c~~Cascading ~~o~~Outages that adversely impact the reliability of the Bulk Electric System. In the planning horizon PJM analyses examine and reveal the violations of applicable criteria. This includes violations affecting PJM monitored facilities at all voltage levels as well as violations that may have widespread impacts affecting the Bulk Electric System, which may be eligible for designation as IROLs. PJM plans system upgrades for violations of applicable criteria, thus IROL designations are not required for the upgraded system in the planning horizon. PJM performs analysis in both the planning and operating horizons to ensure IROLs are not exceeded. For additional information on IROLs for the operating horizon see the PJM Transmission Operation Manual (M03) and the PJM Reliability Coordination Manual (M37).

PJM's Planning methodology to determine IROL facilities simulates transfers across a facility or interface (combination of facilities), comparing thermal and voltage violations associated with a facility. The transfer scenarios used by PJM Planning are established through the application of PJM's deliverability criteria. Additional information on PJM's deliverability criteria is included in Attachment C of this manual. PJM classifies a facility as an IROL facility on the network if wide-area voltage violations occur at transfer levels that are near the Load Dump thermal limit.

As part of the development of the PJM Regional Transmission Expansion plan, SOLs which could result in system instability or uncontrolled cascading outages are identified and system reinforcements are developed. All BES facilities in PJM's footprint and ties to external systems are monitored for violation. In addition, certain selected 69kV and below facilities may also be monitored consistent with the procedures defined in the PJM Transmission Operation Manual (M-03).