**Attachment C**

**FERC-715 - Annual Transmission Planning and Evaluation Report Instructions**

Revised November 2009
Approved OMB Control No. 1902-0171
Expires: (MM/DD/YY)

This report is mandatory under Sections 213(b), 307(a) and 311 of the Federal Power Act and 18 CFR Section 141.300 of the Commission's regulations.

**§ 141.300 FERC Form No. 715, Annual Transmission Planning and Evaluation Report**

**Who must file:** Any transmitting utility, as defined in § 3(23) of the Federal Power Act, that operates integrated (that is, non-radial) transmission facilities at or above 100 kilovolts must complete FERC Form No. 715;

**When to file**: FERC Form No. 715 must be filed on or before each April 1st;

**What to file**: FERC Form No. 715 must be filed with the Office of the Secretary of the Federal Energy Regulatory Commission in accordance with the instructions on that form.

The Commission considers the information collected by this report to be Critical Energy Infrastructure Information (CEII) and will treat it as such. The public reporting burden for this collection of information is estimated to average 160 hours per response, including the time for reviewing the instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. You shall not be penalized for failure to respond to this collection of information unless the collection of information displays a valid OMB control number. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to:

Federal Energy Regulatory Commission
Office of the Deputy Chief Information Officer
ATTN: Information Clearance Officer (ED-32)
888 First Street, N.E.
Washington, DC 20426

and to:

Office of Management and Budget
Office of Information and Regulatory Affairs
ATTN: Desk Officer for the Federal Energy Regulatory Commission
Washington, DC 20503

**Table of Contents**

---

## I. GENERAL INFORMATION

### A. Purpose of Report

The FERC Form No. 715, Annual Transmission Planning and Evaluation Report, is required pursuant to Sections 213(b), 307(a) and 311 of the Federal Power Act to provide information adequate to inform potential transmission customers, State regulatory authorities and the public of potential transmission capacity and known constraints, to support the Commission's expanded responsibilities under §§ 211, 212 and 213(a) of the Federal Power Act (as amended by the Energy Policy Act), and to assist in rate or other regulatory proceedings.

### B. Who Must Submit

Each transmitting utility, as defined in section 3(23) of the Federal Power Act, that operates network (that is, non-radial) transmission facilities at or above 100 kilovolts must report the information requested under the listed items in the prescribed manner. In the case of joint ownership, only the operator of the facilities must report.

A designated agent, such as a regional transmission group, regional reliability organization, formal power pool, or other group, may submit part or all of the required information on behalf of the transmitting utility. The transmitting utility is responsible for submitting all data not submitted on its behalf by a designated agent. Designated agents must specify the transmitting utility (or transmitting utilities) for which they are submitting information. The Commission prefers that all power flow data submitted for Part 2 of FERC-715 be submitted by designated agents outlined above.

### C. Waiver Request

The final rule requires that an entity requesting waiver of FERC-715 must either: (1) indicate the entity that performs transmission planning for it, or (2) state that it does not use power flow analyses in performing transmission planning. Once granted, a waiver request in subsequent years is unnecessary, provided the party's status does not change; that is, as long as the party does not begin to perform transmission planning or to use power flow analyses in its planning. Requests for waivers must be submitted prior to the required submission date, April 1st of the filing year.

### D. Blank or N/A (Not Applicable) Responses

All parts of the FERC-715 must be completed. Blank or N/A (Not Applicable) responses are not acceptable. For example; for Parts 4 and 5, respondent transmitting utilities should state the reasons why they have not developed specific transmission reliability criteria or assessment practices for their own system in addition to that of the regional entities if that should be the case.

### E. Checklist and Where to Submit

Respondents may send their responses via FERC eFiling, if all the files comprising the submission are on the list of FERC acceptable file formats.

Respondents who are unable or unwilling to use the FERC eFiling system must submit one original, either in hardcopy or electronically on CDs or DVDs, including all six Parts of FERC-715 to:

Federal Energy Regulatory Commission
Form No. 715
Secretary of the Commission
888 First Street, N.E.
Washington, DC 20426

### F. When to Submit

File the report annually by April 1st of the filing year.

### G. Contact Information

Direct technical questions concerning the FERC-715, Annual Transmission Planning and Evaluation Report, to email form715@ferc.gov.

### H. Sanctions and Confidentiality Statements

The FERC-715, Annual Transmission Planning and Evaluation Report, is mandatory under the Federal Power Act. The information reported in FERC-715 is classified as CEII. Late filing or failure to file, keep records, or comply with these instructions may result in criminal fines, civil

penalties, and other sanctions as provided by law.

## II. GENERAL INSTRUCTIONS

The Federal Energy Regulatory Commission (Commission) has determined that to satisfy section 213(b) of the Federal Power Act (FPA) it is necessary for potential customers to be able to reasonably anticipate the outcome of technical studies that a transmitting utility would perform in assessing the availability of transmission capacity to satisfy a request for transmission service. Therefore, the Commission requires each transmitting utility, or its designated agent, to:

### A. Submit

The Commission requires each transmitting utility, or its designated agent, to submit an annual report that includes:

1. power flow base cases for its transmission system, or if the transmitting utility belongs to a regional or subregional transmission planning or reliability organization, power flow base cases for that region or subregion;
2. system maps and one-line diagrams;
3. a description of their reliability criteria and transmission planning assessment practices; and
4. an evaluation under the reliability criteria of the current and future performance of their transmission system.

### B. Designate Entity to Submit Power Flow Cases

The Commission requires each transmitting utility, or its agent, to designate any regional or subregional transmission planning or reliability organizations to which it belongs or any other single entity to submit to the Commission any regional or subregional power flow base cases developed for the purposes of members' transmission planning.

### C. Fee Schedule

If Respondents make CEII directly available to the requesting public and desire to impose copying charges for this service, they shall provide a fee schedule..

### D. The Importance of Power Flow Cases in the Evaluation of System Performance

The Commission assumes that most transmitting utilities participate in the development, by a regional or subregional organization to which they belong, of regional or subregional power flow base cases. The purpose of this process is to ensure consistency of assumptions and accuracy of data.

Individual members of regional or subregional organizations use these power flow cases as the starting place for their own transmission planning studies. A detailed description of a transmitting utility's reliability criteria and planning practices and an evaluation of system performance are essential to perform planning studies, to assess the availability of transmission, to identify potential constraints, and to anticipate the outcome of transmitting utility technical studies made in response to an actual request for service.

## III. TERMS AND DEFINITIONS

### A. Transmission Planning Reliability Criteria

The measuring systems and performance standards that are used for assessing the actual or projected ability of the bulk electric transmission system to deliver power to load reliably. Failure to attain a specified performance standard indicates the need to consider adding or rearranging facilities, changing operating modes, or other responses.

Examples of criteria that might apply to simulated testing of the bulk electric transmission system are:

1. No cascading outage following any specified set of contingencies.

2. No overloaded facilities following a specified contingency.

3. All voltages within prescribed limits.

### B. Transmitting Utility

Any electric utility, qualifying cogeneration facility (section 3(18)(B), FPA), qualifying small power production facility (section 3(17)(C), FPA), or Federal power marketing agency (section 3(19), FPA) that owns or operates electric power transmission facilities that are used for the sale of electric energy at wholesale. (section 3(23), FPA)

## IV. SPECIFIC INSTRUCTIONS

### A. Part 1: Identification and Certification

Provide the following information:

1. Transmitting Utility Name
2. Transmitting Utility Mailing Address
3. Contact Person Name
4. Contact Person Title
5. Contact Person Telephone Number
6. Contact Person Facsimile Number
7. Certification by an authorized official of the Transmitting Utility regarding the accuracy of the information submitted.
8. Certifying Official Signature
9. Certifying Official Name
10. Certifying Official Title

### B. Part 2: Power Flow Base Cases

A Respondent participating in a regional or subregional process (for consolidating and ensuring the consistency and accuracy of the power flow information used by the Respondent for transmission planning) must submit the most current regional or subregional input data to solved power flow base cases that the transmitting utility would ordinarily use as the starting point for its transmission planning studies or, where these data are unavailable from a regional organization, submit such data itself.

If the Respondent participates in such a regional or subregional process, it must submit the following items:

1. Regional or subregional organization name;
2. Regional or subregional organization mailing address;
3. Regional or subregional organization contact person;
4. Regional or subregional organization contact person title;
5. Regional or subregional organization contact person telephone number;
6. Regional or subregional organization contact person facsimile number;
7. Description of process for public access to regional or subregional power flow information; and
8. Description of power flow cases currently available from regional or subregional organization, including time frame, conditions, format, media and the fees, if any, for copying data for the public.

If a Respondent does not participate in the development of regional or subregional transmission planning power flow base cases, the Respondent must submit its own equivalent power flow base cases directly to the Commission.

Each Respondent must submit for each solved power flow base case: the input data file (in formats described below) and the corresponding output data file (in ASCII format) showing the solved real and reactive power flows, voltages, real and reactive generation and loads, solution parameters, and other relevant output information; or, in the alternative, at a minimum, a one-line diagram showing real and reactive power flows, bus voltages and angles, generator outputs, transformer tap settings and loads.

Regional and subregional organizations authorized by their members to provide access to solved power flow cases should make them available electronically on CDs or DVDs, or via a computer bulletin board, when practical, in the input data format associated with the power flow program that the regional or subregional organizations use in their transmission studies. The Commission expects that, in nearly all cases, the format will be one of the following:

1. The Raw Data File format of the PTI (Power Technologies, Inc.) PSS/E Power flow program;
2. The Card Deck Image format of the Philadelphia Electric Power flow program;
3. The Card Deck format of the WSCC Power flow program;
4. The Raw Data File format of the General Electric PSLF power flow program;
5. The IEEE Common Format for Exchange of Solved Power Flows; or
6. The Binary or Project File format of the PowerWorld simulator.

Respondents submitting their own cases must supply the input data to the solved base cases and associated ASCII output data on CDs or DVDs in the format associated with the power flow

program used by the Respondents in the course of their transmission studies, as described above.

The power flow cases may also be submitted via eFiling, if they are available in an acceptable file format. A list of acceptable file formats is available on the FERC eFiling website.

The input data to the solved power flow base cases must be forward-looking. For example, the power flow base cases submitted and made available might include:

1. One, two, five and ten-year forecasts under summer and winter peak conditions and
2. A one-year forecast under light load/heavy transfers condition.

This example is similar to a schedule of base cases proposed by North American Electric Reliability Corporation's (NERC) Multiregional Modeling Working Group for development at the time this form was created. A regional or subregional organization may develop, depending on its needs, a different number of power flow base cases than those described above.

The power flow base cases must be in sufficient detail that network equivalents, if used, extend sufficiently beyond the electrical borders of the transmitting utility that potential transmission users could simulate power transfers within a reasonable market area without significant loss of accuracy.

The power flow base cases should include all branch circuit ratings (that is, normal, long-term and short-term emergency, or other relevant ratings) that a Respondent uses. Each Respondent must also submit or make available a data-dictionary that cross-references the bus or line terminal names. Energy Information Administration (EIA) codes must be included for each generating plant referenced. | EIA Plant Codes

## C. Part 3: Transmitting Utility Maps and Diagrams

1. Each Respondent must submit general transmission maps and single-line schematic diagrams. The maps and diagrams should be those prepared in the general course of business for planning and operating purposes. The guidelines provided below indicate the type of information and the level of detail desired; however, the Commission is not requiring the Respondent to specifically prepare new maps and diagrams to satisfy this requirement. If the Respondent has readily available more than one set of maps and/or diagrams, the Commission requests that the set submitted best provide the level of detail described below.

2. The transmitting utility's general maps should show the geographic locations and names of:

   a. Generating plants;
   b. Switching stations;
   c. Substations;
   d. Service areas; and
   e. Interconnections with other utilities.

3. The transmitting utility's single-line schematic diagrams should show and identify:

a. AC and DC transmission lines and facilities, including their nominal operating and design voltages;
b. Electrical connections;
c. Generating plants;
d. Transformation facilities;
e. Phase angle transformers; and
f. VAR control equipment; (i.e., shunt and series capacitors and inductors, etc.).

4. On the maps or in separate documentation, each Respondent should provide a legend that shows the symbols used on the map or diagram to represent generators, transmission lines, transformers, capacitors, reactors, buses, etc.

5. Respondents must submit new maps or diagrams each year regardless of its revision.

6. The FERC prefers all maps and diagrams be submitted electronically in a format such that any text is searchable. For example, these maps typically list many substations, and FERC prefers that the format support a search for specific substation names. The Adobe PDF format is an example of a common file type that provides this feature.

## D. Part 4: Transmission Planning Reliability Criteria

Each Respondent is to provide the transmission planning reliability criteria used to assess and test the strength and limits of its transmission system to meet its load responsibility as well as to move bulk power between and among other electric systems.

If a transmitting utility subscribes, through its interconnection or pooling agreements with others, to criteria that are more detailed than the NERC and regional entity standards, then it must also submit these additional criteria.

The Commission expects that each transmitting utility will have additional detailed criteria. For example, each utility generally sets its own voltage limit criteria on its bulk system as well as its lower voltage system, since NERC and the regional entities generally do not. Each transmitting utility must submit all such additional criteria.

The above criteria will be those which the transmitting utility uses to determine available transmission capacity needed to meet potential transmission requests as well as its own native load. A transmitting utility must describe the criteria that it uses in sufficient detail to allow others to use the criteria when performing their own planning or screening studies and to better understand the process of determining available transmission capacity.

In subsequent years, Respondents need only identify and file changed criteria. If the criteria are unchanged from a previous filing, please provide the date of that filing. If this date is prior to the 2010 filing deadline, Respondents need only state that the previous filing was “prior to the

2010 filing."

## E. Part 5: Transmission Planning Assessment Practices

The criteria submitted under Part 4 of this form set the limits of transmission use. However, assessment practices that a transmitting utility uses in applying these criteria are as important as the criteria themselves. These practices, developed through experience and study, include consideration of detailed factors that a transmitting utility may not list in the criteria that it submits under Part 4. For example, a utility might have certain operating restrictions and limitations that must be met by appropriate modeling within a simulation study.

Also, through experience and study, each transmitting utility may have developed a list of various contingencies it typically tests against in the application of its transmission planning reliability criteria. For example, before testing for the limits of transmission capability that could be used for firm power transfers on its system, a transmitting utility will assume, based on experience or realistic expectation, that certain facilities will be unavailable for some period of time. Each transmitting utility must identify these contingencies and submit them under this Part.

A description of the Respondent's practices when applying the transmission planning reliability criteria submitted in Part 4 must be submitted under this part. The description must include the substantive planning assessment practices that a Respondent follows in the normal course of business. The information filed should help requesters to perform planning or screening studies and to better understand the process of determining available transmission capacity and known constraints.

In subsequent years, Respondents need only identify and file changed assessment practices. If the practices are unchanged from a previous filing, please provide the date of that filing. If this date is prior to the 2010 filing deadline, Respondents need only state that the previous filing was "prior to the 2010 filing."

## F. Part 6: Evaluation of Transmission System Performance

The transmitting utility must provide a narrative evaluation or assessment of the performance of its transmission system in future time periods based on the application of its reliability criteria. It must provide a clear understanding of existing and likely future transmission constraints, their sources, how it identified these constraints, and a description of any plans to mitigate the constraints. The evaluation must provide a clear understanding of the existing and expected system performance of the Respondent's transmission system. The evaluation should include a description of all existing transmission stability limits that the transmitting utility has uncovered through dynamic system simulation studies. If, in their studies, Respondents identify stability as a regional transmission limiting factor, Respondents must, on request, provide the results of their studies.

The required evaluation is to be drawn from existing utility transmission planning studies and the experience and judgment of the Respondents' transmission system planners. Respondents may base the required evaluation, in part, on recently performed operating studies that

determine transfer capabilities for the upcoming peak load season.