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1.0 SCOPE

1.1 This procedure is to ensure the facility ratings, used in the reliable planning and operation of the American Transmission Company (ATC) Electric System, are determined based on an established methodology.

1.2 This document describes ATC’s ratings methodology and compliance with NERC reliability standard FAC-008-3.

1.3 This document is applicable to all personnel engaged in planning, engineering, maintenance, construction and operation of ATC electrical facilities.

2.0 INTRODUCTION

Federal Energy Regulatory Commission (FERC) has granted the North American Electric Reliability Council (NERC) the legal authority to enforce reliability standards with all U.S. users, owners, and operators of the bulk power system, and has made compliance with those standards mandatory and enforceable. NERC reliability standards define the reliability requirements for planning and operating the Bulk Electric System (BES) in North America.

3.0 GENERAL RATINGS REQUIREMENTS

3.1 The ATC facility ratings shall be established in accordance with the ratings methodology as documented herein. Ratings are documented in the ATC Substation Equipment and Line Database (SELD) application.

3.1.1 ATC is transitioning conductor ratings, from legacy weather parameters to study-based weather parameters. Either rating basis may be used during the transitional period. Where the change from legacy ratings to study based ratings creates potential operating issues, a “transitional rating” rating will be applied.

3.1.2 Where transitional ratings are used, a special exception will be applied with the conductor rating calculated using legacy weather parameters.

3.2 ATC has a culture of continuous improvement, where database processes and data quality will be improved as issues are identified and solutions developed. Discovery of additional or improved asset information and data input errors are anticipated. When a SELD database issue is identified, the information will be reviewed, updated as needed and communicated as a modification. Database controls will be used to maintain data integrity.

3.3 Facility ratings will be determined utilizing the most recent and current element/component records available at the time the rating is established. When new or improved facility records become available, the respective element/component rating will be updated if appropriate. This includes changes resulting from as built processes.

3.4 A NERC defined “Facility” in the ATC methodology is called a “Section”. ATC’s methodology includes line sections, transformer sections and bus sections.

3.5 NERC defined Elements in the ATC methodology consist of conductors, switches, transformers, breakers, circuit switches, free-standing current transformers, series inductors (reactors and wave traps), meters, and relays. The ATC methodology, includes three phase sets of bushing-type current transformers which are a component of either a breakers or transformer element. ATC Facility ratings are determined from these elements and components.

3.6 The latest revisions of the ATC Rating Criteria documents will be applied to ATC facilities rated after the effective date of the criteria document. Retroactive application of changes to the rating methodology will be evaluated and applied at ATCs discretion.

3.7 The ATC rating methodology used to establish all of the ATC electric transmission facility ratings are described in this section and the following associated Rating Criteria:

3.7.1 ATC Criteria CR-0061; Overhead Transmission Line Ampacity Ratings
3.7.2 ATC Criteria CR-0062; Underground Transmission Line Ampacity Ratings
3.7.3 ATC Criteria CR-0063; Substation Equipment Ampacity Rating.

3.8 Various rating software and programs may be utilized to establish specific element/component ratings. These applications may not provide identical results. The comparable results are typically within metering accuracy and are acceptable for rating purposes. Metering accuracy is considered to be 1 to 3 percent.

3.9 Special Exception ratings are used in specific cases, based on an evaluation for that specific facility condition.

3.10 Facility equipment is considered in good operating condition, except if limited under Operation Limitations see section 4.3.2.3

3.11 The total number of emergency events (operating contingencies) that might occur during the equipment life is to be limited.

3.12 Under an emergency event, a certain amount of accelerated loss of life or conductor loss of strength is possible and permitted, as described in the ATC rating criteria document for the respective equipment.

4.0 FACILITY RATING REQUIREMENTS

4.1 Generation Ratings (R1)
ATC does not own any generators or associated step up transformers, and therefore has no documented generation facility ratings.

4.2 Generation Rating Methodology (R2)
ATC does not own any generation. ATC owns transmission facilities and equipment that interconnect directly to Generation Owners. The rating methodology for all ATC owned equipment to the point of interconnection with the Generation Owner follows FAC 008-3, R3.

4.3 Transmission Rating Methodology (R3)
The ATC methodology used to rate facility equipment are documented in the following rating criteria:

- CR-0061; Overhead Transmission Line Ampacity Ratings
- CR-0062; Underground Transmission Line Ampacity Ratings
- CR-0063; Substation Equipment Ampacity Ratings

4.3.1 Equipment Rating Methodology (R 3.1)
The ATC methodologies used to rate facility equipment are tabulated in Table 1,
### Table 1 - Equipment Rating Methodology

<table>
<thead>
<tr>
<th>Element</th>
<th>Manufacturer</th>
<th>Industry Standard</th>
<th>Verified practice</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Testing</td>
</tr>
<tr>
<td>Transmission Conductor</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Transmission Line Switch</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Underground Transmission Cable</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Power Transformer</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Circuit Breakers</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Substation Disconnect Switch</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Gas Insulated Switchgear (GIS)</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Circuit Switchers</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Current Transformers</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Jumper Conductors</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Rigid Bus Conductor</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Stranded Bus Conductor</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Series Reactors and Wave Traps</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Meters</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Relay Protective Devices</td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Remote Terminal Unit</td>
<td>X</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Equipment not specifically addressed in the respective rating criteria listed shall use the nameplate or manufacturers rating.

### 4.3.2 Equipment Rating Assumptions, Design Criteria and Methods (R 3.2)

ATC rating criteria describe the underlying assumptions, design criteria and methods used to determine the Equipment Ratings identified in Section 4.3.1. These documents also include how each of the following was considered.
<table>
<thead>
<tr>
<th>Element</th>
<th>Equipment Rating Standards, R3.2.1</th>
<th>Ratings Provided by Manufacturer, R3.2.2</th>
<th>Ambient Conditions, R3.2.3</th>
<th>Operating Limitations, R3.2.4</th>
<th>Related ATC Rating Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transmission Line Switch</td>
<td>ANSI C37.37</td>
<td>Input to Calc.</td>
<td>Input to Calc.</td>
<td>Input to Calc.</td>
<td>CR-0061</td>
</tr>
<tr>
<td>Power Transformer</td>
<td>ANSI C57.12.00 ANSI C57.91</td>
<td>Input to Calc.</td>
<td>Input to Calc.</td>
<td>Input to Calc.</td>
<td>CR-0063</td>
</tr>
<tr>
<td>Circuit Breakers</td>
<td>ANSI C37.010 ANSI C37.04</td>
<td>Input to Calc.</td>
<td>Input to Calc.</td>
<td>Input to Calc.</td>
<td>CR-0063</td>
</tr>
<tr>
<td>Substation Disconnect Switch</td>
<td>ANSI C37.30 ANSI C37.37</td>
<td>Input to Calc.</td>
<td>Input to Calc.</td>
<td>Input to Calc.</td>
<td>CR-0063</td>
</tr>
<tr>
<td>Gas Insulated Switchgear (GIS)</td>
<td>N/A</td>
<td>Nameplate</td>
<td>Considered by Mfr</td>
<td>Considered by Mfr</td>
<td>CR-0063</td>
</tr>
<tr>
<td>Circuit Switchers</td>
<td>N/A</td>
<td>Nameplate</td>
<td>Considered by Mfr</td>
<td>Considered by Mfr</td>
<td>CR-0063</td>
</tr>
<tr>
<td>Current Transformers</td>
<td>ANSI C57.13</td>
<td>Input to Calc.</td>
<td>Input to Calc.</td>
<td>Input to Calc.</td>
<td>CR-0063</td>
</tr>
<tr>
<td>Series Reactors and Wave Traps</td>
<td>ANSI C93.3</td>
<td>Input to Calc.</td>
<td>Input to Calc.</td>
<td>Input to Calc.</td>
<td>CR-0063</td>
</tr>
<tr>
<td>Meters</td>
<td>N/A</td>
<td>Nameplate</td>
<td>N/A</td>
<td>Input to Calc.</td>
<td>CR-0063</td>
</tr>
<tr>
<td>Relay Protective Devices</td>
<td>N/A</td>
<td>Nameplate</td>
<td>Considered by Mfr</td>
<td>Input to Calc.</td>
<td>CR-0063</td>
</tr>
<tr>
<td>Remote Terminal Unit</td>
<td>N/A</td>
<td>Nameplate</td>
<td>Considered by Mfr</td>
<td>Input to Calc.</td>
<td>CR-0063</td>
</tr>
</tbody>
</table>

4.3.2.1 Equipment Rating by Standards (R3.2.1)

Industry standards used for ATC equipment ratings as listed in Table 2.

4.3.2.2 Ambient Conditions (R3.2.3)

- Seasonal Periods: ATC considers seasonal ambient conditions and establishes unique ratings for each of four seasons respectively.

4.3.2.3 Operation Limitations (R3.2.4)

- Rating of all facilities shall consider operating limitations of the respective elements:
  - The operating limitations for specific types of facility and operating conditions are detailed in the respective facility Rating Criteria (CR-0061, CR-0062 and CR-0063).
4.3.4.1 All ATC static ratings assume 100% load factor (no load cycling), except for underground cable which generally assumes a 75% load factor.

• Facility equipment is normally considered in good operating condition (FAC 008-3, footnote 2).

• When the operating condition of an equipment or component is identified during inspections to be operating outside expected parameters, ATC will make a case specific evaluation. As a result of the evaluation, ATC will take appropriate action according to good utility practice, and follow normal maintenance procedures to restore the equipment’s functionality.

• Possible action taken prior to restoration may include, but is not limited to:
  * Continued operation
  * Immediate unscheduled outage of the equipment, or
  * For transformers, see CR-0063 for guidance on possible de-rate.

4.3.3 Most-Limiting Equipment (R3.3)

An ATC Facility (section) Rating shall equal that of the most limiting equipment(s)/component(s) that comprises that Facility (section). The most limiting forward and reverse facility rating is provided via the ATC SELD web-based application.

ATC has jointly owned facilities with the interconnecting companies with each of the individual equipment items within the facility solely owned by only one of the companies. For jointly owned facilities, each owner provides ratings for their own equipment according to their methodology. The Facility Rating is based on the most limiting equipment rating for jointly owned facilities.

The types of facility ratings are of the following categories:

4.3.3.1 Transmission Line Sections consist of one or more segments of overhead line and/or underground cable. A line Facility (section) is determined by the circuit junction points where power flow can split. A line section will include the line conductor and/or cable, inline switches and the substation equipment directly associated with the current flow for that line section.

4.3.3.2 Transformer Sections consist of the transformer and all associated substation equipment directly associated with the current flow through that transformer.

4.3.3.3 Bus Sections consist of all substation equipment connected to a section of bus, with the Facility (section) endpoints defined by the junction points where current/power can flow in multiple directions into adjacent sections.

4.3.4 Equipment Ratings for a Facility (R3.4)

The process by which rating of major equipment comprising an ATC facility is determined as follows:

4.3.4.1 Scope of equipment (R3.4.1)

Equipment, owned by ATC and others, in the current carrying path shall be included in the Facility. The following ATC Facility Rating Criteria address the respective equipment:

• Overhead Lines, CR-0061; conductors and switches
• Underground Lines, CR-0062; conductors and associated cable systems
• Substation Equipment, CR-0063; power transformers, circuit breakers, switches, circuit switchers, current transformers, conductors (rigid and stranded, including jumpers), series inductors (reactors and wave traps), meters, relay settings (forward and reverse) and relay non-directional thermal limit.

ATC does not include shunt connected capacitors, reactors and potential devices, as they cannot be a limiting device to the load current path. ATC does not own the following series connected equipment: primary fuses, capacitors or power electronic devices that utilize shunt reactors and capacitance.

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4.3.4.2 Provided Ratings (R3.4.2)

The ATC ratings address both Normal and Emergency Ratings:
- The ATC normal ratings are expressed in amperes and/or megavolt-ampere (MVA), that a system facility or element can support or withstand through repetitive daily demand cycles without loss of equipment life.
- The ATC emergency ratings are expressed in amperes and/or megavolt-ampere (MVA), that a system facility or element can support, or withstand for multiple exposures of maximum 2-hour duration. The emergency rating assumes acceptable loss of equipment life or other physical/safety limitations for the equipment involved.

4.4 Rating Methodology Inspection and Technical Review (R4)

Table 3 lists the respective Transmission Authorities for the ATC system.

<table>
<thead>
<tr>
<th>Transmission Authorities</th>
<th>Responsible Organization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reliability Coordinator</td>
<td>Midwest ISO (MISO)</td>
</tr>
<tr>
<td>Transmission Operator</td>
<td>American Transmission Company (ATC)</td>
</tr>
<tr>
<td>Transmission Planner</td>
<td>American Transmission Company (ATC)</td>
</tr>
<tr>
<td>Planning Authority Coordinator</td>
<td>Midwest ISO (MISO)</td>
</tr>
</tbody>
</table>

4.4.1 ATC’s Ratings Methodology is posted on the ATC website “ATC10yearplan.com” and is available to MISO. ATC will provide MISO copies within 21 calendar days of receipt of a request.

4.4.2 ATC Transmission Operators and Planners have immediate access to the ATC rating methodology via PowerLine under the “Guides, Procedures, and Criteria” section of the Manage Assets homepage include T-line OH, T-line UG and/or Substation web pages.

4.5 Comments on Rating Methodology (R5)

The Reliability Coordinator and Planning Coordinator for ATC is MISO (Midwest Independent System Operator), with the Transmission Operator and Transmission Planner being ATC.

4.5.1 MISO written comments related to a review of the ATC Facility Ratings Methodology will be responded to in writing within 45 calendar days of receipt of the review comments. MISO written comments are submitted via e-mail to “ATC RatingRequest@atc1lc.com”. The ATC Written response shall indicate whether any change(s) will be made to the Ratings Methodology and/or explain why a change will not be made to the Ratings Methodology.

4.5.2 ATC has a culture of continuous improvement that encourages ATC Transmission Operators and Planners to provide comments on the rating methodology as issues are identified and considered for incorporation into the respective rating criteria.

4.6 Establishing Facility Rating (R6)

ATC has Facility Ratings for solely and jointly owned facilities. Jointly owned Facilities with other companies have individual equipment items within the facility owned and rated by the respective owner’s methodology. For equipment or portions of a facility owned by others, ATC relies on information provided by the respective owner. The Facility Rating is based on the most limiting equipment rating for the facilities, regardless of ownership.

The ATC electric transmission facility ratings are established in accordance with one or more of the following of Rating Criteria:

4.6.1 ATC Criteria CR-0061; Overhead Transmission Line Ampacity Ratings
4.6.2 ATC Criteria CR-0062; Underground Transmission Line Ampacity Ratings
4.6.3 ATC Criteria CR-0063; Substation Equipment Ampacity Rating
4.7 Providing Requested Generation Facility Ratings (R7)
ATC does not own any generation. As a Transmission Owner, ATC provides requested facility ratings to the point of interconnection with a Generation Owner in accordance with FAC 008-3, R8.

4.8 Providing Requested Transmission Facility Ratings (R8)

4.8.1 Scheduled Rating Request (R8.1)

4.8.1.1 As scheduled by MISO (Midwest Independent System Operator), the regional Reliability Coordinator and Planning Coordinator, ATC disseminates the following ratings data for new, modified or updated facilities:
- The respective Facility Rating(s), and
- Identity of the most limiting equipment of the Facilities.

4.8.1.2 Upon ATC internal approval of new, modified or updated facility ratings, the respective ratings are posted on the ATC SELD application and incorporated into the following ATC group activities:
- Update Transmission System Planning models (e.g. PSS/E), used in various power flow and stability studies.
- Update the EMS (Energy Management System) applications, and other internal ATC Transmission Operations models, for use in operating the transmission system.

4.8.2 Next Most Limiting Rating Request (R8.2)

4.8.2.1 Upon request of MISO (Midwest Independent System Operator), the regional Reliability Coordinator and Planning Coordinator, ATC will provide the following Next Most Limiting data:
- The respective facility rating(s)
- Identity of the Next Most Limiting facility equipment or component

The Next Most Limiting facility rating requested data will be provided within 30 calendar days.

4.8.2.2 The Next Most Limiting facility data are readily available to ATC internal groups through the SELD application.

5.0 REFERENCES

5.1 NERC Standard FAC-008-3 is the governing standard for ATC facility ratings, which requires ATC, as a Transmission Owner, to have Facility Ratings based on technically sound principles.

5.2 The following documents will be applied to all ATC facilities. If there is any apparent contradiction or ambiguity among these documents and this procedure, it shall be brought to the attention of Asset Planning & Engineering for resolution before application. Retroactive application of changes to the rating methodology will be evaluated and applied at ATCs discretion.

5.3 Industry References:

5.3.1 NERC Reliability Standard FAC-008-3; Facility Ratings
5.3.2 NERC Glossary of Terms Used in Reliability Standards
5.3.3 NESC (National Electric Safety Code), ANSI C2

5.4 ATC References:

5.5 ATC Criteria CR-0061; Overhead Transmission Line Ampacity Ratings
5.6 ATC Criteria CR-0062; Underground Transmission Line Ampacity Ratings
5.7 ATC Criteria CR-0063; Substation Equipment Ampacity Ratings

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6.0 DEFINITIONS

The bolded definitions are from the NERC Glossary of Terms.

6.1 Ampacity: The current carrying capacity of a circuit or one of its components. This value is measured in amperes and is a rating for each phase of a three-phase circuit. This value may also be listed using apparent power (Mega-Volt-Amperes or MVA) based on the nominal system phase-to-phase voltage:

\[
\text{MVA} = \frac{\sqrt{3} \times (kV)}{1000} \text{(amps)}
\]

6.2 Bulk Electric System (BES): As defined by the Regional Reliability Organization, the electrical generation resources, transmission lines, interconnections with neighboring systems, and associated equipment, generally operated at voltages of 100 kV or higher. Radial transmission facilities serving only load with one transmission source are generally not included in this definition.

6.3 Component: The rated parts or devices that make up the larger element rating.

6.4 Contributing Company: Any entity that has transferred their ownership of transmission facilities to ATC.

6.5 Current Carrying Path: The conductive route transmission voltage level current could normally take in and out of ATC substation facilities.

6.6 Element: Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit breaker, bus section, or transmission line. An element may be comprised of one or more components.

6.7 Emergency Rating: The rating as defined by the equipment owner that specifies the level of electrical loading or output, usually expressed in megawatts (MW) or Mvar or other appropriate units, that a system, facility, or element can support, produce, or withstand for a finite period. The rating assumes acceptable loss of equipment life or other physical or safety limitations for the equipment involved.

6.8 Equipment Rating: The maximum and minimum voltage, current, frequency, real and reactive power flows on individual equipment under steady state, short-circuit and transient conditions, as permitted or assigned by the equipment owner.

6.9 Facility: A set of electrical equipment that operates as a single Bulk Electric System Element (e.g., a line, a generator, a shunt compensator, transformer, etc.) ATC uses the term “section” to describe a facility.

6.10 Facility Ratings: The maximum voltage, current, frequency, or real and reactive power flow through a facility that does not violate the applicable equipment rating of any equipment comprising the facility. ATC uses the term “section rating” to describe a facility rating.

6.11 Limiting Element: The element that is either 1) operating at its appropriate rating or 2) would be following the limiting contingency. The Limiting Element establishes a system limit.

6.12 Normal Rating: The rating as defined by the equipment owner that specifies the level of electrical loading, usually expressed in megawatts (MW) or other appropriate units that a system, facility, or element can support or withstand through the daily demand cycles without loss of equipment life.

6.13 Operating Voltage: The voltage level by which an electrical system is designated and to which certain operating characteristics of the system are related; also, the effective (root-mean-square) potential difference between any two conductors or between a conductor and the ground. The actual voltage of the circuit may vary somewhat above or below this value.

6.14 Peer Review: Peer review is a technique used to mitigate human error by using a second qualified person to independently verify the integrity of the work. It is an activity that augments self-checking by the performer.

6.15 Pre-Valid Rating: A Substation Equipment and Line Database (SELD) section-level status indicating that all of the following conditions have been met:

CAUTION: Any hard copy reproductions of this specification should be verified against the on-line system for current revisions.
6.15.1 All current carrying equipment/components that are to be installed on ATC’s system have been included in the facility record.

6.15.2 All ratings-affecting element data, or components, have been verified by historical record, field review, or manufacturer consultation.

6.15.3 All equipment/component ratings have been calculated per the applicable ATC ratings criteria documents; CR-0061, CR-0062 or CR-0063. A pre-valid rating status is required for all new construction facilities or modifications to existing facilities. The pre-valid status enables an opportunity for other groups to review and comment on the new or revised ratings before validation of the facility ratings.

6.16 **Rating**: The operational limits of a transmission system element under a set of specified conditions.

6.17 **Rating Criteria**: A document the outlines the ATC methodology for establishing normal and emergency ratings for elements of the transmission system. ATC has individual rating criteria document for overhead lines, underground lines and substation equipment.

6.18 **Reactive Power**: The portion of electricity that establishes and sustains the electric and magnetic fields of alternating-current equipment. Reactive power must be supplied to most types of magnetic equipment, such as motors and transformers. It also must supply the reactive losses on transmission facilities. Reactive power is provided by generators, synchronous condensers, or electrostatic equipment such as capacitors and directly influences electric system voltage. It is usually expressed in kilovars (kvar) or megavars (Mvar).

6.19 **Real Power**: The portion of electricity that supplies energy to the load.

6.20 **Section**: (Also see Facility) A set of electrical equipment that operates as a single electric system facility. The general term used to define the level at which ratings are represented in SELD. Circuit junction defines ATC section endpoints.

6.21 **Section Rating**: A system operating limit that does not violate the applicable equipment rating of any equipment comprising the section or ATC Special Exception. A section rating shall equal the section’s most limiting applicable equipment comprising that section. ATC has three (3) types of section ratings—line, transformer and bus section ratings.

6.22 **SELD**: ATC’s Substation Equipment and Line Database (SELD) is the primary computer application for maintaining ratings data.

6.23 **SELD Admin**: The ATC MS Outlook address/queue to which all SELD-related correspondence will be directed, unless such correspondence is more specifically for a particular SELD Data Coordinator.

6.24 **Short-term Emergency**: An emergency current rating with duration less than 2 hours per occurrence.

6.25 **Special Exception Rating**: A temporary rating evaluated for the specific case and considering any related temporary mitigation or special operating limitations. Special Exception ratings are determined by specific case evaluation. Special Exception have a limited life (monitored via a review date) until permanent measures are implemented.

6.26 **Static Rating**: A rating based on predetermined operating conditions, ambient assumptions and applicable load factors.

6.27 **Steady-State Condition**: A theoretical condition with constant electrical current—electrical load.

6.28 **System**: A combination of generation, transmission, and distribution components.

6.29 **System Operating Limit (SOL)**: The value (such as MW, Mvar, Amperes, Frequency or Volts) that satisfies the most limiting of the prescribed operating criteria for a specified system configuration to ensure operation within acceptable reliability criteria. System Operating Limits are based upon certain operating criteria, including Facility Ratings (applicable pre- and post-contingency equipment or facility ratings).
6.30 **Thermal Rating**: The maximum amount of electrical current that a transmission line or electrical facility can conduct over a specified time period before it sustains permanent damage by overheating or before it sags to the point that it violates public safety requirements.

6.31 Transient Condition: A theoretical condition with a fluctuating electrical current—electrical load.

6.32 Transient Thermal Limit; A 30 minute (or other transient interval) rating expressed as a percentage of the facility emergency rating used by Operations.

6.33 Transitional Rating: A rating that is determined using legacy weather parameters during the transition period to ratings based on study-based weather parameters.

6.34 **Transmission Line**: A system of structures, wires, insulators and associated hardware that carry electric energy from one point to another in an electric power system. Lines are operated at relatively high voltages varying from 69 kV up to 765 kV, and are capable of transmitting large quantities of electricity over long distances.

6.35 **Transmission Owner**: The entity that owns and maintains transmission facilities, herein being ATC.

6.36 **Transmission Planner**: The entity that develops a long-term (generally one year and beyond) plan for the reliability (adequacy) of the interconnected bulk electric transmission systems within its portion of the Planning Coordinator Area.

6.37 **Transmission Service Provider**: The entity that administers the transmission tariff and provides Transmission Service to Transmission Customers under applicable transmission service agreements.

6.38 **Valid Rating**: A SELD section-level status indication of ratings integrity that has been approved by a review process.

6.39 **Verified SELD Record**: A SELD status indicating the completeness of data supporting the rating for that component. An element or component will only be marked as verified if all data essential to establishing ratings has been verified by historical record, field review, or manufacturer consultation and included in the SELD record.

### 7.0 REVISION INFORMATION

7.1 ATC’s Asset Planning and Engineering will be responsible for all revisions to this procedure.

7.2 This Procedure will be reviewed in accordance with requirements in GD-0480, Document Control. The review is performed to ensure the Procedure remains current and meets any new or revised NERC Standard listed in Section 2.

<table>
<thead>
<tr>
<th>Version</th>
<th>Author</th>
<th>Date</th>
<th>Section</th>
<th>Description</th>
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<td>01</td>
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<td>3/27/2007</td>
<td>All</td>
<td>Reformatted and replaces former Operating Procedure 01-03.</td>
</tr>
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<td>02</td>
<td>R. Kluge</td>
<td>10/22/2007</td>
<td>Various</td>
<td>Updates to clarify ratings process and include NERC Reliability Std. references.</td>
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<td>03</td>
<td>R. Knapwurst</td>
<td>9/10/2008</td>
<td>2, 5, 7 &amp; Various</td>
<td>Revised various definitions, minor responsibility changes, requirement addition and various other minor format changes.</td>
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<td>04</td>
<td>R. Knapwurst</td>
<td>8/10/2009</td>
<td>All</td>
<td>Updated various document/group titles, added/revised references &amp; definitions, revised Figure 1 Flowchart and various other minor changes. Annual review as required by NERC Standards.</td>
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<tr>
<td>05</td>
<td>R. Knapwurst</td>
<td>5/24/2010</td>
<td>All</td>
<td>Add NERC definitions, add methodology sections, reformatted document and various minor changes/corrections.</td>
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<td>06</td>
<td>R. Knapwurst</td>
<td>8/17/2010</td>
<td>5.1, 5.2, 6, 7.2</td>
<td>Clarified rating requirements, most-limiting equipment and methodology inspection/review section.</td>
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<table>
<thead>
<tr>
<th>Rev</th>
<th>Author/Revisioner</th>
<th>Date</th>
<th>Pages/Sections</th>
<th>Changes and Modifications</th>
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<tr>
<td>07</td>
<td>R. Knapwurst</td>
<td>4/30/2012</td>
<td>3, 4, 5, 6, 7 &amp; Appendices A, B &amp; C</td>
<td>Revised references, moved steady-state and transient condition, removed dynamic loading definitions; revised special exception conditions, ratings methods, rated equipment and operation limitations; added ambient assumption and prior versions, revised ratings examination section, added communication section, removed impedances references, updated responsibilities and process, and other various minor changes/clarifications.</td>
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<td>08</td>
<td>R. Knapwurst, R Kluge</td>
<td>12/27/2012</td>
<td>1 - 6 &amp; Appendices</td>
<td>Major modification to match FAC 008-3 requirements and re-formatting; moved Appendices to new document PR-0286</td>
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