Eastern Interconnection Reliability Assessment Group (ERAG)

Management Committee

Handbook

[Map of the eastern United States with region designations like MRO, RFC, and NPCC]
1. Introduction

The purpose of the EASTERN INTERCONNECTION RELIABILITY ASSESSMENT GROUP (ERAG) Agreement is to further augment the reliability of the bulk-power system in the joint areas through periodic reviews of generation and transmission expansion programs and forecasted system conditions in the corporate region of the Parties.

Under the terms of the Agreement the ERAG MC is established to carry out the intent of the ERAG agreement by establishing study committees, review pertinent documents produced by the various study committees; and, to engage in other activities which in the collective opinion of the members of the ERAG MC would be consistent with the intent of the aforementioned agreement.

On January 1, 2006, ReliabilityFirst Corporation (RFC) began operation as one of the now six Regional Entities in the Eastern Interconnection. With the advent of RFC, the former MAAC and portions of the ECAR and MAIN Regional Entities have combined to form one Regional Entity, with MAAC, ECAR and MAIN now dissolved.

In 2006, the six Regional Managers within the Eastern Interconnection developed and executed an agreement that governs the interregional assessment studies in the Eastern Interconnection. That agreement replaced the previous unilateral interregional agreements and established an Eastern Interconnection Reliability Assessment Group (ERAG) Management Committee (MC) that now oversees all of the interregional study activities. In late 2006, the NERC Planning Committee (PC) transferred oversight of the Multiregional Modeling Working Group (MMWG) to ERAG, which now reports to the ERAG MC. The MMWG has responsibility for all base case model development activities, including seasonal updates to summer and winter study cases.

The former MEN and VEM forums have evolved to become the RFC-NPCC (R-N) and RFC-SERC East (SeR) study forums, respectively. The former studies in the western portion of the Eastern Interconnection have formed the RFC-MRO-SPP-SERC West forum. The activities of these three forums are now directed by the ERAG MC.

2. Study Forums

- The former heritage inter-regional study forums were:
  - (1) MAAC - ECAR - NPCC (MEN).
  - (2) VACAR - ECAR - MAAC (VEM).
  - (3) MAIN - ECAR - TVA (MET).
  - (4) MAIN - MRO - SPP (MMS).
  - (5) MAIN - SERC west (MSw).
  - (6) SERC (Southern) - FRCC.
  - (7) MRO - NPCC
- There will now be three inter-regional study forums under the ERAG MC to replace several of the above listed heritage forums that involved the ECAR, MAIN, and MAAC regions. They are:
  - (1) NPCC – RFC (replacing MEN).
(2) RFC - SERC East (VACAR, TVA) (replacing VEM).
(3) MRO - RFC - SERC West (TVA, Entergy, Gateway) – SPP (replacing MET, MMS, and MSw).

- The MRO - NPCC and FRCC – SERC (Southern) interfaces do not need to be addressed under the ERAG study forum. The SERC (Southern) – FRCC interface is radial and has a limited potential impact upon others outside of the SERC region. The MRO-NPCC interface also essentially functions as a long radial connection and serves a limited load (200 MW) in an isolated area. Study results for these interfaces will be provided to the ERAG MC.
- These initial ERAG study forums were suggested to expedite the 2007 summer study efforts and that, as experience is gained, reconfiguration of these forums may be warranted.

3. Steering (Study) Committees and Working Groups

- There will be one Steering (Study) Committee (SC) and one or more Working Groups (WG) under each study forum.
- The SCs and WGs for MEN and VEM have transitioned to their new counterparts to the extent practical. The MEN SC and WG are now the NPCC-RFC SC and WG, and the VEM SC and WG are now the RFC-SERC East SC and WG.
- The formation of the MRO-RFC-SERC West-SPP study forum was made from the former inter-regional group representatives.

4. Study Base Cases

- A single updated master seasonal study base case covering the entire Eastern Interconnection shall be developed each season that serves as the starting point for all study forum base cases.
- The ERAG MC will direct the activities of the MMWG as it relates to the annual base case development activity. The MMWG base case development process shall be used to update each master seasonal study base case rather than the separate study forum update processes that historically have been used.
- The study base cases shall have security-constrained dispatches provided by the RTOs, provided the TOs have been given an opportunity to review and approve those RTO-provided dispatches.

5. Workload

All study work shall be equally shared among the participating Regions under each study forum, either through rotating or dividing assignments. The SCs and WGs shall develop the details of their study work assignments and schedules.

6. Seasonal / Near-Term / Long-Term Studies

- The group recommends that the transitional assessments be limited to the initial seasonal 2007 Summer studies; with the need and mechanics for conducting seasonal, near-term and long-term studies to be addressed by the ERAG MC / SCs / WGs after they have been selected / seated.
• The group noted that NERC Standard TPL-005-0 requires inter-regional seasonal, near-term and long-term assessments be performed annually.

7. Committee Governance and Officers

The Committee governance is covered under the ERAG agreement (see Appendix A). Section 4 of the Agreement covers the governance, including structure of the Committee, representatives, meetings, quorum and voting, and attendance. Section 5 of the Agreement covers officers of the Committee.

8. Organizational Charts
9. Financial
• The cost sharing of all Committee and sub-group expenses is stated in Section 7.2 of the Agreement. However, the procedure for invoicing and bill payment is not explicitly mentioned there. Expenses may be paid by one Region with the costs then invoiced by that Region to the other five. The costs that are invoiced to and paid by the other ERAG Regions will be divided as stated in Section 7.2 of the Agreement (see Appendix A).

• Regular and special meetings of the ERAG Management Committee, MMWG and other groups sponsored by ERAG will be hosted by an individual Region. This responsibility will be rotated equally between the Regions to ensure that responsibility is shared. Since these costs are incidental and the Regions benefit equally, the cost (such as meeting room costs, audio/visual materials, etc.) to host the meetings (but not the individual travel costs) will be divided equally between the six (6) Regions in ERAG. However, a Region may host a meeting at its own facilities and not invoice the other Regions, if so desired.

10. Information Release Policy

A. Reports

The Management Committee will not approve any of the reports for publication, but will review them after completion by the Working Groups and Study (Steering) Committees. The reports will not be released to the general public, but will be posted to the ERAG private web site. The reports may also be shared with FERC, NERC, regulatory agencies, and other entities on a need-to-know basis. The Management Committee will determine the release to any party in question.

B. Base Cases

i. Power Flow  <MMWG case release policy goes here>

ii. Dynamics  <MMWG case release policy goes here>

11. Region Responsibilities

Since the ERAG is an organization of Regions with no separate staff, each Region will be responsible for certain aspects of operating the ERAG. The total costs (if not major) for the services below may be borne by the responsible Region, since each Region has one responsibility. If costs for a certain service become burdensome for that Region, those costs should then be shared by all Regions per Section 7.2 of the ERAG Agreement, or on an equal basis if agreed by all. The responsibilities for ERAG services are shown below:

• Web site (including the MMWG) – RFC
• Email exploder lists and separate documented rosters – NPCC
• Filing (including original contracts and other official documents) - ???
• Conference call / web meeting vendor and expenses - ???
• Release of power flow and dynamics cases to third parties - ???
Contracts for vendors (such as the MMWG power flow and dynamics coordinators) shall be executed on behalf of the ERAG by the chair of the MC. The Region who holds the chair of the MC will provide an invoice to the other five Regions for payment of their share of the contract per Section 7.2 of the Agreement.
EASTERN INTERCONNECTION RELIABILITY ASSESSMENT GROUP (ERAG)

AGREEMENT

THIS AGREEMENT ("Agreement"), effective as of August 1, 2006 is entered into by and among the Florida Reliability Coordinating Council, Inc., (FRCC), a non-profit corporation registered in the State of Florida; the Midwest Reliability Organization (MRO), a non-profit corporation registered in the State of Delaware; the Northeast Power Coordinating Council, Inc. (NPCC), a non-profit corporation registered in the State of New York, ReliabilityFirst Corporation (RFC), a non-profit corporation registered in the State of Delaware; SERC Reliability Corporation (SERC), a non-profit corporation registered in the State of Alabama; and Southwest Power Pool (SPP), a non-profit corporation registered in the State of Arkansas, to establish the Eastern Interconnection Reliability Assessment Group (hereinafter referred to as the "ERAG").

WITNESSETH

WHEREAS, FRCC, MRO, NPCC, RFC, SERC, and SPP are organized for the purpose of ensuring the reliability of the interconnected electric system and the adequacy of infrastructure in their respective regions for the benefit of all end-users of electricity and all entities engaged in providing electric services in the region;

NOW, THEREFORE, in consideration of the mutual promises contained herein, FRCC, MRO, NPCC, RFC, SERC, and SPP agree as follows:

1. DEFINITIONS.

Except as otherwise defined herein, capitalized terms shall have the following meaning:

1.1 Joint Area means the Eastern Interconnection.

1.2 Party or Parties means a signatory Region or Regions.

1.3 Regional Entity means an entity having enforcement authority pursuant to 16 U.S.C. §824n.

1.4 Regional Reliability Organization means each of the following organizations or successor organizations: Electric Reliability Council of Texas, Florida Reliability Coordinating Council, Midwest Reliability Organization, Northeast Power Coordinating Council, Inc., ReliabilityFirst Corporation, SERC Reliability Corporation, Southwest Power Pool, and Western Electricity Coordinating Council.

1.5 Reliability Standards, as defined in 16 U.S.C. § 824n, means requirements, approved by the Commission and the appropriate Canadian Provincial Authorities, to provide for reliable operation of the bulk-power system. The term includes requirements for the operation of existing bulk-power system facilities, including cyber security protection, and the design of planned additions or modifications to such facilities to the extent necessary to provide for reliable operation of the bulk-power system, but the term does not include any requirement to enlarge such facilities or to construct new transmission capacity or generation capacity.
1.6 **Regional Variance** means an aspect of a Reliability Standard that applies only within a particular Regional Entity or group of Regional Entities. A Regional Variance may be used to exempt the particular Regional Entity or Regional Entities from all or a portion of a Reliability Standard or may establish different measures or performance criteria as necessary to achieve reliability within the particular Regional Entity or group of Regional Entities. A Regional Variance may not be inconsistent with the Reliability Standard as it would otherwise exist without the Regional Variance. Such a Regional Variance may be proposed by a Regional Entity and, if adopted by NERC and approved by the Commission, shall be enforced within the applicable Regional Entity or Regional Entities pursuant to delegated authority.

1.7 **Regional Reliability Standard** means a type of Reliability Standard that is applicable only within a particular Regional Entity or group of Regional Entities. A Regional Reliability Standard may augment, add detail to, or implement another Reliability Standard or cover matters not addressed by other Reliability Standards. Regional Reliability Standards, upon adoption by NERC and approved by the Commission and applicable Canadian Provincial Authorities, shall be Reliability Standards and shall be enforced within the applicable Regional Entity or Regional Entities pursuant to delegated authorities.

1.8 **Regional Criteria** may be developed by a particular Regional Reliability Organization to implement, to augment, or to comply with reliability standards, but which are not reliability standards. Such Regional Reliability Organization Criteria may be necessary to account for physical differences in the bulk power system, but are not inconsistent with Reliability Standards nor do they result in lesser reliability. Regional Criteria may also address issues not within the scope of Reliability Standards, such as resource adequacy. Regional Criteria may include specific acceptable operating or planning parameters, guides, agreements, protocols or other documents used to enhance the reliability of the Regional Reliability Organization’s bulk power system. These documents are not NERC Reliability Standards, Regional Reliability Standards, or Regional Variances, and therefore are not enforceable under authority delegated by NERC pursuant to delegation agreements and do not require NERC approval.

2. **PURPOSE.**

The purpose of this Agreement is to further augment reliability of the bulk-power system in the joint areas through periodic reviews of generation and transmission expansion programs and forecasted system conditions in the corporate region of the Parties.

3. **RELIABILITY ASSESSMENTS AND STUDIES**

The Parties shall cooperate on the development and procedures employed to conduct power system analysis, studies and evaluations among the Parties.

3.2 Each Party agrees to participate, as necessary, in reliability assessments efforts of the other Parties, including case development, studies, contingency selection,
review of results, and meetings when it is determined that the Party may impact or be impacted.

3.3 In developing the reliability assessments and studies, the Parties shall use appropriate methods to appraise the ability of the interregional network to meet the requirements set forth in Reliability Standards, to include but not be limited to, TPL-001-0, TPL-002-0, TPL-003-0, and TPL-004-0 and such applicable Regional Criteria, as they may be modified from time to time.

3.4 Whenever appropriate the Parties will make use of the investigations made by the Parties or by individual systems to avoid duplication of effort. Studies will be based on the most up-to-date plans of the individual systems.

3.5 The Parties shall ensure that the reliability assessments and studies that are adopted by the Parties are as consistent as possible and ensure reliability in the Joint Area or applicable sub areas of the Joint Area.

3.6 The Parties recognize that two or more Parties to this Agreement may enter into separate Reliability Assessment Agreements, and such Agreements do not fall under the purview of this Agreement.

3.7 Each Party to this Agreement shall maintain confidentiality of information shared consistent with its confidentiality requirements. This Agreement shall not impose requirements to disclose information to third parties that violate terms of each Party’s confidentiality requirements.

4. GOVERNANCE

4.1 Management Committee

This Agreement shall be governed by a Management Committee who shall manage the Eastern Interconnection Reliability Assessment Group (ERAG) in accordance with this Agreement. The Management Committee shall consist of two (2) Members from each Party.

4.2 General Powers

The business and affairs of the ERAG shall be managed by the Management Committee which shall have all voting power.

4.3 Designation of Representatives

Each Party shall appoint its Representative(s) to the Management Committee to serve until successors are appointed, or until the earlier resignation or removal of the Representative(s). Each Party shall submit to the Chair of the Management Committee, a written designation of the persons it intends to appoint as its Representative(s). At any time a Party may change its representative(s) by submitting a written notification to the Chair of the Management Committee of the
removal or resignation of the former Representative(s) and the appointment of the new Representative(s).

4.4 Meetings

Regular meetings of the Management Committee shall be held at such times and places as may be determined by the Management Committee. Special meetings of the Management Committee may be called by any officer, and shall be called by any officer upon receipt of requests in writing for a meeting from six (6) or more of the Representatives.

4.5 Notice of Meetings

Notice of any regular or special meeting of the Management Committee shall be e-mailed to each Representative at such Representative’s usual place of business at least 10 (ten) business days, in the case of a regular meeting, or 5 (five) business days, in the case of a special meeting, before the date of the meeting. The notice shall set forth a proposed agenda for the meeting, but any matter may be considered and acted upon at any meeting, whether or not the matter was listed in the proposed agenda, if addition of the item to the agenda is approved at the meeting by the vote of Representatives whose votes equal three quarters (3/4) of the total votes of the Representatives present.

4.6 Quorum and Manner of Voting

At all meetings of the ERAG, two thirds (2/3) of the voting Representatives shall constitute a quorum for the transaction of business. If a quorum shall not be present at any meeting of the Management Committee, the Representatives present may adjourn the meeting from time to time without notice until a quorum shall be present. Three quarters (3/4) of the Representatives present must vote in the affirmative to pass any action of the Management Committee. Each Representative shall have one (1) vote. In the event one Representative of a Member cannot attend a meeting of the ERAG, such Representative may give its proxy to the other Member Representative. Such notice of proxy shall be forwarded to the Chair and Vice-Chair/Secretary of the Management Committee.

4.7 Action without Meeting

Any action that may be taken at a meeting of the Management Committee may be taken without a meeting if consent in writing, setting forth the action so to be taken, shall be signed before the action by all Representatives.

4.8 Attendance by Electronic Means

Any member of the Management Committee may participate in any meeting of the Management Committee by telephone, or other electronic means enabling all persons participating in the meeting to communicate with each other. A member participating in a meeting by such means shall be deemed present in person at such meeting.
5. OFFICERS

5.1 The Management Committee shall elect a Chair, and a Vice Chair/Secretary who shall be the officers of the ERAG.

5.2 Term of Office

Each officer shall hold office for two (2) fiscal years, but may be re-elected to unlimited terms.

5.3 Responsibilities of Officers

Chair. The Chair shall serve as the Chair of the Management Committee. The Chair shall preside at all meetings of the Management Committee and shall be responsible for the preparation of the agenda for all meetings of the Management Committee.

Vice Chair/Secretary. The Vice Chair/Secretary shall, in the absence or disability of the Chair, perform the duties and exercise the powers of the Chair, and have such other powers and duties as may be prescribed by the Management Committee.

The Vice Chair/Secretary shall be responsible to assure there are adequate procedures to distribute the agenda of the meetings of the Management Committee, give notice of the meetings of the Management Committee, keep the Minutes of the proceedings of said meetings, maintain the records of the ERAG and Management Committee, and have such other powers and duties as may be prescribed by the Management Committee.

6. SERVICE PROVIDER

6.1 The Parties hereby agree that the Management Committee may enter into an Agreement with one Party to this Agreement to act as a Service Provider for administrative and accounting services to the ERAG, and other services as specified by the ERAG.

7. FINANCIAL

7.1 Fiscal Year

The fiscal year for the ERAG shall be the calendar year.

7.2 Cost Sharing and Expenses

All costs for administration and operation of the ERAG shall be split in accordance with the pro-rata NEL calculation below. All costs incurred (such as travel, room and board) by each Representative on the Management Committee for the purpose of attending meetings of the Management Committee shall be borne by the Party.
8. WITHDRAWAL OF PARTIES/TERMINATION

Any Party may withdraw from this Agreement by providing thirty days (30 days) written notice to the Chair of the Management Committee. Provided, however, a Party’s withdrawal from this Agreement does not affect in any manner the obligations that such Party may have under other documents. A withdrawing Party shall continue to be liable for any unpaid fees or assessments imposed prior to the date its withdrawal is effective.

The Agreement may be terminated by two-thirds (2/3) of the voting representatives and such termination will be effective 30 days from such vote. At termination, each Party is responsible for its unpaid fees or assessments.

The Agreement shall terminate if four (4) of the Parties withdraw from the Agreement. Such termination will be effective 30 days from the final withdrawal. At termination, each Party is responsible for its unpaid fees or assessments.

9. AMENDMENT OF AGREEMENT

The power to alter, amend or repeal this Agreement shall be vested in the Management Committee. Such action shall require the affirmative votes of three quarters (3/4) or more of the total votes of the Representatives.

10. INDEMNIFICATION

The ERAG shall indemnify and hold harmless, to the maximum extent permitted by law, any Representative, Officer, and the heirs, estates, successors or assigns of any of them, from any and all claims or liabilities, including costs or attorneys fees for defending against assertion of any such claims or liabilities, arising from any act or failure to act of such person for, on behalf of, or at the direction of the ERAG, unless such act or failure to act constituted a willful violation of state or federal law, willful misconduct, or gross negligence.

11. APPLICABLE LAW

This Agreement shall be governed by and construed in accordance with the laws of the State of New Jersey without regard to its conflict of laws, principles or rules.

12. COUNTERPARTS

This Agreement may be executed in any number of counterparts, each of which shall be an original but all of which together shall constitute one instrument, binding upon all parties hereto, notwithstanding that all of such parties may not have executed the same counterpart.
13. **THIRD PARTIES**

Nothing in this Agreement is intended to create or imply the existence of any rights or waivers hereunder for or on behalf of any third party not a signatory hereto, and no such third party shall be entitled to enforce this Agreement against any person or entity.

**IN WITNESS WHEREOF,** each of the Parties has executed this Agreement as of the day and year indicated next to the signature.

DATE:___________ FLORIDA RELIABILITY COORDINATING COUNCIL

By: __________________________
Name: ________________________
Title: _________________________

DATE:__________ MIDWEST RELIABILITY ORGANIZATION

By: __________________________
Name: ________________________
Title: _________________________

DATE:__________ NORTHEAST POWER COORDINATING COUNCIL, Inc.

By: __________________________
Name: ________________________
Title: _________________________

DATE:__________ RELIABILITY FIRST CORPORATION

By: __________________________
Name: ________________________
Title: _________________________

DATE:__________ SERC RELIABILITY CORPORATION

By: __________________________
Name: ________________________
Title: _________________________

DATE:__________ SOUTHWEST POWER POOL

By: __________________________
Name: ________________________
Title: _________________________