Joint Interregional Review Committee Handbook

December 1, 1987
INTRODUCTION

Under the separate terms of existing Coordination Agreements between the Northeast Power Coordinating Council (NPCC) and the East Central Area Reliability Coordination Agreement (ECAR); between NPCC and the Mid-Atlantic Area Coordination Agreement (MAAC); and, a three party interregional agreement among Virginia-Carolinas (VACAR) and ECAR and MAAC (Note: VACAR is a subregion of the Southeastern Electric Reliability Council); reliability of bulk power supply in the interconnected system is augmented through periodic reviews of the generating and transmission systems.

A Joint Interregional Review Committee (JIRC), consisting of representatives from ECAR, MAAC, NPCC, and VACAR is established: To carry out the intent of the agreements noted above; to establish study committees to assist in carrying out the intent of the agreements; to approve study scopes; and, to engage in other activities which in the collective opinion of the members of the JIRC would be consistent with the intent of the aforementioned agreements.

PURPOSE AND SCOPE

The JIRC, with the aid of the study committees, will carry out the intent of the Coordination Agreements. System plans will be reviewed according to the parameters adopted by JIRC, and, in general, as covered under the section headed "STUDY COMMITTEES". It is understood that the system planning remains the responsibility of each individual power system or pool.

ORGANIZATION

The membership of the JIRC shall consist of one member each from ECAR, MAAC, NPCC, AND VACAR, who are to be designated by their respective regions. The Chairman shall be appointed by JIRC from its membership and shall serve a term of one year. The Chairman shall preside at meetings, arrange the meetings, prepare agenda, and provide a secretary for the meetings who will prepare minutes. The JIRC shall meet at least twice a year, preferably immediately before the summer and winter peak load periods.

Attendance of non-members at JIRC meetings shall be at the invitation of the Chairman. Special meetings of the JIRC may be held at the request of any JIRC member. The JIRC will appoint study committees or task forces (ad hoc) as necessary to carry out the intent of the aforementioned agreements. Initially, two study committees, to be identified as MEN (MAAC-ECAR-NPCC) and VEM (VACAR-ECAR-MAAC), are appointed. The initial organizational structure is as shown in Appendix A.
STUDY COMMITTEES

The MEN and VEM Study Committees shall report to the JIRC and shall conduct the necessary periodic analysis and review of generation and transmission expansion programs. The MEN Study Committee is assigned the responsibility for studies needed to assess the reliability of the MAAC-ECAR-NPCC regions. The VEM Study Committee is assigned the responsibility for studies needed to assess the reliability of the VACAR-ECAR-MAAC Regions (VACAR is a subregion of SERC).

The two Study Committees are to appraise the anticipated near-term and future performance of the bulk power transmission systems within their respective Regions of responsibility from an overall interregional standpoint. The Study Committees will obtain pertinent information for making these appraisals from the Regions as supplied by their members. The Study Committees will undertake studies and analyses utilizing interregional load flows, inertial responses, transient stability studies, and other appropriate program packages which may be available to appraise the ability of the interregional network to withstand representative severe contingencies without causing widespread cascading outages. The goal of these appraisals is to provide assurance that system developments and operating procedures within each Region are being properly coordinated so they do not adversely affect other Regions. The guidelines provided in the section titled "STUDY AND TESTING PHILOSOPHY" will be used by the Study Committees in the appraisal of system performance.

Whenever appropriate, the Study Committees will make use of the investigations made by the Regions or by individual systems within the Regions to avoid duplication of effort.

Studies will be based on the most up-to-date plans of the individual systems. An analysis of any change in protected system development or mode of operation that will significantly affect interregional system performance is to be included in the appraisal report.

Each Study Committee will consist of a total of six members, two from each of the three Regions. A Chairman shall be selected by each Study Committee from its membership. No Region shall hold the Chairmanship for more than two consecutive years. Each Study Committee will appoint whatever working groups that may be needed to carry out its responsibilities. Special ad hoc task forces may be appointed from time to time as required.

The Chairmen of MEN and VEM are responsible for assuring that the work of these two Study Committees is coordinated. The Chairman of each Study Committee will attend the meetings of the JIRC, and report on his committee’s activities. The MEN and VEM Study Committees will have at least one joint meeting each year. The agenda for this meeting will be approved by both Study Committee chairmen and sent to all members of the JIRC.
DISTRIBUTION OF REPORTS - INTERNAL TO THE FOUR COUNCILS

Each of the participating regional councils is at liberty to determine and make distribution within its council all reports produced by the JIRC and its associated study committees. This includes reports approved by the MEN and VEM Study Committees, and reports which may be in draft form, but require distribution within the councils to obtain review and comments. In the latter case, it is expected that such distribution would be held to such a level in order to obtain adequate review and comments.

DISTRIBUTION OF REPORTS - EXTERNAL TO EACH REGIONAL COUNCIL

External distribution of the VEM and MEN reports which are made semi-annually to appraise the bulk power network for the winter and summer peak load periods is approved on a continuing basis by the JIRC only to regulatory bodies and electric utility industry councils, committees and associations. This distribution will not be made, in whole or in part, until 30 days after it has been issued by the Chairman of the Study Committee, to give each council an opportunity to make a final review. Distribution of these reports, in whole or in part, to parties other than those described above is not permitted without a written request to the Chairman of the JIRC from such other party. The Chairman shall obtain the concurrence of the remaining members of the JIRC prior to making the requested distribution.

Requests for distribution of any other reports, such as a future system study report, in whole or in part, to parties outside the NPCC, ECAR, MAAC AND VACAR regions shall be in writing to the Chairman of the JIRC. The Chairman will obtain the concurrence of the remaining members prior to distributing the requested report to the outside party.

STUDY AND TESTING PHILOSOPHY

The North American Electric Reliability Council’s (NERC) definitions of various types of transfer capabilities, as presented in its document, "Transfer Capabilities - A Reference Document," October, 1980, are herewith adopted to guide the Study Committees in their appraisals of interregional bulk power transmission system performance. The investigations will be conducted considering the load level most critical to system performance as well as appropriate power transfer schedules.

Facility ratings and acceptable voltage levels will be determined by practices being used within each of the councils in the application of the NERC definitions.

Each council will further consider other aspects of transfer capability according to its criteria. Sufficient investigation will be made to adequately analyze those aspects that are important to any council.
To appraise the reliability of the interregional bulk power transmission system, as measured by its ability to avoid cascading outages over a widespread area, the effects of the following types of very severe contingencies will be considered:

(a) The sudden loss of all generating capacity at any generating plant.

(b) The sudden loss of all transmission facilities at any station, including all generating units connected to that station.

(c) The sudden loss of all transmission lines on a common right of way.

(d) The sudden loss of a large load or major load center.

(e) The loss of the most critical transmission circuit on any one of the interconnected systems immediately following the loss of another critical circuit, before any readjustment of generation.

(f) A three-phase fault at critical locations, including the effect of delayed clearing by backup devices as a result of failure of a primary device to clear the fault.
APPENDIX A

ORGANIZATIONAL CHART
JIRC ORGANIZATIONAL CHART

JOINT INTERREGIONAL REVIEW COMMITTEE (JIRC)

- ECAR-NPCC
- NPCC-MAAC
- VACAR-ECAR-MAAC

MAAC-ECAR-NPCC STUDY COMMITTEE (MEN)

VACAR-ECAR-MAAC STUDY COMMITTEE (VEM)
APPENDIX B

INTERREGIONAL AGREEMENTS
NORTHEAST - MID-ATLANTIC
INTER-AREA COORDINATION AGREEMENT

This Inter-Area Agreement, dated December 15, 1968, by and between the Northeast Power Coordinating Council, a voluntary association constituted under a certain Agreement, dated January 19, 1966, (hereinafter called the "NPCC Agreement") and the Executive Board constituted under the Mid-Atlantic Area Coordination Agreement, dated December 26, 1967, (the "MAAC Agreement"), and said Agreements being hereinafter referred to collectively as the "Area Agreements",

W I T N E S S E T H :

WHEREAS, the parties to the NPCC Agreement collectively supply electric power and energy to the Northeast area of the United States and the parties to the MAAC Agreement likewise supply the Mid-Atlantic area of the United States (such areas being hereinafter called in the singular the "Area" and collectively the "Areas"); and

WHEREAS, the NPCC Agreement has as one of its principal objectives the coordination of system planning of the Council members and the MAAC Agreement has as its purpose the coordination of the planning of the generation and transmission facilities of the parties thereto; and

WHEREAS, the parties to each Area Agreement recognize that attainment of their objectives requires continued cooperation between them and the parties to the other Area Agreement, and they desire to have periodic reviews with such parties to the other Area Agreement of generation and transmission expansion programs and forecast system conditions to the end of further augmenting the reliability of their bulk power supply systems; and

WHEREAS, the parties hereto desire to establish mechanisms and procedures for said periodic reviews.

NOW, THEREFORE, the parties hereto, each in consideration of the agreements of the others herein set forth, hereby mutually agree as follows:

ARTICLE 1
Northeast - Mid-Atlantic Inter-Area Review Committee

1.01 There is hereby established the Northeast - Mid-Atlantic Review Committee (NMRC) whose members shall be the Chairman and one other designee of the Chairman of the System Design Coordinating Committee formed pursuant to the NPCC Agreement and the Chairman and Vice-Chairman of the Area Coordination
Committee formed pursuant to the MAAC Agreement. Each member of the NMRC may at any time designate an alternate to act for him who is fully informed as to all activities carried on and all decisions made by the particular aforesaid committee of which such member is Chairman, Vice-Chairman or member.

1.02 The members of the NMRC shall select annually one of their number to serve as Chairman for a term of one year.

1.03 The NMRC shall meet semi-annually and from time to time as required to carry out its duties. Meetings shall be called by the Chairman on his own initiative or upon request of any member of the Committee.

1.04 At each meeting of NMRC the members shall exchange information as to, and analyze the inter-area effects of (a) activities carried on and decisions made under the Area Agreements, (b) plans of the parties to such Area Agreements for the expansion of generation and transmission, and (c) the forecast system conditions of such parties that relate to the reliability of the bulk power supply systems in areas other than their own.

1.05 The NMRC may appoint subcommittees and task forces to aid it in carrying out the foregoing purposes.

1.06 The NMRC shall render reports of its meetings and determinations and those of any subcommittees and task forces by it to the Executive Committee of NPCC and the MAAC Agreement Executive Board. The Chairman of the Executive Committee of NPCC or other designated representative and the Chairman of the MAAC Agreement Executive Board or other designated representative shall meet as required in order to institute action on these reports.

1.07 The salaries of the members of NMRC and of the members of subcommittees and task forces established pursuant to Section 1.05 and expenses incurred by them shall be borne by the Company by whom such member or members are regularly employed and their services shall be subject to approval by that Company. All other expenses shall be shared as agreed upon in advance by the Executive Committee of NPCC and the MAAC Agreement Executive Board.

ARTICLE 2

Term

2.01 This Inter-Area Agreement shall become effective on December 15, 1968, and shall continue in effect as long as both the NPCC and MAAC Agreements are in effect unless terminated by either party hereto by its giving 30 days’ prior written notice to the other.

ARTICLE 3
General

3.01 No signatory to this Inter-Area Agreement, either individually or collectively, shall be liable for the failure of the other signatory to perform its or their obligations hereunder.

3.02 Each of the individual companies who are signatories to the "Area Agreements" mentioned herein shall retain sole control over its own facilities and the use thereof.

ARTICLE 4
Regulation

4.01 This Inter-Area Agreement is subject to the approval of regulatory authorities, if any, having jurisdiction in the premises.

IN WITNESS WHEREOF, the parties hereto have caused this Inter-Area Agreement to be duly executed.

NORTHEAST POWER COORDINATING COUNCIL

By____________________ /s/ Ernest R. Acker____________________
Chairman

MAAC AGREEMENT EXECUTIVE BOARD

By____________________ /s/ Thomas W. Trice____________________
Chairman and Attorney-in-Fact
INTER-AREA RELIABILITY COORDINATION AGREEMENT

Inter-Area Reliability Coordination Agreement dated August 1, 1969 between the Executive Board under the East Central Area Reliability Coordination Agreement and the Northeast Power Coordinating Council, a voluntary association constituted under an Agreement dated January 19, 1966 (said Agreements being hereinafter called, respectively, the "ECAR Agreement" and the "NPCC Agreement" and, collectively, the “Area Agreements”),

W I T N E S S E T H :

0.01 Each of the Area Agreements seeks to augment the reliability of its parties' bulk power supply through coordination of the planning and operation of such parties' generation and transmission facilities. The parties thereto recognize that attainment of their objectives requires continued cooperation between them and bulk power supply systems outside of the area they serve, and they desire to have periodic reviews with coordinated areas contiguous to their own of generation and transmission expansion programs and forecast system conditions to the end of further augmenting the reliability of bulk power supply.

0.02 Accordingly, in furtherance of the objectives of the Area Agreements, the parties hereto desire to establish mechanisms and procedures for the aforesaid periodic reviews.

ARTICLE 1

Purpose of Agreement

1.01 The purpose of this Agreement is further to augment reliability of bulk power supply in the East Central Area and in the Northeast Area (“Areas”) of the United States through periodic reviews of generation and transmission expansion programs and forecast system conditions of the parties to the ECAR Agreement and the parties to the NPCC Agreement which relate to bulk power supply reliability in Areas other than their own.

ARTICLE 2

ECAR-NPCC Inter-Area Review Committee

2.01 There is hereby established the ECAR-NPCC Inter-Area Review Committee whose members shall at any time be the then chairman of the ECAR Agreement Coordination Review Committee and the NPCC System Design Coordinating Committee. Each member of the Inter-Area Review Committee may, at any time, designate an alternate to act for him who is fully informed as to all activities
carried on and all decisions made by the aforesaid committee of which such member is chairman.

2.02 The Inter-Area Review Committee shall schedule semi-annual meetings, and its members shall otherwise communicate with each other to carry out their duties. Meetings may be called by either member.

2.03 At each meeting of the Inter-Area Review Committee the members shall exchange information as to all activities carried on and decisions made under the Area Agreements, as to all plans of the parties to the Area Agreements for the expansion of generation and transmission and as to the forecast system conditions of such parties, which relate to bulk power supply reliability.

2.04 The members of the Inter-Area Review Committee shall see to it that a report of each meeting of the Committee is made to the first meetings thereafter of the ECAR Agreement Coordination Review Committee and the NPCC Agreement System Design Coordinating Committee.

2.05 The Inter-Area Review Committee shall examine all plans of the parties to the Area Agreements for the expansion of generation and transmission sufficiently in advance of construction to analyze the effects of such expansion in one Area on the reliability of bulk power supply in the other and shall report its findings to the aforesaid Coordination Review and System Design Coordinating Committees.

2.06 The Inter-Area Review Committee may appoint such subcommittees as it may deem necessary to carry out the purposes of this Agreement.

2.07 The salaries and expenses of each member of the Inter-Area Review Committee and any subcommittee shall be borne by the person by whom he is regularly employed, and his service thereon shall be subject to the approval of that person. All other expenses of said Committee and subcommittees shall be shared as agreed upon in advance.

ARTICLE 3

Term

3.01 This Agreement shall become effective upon its approval by the Executive Board under the ECAR Agreement and the Executive Committee under the NPCC Agreement and, subject to the provisions of section 3.02, shall continue in effect as long as both of those Agreements are in effect.

3.02 Any party hereto may terminate this Agreement on the fifth or any succeeding anniversary of its date upon one year prior written notice to the other parties.
ARTICLE 4

General

4.01 No party to this Agreement, nor any signatory party to any of the Area Agreements, shall be liable for the failure of any other party to perform its obligations hereunder.

4.02 Each of the individual companies who are signatories to the Area Agreements shall retain sole control over its own facilities and the use thereof.

ARTICLE 5

Regulation

5.01 This Agreement is subject to the approval of all regulatory authorities having jurisdiction in the premises.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be duly executed.

ECAR AGREEMENT EXECUTIVE BOARD

B. Hudson Milner
Chairman

NORTHEAST POWER COORDINATING COUNCIL

Ernest R. Acker
Chairman
INTER-AREA RELIABILITY COORDINATION AGREEMENT

Inter-Area Reliability Coordination Agreement, dated December 20, 1971, among Carolina Power & Light Company, Duke Power Company, South Carolina Electric & Gas Company, South Carolina Public Service Authority, Southeastern Power Administration, Virginia Electric and Power Company, Yadkin, Inc., being the member companies of the Virginia-Carolinas Reliability Agreement and acting through the Executive Committee under said Agreement, and the Executive Boards under the East Central Area Reliability Coordination Agreement and the Mid-Atlantic Area Coordination Agreement (said agreements being hereinafter called, respectively, the “VACAR Agreement,” the “ECAR Agreement,” and the “MAAC Agreement” and, collectively, the “Area Agreements”),

W I T N E S S E T H :

The parties to the VACAR Agreement supply electric power and energy in the Virginia-Carolinas area, the parties to the ECAR Agreement in the East Central area, and the parties to the MAAC Agreement in the Mid-Atlantic area, of the United States. Said areas are hereinafter called the “Areas.”

ARTICLE I

Purpose of Agreement

1. The purpose of this Agreement is further to augment reliability of bulk power supply in the Areas through periodic reviews of generation and transmission expansion programs and forecasted system conditions of the parties to the VACAR Agreement, the parties to the ECAR Agreement, and the parties to the MAAC Agreement which relate to bulk power supply reliability in Areas other than their own.

ARTICLE II

VACAR-ECAR-MAAC Inter Area Review Committee

1. There is hereby established the VACAR-ECAR-MAAC Inter-Area Review Committee (the “VEMRC”) whose members shall at any time be the then Chairmen of the VACAR Agreement Executive Committee, the ECAR Agreement Coordination Review Committee, and the MAAC Agreement Executive Board. Each member of the VEMRC may at any time designate an alternate to act for him who is fully informed as to all activities carried on and all decisions made by the particular aforesaid Committee or Board of which such member is Chairman.
2. The members of the VEMRC shall annually select one of their number to serve as Chairman for one year. No person may succeed himself or his successor as Chairman.

3. The VEMRC shall meet semi-annually and from time to time as required to carry out its duties. Meetings shall be called by the Chairman on his own initiative or upon request of any member of the Committee.

4. At each meeting of the VEMRC the members shall exchange information as to, and analyze the inter-area effects of, (a) activities carried on and decisions made under the Area Agreements, (b) the plans of the parties to the Area Agreements for the expansion of generation and transmission, and (c) the forecasted system conditions of such parties which relate to bulk power supply reliability in Areas other than their own.

5. The VEMRC shall render to the VACAR Agreement Executive Committee, the ECAR Agreement Coordination Review Committee, and the MAAC Agreement Executive Board reports of its meetings and determinations and those of any subcommittees and task forces established by it.

6. The VEMRC shall examine all plans of the parties to the Area Agreements for the expansion of generation and transmission sufficiently in advance of construction to analyze the effects of such expansion in one Area on the reliability of bulk power supply in the others and shall report its findings to the aforesaid Executive and Coordination Review Committees and Executive Board.

7. The VEMRC may appoint such subcommittees as it may deem necessary to carry out the purposes of this Agreement.

8. Each member of the Inter-Area Review Committee and any subcommittee shall serve without salary in that capacity, and his expenses shall be borne by, and his service thereon shall be subject to the approval of, his regular employer. All other expenses of said Committee and sub-committees shall be sheared as agreed upon in advance by the parties hereto.

ARTICLE III

Term

1. Unless terminated under Section 2 of this Article, this Agreement shall continue in effect as long as all of the Area Agreements are in effect.
2. Any party hereto may terminate this Agreement on the fifth or any succeeding anniversary of its date upon one year prior written notice to the other parties.

ARTICLE IV

General

1. No party to this Agreement shall be liable for the failure of any other party to perform its obligations hereunder.

2. Nothing herein shall affect the right of any party to retain sole control over its own facilities and the use thereof.

ARTICLE V

Regulation

1. This Agreement is subject to the approval of any regulatory authorities having jurisdiction in the premises.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be duly executed.

VACAR AGREEMENT EXECUTIVE COMMITTEE

/s/ A. C. Thies
Chairman

ECAR AGREEMENT EXECUTIVE BOARD

/s/ W. J. Mathews
Chairman

MAAC AGREEMENT EXECUTIVE BOARD

/s/ R. H. Demmy
Chairman and Attorney-in-Fact
APPENDIX C

JOINT INTERREGIONAL REVIEW COMMITTEE STUDY AREAS
ECAR: East Central Area Reliability Coordination Agreement

Allegheny Power System
American Electric Power System
Centerior Energy Corporation
The Cincinnati Gas & Electric Company
Consumers Power Company
The Dayton Power and Light Company
The Detroit Edison Company
Duquesne Light Company
East Kentucky Power Cooperative, Inc.
Hoosier Energy Rural Electric Cooperative, Inc.
Indianapolis Power & Light Company
Kentucky Utilities Company
Louisville Gas & Electric Company
Northern Indiana Public Service Company
Ohio Edison System
Ohio Valley Electric Corporation
Public Service Company of Indiana, Inc.
Southern Indiana Gas & Electric Company

MAAC: Mid-Atlantic Area Council

Atlantic City Electric Company
Baltimore Gas and Electric Company
Delmarva Power & Light Company
Jersey Central Power & Light Company
Metropolitan Edison Company
Pennsylvania Electric Company
Pennsylvania Power & Light Company
Philadelphia Electric Company
Potomac Electric Power Company
Public Service Electric and Gas Company
UGI Corporation

VACAR: Virginia-Carolinas Subregion

Carolina Power & Light Company
Duke Power Company
South Carolina Electric & Gas Company
South Carolina Public Service Authority
Southeastern Power Administration
Virginia Electric and Power Company
Yadkin, Inc.
NPCC: Northeast Power Coordinating Council

Boston Edison Company
Central Hudson Gas & Electric Corporation
Central Maine Power Company
Central Vermont Public Service Corporation
Commonwealth Energy System
Consolidated Edison Company of New York, Inc.
Eastern Utilities Associates
Green Mountain Power Corporation
Hydro-Québec
Long Island Lighting Company
New Brunswick Power
New England Electric System
New York Power Authority
New York State Electric & Gas Corporation
Niagara Mohawk Power Corporation
Northeast Utilities
Nova Scotia Power Corporation
Ontario Hydro
Orange and Rockland Utilities, Inc.
Public Service Company of New Hampshire
Rochester Gas and Electric Corporation
United Illuminating Company, The
Vermont Electric Power Company, Inc.