February 26, 1999

VIA HAND DELIVERY

David P. Boergers
Secretary
Federal Energy Regulatory Commission
888 First Street, N.E.
Washington, D.C. 20426

Re: North American Electric Reliability Council
FERC Docket No. EL98-52-000
Lake Erie Emergency Redispatch Procedure

Dear Secretary Boergers:

The Northeast Power Coordinating Council ("NPCC"), on behalf of the Member Systems of the New York Power Pool,\(^1\) and joined by Allegheny Energy, Inc., Consumers Energy Co., and The Detroit Edison Company, and with the support of Ontario Central Market Operations ("Ontario CMO")\(^2\), hereby files the Lake Erie Emergency Redispatch Procedure ("LEER") in


\(^2\) Ontario CMO is one of the LEER participants, but as a Canadian provincial entity, Ontario CMO is not subject to this Commission’s jurisdiction, and does not intend to submit to FERC jurisdiction by joining this filing. However, Ontario CMO will follow the LEER procedures.
compliance with Ordering Paragraph (E) of the Commission’s Order issued in North American Electric Reliability Council. ³ (See 85 FERC ¶61,353 (1998).) The order required that the North American Electric Reliability Council (“NERC”) file its Transmission Loading Relief (“TLR”) procedures with the Commission as tariff amendments via the efficient mechanism specified by the Commission. The order also required further efforts by NERC and industry participants. Because the NERC TLR procedures address the problem of curtailment in multi-system transactions and parallel flows, the Commission found them to be superior to the pro forma tariff.

The order also required transmission operating public utilities in the Eastern Interconnection to develop, and put in place, interim procedures applicable to native load or network service transactions by the 1999 summer period. The order addressed the issue of methods for avoiding curtailment altogether, including use of redispatch procedures prior to curtailment. The order required public utilities that operate transmission facilities in the Eastern Interconnection and that are not already developing regional congestion management programs through their power pools to identify, and to file, interim redispatch solutions with the Commission by March 1, 1999, with particular emphasis on aspects of the solution that can be implemented by the 1999 summer period.

³ The Pennsylvania-New Jersey-Maryland (“PJM”) Interconnection L.L.C. and American Electric Power Company, Inc., which are filing separately in response to the Commission’s order, are also LEER Participants, and will follow the LEER Procedures.
This compliance filing meets the requirements of the order by providing procedures which avoid curtailment through redispatch. (See “Attachment A” to this compliance filing.)\(^4\) These procedures will avoid the shedding of firm load by utilizing generation shift factors (“GSFs”) under the direction of the constrained Security Coordinators (“SCs”) and Control Areas (“CAs”). (Id. at 4.) Constrained and dependent SCs/CAs coordinate by conference call via the NERC Hotline to discuss redispatch options. (Id. at 4-5.) Dependent Lake Erie SCs/CAs may initiate the LEER Procedure, but constrained Lake Erie SCs/CAs must direct the LEER Procedure. LEER Procedures may be implemented concurrently with NERC TLR 2 procedures and above.\(^5\) Compensation will be paid to generators raised for redispatch and an energy exchange will be provided to SCs/CAs reduced for redispatch. (Id. at 5.) When the transmission system is no longer constrained, the SCs/CAs will notify all other SCs/CAs that transactions can resume and redispatch is no longer necessary. (Id. at 6.)

The LEER Procedure is an inter-regional, multi-national emergency redispatch procedure which was developed with input from both merchant and transmission provider representatives from the Lake Erie region. The LEER Procedure is initiated as an emergency redispatch tool to relieve transmission constraints that could otherwise require a Lake Erie participant to shed firm load and would only be invoked when firm load curtailment is imminent. The LEER Procedure is intended to prevent the necessity of implementing the curtailment procedures contained in the FERC and NERC tariffs and policies. However, in the event that curtailment becomes necessary, the FERC and NERC procedures will be followed regardless of any conflicting provision of the LEER Procedure. LEER is a form of system redispatch as opposed to a market redispatch procedure and it would complement proposed market redispatch procedures.

According to “good utility practice,” preliminary actions are to be executed prior to implementing LEER including actions such as “no cost” operating procedures, curtailment of interruptible customers, voltage reduction, and efforts to obtain alternate sources of energy not contributing to the constraint by the dependent SCs/CAs.

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\(^4\) While this transmittal letter describes the LEER Procedures, the description contained herein is only explanatory, and only the attached procedures should be relied upon in the event of any perceived conflict between this transmittal letter and the actual LEER procedures.

\(^5\) The LEER Procedure Levels A, B, and C are described in “Attachment A.”
The Communications Protocols require use of the NERC Security Coordination Information System (“SCIS”) to provide the information regarding the magnitude of the dependency, the amount and duration of redispatch to SCs/CAs and to provide notice of any planned conference calls and the termination of redispatch procedures. The NERC Hotline is to be used by SCs/CAs to initiate a conference call by the SCs/CAs that anticipate a capacity deficiency. During the conference call, the constrained SCs/CAs will discuss redispatch options and determine sources of potential replacement energy. Additionally, the NERC TLR web page will be used to post the TLR level, and, if a LEER procedure is required, the posting will be used to provide information about the corresponding LEER level to market participants. (Id. at 7.)

The LEER Process works as follows: The Sink SCs identify "Dependent Transactions" while all SCs identify potential flowgate constraints. The NERC TLR Procedure is followed until LEER is invoked to "protect" dependent transactions if TLR could result in firm load cuts. Should a potential TLR cut affect a "protected transaction" the constraining SC then directs redispatch, assisted by the dependent SC and the SC having available generation. Given the understanding that LEER is supported by emergency purchases to prevent load cuts, compensation is to be provided through the prevailing emergency energy prices. At any point the Dependent Security Coordinator must cancel LEER procedures when it is determined that the dependency no longer exists, the system constraint is relieved, or the controlling unit is no longer available for re-dispatch. Additionally, the Security Coordinator supplying emergency energy to replace the controlling action can cancel LEER if the replacement energy becomes unavailable.6

Transactions for which re-dispatch is implemented shall be "protected" from further non-firm curtailment on the designated flowgate. Once re-dispatch begins to protect dependent transactions, they are categorized as protected transactions. Any additional loading of the flowgate is not to be associated with the protected transactions so long as the re-dispatch action is current. Re-dispatch can be applied to a whole or part of a transaction, as required by the magnitude of the dependency. When the re-dispatch action covers only a portion of the transaction, the unprotected part is still subject to curtailment.

The LEER Procedures provide an illustration of how redispatch may be used, and what communication protocols have been devised to prevent the need for curtailment of firm load. The redispatch protocols are in compliance with the order to “identify and file interim redispatch solutions with the Commission by March 1, 1999, with particular emphasis on aspects of the

6The steps of the LEER procedure are more fully described in “Attachment A.”
solutions which can be implemented by the 1999 summer period.” North American Electric Reliability Council, supra, 85 FERC at 62,364. Since the protocols will result in reduced curtailment of firm load and require only the existing SCIS, they can be implemented by the 1999 summer period. All signatories of the LEER procedure have agreed to implement the LEER procedure in their respective control rooms for the summer 1999 period and the Lake Erie Security Process (“LESP”) Teams continue to meet to enhance procedure and extend it to non-emergency application as part of the “living process” of identifying other possible solutions to the problem of transmission congestion. Price negotiation and a market solution for non-emergency conditions are to be included in future revisions as the LESP Teams continue to meet with an objective to turn LEER into a pro-active (pre-dispatch) procedure.

NPCC, on behalf of the LEER participants that are required to maintain an OASIS, requests a waiver of the OASIS reservation posting guidelines to the extent necessary to implement the LEER Procedures. A review of the OASIS reservation posting guidelines, as set forth in 86 FERC ¶61,061, FERC Docket No. RM95-9-003, reveals no requirement that is directly on point, because the guidelines deal with typical situations involving bidding and rebidding. The LEER Procedures provide for reservation posting on OASIS “as soon as practicable” which is consistent with the objective of providing information on OASIS as soon as practicable. The LEER Procedure may be modified at a later date to provide that if no OASIS reservations are listed, then after-the-fact posting of emergency redispatch transaction reservations on OASIS will be made within four hours. The four hour period for after-the-fact posting of reservations on OASIS is consistent with the time period proposed for posting of OASIS reservations in Step 3 of the NERC Market Redispatch Pilot for Summer 1999 Draft Procedure dated February 17, 1999, attached as Exhibit 2 to the NERC Response to FERC TLR Order Regarding Parallel Flows Associated with Native Load and Network Service and Interim Redispatch Solutions. The reason for any delay in posting the reservation will be provided. Posting of transmission reservations on OASIS should be exempt for LEER transactions due to the emergency nature of these counter-flow transactions.

Further it is requested that the LEER Procedures attached to this compliance filing as “Attachment A” be considered a generic amendment to the pro forma tariff of each LEER participant which has filed an open access tariff with the Commission [or reciprocity tariff], and that any other public utility which has filed an open access tariff with the Commission and which wishes to adopt the LEER Procedures be allowed to do so by filing a notice informing the Commission that it uses the LEER Procedures attached as “Attachment A” to this compliance
filing and, therefore, that its pro forma tariff should be modified to reflect the generic amendment (See Attachment B which contains revised pro forma tariff sheets).

Finally, it is requested that the LEER Procedure described in the compliance filing be made effective sixty (60) days from February 26, 1999.

Respectfully submitted,

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Lake Erie Emergency Re-dispatch (LEER) Procedure

Objective
The objective of the Lake Erie Emergency Re-dispatch (LEER) procedure is to facilitate emergency re-dispatch among participants within the Lake Erie Control Area (AEP, AP, MECS, NYPP, OH, and PJM) to avoid the shedding of firm load. The LEER procedure is only intended to be implemented for emergency re-dispatch to relieve transmission constraints that could otherwise require another Lake Erie Company to shed firm load. The LEER procedure would only be fully effected when firm load curtailment is imminent. Lake Erie Control Areas must purchase emergency power from unconstrained directions or from other sources, if possible, before calling on LEER emergency re-dispatch.

Attempts should be made by the dependent Control Areas or their Purchasing-Selling Entities, where applicable, to secure firm transmission services to support transactions that are required to supply firm load.

Lake Erie Security Coordinators (SCs) and Control Areas (CAs) will provide emergency aid in the form of intra-Control Area re-dispatch, inter-Control Area re-dispatch, re-configuration of the transmission system, and/or adjustment of phase angle regulating transformers to maintain Firm Load service when possible. Phase Angle Regulator adjustments are not limited to only those PARs under the control of the constrained system. SCs/CAs will determine emergency re-dispatch options and requirements prior to actions being needed.

Provisions of the LEER procedure are not intended to conflict with applicable transmission service agreements or tariffs (e.g., the FERC filed tariffs, NERC Operating Policy 9, etc.) and the terms of such agreements or tariffs take precedence over LEER.

This procedure is intended to be as dynamic as practicable, allowing for dependent and constrained SC/CA to update dependent transactions and controlling actions as system conditions change.

Preliminary Actions
Prior to implementing LEER, all Phase Angle Regulator adjustments and other “no cost” operating procedures should be utilized by Lake Erie participants to the benefit of reliability of the bulk power system. However, owners of PARs, etc., are not expected to incur financial harm by operating PARs at a tap position that forces uneconomical operation.

Re-dispatch service shall be available to any participants within the Lake Erie Control Areas relying on interconnection transactions to meet firm load. Prior to resorting to re-dispatch service, dependent SCs/CAs shall curtail interruptible customers and reduce
Lake Erie Emergency Redispatch Procedure

voltage, if applicable, and use their best efforts to obtain other sources of energy, which does not adversely affect the constrained SCs/CAs. Highly effective generation shifts, including generation under the control of Independent Power Producers and Power Marketers, should be used for re-dispatch, if applicable.

**Generation Shift Factors**

Preliminary Generation Shift Factors have been developed by Ontario Hydro and are to be used as a default to determine the appropriate advanced strategy when the potential exists that Firm Load would be curtailed due to an external transmission constraint.

Generation Shift Factors are defined from a generator source bus to a specific predefined generator sink bus in order to assist SCs/CAs in quickly identifying effective re-dispatch options. LEER re-dispatch can be implemented as follows, to the extent that generation is available and transmission tariffs allow:

1. **Lower Controlling Generator (s):** The dependent Lake Erie SCs/CAs or their Purchasing-Selling Entities (PSEs), where applicable, would arrange to replace the amount of generation that was lowered by the controlling generator with an Emergency Transaction.
2. **Raise Controlling Generator (s):** The dependent Lake Erie SCs/CAs or their PSEs, where applicable, would arrange to purchase the most effective generator increase, where available, as an Emergency Transaction.
3. A combination of the above two options may be exercised to effect the redispatch option.

These actions will allow for continued transfers across the constrained flowgate, minimizing the need to curtail scheduled transactions supplying firm load. The constrained SCs/CAs should determine the appropriate generation shift factors (GSF) for use in the re-dispatch evaluation. These factors must be based on a current system analysis, which depicts the latest system topology. Re-dispatch should be at the request of the SCs/CAs (or on behalf of their PSEs where applicable) with dependency, but under the direction of the constrained SCs/CAs.

**Coordination Procedures**

By 8:00 A.M. each day, those SCs/CAs who determine they are dependent on purchases and may need to implement the LEER procedure, shall provide, via the Security Coordinator Information System (SCIS), its expected peak dependence on covered transactions,

\[
\text{Dependency} = \frac{\text{Forecasted/Actual Load}}{\text{Committed/Available Resources}} - \text{MW Voltage Reduction} - \text{MW Interruptible/Curtailable Load}
\]

and whether it is relying on non-firm transmission service for some portion of the transaction. The Lake Erie SCs/CAs implementing LEER shall identify those dependent
transactions in the iIDC that require re-dispatch service. This list of dependent transactions should be published via the SCIS for participating CAs to investigate possible mitigating measures including redispatch.

The SCs/CAs initiating the LEER procedure shall conduct a conference call to discuss their dependency on external transactions. At this time each Lake Erie SCs/CAs shall discuss expected constraints on their system and how those constraints would impact the SCs/CAs with the dependency. Constrained SCs/CAs and the dependent SCs/CAs should discuss the optimal re-dispatch solution for the expected constraint, taking into consideration generation available for redispatch (both reduction and increase in generation). The Constrained SCs/CAs should determine the appropriate GSF/PTDF/OTDF for use in the re-dispatch evaluation, using on-line or off-line load flows that depict current system topology. The constrained SCs/CAs, the one declaring TLR, must be in control of the re-dispatch process and agree with the effectiveness of all schedule/re-dispatch changes. This process may involve other SCs/CAs who are in control of and have available the generation designated for re-dispatch.

All SCs/CAs should expedite the emergency re-dispatch schedule without regard for the formality of obtaining transmission service reservations on OASIS, and permit after-the-fact reservations, if required.

Transactions for which re-dispatch is implemented shall be protected from further non-firm curtailment on the designated flowgate. Once re-dispatch begins to protect dependent transactions, they are categorized as protected transactions. Any additional loading of the flowgate should not be associated with the protected transactions so long as the re-dispatch action is current. Re-dispatch can be applied to a whole or part of a transaction, as required by the magnitude of the dependency. When the re-dispatch action covers only a portion of the transaction, the unprotected part is still subject to curtailment.

The SCs/CAs with generators being reduced for LEER shall receive an energy exchange for the megawatts they reduce. Generators raised for LEER shall be paid in accordance with local tariffs and control area agreements, or at the prevailing emergency energy price where applicable. If the unit(s) designated as the controlling action in the LEER procedure were to trip or become limited or unavailable in any way (e.g., derated or already dispatched to control an unrelated transmission constraint), the constrained SCs/CAs shall immediately notify the dependent SCs/CAs that the re-dispatching service has been modified or canceled. All transactions designated as replacement energy for the controlling transaction shall be canceled immediately.

The Constrained SC shall provide periodic updates via the SCIS as the level of dependency changes and system conditions permit. The Dependent SC/CA shall provide updates to the Constrained SC regarding any changes dependent transactions.

When the transmission system is no longer constrained, the SCs/CAs shall notify all other SCs/CAs that transactions can resume and re-dispatch service can be discontinued.
**LEER Procedure Levels**

Under the Lake Erie Security Process, non-firm transactions which would otherwise be curtailed, in accordance with NERC Policy 9, resulting in the shedding of firm load, may be protected from curtailment through the implementation of re-dispatch actions. The relevant parameters for all transactions covered by LEER should be supplied to the iIDC database and the iIDC software or equivalent should be the primary tool to identify scheduled transactions that are subject to curtailment. The LEER procedure can be initiated by the Dependent Lake Erie SCs/CAs, but must be directed by the constrained Lake Erie SCs/CAs. The applicable stages of LEER which may be implemented concurrently with NERC TLR procedures are:

**LEER A:** When the initiation of new schedules is halted under NERC TLR Level 2, a dependent transactions under LEER will be allowed to be picked-up and maintained concurrently with re-dispatch actions.

**LEER B:** When non-firm transactions are curtailed under NERC TLR Level 3, a dependent transaction may continue or be picked-up upon the initiation of re-dispatch action (or continuation of re-dispatch action initiated under LEER A). Transactions identified for curtailment are curtailed by transmission priority in accordance with the NERC TLR procedures. Protected transactions are not curtailed.

**LEER C:** When re-dispatch actions are being implemented under NERC TLR Level 4, protected transactions for which re-dispatch was implemented under LEER B or LEER A will continue so long as such action does not result in the curtailment of firm transactions. To avoid the curtailment of firm load on the dependent SC/CA, it is encouraged if applicable, that alternative agreements be arranged for re-dispatch/replacement energy to avoid the curtailment of both non-firm protected and firm transactions.

According to NERC Operating Policy 9, firm transmission service carries the obligation to re-dispatch generation prior to implementing curtailments.

**Communications Protocols**

*Security Coordination Information System (SCIS)* is used to communicate NERC Transmission Loading Relief (TLR) Levels and actions to all SCs. The dependent SCs/CAs are responsible for notifying other Lake Erie SCs/CAs of the magnitude of expected dependency prior to the morning conference call via the SCIS. The SCIS is also used to indicate the time of any planned conference calls. The constrained SCs/CAs are responsible for notifying other Lake Erie SCs/CAs when the LEER procedures have been implemented on the behalf of the SCs/CAs protecting firm load. The message must include the controlling action, MW amount of flowgate reduction, protected NERC tags,
and total MW transaction(s) protected. Protected transactions only apply to those protected by the controlling action on the constrained flowgate. Periodic updates shall be supplied as the level of dependency changes and system conditions permit. The constrained SCs/CAs are responsible for notifying all other SCs/CAs once the LEER procedures are no longer necessary.

**NERC Hotline** – A conference call is initiated by the SCs/CAs that anticipates a capacity deficient situation. During the conference call, the constrained SCs/CAs will discuss re-dispatch options and determine the potential location of replacement energy.

**NERC TLR web page** – Used to provide information about TLR to market participants.

**LEER Procedure**

1. LEER SCs/CAs report dependence on transactions and request a conference call using the SCIS.

2. Dependent Lake Erie SCs/CAs summarize dependency during morning conference call (NERC Hotline).

3. Lake Erie SCs/CAs discuss projected constraints and how transfers to the dependent system impact constraints.

4. The Dependent Lake Erie SCs/CAs will discuss controlling actions and identify dependent transactions with constrained SCs/CAs. SCs/CAs with dependency should:
   - Note Dependent Transaction Id: Transaction must be entered into NERC interim Interchange Distribution Calculator (iIDC) prior to becoming a candidate for LEER Procedure
   - CA Source and Sinks of Dependent Transactions discussed to determine GSF/PTDF/OTDF effect
   - MW amount of Dependent Transaction – list maximum when transaction MW profile varies

   This discussion does not have to be part of the initial conference call.

5. The Constrained Lake Erie SCs/CAs will discuss available controlling actions and updated GSF/PTDF/OTDF effects based on current system topology.

   This discussion does not have to be part of the initial conference call.

6. The Constrained and Dependent Lake Erie SCs/CAs will agree on which dependent transactions are protected based on the controlling action. The net MW effect of the controlling action must equal the effect of the dependent transactions.
7. The Dependent SCs/CAs will arrange for emergency replacement energy in the amount of the controlling action when the agreed upon action is to lower generation. The replacement energy PTDF/OTDF effect should be significant unless otherwise agreed upon by the involved SCs/CAs. Dependent transactions become protected transactions once re-dispatch begins.

The Dependent CAs will be required to compensate the Controlling CAs, or their Purchasing-Selling Entities (PSEs) where applicable, for all costs incurred in acquiring replacement energy including transmission charges. Where applicable, the Dependent CAs will recover the expenses based on their current settlement practices.

8. The Constrained SCs/CAs will notify other SCs/CAs via the SCIS when the LEER procedure is implemented and provide information including the controlling action, the protected transactions, and the anticipated duration of the constraint. Periodic updates regarding system conditions are to be provided via the SCIS as system conditions permit.

9. The constrained or controlling SCs/CAs are responsible for notifying all parties once system constraints are relieved or if the controlling generator trips off line, becomes derated or is reduced for an unrelated constraint.

10. The Dependent SCs/CAs, or their PSEs where applicable, are responsible for canceling the emergency energy purchase that replaced the controlling action, after concurrence by the constrained SCs/CAs that relief is no longer required, or that dependence no longer exists.

At any point:
- The Dependent Security Coordinator must cancel LEER procedures when it is determined that the dependency no longer exists.
- The Constrained Security Coordinator must cancel LEER procedures if the system constraint is relieved when the controlling action is terminated.
- The Controlling Security Coordinator must cancel LEER procedures if the controlling unit is no longer available for re-dispatch, has tripped off-line, is derated, or has been reduced to control a separate constrained facility; unless alternative re-dispatch can be immediately implemented.
- The Security Coordinator supplying emergency energy to replace the controlling action can cancel LEER procedures if the replacement energy becomes unavailable.
APPENDIX A: DEFINITIONS

Constrained System: SC or CA with transmission limitation, which may curtail Dependent System’s transactions.

Controlling System: SC or CA with re-dispatch option to control constraint (not necessarily constrained system).

Dependent System: SC or CA in jeopardy of curtailing firm load due to capacity shortage.

Dependency: Forecasted Peak Load (MW) – Committed Available Resources (MW) – Voltage Reduction MW – Interruptible/Curtailable Load (MW).

Dependent Transactions: Transactions required to serve firm load.

Generation Shift Factor: MW effect on a flowgate resulting from the change in MW output of a generator (s).

Power Transfer Distribution Factor: MW effect on a flowgate resulting from the change in MW output between the CA source and CA sink.

Protected Transactions: Dependent transactions protected by re-dispatch service.

Re-dispatch Option: Generation raised or lowered to control a transmission constraint.
## APPENDIX B: ACRONYMS

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>Control Area</td>
<td>CA</td>
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<tr>
<td>Generation Shift Factor</td>
<td>GSF</td>
</tr>
<tr>
<td>interim Interchange Distribution Calculator</td>
<td>iIDC</td>
</tr>
<tr>
<td>Lake Erie Emergency Re-dispatch</td>
<td>LEER</td>
</tr>
<tr>
<td>Outage Transfer Distribution Factor</td>
<td>OTDF</td>
</tr>
<tr>
<td>Power Transfer Distribution Factor</td>
<td>PTDF</td>
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<td>Security Coordinator Information System</td>
<td>SCIS</td>
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<tr>
<td>Transmission Loading Relief</td>
<td>TLR</td>
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</tbody>
</table>
APPENDIX C: LEER PROCEDURE EXAMPLE

Limiting facility – actual overload on South Ripley (NYPP) to Erie (PJM) 230 kV tie line. FE is purchasing from Ontario Hydro and is the dependent Control Area. The most effective controlling actions are to lower South Ripley (GSF = 65%) and Dunkirk (GSF = 34%) generation, both under NYPP control (GSFs with respect to a common reference generator). Assuming OH is determined to be the source of emergency replacement energy for the controlling action (GSF = -10%). Not implementing LEER would result in the curtailment of 100 MW of FE load.

1. FE (Dependent CA) identifies extent of dependency using Security Coordinator Information System.
2. Lake Erie SCs/CAs review projected system constraints and how FE dependency is affected.
   - PTDF and GSF Viewers used to determine general distribution factor effect.
   - EMS or off-line powerflow used to determine appropriate controlling actions based on current system conditions (more accurate GSF developed).
3. FE (Dependent CA) initiates conference call via NERC Hot Line.
4. PJM (Constrained Security Coordinator) identifies projected constraint and appropriate controlling action. PJM anticipates that the South Ripley line must be relieved by 14 MW. GSFs indicate that most effective controlling action is to lower NYPP generation. NYPP is identified as the Controlling Security Coordinator. Other SCs/CAs identify potential sources of replacement energy.
5. FE (Dependent CA), PJM (Constrained Security Coordinator), and NYPP (Controlling Security Coordinator) are to agree on the GSF effect of controlling action, replacement energy and identified dependent transactions. SCs/CAs agree that the appropriate controlling action is to reduce South Ripley Generation (65%). SCs/CAs must include the effect of emergency replacement energy on constrained facility. If OH is determined to be the source of replacement energy (10%), the analysis would indicate that South Ripley Generation must be reduced by 25 MW to relieve constraint (14MW/(.65-.1)). FE arranges for 25MW of replacement energy, to be supplied from OH, to replace the controlling action on the NYPP system. Discussion does not have to be part of the initial conference call. FE is responsible for the costs of the replacement energy.
6. FE determines to which step the LEER procedure is to be implemented depending on the severity of the dependency. If FE determines that the dependency can be satisfied by protecting Non-Firm Transaction > 15% effect they will implement Step B (refer to LEER procedures identified above).
7. PJM (Constrained Security Coordinator) identifies protected transactions, controlling action, and the anticipated duration of the constraint using the SCIS.

8. PJM (Constrained Security Coordinator) notifies SCs/CAs via SCIS once constraint is relieved.

9. PJM (Constrained Security Coordinator) notifies NYPP (Controlling Security Coordinator) via telephone once controlling action is no longer required.

10. PJM (Constrained Security Coordinator) notifies FE/CEI (Dependent Security Coordinator) via telephone once constraint is relieved.

11. FE (Dependent Control Area) notifies OH that replacement energy is no longer required.
1. **Dependency Calculation**

\[
\text{Dependency} = \frac{\text{Forecasted/Actual Load}}{\text{Committed/Available Resources}} - \text{MW Voltage Reduction} - \text{MW Interruptible/Curtailable Load}
\]

2. **Dependent Transaction Flowgate Effect**

\[
\text{Dependent Transaction Flowgate Effect} = (\text{Transaction MW Amount}) \times \text{PTDF}
\]

(PTDF to be replaced by OTDF where appropriate)

3. **Re-dispatch Requirement 1 (lower generation)**

\[
\text{Re-dispatch requirement} = \text{Dependent Transaction Flowgate Effect} \div \text{Controlling Action GSF} \pm \text{Replacement Energy GSF}
\]

4. **Re-dispatch Requirement 2 (raise generation)**

\[
\text{Redispatch requirement} = \text{Dependent Transaction Flowgate Effect} \div \text{Controlling Action GSF}
\]
APPENDIX E: SCIS TEMPLATES

TEMPLATE 1: PRE-CONFERENCE CALL SCIS MESSAGE – DEPENDENT SC/CA
LEER SC IS DECLARING EMERGENCY DEPENDENCY ON TRANSMISSION IMPORTS

```plaintext
LEER LEVEL : 
DEPENDENT SC : 
DEPENDENCY START : MMDDYY HHHH TZ 
DEPENDENCY END : MMDDYY HHHH TZ 
LEER CONFERENCE CALL : MMDDYY HHHH TZ 
```

REQUESTED

TRANSACTION ID(TAG) MW
1
2
3
4
5

COMMENTS:

 TEMPLATE 2: DECLARING LEER – CONSTRAINED SC/CA
LEER EMERGENCY RE-DISPATCH HAS BEEN PERFORMED TO PROTECT FIRM LOAD CURTAILMENTS AT THE REQUEST OF THE DEPENDENT SC

```plaintext
LEER LEVEL : 
CONSTRAINED SC : 
CONSTRAINED CA : 
DEPENDENT SC : 
LIMITING FLOWGATE : 
FLOWGATE ID# : 
TIME : 
DIRECTION OF LOADING : 
iIDC QUERY NAME : 
```

RE-DISPATCH UNIT(S) MW DECREASED:

RE-DISPATCH UNIT(S)/ZONE/CA MW INCREASED:

TOTAL MW REDUCTION ON FLOWGATE DUE TO RE-DISPATCH:

```plaintext
PROTECTED TRANSACTION FLOWGATE 
TRANSACTION ID(TAG) MW MW
1
2
3
4
5
```

TOTAL PROTECTED TRANSACTION MW :

COMMENTS:
13.6 Curtailment of Firm Transmission Service

In the event that a Curtailment on the Transmission Provider’s Transmission System, or a portion thereof, is required to maintain reliable operation of such system, and the systems directly and indirectly interconnected with Transmission Provider’s Transmission System, Curtailments will be made on a non-discriminatory basis to the transaction(s) that effectively relieve the constraint. The Transmission Provider will follow the Lake Erie Emergency Redispatch (“LEER”) Procedures specified in Attachment *. The LEER Procedure is intended to prevent the necessity of implementing the curtailment procedures contained in the FERC and NERC tariffs and policies. However, in the event that curtailment becomes necessary, the Transmission Provider may elect to implement such Curtailments pursuant to the Transmission Loading Relief Procedures specified in Attachment J. If multiple transactions require Curtailment, to the extent practicable and consistent with Good Utility Practice, the Transmission Provider will curtail service to Network Customers and
Transmission Customers taking Firm Point-To-Point Transmission Service on a basis comparable to the curtailment of service to the Transmission Provider’s Native Load Customers. All Curtailments will be made on a non-discriminatory basis, however, Non-Firm Point-To-Point Transmission Service shall be subordinate to Firm Transmission Service. When the Transmission Provider determines that an electrical emergency exists on its Transmission System and implements emergency procedures to Curtail Firm Transmission Service, the Transmission Customer shall make the required reductions upon request of the Transmission Provider.

However, the Transmission Provider reserves the right to Curtail, in whole or in part, any Firm Transmission Service provided under the Tariff when, in the Transmission Provider’s sole discretion, an emergency or other unforeseen condition impairs or degrades the reliability of its Transmission System. The Transmission Provider will notify all affected Transmission Customers in a timely manner of any scheduled Curtailments.

*(Name of Transmission Provider) Open Access Transmission Tariff Original Sheet No. *
33.2 Transmission Constraints: During any period when the Transmission Provider determines that a transmission constraint exists on the Transmission System, and such constraint may impair the reliability of the Transmission Provider’s system, the Transmission Provider will take whatever actions, consistent with Good Utility Practice, that are reasonably necessary to maintain the reliability of the Transmission Provider’s system. To the extent the Transmission Provider determines that the reliability of the Transmission System can be maintained by redispatching resources, the Transmission Provider will initiate procedures pursuant to the Network Operating Agreement to redispatch all Network Resources and the Transmission Provider’s own resources on a least-cost-basis without regard to the ownership of such resources. Any redispatch under this section may not unduly discriminate between the Transmission Provider’s use of the Transmission System on behalf of its Native Load Customers and any Network Customer’s use of the Transmission System to serve its designated Network
Load. The Transmission Provider will follow the Lake Erie Emergency Redispatch ("LEER") Procedures specified in Attachment *. The LEER Procedure is intended to prevent the necessity of implementing the curtailment procedures contained in the FERC and NERC tariffs and policies.

(* indicates throughout where Transmission Providers will substitute numbers or letters to conform to their tariffs)