



# **NORTH AMERICAN ELECTRIC RELIABILITY COUNCIL**

**Princeton Forrestal Village, 116-390 Village Boulevard, Princeton, New Jersey 08540-5731**

Distribution Factor Task Force

January 12–13, 1998

Sheraton Orlando North

Orlando, Florida

## **Meeting Minutes**

### **Attendance**

Madison Long, Chairman	SERC	William Tiller	SERC
Jonathan Riley, Vice Chairman	ECAR	Lanny Nickell	SPP
Thomas Vitez	ECAR	Chi Tang	Canada
Greg Krajnik	MAAC	P. S. (Ben) Li	SPSSTF
Roberto Paliza	MAIN	Conrado Caunan	NERC
Patrick Shanahan	MAIN	Brian M. Nolan	NERC
Greg Campoli	NPCC		

### **Administrative Matters**

The Distribution Factor Task Force (DFTF) meeting was called to order at 1 p.m. on January 12, 1998 by Chairman Madison Long. Each representative introduced himself.

The November 19-20, 1998 meeting minutes were approved with modifications.

### **Assignments from November 19–20, 1997 Meeting**

- Brian Nolan will continue to build flowgate and control area web pages. The latest version of the flowgates will need to be updated to what is currently posted. A to control area web page will need to be added
- Brian Nolan will add links to the PTDF viewer and data files to the DFTF web page. (Completed)
- Brian will continue to look into creating standardized Control Area Names as well as a mechanism to go from one version of a name to another. (On hold for now) For those who have not submitted the February outage information, submit it to Chi by January 21, 1998
- Roberto and Lanny will ask the iIDC the status of the transaction data entry. There will be a monthly audit to determine the entries.
- Lanny Nickell will talk to Steve Busby about the length of the flowgate names. The flowgate name can now handle 40 characters and a null terminator.

### **Update on PTDF matrix calculation**

Before the December Matrix was loaded there were many Utility mergers. The matrix was loaded on December 1 and became active on December 2. For the January matrix SPP now has more descriptive flowgate names. There are now 1128 flowgates; this includes some dummy values that will

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act as placeholders for future expansion. The second change was a negative BLIP flowgate for Ontario. Lou Leffler wanted a second set of TPF value to show the effect of the utility mergers. These values were preliminary numbers and DFTF will need to send Lou new values.

DFTF would like to have a more active role in some of these interim requests. DFTF also needs to develop a process for interim updates and changes. If the keeper of the flowgate definition is not DFTF then DFTF needs to develop a plan to notify the rest of the Working Group

Brian will look into what the OC has as a notification process if there is one.

NERC should have some guidelines on whom and when notifications go to, to notify people of changes that will effect other entities.

Chi believes that doing a DIF on the previous and current months base cases will be a better process to get a list of outages than having the Regional representatives submitting them monthly. When the base case changes this will make doing the DIF difficult. The current base case was developed during the 1996 MMWG effort and the spring case will be from the 1997 MMWG modeling effort. In the 1997 effort three Regions have done a one time renumbering of its bus numbers.

The spring 1998 base case now has up to three digits for Area number and now has a detailed model for FRCC. There are currently four areas that do not have a slack bus. The Cornwall area is merged with NYPP, another is a service area in Florida, and the third is a small load in SPP. DFTF has about two months to fine tune the base case before it will be used. PJM is combined into one control area. (Clarify this based on the paperwork that Chi passed out at the January meeting.)

GE load flow program users may have difficulty using the spring base case due to the number of buses that are in the base case. Chi can be selective on what Control areas are included. All are to review the spring 1998 base case and report back to Chi Tang by January 30, 1998. All comments that are sent to Chi should be carbon copied to the DFTF. The changes that are made to this case should be the same as those needed for the remaining three seasons.

## **Flow Gate Definition**

What is the reason behind the need for flowgate definitions? Is it that we have too many flowgates or that we need to better manage them?

Are there some special attributes that differ flowgates that have a compensation attached to them versus a reliability flowgate?

On the definition of a flowgate that states a flowgate can be constrained by thermal and congestion, a flowgates can also be constrained by relays and be directional.

Some areas use several lines as a flowgate. This is because the group of lines acts alike. This falls under a statement of a flowgate needs a definable limit. This could be a single or multiple definable limit and this will need further definition by the iIDC. iIDC is currently viewing limits as a limit to flowgate relationship, and there are several occasions where there are matrixes to define the limits for a single flowgate. Are the compensation flowgates the same as ATC flowgates? In the FLOBAT world these flowgates would be the same. Currently in the contract path they can be different. A flowgate should be part of the network, not a radial element for compensation and limiting flowgates. An exception might be the radial DC ties into Quebec, ERCOT, and WSCC. The statement that a flowgate needs to have a definable limit needs to be added to David Zwergal's flowgate definition paper.

Under the property list the PTDF value of 5%, is that assumed to be pre contingency or post contingency or both? The PTDF value of 5% is for both pre and post contingency, depending of the situation. The 5% value is somewhat arbitrary but it needs to be large enough that a lot of entities are

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asked to adjust its generation to get the compensation needed. The value needs to be consistent across the board though. Also, the definition of a flowgate should be set in such a way that it prevents an area from defining a flowgate in such a way that it would always meet the cut-off value of the PTDF value for compensation. This would reduce the ability of an entity to game the system.

**TLR**

In the long term the TLR would be able to analyst all the flowgates at one time. Currently the TLR system looks at one flowgate disregarding the effect that may happen to other flowgates. Roberto was asked, by the IDC, to develop a prototype system, using linear programming, to attempt to take the effect on all flowgates when enacting the NERC TLR procedures. This was a two flow-gate system, but it showed that it is possible to do. The final product will be bid out for development.

The threshold for TLR is being reevaluated. The reasoning is that if you add more lines to the flowgate the cutoff threshold should not really change.

**Base Case for 1998 Summer**

DFTF will continue to use the MMWG base cases, which provides four seasonal models. The summer base case will be used for June, July, August, and September. The fall base case will be used for October and November. The winter base case will be used for December, January, and February. The spring base case will be used for March, April, and May.

**Compare Results of Using Additional Non-participating Units**

Using the January matrix as a base scenario, the effects using the additional non-participating generating units and nuclear units was larger than 1% in the PTDF values. The largest positive delta, to the reference was about 10%. Area 62, EEI was used as the reference area. The flowgates that have the largest changes have large hydro plants very close to the flowgates. With the removal of the NPCC hydro units in New York and Ontario, from scaling, effected the loop flows around the Great Lakes. The rationality of why a unit was removed from the scaling will be needed before this will be used in the monthly PTDF calculations.

Some area included the base loads units in the non-participating units. Should the pumped storage units be scaled at 50% or 100%?

How do you prevent gaming the system and maintain consistency through out the system? Scaling the load is the best way to prevent gaming of the system. Sticking to broad categories of what should not be included in the scaling of generation would be best. The units that are submitted would be used for the entire season, and they would need to be approved by the DFTF.

The non-participation concept was initially brought up to improve the PTDF values. Now there is a strong push to get better outage data and collected daily. ATCWG is asking for the outage information on an hourly and daily basis. DFTF needs this same information at the same priority and possibly a higher priority.

Until all systems change its EMS systems to conform to a consistent naming convention the standard data submission format will not be useful or workable.

The next step for DFTF is to proceed with the just the hydro units that the Region believes should be non-scalable, this test will include the nuclear units. The list of non-scaling hydro units should be submitted to Chi by February 6, 1998. This will be the second test.

### **DFTF Meeting Expenses Spreadsheet**

Currently the least expensive meeting was the meeting in Atlanta followed by Tampa. Based on the discussion of the Orlando Meeting this will be one of the least expensive.

### **SPSSTF, iIDC, etc. Update**

Tabletop exercise is an exercise that the security coordinators are doing bases on a day's transactions. This is comparing the cost of transactions on a contract path versus the flow-based method. This is to find a cost basis difference between the two methods. Some transactions are turning out to be more expensive for the flow-based transactions.

SPP has filed a new tariff for megawatt mile billing. The MW impact is calculated for all provider-to-provider and posted on the SPP OASIS. This allows anyone who is planning on doing a transaction in SPP to calculate the cost. The generation was zoned to allow some generation to be scalable and others to be non-scalable. SPP has asked for a decision by February 16, 1998.

IDCSDWT is issuing an RFP on the IDC. Prior to the issuing of the RFP the Work Team will meet with the prospective vendors to discuss the IDC and the basic concepts. This meeting will act as a heads-up meeting as well as allowing the vendors to have some input on the RFP.

Tagging, many Regions and Utilities have been visited by FERC to review the posting compliance of ATC values. This is more of an audit to ensure that the posting procedures are being followed and that proper documentation is being kept. AEP has created its own OASIS site. The main reason was to improve access.

ISN, there is currently over 33,000 data records. The validation of the data showed that over 8,000 of those data records were invalid. Conrado has developed a data validation program to assist the people that need to enter the data. Along with validating the data, data entry and corrections can be easily be done. Currently most are reverting to the original spreadsheets to correct the data. Outage data is currently not part of the data record, which the DEWG developed.

Ben Li will keep DFTF informed, as to what is going on at the SPSSTF and its related work teams.

Chairman Long discussed the current process of requesting TPF values with Ben Li. Ben assured Chairman Long that this was a one-time effort and future request will be handled differently. One concern is that the TPF values could be different from the values created by the GAPP experiment. A TPF viewer has been developed and is posted on the iIDC download site; this will be linked to the DFTF web page

To go to a true flow base methodology the modeling would need to go from control are to control area to a system to system modeling methodology.

### **Future Meetings**

March 2-3, 1998	Tampa/Atlanta	half day and half day
May 4-5, 1998	Columbus	half day and half day

Check on the Spring Break Schedule

### **Assignments**

- All are to submit February outage data to Chi by January 21, 1998.
- All are to review the spring 1998 base case and report back to Chi Tang by January 30, 1998. All comments that are sent to Chi should be carbon copied to the DFTF.

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- All are to submit list of non-scaling hydro units should be submitted to Chi by February 6, 1998.
- All should continue to think about flowgate definitions.
- All should think about a process for changing control area and flowgate definitions.
- All need to submit meeting expenses by the end of January; this should include prior meetings. .
- Brian will look into what the OC has as a notification process if there is one.
- Brian will develop a Private FTP site. Look into developing a two way FTP site.
- Brian Nolan will continue to build flowgate and control area web pages, this is to include the updating of the From Control Area web pages and build the To Control Area web pages. A link will be built to the TPF viewer.
- Conrado will look into modifying the PTDF Viewer control area in addition to the current by flowgate. This was requested by Lou Leffler.

**Adjournment**

Chairman Long adjourned the meeting at noon on January 13, 1998.