

Distribution Factor Task Force

May 5–6, 1998
Royal York
Toronto, Canada

Draft Meeting Minutes

Attendance

| | | | |
|------------------------|------|-------------------|--------|
| Madison Long, Chairman | SERC | Larry E. Brusseau | MAPP |
| Greg Krajnik | MAAC | Greg Campoli | NPCC |
| Thomas Vitez | ECAR | William Tiller | SERC |
| Roberto Paliza | MAIN | Chi Tang | Canada |
| Patrick Shanahan | MAIN | Brian M. Nolan | NERC |

Administrative Matters

The Distribution Factor Task Force (DFTF) meeting was called to order at 1 p.m. on May 5, 1998 by Chairman Madison Long. Each representative introduced himself.

The February 2–3, 1998 meeting minutes were approved with modifications.

Update on PTDF matrix calculation

Chi distributed a list of units that were excluded from the May PTDF matrix. In the future if a unit that is to be excluded for an outage, then the comments should so state. If a unit is to participate in the base case then it needs some trivial amount of MW and the MBASE should be set to the amount of participation. If the correct MBASE is entered into the base case then some problems can be avoided. Larry Brusseau will send a request to MMWG to review all of the MBASE values that are in the base cases.

Starting with the summer base case DFTF will use whatever MBASE is in the MMWG base case as a default. All representatives are to review the MBASE and the configuration topology in the MMWG 1998 summer base case. Once the excluded units are set they should not be changed within the season, except for outages. Changes on a seasonal basis are acceptable

Entergy needs to begin submitting its data to Chi. The data received from NEPOOL needs some review. Chi has been receiving the data from the other areas in a relatively timely fashion.

Jon Riley has requested that KU and LG&E be merged into a single control area. They should be operational as one control area by May 5-6.

Due to some of the changes that are going to occur, DFTF may want to use only one case for the entire year. The other option is to continue to update the seasonal MMWG base cases. The use of one case will reduce the numbering changes that are happening when the case goes from one season to another. The summer MMWG base case would be selected and scaled as needed to match the season. The proper topology is what is needed as opposed to the accurate load profiles.

Some Security Coordinators want a model created and solved daily. If MMWG can get a consistent bus numbering scheme then a lot of the problems of switching from base case to base case would be solved.

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DFTF needs to determine if it wants to continue to change cases from the summer to fall. One option is to use a single base case as a yearly reference case. If the numbering of the buses do not change then switching base cases are relatively easy. The two options are to spend time on the mapping of buses instead of the continuous topology changes. It takes about two days for Chi to remap a new base case. The Regional representatives will assist Chi in the mapping process.

Greg Krajnik will e-mail the latest MMWG 1998 summer base case to Chi, and the entire DFTF, to ensure that Chi has the latest version of the base case.

Pat Shanahan requested the use of load points for the summer PTDF values. DFTF will continue to use the current method, but will revisit this issue in the future.

Daily Update of Eastern Interconnection Model

The Security Coordinators and the iIDC have approved the daily updated for the PTDF values and on demand updates of the PTDF values. It is now up for approval by the NERC Board. To do the updates on a daily and on demand basis the creation of a System data exchange (SDX) process will be created. If the daily and on demand updates are approved, the SDX system and the daily updates will be put in place by the middle of June.

For the daily calculation, the iIDC decided to remove units that are on outages for the time that it will be out from the participation points. iIDC is trying to get the most valid participation points and values. iIDC will remove the participation point from the cases and return them to the case, but will not add new participation points during the month. When the new monthly model is received, new participation points can be inserted. Changes in participation factors will have to wait until the new month.

The outage information will be collected on a continuous basis. Roberto has written up a paper on the data flow and the collection process. Ontario Hydro is preparing a system to automatically read the outage information for inclusion in the daily and on demand PTDF calculations.

iIDC will be using the seasonal cases that DFTF will be creating. Chi has extracted the bus names from the Summer MMWG base case and Conrado has loaded these into the SDX system. These buses have been sent to the Security Coordinators for their review and changes to the names for more common names.

If an on demand recalculation is called for the time frame to get the new values is less than a half an hour. Since the changes to the matrix will only be incremental, from the last recalculation this should be achievable.

iIDC will need a base case to work with, so DFTF will need to create at least a updated seasonal model.

Book of Flowgates

DFTF need to concentrate its effort on the non control area-to-control area flowgates. Chairman Long distributed a first draft of the book of flowgates.

For the Book of flowgates the following elements will be included:

- Flowgate ID Number/Name
- Control Area(s)
- Security Coordinator(s)
- Transmission Provider(s)
- Description

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- Type of Flowgate
- Justification
- Critical Contingency (optional)

DFTF will need to define a commercial flowgate. Other flowgates are reliability, internal, and contingent flowgates. A flowgate that needs to be normalized needs to be so identified along with the type of flowgate. The names that are used for some of the flowgates should be reviewed and possibly changed. The names used can use up to forty characters. The critical transfers will be removed. For the critical contingencies if the flowgate has one it should be provide. If a flowgate has multiple contingencies then no contingencies should be provided. The elements will be listed separately on the flowgates.

The flowgate data will be submitted in an excel file, for use in the iIDC system. It will need to be submitted by the first week of June. The flowgates that are listed for Eastern Interconnection members that are not represented on DFTF need to be reviewed. Chairman Long will call all DFTF representatives in about two weeks to check on the status of the flowgate review. Chairman Long will develop a template, in Office 95 format of excel, for submitting flowgates.

If a flowgate is defined, as multiple lines then the PTDF values is the sum of the individual lines PTDF values. A multi-line interface is needed for stability constrained interface. The normalization of a flowgate will decrease the impact of a transaction on the flowgate. One proposal would be to use an N-1 times the flowgate participation of the line. The stability flowgates do not need to be normalized, but the thermally limited flowgates need to be normalized. If there are just two elements on a flowgate then the flowgate should not be normalized.

A proposal was made to limit thermally constrained flowgates to two elements. This would remove the need for normalization, since the flowgates with one or two elements are not normalized. A few reliability flowgates would remain that need more than two elements. SPP will need time to review this.

Roberto requested the calculation methods for thermally limited flowgate rating. This would allow MAIN to get a better idea of how others are calculating the flowgate ratings. Roberto will send an example of what he is requesting to DFTF. Specific examples of how the calculations are done as well as the methods are what are being requested, not just blanket statements. This information would be included in the book of flowgates.

Changes to the flowgates are to be addressed by May 22, 1998. All changes to the flowgates should be sent to the entire DFTF. The mapping of flowgates to transmission providers would be nice to have by May 22.

PTDF Viewer

Conrado has begun development of an Internet based PTDF viewer. This is in the preliminary stages of development and testing. If while attempting to access or use the Internet PTDF viewer a problem occurs please forward the location of the problem and what you were attempting to achieve to Conrado and Brian.

DFTF Meeting Expenses Spreadsheet

The three least expensive meeting thus far are Tampa (1998), Orlando, and Tampa (1997). The average cost per DFTF representative is about \$8,700 for all of the meetings, the per meeting cost of about \$1,100.

MMWG Update

MMWG is in the process of revisiting a database approach to developing base cases. What MMWG would like from DFTF and other groups that it views as its customers is:

- What needs do the various groups have for the current base cases?
- What future needs do you see your group having for base cases?
- What changes would the users like to the base cases?
- Are the current base cases used for operational or planning basis?

The database needs to include the operational and planning names, as well as a bus numbering system. The database needs to be able to create an operational model, planning model, short circuit models and stability models. The time frames and naming conventions will need to handle these differences. If the database can be linked into the EMS systems would be great.

Once the database is populated and being used by the satellite groups, will the non-participants of these groups buy into it.

Once the RFP is written it should be sent to some of the other working groups for a quick review. With the needs of the IDC the database would need to be adaptable to the Internet.

SPSSTF, iIDC, etc. Update

Board Meeting highlights

1. IIDC enhancements, are budgeted at \$207,400 for the on-demand PTDF calculator
2. \$260,000 For the TMS business plan, a RFP for the IDC, and RFP for the TIS.
 - Four bids have been received on the TMS business plan
 - The four bids will be reviewed by SPSSTF
 - The IDC RFP will be reviewed by the SPSSTF, many issues still need to be included.
3. The collaboration with EPRI is still on the table.

At the July EC/OC meeting

1. Final Draft of the RFP on the IDC.
2. Draft of the TMS business plan presentation.
3. At the September EC/OC meeting the final TMS business plan.

Currently the iIDC system is using the SDX system. When the IDC is created the iIDC will cease to exist. The IDC will get its data from the ISN in a format that will be developed by the DEWG. The PTDF values that are created will be benchmarked and time stamped for use by other groups. The IDC will be using an engine to create the PTDF values, that may or may not be the PTI engine. The SPSSTF will be determining the engine that will be used. The marring of the operational and planning modeling needs, will be one of the largest problems.

The TMS Business Plan is to include the linkages between the security process and the commercial process. This is to better manage the market place.

The marketers have requested the TPF values to be created, but DFTF has not been adjusting the models to account for over and undercounting. DFTF does not feel to comfortable at the time with the creation of the TPF values.

Accuracy Factors

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|----|--------------------|---|
| 1. | Topology Changes | 2 |
| 2. | Generation Changes | 3 |

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| 3. | Area to Area transfers | 1 |
| 4. | Load to Load or Generation to Generation scaling | 4 |

If the 1998 summer case is used as the base reference case, DFTF probably will not be able to support a TPF creation until August. When MAIN take over the calculation of the PTDF values how will the creations of the TPF values get handled? The same base case can be used in the creation of PTDF and TPF values.

For a more complete description of what these groups are doing please refer to the minutes of the specific working groups.

Future Meetings

| | | |
|--------------------|-----------|-------------------|
| June 2, 1998 | Chicago | 10 AM-4 PM |
| August 13-14, 1998 | Albany NY | half day half day |

Try to see about the Hilton for a meeting room and sleeping rooms. DFTF representatives will review their schedules to see if it would be more advantageous to meet a half day-half day on June 2-3 or a 10-4 on June 2. Responses should be sent by the

Assignments

- Brian Nolan will continue to build flowgate and control area web pages. The following changes were recommended: the interface column will be removed from the HTML files and a 40 character descriptive name will be use in place of the current flowgate description
- Greg Campolli will update the calculation procedures. This will be posted on the DFTF web site.
- Chairman Long will discuss the status of the Modeling Guidelines.
- Greg Krajnik will e-mail the latest MMWG 1998 summer base case to DFTF
- Chairman Long will develop a template, in Office 95 format of excel, for submitting flowgates.
- Chairman Long will call all DFTF representatives in about two weeks to check on the status of the flowgate review.
- The flowgate data will be submitted by the first week of June.
- Changes to the flowgates are to be addressed by May 22, 1998. All changes to the flowgates should be sent to the entire DFTF.

Adjournment

Chairman Long adjourned the meeting at noon on May 6, 1998.