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Work Force (DFTF) meeting to order of 1

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Items From Last Meeting

- Request from MMNG that all control areas modeled in their base cases, be registered on the NERC TIS list. This has been done.
- Request from MMNG to ensure that the Enron control area is included. This has been done.
- Request from MMNG that representatives should review both cases to ensure that the control areas are the same on the TIS list. This has been done.
- Request from MMNG that agreement discussion papers should be submitted to Mat Long by August 20, 1999. This has been done.
- Request from MMNG that Chi is to add additional description to his multi-element flowgates. This has been done.
- Brian will create a new password for the DFTF Private Files web site. In progress.
- Mat will distribute the updated Flowgate Definition document by August 2, 1999. This has been done.

OTDF, PTDF, Multi-element Flowgate Discussion

Tim showed the PTDF and OTDF presentation that he did for SPP recently. Tim will make this presentation available to the members of DFTF for their own use. Is the comparison of PTDF and OTDF comparing similar products? Generalization of whether PTDF or OTDF hold more directions depends partly on whether the comparison is made for Contingency or Monitored PTDF elements.—Assumptions should not be made as to which factors are higher. Conditions such as direction of flow, flowgate definition and other items may impact the relative magnitude of the flowgate.

The SCS requested the DFTF to review the application of PTDF and OTDF Flowgates. Also the DFTF has been asked to develop criteria for approving Flowgates.

For ATC and monitoring the use of OTDF's are preferred in SPP, because they need only monitor the thermal ratings of the monitored element. Determining Operating limits for PTDF Flowgates can be dependent on the transactions that are flowing on the limiting and contingency Flowgate elements. Determining a pre-contingency operating limit that respects post-contingency limits is not always a straightforward or exact calculation (the more directly parallel the elements, the easier the calculation can be). The operating limit for an OTDF Flowgate can be clearly defined by the thermal rating of the monitored element (given a non dynamic rating). LODF is topology based; both PTDFs and OTDFs are dependent on the dispatch points (participation factors).

OTDF Flowgates should (except for granted situations) be used for an anticipated post-contingency thermally limited constraint. The cutoff level should be reviewed to see if it should be reduced. The number of surrogate flowgates may be reduced if a lower cut off threshold could be accepted, allowing for TLR's to be called on the limiting element. The cut-off level application should be applied uniformly. A tiered approach to curtailing schedules is a possible approach to the curtailment process. The process would curtail higher tier TDF transactions and proceeding to lower tier TDF transactions until the requested relief is achieved. Tiers might include the 15%, 10% and 5% TDF levels with possible lower levels below 5%. By cutting the higher TDF transactions first, you get the more effective relief with a lesser amount of affected transactions.

The SCS request to review the application of the use of OTDF and PTDF Flowgates is interpreted by the DFTF to be an opportunity to comment on NERC policy. There is a general agreement among the DFTF members that application rules for OTDF and PTDF Flowgates cannot be evaluated without simultaneously reevaluating the TLR implementation cut-off specified in NERC Policy 9.

The present practices of using multi-element Flowgates, Contingency Flowgates and Surrogate Flowgates blur the application and effectiveness of the 5% NERC TLR cut-off. The 5% cut-off was chosen as the measure between local area and regional problems. Lowering the OTDF cutoff (with tiers and other options) is the "right thing" to do in order to implement more accurate OTDF Flowgates for anticipated post-contingency loading. Properly implementing OTDF Flowgates (perhaps with a lower cut-off) would yield a fairer, more uniform TLR process. This may also apply to PTDF cut-off of 5% may also be reviewed.

Draft DFTF Proposal

Item 1: For a thermally limited facility, an OTDF should (except for granted situations) be used to protect a monitored facility from anticipated post-contingency overloads and a PTDF should be used to protect a monitored facility from pre-contingency overloads.

Item 2: Requested Exceptions to the above guideline would have to be reviewed

Item 3: The cutoff threshold in Policy 9 should be reviewed; due to the accuracy of the calculations, the cut-off threshold should not be lower than 2%.

Item 4: In relation to the cut-off criteria, a variable cut-off should be considered based on the voltage level of the monitored facilities and/or the impact of transactions relative to the facility rating.

Item 5: Multi-element thermal flowgates should be replaced with multiple OTDF flowgates where practical; where this is not practical, a justification of why the multi-element Flowgate cannot be replaced by OTDF Flowgate(s) will require review by the DFTF. The burden of proving necessity is on the Flowgate submitter. The number of replacement OTDF flowgates is not a valid reason for using a multi-element Flowgate from an IDC implementation standpoint but may be a valid reason from an operating standpoint. Contingency modeling concerns should first be addressed by attempts to add the necessary bus modeling. Possible exceptions where ratings are constant (not dependent on transactions) and the model will not support the applications of the flowgates.

Item 6: Multi-element Flowgates should be allowed for voltage and dynamic stability limits. No significant changes to policy may be required but a tiered cut-off may be considered.

Discussion:

- SDX data does not require reporting outages below 230kV. In order to implement and OTDF flowgate policy, outage reporting for lower voltage facilities such as 161kV will become more critical. The SDX system should accept outage reporting for lower voltage facilities for those SCs that submit them. The requirement for the SDX and IDC would need to be reviewed to include lower voltage systems. (Note- the SDX will accept any facility outage that is in the base case; the previous statement is not a problem)
- The tiered ("Pyramid") cut-off approach may be in conflict with some Regions ATC calculation practices.
- The move to use OTDF Flowgates exclusively for anticipated post-contingency loading, would not be accepted by some members if the lower threshold is not adopted (example: Dell-New Madrid)
- A lower OTDF cut-off may not be acceptable to some members unless it is added a separate tier of transaction cuts. It may be necessary to have 1% tiers for any application below 5%.
- It was suggested that the lower OTDF cut-off might apply only to non-firm transactions.
- The processing of tiered cuts would be more complicated than the present practice, and would require possible IDC modifications.
- With the uniform application of OTDF flowgates, the number of flowgates would greatly increase, to represent significant monitored element - contingency combinations.
- Variable threshold: Use a OTDF threshold below 5% if the aggravating transfers above the lower threshold (2% ?) add up to contributions of x% of the limiting rating. (Jon Riley)
- For the multi-element flowgates, if thermal flowgate can be monitored with OTDF, then it should be. A tiered approach may solve this problem.
- It was suggested that when multiple OTDF Flowgates are implemented that there can be situation where opposing directions are limiting. Cutting opposing transactions can greatly reduce the relief seen in either direction. This problem would occur in either PTDF or OTDF.
- Pre-contingency flows calculated from an EMS favor PTDF.
- With the proposed method, multi-element thermally limited Flowgates would be eliminated and therefore Normalization was not fully discussed. Should multi-element thermally limited

Flowgates be grand fathered or allowed as special exceptions, the Normalization issue must still be addressed.

- The number of Flowgates is not considered a limitation of the IDC. (Note-IDC limitation now is 2000 flowgates)
- NERC compliance measures should be adopted to enforce any new Flowgate application rules.
- A technically capable "policing" entity must be identified to review TLR application.

DFTF will hold a conference call on October 28, 1999 to finalize this discussion and prepare the final proposals. All reference/discussion materials for this discussion on these issues are to be submitted to Mat Long by 4 PM October 25, 1999.

Flowgate Definition Document

This document will be reviewed after the October 28, 1999 conference call on the SCS proposals.

Flowgate Approval Process

With the flowgate on the fly approval process, there is no time for pre approval. The Book of Flowgates will be updated once a week, on a manual basis, by NERC to incorporate the on the fly flowgates that are to be permanent.

The IDCWG will be requested to implement a procedure whereas when a new flowgate is added to the system, the Help Desk would send a message to DFTF and the submitter for reliability and contingency flowgates, alerting us of the new temporary flowgate for review. If an on the fly flowgate is to be permanently incorporated into the Book of Flowgates, it is the responsibility of the submitter to send a message to the DFTF stating such with the appropriate data. If the submitter does not indicate that the on-the-fly flowgate is to be made permanent, the on-the-fly flowgate will be written over (deleted) the next time the IDC reads the Book of Flowgates, this may be done as often as daily. The IDCWG will also be asked about the feasibility of adding a text box to the Flowgate Addition, Modification, or Deletion screen on the IDC so the SC can indicate whether a Flowgate change is permanent or temporary. This should not alleviate the submitter's responsibility to make a formal request to the DFTF, but simply a notification.

Flowgates will be added without a formal review. However, Flowgates can be challenged if there is a challenge, and then there would be a formal review and approval for the challenged Flowgate.

1999 Winter Base Case Implementation

Chi has implemented the changes that he has received thus far. Chi will be distributing the trial 2 very soon. There will be some changes that have to be made in the Book of Flowgates and possible SDX. A DIFF will have to be done to determine the changes needed for SDX. The majority of the problems between the base case and SDX will appear in the next summer case. All members should review the MBASE and status of their units in the winter base case. Once the case is deemed good it will be sent to OATI for review.

The winter base case will be implemented November 30, 1999.

Other Items

DC Ties and PARs

IDCWG asked DFTF to review the DC tie models. DFTF believes that no additional action is needed here and that the present method of modeling DC ties is sufficient. IDCWG also asked DFTF to review the modeling of phase angle regulators (PARs). There are 11 PARs that would need modeling.

Modeling of phase shifters was discussed by DFTF. Phase shifters should provide the IDC with a set of factors to provide relief similar to transaction curtailments on a per PAR basis. This will be further discussed by DFTF.

New Madrid-Dell Flowgate

Charles Long discussed the problems at the New Madrid-Dell flowgate. To reduce the loading on the interface, other than opening the northern interface, Entergy would have to shed firm load. A few times this past summer, Entergy ran the system assuming that the contingency element would not go out of service, other times they were listing ATC's and TTC's at zero.

Entergy has evaluated different scenarios of opening lines and has not come up with a good solution. Energy is also looking into building another line, but it would require siting in two states and dealing with a non-cooperative landowner. This is not planned to be in service until 2004.

One of the problems that people have is the perception of the situation. Another problem is that the limit on the New Madrid-Dell flowgates is calculated daily and can change daily. There are very few transactions with OTDFs above current 5% cut-off. Therefore, if OTDFs were strictly adopted with the current 5% cut-off, there would be no regional mechanism to reduce loading even though a significant portion of the loading is from off-contract path transactions with OTDFs between 2% and 5%.

Most of the DFTF agreed that Entergy was managing this Flowgate correctly with the present NERC policy. However, a lower cut-off for OTDFs may be a better solution to this problem.

Review Action Items

- All reference/discussion materials for the October 28, 1999 conference call are to be submitted to Mat Long by October 25, 1999.
- All members should review the MBASE and status of their units in the winter base case.
- Look into a lower cutoff for lower voltage facilities.
- Review the multi-element flowgates, if thermal flowgate can be monitored with OTDF, then it should. A tiered approach may solve this problem.
- Look into a variable threshold, based on line ratings.
- Mat Long will request the IDCWG to consider Help Desk notification to the DFTF when a Flowgate is added, modified, or deleted on the fly in the IDC.
- Mat Long will ask the IDCWG to consider adding a text box to the IDC screen for Flowgate changes to indicate whether the change is temporary or permanent.

Future Meetings

October 28, 1999	Conference Call	10 AM
January 18–19, 2000	Orlando, Florida	Noon to Noon

Adjournment

Chairman Long adjourned the meeting at noon on October 15, 1999.