



## Update on daily PTDF/OTDF calculations

The OTDF flowgates are being implemented in a piecemeal approach. Two areas have not implemented OTDF flowgates yet — TVA and Southern — other areas may continue to add or alter their OTDF flowgates. Prior to any revisions or additions to flowgates, the existing Book of Flowgates will be implemented.

## Memo from David Zwergel

Mat Long sent out a message from David Zwergel, Chairman of IDCWG and member of CMWG, outlining four items that DFTF needs to be addressed.

1. When will the OTDF flowgates be implemented? — The Book of Flowgates, as it stands, will have the OTDF flowgates implemented by April 15, 1999. These flowgates, once fully implemented, will be changing. Flowgates needed for TLR will take precedence over new OTDF flowgates for implementation purposes.
2. When will the book of flowgates be fully implemented? — By April 15, 1999.
3. Please draft a formal procedure and criteria for the addition, deletion, and modification of flowgates. This draft procedure will be subject to the SC's approval. Please draft the procedure for calculation of Generation Shift Factors for the Market Redispatch Pilot. — Tom Vitez will be working on the formal procedure and criteria for the addition and deletion of flowgates. With the ability of the IDC to create flowgates on the fly, this will be difficult to police. The Market Redispatch process is a little more difficult. Market Redispatch is not included in the IDC under the present contract with Alliance (Perot Systems and OATI).
4. Please produce a list of generators by flowgate that will be candidates for redispatch for this summer. Included should be the name of the generator, contact names(s), sample GSFs, and sample GSF viewer (LEER viewer adapted by Travis as necessary).

DFTF will respond to David Zwergel with its status on these four items. The message would include that Roberto is already calculating generation shift factors for units 200 MW and larger. The specifications can be changed to suit lower MW values. The current thinking is that if a redispatch is implemented and it overloads another flowgate, the redispatch will be subject to curtailment. The IDC that will be implemented for this summer will not have the ability to inform those using the redispatch feature that a redispatch will overload another flowgate.

The easiest means to implement the MRD would be to calculate a matrix with all generators and all flowgates. With the current cutoff value of 200 MW and larger units, the matrix size is about seven megabytes. Roberto is not sure of the matrix size with no MW cutoff value. To reduce the size of the matrix, a method of clustering could be used. PTI has a program that does the matrix calculations based on the clustering method and takes the impact on other flowgates into account.

Rather than just using a cutoff on generator MW or generator shift factor magnitude, a cutoff on the MW impact on a flowgate may be better. The implementation of this method would be difficult. The other option would be to not have any cutoff and calculate the generator shift factors for all units in the base case. The volume of data for this scenario may be too large to be practical. The DFTF could calculate all the shift factors for both on-line and off-line generators and have the CMWG determine what generators will be selected for the MRD project. The DFTF recommends that for all flowgates included in the MRD pilot program, all generators greater than 25 MW be included for the calculation of

generator shift factors. The DFTF also recommends that the CMWG determine the generators that would be included in the MRD program or how they would be displayed.

### **Book of Flowgates**

Another column was added to accommodate a request by OATI. OATI has also been running error checks on the Book of Flowgates and mapping is the last issue that needs to be corrected.

The mapping issue needs some work to get the transmission providers corrected. A list of registered transmission providers and control areas are on the MAIN and NERC web sites. When the summer base case is set up, the DFTF needs to ensure that the control areas in the base case match the latest TIS list.

All changes to the latest Book of Flowgates, including the mapping of control areas to Security Coordinators and control areas to transmission providers should be sent to Mat Long by April 5, 1999.

The viewer is limited to 25 characters for the descriptive name, and the Book of Flowgates is limited to 42 characters. Lou Leffler is discussing this with Southern Company to see about modifying the current client to handle the 42-character names.

There are about six multi element flowgates that do not have rationales.

### **Flowgate Addition, Deletion, and Modification Procedure**

Thomas Vitez presented his draft report outlining the addition, modification, and deletion of flowgates. Initially there will be three processes for the flowgate additions: urgent, multiple element, and single element. The urgent process will be done ASAP and then processed through the standard approval process. The multiple element process will require a justification by the flowgate owner and approval by the CMWG and SCS. The single element flowgates will be processed in groups and sent to the CMWG and SCS for approval. If the SCS or CMWG does not object to the new flowgate, it will be implemented. If objections were raised about the proposed flowgate, it would be up to the requesting entity to justify the need for the flowgate.

A preliminary impact study would be run to determine the impact that the addition of the flowgates will have on the system. The results would then be sent to the SCS for final approval. A form will be developed that will be used for the submission of new flowgates, the criteria from the flowgate definitions document will be included.

Automatic deletion is an issue that needs further review. This may or may not be a process that is needed. Mat Long will request a date field from OATI for the Book of Flowgates. Automatic will be changed to periodic.

Tom will make another draft of this document based on the discussions by the DFTF and send to the DFTF for comments. Tom was commended for the excellent draft he submitted to the group.

### **PAR Modeling**

Greg Campoli led a discussion on the modeling of PARs in the matrix base case. At present, a fixed angle represented by a branch impedance is used for modeling PARs. In actual operations, generation shifts are not done simultaneously with changes in PAR taps. Reducing power flows on a flowgate may be accomplished through changing PAR taps rather than changing generation. In the future IDC, power flow shifts on flowgates, represented by changing taps on the PARs, will be modeled. Greg and Ramon will draft some considerations for modeling PARs in more detail.

### **TPF Calculations**

Pat Shanahan led a discussion on calculating TPFs by “painting MWs” for control areas involved in transactions. Pat distributed several examples that demonstrated the method and how it can be used to eliminate under and over counting of flows through a control area. Boris Gisin from PTI gave Pat an estimated cost of \$10,000 to develop a program using this method. Pat will work on some examples to give OATI for calculating TPFs using this method when OATI requests it later this year. Pat was commended for efforts on this project.

### **Summer Base Case**

Since MAIN has been replacing their representation in the MMWG base case used for matrix calculations, it was discussed whether the current summer VEM/MEN base case should be used as a starting point for the summer matrix case. The argument for using the MMWG case as a starting point is that all would be starting from a common base case. However, if some Regions are replacing their models in the MMWG for the matrix case, there is no reason that the updated VEM/MEN case cannot be used. Dave Mabry will check with MAAC, Ramon with NPCC, Jon with ECAR, and Mat with VACAR to see if there are any objections to using the VEM/MEN summer base case as a starting point for the summer matrix case. Chi will send the 1999 summer base case (using the VEM/MEN as a starting point if no one objects) to the DFTF by April 16. Any changes to be included in that case should be received by Chi no later than April 9. Billy Tiller will run a comparison between the summer base case and the present winter base case.

All flowgates, including any new OTDF flowgates, should be run against the summer base case by May 14. An updated BOF, based on the summer case, should be sent to OATI as soon as possible after May 14.

### **SPSSTF, IDC, etc. Update**

Informational flowgates were discussed at the IDC meeting. TLR will not be allowed on this type of flowgate. Pure commercial flowgates will not be available for TLR either.

A LODF viewer will be developed for the market redispatch portion of the IDC. DFTF has been asked to create the outaged and monitored elements for the calculation process. The marketers wanted the LODF values calculated on the same model that the PTFD and OTDF values are calculated on.

Any flowgates that lists a contingent element would be used along with the monitored element for the calculation of LODFs.

### **Other Items**

Duplicate bus names is an important issue that needs to be addressed by MMWG. Duplicate bus names causes problems with the SDX data and the creation of the IDC database from the BOF. Prior to the use of the summer base case, the duplicate names need to be corrected.

MMWG needs to ensure that the MBASE and PMAX and PMIN are as correct as possible, since many of the new systems are being used in the IDC and other systems. MMWG should try to alter its list of control area to match the TIS list.

**Review Action Items**

- Brian Nolan will clean up the DFTF web site (roster, flowgate page, etc.).
- Mat Long will contact Larry Brusseau to find out what is going on with the MAPP flowgates.
- All members send corrections to BOF to Mat Long by April 5, this should include mapping.
- Billy Tiller will do a comparison of the new MMWG summer base case versus the current winter base case.
- Mat Long will send a message to Mark Gravener, Chairman of the MMWG, requesting MMWG to eliminate duplicate bus names and make control area designations agree with the TIS list.
- Mat Long will request Roberto generate a list of flowgates that are consistently below the 5% threshold.
- All are to check the cost of airfare to Little Rock and St. Louis and send to Brian Nolan.

**Future Meetings**

April 27, 1999	New Orleans, LA	8 a.m. to 3 p.m.
May 24–25, 1999	Little Rock/St Louis	noon to noon

**Adjournment**

Chairman Long adjourned the meeting at noon on March 24, 1999.