The Interchange Distribution Calculator Working Group (IDCWG) met on May 11–12, 2011 in Minneapolis, Minnesota. The meeting agenda is affixed as Exhibit A. Chair Yasser Bahbaz presided and Larry Kezele announced that a quorum was present. Mr. Kezele read the applicable Notice of Public Meeting.

**Attendees**

- Yasser Bahbaz, Chair
- Allan Watson, Vice Chair
- Cheryl Mendrala (speakerphone)
- Ben Taylor (speakerphone)
- Carlos Gonzalez-Perez
- Ed Skiba (speakerphone)
- Jim Latimer
- Brian Strickland (speakerphone)
- Narinder Saini (speakerphone)
- Sudhakar Chavali (speakerphone)
- Neil Shah (speakerphone)
- SPP
- IESO
- ISO-NE
- TVA
- OATI
- MISO
- LaChelle Brooks
- David Mahlmann
- NERC
- OATI
- NYISO
- PJM
- OATI
- Southern
- MISO
- OATI
- OATI
- MISO
- Jose Medina
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**Antitrust Compliance Statement**

Mr. Kezele summarized the NERC Antitrust Compliance Guidelines.

**Interchange Distribution Calculator Working Group Meeting Minutes**

The IDCWG approved the minutes of the January 19, 2011 Distribution Factor Working Group meeting (Motion 1), the minutes of the March 23–24, 2011 IDCWG meeting (Motion 2), the minutes of the April 7, 2011 DFWG conference call meeting (Motion 3), and the minutes of the April 11, 2011 IDCWG conference call meeting (Motion 4).
Future Meetings

<table>
<thead>
<tr>
<th>Meeting/Conf. Call</th>
<th>Purpose</th>
<th>Date</th>
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<tbody>
<tr>
<td>IDCWG Conference Call</td>
<td>Discuss change orders CO-320, CO-321, CO-324,</td>
<td>June 2, 2011 (2p.m.– 4p.m. EDT)</td>
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<tr>
<td></td>
<td>CO-325, CO-322, CO-07, and CO-10</td>
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<tr>
<td>IDCWG Meeting</td>
<td>Regular Meeting</td>
<td>August 24, 2011 (8a.m.– 5p.m. EDT) and</td>
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<td>August 25, 2011 (8a.m.– 5 p.m. EDT)</td>
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<td>Toronto, ON hosted by IESO</td>
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<tr>
<td>IDCWG Meeting</td>
<td>Regular Meeting</td>
<td>October 11, 2011 (8a.m.– 5p.m. CDT)</td>
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<tr>
<td></td>
<td></td>
<td>and October 12, 2011 (8a.m.– 5 p.m. EDT)</td>
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<td></td>
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<td>Minneapolis, MN hosted by OATI</td>
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Review of Agenda

Chair Bahbaz reviewed the agenda and prioritized agenda items. The working group will conduct closed sessions as required.

IDCWG Roster

The working group reviewed and revised the roster. Larry Kezele informed the working group that he will begin merging the two working groups into a single roster and two email list servers (idcwg@nerc.com and idcwg_plus@nerc.com). The basecase@nerc.com list server may remain intact; however, the dfwg@nerc.com and dfwg_plus@nerc.com list servers will eventually be discontinued.

IDCWG Self-directed Work Teams

The working group reviewed membership of each of the self-directed work teams.

<table>
<thead>
<tr>
<th>Project Management</th>
<th>Yasser Bahbaz (Team Lead), Allan Watson, Larry Kezele, Brian Nolan</th>
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<tbody>
<tr>
<td>Market Flow</td>
<td>Yasser Bahbaz (Team Lead), Raja Thappetaobula, LaChelle Brooks, Allan Watson, David Mahlmann, Larry Kezele</td>
</tr>
<tr>
<td>Documentation</td>
<td>Ben Taylor (Team Lead), Allan Watson, Cheryl Mendrala, LaChelle Brooks, Larry Kezele</td>
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NERC Update

Larry Kezele reported that the Reliability Coordinator Working Group (RCWG) met on May 3, 2011 and the Operating Reliability Subcommittee (ORS) met on May 4, 2010. Mr. Kezele reviewed the RCWG and ORS discussion topics, as identified in the agenda, and responded to working group questions. The ORS moved to cancel IDC CO-310, approved merging the RCWG into the ORS, approved merging the DFWG into the IDCWG, approved
the formation of the Alcoa Tapoco pseudo balancing authority, and supported implementation of IDC CO-324 before the summer of 2011.

NERC/NAESB Coordination

Ed Skiba, co-chair of the NAESB Business Practices Subcommittee (BPS), provided an overview of efforts to develop a permanent solution to replace the Interim solution for use in the parallel flow visualization project. The two options being considered are 1) the Hybrid option and 2) the Flowgate Allocation option. The BPS expects to arrive at a final solution at its May 17–19, 2011 meeting. Following BPS approval, the final solution will be posted for a 30-day comment period. At that point the BPS will begin development of related business practices. Executive Committee approval is also required.

Other coordination issues:

- Submission of Generator Priority Data – The IDCWG discussed this topic at its last meeting and concluded that an IDC change order is not required since either the balancing authority or the reliability coordinator can supply this data. However, whether the balancing authority or the reliability coordinator submits the data, the entity must submit both the generator priority and the associated MWs.

  The working group discussed alternatives available for the submission of generator priority data and generator outputs. If the balancing authority submits the generator priority data, then it must also provide the MW output that is firm or the percent of MW output that is firm. This data will override data provided by its reliability coordinator. Chair Bahbaz and Brian Strickland will draft a webSDX change order to implement this proposal.

- Parallel Operation of GTL and TLR – The BPS and the IDCWG are developing commercial and reliability metrics to determine the differences in congestion relief under GTL versus TLR.

- Status of Data Submittals – Keith Mitchell will provide the BPS an update at its May 17–19, 2011 meeting.

Motions

**Motion-1**: Moved: Raja Thappetaobula; Action: Passed.
Approve the minutes of the January 19, 2011 DFWG meeting.

**Motion-2**: Moved: Raja Thappetaobula; Action: Passed.
Approve the minutes of the March 23–24, 2011 IDCWG meeting.

**Motion-3**: Moved: Raja Thappetaobula; Action: Passed.
Approve the minutes of the April 7, 2011 DFWG conference call meeting.
**Motion-4:** Moved: Raja Thappetaobula; Action: Passed.
Approve the minutes of the April 11, 2011 IDCWG conference call meeting.

**Motion-5:** Moved: Vice Chair Watson; Action: Passed.
Approve CO-324 (Change in Default TLR Start Time for TLR 3B and 5B in IDC TLR Issuance Window) for evaluation.

**Motion-6:** Moved: Ben Taylor; Action: Passed.
Cancel CO-296 (Chouteau Generation Pseudo Balancing Authority).

**Motion-7:** Moved: Hugh Francis; Action: Passed.
In accordance with the Operating Reliability Subcommittee’s directive, cancel CO-310 (IDC Treatment of Tagged, Intra-Balancing Authority Transactions).

**Motion-8:** Moved: David Mahlmann; Action: Passed.
Accept CO-319 (Posting of Current TLR Data to the NERC Data Exchange Site) as implemented.

**Motion-9:** Moved: David Mahlmann; Action: Passed.
Accept NERC IT Services CO-01 (Posting of Current TLR Data to the NERC Data Exchange Site) as implemented.

**Motion-10:** Moved: LaChelle Brooks; Action: Passed.
Accept CO-305 (NNL Worksheet in Study Mode) as implemented.

**Motion-11:** Moved: David Mahlmann; Action: Passed.
Approve CO-321 (Data Interface for TLR CMR Report Data for SPP) for development, contingent upon resolution of an agreement between NERC and SPP regarding funding.

**Motion-12:** Moved: Ben Taylor; Action: Passed.
Approve CO-09 (Addition of Derate Validation to webSDX) for evaluation.

**Motion-13:** Moved: Ben Taylor; Action: Passed.
Approve CO-327 (Creation of TAP Pseudo Balancing Authority for the Alcoa Elements in the TVA Balancing Authority) for evaluation.

**IDC Change Orders (CO)**

1. **CO-283 Generator-to-Load Reporting Requirements**
   - Model Updates – When the model is updated in the GTL environment, errors are flagged and messages sent to the submitter. Mohamad Yassin suggested that reliability coordinator support staff be informed of model updates prior to the model be uploaded.
• TSIN Mapping of Sources to Generators – This information is needed to identify the sources of e-Tags, which would improve IDC granularity.
• GLT Metrics – See discussion of CO-326 below.
• Status of GTL Data Transmittals – This agenda item was not discussed.
• Reliability Coordinator Permissions to Address GTL Data Confidentiality – The working group reviewed the current list of reliability coordinator permissions received.

2. CO-296 Chouteau Generation Pseudo Balancing Authority
Chair Bahbaz reported that there are operating guides in place to monitor the dispatch and system impact of Chouteau generation. Ben Taylor moved to cancel CO-296 (Motion 6). The working group approved the motion.

3. CO-305 NNL Worksheet in Study Mode
The NNL worksheet is now available to operators only when the reliability coordinator has NNL relief obligations as part of a TLR Level 5. Revision 2 of CO-305 is a request to make the NNL Worksheet available as a study tool for use by operators at anytime. By implementing the NNL worksheet in study mode, operators would be able to select a flowgate, inspect the current amount of NNL flowing on the flowgate, specify a desired amount of NNL relief, and step through the NNL worksheet process to determine which units to move to achieve the desired amount of NNL relief.

The working group approved Revision 2 of CO-305 for development at its May 2010 meeting. Larry Kezele reported that NERC has approved CO-305 for development. Mohamad Yassin reported that CO-305 is ready for testing. Vice Chair Watson, Brian Strickland and Chair Bahbaz tested the development of CO-305. LaChelle Brooks moved to accept CO-305 as implemented (Motion 10). The working group approved the motion.

4. CO-310 IDC Treatment of Tagged, Intra-Balancing Authority Transactions
The present determination of Balancing Area to Balancing Area (BA to BA) transnational impacts on any given flowgate by the IDC is through the calculation and use of transfer distribution factors (TDFs). Presently, impacts of tagged, intra-BA transactions on any given flowgate are not subject to curtailment as the calculated intra-BA TDF will always be zero, which is, of course, below the curtailment threshold criterion of 5%. To capture the impact of intra-BA transactions on flowgates, the IDC would be modified to identify those tagged transactions which source and sink in the same BA. Where the specific generation source is not known for a tagged, intra-BA transaction, a calculation utilizing the BA’s TDF and LSF would be utilized to assess its impact on any given flowgate – such that flowgate impact due to intra-BA “X” transaction is equal to TDF (BA X) – LSF (BA X). Where the specific generation source is known for tagged, intra-BA transactions, a calculation utilizing the BA’s GSF and LSF
should be utilized to assess its impact on any given flowgate – such that flowgate impact due to intra-BA “X” transaction is equal to GSF (Gen in BA X) – LSF (BA X).

In accordance with the Operating Reliability Subcommittee’s directive, Hugh Francis moved to cancel CO-310 (Motion 7). The working group approved the motion.

5. CO-313 Use of SDX Common Names in IDC
CO-313 seeks to introduce the use of the common name identifier within the IDC and to specifically utilize common names within displays which present Generation Shift Factors (GSF) and/or bus names associated with Network and Native Load (NNL) calculations. Thus, CO-313 requests that functionality be added to the IDC such that webSDX common names, when present, replace bus names given in the model and that this change be incorporated into displays which present Generation Shift Factors (GSF) and/or bus names associated with NNL calculations.

The working approved CO-313 for development at its October 2010 meeting. Larry Kezele reported that NERC approved CO-313 for development. Mohamad Yassin reported that OATI has not yet started on the development of CO-313.

6. CO-315 Circuit B3M (ONT-ITC) Phase Shifter Modeling Changes
Raja Thappetaobula and David Mahlmann reported that NYISO, MISO, PJM, and IESO are reviewing CO-315. CO-315 may be redrafted following this review.

7. CO-316 Send a Target Market Flow not Equal to 9999 to External Market Entities of Flowgates
CO-316 addresses the sending of a target market flow not equal to 9999 to external market entities of flowgates. Chair Bahbaz reported that the working group previously addressed target market flow through the implementation of multiple change orders. At the working group’s August 2010 meeting, former Chair Busbin suggested that the Congestion Management Working Group consider the impacts of implementation of CO-316 before the working group takes action. Chair Bahbaz reported that the Market Flow Task Force of the CMWG is reviewing development and deployment of CO-316 and requested that further action by the working group related to CO-316 remain on hold.

8. CO-317 Michigan–Ontario PAR Status Change Switch
The working group approved CO-317 for development, contingent upon resolution of a contractual agreement regarding funding between NERC and MISO, at its October 18, 2010 conference call meeting. CO-317 requests a single status flag that resets all four PARs in the MI-ONT interface with a single status change.
9. **CO-319 Posting of Current TLR Data to the NERC Data Exchange Site**

CO-319 proposes that the current TLR Data generated in the IDC be posted in XML format to the NERC Data Exchange site that is hosted by OATI on behalf of NERC. The NERC Data Exchange site also includes historical Factors files in CSV format. Thus, implementation of CO-319 provides an alternative source of current TLR data in the event that the NERC CRC site is unavailable.

The working group approved CO-319 for development at its January 2011 meeting. Larry Kezele reported that NERC approved CO-319 for development. David Mahlmann moved to accept CO-319 as implemented (Motion 8). The working group approved the motion.

10. **CO-320 Set $P_{GEN}$ for Base Loaded Units to Effective $P_{MAX}$ for NNL**

Chair Bahbaz explained that the NNL relief requirement is currently determined by the amount of online generation available to serve a particular load value submitted to SDX. All online generation is adjusted to meet this load value. The scaled value does not always represent the correct real time output for these units. Knowing that base loaded units are typically always at or close to $P_{MAX}$ and that these units are flagged, thru setting MBASE to zero, to exempt them from participating in TDF calculations, a logic can be put in place to set the $P_{GEN}$ for these units for NNL purposes to the effective $P_{MAX}$ when appropriate.

Implementation of CO-320 changes the IDC logic for NNL allocation to set the SCALED $P_{GEN}$ for units with MBASE of 1.1 or less ($\leq 1.1$) to their effective $P_{MAX}$. Effective $P_{MAX}$ should reflect any de-rates or outages submitted for the units. The units may be scaled lower than the effective $P_{MAX}$ only if the total $P_{MAX}$ of units is greater than the load value submitted to SDX.

The working group approved CO-320 for development at its March 2011 meeting. Larry Kezele reported that NERC approved CO-320 for development. Mohamad Yassin reported that OATI has begun development of CO-320.

11. **CO-321 Data Interface for TLR CMR Report Data for SPP**

The working group reviewed the evaluation of CO-321. Chair Bahbaz explained that currently the NERC IDC Tool generates a Congestion Management Report (CMR) for every TLR issuance. This report is available through Graphical User Interface (GUI) and is available for manual user download in a Comma Separated Value (CSV) format.

Implementation of CO-321 would transfer all TLR data that is currently available through downloadable CSV format CMR automatically into the OATI webData for every confirmed TLR Level 3 or greater. The data would be sent for the entire TLR event once, after the TLR event is terminated and all curtailments and reloads associated with any of the TLR actions in the event are completed.
David Mahlmann moved to approve CO-321 for development, contingent upon resolution of an agreement between NERC and SPP regarding funding (Motion 11). The working group approved the motion.

12. CO-322 ATSI Integration into PJM
Carlos Gonzalez-Perez reported that OATI reviewed the draft CO-322 for the ATSI (FirstEnergy Corp) Integration into PJM on June 1, 2011. There are no code changes needed to accomplish the purpose of CO-322, since all requirements can be met through data changes in the model, the Book of Flowgates, and the NERC Registry. Therefore, OATI recommends that PJM and the IDCWG withdraw the draft of CO-322 and that the change order number be used for an upcoming draft.

In addition, during its discussion of CO-322, the IDCWG acknowledged that the June 1, 2011 IDC base case model cutover time and model build would begin at 12:30 EDT and is expected to be complete at 1:15 EDT.

13. CO-323 MISO Request to Access IDC Data for webImpact
Implementation of CO-323 provides the aggregated impact of Midwest ISO scheduled firm transmission service reservations on coordinated flowgates. This impact will be used by the Midwest ISO to determine the firm limit of its market flows on its reciprocally coordinated flowgates. Development of CO-323 would require OATI to build an interface between the NERC IDC and OATI’s webImpact, which is an OATI hosted engine to calculate the requested impacts, to support the following tasks:

i) Access the Transfer Distribution Factors (TDFs)
ii) Identify interchange schedules that source/sink or wheel through the Midwest ISO system
iii) Retrieve the list of Midwest ISO coordinated flowgates

The working group approved CO-323 for development at its March 2011 meeting. Larry Kezele reported that NERC approved CO-323 for development. Jim Latimer reported that CO-323 is under development.

14. CO-324 Change in Default TLR Start Time for TLR 3B and 5B in IDC TLR Issuance Window
The working group reviewed a draft of CO-324. Raja Thappetaobula explained that currently, in the NERC IDC Tool TLR Issuance Window whenever a reliability coordinator selects a TLR 3B or TLR 5B the IDC defaults the TLR start time to 10 minutes from the time the reliability coordinator selected the TLR level option. The reliability coordinator still has the option to change the start time to any time that they prefer to be the start time of TLR, but generally the issuing reliability coordinator issues the TLR with a start time of 10 minutes from the issue time without changing
the start time. This causes issues to impacted sink reliability coordinators in that they have less time to acknowledge the TLR and, in some instances, a sink balancing authority’s schedulers end up denying tag curtailments to avoid NERC BAL standard violations.

In order to avoid the above situations, implementation of CO-324 changes the default TLR start time to 20 minutes from the time TLR level 3B or 5B is selected. The reliability coordinator will still have the option to change the start time to any time that they prefer to be the start time of TLR. The issuance of TLR 3B and 5B should also be considered in reliability coordinator training programs.

The working group discussed specific examples related to the timing of the issuance of a TLR 3B and a TLR 5B. Following the working group’s discussion, Vice Chair Watson moved to approve CO-324 for evaluation (Motion 5). The working group approved the motion.

15. CO-325 Changes to TLR Event History Display
Chair Bahbaz explained that currently, the IDC’s TLR Event History display, which is used for post analysis, displays a summary of each TLR issuance on the specific flowgate. There are columns for data such as relief requested, remaining relief, relief provided, the number of tags curtailed, and the MW value of curtailments. He stated that this display includes “not required tags” and tags that have an outside restriction placed on them by balancing authorities that were not actually curtailed by the TLR. This can mislead IDC users.

Implementation of CO-325 modifies the TLR Event History display by deleting the requested relief column and changing the relief provided, tags cut, and MWs cut columns to the values in the row labeled “Required Tags”.

Mohamad Yassin reported that OATI has not yet evaluated CO-325.

16. CO-326 Parallel Flow Visualization Metrics
The working group reviewed a draft of CO-326. Chair Bahbaz explained the purpose of CO-326 which is:

As the parallel flow visualization (PFV) project prepares to enter the pilot period, more benchmarking tools are needed to compare the results in both current production IDC logic and the generator-to-load (GTL) calculation logic. The difference between the two logics in the two environments should be justifiable and defensible through the enhancements in visualization of parallel flows in the IDC. The following metrics assume that the methodology for PFV relief assignment has been determined and incorporated into the IDC.
To accomplish this testing and comparison, the working group requests that OATI creates metrics in the IDC to analyze the GTL calculation, compare it to the current IDC logic and evaluate the differences in results. The core of CO-326 is to help accomplish the following objectives:

- Measure the accuracy of the data inputted by reliability coordinators, balancing authorities, transmission service providers, and transmission operators
- Measure the availability and the frequency of updated data submission by entities
- Validate that the correct PFV calculation methodology logic is implemented
- Measure the accuracy of the results of the PFV logic
- Quantify the differences between the PFV calculations and the results with respect to the current IDC logic in terms of curtailments and relief assignments

The working group discussed the metrics identified in draft CO-326. Chair Bahbaz will redraft CO-326 based upon the working group’s discussion. Chair Bahbaz formed a GTL/PFV task team (Vice Chair Watson, Ben Taylor, Chair Bahbaz, Hugh Francis, Mohamad Yassin, and LaChelle Brooks) to begin development of GUI displays to present the reliability metrics data. Chair Bahbaz also formed a GTL calculations team (David Mahlmann, Ben Taylor, Chair Bahbaz, LaChelle Brooks, and Mohamad Yassin). The task teams will report out at the working group’s August 2011 meeting.

17. CO-327 Creation of TVAT Pseudo Balancing Authority for the Alcoa Elements in the TVA Balancing Authority
Ben Taylor reviewed a draft of CO-327, which creates a new pseudo balancing authority within the TVA balancing authority. The Operating Reliability Subcommittee approved the formation of this pseudo balancing authority at its May 4, 2011 meeting. Ben Taylor moved to approve CO-327 for evaluation (Motion 13). The working group approved the motion.

SDX Change Orders (CO)
1. CO-07 SDX File Daily Load Time Conversion
Currently, in the SDX files for daily load data, no time conversion occurs between the submitted file and the posted file, when in two different time zones. For example, PJM submits data in Eastern Time. The peak times for daily loads do not convert to Central Standard Time before posting. Implementation of webSDX CO-07 would correctly apply the time conversion for daily load data in the webSDX files. The working group approved webSDX CO-07 for development at its March 2010 meeting. Larry Kezele reported that NERC approved CO-07 for development. Mohamad Yassin
reported that OATI has completed development of CO-07. LaChelle Brooks will test the development of CO-07.

**CO-08 Remaining GUI Changes**
Chair Bahbaz reminded the working group that during its April 26, 2010 conference call, it was agreed that webSDX CO-02 (Miscellaneous GUI Changes) would be partially implemented with the understanding that sections 4 and 5 of the change order would be addressed in a new change order. The purpose of webSDX CO-08 is to address those outstanding items; however, the change order also requested additional functionality not originally requested in webSDX CO-02.

The working group deferred action on CO-08 until its next meeting.

2. **CO-09 Addition of Derate Validation to webSDX**
Ben Taylor stated that currently there is no validation performed by the webSDX tool to ensure a unit is not being de-rated to above its Pmax in the base case. This, however unlikely, has been a problem in the past and has resulted in inaccurate information being posted to the webSDX tool and, consequently, potentially being used in the planning of operations.

Ben Taylor moved to approve CO-09 for evaluation (Motion 12). The working group approved the motion.

**WebFactor Change Orders (CO)**
There were no webFactor change orders to consider.

**NERC IT Services Change Orders (CO)**
1. **CO-01 Posting of Current TLR Data to the NERC Data Exchange Site**
The working group reviewed the evaluation of NERC IT Services CO-01. CO-01 proposes that the current TLR Data generated in the IDC be posted in XML format to the NERC Data Exchange site that is hosted by OATI on behalf of NERC. The NERC Data Exchange site also includes historical Factors files in CSV format. Thus, implementation of CO-01 provides an alternative source of current TLR data in the event that the NERC CRC site is unavailable.

The working group approved CO-01 for development at its January 2011 meeting. Larry Kezele reported that NERC approved CO-01 for development. David Mahlmann moved to accept NERC IT Services CO-01 as implemented (Motion 9). The working group approved the motion.

**Book of Flowgates Change Orders (CO)**
1. **CO-10 Validate Temporary Flowgates in Book of Flowgates**
Larry Kezele reported that the DFWG approved BoF CO-10 for development at its March 30, 2010 meeting and that the costs for developing the change order are included in NERC’s 2011 budget. Larry Kezele reported that NERC approved CO-10 for development. Mohamad Yassin reported that OATI has not yet started development of CO-10.

2. **CO-11 Base Case Deadline Communication**

Larry Kezele reported that the DFWG approved BoF CO-11 for evaluation at its March 30, 2010 meeting. At its January 2011 meeting, the DFWG decided to keep BoF CO-11 on hold until its next meeting. Ben Taylor will revise the script and base case development timeline to include information through 2013.

3. **CO-14 ATSI Integration into PJM**

Carlos Gonzalez-Perez reported that OATI reviewed the draft CO-14 for the ATSI (FirstEnergy Corp) Integration into PJM on June 1, 2011. There are no code changes needed to accomplish the purpose of CO-14, since all requirements can be met through data changes in the model, the Book of Flowgates, and the NERC Registry. Therefore, OATI recommends that PJM and the IDCWG withdraw the draft of CO-14 and that the change order number be used for an upcoming draft.

4. **CO-15 MISO Source-Sink Mapping**

Implementation of CO-15 would provide the Midwest ISO with the aggregated impact of its scheduled firm transmission service reservations on coordinated flowgates. MISO will use this impact to determine the firm limit of its market flows on its reciprocally coordinated flowgates. Development of CO-15 requires OATI to build an interface between the NERC IDC and OATI’s webImpact, which is an OATI hosted engine to calculate the requested impacts, to support the following tasks:

i) Access the Transfer Distribution Factors (TDFs)

ii) Identify interchange schedules that source/sink or wheel through the Midwest ISO system

iii) Retrieve the list of Midwest ISO coordinated flowgates

Furthermore, implementation of CO-15 requires that the distribution factors for the Midwest ISO OASIS sources and sinks be a data source into webImpact. However, currently there is no specific mapping of OASIS sources and sinks to generators available in the Flowgate Management System (BOF) or IDC. CO-15 requests the creation of a mapping in the BOF to resolve this issue. This mapping would be updated through the IDC model update process via the Book of Flowgates.
Finally, the process for model update would to be modified to enable MISO personnel to resolve any mapping errors via the BOF user interface. This shall take place following the base case upload done by the BOF administrator.

The working group approved CO-15 for development at its March 2011 meeting. Larry Kezele reported that NERC approved CO-15 for development. Jim Latimer reported that CO-15 is under development.
Calendar of Change Order Implementation and Other Related Events

1. **May 6, 2011** – IDC Summer Model Upload
2. **May 10, 2011** – Emergency IDC Summer Model Update
3. **May 18, 2011**
   a. NERC IT Services CO-01 (Posting of Current TLR Data to the NERC Data Exchange Site) implemented
   b. IDC CO-319 (Posting of Current TLR Data to the NERC Data Exchange Site) implemented
   c. IDC CO-305 (NNL Worksheet in Study Mode) implemented
4. **June 1, 2011** – IDC Summer Model Update
5. **July 6, 2011** – IDC Summer Model Update
6. **August 3, 2011** – IDC Summer Model Update
7. **September 1, 2011** – IDC Summer Model Update
8. **October 4, 2011** – IDC Summer Model Update

IDC Operations and Maintenance

1. **IDC and SDX User Comments**
   a. TLR Trends – OATI analyzed TLR events for trends and presented its findings. The trends indicated that conducting the model uploads at 2230 CPT is less impactful to system operations since that is when the number of TLRs are in effect begins to significantly decrease. The working group decided to continue conducting model uploads at 2230 CPT.

2. **IDC Event/Incident Reports** — Mohamad Yassin reviewed IDC and webSDX help desk calls since the working group’s March 23–24, 2011 meeting.

3. **Transition of IDC, SDX, and BoF to a New Production Platform** — Troy Sorrells briefed the working group regarding the transition of the IDC, webSDX and the BoF from its existing production platform to the new production platform. The transition required all system users to modify the IP addresses and URLs used to access these reliability tools. OATI refers to the new hardware platform as its “private cloud environment.” All software applications will be accessible at either of the two OATI data centers.

New Projects, Issues, and Other IDC/webSDX Matters

1. **WebSDX Documentation** — The working group reviewed Version 1.0 of the Balancing Authority webSDX User Guide for Providing Generator Outputs and Priority and Version 2.3 of the webSDX User Administrator Registration Guide. These documents may require revision to reflect development and implementation of IDC CO-322.
2. **Change Order Prioritization** — The working group discussed its 2011 budget for IDC, webSDX, webFactor, and BoF change orders and prioritized those that should begin development as soon as practicable.

3. **Impact of E-Tags That Do Not Start at the Top of the Hour** — Yasser Bahbaz explained that when an e-Tag starts sometime during the upcoming hour, it is not curtailed during a TLR 3A. The working group previously drafted and implemented CO-128 (User Interface for Intra-hour e-Tags) to address this issue and a GUI display was developed to capture data related to intra-hour e-Tags.

   Nelson Muller reviewed two options for further analysis to capture these e-Tags that would otherwise not be curtailed. Implementation of either option would result in running TLRs every 15 minutes. The working group decided that intra-hour e-Tags would be reliability capped at the lowest scheduled MW amount and the TLR curtailment calculation would use the reliability cap to determine the tag’s curtailment adjustment. Chair Bahbaz will draft an IDC change order for the working group’s further discussion.

4. **SDX Data Submittals** — Ben Taylor explained that the working group should revisit the SDX data submittal verification or quality check routines. In some instances, generators are being de-rated to a level in excess of its base case $P_{\text{max}}$. OATI reviewed the existing data verification and quality check routines. Mr. Taylor suggested modifying the data quality check routine such that a data submission that includes a generator unit de-rate to a level in excess of its $P_{\text{max}}$ would not be accepted. Mohamad Yassin stated that this data validation check could be easily added. Mr. Taylor drafted a webSDX change order to add this validation check (see discussion of webSDX CO-09 above).

5. **Net Target Market Flow** — The working group deferred discussion of this topic to its next meeting.

6. **TLR Level 5B** — Chair Bahbaz stated that the initial issuance of a TLR 5B does not result in reallocation of transactions in the next hour as is done when a TLR 3B is issued. This is especially problematic when back-to-back 5Bs are issued, since the TLR curtailments keep increasing. Nelson Muller queried the IDC on the number of back-to-back TLR 5Bs and determined that this occurs about once a month. He will draft a Request for Initiation of a NAESB Business Practice Standard for the working group’s review at its June 2, 2011 conference call.
7. Reference Document Review
   i. Parallel Flow Calculation Procedure Reference Document – Larry Kezele recommended that the working group not expend additional resources to revise the Parallel Flow Calculation Procedure Reference Document, given that the NAESB BPS will be rewriting the TLR business practices to implement the approved permanent solution.
   ii. Reliability Coordinator Reference Document – Chair Bahbaz requested the Documentation SDWT to review the status of the Reliability Coordinator Reference Document.

Adjournment
The meeting was adjourned at 2:21 p.m. CDT on May 12, 2011.

Larry Kezele
Larry Kezele
Secretary
1. Administrative Matters*
   a. Arrangements – Larry Kezele
   b. Notice of Public Meeting – Larry Kezele
      “Participants are reminded that this meeting is public. Notice of the meeting was posted on the NERC website and widely distributed. Participants should keep in mind that the audience may include members of the press and representatives of various governmental authorities, in addition to the expected participation by industry stakeholders.”
   c. Welcome and Introductions – Chair Bahbaz
   d. Announcement of Quorum – Larry Kezele
   e. NERC Antitrust Compliance Guidelines – Larry Kezele
      Attachment 1.e – NERC Antitrust Compliance Guidelines
   f. Parliamentary Procedures – Larry Kezele
      Attachment 1.f – Parliamentary Procedures
   g. Approve Agenda – Chair Bahbaz

Closed sessions will be conducted as required. The May 11–12, 2011 IDCWG meeting agenda in Word format is included in the IDC Change Order zip file.

* Background material included
h. Future Meetings and Conference Calls – Chair Bahbaz
   i. August 24–25, 2011 (8 a.m. – 5 p.m. both days), in Toronto, ON (hosted by IESO)
   
   i. Approval of the IDCWG and DFWG Meeting Minutes – Chair Bahbaz
      Attachment 1.i.1 – January 19, 2011 DFWG Meeting Minutes
      Attachment 1.i.2 – March 23–24, 2011 IDCWG Meeting Minutes
      Attachment 1.i.3 – April 7, 2011 DFWG Conference Call Meeting Minutes
      Attachment 1.i.4 – April 11, 2011 IDCWG Conference Call Meeting Minutes
   
   j. NERC feedback from Reliability Coordinator Working Group (RCWG) and Operating Reliability Subcommittee (ORS) – Larry Kezele
      i. The RCWG met on May 3, 2011.
      ii. The ORS met on May 4, 2011.
      iii. Approved merger of the DFWG and the IDCWG
      iv. Approved cancelling IDC CO-310
      v. Supports implementing IDC CO-324 before the summer of 2011
      vi. Approved the formation of the Alcoa Tapoco pseudo-balancing authority within the TVA balancing authority footprint
   
      i. Business Practices Subcommittee – Ed Skiba or Narinder Saini
   
   l. Review IDCWG roster and List Servers – Larry Kezele
      Attachment 1.l – IDCWG Roster
   
   m. Review of membership of the IDC self-directed work teams – Chair Bahbaz

<table>
<thead>
<tr>
<th>Project Management</th>
<th>Yasser Bahbaz (Team Lead), Allan Watson, Larry Kezele, Brian Nolan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Market Flow</td>
<td>Yasser Bahbaz (Team Lead), LaChelle Brooks, Raja Thappetaobula, Allan Watson, David Mahlmann, Larry Kezele</td>
</tr>
<tr>
<td>Documentation</td>
<td>Ben Taylor (Team Lead), Cheryl Mendrala, Dave Hislop, Allan Watson, Larry Kezele</td>
</tr>
</tbody>
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* Background material included
2. **Review of Active Interchange Distribution Calculator (IDC) Change Orders (CO)**

   (Secretary’s Note: The IDC Change Orders for discussion at this meeting are posted in a zip file on the IDCWG Web site.)

   a. **CO-283: Generator-to-Load Reporting Requirement**
      
      (Status — Accepted as implemented on November 1, 2010)
      
      Action:
      
      i. Review outstanding variances and other areas of development
      
      ii. Field trial would not start until the permanent solution is determined and implemented in IDC production
      
      iii. Status of data transmittals
      
      iv. Reliability Coordinator Permission to address GTL Data Confidentiality
      
      v. Coordination with NAESB BPS
         
         1. Inputting generator priority data
         
         2. Intra-BA tags
         
         3. TSIN mapping of sources to generators

   b. **CO-296: Chouteau Generation Pseudo Balancing Authority**
      
      (Status — TVA to redraft)
      
      Action: Review draft and approve for evaluation.

   c. **CO-305: NNL Worksheet in Study Mode**
      
      (Status — Approved for development)
      
      Action: NERC has signed CO-305. Review development status.

   d. **CO-310: IDC Treatment of Tagged, Intra-Balancing Authority Transactions**
      
      (Status — Approved for development)
      
      Action: ORS deferred action until its May 2011 meeting. Funding approved for 2011 NERC budget.

   e. **CO-313: Use of SDX Common Names in IDC**
      
      (Status — Approved for development)
      
      Action: NERC has signed CO-313. Review development status.

   f. **CO-315: Circuit B3M (ONT-ITC) Phase Shifter Modeling Changes**
      
      (Status — NYISO, MISO, PJM, and IESO are reviewing CO-315)
      
      Action: On hold.
g. CO-316: Send a Target Market Flow not Equal to 9999 to External Market Entities of Flowgates  
   (Status — Congestion Management Working Group to review need to proceed with the development and deployment of CO-316.)  
   Action: On hold.

h. CO-317: Michigan – Ontario PAR Status Change Switch  
   (Status — Approved for development, contingent upon resolution of a contractual agreement regarding funding between NERC and MISO)  
   Action: NERC and MISO have not yet finalized a contractual agreement regarding funding.

i. CO-319: Posting of Current TLR Data to the NERC Data Exchange Site  
   (Status — Approved for development)  
   Action: NERC has signed CO-319. Review development status.

j. CO-320: Set PGEN for Base Loaded Units to Effective Pmax for NNL  
   (Status — Approved for development)  
   Action: NERC has signed CO-320. Review development status.

k. CO-321: Data Interface for TLR CMR Report Data for SPP  
   (Status — Evaluated)  
   Action: Review evaluation and approve for development, contingent upon resolution of a NERC/SPP agreement regarding funding.

l. CO-322: ATSI Integration into PJM  
   (Status — Approved for evaluation)  
   Action: OATI reports there are no IDC code changes required; therefore CO-322 does not require implementation.

m. CO-323: MISO Request to Access IDC Data for webImpact  
   (Status — Approved for development)  
   Action: NERC has signed CO-323. Review status of development.

n. CO-324: Change in Default TLR Start Time for TLR 3B and 5B in IDC TLR Issuance Window  
   (Status — Review revised draft)  
   Action: Approve for evaluation.

o. CO-325: Changes to TLR Event History Display  
   (Status — Approved for evaluation)  
   Action: Review evaluation and approve for development.
p. CO-326: Parallel Flow Visualization Metrics
   (Status — Review draft)
   Action: Approve for evaluation.

3. **Review of Active webSDX (SDX) Change Orders (CO)**
   (Secretary’s Note: The webSDX Change Orders for discussion at this meeting are posted in a zip file on the IDCWG Web site.)
   a. CO-07: SDX File Daily Load Time Conversion
      (Status — Approved for development)
      Action: NERC has signed webSDX CO-07. Review development status.
   b. CO-08: Remaining GUI Changes
      (Status — Evaluated, at its January 2011 meeting MISO, PJM and VACAR-S asked to review and comment on evaluation)
      Action: Review evaluation and approve for development.

4. **Review of Active webFactor (Factor Viewer) Change Orders (CO)**
   (Secretary’s Note: The Factor Viewer Change Orders for discussion at this meeting are posted in a zip file on the IDCWG Web site.)
   There are no webFactor change orders to review at this meeting.

5. **Review of Active NERC IT Services Change Orders (CO)**
   (Secretary’s Note: The NERC IT Services Change Orders for discussion at this meeting are posted in a zip file on the IDCWG Web site.)
   There are no webFactor change orders to review at this meeting.
   a. CO-01: Posting of Current TLR Data to the NERC Data Exchange Site
      (Status — Approved for development)
      Action: NERC has signed CO-01. Review development status.

6. **Review of Active Book of Flowgates Change Orders (CO)**
   (Secretary’s Note: The Book of Flowgates Change Orders for discussion at this meeting are posted in a zip file on the IDCWG Web site.)
   a. CO-10: Validate Temporary Flowgates in Book of Flowgates
      (Status — Approved for development)
      Action: NERC has signed BoF CO-10. Review development status.
   b. CO-11: Base Case Deadline Communication
      (Status — Evaluated, at its January 2011 meeting, the DFWG deferred further action until its next meeting)
Action: On hold.

c. CO-14: ATSI Integration into PJM
   (Status — Approved for evaluation)
   Action: OATI reports there are no webSDX code changes required; therefore CO-14 does not require implementation.

d. CO-15: MISO Source-Sink Mapping
   (Status — Approved for development)
   Action: NERC has signed CO-15. Review development status.

7. IDCWG Calendar of Change Order Implementation and Other IDC-Related Events
   a. April 4, 2011 – IDC Winter Model Update
   b. May 6, 2011 – IDC Summer Model Upload
   c. June 1, 2011 – IDC Summer Model Update
   d. July 6, 2011 – IDC Summer Model Update
   e. August 3, 2011 – IDC Summer Model Update
   f. September 1, 2011 – IDC Summer Model Update
   g. October 4, 2011 – IDC Summer Model Update

8. IDCWG Maintenance
   a. IDC operation:
      i. IDC and SDX user comments
   b. Event/incident reports – OATI
      i. Review Help Desk calls

9. New Projects, Issues, Other
   a. WebSDX Documentation — The working group will review Version 1.0 of the Balancing Authority webSDX User Guide for Providing Generator Outputs and Priority and Version 2.3 of the webSDX User Administrator Registration Guide. Note: These documents were distributed separately from the agenda.
   b. WebSDX Validation Warnings and Errors Listing — The working group will review and discuss webSDX validation warnings and errors and related documentation.
   c. Change Order Prioritization — The working group will continue its discussion of prioritizing change order development for 2011.
   d. TLR Trends — OATI will provide a summary of its analysis of TLR events to identify trends.
e. Impact of E-Tags That Do Not Start at the Top of the Hour — The working group formed a task group (Chair Bahbaz, Vice Chair Watson, Raja Thappetaobula, and Hugh Francis) to review in impacts of intra-hour e-Tags. The task group will report its findings.

f. webSDX Data Submittals — At its January 2011 meeting, Ben Taylor reported in some instances generators are being de-rated to a level in excess of its $P_{\text{max}}$. OATI will report on its investigation of the webSDX data submittal verification and quality check routines.

g. Net Target Market Flow — Yasser Bahbaz will lead a discussion of net target market flow.

h. TLR Level 5B — Chair Bahbaz will review a draft *Request for Initiation of a NAESB Business Practice Standard, Model Business Practice or Electronic Transaction* to provide for reallocation during TLR 5B.

i. Reference Document Review

i. Parallel Flow Calculation Procedure Reference Document – At its May 2010 meeting, Chair Busbin requested additional time to research the history of Parallel Flow Calculation Procedure Reference Document before making a final recommendation to the Operating Reliability Subcommittee.

ii. Reliability Coordinator Reference Document – At its March 2010 meeting, the working group, by consensus, approved rewriting the SDX section of the Reliability Coordinator Reference Document to become a reliability guideline. The working group also supported the elimination of the TLR Level 6 section of the reference document. The Operating Reliability Subcommittee has not yet been informed of the working group’s decision.