



Eastern Interconnection Planning Collaborative

EIPC 2014

Update on Activities and Work Plan (Non-Grant)

EIPC Webinar
September 09, 2014

Outline

- Background
- Updates to 2023 Roll-Up Case
- Summary of Transfer Results
- Final Heat Wave & Drought Scenario Assumptions
- Updated Schedule

Background

EIPC 2013 Effort:

- 2018 and 2023 summer peak models created
 - Model assembled utilizing most up to date information
- Steady-state load-flow model analysis performed
 - Transmission “Gap” Analysis
 - Linear Transfer Analysis
- Report assembled and posted to EIPC website
 - http://www.eipconline.com/Non-DOE_Documents.html

Background

EIPC 2014 Effort:

- Stakeholder input requested for potential scenarios
 - 2 sample scenarios created by EIPC
 - 5 scenarios submitted by stakeholders
- Two of Stakeholder suggested scenarios selected
 - Updated 2023 Roll-Up Base Case
 - Heat Wave and Drought Scenario
- Purpose of Today's Webinar
 - Inform Stakeholders of completion of updated base case
 - Inform Stakeholder of final Heat Wave and Drought Study Assumptions

Updates to 2023 Roll-Up Case

- 2023 Summer Peak Roll-Up Utilized as Starting Point
 - Updated with any available generation, transmission, and load modifications determined significant by individual PA's

Summary of Updates:

- ATC
 - Updated ratings, impedance, and added a few transmission to distribution connections
- MAPPCOR
 - Updated to match models utilized in 2014 MAPP regional planning process

Updates to 2023 Roll-Up Case

Summary of Updates Continued:

- DUKE
 - Updated to retire Lee 1&2, include newly announced Lee CC, and included various transmission system upgrades
- ISO-NE
 - Updated to include Northern Pass Transmission Project (NPT)
- NYISO
 - Updated to include Transmission Owner Transmission Solutions (TOTS)

Updates to 2023 Roll-Up Case

Summary of Updates Continued:

- PJM
 - Updated with RTEP model dated April 25th, 2014 and uniformly scaled loads to 2023 projected levels
- Southern, GTC, and MEAG
 - Updated with latest load, generation, and transmission topology information
- Various others small updates also included

Summary of Transfer Results

- Objective was to demonstrate the effect case updates had on the Eastern Interconnection's ability to reliably move large amounts of power between areas
 - Analyzed 5,000 MW transfers between selected areas
- Monitored the following (100 kV and above):
 - N-0 branch overloads
 - N-1 branch overloads
 - Also included NYISO specific regional contingencies
- Updates to 2023 Roll-up did not have significant impact on the Eastern Interconnection transfer capability

Summary of Transfer Results

				Previous		New	
Source		Sink		FCITC (MW)	Lim. PA	FCITC (MW)	Lim. PA
A	FRCC	E	SERC	1600	DEF	1700	DEF
B	MISO	C	NPCC	3400	PENELEC-PJM	3100	PENELEC-PJM
B	MISO	D	PJM	>5000	N/A	>5000	N/A
B	MISO	E	SERC	>5000	N/A	>5000	N/A
B	MISO	F	SPP	650	EES	650	EES
C	NPCC	B	MISO	1800	NYISO	1350	NYISO
C	NPCC	D	PJM	1500	NYISO	1150	NYISO
D	PJM	B	MISO	1600	ALTW-MISO	1650	ALTW-MISO
D	PJM	C	NPCC	2100	PENELEC-PJM	2750	NYISO
D	PJM	E	SERC	>5000	N/A	>5000	N/A
E	SERC	A	FRCC	1900	SBA/FRCC	1900	SBA/FRCC
E	SERC	B	MISO	>5000	N/A	>5000	N/A
E	SERC	D	PJM	1900	BREC-MISO	4800	DVP-PJM
E	SERC	F	SPP	550	SWPA-SPP	500	SWPA-SPP
F	SPP	B	MISO	850	WERE-SPP	800	WERE-SPP
F	SPP	E	SERC	950	WERE-SPP	950	WERE-SPP

Heat Wave and Drought Scenario Assumptions

- Submitted by: Eastern Interconnection States' Planning Council (EISPC)
- Study Case: Updated 2023 Summer Peak
- Premise: Model a severe and pervasive heat wave and drought condition in study year 2023
- Questions to be answered by analysis:
 - “What constraints arise when large amounts of power are transferred to areas of need during times of extremely high temperatures and drought conditions”

Heat Wave and Drought Scenario Assumptions

Modeling Parameters and Resource Modifications:

- Utilize updated 2023 summer peak roll-up model
- Model effect of heat wave condition on sink
 - Scale sink load up by 5% (~15,000 MW)
- Model effect of drought condition on sink
 - Scale sink generation down by 5% while assuming all unused capacity is unavailable (~15,000 MW)
- Model effect of power transfer from source
 - Scale available generation up while not violating generator limits (~30,000 MW)

Heat Wave and Drought Scenario Assumptions

- Utilizing revised Heat Wave & Drought Scenario Model:
 - Perform N-1 contingency analysis on 200 kV and above
 - Except for areas where lower voltage levels are required
 - Monitor all lines 161 kV and above
 - Utilizing MUST transfers analysis to identify facilities with > 3% TDF
 - Transfer Source:
 - ISO-NE, NYISO, IESO, PJM, MISO North, ATC, MAPP
 - Transfer Sink:
 - TVA, MISO South, SPP, SOCO, DEC, DUKE, SCEG, SC, PS, Alcoa, EEI, LGE/KU, FPL, DEF, JEA
 - Assemble results into report to be presented to Stakeholders December 2014

Updated Schedule

	Action	Due Date
2	EIPC Webinar to present the results of the updated 2023 Summer Roll-up case and present final input assumptions for the Heat Wave & Drought scenario.	September 9, 2014 10am Eastern
3	EIPC modifies updated 2023 Summer Roll-up case to model the agreed upon assumptions for the Heat Wave & Drought conditions. (Scenario B)	September 19, 2014
4	EIPC performs Heat Wave & Drought analysis. (Scenario B)	September 30, 2014
5	EIPC assembles draft report (supplement to the original Roll-up Report) to incorporate results of transfer analysis on updated 2023 Summer Roll-up case and results of Heat Wave & Drought Scenario.	October 31, 2014
6	EIPC Webinar to present the scenario analysis results and to obtain input on the updated Roll-up report.	Week of November 17, 2014
7	Stakeholder written comments on updated Roll-up report due	December 5, 2014
8	If needed, hold an interconnection-wide stakeholder meeting to review Roll-up report.	Early December 2014

Questions and Discussion

