



Michigan Phase II Study Request

Economic Planning Users Group Meeting

March 17th, 2017

Overview

- MI Phase II Request
- Timeline
- Analysis Tools and Models
- Scenarios for Study
- Next Steps

Michigan Phase II Study Request

- **Exploratory** study for Michigan Agency for Energy and the Michigan Public Service Commission requested in August of 2016.
- Near and long term evaluation of production cost savings, reliability, and resource adequacy benefits of transmission and generation expansion in Michigan
 - Connection between MI Upper Peninsula and Ontario
 - Connection between MI Upper Peninsula and Lower Peninsula
 - Analysis will cover years 2021, 2026, and 2031 in PROMOD

Timeline

Tasks	Targeted Completion Date
Develop scope and assumptions documents	02/14/17
Finalize and present scope and assumptions documents and solicit transmission ideas (March EPUG meeting)	03/17/17
Update PROMOD and powerflow models based on assumptions and IESO Coordination	04/21/17
Present and Discuss received transmission ideas (May EPUG meeting)	05/25/17
Run PROMOD and powerflow simulation to test transmission ideas	08/25/17
Calculate LRR and run analysis to determine CIL	09/25/17
Present findings and request feedback (September EPUG meeting)	09/25/17
Finalize outputs, communicate to RTOS for further evaluation/inclusion	11/13/17
Complete Phase II report	12/22/17

Analysis Tools and Models

- Analysis Tools
 - PROMOD: Used to calculate Adjusted Production Cost savings and determine LMP changes as a result of adding new transmission and/or generation
 - PSSE: used for reliability analysis in the form of powerflow simulation. It also will be used to calculate new Capacity Import Limits
 - SERVM: used to calculate Local Reliability Requirements
- MTEP17 PROMOD and powerflow models will be reviewed, updated, and used for analysis
 - Generation siting locations for resource expansion
 - Load forecasts
 - Generation retirements
 - Base generation fleet characteristics

Scenarios for Study

- Base model
- Base model + Generation Addition at Otsego/Kalkaska county
- Base model + Transmission Addition(s)
 - We will create multiple models with different proposed transmission ideas
- Base model + Generation Addition + Transmission Addition(s)
 - We can create various combinations transmission ideas with the generator at Otsego/Kalkaska counties

Next Steps

- **MI Phase II Study Scope and Assumptions:**
 - (<https://www.misoenergy.org/Events/Pages/EPUG20170317.aspx>)
- **Transmission Idea Solicitation:**
 - Deadline to submit solutions – **April 14, 2017**
 - Use submission form posted along with March 17th, 2017 EPUG meeting materials
(<https://www.misoenergy.org/Events/Pages/EPUG20170317.aspx>)
- Send all submissions to tkopp@misoenergy.org

Questions?

Tim Kopp

tkopp@misoenergy.org

(651) 632-8577

Zheng Zhou

zzhou@misoenergy.org

(651) 632-8432