

**NEBRASKA STATEWIDE WIND INTEGRATION STUDY**  
**Technical Review Committee Meeting #5 by Webex (computer/phone)**  
**Thursday, July 2, 2009 – 11:00 AM to 3:00 PM (EASTERN Time)**  
**10:00 AM to 2:00 PM (CENTRAL Time)**  
**9:00 AM to 1:00 PM (MOUNTAIN Time)**

**Preliminary Agenda**

<u>Central Time</u>	<u>Topic</u>	<u>Presenter</u>
10:00 am	Welcome, check on Webex connection, instructions and questions on protocols for the meeting	Gary Moland-Ventyx
10:10 am	Welcome, "roll call", general agenda review, acceptance of TRC 4 Meeting Summary dated and distributed June 5 (including Case and Schedule Slides dated May 19)	Clint Johannes-G&T
10:25 am	General progress report of accomplishments, review of agenda specifics and goals for the day	Bob Zavadil-EnerNex
10:30 am	Update on EnerNex work, especially since TRC #4: <ul style="list-style-type: none"> <li>• New results for Data Report               <ul style="list-style-type: none"> <li>○ Sample hourly NPA wind/load (10%, 20%, 40%)</li> <li>○ Monthly capacity factors by site and aggregate (10%, 20%, 40%)</li> <li>○ Other</li> </ul> </li> <li>• Additional work forthcoming               <ul style="list-style-type: none"> <li>○ NPA wind generation diversity</li> <li>○ NPA net load hourly ramps</li> <li>○ Status of WAPA mitigation case definition</li> <li>○ Final report drafting</li> <li>○ Other</li> </ul> </li> </ul>	Bob Zavadil-EnerNex Tom Mousseau-EnerNex

- 11:00 am      Update on Ventyx work, especially since TRC #4:      Gary Moland-Ventyx
- Transmission maps (with and w/o overlay)      Rick Hunt – Ventyx
  - Monitored line flows at 20%(with and w/o overlay)      Barbara Coley-Ventyx
  - New base results from PROMOD (12 cases)
    - Changes to inputs and results from TRC 4
    - Four wind penetrations
    - Three base wind/load years
    - Reserves
    - Generation (including wind)
    - Results of actual wind vs ideal wind
    - Curtailments (NPA vs. rest of SPP)
    - Wind integration cost
    - Locational marginal prices (10%, 20%, 40%)
    - Generator ramping
    - Emissions tonnage and dollars
  - Additional work forthcoming
    - Export characteristics, including destinations, magnitudes and volatility
    - Sample generation and forecasting errors modeled at a large Nebraska site.
    - Total cost of case runs
    - Duration graph identifying energy exceeding net load and must-run generation minimums
    - Generalized heat rate variations during ramping
    - General thoughts about the sensitivity cases (more discussion in next segment)
    - Final report drafting
    - Other

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| 12:30 pm | <ul style="list-style-type: none"><li>• Discussions on study decisions/conclusions<ul style="list-style-type: none"><li>○ Relaxed constraints serving as a virtual overlay?</li><li>○ Sensitivity on 345kV overlay at 20%?</li><li>○ For the sensitivity cases, do we:<ul style="list-style-type: none"><li>▪ Always use the 20% penetration?</li><li>▪ Use the case without overlay, or the case with the overlay?</li><li>▪ Review of other sensitivity cases (inclusion, revision, order) – see slide 1 distributed with the TRC 4 Meeting Summary</li></ul></li><li>○ Other</li></ul></li><li>• Discussion of study and meeting schedules – refer to slide 2 distributed with the TRC 4 Meeting Summary</li><li>• Other</li></ul> | Bob Zavadil-EnerNex<br>Gary Moland-Ventyx    |
| 1:40 pm  | Western Nebraska (western interconnection) report status  | Ron Steinbach-Tri-State<br>Billy Cutsor-MEAN |
| 1:50 pm  | Wrap-up and Next Meeting (Confirmation of Date)   | Clint Johannes – G&T                         |
| 2:00 pm  | Adjourn   |  |