



---

---

---

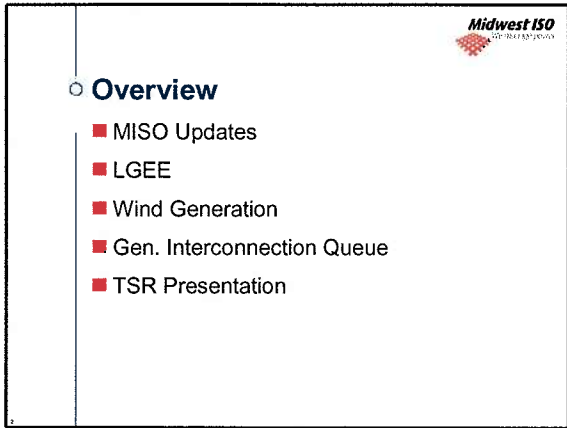
---

---

---

---

---



---

---

---

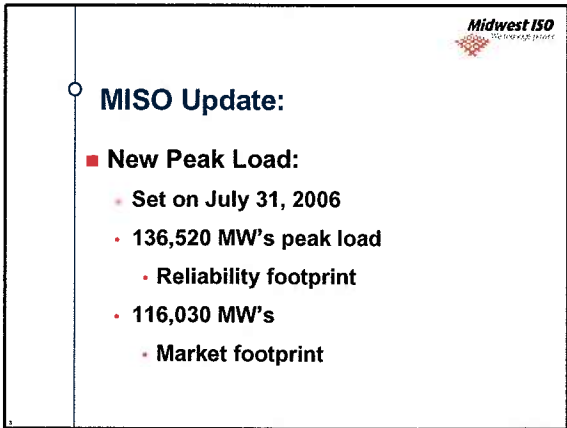
---

---

---

---

---



---

---

---

---

---

---

---

---

## ○ Summer Loads and LMP's

- Peak load conditions created some interesting conditions
- Week of July 31, 2006
  - Max Generation Warnings
  - Energy Emergency Alerts
    - Levels 1 & 2
  - Coordinated efforts with Balancing Areas
  - Lights stayed on
  - Resumed more normal operation latter part of week
- Post Mortem analyses of peak load events – In September
  - Work with BA's to coordinate peak load operations better
  - Ensure all DNR's were 'in the market'

---

---

---

---

---

---

---

---

## ○ Louisville Gas and Electric

- LGEE (E.ON.US) Withdrawal
  - Effective Sept 1, 2006
  - Still will be a Market Participant
  - Reliability Coordination provided by TVA
  - OASIS and TSR's provided by Southwest Power Pool
  - MISO Operating Budget reduced by \$10M to reduce the impact.
  - LGEE paying \$40M to reduce impact on Capital Budget

---

---

---

---

---

---

---

---

## ○ Wind Generation

- Market Rules
  - Intermittent Resource Status
    - Like hydro, landfill gas, etc.
  - Not Dispatchable
  - Day Ahead offers only
  - Real Time price takers
  - No Uninstructed Deviation penalties
    - Dispatch instruction = previous state estimator solution (echo back)

---

---

---

---

---

---

---

---



## Wind Generation

- **Market Rules**
- **BPM for Energy Market Instruments**
- **BPM for Network and Commercial Models**
  - 5 MW threshold minimum for network modeling
  - Multiple units totaling 5 MW's or greater at the same bus are o.k.
  - Anything less than 5 MW's is accepted on a case-by-case basis

---

---

---

---

---

---

---

---



## Wind Generation

- **Market Rules**
- For units < 5 MW's;
  - Driven by reliability
  - Must have Real-Time telemetry
  - ICCP communications between MISO and generator
  - For distribution voltage connection must transition up to Transmission
  - CP Node must be created for settlements

---

---

---

---

---

---

---

---



## Gen. Interconnection Queue

- Capacity in Queue— 21,580MW
  - ATC Footprint— 1,448MW
- Wind Generation— 10,061MW
  - ATC Wind— 405MW
- MISO Coal— 9,704MW
- GI Queue Map
  - <http://www.midwestmarket.org/page/Generator+Interconnection>

---

---

---

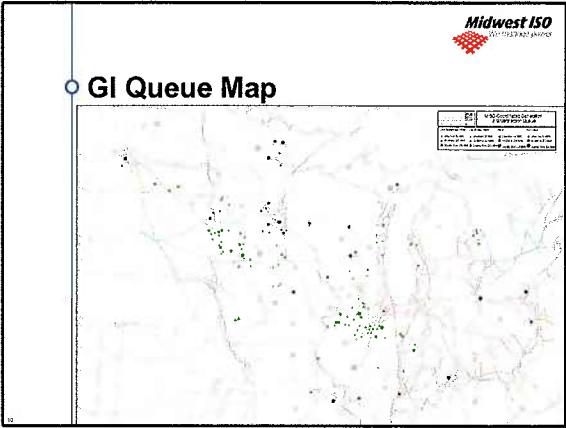
---

---

---

---

---




---

---

---

---

---

---

---

---




---

---

---

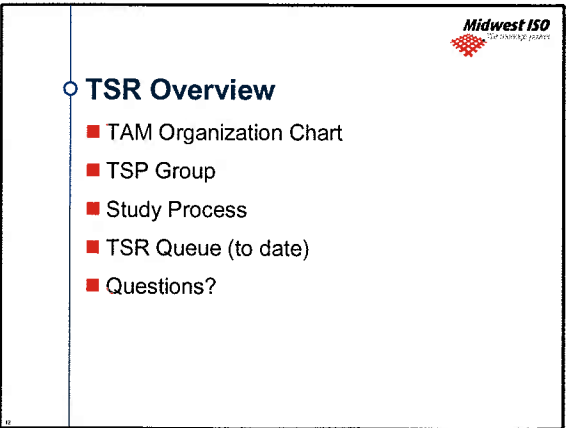
---

---

---

---

---




---

---

---

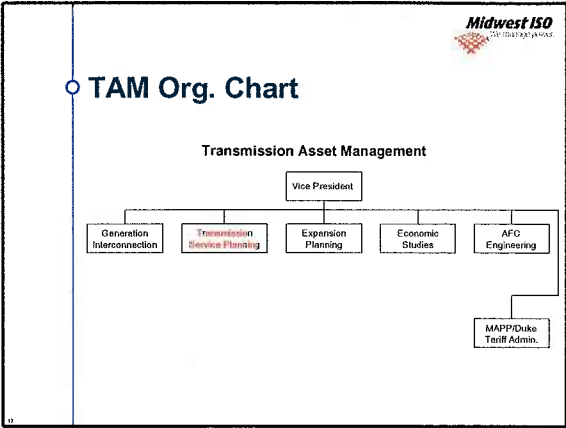
---

---

---

---

---




---

---

---

---

---

---

---

---

- 
- TSP Group**
- TSP Manager:
    - Eric Lavery
  - TSP Engineers:
    - 9 Engineers
    - 1 Queue Associate
    - 1 Opening for an engineer
  - TSP Website:
    - <http://www.midwestmarket.org/page/Transmission+Services>

---

---

---

---

---

---

---

---

- 
- Study Process**
- Initial Review (30 days)
    - Either it needs a study, or there's clear evidence this transaction can't happen because of reliability
  - System Impact Study (60 days)
    - Determine if there are reliability problems, and if there are, how you fix them
  - Facilities Study (60 days)
    - Determine the cost and schedule to perform the fixes

---

---

---

---

---

---

---

---

**Midwest ISO**  
RELIABLE ENERGY

○ **Study Wrap-up**

- **Specification Sheets** (15 days)
  - Memorializes any specifics around the transaction
- **Confirmation** (15 days)
  - After MISO Accepts or Counter-Offers—the customer must confirm it
    - This is sometimes done ahead of time by "pre-confirming" the service on OASIS

---

---

---

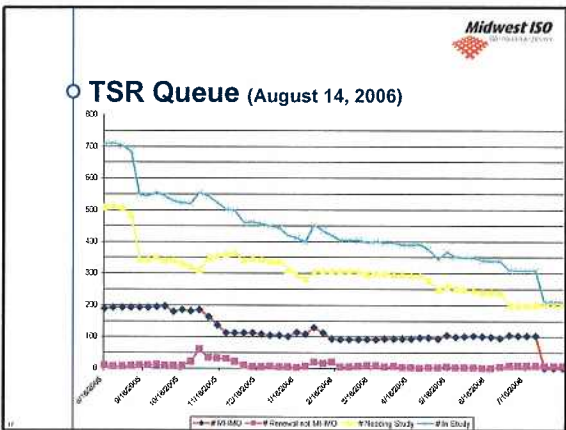
---

---

---

---

---




---

---

---

---

---

---

---

---

**Midwest ISO**  
RELIABLE ENERGY

○ **Questions?**

- **Client Relations**
  - 866-296-6476
  - [Clientrelations@midwestiso.org](mailto:Clientrelations@midwestiso.org)
- **Rick Hensley**
  - 317-249-5213
  - [Rhensley@midwestiso.org](mailto:Rhensley@midwestiso.org)
- [www.midwestmarket.org](http://www.midwestmarket.org)
- <http://extranet.midwestiso.org>

---

---

---

---

---

---

---

---