

# Briefing for the Kansas Legislature

March 6, 2013

Paul Suskie & Mike Ross

[psuskie@spp.org](mailto:psuskie@spp.org)

[mross@spp.org](mailto:mross@spp.org)

• 501.614.3200

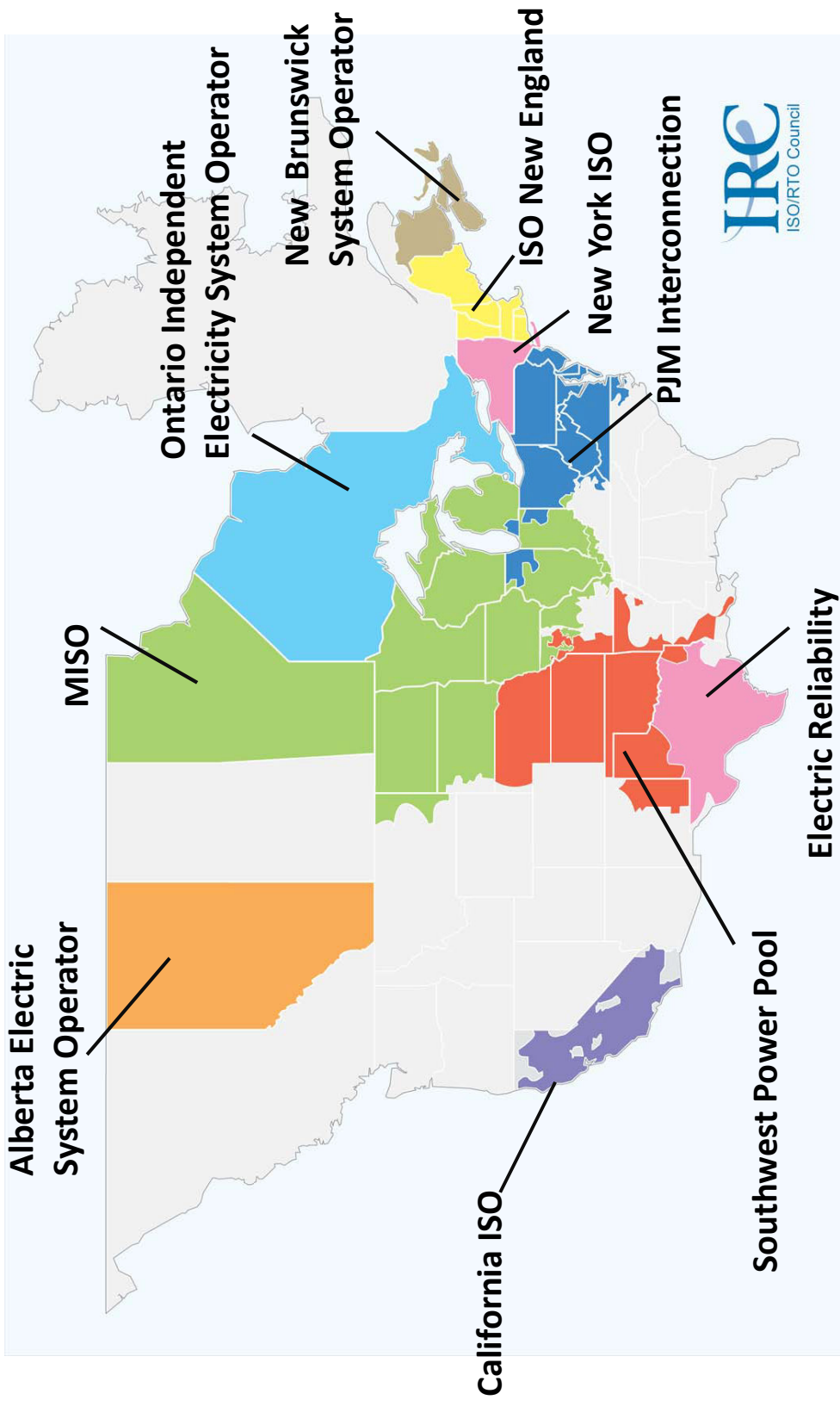




# Presentation overview

- Who we are
- What we do
- How we benefit the consumer
- Industry dynamics
- Kansas Specific Information
- Q&A

# Independent System Operator (ISO) / Regional Transmission Organization (RTO) Map



# Members in 9 states

**Arkansas**

**Kansas**

**Louisiana**

**Mississippi**

**Missouri**

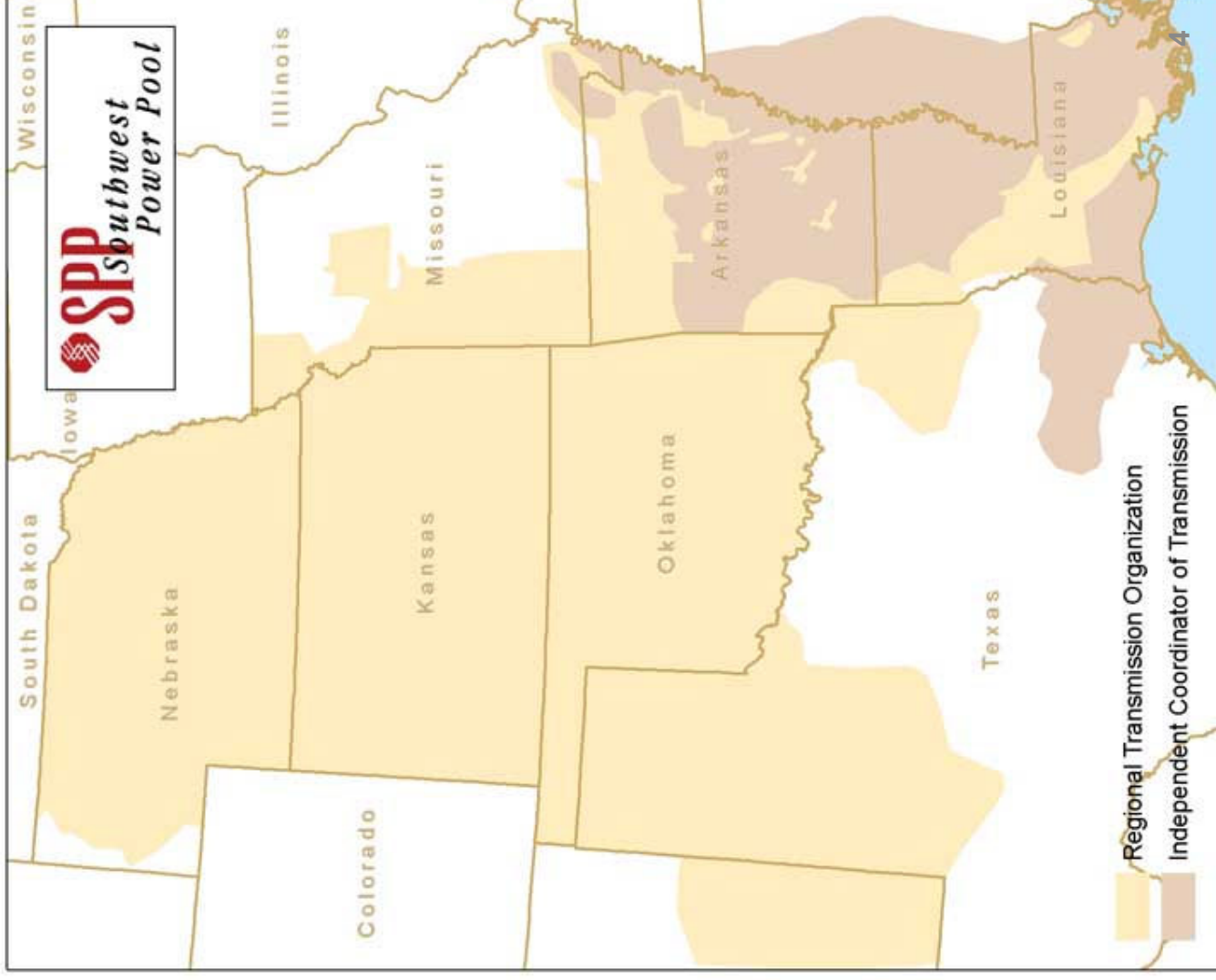
**Nebraska**

**New Mexico**

**Oklahoma**

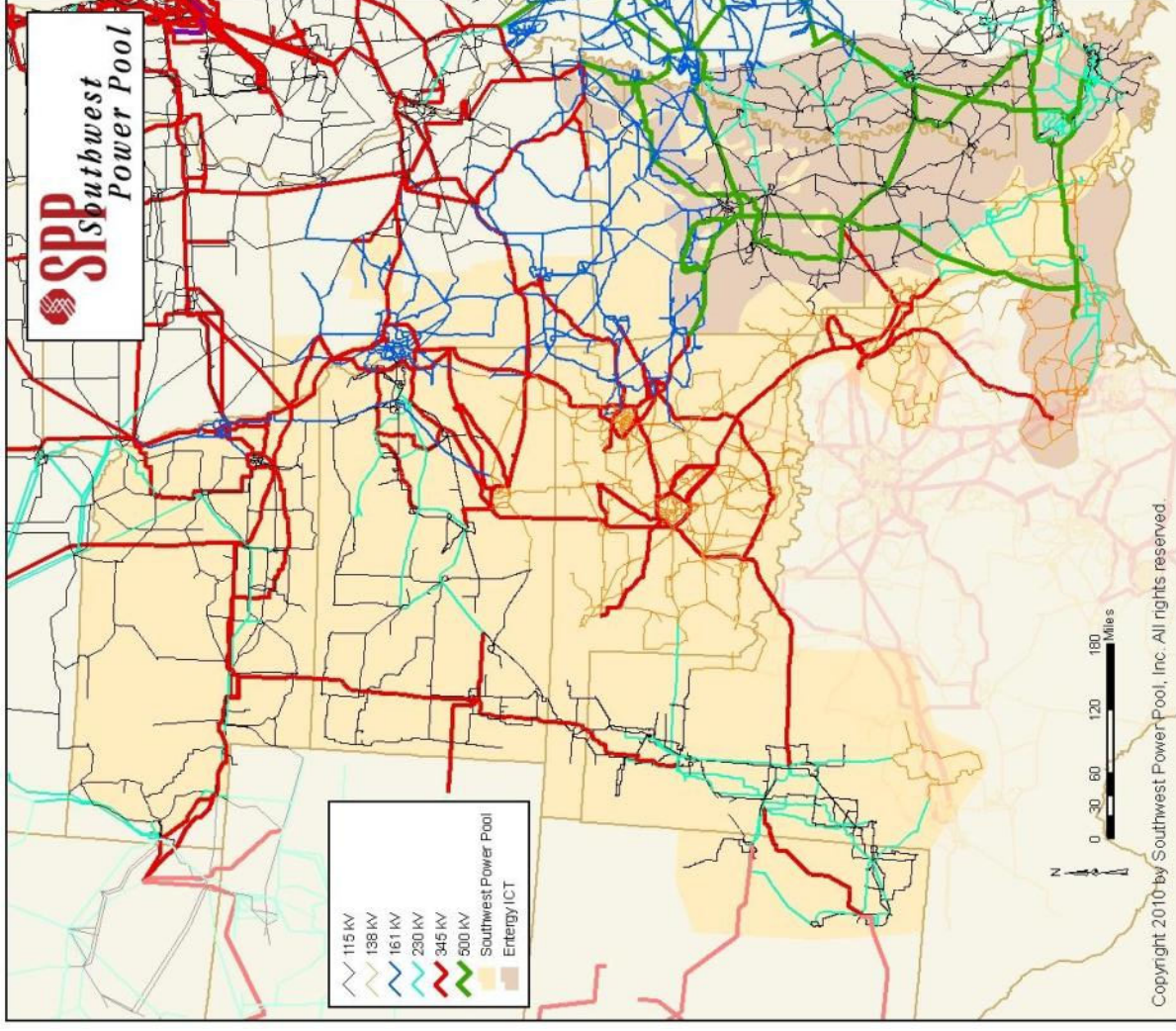
**Texas**

**Provide services to Entergy  
on contract basis (ICT)**

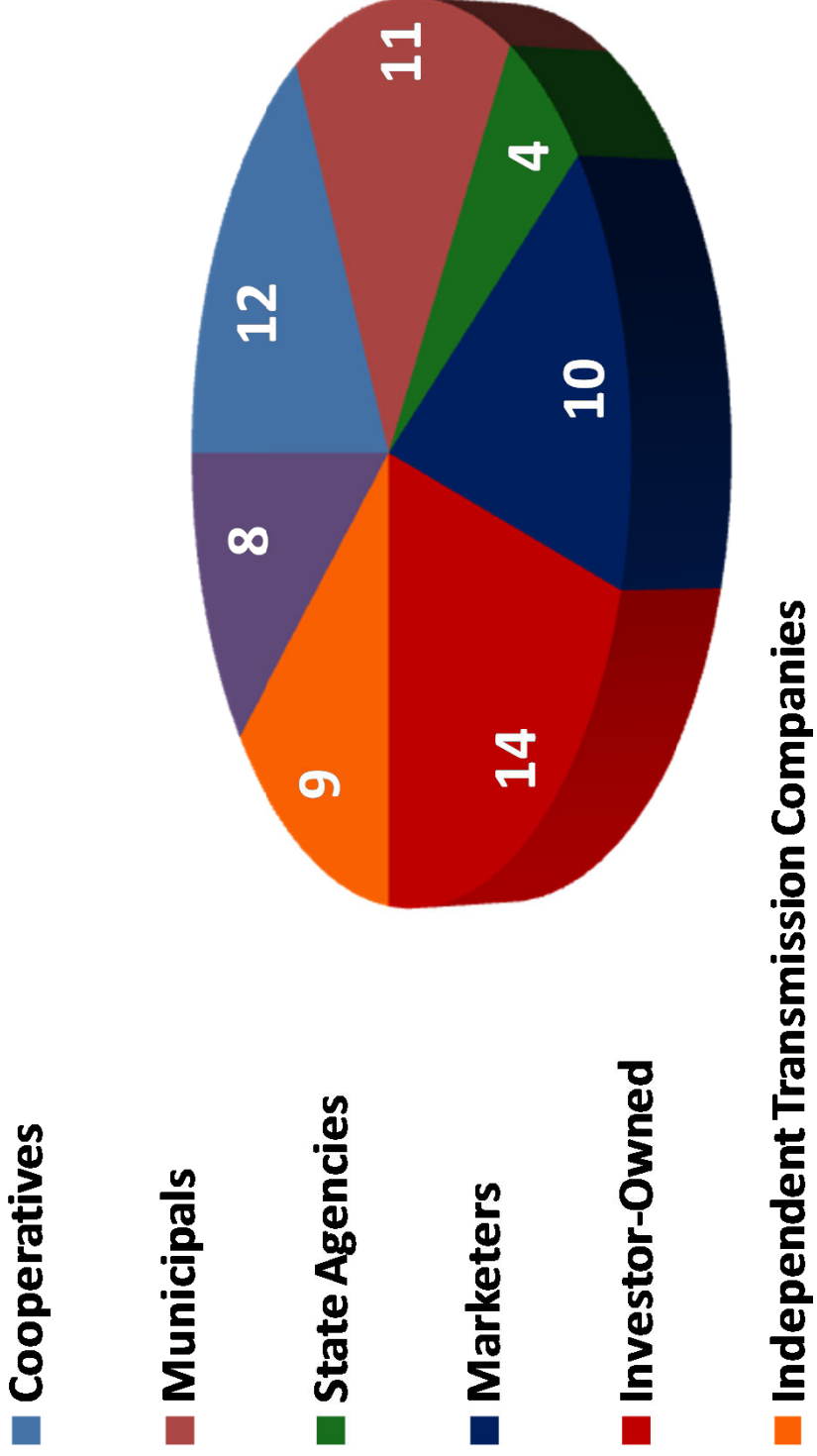


# Operating Region (2011)

- 370,000 miles service territory
- 915 generating plants
- 6,408 substations
- 48,638 miles transmission:
  - 69 kV – 11,966 miles
  - 115 kV – 10,302 miles
  - 138 kV – 10,129 miles
  - 161 kV – 5,066 miles
  - 230 kV – 3,787 miles
  - 345 kV – 7,023 miles
  - 500 kV – 93 miles



# 68 SPP Members



Independent Power Producers / Wholesale Generation

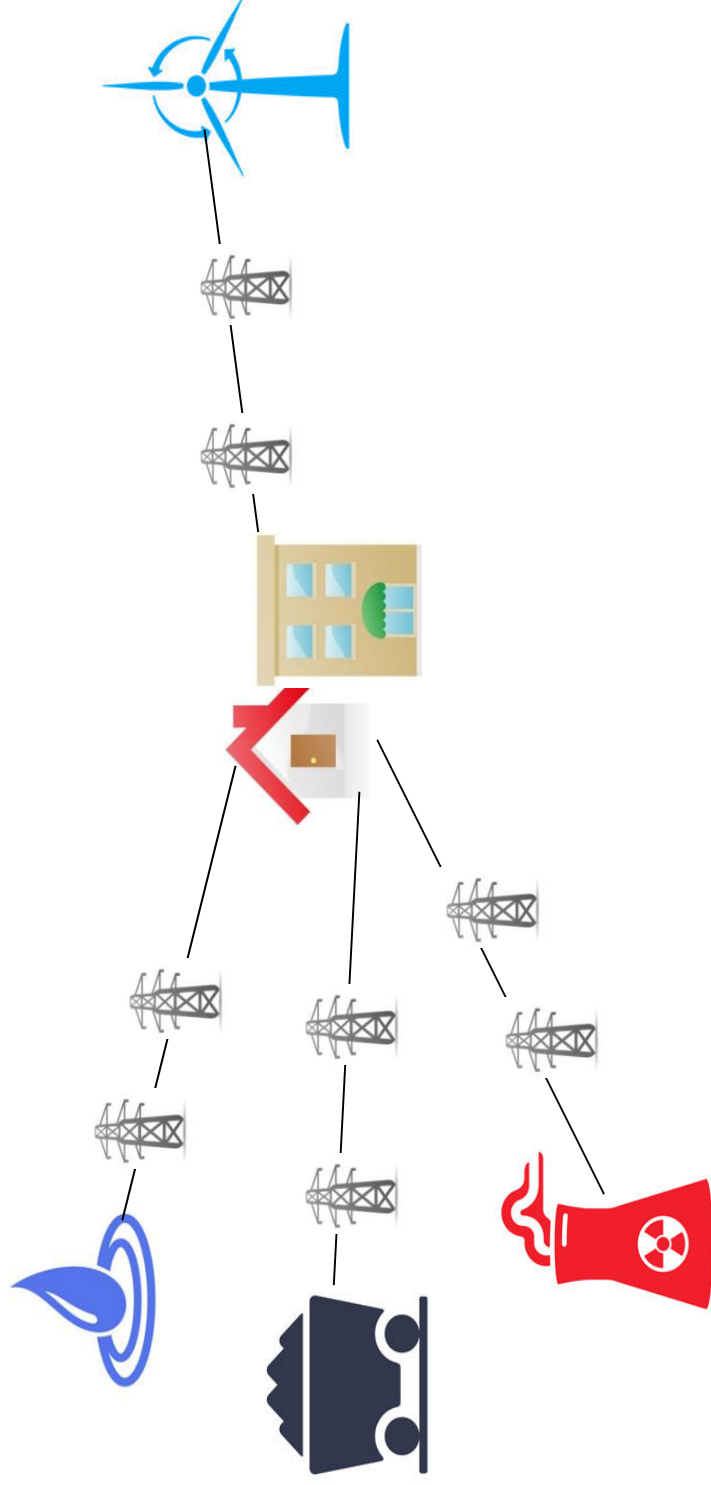


# What we do – Non-Profit

- **Designed by the Federal Energy Regulatory Commission to Manage reliable flow of electricity across transmission lines in nine states**
  - Our members own the generation equipment and the transmission lines
- **Ensure legal and regulatory requirements are met**
  - Enforce federal and regional reliability standards
- **Manage financial transactions between members who buy and sell power**
  - More than 8,500 requests annually, accounting for \$945 million
- **Administer tariff with consistent rates and terms**
  - Streamlines process of working across the region
- **Deliver training**
  - More than 34,000 hours to 38 organizations in 2012
  - More than 900 individuals who responsible for grid operations
- **Plan for future transmission lines**
  - Improvements and additions

# Industry dynamics

- Electricity cannot be stored so generation, transmission, and distribution must occur instantaneously



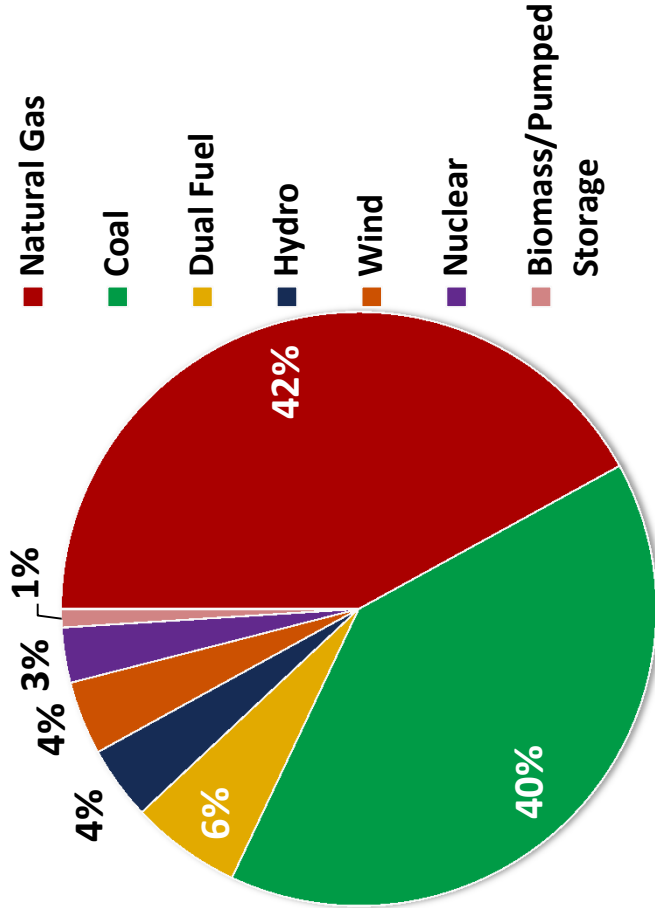


## Industry dynamics

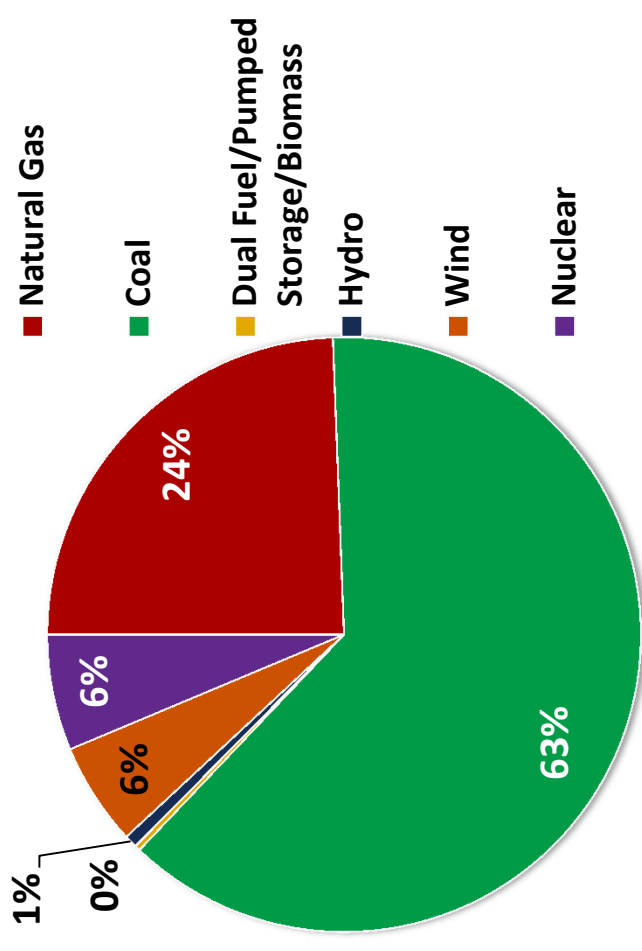
- Multiple generation sources (wind, solar, nuclear, hydro, coal, natural gas) increase reliability
- Generation facilities aren't always located where energy is needed, and transmission lines may not exist to deliver energy to where it is needed
- Some generation sources are only available at certain times
- Congestion doesn't allow energy to move along a certain path; results in inability to use least-cost electricity to meet demand

# 2011 RTO Generating Capacity and Energy

## 63 GW Capacity



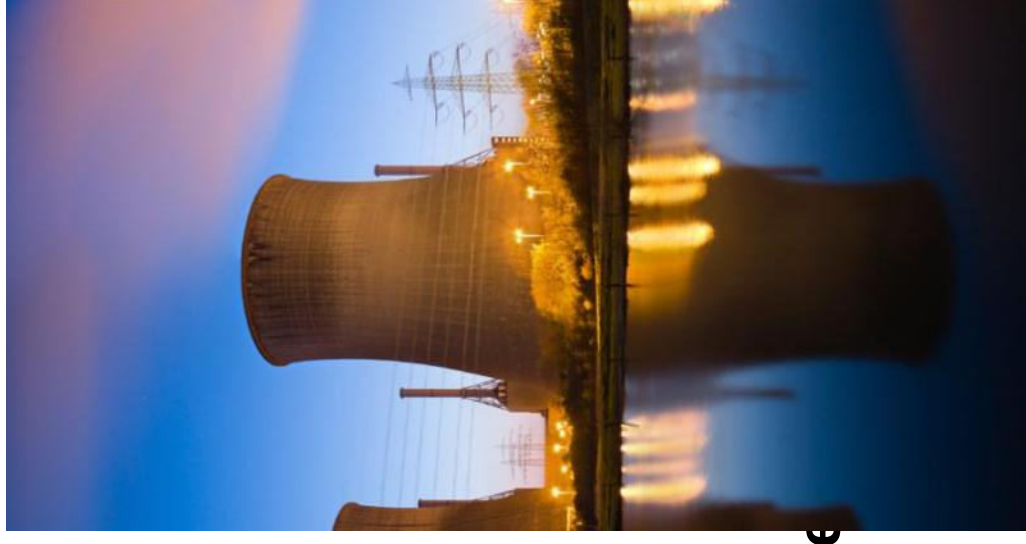
## 226,011 GWh Energy Produced



12% annual planning capacity requirement

# 2011 Wholesale Energy Market

- 37 participants
- 438 generating resources
- 2011 transactions = \$1.28 billion
- 48 GW coincident peak load
- 229.7 TWh energy consumption
- 16 Balancing Authorities
- ~1,500 MW wholesale demand response



## How we benefit the consumer

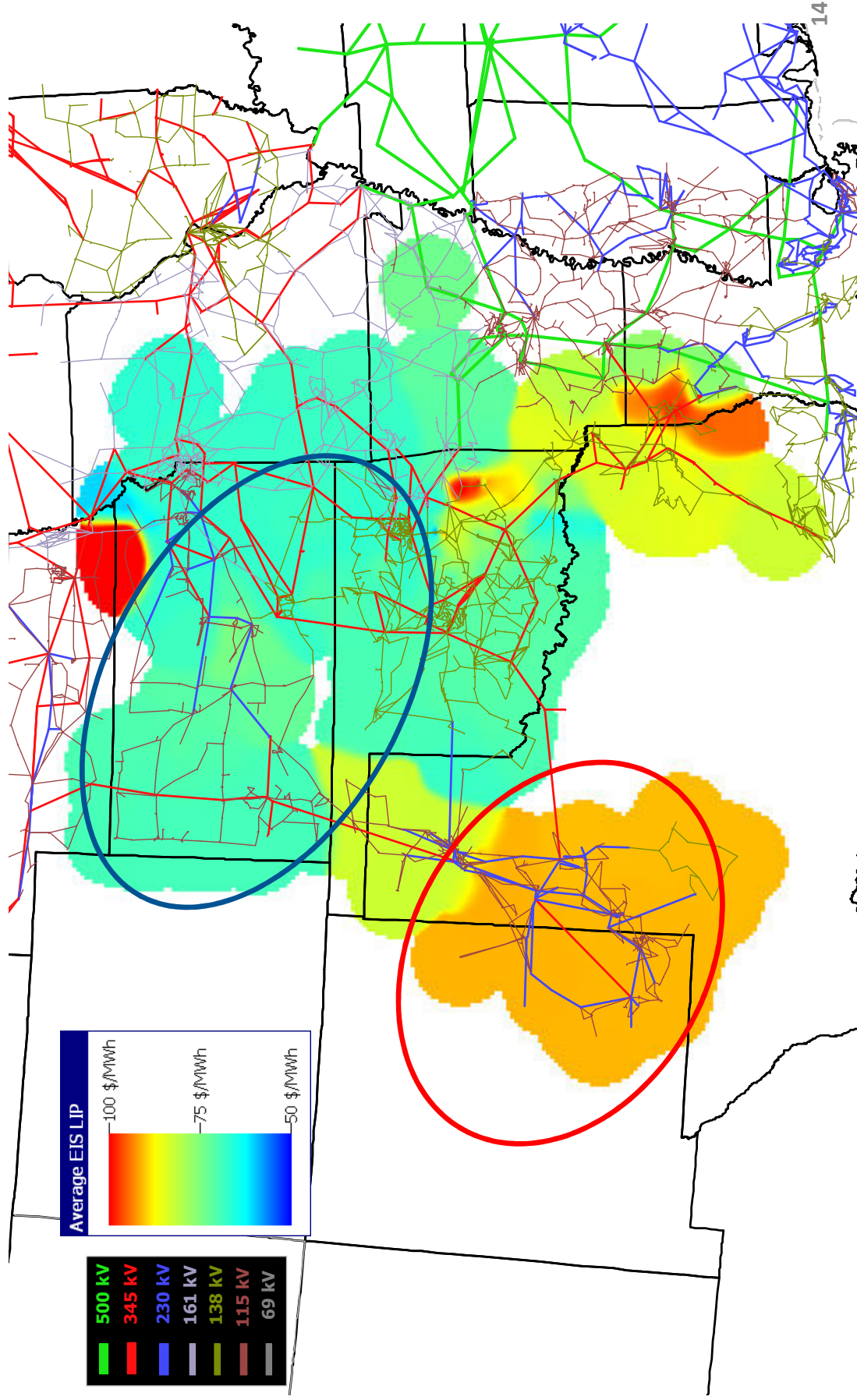
- **A utility has three ways to serve its customers:**
  1. Generate its own power
  2. Buy power from another provider
  3. Buy from the SPP market
- **An energy market enables comparison of real-time prices to make the most cost-effective decision**
  - Companies can sometimes buy power for less than it would cost to generate its own energy
  - Major limiting factor of Markets is Congestion



# GRID CONGESTION

Impacts markets and transmission planning

# Congestion prevents access to lower-cost generation

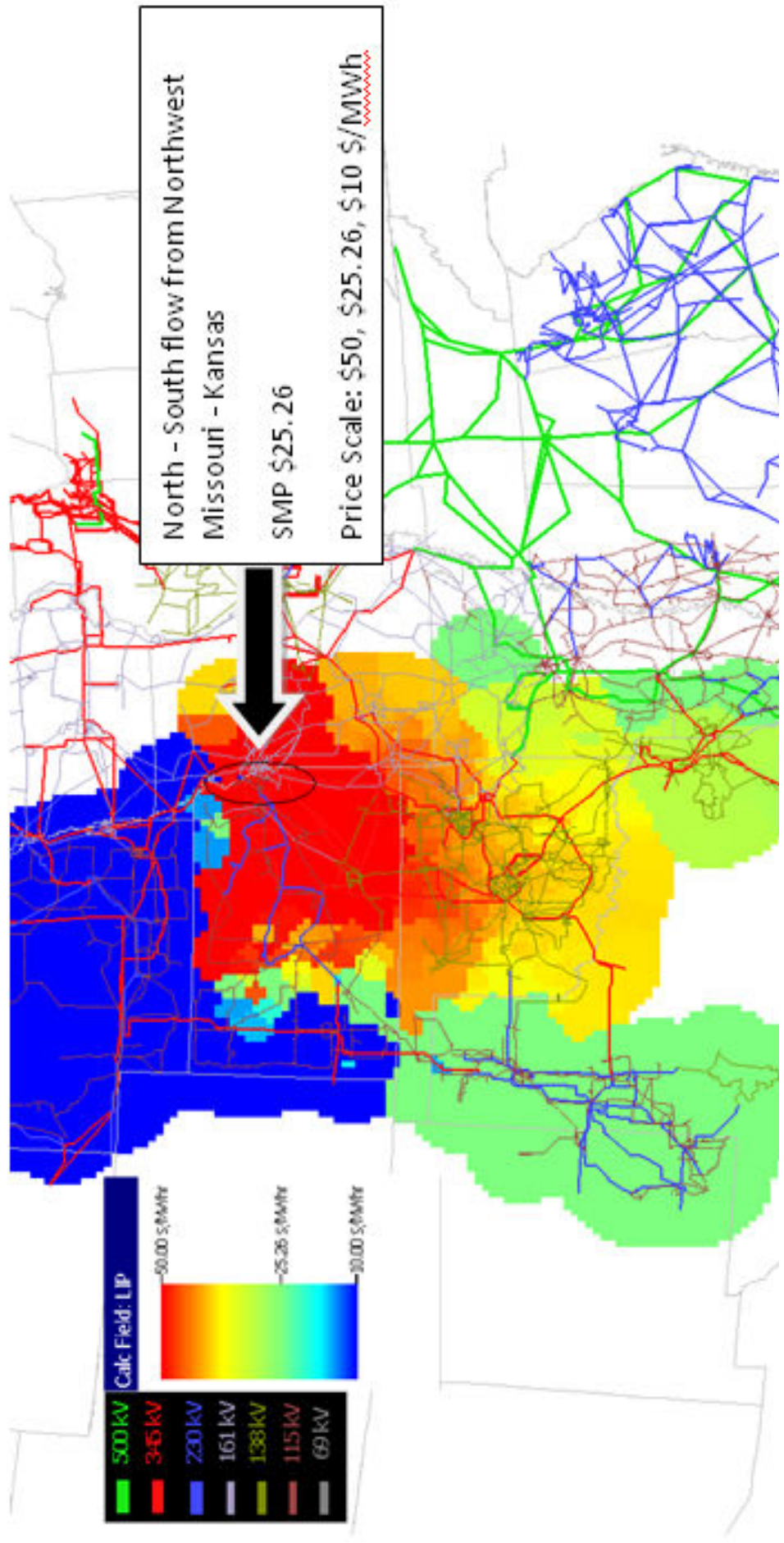




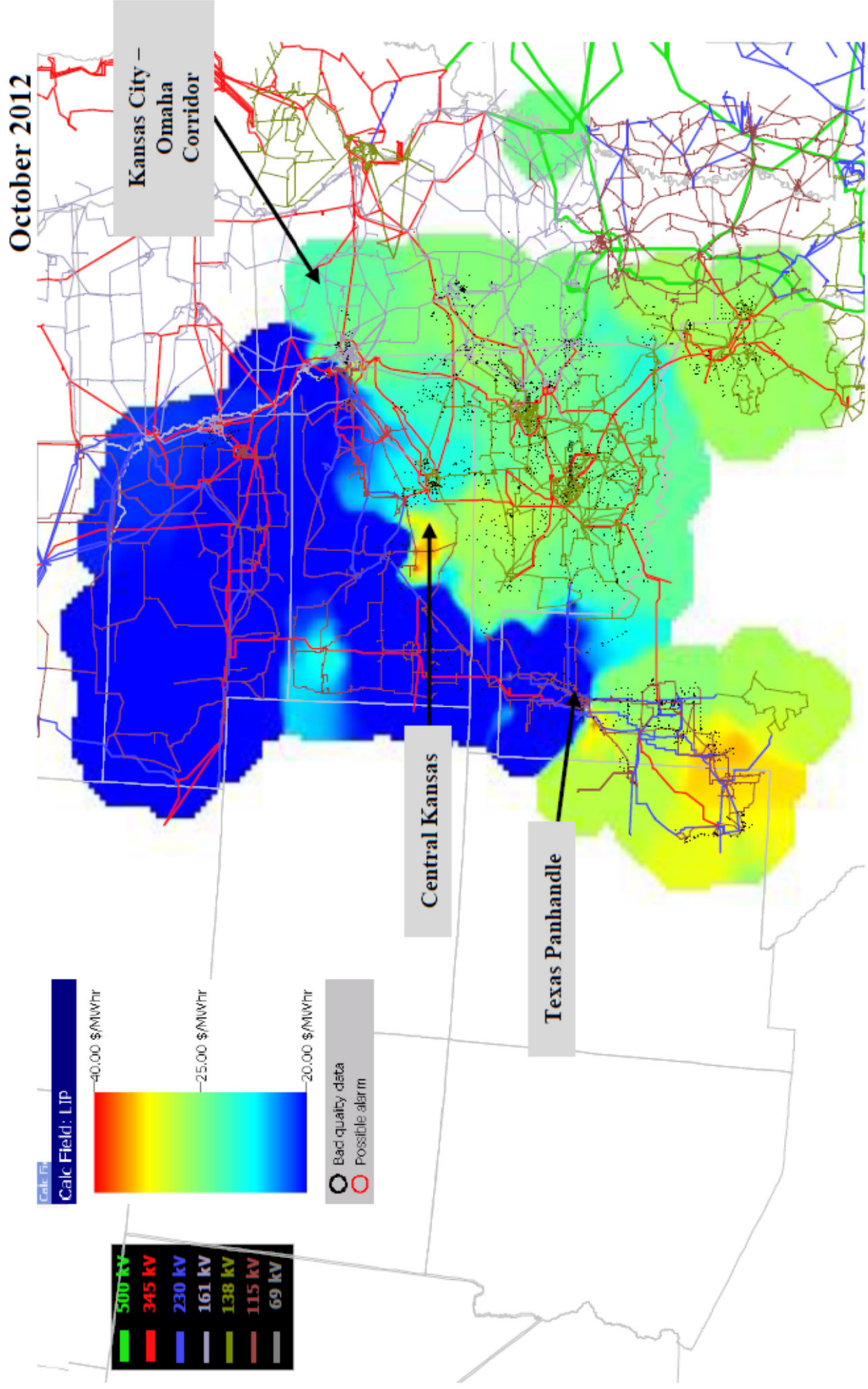
# Congestion's Impact on Wholesale Market Prices

January 26, 2010 Interval Ending 12:15 PM

LAKALAIATR: Lake Road - Alabama 161kV (MPS) ftlo latan - Stranger Creek 345kV (KCPL)



# East – West Congestion in Kansas





Services

# TRANSMISSION PLANNING MAPS

# What role do state regulators play?

- **Regional State Committee - Retail regulatory commissioners from:**

Arkansas      Nebraska      Oklahoma

Kansas      New Mexico      Texas

Missouri

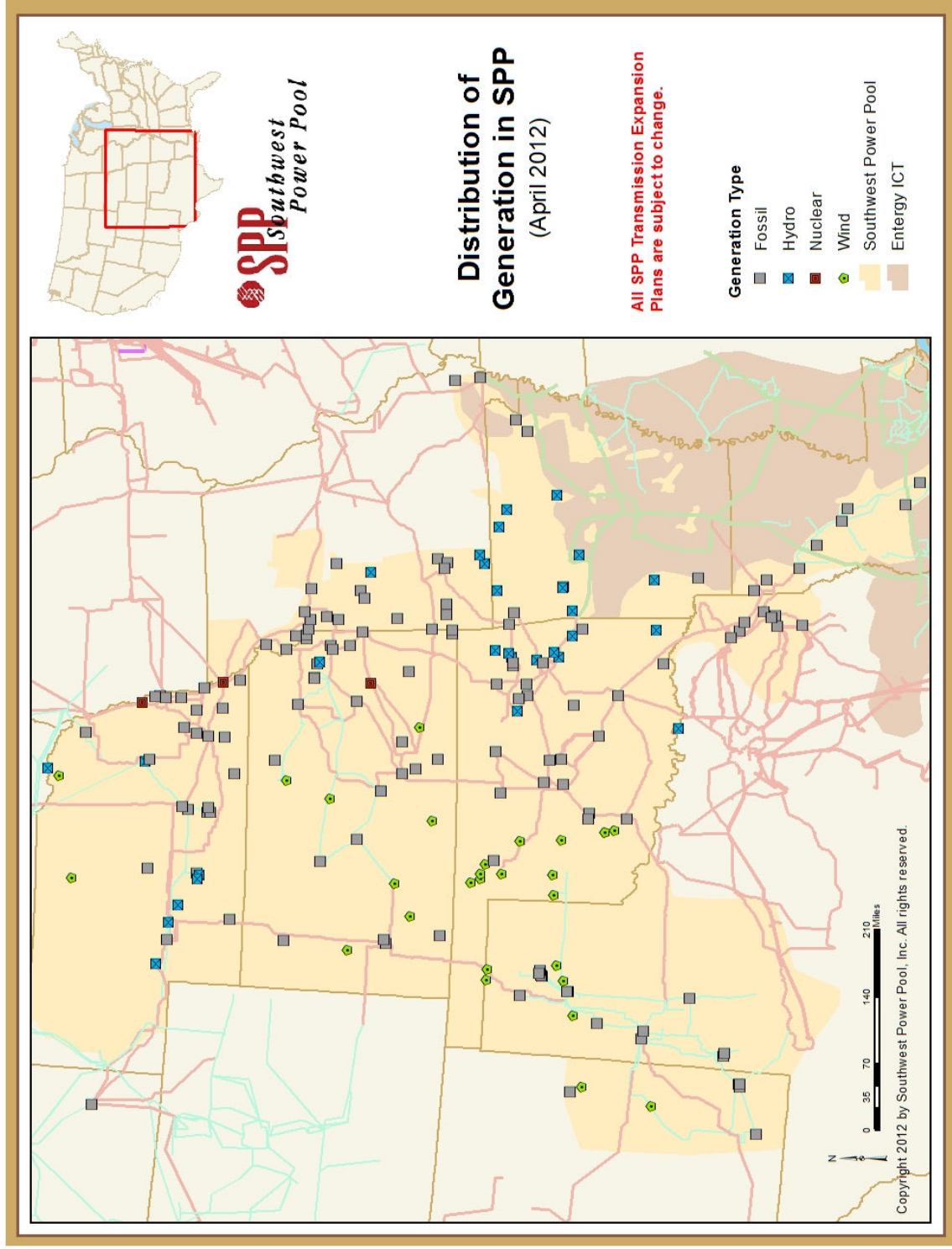
*Louisiana maintains active observer status*



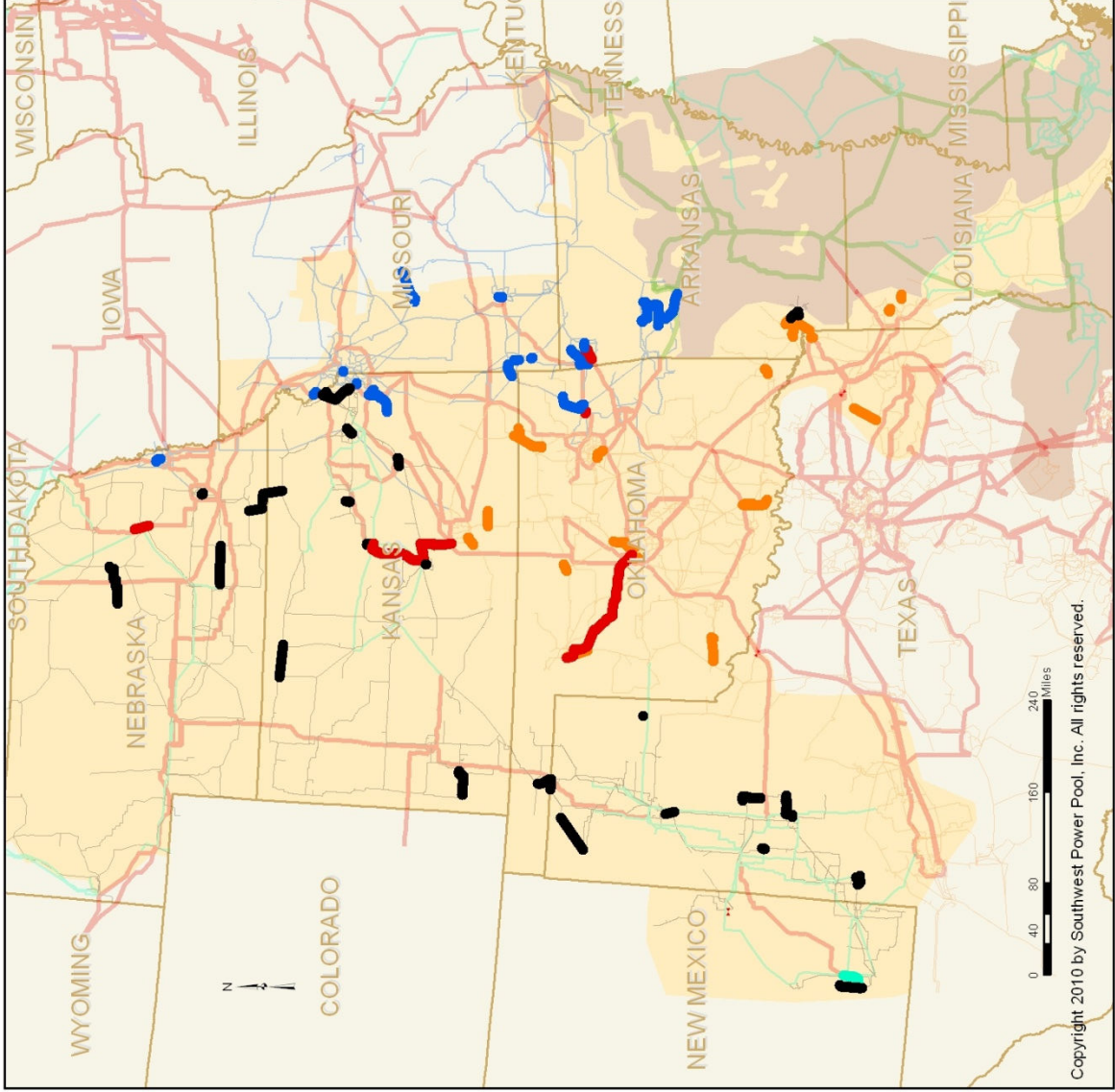
- **Primary responsibility for:**
  - **Cost allocation for transmission upgrades**
  - **Approach for regional resource adequacy**
  - **Allocation of transmission rights in SPP's markets**



# Generating Resources



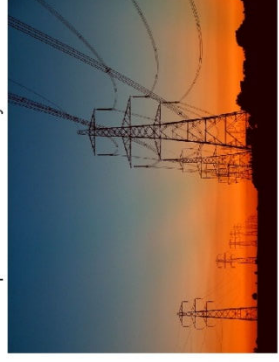
# Projects Constructed 2005-2011



## Projects Constructed (2005-2011)

- 115 KV
- 138 KV
- 161 KV
- 230 KV
- 345 KV
- Southwest Power Pool
- Energy ICT

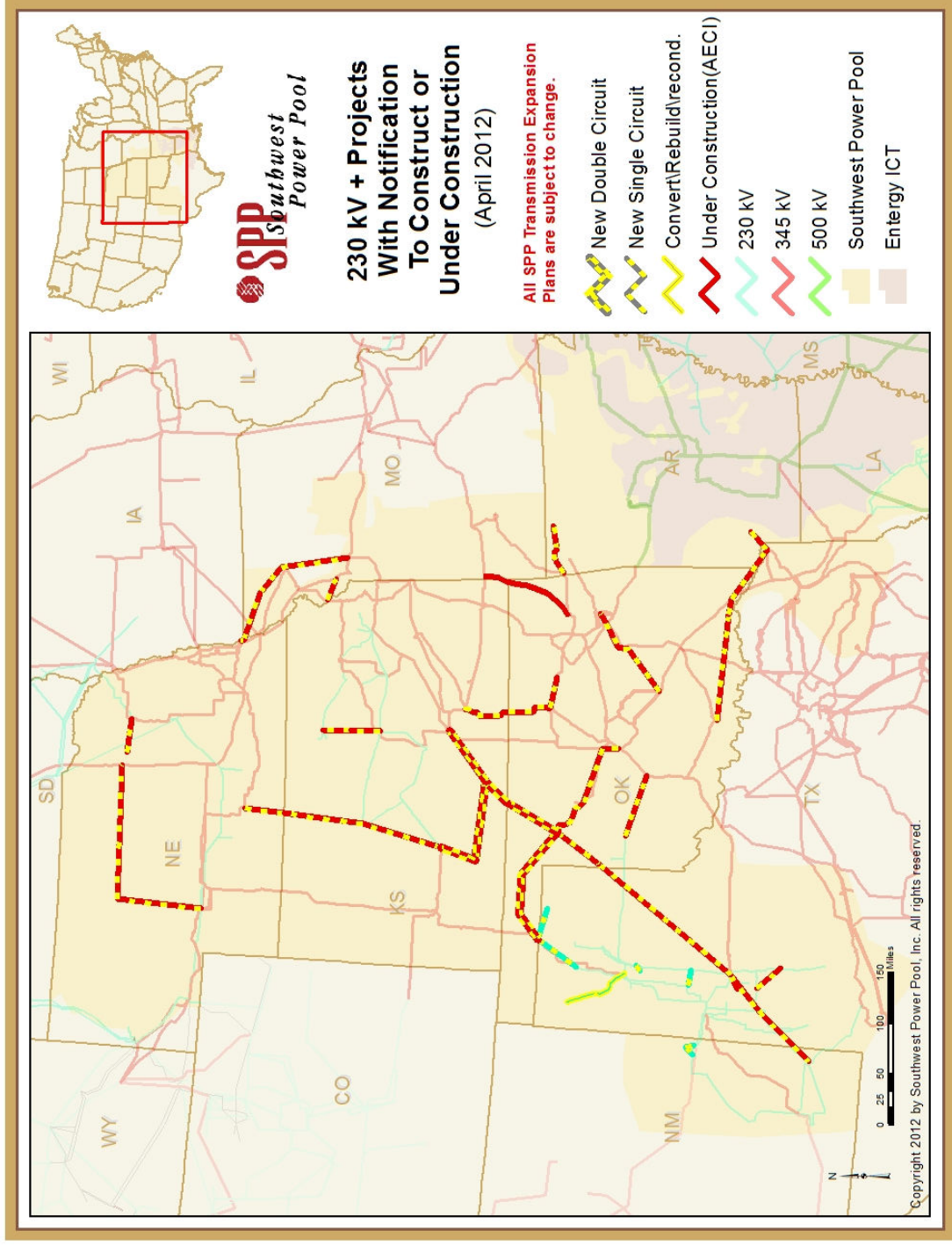
Map Created January 2012



Copyright 2010 by Southwest Power Pool, Inc. All rights reserved.

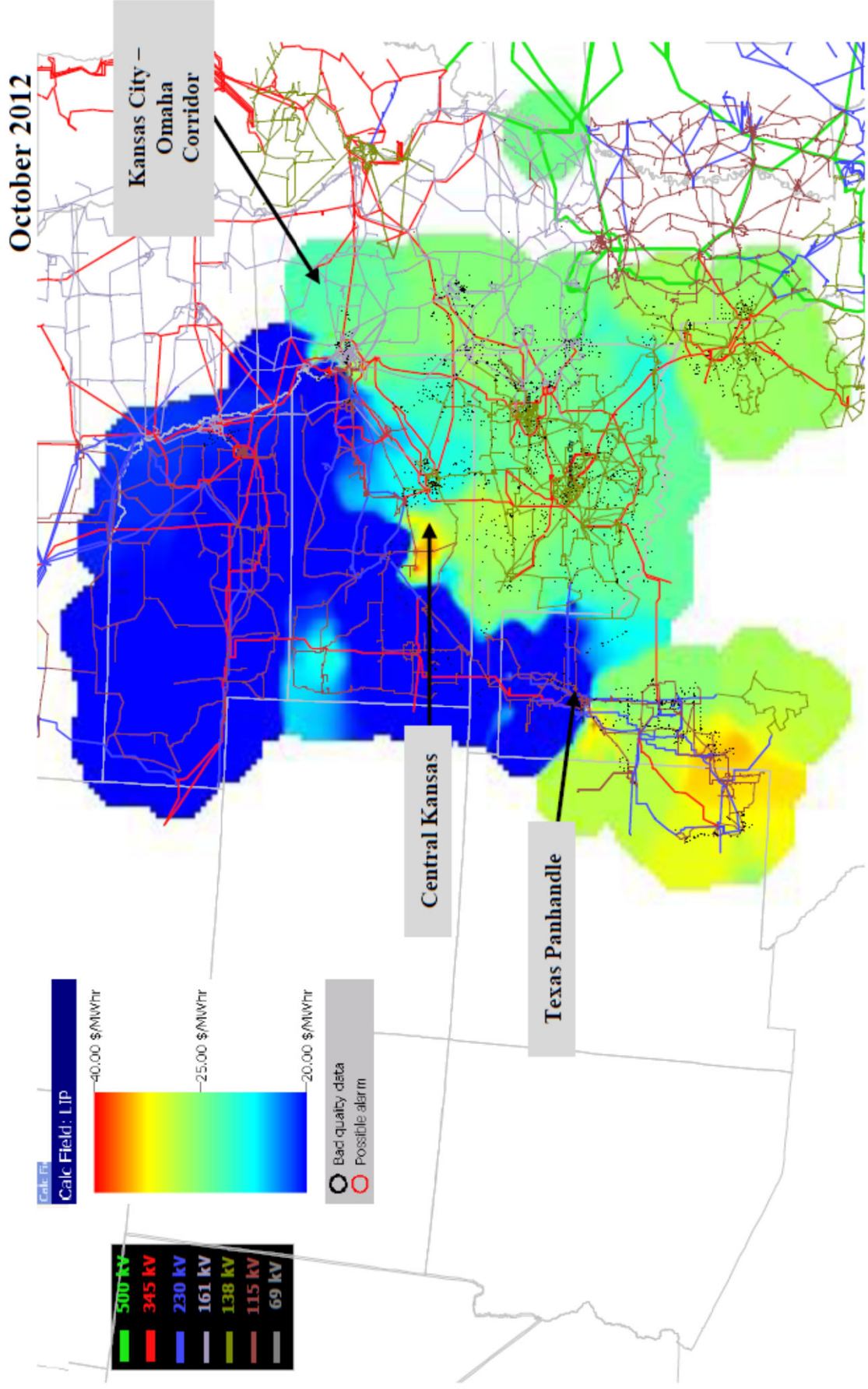


# Projects with Notifications to Construct

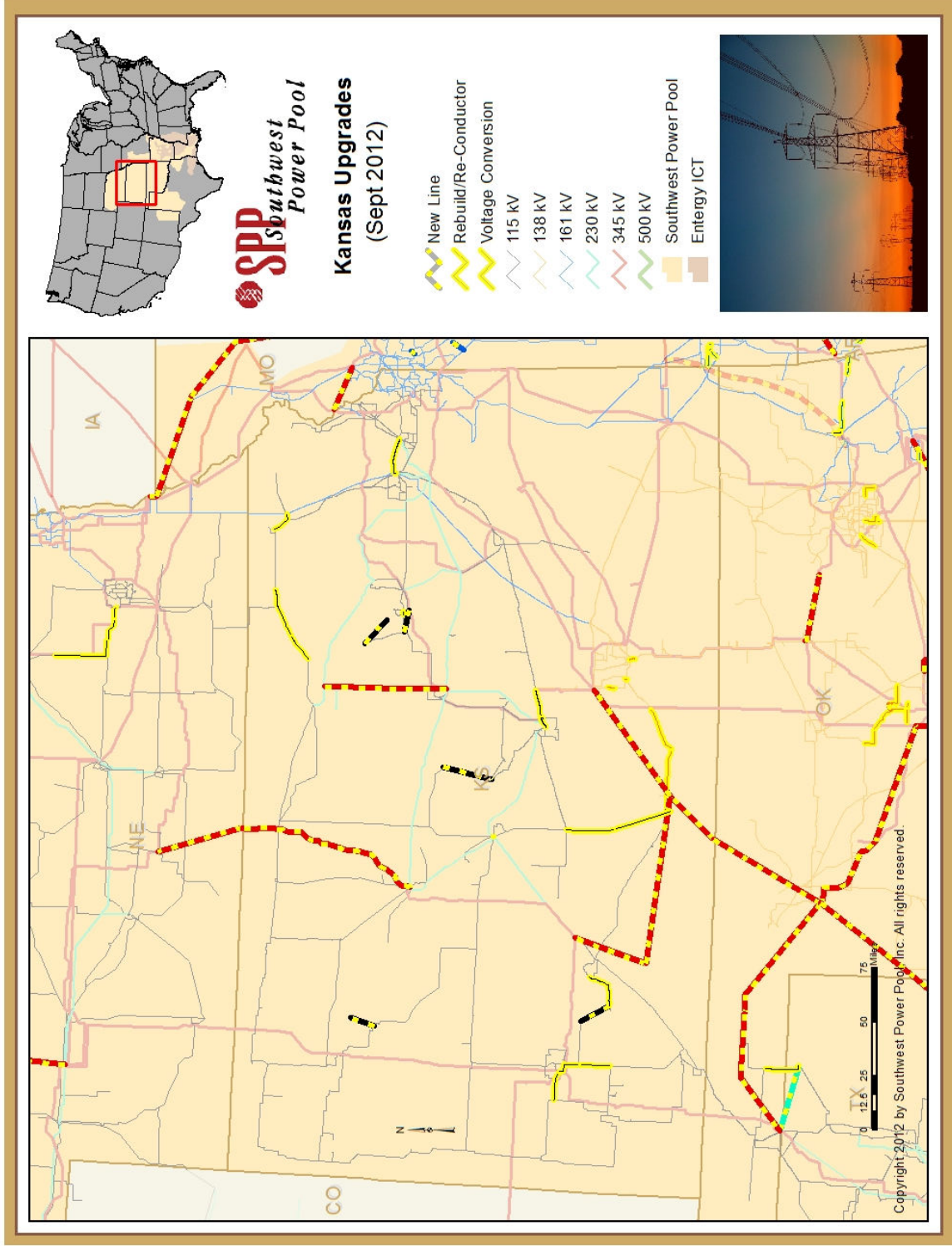


# KANSAS SPECIFIC INFORMATION

# East – West Congestion in Kansas



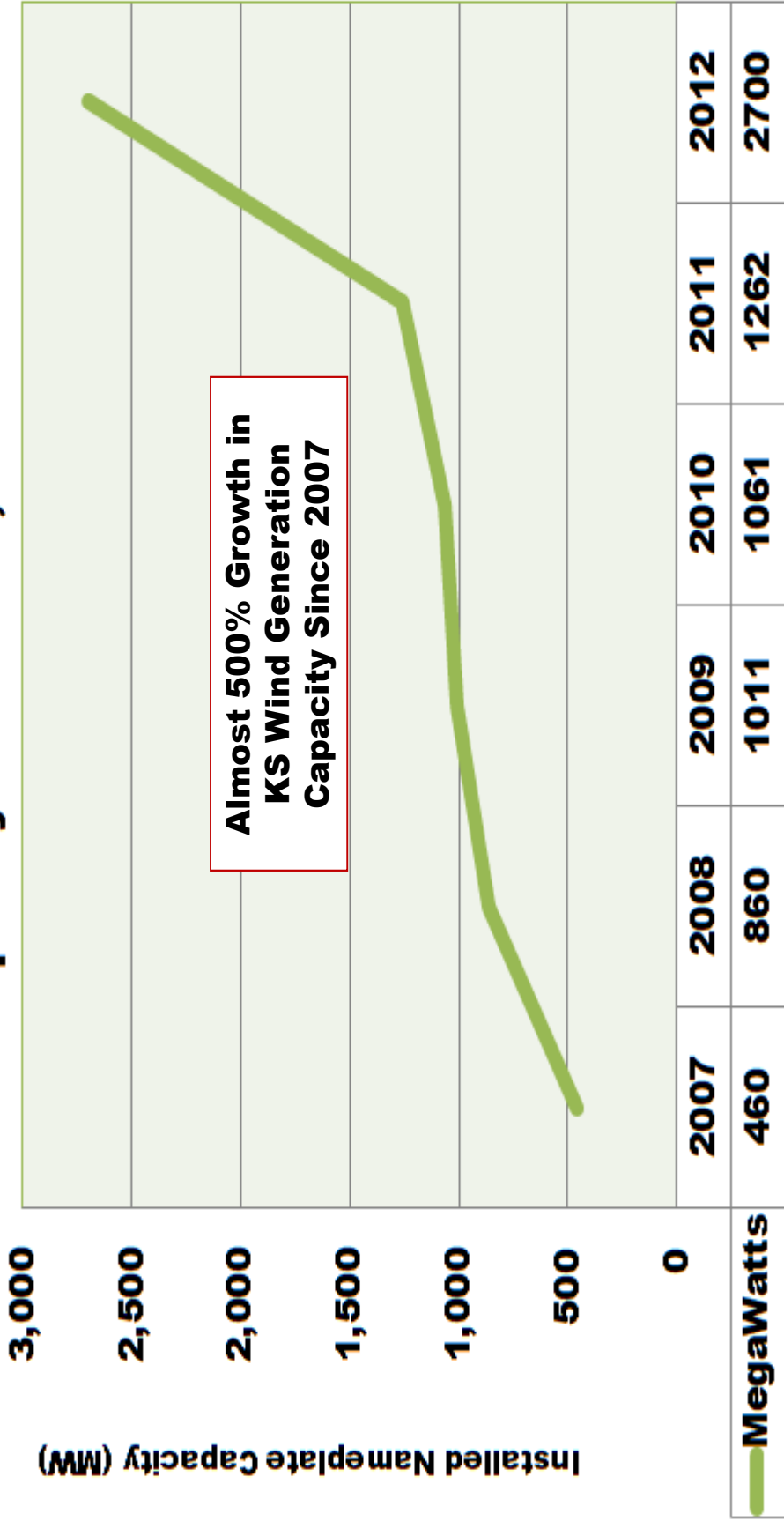
# SPP Directed New Transmission Development in KS





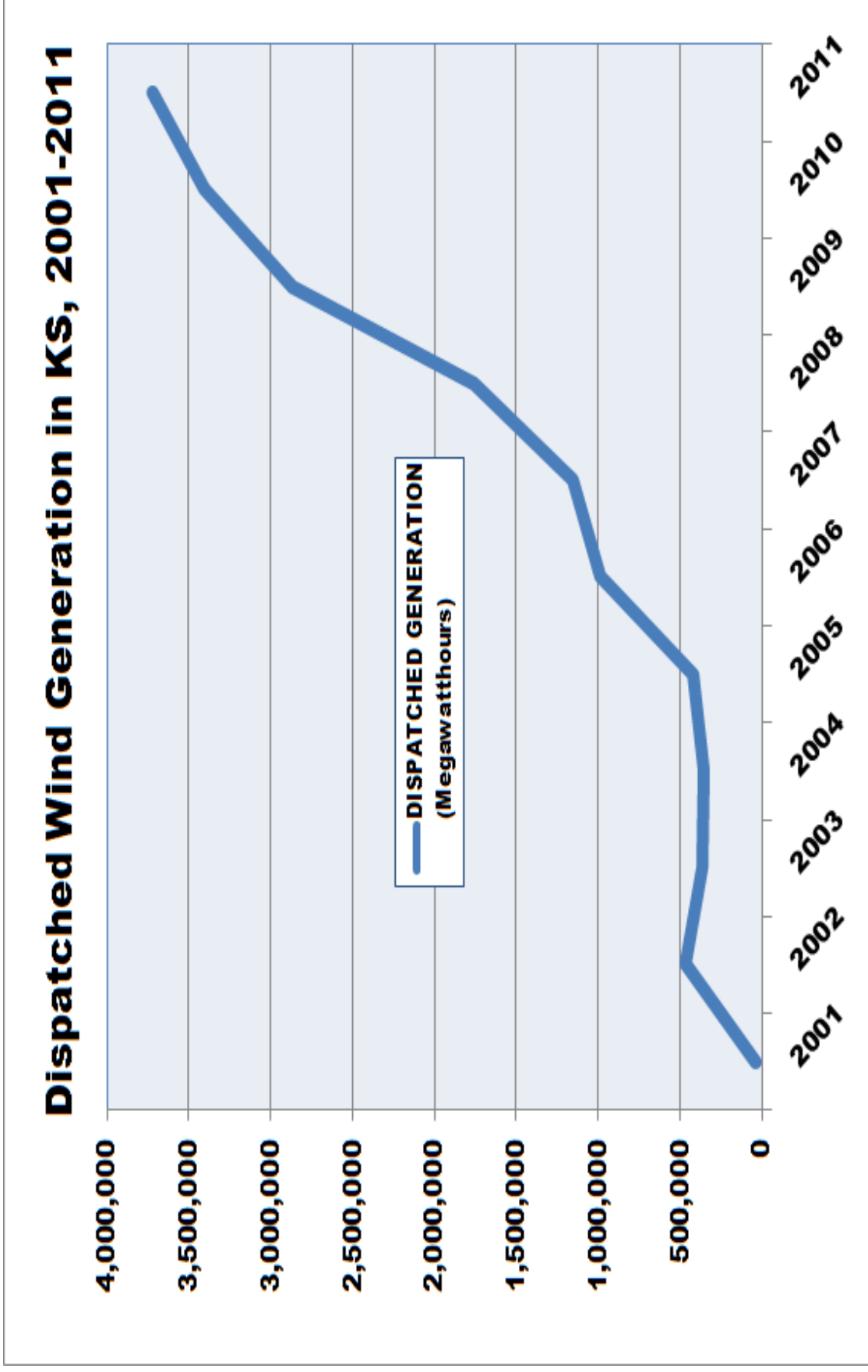
# Kansas Wind Generation Capacity Growth

**Installed Wind Generation Nameplate Capacity in Kansas, 2007-2012**



Source: SPP Generation Interconnection Department

# Dispatched Wind Generation in Kansas

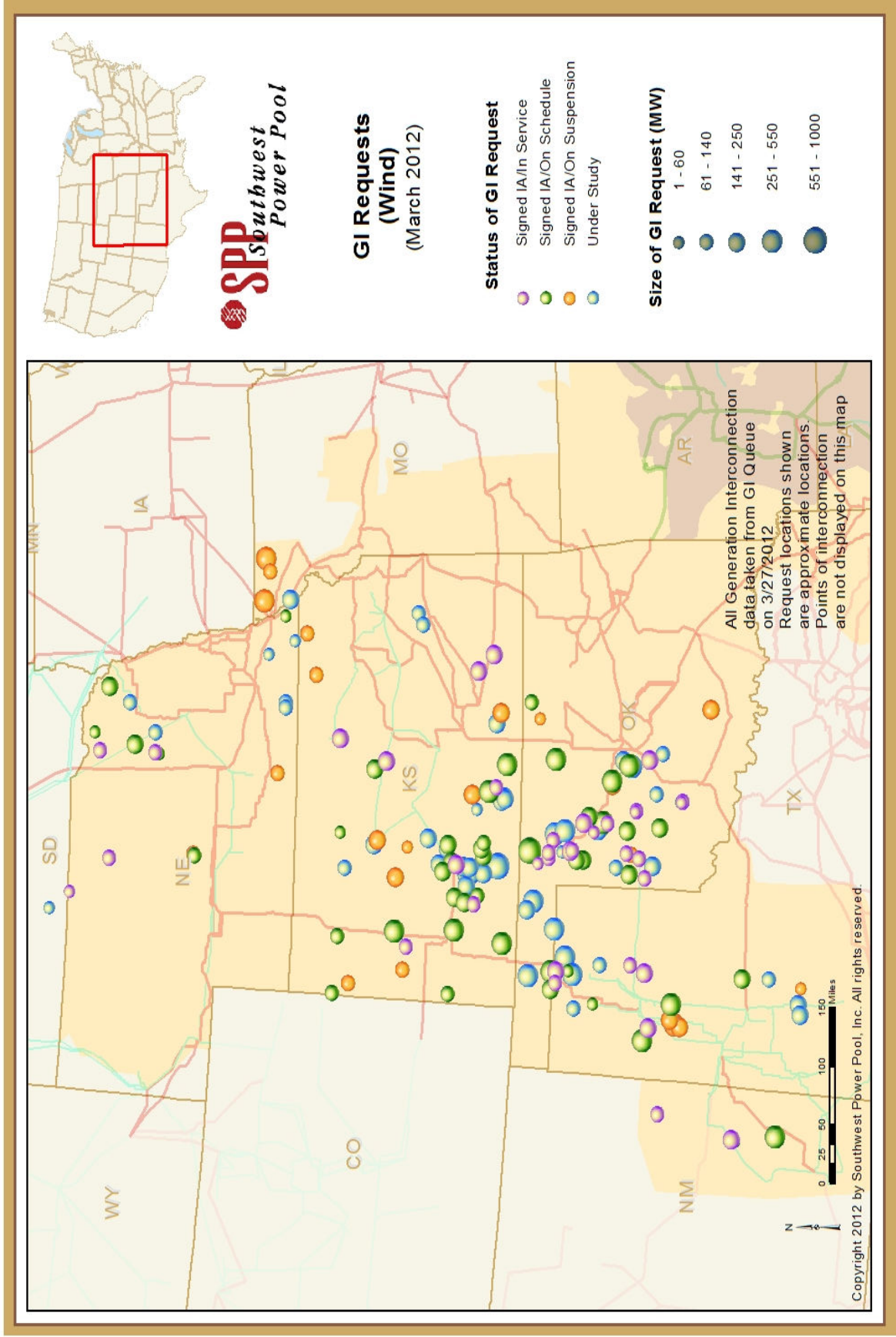


Source: U.S. Energy Information Agency,

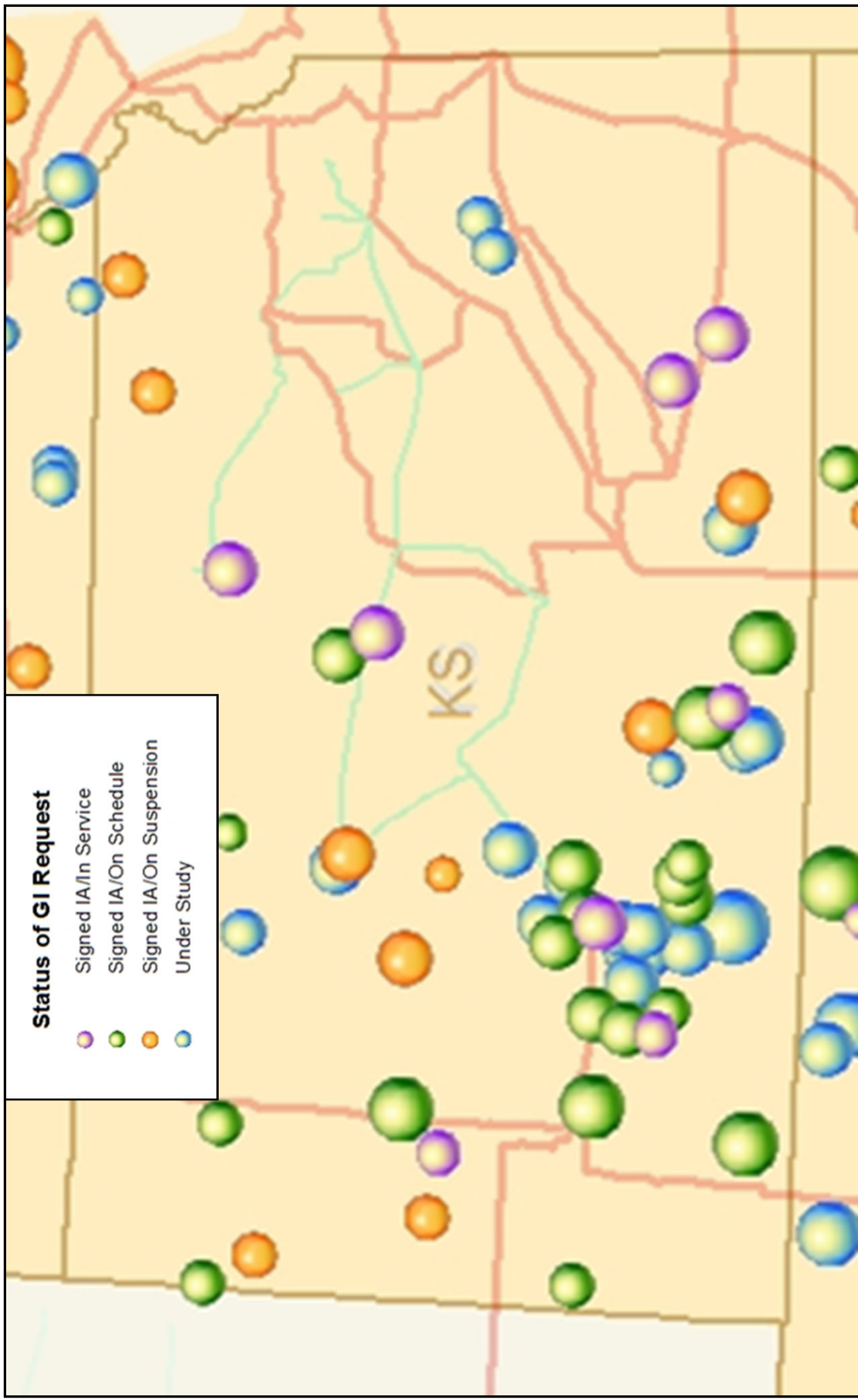
[http://www.eia.gov/electricity/data/state/annual\\_generation\\_state.xls](http://www.eia.gov/electricity/data/state/annual_generation_state.xls)



# Generation Interconnection Requests




# Generation Interconnection Requests - Kansas





# Q&A



**Paul Suskie**  
Sr. VP Regulatory Policy & General Counsel  
[psuskie@spp.org](mailto:psuskie@spp.org)

**Mike Ross**  
Sr. VP Governmental Relations & Public Relations  
[mross@spp.org](mailto:mross@spp.org)