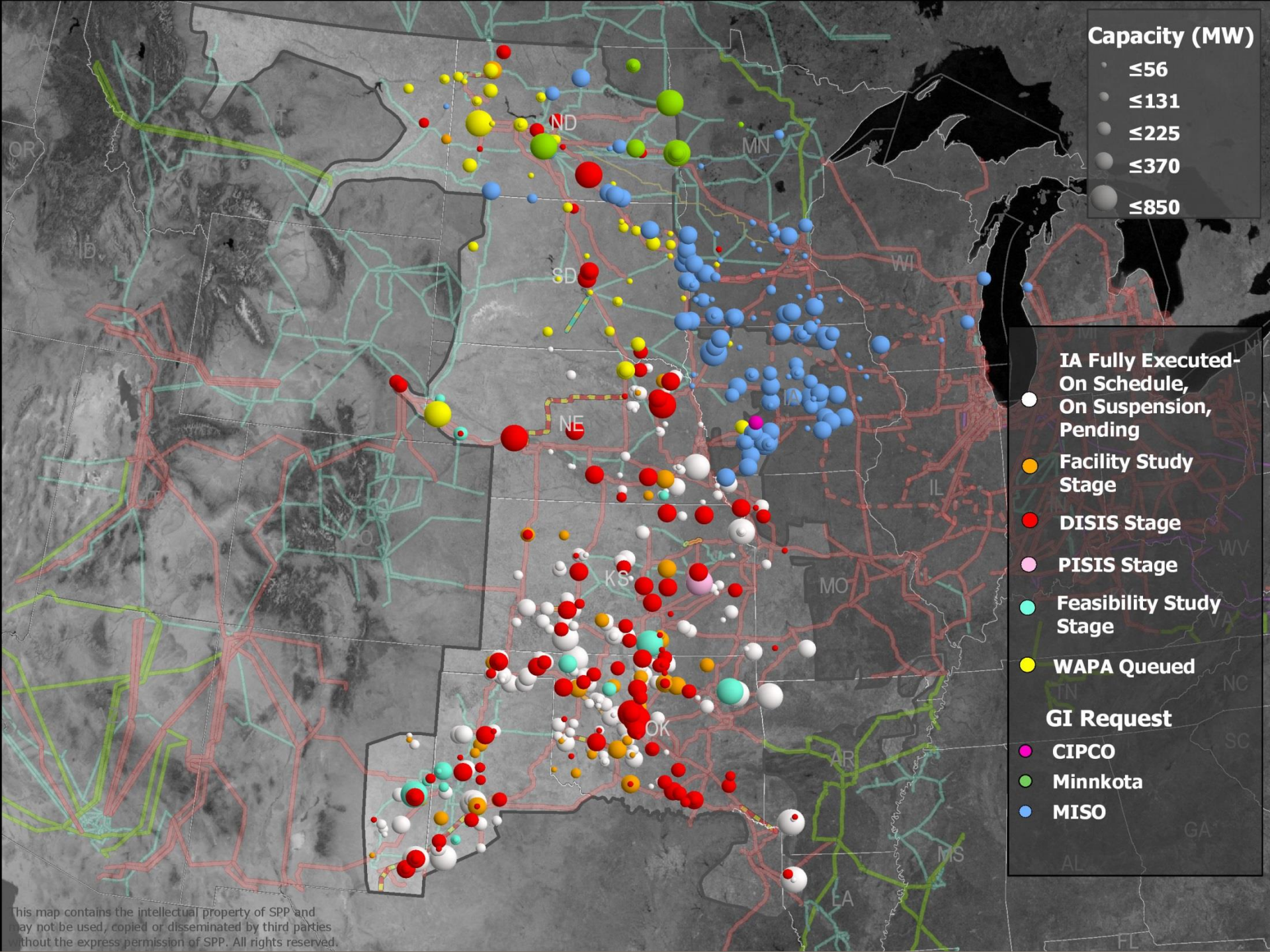


Xcel Energy

**Generator Interconnection
SPS Sub-Regional Planning Meeting
May 9, 2019**



Kevin Pera, P.E.
Transmission Access



Capacity (MW)

- ≤56
- ≤131
- ≤225
- ≤370
- ≤850

**IA Fully Executed-
On Schedule,
On Suspension,
Pending**

**Facility Study
Stage**

DISIS Stage

PISIS Stage

**Feasibility Study
Stage**

WAPA Queued

GI Request

CIPCO

Minnkota

MISO

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Generator Introspection: *Why should I care?*

Utility Roles

- Developer
- Generator Owner
- Transmission Owner
- Load Serving Entity
- Resource Planner

New Generators Affect Grid Operation:

- Transmission Loading
- Losses
- Voltage Stability
- Power Responsiveness
- ***Cost of Energy***



FERC Orders



FERC Order 2003 & 2006

Established Standard Generator Interconnection Procedures (GIP)

- *Pro Forma Tariff*
- Large/Small Generator Interconnection Agreements (LGIA and SGIA)

FERC Order 845, 845-A

- Ten reforms, three categories
 - Improve certainty
 - Promote more informed interconnection decisions
 - Enhance interconnection process
- All reforms either
 - *require* the Transmission Provider to do something or
 - *allow* the Interconnection Customer to do something.

SPP Queue Reform Efforts



2009

Clearing the serial queue

- Clustering
- Established three queues
- Shortened suspension times

2019

Completely refreshes GIP

- Three-stage process
- Increased deposits to match assigned upgrade costs at each stage in the study process

Other GIP
Improvements

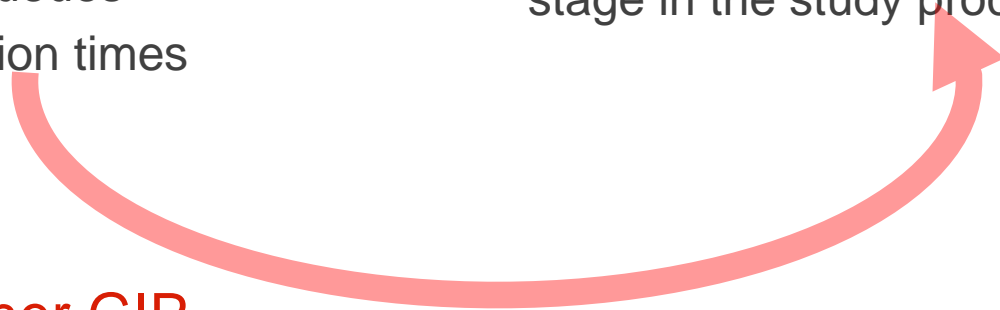
Faster to commercial

- Interim GIA
- SGIP consolidation

2014

Faster to commercial

- Increased deposits
- 11 months to generator construction
- Shortened suspension times



More Questions?

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