

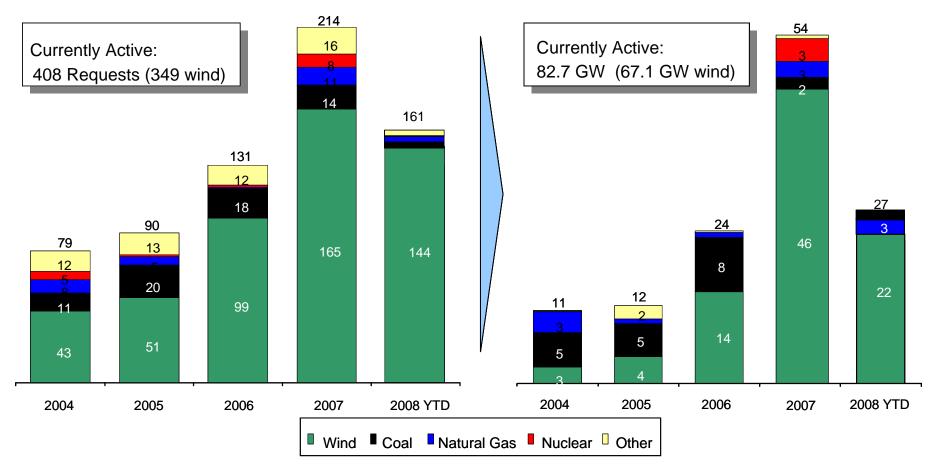
# Midwest ISO Generator Interconnection Queue Reform

### ATC LLC Customer Meeting November 20, 2008

# **Queue Evolution**\*

Number of Requests

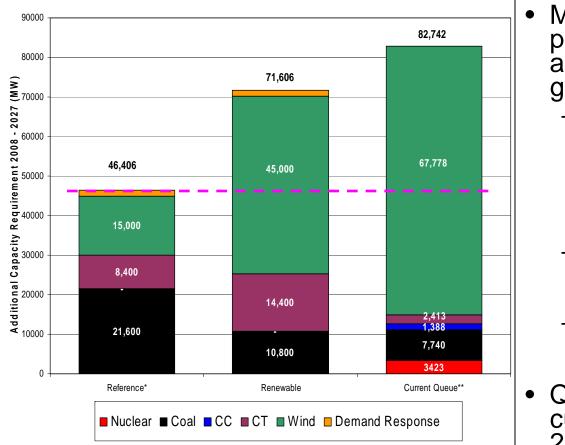
Megawatts of Requests





\* All requests received as of October 31, 2008 2

# 2008-2027 Future Generation Scenarios



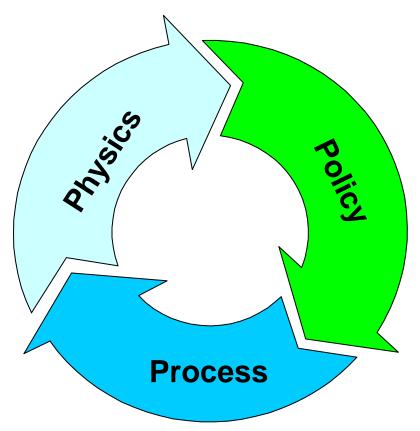
- Midwest ISO long-term planning process models alternative scenarios of future generation needs
  - Scenarios support a transmission planning approach which attempts to maximize optionality of the transmission grid, given an uncertain future
  - Reference future models status quo, including renewable portfolio standards (RPS)\*
  - Renewable future assumes 20% renewable mandate across Midwest ISO footprint
- Queued wind requests exceed current RPS\* by more than 250% and a 20% footprint mandate by more than 55%



\* RPS as of October 2007 for the Midwest ISO footprint; current RPS is 20,000 MW

\*\* Requests under evaluation in queue as of October 31, 2008; wind includes 662 MW of other renewables

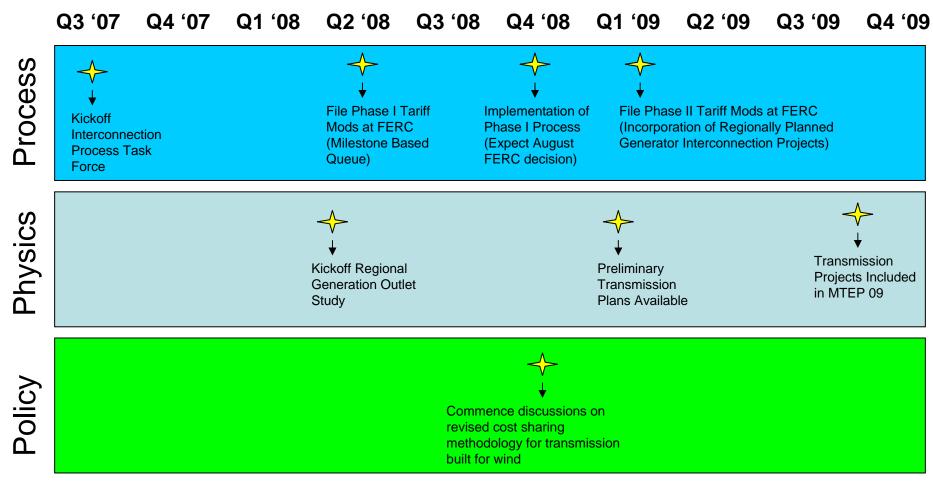
# 3 P's of Queue Reform



- Success in queue reform rests on addressing each of the 3 P's
  - Process: Filed to FERC proposed changes to generator interconnection process on June 26, 2008
  - Physics: Regional Generation Outlet Study is the first step in using alternative planning methods to identify network upgrades to support interconnection of large quantities of generation in remote areas
  - Policy: Opening dialogue on items such as cost sharing and recovery

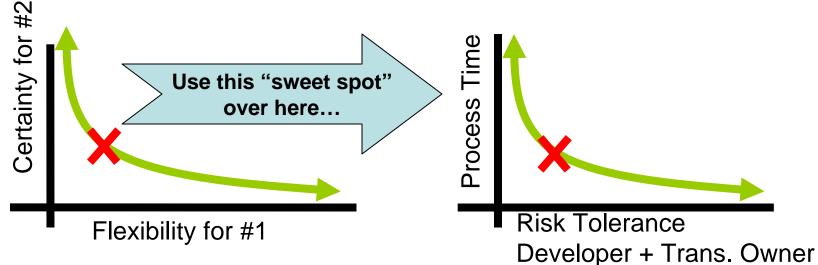


#### **Queue Reform Timing**





# What We Did for Queue Process Reform



Step 1: Find that sweet spot that balances certainty with flexibility

Step 2: Add the risk tolerance of the TO to the developer's risk tolerance.

Step 3: The RTO's develops processes and procedures to meet the balance of risk on a consistent timeline

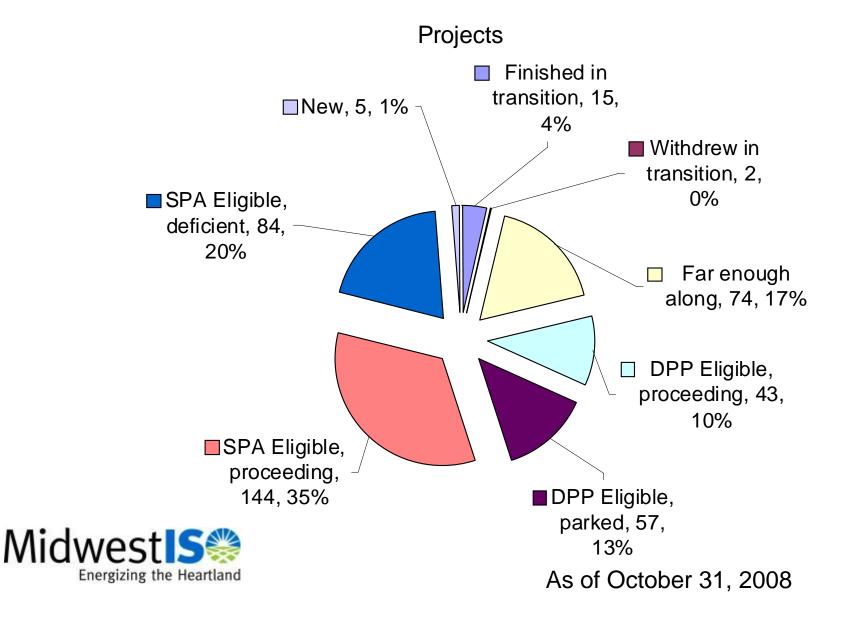


# Effects of Transition

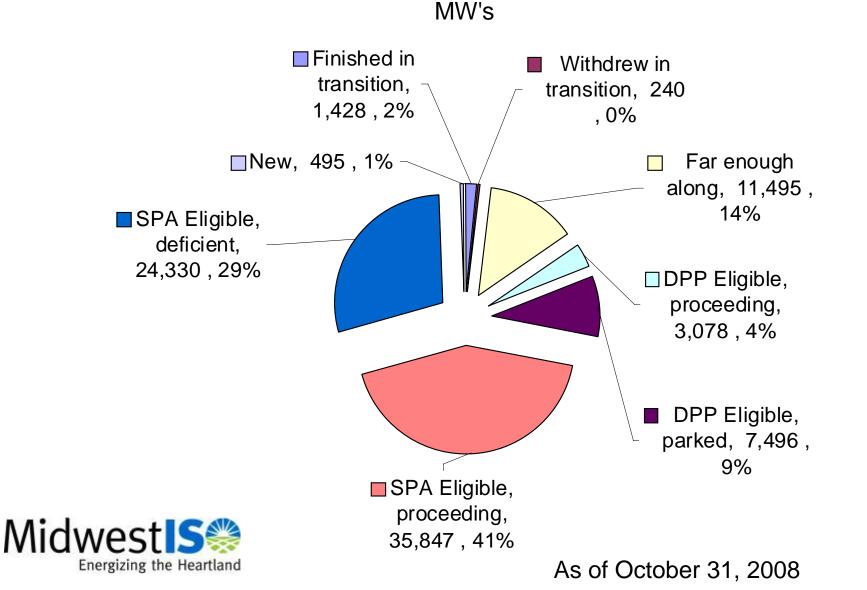
- 21% of projects, 16% of MW's either finished during transition or were far enough along that the transition only affects their suspension terms
- 23% of projects, 13% of MW's were eligible for the DPP (faster lane) treatment
- 55% of projects, 70% of MW's were sent to the SPA
- 1% of the projects, 1% of MW's are new
- 33% of projects, 36% of MW's are either parked or were deficient



# **Resultant Effects of Transition**



# **Resultant Effects of Transition**



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# Generator Interconnection Queue Reforms (Process)

- Make Results of Feasibility Study Binding/Create Fast Lane
  - Change the current Feasibility Study process to a screen, which determines if a project can proceed to fast lane
  - Fast lane projects will proceed with reduced wait time to start study process with a shortened timeline
- Modify Study Deposit Levels and Timing
  - Increase study deposits to match expected study costs at various project sizes
  - Collect all study deposits up-front
  - Make study deposits partially non-refundable to fund potential restudies caused when a project withdraws from the queue

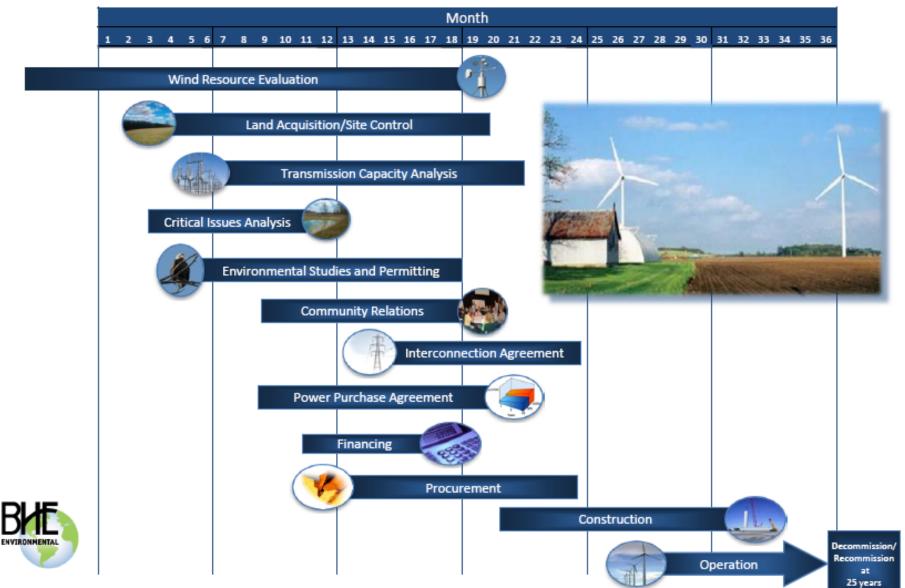


# Generator Interconnection Queue Reforms (Process) cont.

- Introduce New or More Rigorous Milestones
  - Increase requirements for technical information during study process
  - Introduce non-technical milestones at start and midpoint of Definitive Planning Phase
    - Financial such as security for estimated Network Upgrades
    - Non-financial such as attaining necessary air, land, or water permits
- Reduce Flexibility Associated with Suspension
  - Only allow suspension for Force Majeure conditions
    - Move first Generator Interconnection Agreement milestone out six
      months
  - Require payment of Network Upgrade cost or \$5 million, whichever is greater, upon suspension



#### Example\* Wind Project Development Timeline



\* This timeline is only an example. An exact timeline should be developed for your specific project.

#### Regionally Planned Generator Interconnection Projects

- Goal is to increase integration with long-term planning process to allow more efficient generator interconnection
  - Determine the demand for the energy
  - Identify transmission upgrades to meet the demands
  - Allow projects in the queue to have access to the capacity
- Regional Generation Outlet Study to evaluate the transmission requirements
  - Determine distribution of wind sites across footprint to maximize ease of wind integration (Renewable Energy Zones)
  - Assess year-by-year aggregate wind mandates for all states in Midwest ISO, and associated renewable capacity requirements
  - Develop five year road map, informed by the queue and consistent with mandates, of transmission projects to interconnect wind generation
- Interconnection Process Task Force to evaluate necessary tariff changes to integrate with current queue process (e.g. identification and subscription methodology)

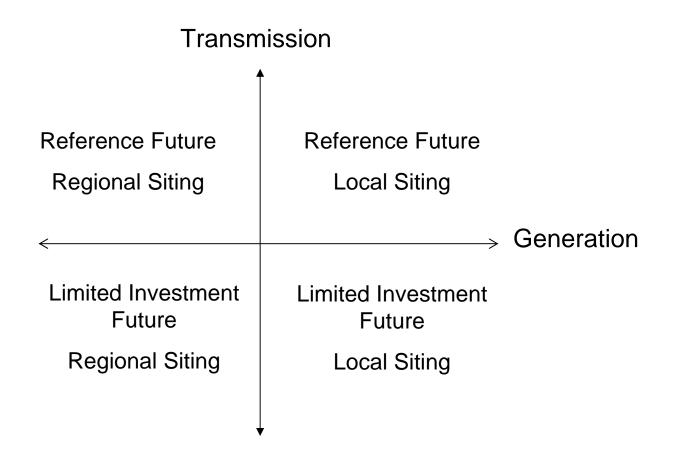


# The Optimization Problem

- General Problem Statement for Transmission Studies
  - Minimize transmission and generation capital costs and minimize system energy costs while maintaining system reliability
- Problem solution subject to sometimes competing constraints:
  - Minimize investment risk (shorter payback horizon)
  - Maximize carbon reduction (replace coal production)
  - Maximize local economic development (install wind directly within RPS State)
  - Maximize economic value (lowest cost to customer)



## Regional Generation Outlet Study Alternatives under Evaluation





# Conditions Precedent to Increased Transmission Build

- A robust business case for the plan
  - Need to demonstrate that the hypothesized benefits exist, including evaluation of alternatives
  - Regulators are the judge of the business case
- Increased consensus around regional energy policy
  - Does not exist today around wind, for example, across the Midwest ISO footprint
- A regional tariff that matches who benefits with who pays over time
  - For example, beneficiaries of wind may be due to public policy, rather than load flow or economic benefit analyses which are the current basis for cost allocation
- Cost recovery mechanisms that reduce financial risk
  - Investors in these projects need to be assured of cost recovery

