



IURC Summer Assessment

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Discussion Outline

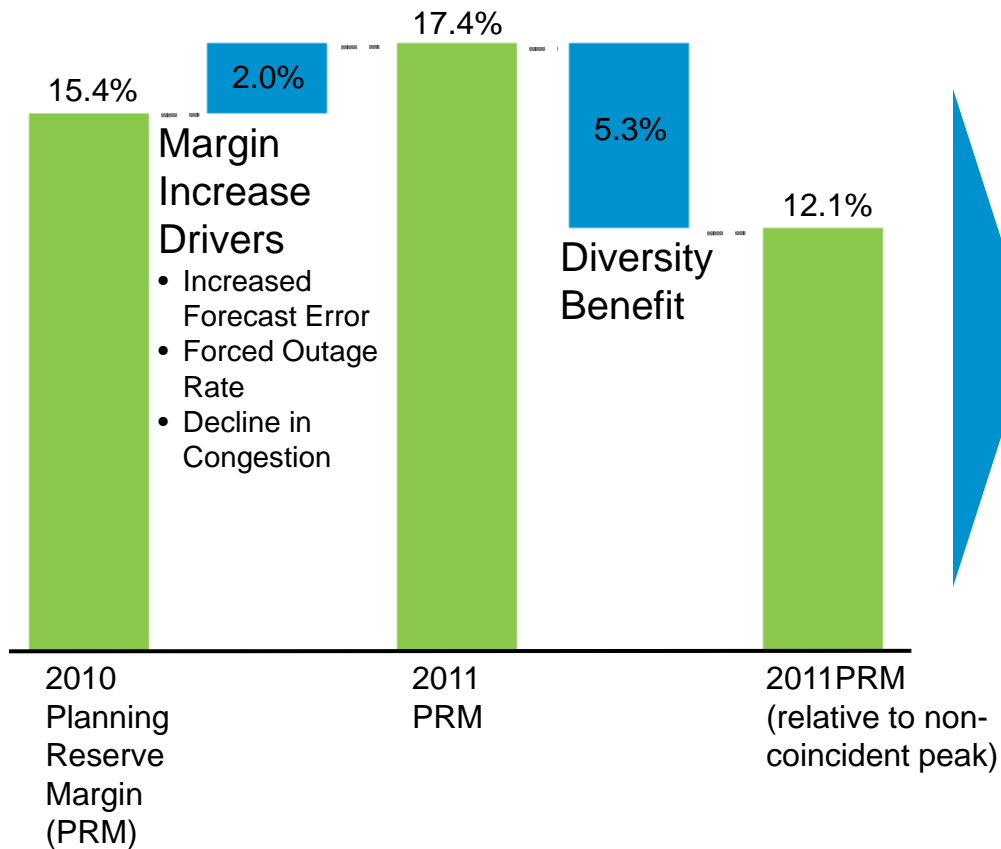
- MISO Summer Assessment
- Resource Evolution
- MISO Resource Initiatives
 - Resource Adequacy
 - Transmission Planning
- Membership Changes

MISO current resource adequacy construct enables capacity sharing while leveraging traditional bi-lateral methodologies

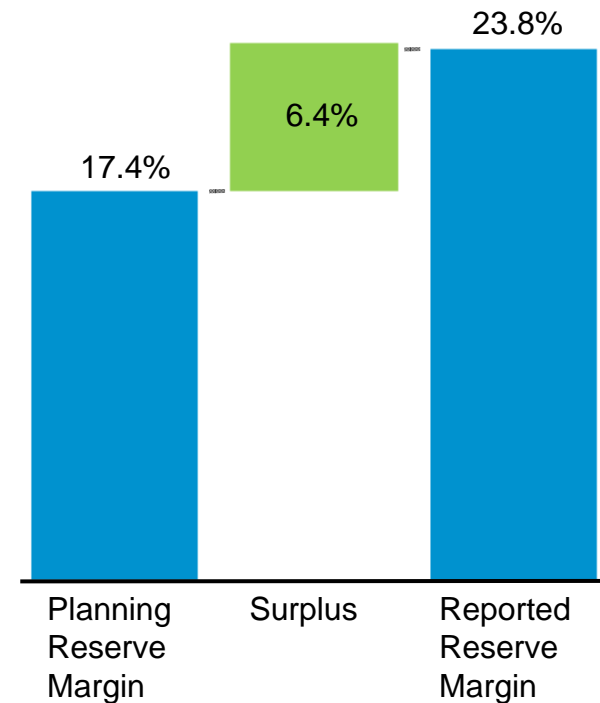
- ▶ Setting Planning Reserve Margins (PRM)
 - Load Serving Entity establishes load forecast
 - MISO establishes/recommends PRM based on Loss of Load Expectation Study
 - Local regulators have authority to modify for their jurisdiction
- ▶ Term – Monthly
- ▶ Clearing obligation is met by bringing resources to meet load forecast plus their Planning Reserve Margin
 - Owned resources
 - Controlled resources
 - Voluntary Capacity Auction
- ▶ Penalty - Failure to meet resource obligation results in a settlement charge based on Cost of New Entry (CONE) – currently \$95,000 / MW-month

For the 2011 summer season, there are sufficient resources to manage weather, load and outage uncertainty

Reserve Margin Change



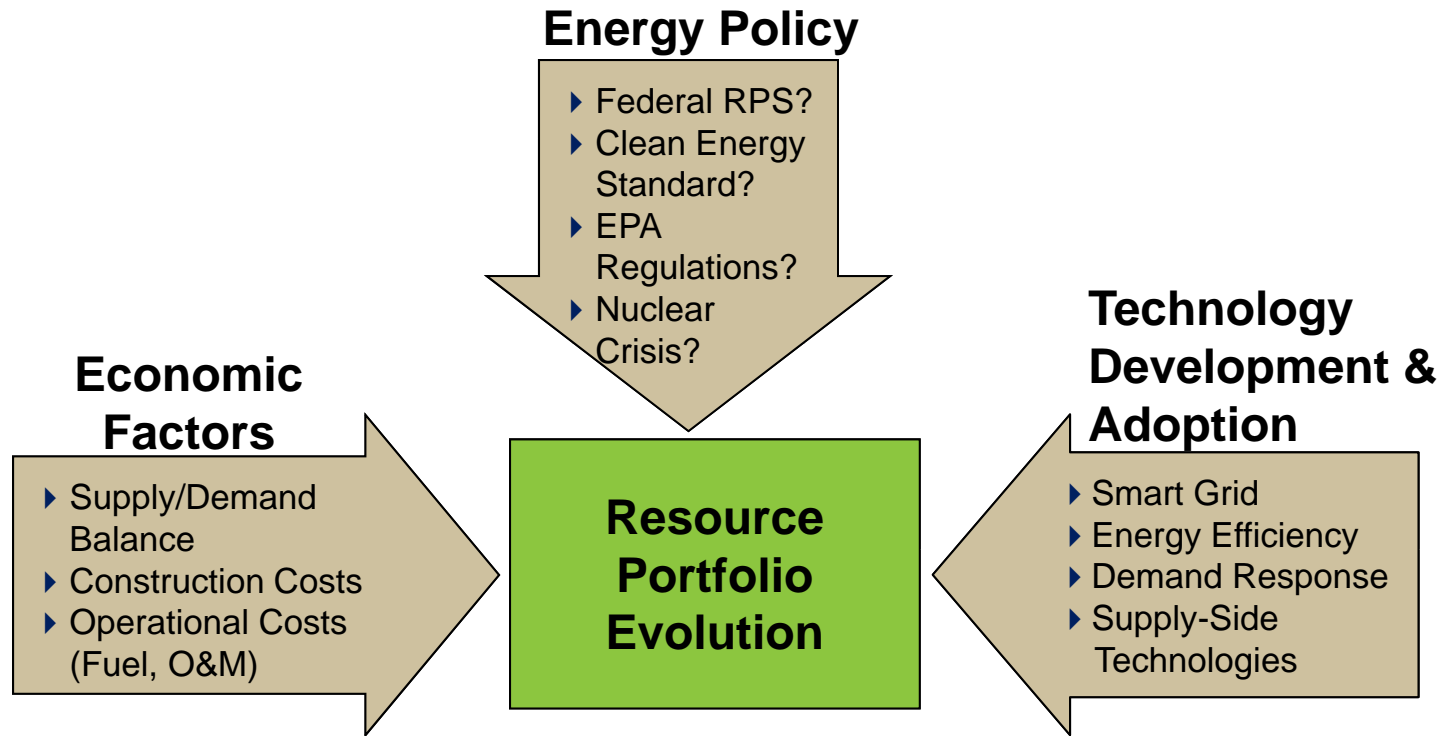
Reserve Margin 2011



The primary changes from last year are driven by changes in capacity registered in MISO's resource adequacy process

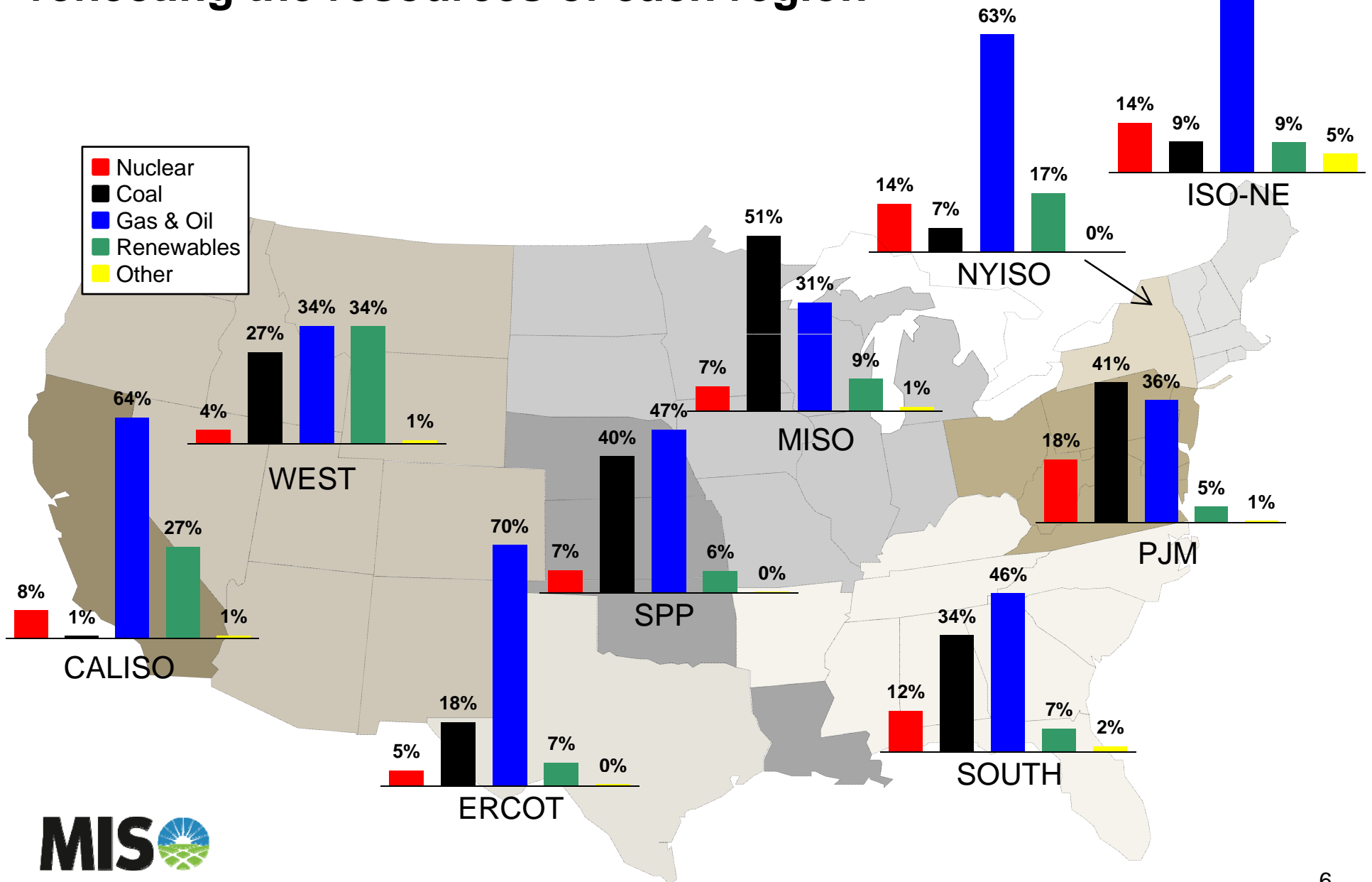
- Total installed 2011 summer capacity reflects:
 - Addition of 1,500 MW of wind (although only 382 MW registered under MISO's Resource Adequacy program)
 - Subtraction of 18,156 MW of system capacity not registered under MISO's Resource Adequacy program, including:
 - 1,800 MW mothballed,
 - 2,300 MW extended planned outages,
 - 5,000 MW external commitments.
- Forecast demand increased 1.3%
 - Excludes impacts of FE exit and Big Rivers integration

The future resource portfolio will be shaped by a host of influences



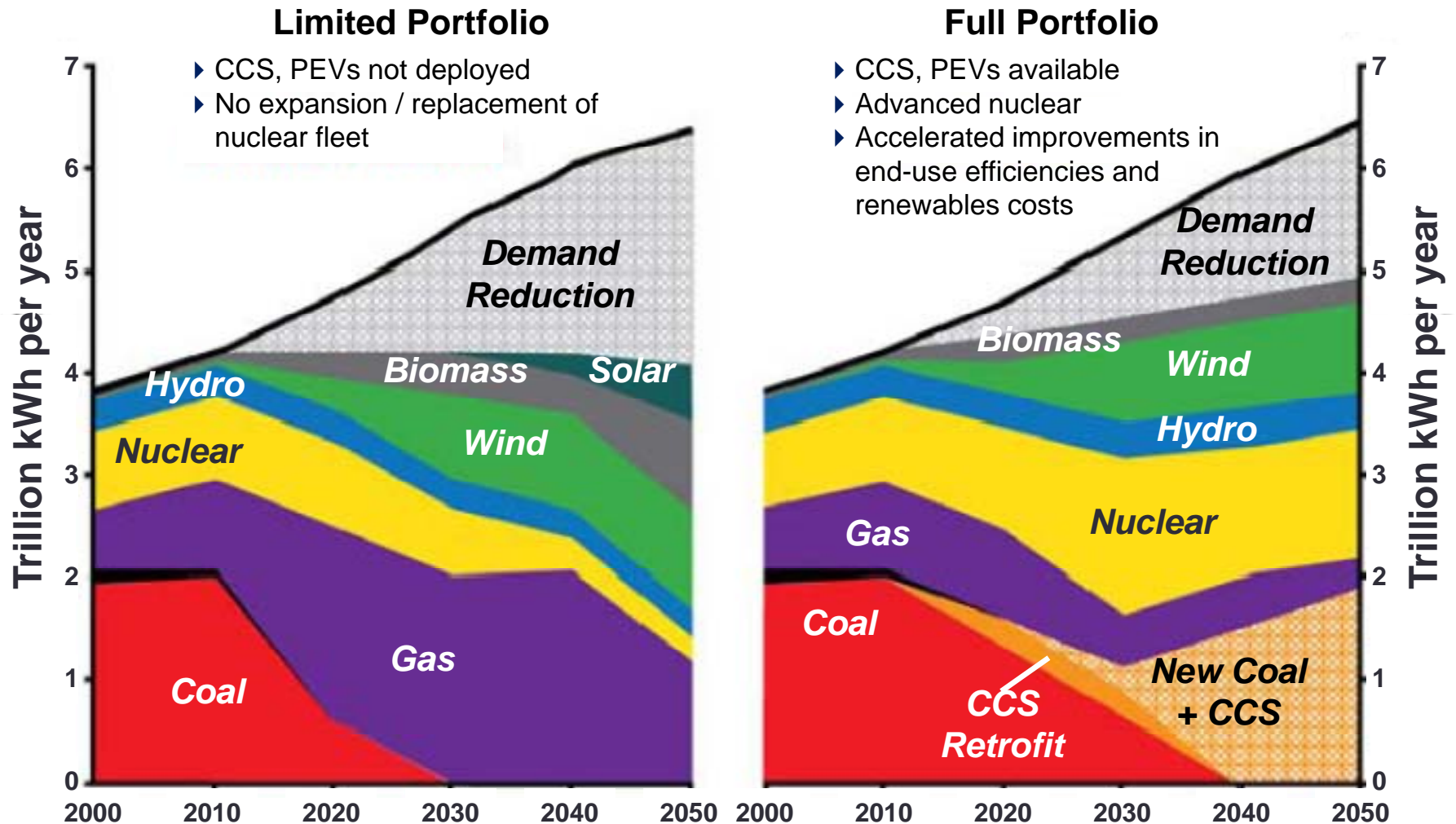
A versatile transmission system and regional resource adequacy are required to accommodate multiple potential resource futures

Resource portfolios vary across the US reflecting the resources of each region

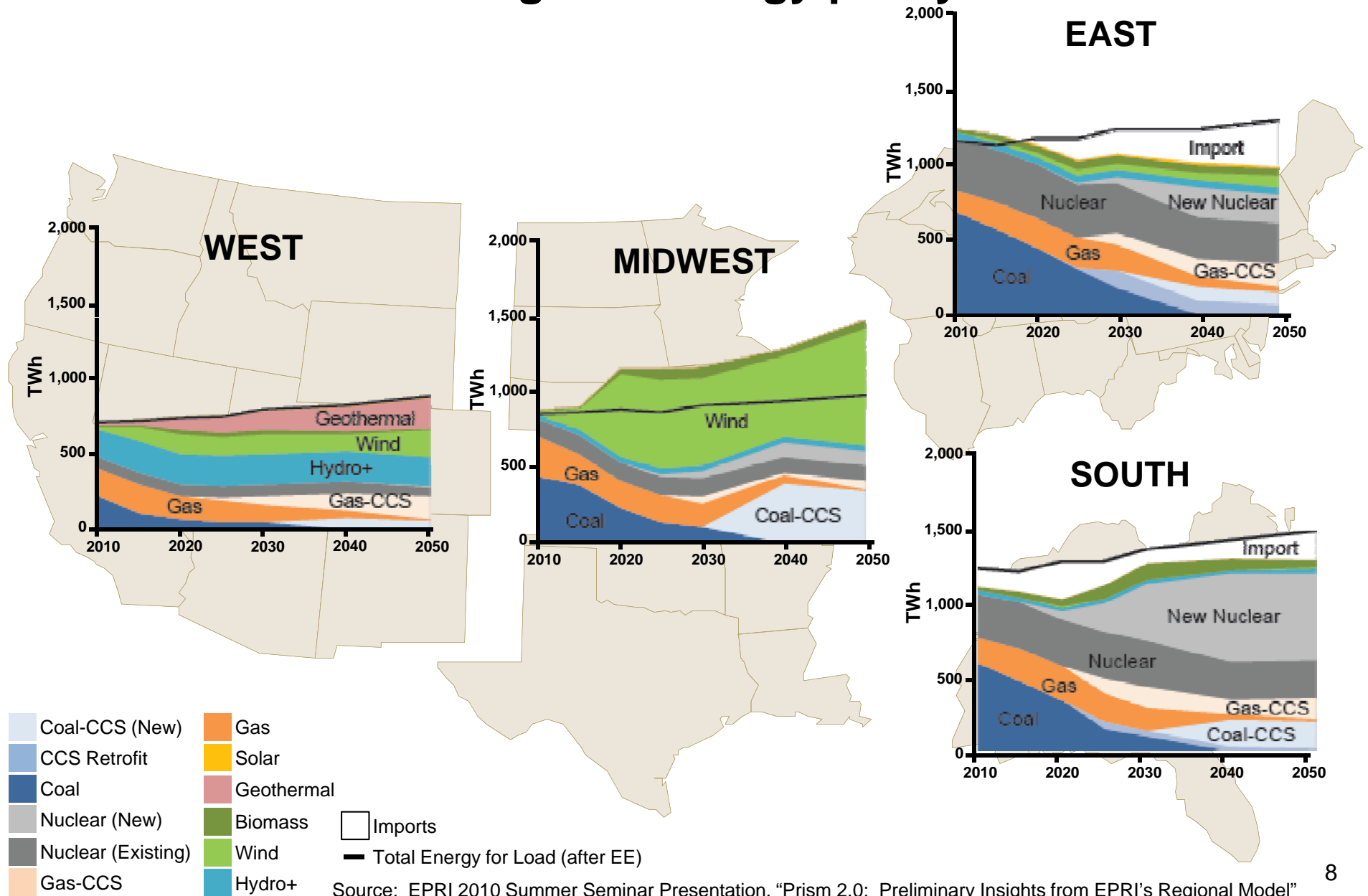


Source: U.S. Energy Information Administration and RTO data, 2010

Technology development/adoption will be a key driver of the evolution of the nation's resource portfolio ...

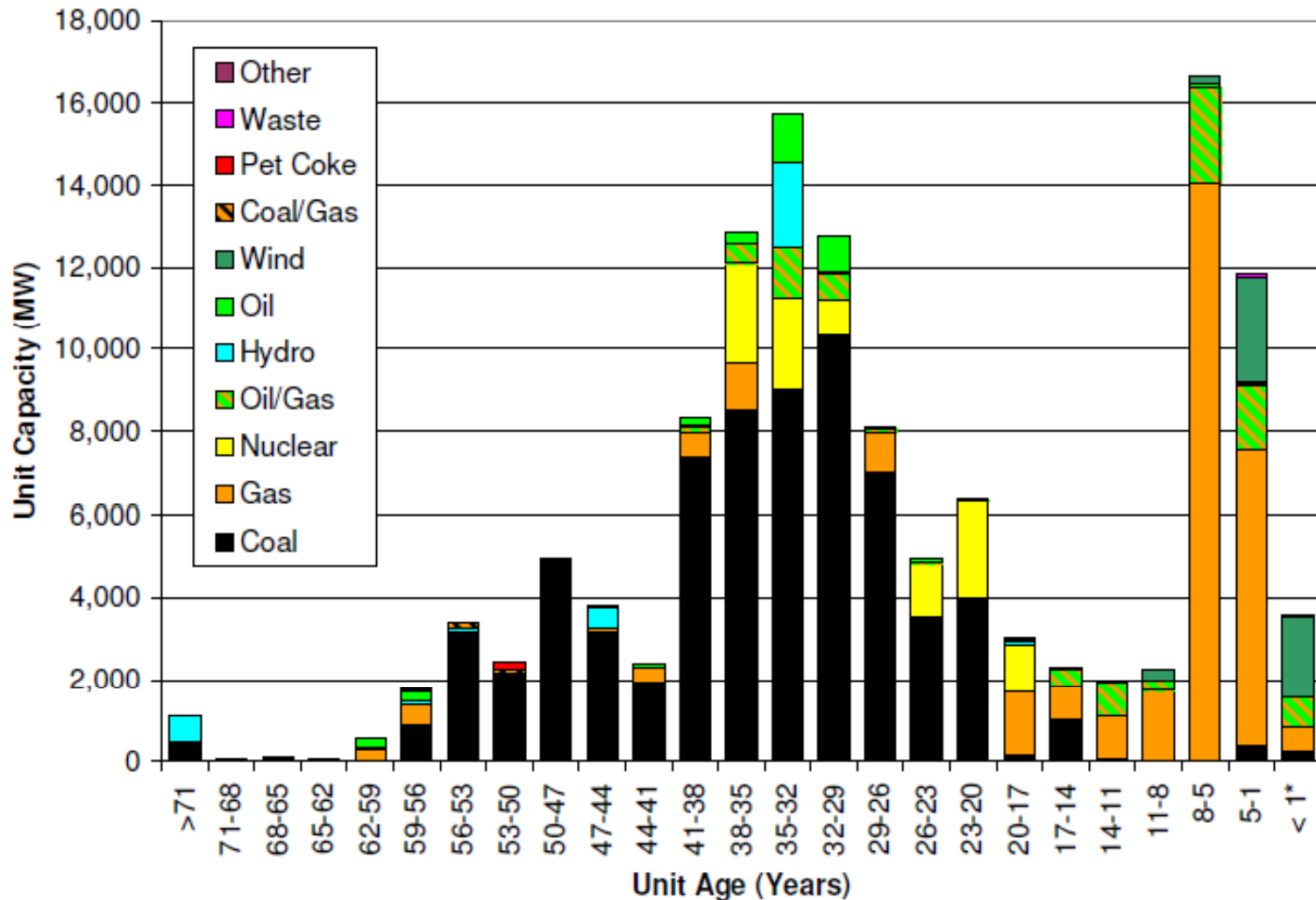


... and regional resource portfolios will continue to reflect local resources and regional energy policy decisions



Source: EPRI 2010 Summer Seminar Presentation, "Prism 2.0: Preliminary Insights from EPRI's Regional Model"

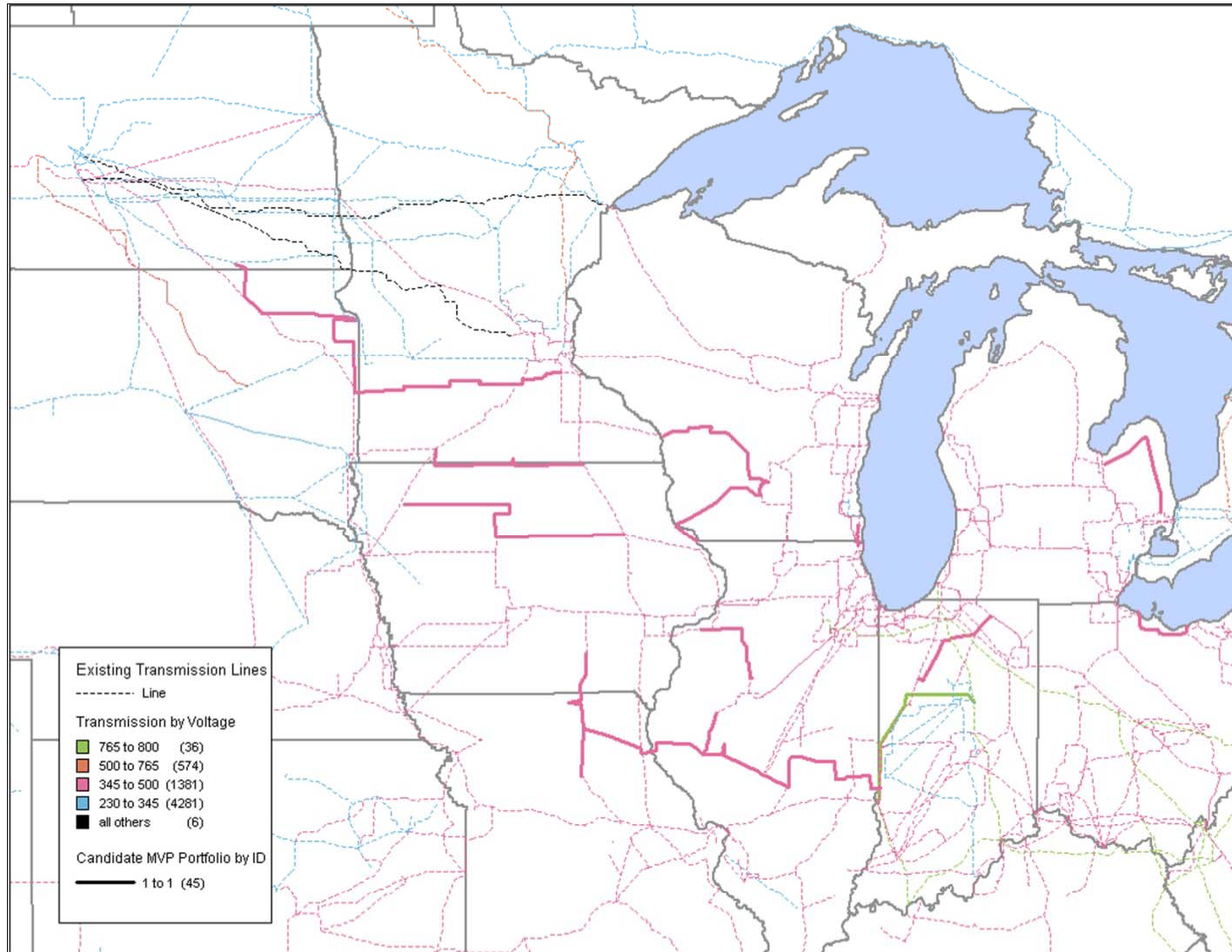
The actual MISO reserve margin remains high (24%), but the generation fleet is aging and little baseload capacity has been built in the last twenty years...



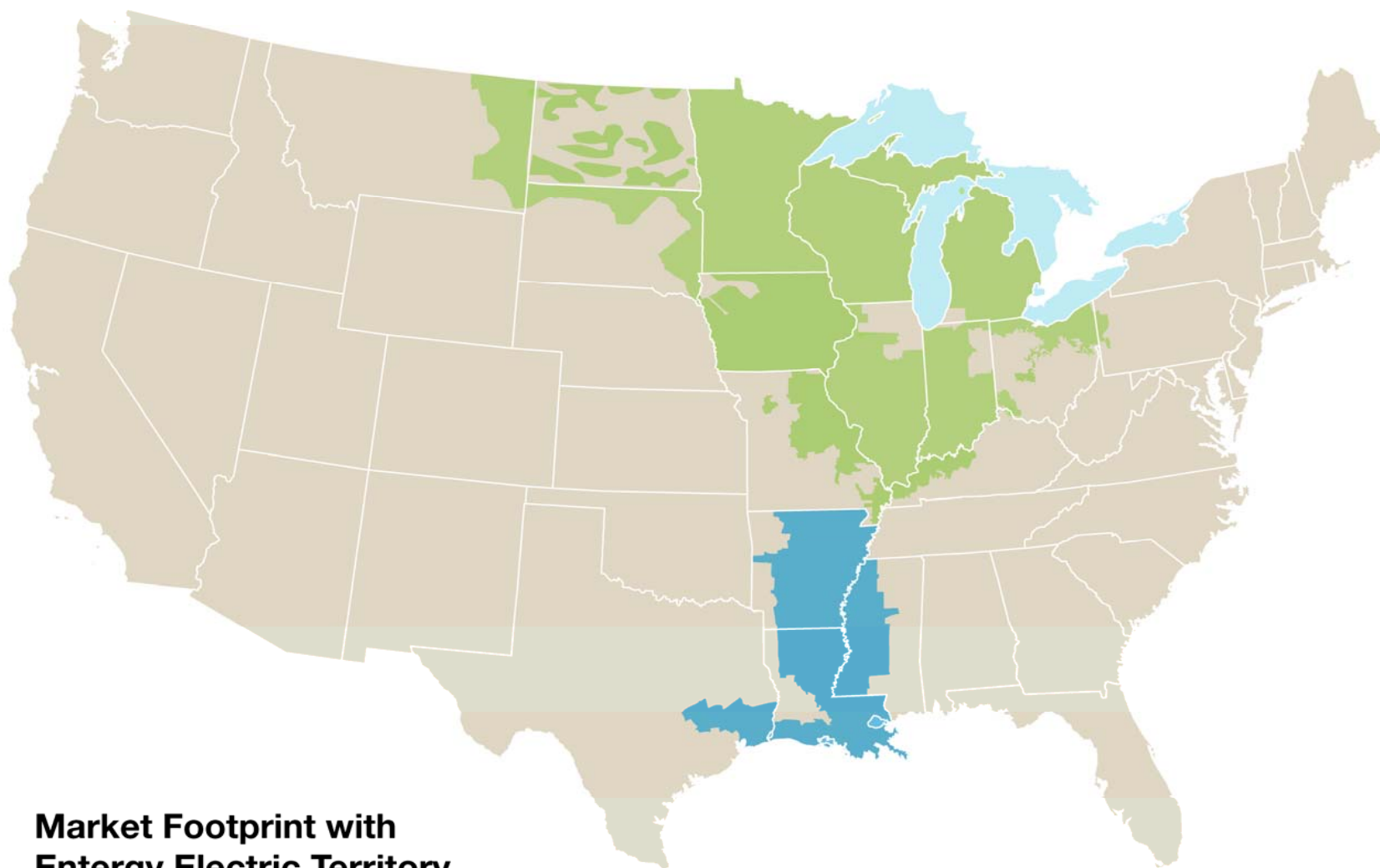
MISO is proposing to modify its Resource Adequacy construct to address deliverability concerns, price transparency and other concerns

- ▶ Planning Reserve Margin Methodology – Unchanged
- ▶ Term – 1 year beginning in 2013-2014 planning year
- ▶ Clearing functions
 - Adds an annual resource adequacy auction that establishes a market clearing price
 - Load Serving Entities may “opt-out” by providing resource plan to meet their obligations
- ▶ Penalty – Unchanged
- ▶ New features
 - Zonal deliverability assurance
 - Resource portability across seams (to other markets)

MISO's integrated transmission system is designed to reduce the delivered cost of wholesale energy



Entergy's recent decision to join MISO will add scope and diversity to our generation fleet



**Market Footprint with
Entergy Electric Territory**

Indiana will benefit from Entergy's decision

- ▶ Reduced pro rata share of regulation requirement
- ▶ Reduced pro rata share of contingency reserve requirement
- ▶ Reduced per MWh cost of MISO administrative fees
- ▶ Increased economic trade opportunities
- ▶ Increased footprint diversity will likely result in reduced planning reserve requirement for Indiana utilities