

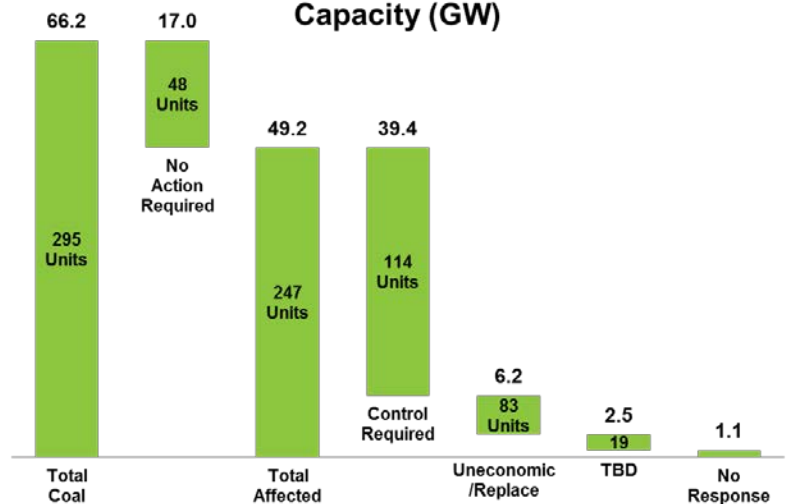
### INTRODUCTION

As requested during the Missouri Public Service Commission's (Commission) Environmental Compliance Workshop held at the Commission Offices on October 28, 2013, the Midcontinent Independent System Operator (MISO) respectfully submits this information to update and inform the Commission on the work of MISO, along with the Organization of MISO States (OMS), the Transmission Owners and Stakeholders, on the relevant environmental Compliance matters. As compliance efforts move forward, MISO will continue to work with its stakeholders, as well as our neighboring regions, to continue to ensure reliability of the system at the lowest cost. If the Commission, or its Staff, is interested in further information or presentations on this information, please contact Marya White at 651-315-5276 or at [mwhite@misoenergy.org](mailto:mwhite@misoenergy.org).

### MISO QUARTERLY SURVEY UPDATE

- Of the 8.7 GW in the uneconomic/replace and TBD buckets **35 units (1.8 GW) have already retired, 11 units (0.9 GW) plan to convert to another fuel source and 7 units (1.0 GW) plan to go on suspension**
- Approximately 78% (by capacity) of coal units requiring retrofit have work scheduled and over 70% have outages scheduled
- Of the 84 coal units with the potential for a one-year compliance extension, 35 have been approved and 24 units have prepared but not yet submitted applications

**Coal Resources Affected 2nd Q 2013  
Survey  
Capacity (GW)**



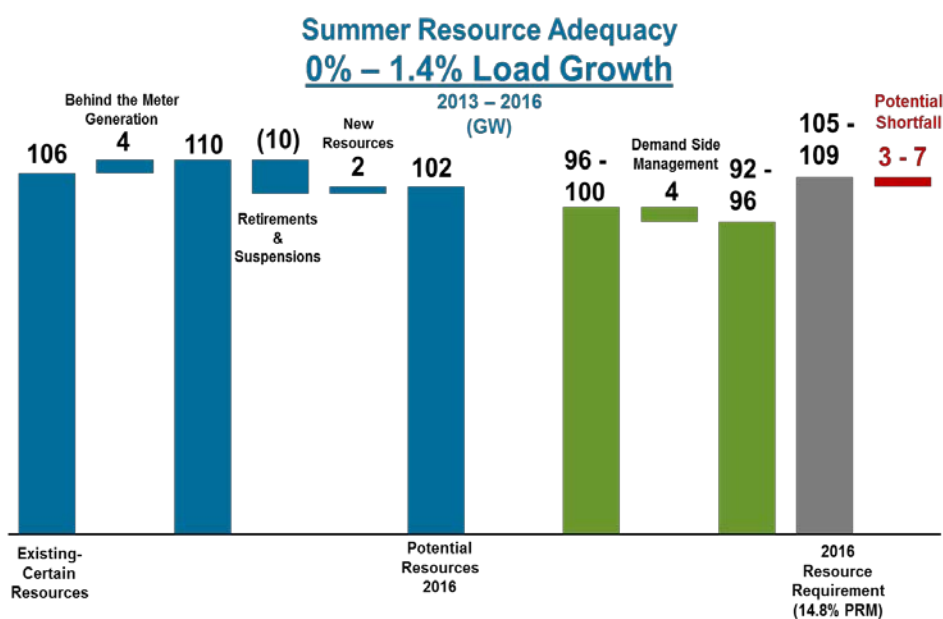
- Third Quarter 2013 survey results will be available on or about November 15, 2013.

### OMS-MISO RESOURCE ASSESSMENT SURVEY UPDATE

As MISO prepares for changes to the system based on the implementation of EPA rules, modeling efforts using currently available information have identified potential capacity shortfalls as early as 2016. The chart below identifies the potential for a 3-7GW shortfall of capacity to meet a 14.8% PRM in 2016.

Given this potential, the Organization of MISO States (OMS) and MISO developed a collaborative effort to gain additional information about resources and load requirements that will be in the MISO footprint in the future. Specifically, OMS and MISO jointly developed a robust survey to gain better insights about future needs and resources. MISO appreciates this collaboration and looks forward to continuing to work with OMS on resource adequacy issues.

- The survey is the product of collaboration between OMS and MISO. The survey seeks information from both the MISO Midwest and MISO South Regions.
- The survey requested feedback on a variety of items, including **future load expectations**, **current resources** (and potential retirements), **potential new resources** and **energy efficiency (EE)/demand response (DR) programs**. The survey also sought **confidence factors** associated with the forecasts provided.
- **To date, over 98% (by load) of the system has responded** and OMS continues to encourage additional responses.
- Survey responses are **currently being analyzed and reviewed** to be used in a MISO system-wide assessment.
- MISO anticipates presenting a system-wide assessment (both MISO Midwest and MISO South) at the **December 5<sup>th</sup> Supply Adequacy Work Group Meeting**. In early 2014, MISO will present a zonal analysis, which will be performed in a manner that will maintain confidentiality of information provided.



### MISO ENGCTF UPDATE

Established in Oct. 2012, MISO's Electric and Natural Gas Coordination Task Force has since been providing a forum for discussion, education and collaboration on gas-electric system interdependencies. The major initiatives of the Task Force, including Issue Summary Papers drafted by cross-industry teams, are overviewed below.

INITIATIVE	STATUS
Issue Summary Paper on the Misalignment of the Gas/Electric Days	Completed Aug. 2013; recommendation to MISO Steering Committee to survey stakeholders on moving up MISO Day Ahead market schedule
Issue Summary Paper on Resource Adequacy (examines GADS reporting, seasonal aspects of resource adequacy, and LOLE study methodology)	Completed Oct. 2013; recommendations to LOLEWG (to investigate GADS/Reserve Shutdown/Lack of Fuel events) and to SAWG (to investigate capacity accreditation and annual vs. seasonal resource adequacy construct)
→ Loss of Load Expectation Study (LOLE) to capture fuel risk	In progress; study completion targeted for Q1 2014
Issue Summary Paper on Coordinated Operations	Completed Sept. 2013; examines opportunities for info/data sharing; recommends communication exchange with NG pipelines
→ 6-month Coordination Field Trial with ANR Pipeline Company  <b>Objective:</b> To further coordination between the gas and electric industries, enhance operator situational awareness and improve reliability	Kicked off in early Oct. 2013; monthly update for November outages and system maintenance/outlook took place on Oct. 30 <sup>th</sup>  <b>Details:</b> Includes a joint monthly review of pipeline outages and potential service impacts, as well as short-term notice of unplanned pipeline events and communication during Emergency Conditions, when possible.  <b>Future action:</b> At the completion of the field trial, MISO will work with stakeholders and the gas industry to review outcomes.
Issue Summary Paper on Market Signals for Reliability	Draft in progress
Develop database of NG generators and associated infrastructure in the MISO footprint	In progress
Develop web platform to consolidate critical pipeline notices impacting MISO, and pipeline overlay overhead display for MISO Operations	Being investigated / in progress
Phase III Gas Study  <b>Objective:</b> To assess the ability of natural gas infrastructure throughout the MISO footprint to serve growing demand, to identify current and potential areas of pipeline congestion and to understand changing flow patterns and development trends	Final report in-progress / targeted completion date of mid-Nov.  Preliminary results shared with stakeholders at Sept./Oct. meetings of ENGCTF