



Resource Availability and Need: 2020 Focus

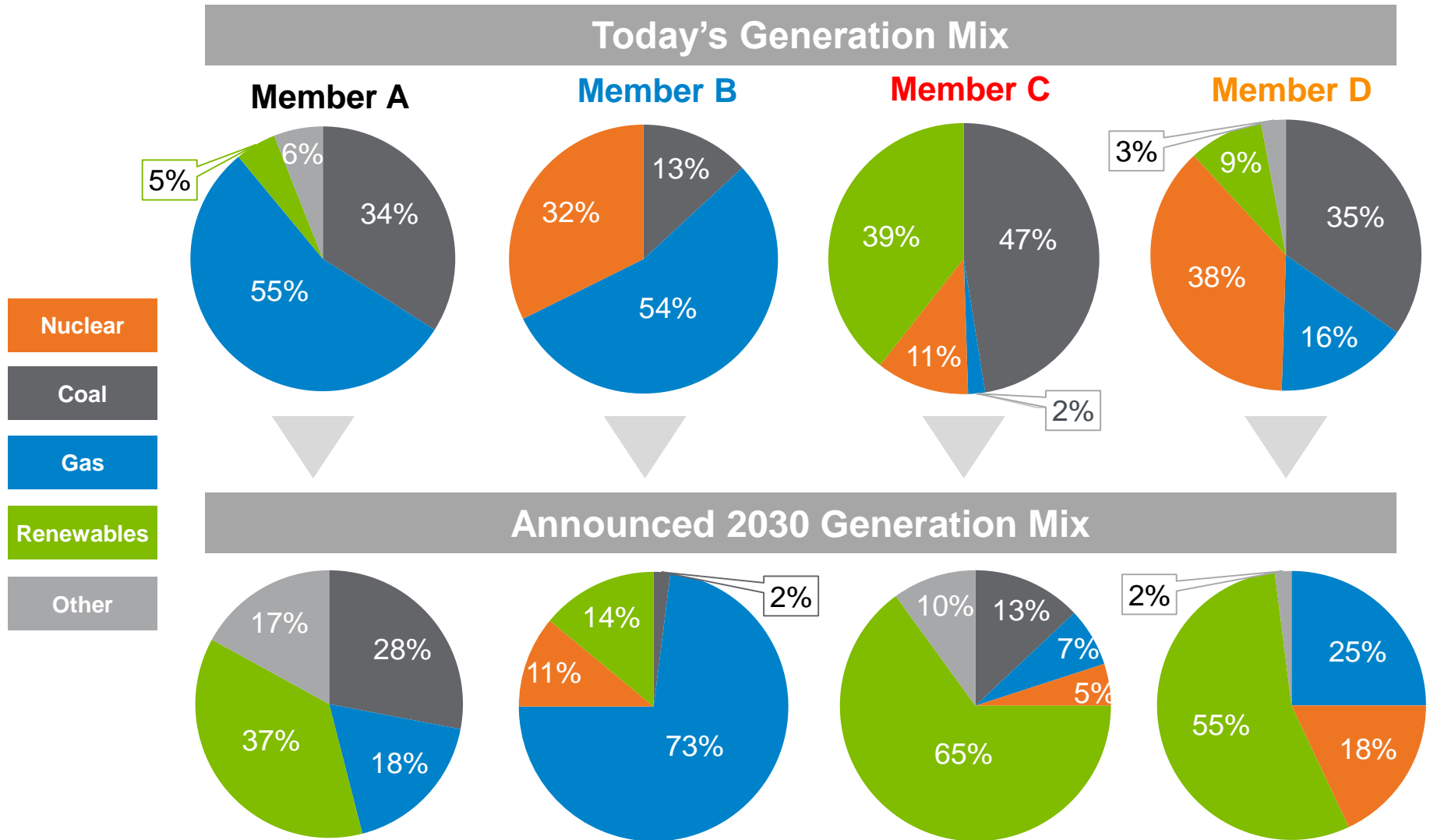
Issue ID#: RASC009, RASC010, RASC011, RASC012

March, 2020

MISO Region's Reliability Imperative

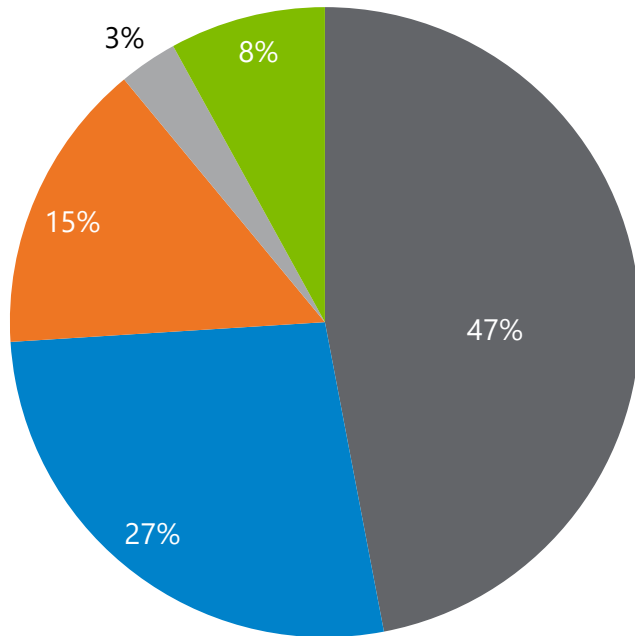
- Portfolio evolution and industry trends create a reliability imperative for change
- MISO believes that transitional and transformational enhancements must be made to ensure continued reliable and efficient operations
 - Policy & resource planning decisions are being made now (IRPs, retirements, investments)
 - MISO and the region must address future reliability now in order to meet your goals
 - Changes required now in planning, markets and operations

The resource portfolios of our members reflect these changes as well as the increasing diversity between member fleets...

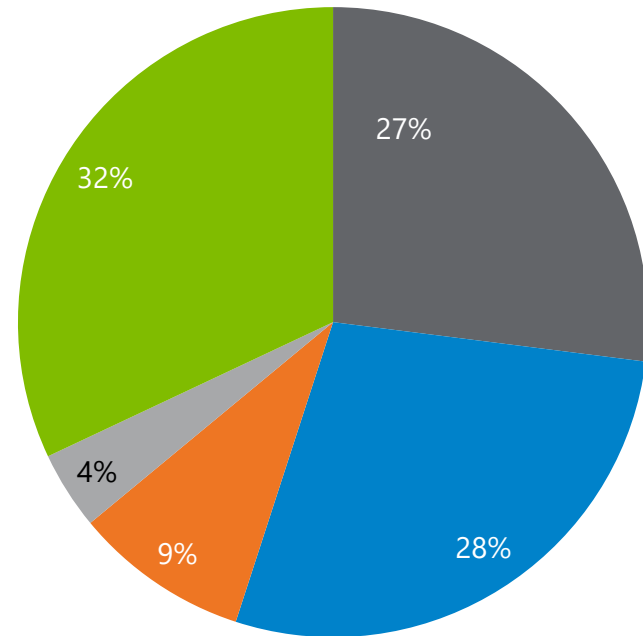


... leading to regional portfolio evolution and operational challenges that create a reliability imperative

2018 Generation Mix



2030 Generation Mix



Renewables



Other



Nuclear



Gas

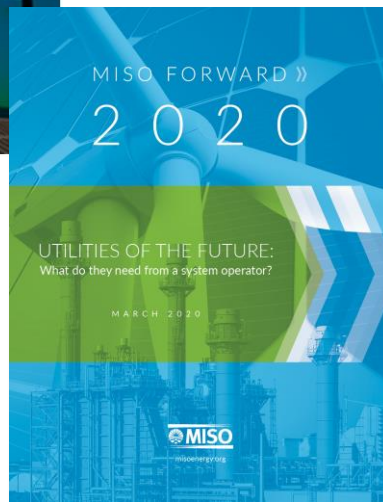


Coal

The reliability imperative must address MISO and member needs for Availability, Flexibility and Visibility



Reports and whitepapers frame need for change to address industry evolution



[MISO Forward March 2019](#)

[RAN Whitepaper Dec. 2019](#)

[MISO Forward March 2020](#)



MISO's Resource Adequacy & Need program addresses these challenges through near and longer term enhancements

- Identify Reliability Needs
 - Develop analytic methods to define reliability criteria
 - Identify needed attributes in addition to peak hour MWs
- Resource Planning Horizon
 - Define planning timeframe (annual, seasonal, monthly)
 - Determine necessary auction reform
 - Improve accreditation
- Operating Horizon
 - Improve pricing for existing products
 - Develop necessary new processes, tools and products

The 2020 focus is on sub-annual planning, accreditation, and scarcity pricing to address planning and operational horizons

	Identify Reliability Needs	Planning Horizon	Operating Horizon
Problem Statement	Annual LOLE does not address 24/7 risk in transforming grid	Stakeholders require better information to inform planning and investment decisions	Market prices must better reflect underlying system conditions
2020 Focus	Define system reliability needs and capabilities	Sub-annual planning + Planning Resource Auction reform Resource accreditation	Scarcity and emergency pricing