NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

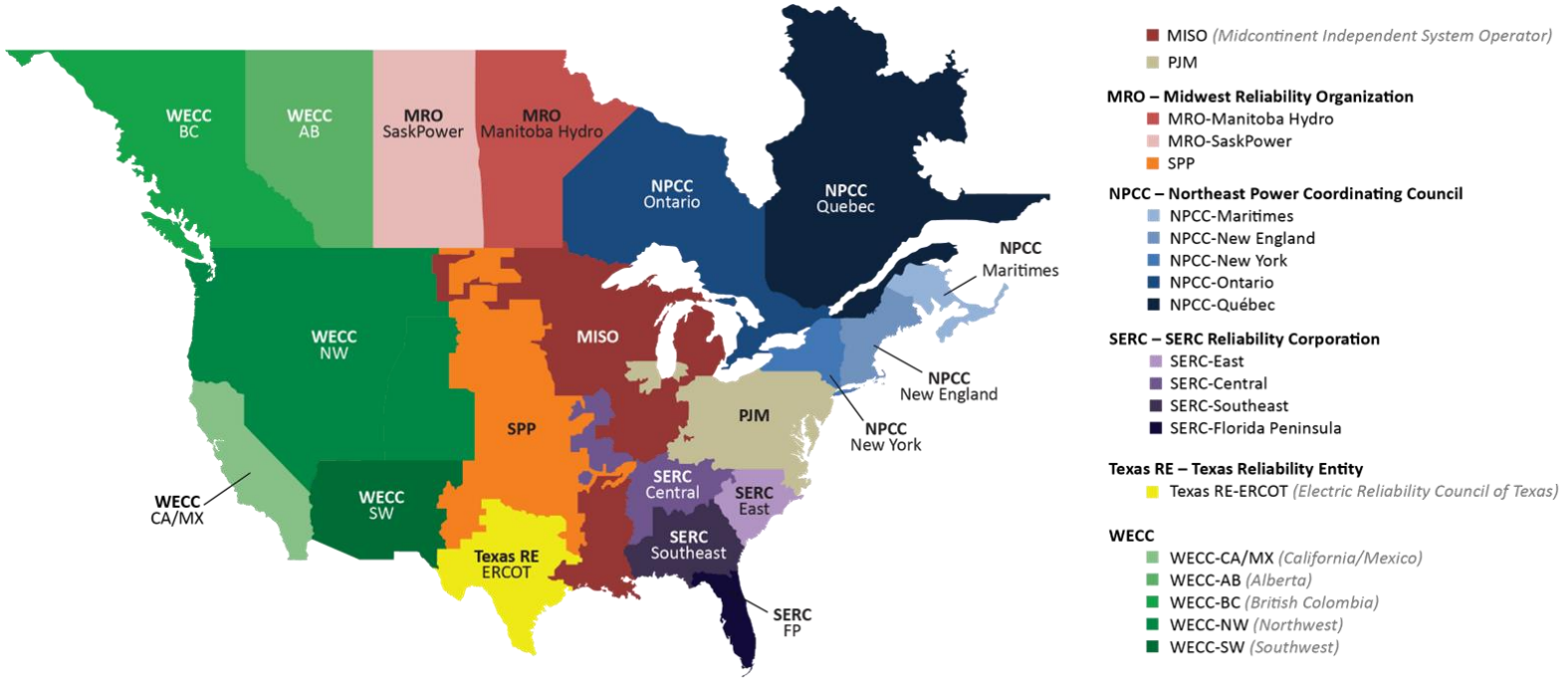
2023 Long-Term Reliability Assessment

Findings and Recommendations

Mark Olson, Manager, Reliability Assessments
ESIG Spring Technical Workshop
March 27, 2024

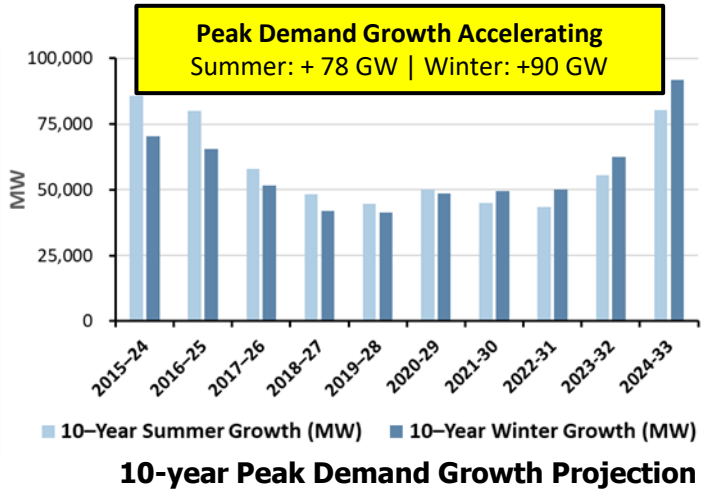
Long-Term Reliability Assessment (LTRA)

- 10-year assessment of resource capacity and energy risks
- Uses industry's demand and generation forecasts and transmission projections
- Coordination and Review with Regions and Stakeholders
- Includes resource and transmission trends + emerging issues that can impact future reliability

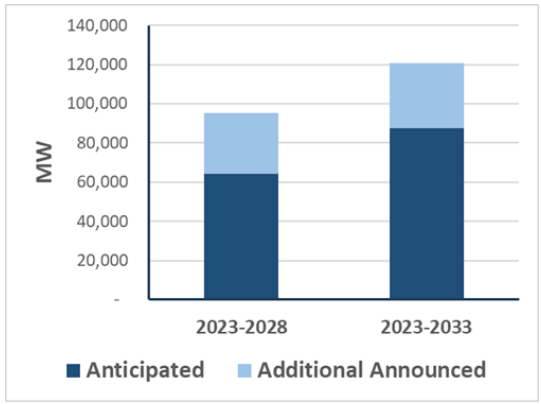


2023 LTRA Highlights

- Accelerating demand growth and generator retirements are increasing resource adequacy risks

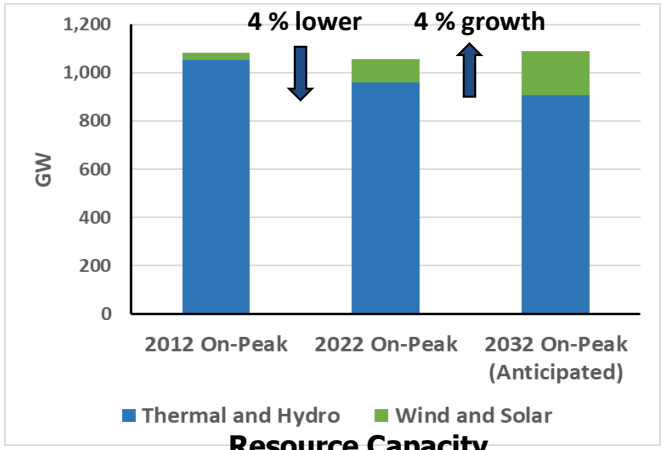


10-year Peak Demand Growth Projection

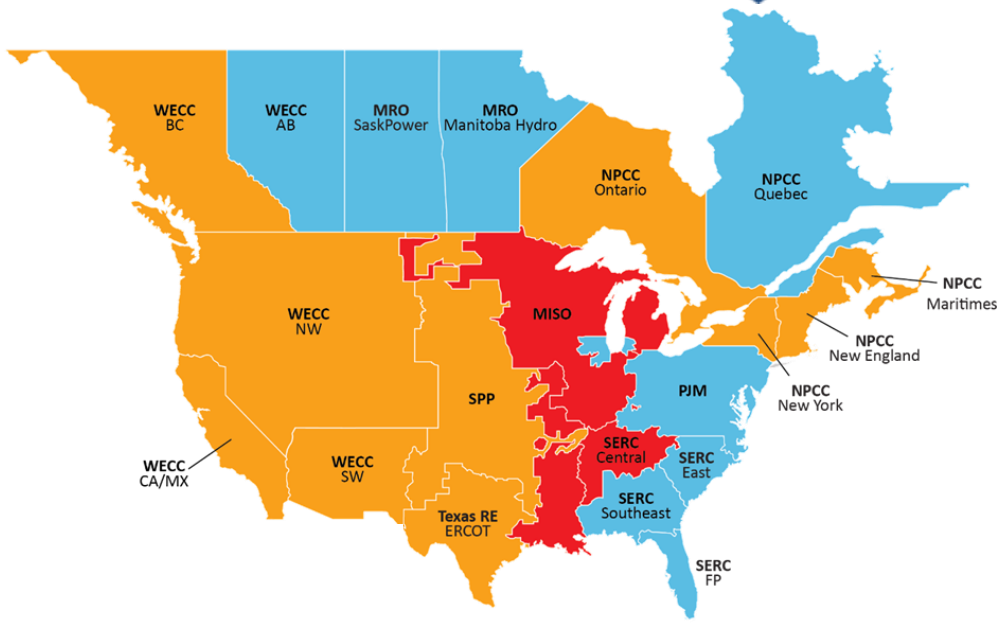


Generator Retirements

- Energy risks emerge when the resource mix lacks sufficient dispatchable resources



Resource Capacity



Risk Area Summary 2024-2033

High Risk

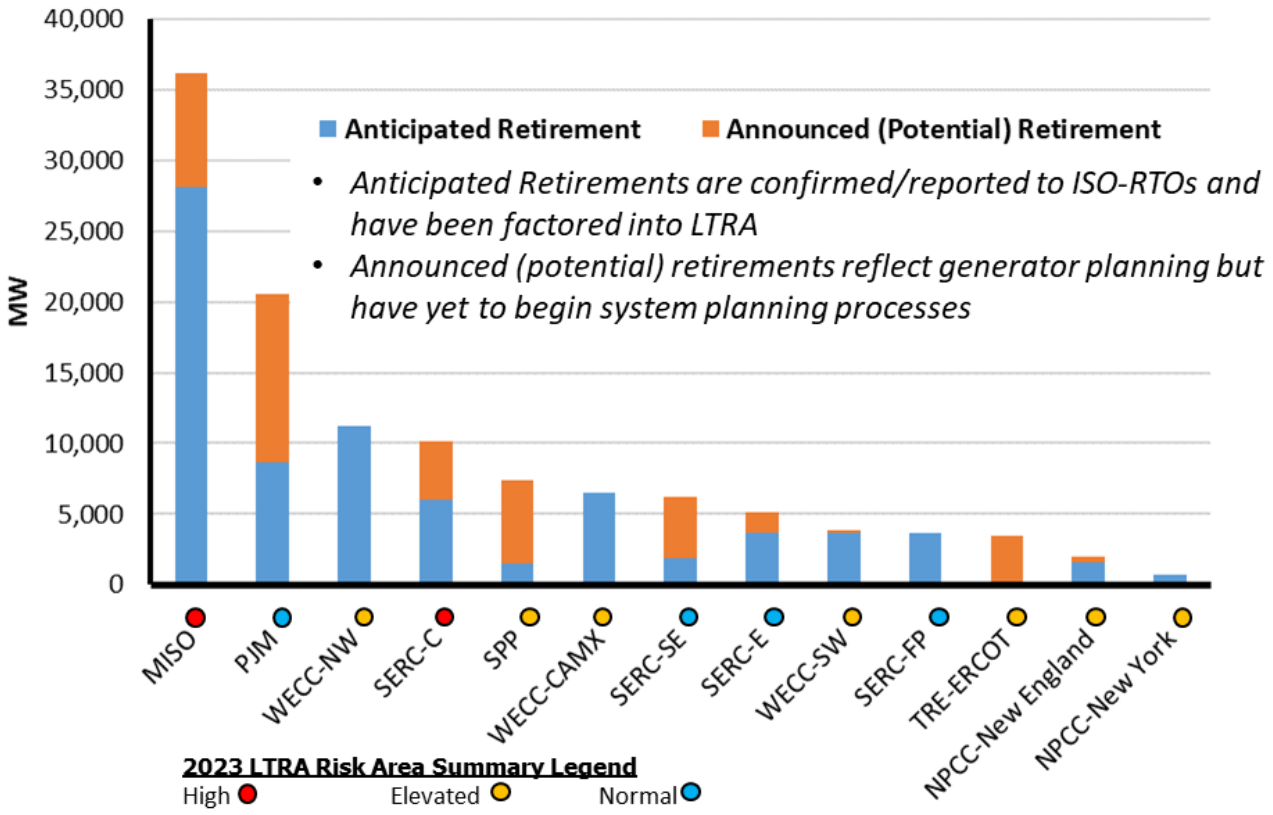
- Supply shortfall can occur in **forecast conditions**

Elevated Risk

- Supply shortfalls are likely in **extreme conditions** only

Generator Retirements

- Retirement of 51 GW of coal-fired + 30 GW of nuclear and gas-fired generation through 2033 accounted for in the LTRA
- Economic and regulatory factors make additional fossil plant retirements likely
  - Over 31 GW of additional coal-fired generation has announced plans to retire prior to 2033
- New resources: solar, battery, and wind
- Additional generator retirements can exacerbate future capacity and energy shortfalls and jeopardize essential grid reliability services



Anticipated and Potential Generator Retirement Capacity through 2033

Key Recommendations

The *2023 LTRA* contains actionable recommendations to meet accelerating demand growth as grid transformation continues

1. Add new resources with needed reliability attributes, manage retirements, and make existing resources more dependable
2. Expand the transmission network to deliver supplies from new resources and locations to serve changing loads
3. Adapt BPS planning, operations, and resource procurement markets and processes for a more complex power system
4. Strengthen relationships among policymakers and reliability stakeholders

NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

2023 Long-Term Reliability Assessment

Findings and Recommendations

Mark Olson, Manager, Reliability Assessments
ESIG Spring Technical Workshop
March 27, 2024