

UNSE RPAC Meeting Minutes – September 8, 2026

Facilitators:

Lauren Briggs (Director of Resource Planning)
Ryan Anderson (Business Development Manager)

Meeting Focus:

- 2026 IRP Preliminary Portfolio Review:
 - Resource adequacy and reliability assessment
 - Portfolio cost, emissions, and sensitivity results
 - Selection of the preferred portfolio and next steps

Key Themes and Topics Discussed:

1. Introductions

2. Stakeholder Representation:

- TEP/UNSE
 - Business Development
 - Communications
 - Environmental Services and Sustainability
 - Regulatory Services
 - Resource Planning
- Business Advocacy
 - AriSEIA
- Regulatory
 - Arizona Corporation Commission

3. Portfolio Evaluation

- Seven portfolios were evaluated, including:
 - A least-cost technology-neutral case
 - Clean energy buildout cases
 - High-load-growth scenarios
 - Portfolios containing pumped hydro, geothermal, and nuclear resources

4. Resource Adequacy

- UNSE applied an 18% planning reserve margin and a 15-year hourly stress test that restricted market purchases during critical hours to ensure reliability

5. Resource Buildout Results

- Clean energy portfolios required the largest resource additions while high-load-growth scenarios drove the greatest overall capacity needs

6. Emissions Discussion

- The plateauing of emissions after 2031 was discussed
- Load growth and the addition of dispatchable resources to maintain reliability contribute to the emissions trend

7. Cost Analysis

- Portfolio P01 (Technology Neutral) had the lowest NPVRR and P03 (HLFC Growth Technology Neutral) had the lowest average system cost
- Clean energy portfolios were materially more expensive

8. UNSE's Preferred Portfolio

- UNSE selected P01 as its preferred portfolio because it satisfied reliability requirements while providing the lowest cost path and maintaining technology neutrality
- The preferred portfolio includes the 2028 Dandelion solar plus storage PPA, the 2030 Black Mountain expansion project, a new natural gas combined-cycle resource in 2031, and additional solar plus storage later in the planning horizon

9. Resource Mix Observations

- Natural gas remains a critical reliability resource
- By the early 2030s dispatchable resources account for a large share of coincident peak capacity, while reliance on market purchases declines

10. Stakeholder Questions

Geothermal Selection

How is geothermal included in Portfolio 2 and Portfolio 6 if it is not available until 2034?

- Geothermal is available for the model to select beginning in 2034 in all portfolios.
- Only Portfolio 6 includes a required 25 MW geothermal addition.

Resource Adequacy

How does UNSE evaluate resource adequacy?

- UNSE uses an 18% planning reserve margin and an hourly stress test that limits access to market purchases during critical reliability periods

Resource Additions

Which portfolios require the largest resource additions?

- Portfolios 2 through 4 have the largest buildouts
- Portfolio 3 reflects the impact of higher load growth, while Portfolio 4 has the largest overall resource addition requirement

Black Mountain Expansion

What is the status of the 196 MW Black Mountain Expansion project?

- UNSE is working with WAPA on the interconnection, with the earliest expected in-service date in 2030

Emissions Concerns

Why do emissions stop declining in many portfolios after 2031?

- Additional resources are being added primarily to satisfy planning reserve margin requirements and serve existing and growing load

Preferred Portfolio Selection

Why was Portfolio 1 selected as the preferred portfolio?

- As the least-cost portfolio, it supports both the reliability and affordability planning objectives.
- Natural gas combined-cycle and solar-plus-storage additions are economically competitive over the long-term.

11. Future Planning

- UNSE indicated future all-source request for proposals will be issued as resource needs, costs, and reliability requirements evolve

Key Takeaways / Analysis:

- UNSE continues to prioritize reliability and affordability, with the preferred portfolio centered on dispatchable natural gas resources supported by solar and storage
- The modeling results suggest clean energy-only portfolios remain significantly more expensive than the technology-neutral case under current cost assumptions
- Natural gas capacity remains essential for meeting planning reserve margin targets despite increasing renewable penetration
- Reduced tax credit benefits and lower ELCC values increase the levelized cost of capacity of renewable resources
- Stakeholder concerns primarily focused on long-term emissions performance and the pace of decarbonization relative to load growth

Action Item: The public IRP workshop will take place in October with UNSE filing the IRP on October 30, 2026.