



Utilities Policy Advisory Committee (UPAC)

Wednesday, November 6, 2024

8:00 a.m. – 10:00 a.m.

Blue River Board Room

121 S. Tejon Street

Plaza of the Rockies or Microsoft Teams

[Click here to join the meeting](#)

8:00 a.m.	1. Call to Order	
8:05 a.m.	2. Approval of October 2, 2024 UPAC Meeting Minutes	Decision
8:10 a.m.	3. Utah Associated Municipal Power Systems	Discussion
9:50 a.m.	4. Customer Comment Citizens can provide comment in person, by joining the meeting from computer or by phone using the link above. If you would like to speak during the citizen comment period, please sign up to speak through BoardSubmissions@csu.org prior to the meeting.	Discussion
9:55 a.m.	5. Committee Member General Discussion	
10:00 a.m.	6. Adjournment	

Next meeting: December 4, 2024

Note: UPAC Bylaws, Rule 6: Customer and Public Comment: (b) At the discretion of the Chair, or the majority of the Committee Members present, customers and members of the public will be allowed to comment or ask questions concerning items discussed at regular meetings or concerning matters discussed at special meetings. Comments or questions by individuals will be limited to five minutes each, and all customer or public comments will not exceed twenty minutes on any agenda item unless time is extended by the Chair or majority of the Committee Members present.



Minutes
Utilities Policy Advisory Committee (UPAC)
Wednesday, Oct. 2, 2024
Blue River Board Room
5th floor, 121 S. Tejon Street
Colorado Springs, CO
and Microsoft Teams Virtual Meeting

Committee members present in the Boardroom or via Microsoft Teams:

Scott Smith, Gary Burghart, Michael Borden, David Watson, Katherine Danner, Chris Meyer, Tom Carter and Albert Badeau

Utilities Policy Advisory Committee Members Excused: Chair Larry Barrett

Staff members present in the Boardroom or via Microsoft Teams:

Travis Deal, Lisa Barbato, Tim Benedict, Renee Adams, Tristain Gearheart, David Longrie, Marcela Espinoza, Natalie Watts, Bethany Schoemer, Al Wells, Jason Reynolds, Jaqueline Nunez, Kathryn Rozwod, Amy Lewis, Jay Anderson, Will Russell, Heather Tocci, Troy Bass, Gabe Caunt, Kerry Baugh, JerrieAnn LaLond, Kaitlin Haslam, David Dalton and Steve Berry

Utilities Board members present in the Boardroom or via Microsoft Teams:

Chair Dave Donelson

City of Colorado Springs staff present in the Boardroom or via Microsoft Teams:

David Beckett and Jill Burris

Citizens present in the Boardroom or via Microsoft Teams:

Will Russell and Bryce Greenfield

1. Call to Order

Committee Member Gary Burghart called the meeting to order at 8:04 a.m. and called the roll.

2. Approval of September 4, 2024, UPAC Meeting Minutes

Committee Member Burghart made a motion to approve the Sept. 4, 2024, meeting minutes after a requested modification. Committee Member Scott Smith seconded the motion. The motion passed unanimously.

3. Generational Fuel Preference from 2020-2024

Ms. Leslie Smith, Analyst Supervisor, presented on the Colorado Springs Utilities customers' public perception of nuclear energy. This included survey data on public preferences for energy sources. Solar, wind and natural gas remain top preferences for

both residential and business customers. Nuclear showed a slight increase in interest among business customers. The committee discussed the need for further public engagement on nuclear topics.

4. Small Modular Nuclear Reactors

Mr. Bryce Greenfield, Nuclear Engineer from Grant County Public Utility District, presented information on small modular reactor (SMR) technology, focusing on NuScale and X-Energy designs. Mr. Greenfield presented two main SMR designs: NuScale (water-cooled) and X-Energy XE-100 (helium-cooled).

He explained SMRs offer higher power density than traditional energy sources - one uranium pellet equals a ton of coal. Both designs feature safety systems that eliminate the need for pumps in accident scenarios. SMRs can be load-following, operating between 40% and 100% of rated power. The safety features of SMR designs have safety systems that allow reactors to shut down safely without human intervention.

Mr. Greenfield said that X-Energy fuel design (TRISO) makes fuel meltdown "almost impossible". NuScale design places reactor modules in a large underground pool for additional safety. X-Energy uses TRISO fuel with multiple containment layers. These are fuel enriched to about 15.5% for X-Energy design, compared to 3%-5% for traditional reactors.

There is a current uranium supply challenge due to sanctions in Russia. The estimated production cost is around \$60 per megawatt hour for X-Energy design, and the total project cost is estimated at roughly \$3 billion for Grant County PUD's planned SMR. There is also the potential for long-term power purchase agreements with data centers to help finance construction. NuScale is currently the only SMR design with an approved license in the United States. X-Energy is working through the licensing process, and the regulatory approach for SMRs is still evolving.

5. Customer Comment

There were no customer comments.

6. Committee Member General Discussion

The committee discussed the importance of understanding community needs, regarding potential military involvement and data center demands from companies like Microsoft and Amazon. There was an emphasis put on the necessity for further study and exploration of nuclear technologies. Concerns about costs, complexity, and public perception were raised, with a consensus on the need for a clear set of recommendations moving forward. The committee recommended that the next steps would involve potential future presentations and outreach to local military installations.

7. Adjournment

Committee Member Burghart adjourned the meeting at 9:49 a.m.

Next meeting: Wednesday, Nov. 6, 2024, at 8:00 a.m. in the Blue River Board Room

CFPP LESSONS LEARNED

UTAH ASSOCIATED MUNICIPAL POWER SYSTEMS

November 6, 2024

Mason Bakers, CEO and General Manager

5 of 16

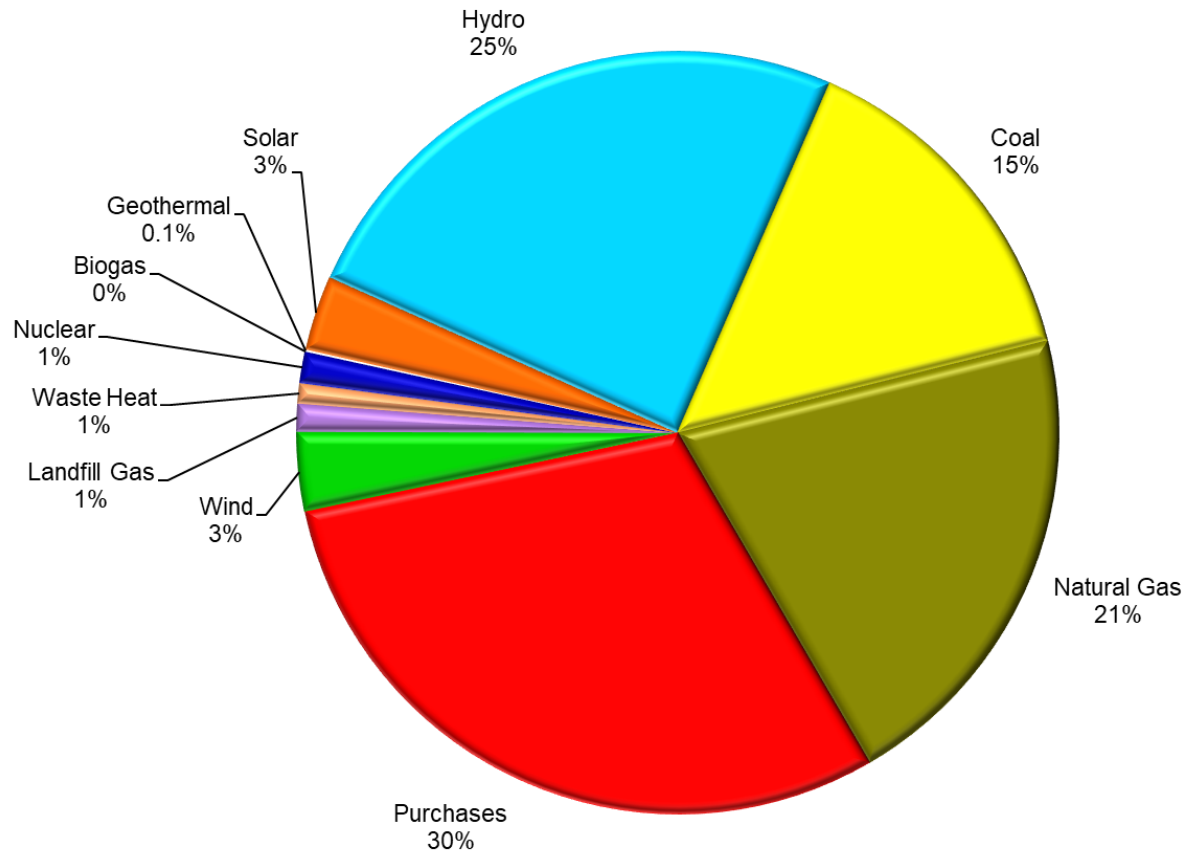




UAMPS Overview

- Joint Action Agency
- Non-profit
- 50 members in 7 western states
- Project-based with 16 Projects
- Economic energy solutions

UAMPS PROJECTS



Resources by Type: 2023

Generation Projects

Hunter Project – coal-fired

San Juan Project – coal-fired (retired)

IPP Project – coal fired (converting to natural gas)

Nebo Project – natural gas

Natural Gas Project

CRSP Project – hydro

- Provo River - hydro
- Olmsted - hydro

Horse Butte Wind Project – wind

- Software upgrade and additional phase – investigating

Veyo Project – waste heat

Firm Power Supply Project

- Pleasant Valley – wind
- Patua – geothermal and solar
- Red Mesa Tapaha (2023) – solar
- Steel 1A and Steel 1B (2024) – solar
- Sunnyside – waste coal

Carbon Free Power Project – small modular reactors (terminated)

Transmission Projects

Central-St. George Project

Craig-Mona Project

Service Projects

Pool Project – dispatch and scheduling services

Resource Project – investigation of new resources

GPA Project

Member Services Project

THE ENERGY TRANSITION

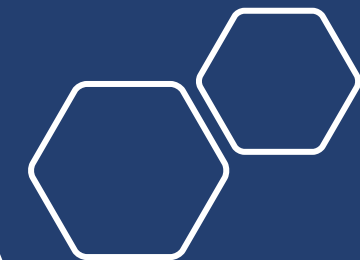
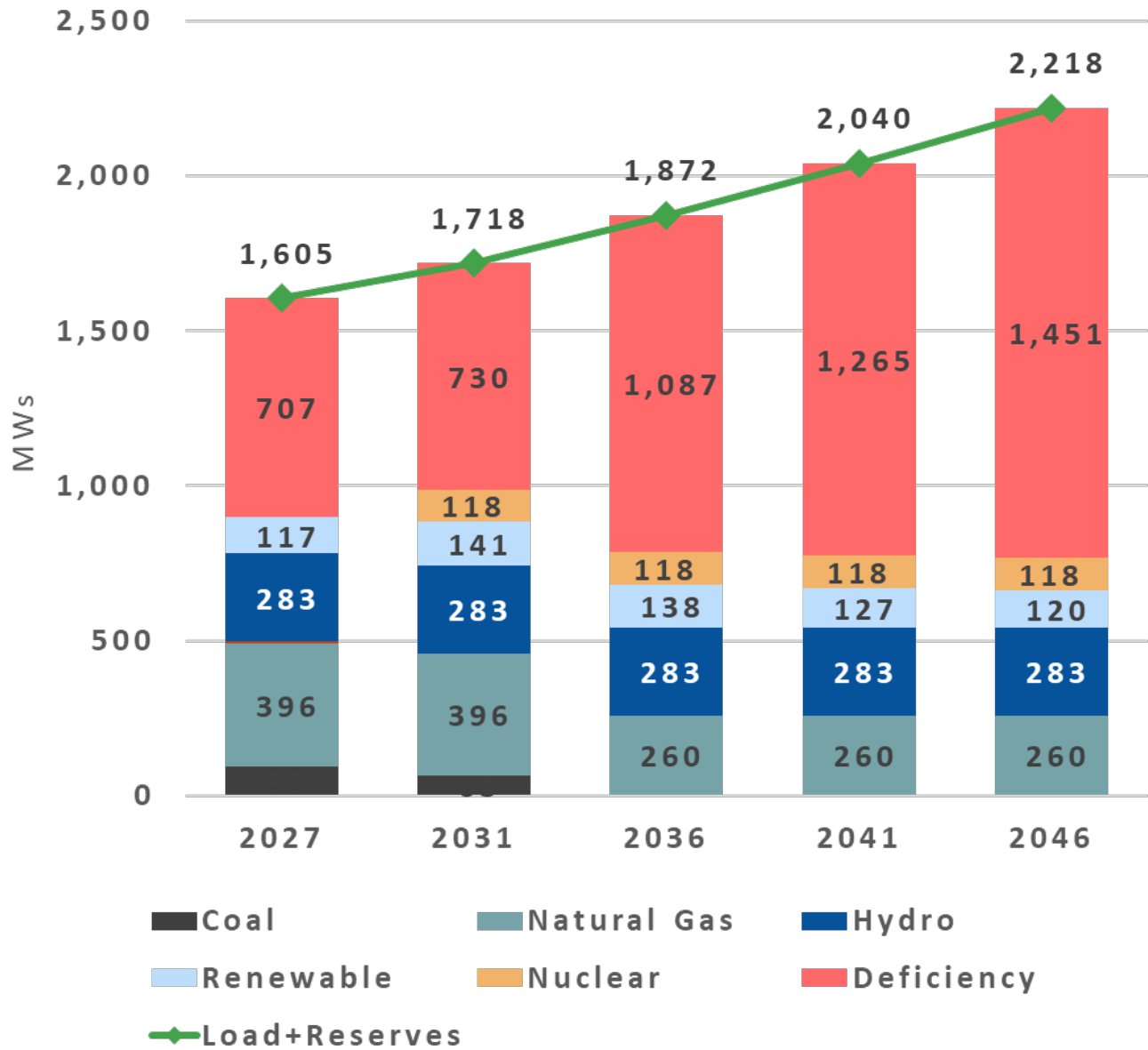


Growing loads while maintaining reliable, cost-effective wholesale electricity to UAMPS members as the economy is electrified.



All resources including nuclear must play a major role in meeting the **Energy Transition Challenge**.



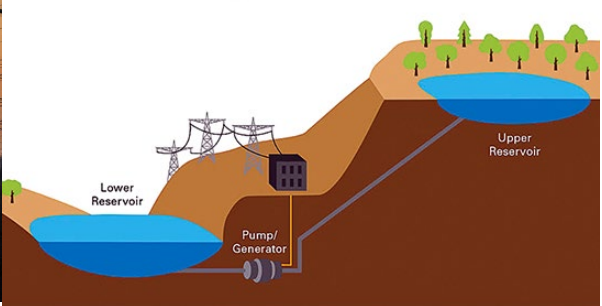
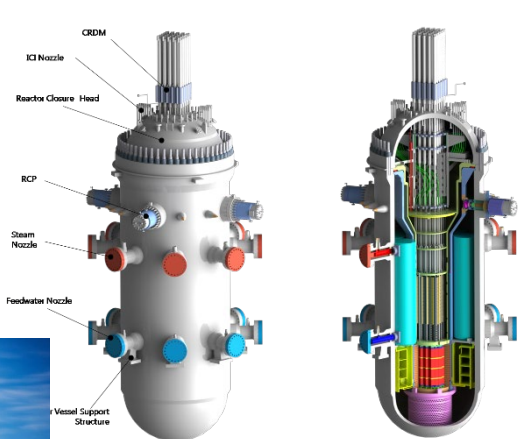
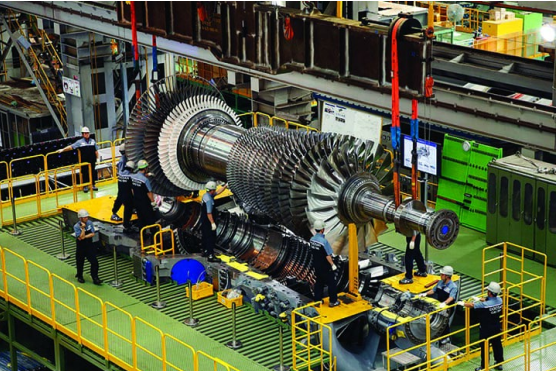


IRP Results

- New resource need
- Reserves=115% of load
- Peaking need

New Resources: All of The Above

Actively studying/developing around 1,000 MW of new generation for the Members



AFFORDABILITY



Transition to Low/No Carbon Generation will result in increased costs to the end use customer.



Renewable energy pricing: Renewable generation pricing has become more economic over the last decade.



Renewable energy intermittency: Renewables are intermittent, and we need dispatchable generation to ensure a reliable electric system.



Natural Gas Generation is becoming the default resource to meet dispatchability needs but its long-term role in the Energy Transition is uncertain.



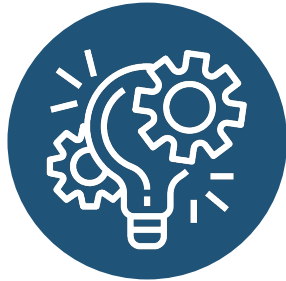
CFPP SUCCESSES

- 1. Local, State and Federal Support**
 - Congressional support during and after the termination decision
 - FY24 Largest bipartisan appropriations letter of support – 46 members
 - DOE support and engagement
- 2. Incredible project team to execute permitting and constructing the project**
- 3. The most advanced cost estimate of any SMR**
- 4. NRC engagement**
 - NuScale design certification
 - Limited Work Authorization (LWA)



*Bipartisan Congressional Staff Visit to
CFPP Site*

CFPP CHALLENGES



FIRST-OF-A-KIND (FOAK)

First-of-a-kind construction risk.



SUBSCRIPTION

CFPP terminated due to not achieving 80% of output subscribed—UAMPS members required outside parties to share in the development/construction risk.



FOAK CONSTRUCTION

Tremendous interest by potential subscribers BUT FOAK construction risk exposure an impassable roadblock.



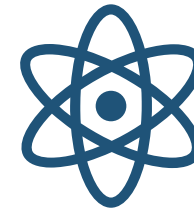
SOLUTIONS TO MAKING NEW NUCLEAR A REALITY



Commercial challenges led to the decision to terminate - not technical or permitting issues.



Additional federal support to address FOAK commercial issues - e.g. construction cost overrun exposure



Big Tech Investments in Nuclear – Potential solution should additional federal support not occur



UAMPS CONTINUED PURSUIT OF NEW NUCLEAR



Evaluating other new resource options outside of nuclear that are necessary for achieving a balanced resource portfolio for the members.



New nuclear will need to be part of the UAMPS members' resource mix.



UAMPS will investigate a non-ownership role in new nuclear through a power purchase agreement with an ownership option after commercial operation has been achieved.



UAMPS

QUESTIONS

UTAH ASSOCIATED MUNICIPAL POWER SYSTEMS