

UAMPS Presentation to Los Alamos County on the Carbon Free Power Project

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Acknowledgment & Disclaimer

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Topics to be Discussed

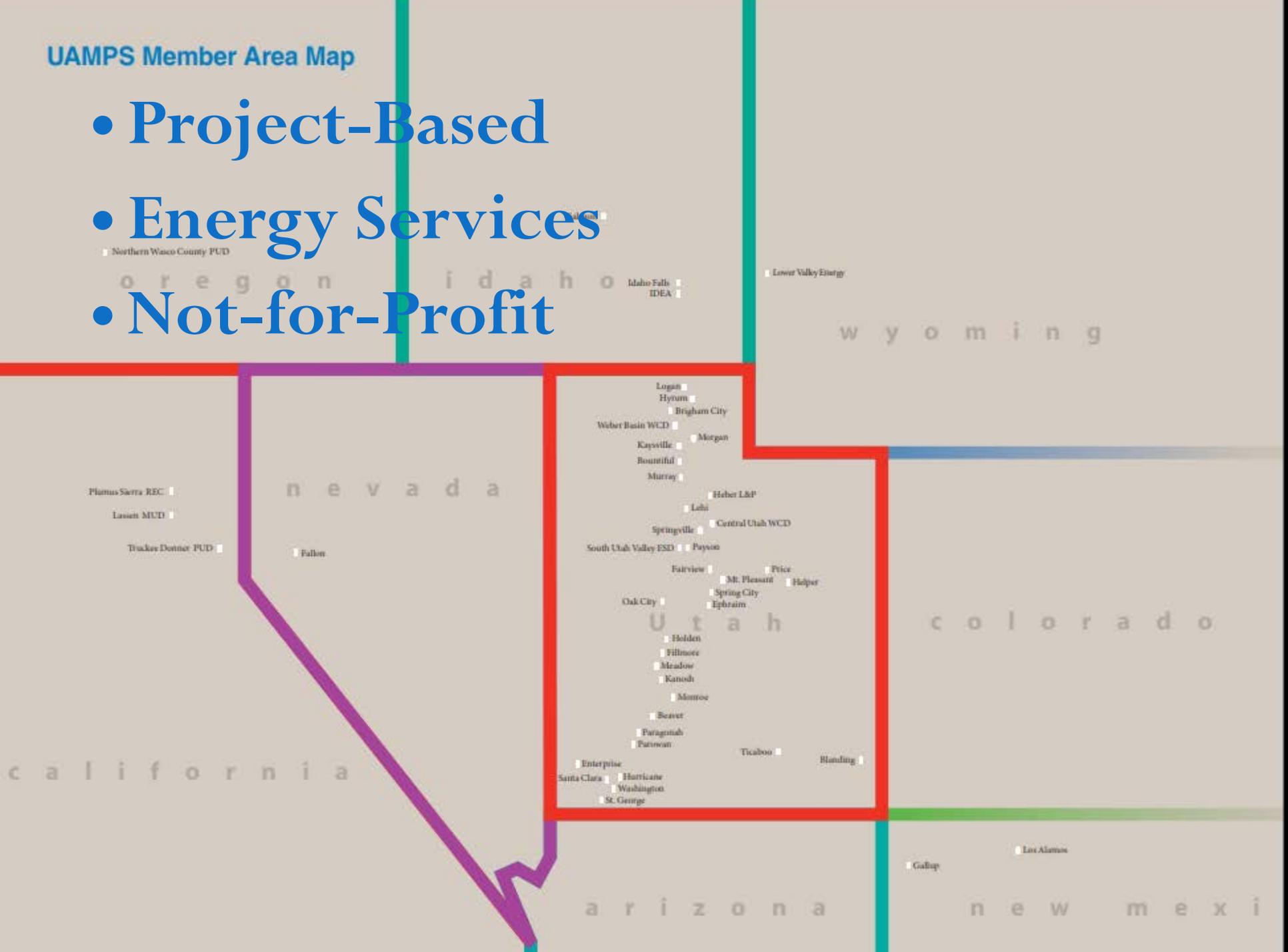
- What it means for Los Alamos County to be a member in UAMPS and a Participant in the Carbon Free Power Project (CFPP)
- Why UAMPS is exploring the CFPP
- High level discussion of CFPP Power Sales Contracts
- Development Approach and Project Risks
- Cost Feasibility of Doing the Project

UAMPS Overview

- A separate legal entity and a political subdivision of the State of Utah
- Organized in 1980 under the Interlocal Cooperation Act, Title 11, Chapter 13, Utah Code Annotated 1953, as amended
- Each Member has entered into the UAMPS Joint Action Agreement (JAA)

UAMPS Member Area Map

- Project-Based
- Energy Services
- Not-for-Profit



Project Participation

- Becoming a Participant in the CFPP
 - Siting Phase Study Agreement
 - Currently, there are 36 Participants in the Project

WHY THE CFPP?

The ENVIRONMENTAL Regulatory Perspective

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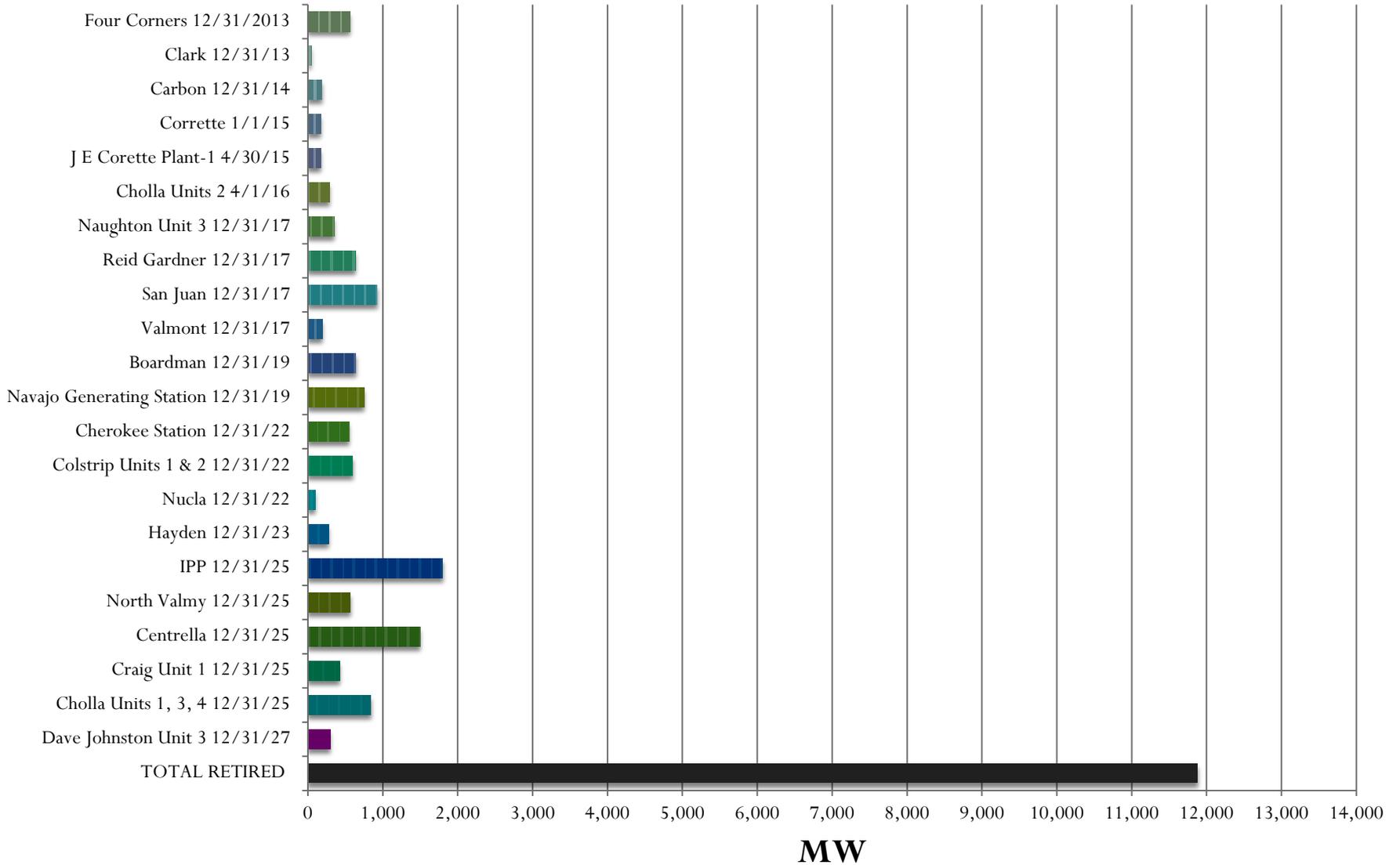


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What is the CFPP?

- Carbon Free Power Project=UAMPS effort, on behalf of its members, to examine how to de-risk UAMPS' exposure to carbon regulation
- Three pronged approach=Investigation of Nuclear Small Modular Reactors, Energy Efficiency, and Distributed Generation (Rooftop Solar)
 - Underlying Premise for Pursuing Above 3 Resources:
 - Industry is shifting towards cleaner forms of electricity production, which is inherent to all 3 of the above resource options.
- Next Phase in Developing the CFPP: Further developing the option by additional work on submitting an application to the Nuclear Regulatory Commission to ultimately construct and operate the CFPP Project

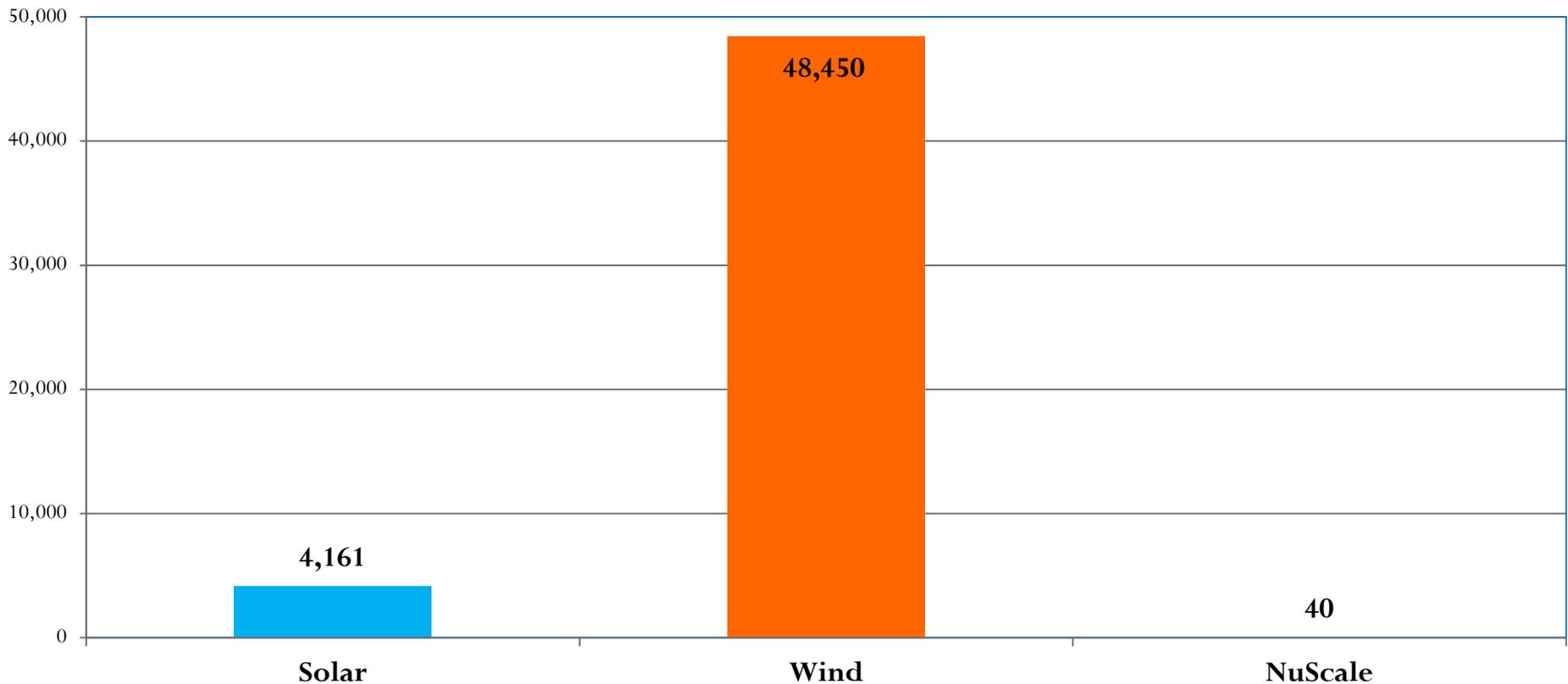
Western Coal Plant Retirements (Actual & Announced)



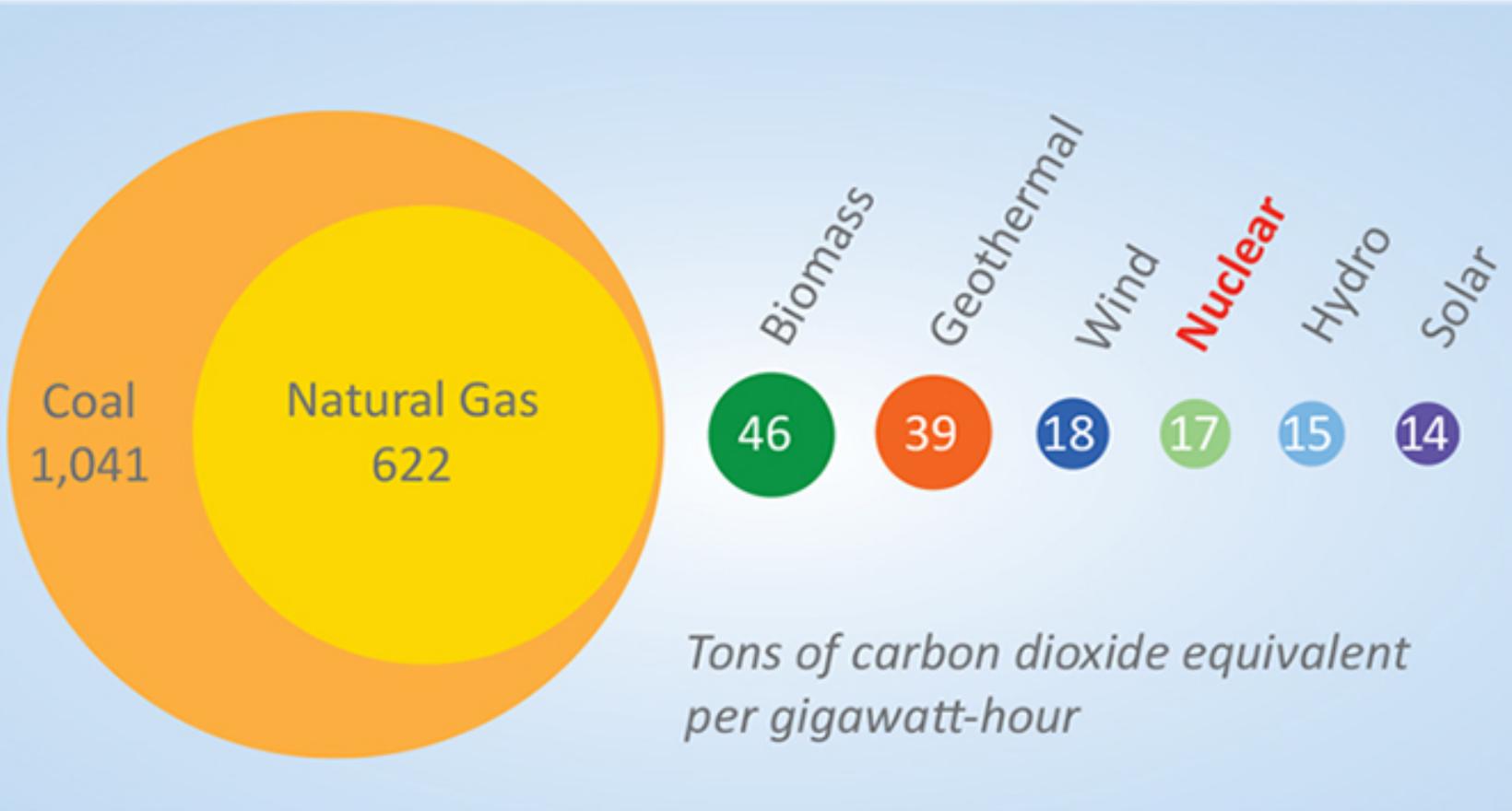
WHY SMRs?

- Environmental Impacts:
 - No greenhouse gas (GHG) emissions when generating electricity
 - Lifecycle GHG emission much lower than comparable alternative (NGCC)
 - Much smaller environmental footprint/impact than alternative carbon free generating resources (utility scale wind and solar)

Acres Required for 570 MW



Lifecycle CO2 Emissions from Electric Sources



CFPP Power Sales Contracts

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Carbon-Free Power Project

Power Sales Contracts

- The CFPP Power Sales Contracts will include a number of provisions that have been used in the Power Sales Contracts for UAMPS' existing projects, as well as a number of refinements that will be tailored to the CFPP
- Main distinction is Licensing Period
 - Extended development period
 - Licensing Period Development Work:
 - work necessary to submit the COLA to the NRC
 - negotiation of definitive project agreements with NuScale, Fluor, Energy Northwest and other parties
 - procurement of interim financing for development costs, including seeking grants and additional cost-sharing arrangements. Participants' governing bodies to separately approve development cost financings.
 - Licensing Period divided into 3 Phases to allow for comparative approach to developing the CFPP relative to other resource option

Other Power Sales Contracts

Periods

- Construction Period
 - Begins at the completion of development and ends on the commercial operation date of the CFPP
 - UAMPS will finance and pay the cost of construction of the CFPP, monitor the performance of the EPC contractor and confirm adherence to the construction budget and construction schedule
- Operating Period
 - Extends from the commercial operation date to the date on which the CFPP is permanently removed from service
 - UAMPS will establish annual budgets for CFPP operations as well as budgets for capital improvement and repair and replacement costs, monitor the performance of the CFPP operating agent, and sell and deliver the output of the CFPP to the Participants

Other Power Sales Contracts Periods

- Decommissioning Period
 - Begins at the end of the Operating Period and continues until the CFPP is fully decommissioned and all decommissioning costs and liabilities have been paid and discharged
- Term of the Power Sales Contracts will extend from the beginning of the Licensing Period to the end of the Decommissioning Period

Participant Payment Obligations

- Each Participant has an Entitlement Share in a specified percentage of the capacity and output of the CFPP
- The Entitlement Share has the effect of passing through the benefits and burdens of the CFPP to the Participants
- All payments by the Participants are made on a “take-or-pay” basis regardless of whether the CFPP is constructed, completed, operable or operating
- The amounts payable by the Participants constitute the principal security and source of payment for UAMPS’ financial and contractual obligations in connection with the CFPP

Participant Covenants

- Under the Power Sales Contracts, each Participant covenants that:
 - Charge and collect rates for the electric service it provides to produce revenues sufficient to meet its obligations under the Power Sales Contracts
 - Operate its electric utility in a prudent manner
 - It will not sell or lease its electric system or transfer or assign its Entitlement Share, except upon prior notice to UAMPS and compliance with Power Sales Contracts provisions

Engineering, Procurement, & Construction (EPC) Contract Development Agreement

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Engineering, Procurement, & Construction Contract Development Agreement

- Parties: UAMPS, NuScale & Fluor
 - NuScale & Fluor providing services under a consortium approach
 - NuScale Original Equipment Manufacturer (OEM)= Providing NuScale's Nuclear Technology
 - Fluor=Constructing the project, building NuScale's technology and responsible for building the balance of plant

Background Issues to EPC Development Agreement Negotiations

- NuScale and UAMPS actively seeking additional DOE funding for the CFPP
- Pending NPTC legislation that will allow tax credits to be utilized by the project
 - Means to monetize these tax credits as a not for profit state entity

Purpose of EPC Development Agreement

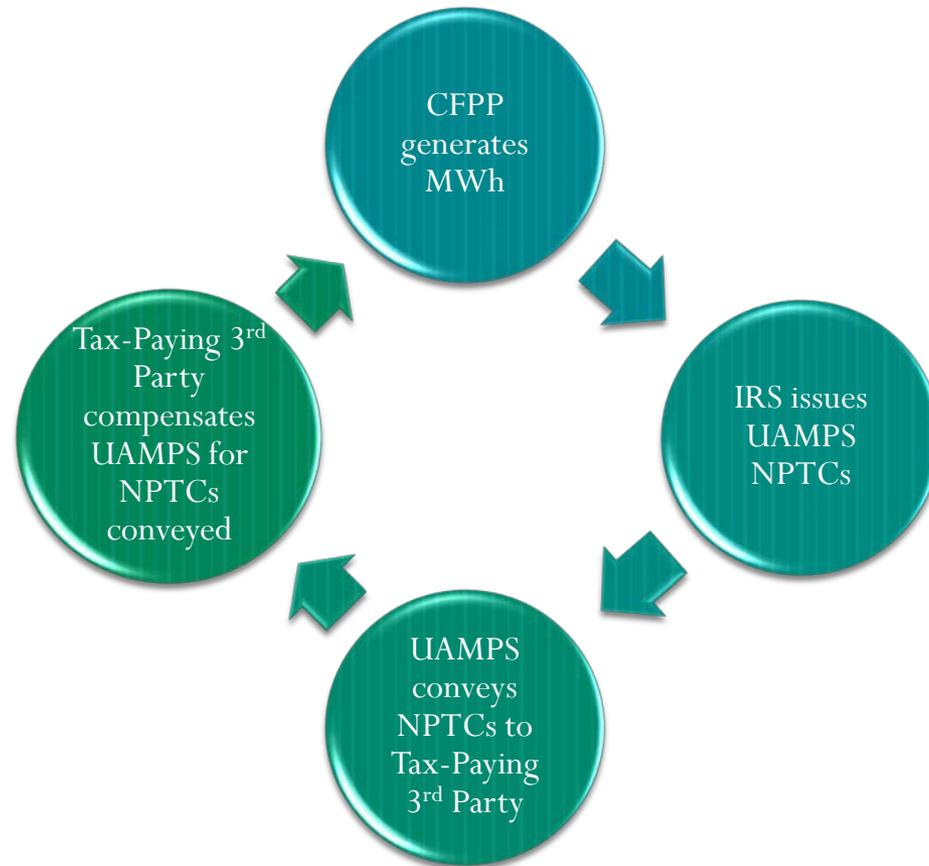
- Set forth the binding terms amongst the Parties that will govern how the CFPP continues to be developed and the process leading to the parties agreeing to a EPC Contract Price to construct the CFPP
 - **Key Issue:** Too early in the development process for the Consortium to agree to a EPC Contract Price
 - UAMPS will incur developments costs (e.g., developing and submitting the COLA to the NRC)
 - UAMPS and Consortium negotiating exit terms and allocation of UAMPS development costs if CFPP proves to be uneconomic
 - NuScale has offered UAMPS an additional \$5M in co-development costs to further reduce risk for near-term development—on similar terms to existing \$1.6M in co-developments being paid by NuScale

Key Issues to be dealt with in the EPC Development Agreement

- Potential means for monetization of the Nuclear Production Tax Credit
- Exit Terms and allocation of UAMPS development costs if CFPP proves to be uneconomic
- Typical Commercial Terms that will be in the final EPC Contract (warranty, standard of care, division of labor amongst the parties, limitations on liability, events of default)
 - Important to reach agreement on these terms now prior to conducting future development in the project

Monetization of Nuclear Production Tax Credit (NPTC)

Terms of
How NPTC
Conveyance
could be dealt
with in EPC
Term Sheet



Economic Competitiveness Test

- Consortium will be revising its cost estimate for what it will cost to construct the CFPP
- Cost Estimate will be compared to what it will cost to construct and operate a natural gas priced combined cycle plant of a similar size to the CFPP (570 MW net)
- If a price gap remains → UAMPS afforded with the option to terminate further development
 - Note: Allocation of UAMPS development costs if CFPP proves to be uneconomic is subject to further negotiations
- Economic Competitiveness Test will be performed until parties reach a EPC Contract Price
 - UAMPS will present a timeline for how this process will occur and the development costs UAMPS will incur along this timeline

Next steps in EPC Development Agreement Negotiations



Development Approach for the Project & Project Risks

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Comparative Resource Approach

- Comparing the Cost of Doing the CFPP relative to a similarly sized natural gas combined cycle plant
 - Why?
 - Most likely resource alternative for building a new baseload resource
 - How?
 - Hired a consultant to compile a pro forma for a natural gas combined cycle plant
 - ~600 MW NGCC
 - 570 MW (net) to match SMR
 - What is the commitment?
 - Phased approach to developing the Project
 - 3 Phases contemplated during the Licensing Period
 - Phased approach to allow UAMPS to weigh the most current cost of doing the CFPP against the NGCC alternative

570 MW NGCC Option

- High Level Assessment/Pro-Forma Development (cont.)
 - Environmental Expenses
 - Assumes no cost for CO₂
 - Can be adjusted to include CO₂ compliance costs as regulations become more clear
 - Emission rates for CO₂ and other regulated emissions are calculated in the model, but not applied

Project Risks

- First of a Kind Project: Risks exists but can be mitigated
 - Phased development approach cornerstone of risk mitigation strategy
- Licensing Period:
 - Project proves uneconomic
 - Mitigation=UAMPS may terminate the Project and seek reimbursement from NuScale for a portion of its Development Costs
 - Permitting Risk → failure to get necessary Project permits (NRC, water, etc.)
 - Mitigation= UAMPS has been meeting with permitting agencies since 2015; NuScale's Design Certification Application submitted two plus years in advance of UAMPS' NRC COLA

Project Risks....

- Construction Period:
 - Construction Delays:
 - Mitigation= Delay risk will be addressed in final EPC Contract with Fluor and NuScale
 - Construction period (36 months) is significantly less than large scale reactors currently under construction in southeastern US
 - Fluor has taken over construction management of these projects and accounting for lessons learned from those projects in devising CFPP construction schedule
- Operating Period:
 - Performance Risk
 - Mitigation=performance guarantees will be identified in the final EPC Contract

Carbon Free Power Project TRANSMISSION

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How will the energy be delivered to Los Alamos County?

- 4 Potential Ways:
 - Displacement Arrangement (physical delivery of CFPP power to a different delivery point than Los Alamos in exchange for another entity delivering same amount of energy to Los Alamos)
 - WAPA → has existing transmission rights to accommodate physical delivery to Los Alamos
 - Shift to Organized Transmission Market → new market would change from a point to point transmission system to flow based, providing for physical delivery to Los Alamos County
 - Buying point to point transmission

Carbon Free Power Project FINANCING

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Current Funding

- DOE Assistance Agreement
 - DOE Cooperative arrangement – 50% of all eligible project costs under this award (\$16.6M)
 - NuScale and UAMPS have agreed to an elective Cost Sharing Option (CSO). Under the CSO, and UAMPS's election, NuScale will pay for 25% of all eligible project costs under this award (not to exceed \$1.6M)
- DEED Grant Award (APPA) → APPA awarded UAMPS a DEED Grant in the amount of \$125,000 earlier this year
- Participant Revenue

Next Steps

- If Participants move forward with executing Power Sales Contracts → financing will occur to fund further development costs, namely to compile the NRC license application (COLA)

Carbon Free Power Project COST FEASIBILITY

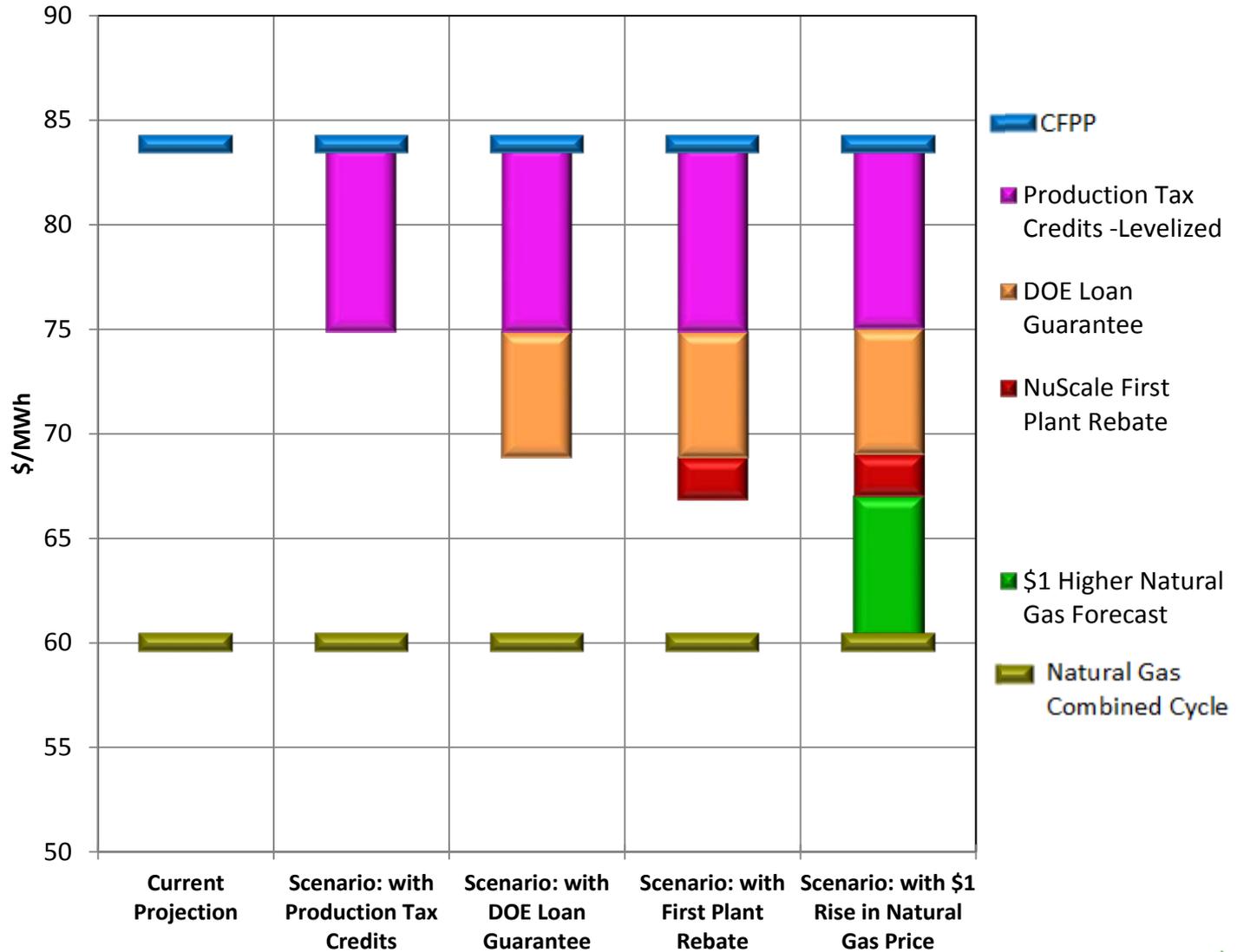
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CFPP Compared to Natural Gas Plant



Why the CFPP?

Concluding remarks

- NuScale's technology has promise to be a cost competitive resource that has reduced exposure to likely future environmental regulations (GHG regulation)
 - Reduced environmental footprint = reduced environmental exposure
- Future GHG regulations are uncertain at present—but trajectory towards increased regulatory pressure on carbon emitting resources
 - These regulatory pressures will result in compliance costs
 - Magnitude of these costs will become clear as CFPP development proceeds
- Phased approach to developing the CFPP provides the UAMPS Participants the ability to gain clarity on the economic competitiveness of proceeding with the CFPP