Attachment 3
Jan 16, 2017

UAMPS Carbon Free Power Project (CFPP)

Briefing to Idaho Legislative Committee

January 16, 2017

UAMPS
Utah Associated Municipal Power Systems

SMARTENERGY

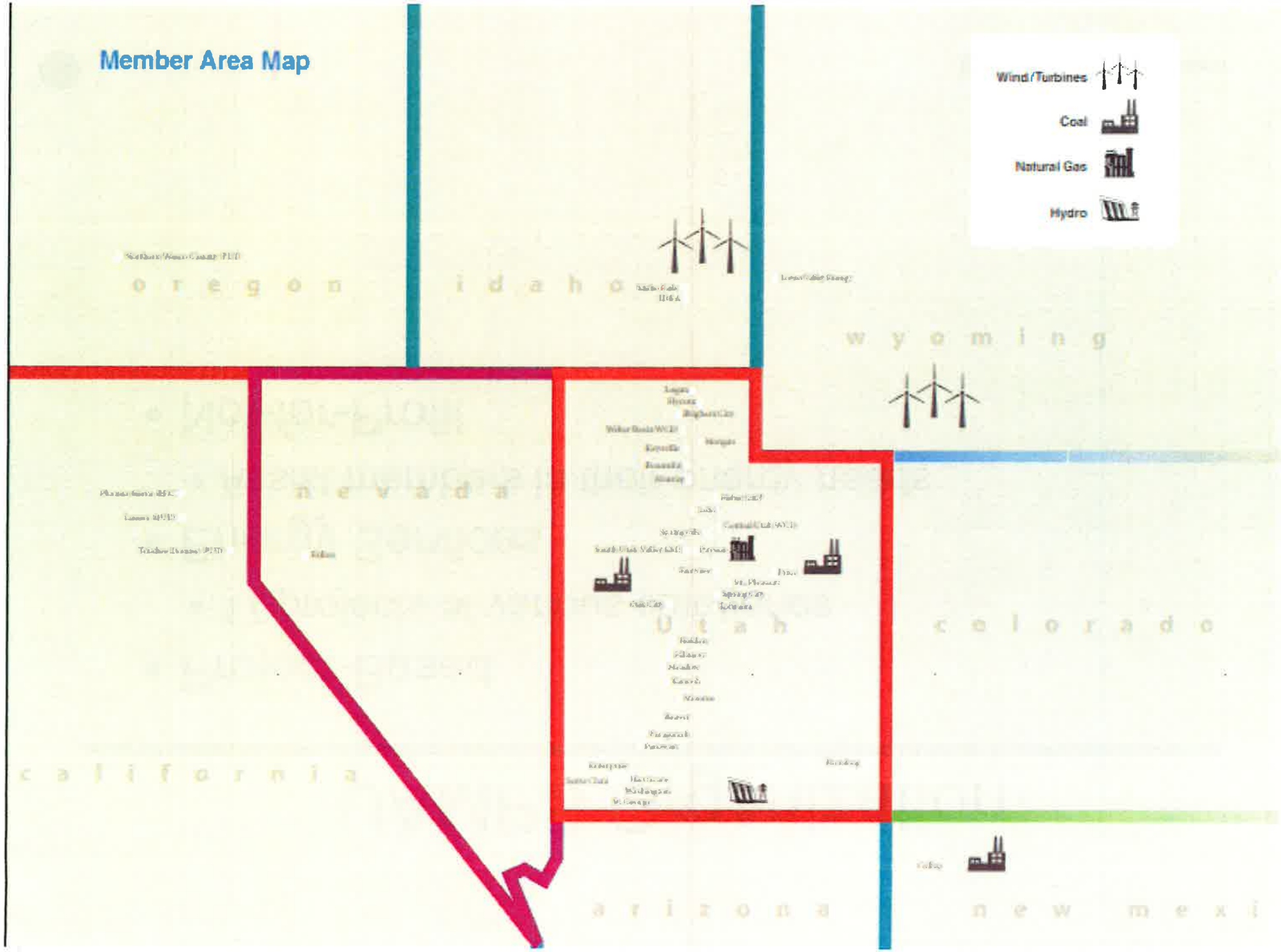
Description of UAMPS

- UAMPS is an Energy Services Interlocal Agency
  - Created in 1980 under State of Utah statutes
  - 47 members in 7 Western states
    - Most are municipal electric utilities
    - Offer an array of various services and projects
      - Members free to develop their own projects w/o the group

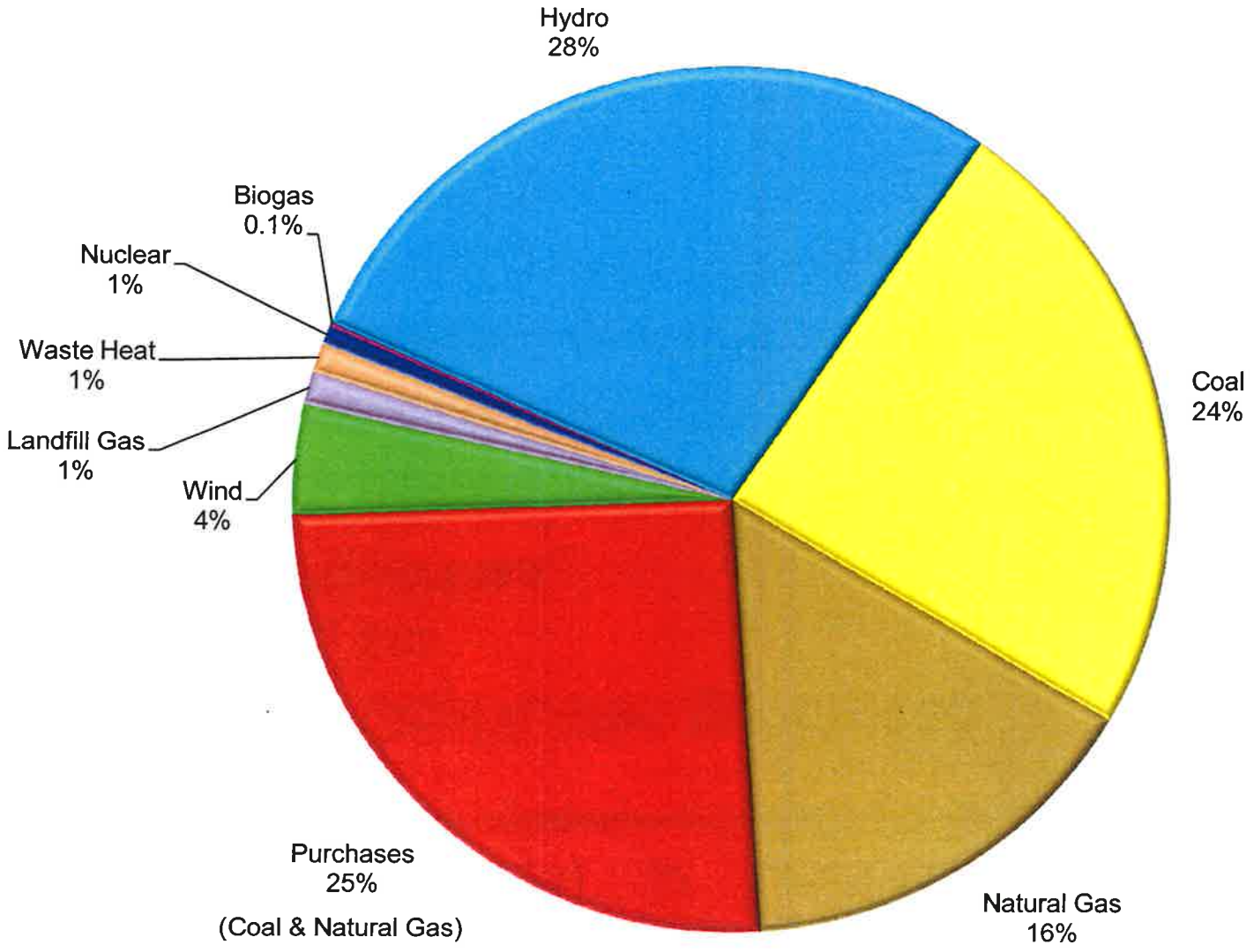
UAMPS Organization

- Project-Based
  - 17 projects of various categories
- Energy Services
  - Assist members in their energy needs
- Not-for-Profit

Member Area Map



UAMPS Resources by Type: 2015-2016



UAMPS' Concerns

- Future of Coal fueled generation
  - Clean Air Act
  - Clean Power Plan
- Future of power market
  - Derivative of coal fueled generation
- Future of natural gas fueled generation
  - What is the end-goal for C02 reduction?
  - Fuel price volatility

What is the CFPP?

- Carbon Free Power Project - UAMPS effort, 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)
  - Pursue Above 3 Resources:
    - Industry is shifting towards cleaner forms of electricity production, which is characteristic to all 3 of the above resource options.
- Developing this resource option by additional work on submitting an application to the Nuclear Regulatory Commission to ultimately construct and operate the CFPP Project

UAMPS' Approach to Environmental Regulation

- Manage risk associated with environmental compliance obligations
- New Resource Option Feasibility – A cost competitive resource that will meet environmental compliance over its expected lifespan.
  - Coal - Every indication is that existing coal resources will not be competitive due to proposed and future regulations.
  - Natural Gas – Possible growing environmental compliance obligations surrounding natural gas generation.
  - Nuclear - Poses no risk of greenhouse gas compliance costs and other environmental compliance are minimized by NuScale's technology.

Past/Present Environmental Regulatory Pressures

- Clean Power Plan
  - Regulates CO2 from existing UAMPS carbon resources, but suggests a very tough regulatory environment for new carbon resources
  - Compliance cost impact on existing coal plants uncertain
- Clean Power Plan was stayed by the U.S. Supreme Court in February 2016
  - Trump unlikely to implement the Clean Power Plan

Carbon Free Power Project

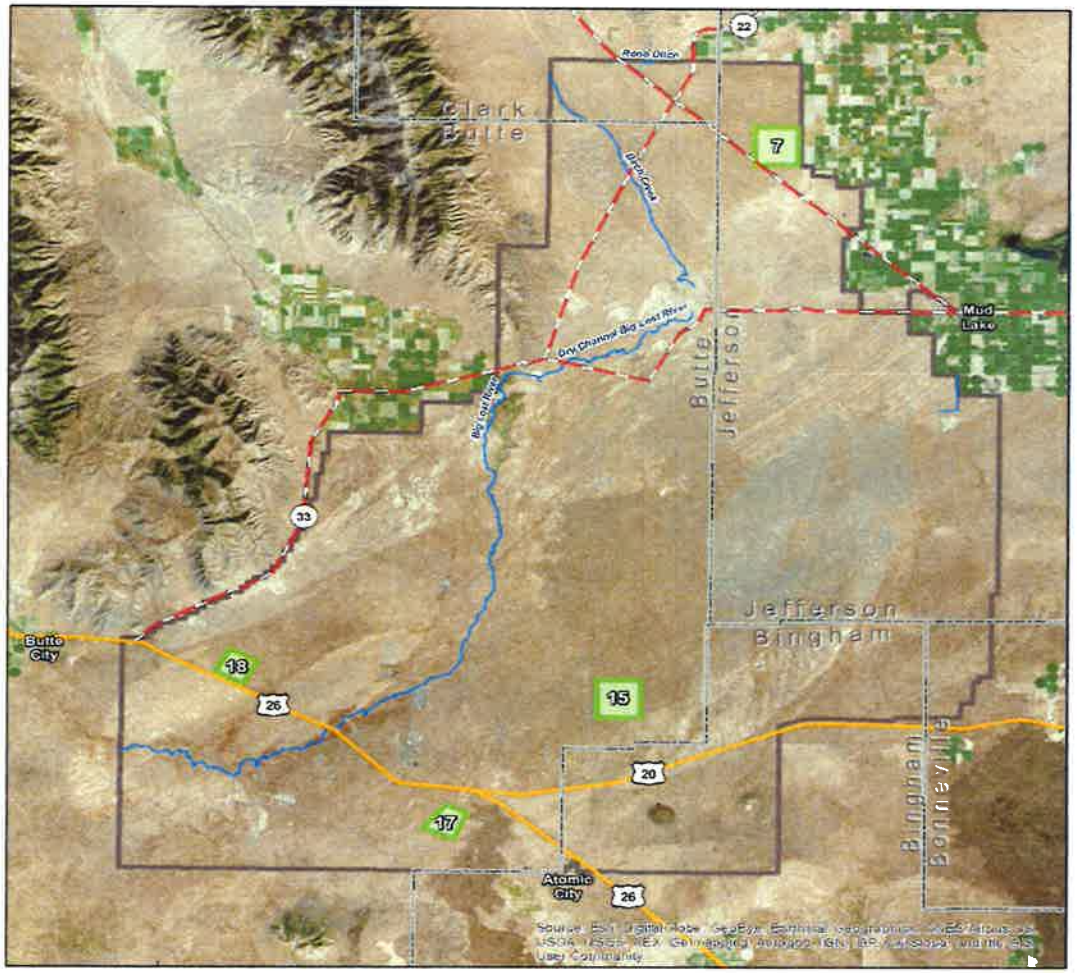
- Need for a reliable replacement for carbon dioxide emitting generation sources
  - Energy Efficiency
    - Customer satisfaction with correct incentives
    - Customer makes subsidized (?) capital investment
  - Rooftop solar or other distributed generation
    - Feed-in tariff with Member (local utility) or UAMPS
    - Customer makes subsidized (?) capital investment
  - NuScale Modular Reactors
    - Baseload with flexibility resource
    - Safety
    - Scalable & with load following capability

Why the CFPP?—Concluding remarks

- NuScale's technology has promise to be a cost competitive resource with reduced exposure to future environmental regulations (GHG regulation)
  - Reduced environmental footprint - reduced environmental exposure
- Future GHG regulations are uncertain at present—but increased regulatory pressure on carbon emitting resources is certain
  - These regulatory pressures will result in compliance costs
  - Magnitude of these costs will be known as CFPP development proceeds
- These environmental compliance costs have the potential to make UAMPS' existing carbon emitting resources and coal based market purchases uneconomic

Site Selection

Four Acceptable Sites



Legend

- Stream / River
- US Route
- State Highway
- Acceptable Site
- INL Property Boundary
- County

1:340,000

Figure 1: Acceptable Sites Overview Map

0 3 6 12 Miles

Confidential and Business Sensitive

CFPP Transmission

- UAMPS has undertaken a high-level analysis of the existing transmission system for the INL site
- UAMPS has submitted an interconnection request to PacifiCorp order to understand the transmission line upgrades necessary for the CFPP
- CFPP transmission will be studied by NTTG technical working group
- UAMPS objectives for CFPP Transmission:
  - Minimize environmental disturbance (co-location with existing lines)
  - Coordinate with PacifiCorp and Idaho Power on transmission planning for the area

Site Selection Process

- Next steps
  - Continue engagement with Shoshone – Bannock Tribes in consultation process
  - Idaho State government offices
    - Idaho Governor's Office
    - Idaho Attorney General's Office
    - Idaho Department of Environmental Quality
    - Idaho Department of Water Resources
    - Idaho Department of Commerce
      - Regional economic development

Regional Economic Development Potential

- ~1000 construction jobs at its peak, for about 2-3 years
  - Example: Welders, riggers, pipefitters, masons, carpenters, millwrights, sheet metal workers, electricians, ironworkers, security
- Once plant is operational;
  - About 360 workers with average salaries of $85/000/yr
    - Example: Certified operators, electrical, mechanical maintenance, administrative, security
- Eastern Idaho economic benefits from related industries
- UAMPS will give preference to local individuals that are qualified for plant positions

Schedule

- Plant Licensing: 2017- 2022
- Site Mobilization, Construction & Startup: 2020 – 2026
- Commercial Operations: 2026

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