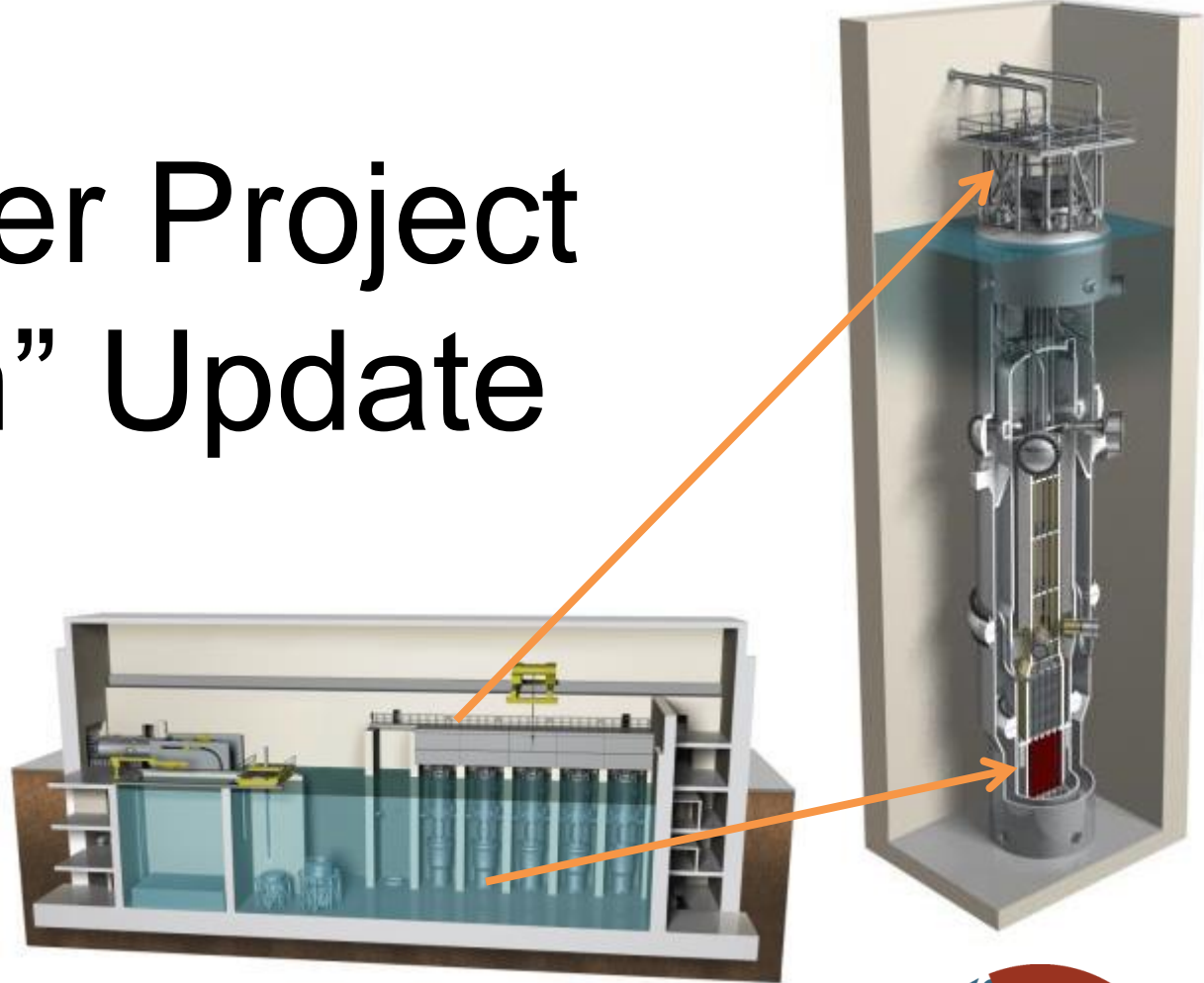


Carbon Free Power Project Resource “Option” Update

February 16, 2021
County Council Meeting



LOS ALAMOS

Agenda

- Why NuScale
- The Project
 - Accomplishments
 - Subscription
- NuScale & Fluor - Evaluates Design Changes
- New Interim Off-Ramp
- Public Information & Involvement
- Things Considered for continued Participation
- LAC Power Generation Resources
 - Historical and current costs
 - Load and Generation



First-Of-A-Kind

1/3 Scale Prototype and full-scale critical component testing



NuScale Integral System Test (NIST-1) facility located at Oregon State University in Corvallis, Oregon



Critical Heat Flux testing at Stern Laboratories in Hamilton, Ontario Canada



Helical Coil Steam Generator testing at SIET SpA in Piacenza, Italy

Why NuScale SMR Design Technology

NuScale Power Module (NPM)

- Safety - No AC/DC or Operator Interaction for safe shut down
- Modularity - Factory built
- Capable of following intermittent resources like wind and solar (Dispatchable)

The Project

- Utah Associated Municipal Power Systems (UAMPS) Joint Action Agency with 47 municipal members, 27 members participating in the CFPP
- Partners (UAMPS, NuScale, Fluor, DOE)
- Original design of Twelve 50 megawatt (MW) small modular reactors for a total plant capacity of 600 MW's.
- Plant sited at the Idaho National Laboratory

Accomplishments to Date

- NuScale receives NRC Design Certification received in August 2020
- DOE Multi Year Award \$1.355 billion allocated over ten-year period received in October 2020

CFPP Subscription levels

- Prior to October 2020 Off-ramp 213 MW total
- Current Subscription level 100.6 MW total
- LAC subscription reduced to 6.37 MW to remain under \$1.26 million budget cap authorized by Board and Council
- Changes in subscription level are available at the end of each phase, priority to current subscribers

NuScale & Fluor Evaluates Design Changes

- NuScale evaluating cost of 4, 6 and 8 NPM plant design
- NuScale will submit NPM capacity uprating from 50 MWe to 77 MWe using NRC Standard Design Approval Application
- UAMPS Independent Review by Owners Engineer, Burns and McDonald and MPR

New Interim Off-Ramp

January 2022

Things to be accomplished by next off-ramp, 1st quarter 2022

- Economic Competitive Test (ECT) \$55/MWh
- Increased subscription
- Class 3 Estimate on 6 or 8 NPM plant as determined by the Project Management Committee 2nd quarter 2021

Public Information & Involvement

- Dec. 1, 2016 - 1st CFPP Town Hall
- Jan. 12, 2017 - CFPP Town Hall
- July 12, 2017 - IRP Town Hall
- Jan. 25, 2018 - CFPP Town Hall
- August 3, 2020 – CFPP Town Hall
- Open Forum 2020, majority in favor of project

Things Considered for Continued Participation

- DOE Multi-Year Award of \$1.355 Billion
- For Phase I Development, DOE to pay 79% of UAMPS' Cost to develop the Class II Estimate and completion of the Combined Construction and Operating License Application (COLA)
- CFPP Economic Competitive Test (ECT) \$55/MWh in 2020 Dollars
- Mitigate risk of future generation uncertainty by keeping CFPP as an option in a diverse portfolio
- Resource Adequacy in the West - Shortage from Retiring Coal plants and EPA regulations

Things Considered for Continued Participation Cont.

- DPU continues to seek out and evaluate generation options
 - Renewables + storage not yet economically feasible
 - Currently no other carbon-neutral options
- 2017 Integrated Resource Plan - CFPP 2nd best Alternative @ \$65/MWh (New Target price of \$55/MWh in 2020 Dollars)
- 2021 – 2023 IRP Updated prior to COLA Submittal to NRC (Best Options for meeting 2040 Carbon Neutral goal)
- Energy Imbalance Market (EIM)

Cost of Resources

Owned Generation Assets	MW	Avg. Cost \$/MWh 2000 – 2015 (1)	Avg. Cost \$/MWh 2016 - 2020	Avg. Cost \$/MWh 2000 – 2020	Cost \$/MWh 2020
Abiquiu Hydro	17	\$94.28	\$45.22 (2)	\$84.12	\$32.92
El Vado Hydro	9	\$85.49	\$72.91 (3)	\$83.82	\$22.73
Laramie River Sta. Coal	10	\$37.35	\$44.82 (4)	\$38.92	\$29.26
San Juan Sta. Coal	36	\$55.63	\$50.01 (4)	\$54.36	\$47.34 (5)

(1) Includes original debt service

(2) Abiquiu lost one year generation in 2017 due to bell chamber vent shaft leak

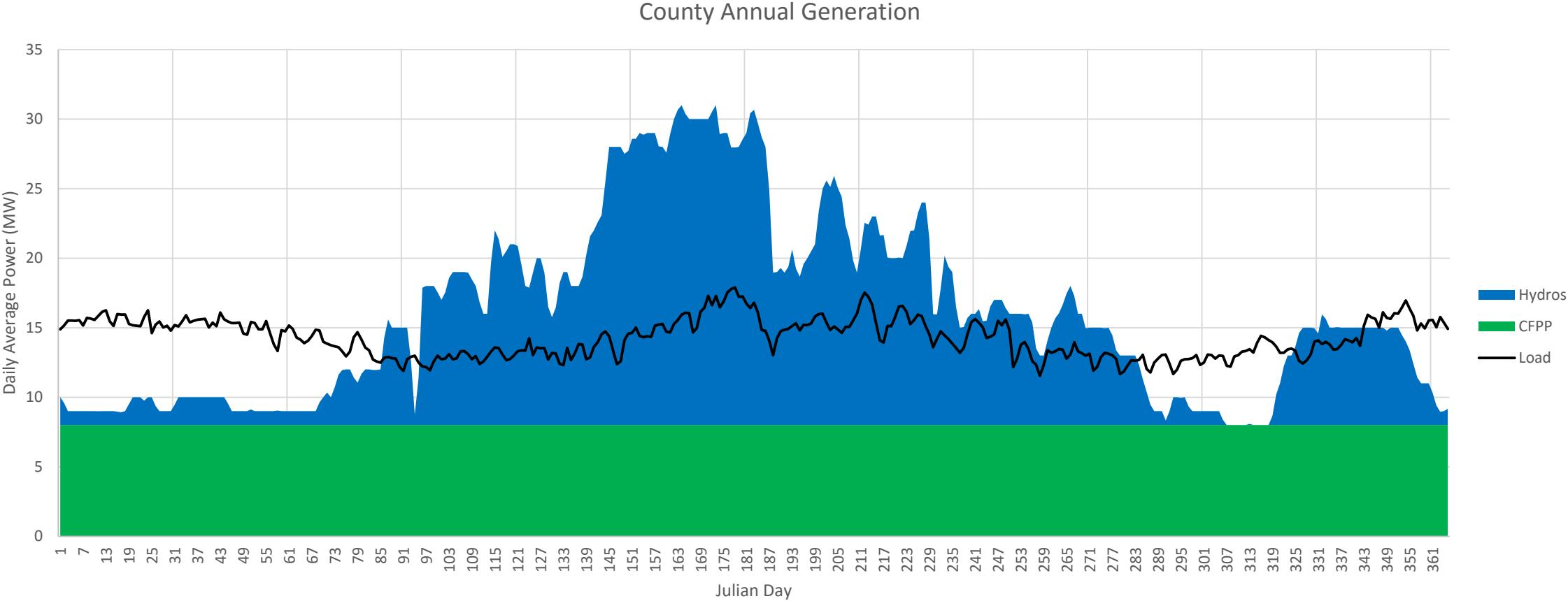
(3) El Vado extended outage due to generator rewind issues and contract dispute resolution

(4) SJGS/LRS EPA Regional Haze Compliance (SNCR/SCR)

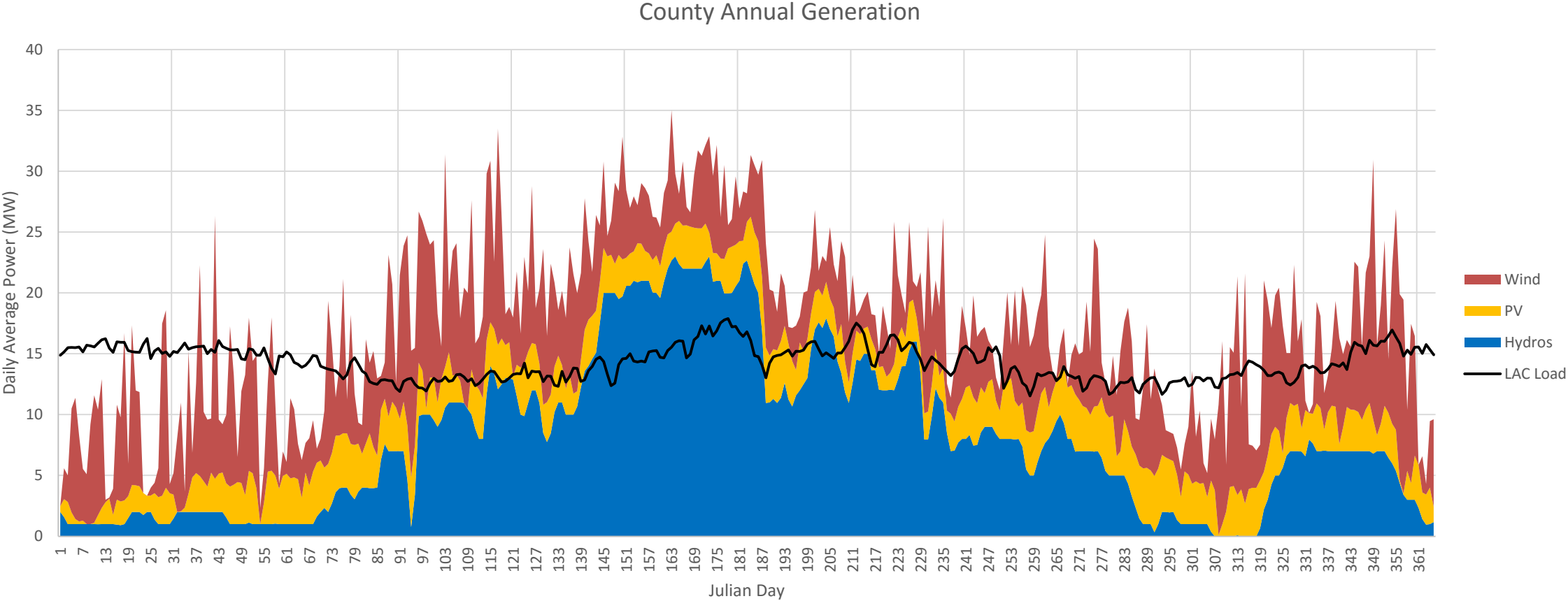
(5) San Juan Equivalent Availability Factor 71%, Capacity Factor of 62%

ATTACHMENT A

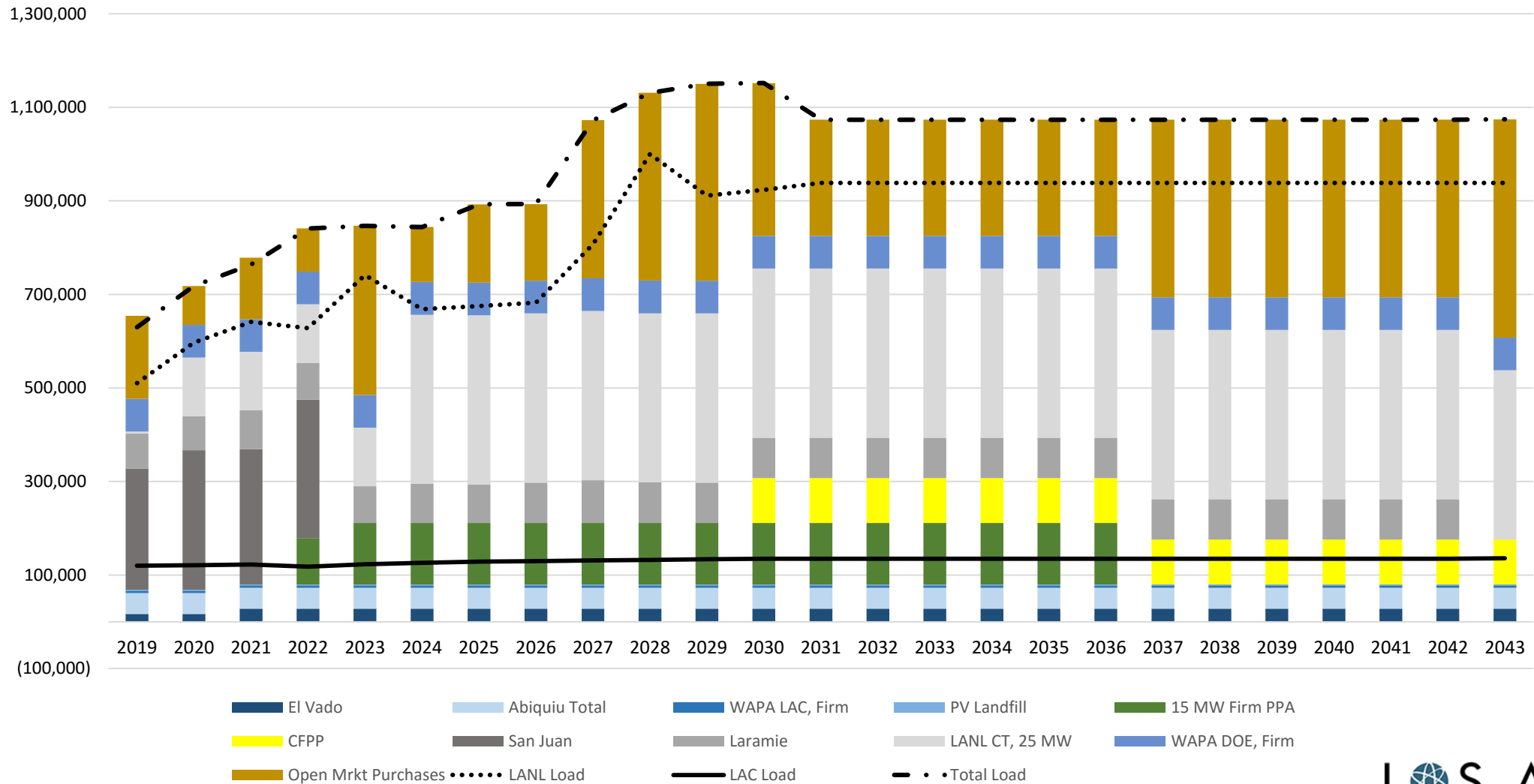
Generation Mix Profile Scenario



Generation Mix Profile Scenario

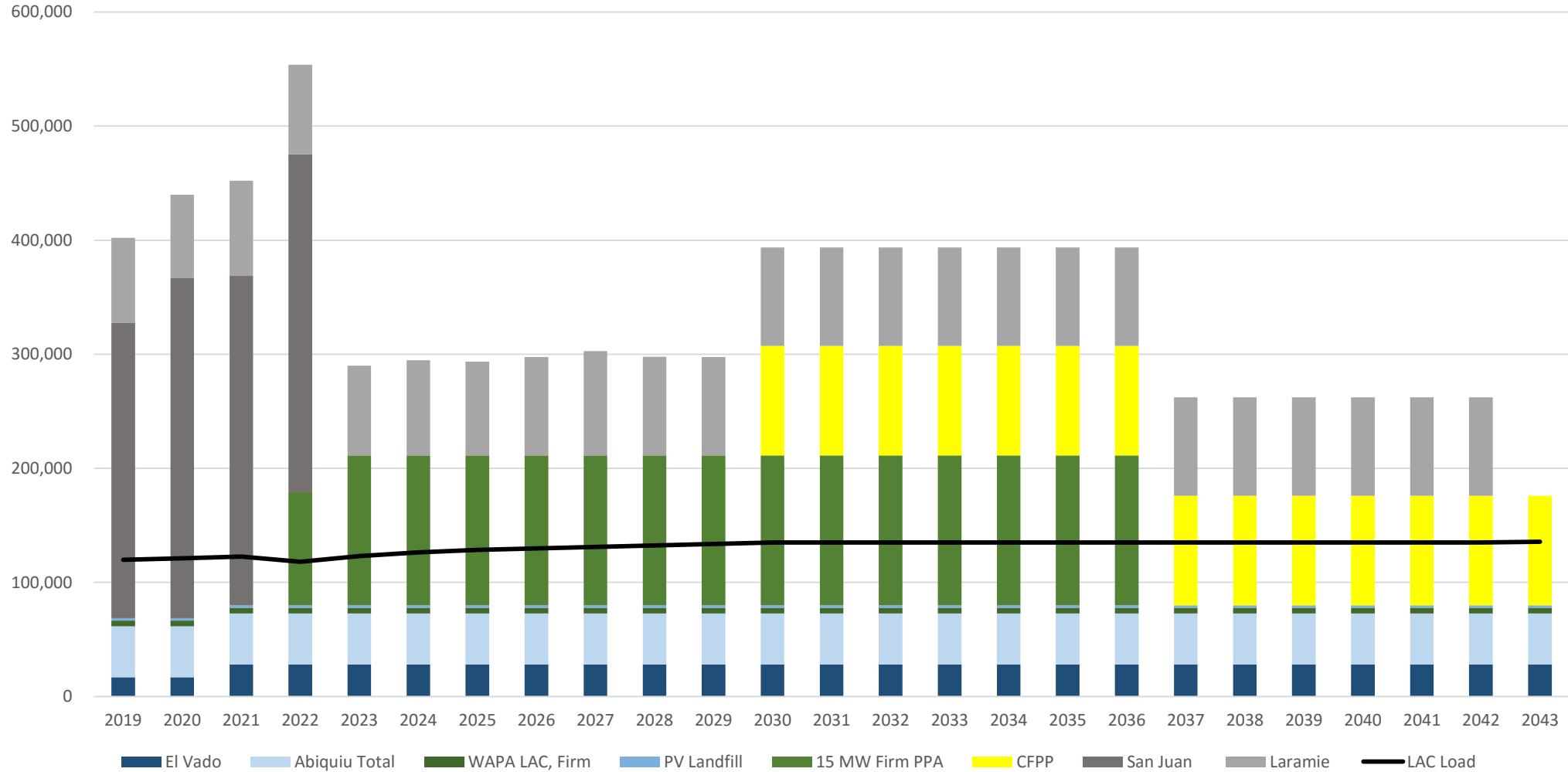


LAC/LANL Load And Generation Resources with CFPP



Los Alamos County

Load and Generation with CFPP



Questions?

