Integrated Resource Plan (IRP)
Draft Implementation Plan

June 21, 2022

Power Supply

LOS ALAMOS

Agenda Items

- IRP Analysis and Results
- LAC & LANL Resource Position
- Implementation Plan Key Dates
- Agreements
- BPU Policy
- Resource SWOT
- Reliability
- Operational Impacts
- DOE-NNSA Feedback
- Recommendations / Pivot Strategies

What is an IRP?

- LAC and LANL 2022 Integrated Resource Plan (IRP)

  - The Los Alamos County (LAC) Department of Utilities (DPU) and the Los Alamos National Lab (LANL) jointly conducted this IRP for the Los Alamos Power Pool (LAPP) to comprehensively address the near-term and long-term decisions through assessing the evolving resources needs during the planning horizon (2022 - 2041).
  - This IRP considers the electricity demand from residential, commercial, industrial customers, electric vehicle (EV), as well as residential and industrial electrification as a result of natural gas reduction.
  - The IRP takes a least-cost and technology-agnostic approach to meet the carbon neutral goal by 2040 for LAC and 100 percent renewable goal by 2035 for LANL.
  - These goals are critical to LAPP's continued environmental leadership in supporting the New Mexico's Energy Transition Act, which calls for 100 percent zero-carbon resources for investor-owned utilities by 2045 and rural electric cooperatives by 2050.
  - The IRP develops portfolio options based on current commercially available utility-scale resources to contain cost, mitigate risk, improve sustainability, improve reliability and operational flexibility.
  - The IRP is based upon the best available information at the time of preparation, recognizing that the industry is rapidly evolving with new cost and technology trends.
  - The IRP is a roadmap and is subject to update as new information becomes available or circumstances change.

Examine **20-year resource plan** horizon

Create a **5-year action plan**

Revisit the IRP every **three years**, *or*

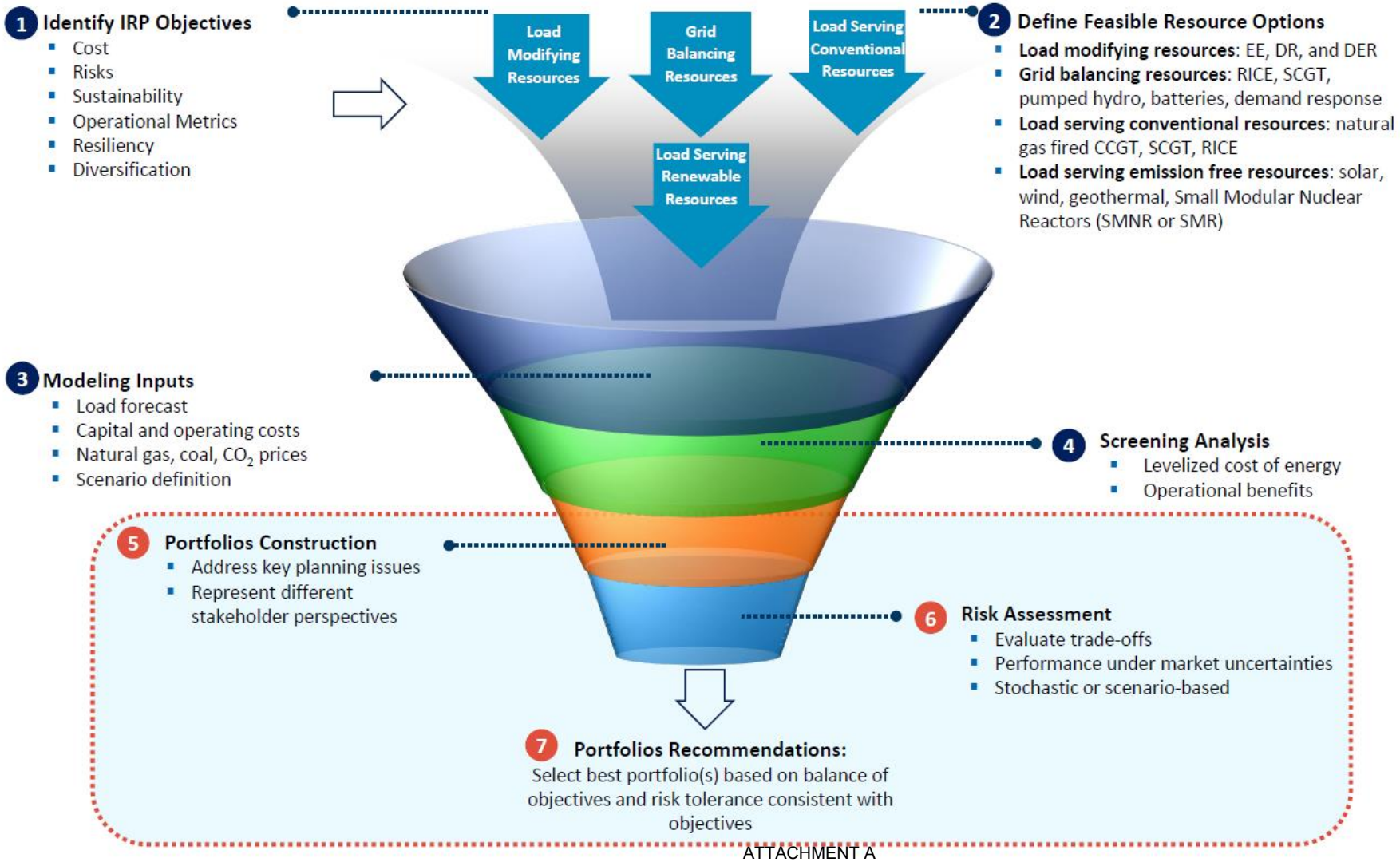
When there are **material changes in policy, market, load, resources, or technology**

Improve plan through **stakeholder inputs**:

- Board of Public Utilities (BPU)
- LAC and LANL
- Public process

Incorporate **pivot strategies** as new information becomes available or as circumstances change

IRP Process



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WECC Recommends Entities to take Action to Mitigate Risks

NERC and WECC assessments highlight the risks of loss of load due to declining reserve margin, increasing load and resource variability.

- Los Alamos County's Balancing Authority (BA) PNM is in the Southwest Reserve Sharing Group (SRSG), one of the three reserve sharing groups in WECC in addition to the California Independent System Operator (CAISO), and the Northwest Power Pool (NWPP).
- The North American Electric Reliability Corporation (NERC)'s 2021 Long-term Reliability Assessment has shown that CAISO, NWPP, and SRSG all face potential load loss hours in the near term (2022 - 2024).
- The 2021 Western Assessment of Resource Adequacy (WARA) concludes that resource adequacy risks to reliability are likely to increase over the next 10 years. WECC recommends entities take immediate action to mitigate near-term risks and prevent long-term risks.
- Climate change and extreme weather (cold snaps, high heat, drought, etc.) lead to increasing demand volatility and resource variability.
- Transportation electrification and Distributed Energy Resources (DERs) will continue to modify load pattern and levels.
- Increasing Variable Energy Resources (VERs), coupled with large planned baseload resource retirements contribute to declining reserve margins and pose supply-side challenges.
  - Nuclear (Diablo Canyon, 2.3 GW by 2024 - 2025)
  - Coal-fired generation resources (3.5 GW by 2026)
  - Coastal gas-fired generation resources (3 GW in 2024-2029) due to once-through cooling regulation.
- Potential Aliso Canyon closure could further stress the power grid.

WECC Reserve Sharing Groups

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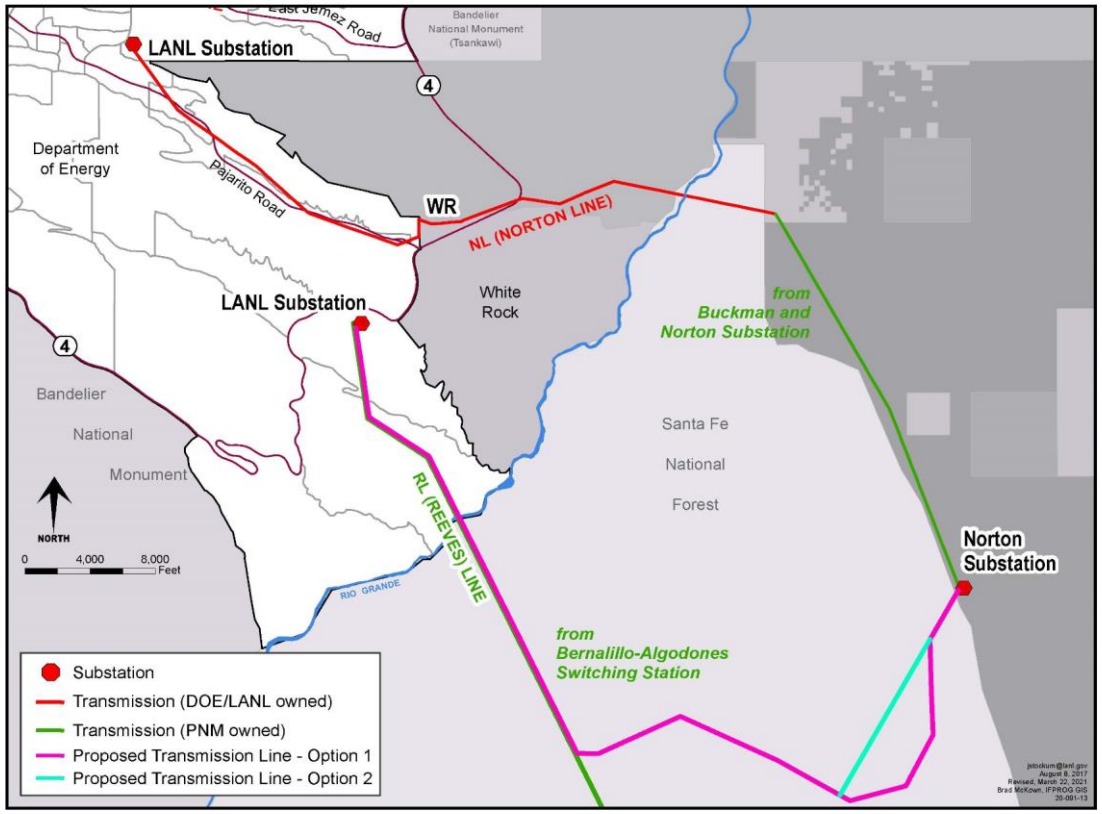
LAPP Transmission Constraints and Expansion Options

- The IRP models the LAPP transmission capacity of 116 MW during 2022 - June 2028, and 200 MW (July 2028 - 2041).
- The County has a Network Integrated Transmission Service Agreement (NITSA) with PNM.
- The County also has transmission service agreements with Jemez Electric co-op and NORA Electric Co-op to deliver the power from the hydroelectric facilities into the LAC load.
- The County also has a 10 MW firm point to point transmission service agreement from Ault to San Juan for the delivery of the LRS power.
- LANL owns and operates approximately 20 miles of 115kV transmission line with two interconnections with the PNM BA. The substations are referred to as the Norton and the Southern Technical Area (STA) substations. The community of White Rock is served from a substation of the LANL 115kV transmission line. Los Alamos Town-site is served from a LANL substation inside Tech Area, TA-3.
- The LAPP transmission capacity is currently at 116 MW and will expand to 200 MW once the EPCU project is completed in July 2028.

LAPP Transmission Expansion Options



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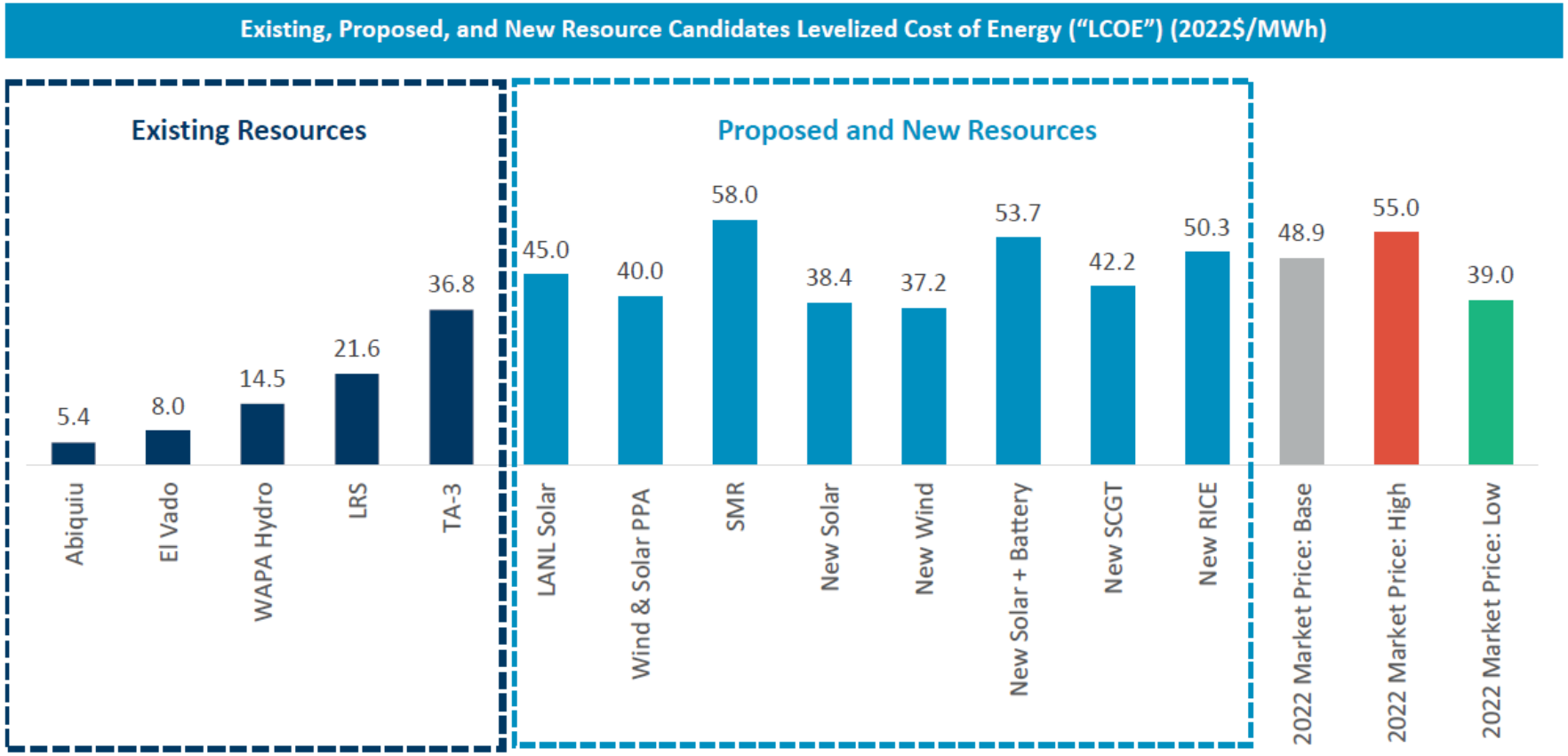
Supply Side Technology Options

Types		Resources	Considerations
Baseload	Thermal	Combined Cycle (CC)	Inconsistent with carbon neutral goal
		Laramie River Station (LRS)	Exit when economical, no later than 2042[1]
	Nuclear	Carbon Free Power Project (CFPP)	Subscription levels: 0, 8, 36 MW
	Hybrid	ATC PPA with 28% Renewable[2]	Near term bridge PPA to replace San Juan Unit 4
	Firm Renewables	Solar + Wind	Uniper contract + more
		Solar + Battery	Solar weather dependent
		Geothermal	High cost, opportunistic and geography dependent
		Fuel Cells	< 5 MW size, implemented in other national labs
Peaking	Thermal	Reciprocating Internal Combustion Engine (RICE)	Explore in IRP for dispatchability and balancing
		Simple Cycle Gas Turbine (SCGT)	Explore in IRP for dispatchability and balancing
	Storage	Pumped Hydro	Cost and ownership of water rights; Opportunistic and geography dependent
		Lithium-ion Battery	Duration considerations
		Vanadium Redox Flow Battery	High-cost; lack of actual projects development
Intermittent	Renewables	Solar (onsite or offsite)	Weather dependent
		Onshore Wind	Weather dependent; transmission constraints

Levelized Cost of Energy for Existing, Proposed, and New Resources



Note:

1) New solar, wind, and solar + battery LCOE estimates are based on National Renewable Energy Laboratory 2021 Annual Technology Baseline for projects achieving commercial online in 2022.
2) SCGT and RICE LCOE estimates are inclusive of fixed operating and maintenance costs, variable operating and maintenance costs, fuel costs at $3/MMBtu, and capacity factor of 20%.

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Portfolios Construction Summary: Base Case

- Under the Base Case, the cumulative new builds range from 561 MW (Portfolio 12) to 968 MW (Portfolio 7).
- All portfolios satisfy LAC's carbon neutral and LANL's renewable requirements.
- Wind builds are assumed to be sourced in resource rich regions such as the east of the state and will require transmission capacity.

Portfolio Composition: LAPP Cumulative New Builds during 2022 - 2041		Base Case							
		Avg PRM	BESS	PV	Wind	GT	RICE	SMR	**Total**
		%	MW	MW	MW	MW	MW	MW	**MW**
P1	SMR (8)+ solar + wind + storage	4%	55	380	135	0	0	8	**578**
P2	SMR (8) + solar + wind	4%	0	605	200	0	0	8	**813**
P3	solar + wind + storage	4%	70	370	145	0	0	0	**585**
P4	SMR (8) + solar + wind + SCGT	4%	0	480	180	24	0	8	**692**
P5	SMR (8) + solar + wind + RICE	4%	0	500	185	0	18	8	**711**
P6	SMR (8) + solar + wind + storage	14%	65	435	160	0	0	8	**668**
P7	SMR (8) + solar + wind	14%	0	760	200	0	0	8	**968**
P8	solar + wind + storage	14%	90	365	170	0	0	0	**625**
P9	SMR (8) + solar + wind + SCGT	14%	0	635	190	24	0	8	**857**
P10	SMR (8) + solar + wind + RICE	15%	0	650	200	0	18	8	**876**
P11	SMR (36) + solar + wind + RICE	4%	0	420	145	0	18	36	**619**
P12	SMR (36) + solar + wind + storage	4%	35	350	140	0	0	36	**561**

Min	Max
561	**968**
P12	**P7**

Note:
1) Portfolio 1, 2, 3, 4, 5, 11, and 12 has average Planning Reserve Margin of 4 percent during 2023 - 2041.
2) Portfolio 6, 7, 8, 9, and 10 have average Planning Reserve Margin of 14- 15 percent during 2023 - 2041.
3) Battery storage builds have the flexibility to charge from solar (as a hybrid project) or from the grid.

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Portfolios Construction Summary: Low Case

- Under the Low Case, the cumulative new builds range from 214 MW (Portfolio 11) to 548 MW (Portfolio 7).
- All portfolios satisfy LAC's carbon neutral and LANL's renewable requirements.
- Wind builds are assumed to be sourced in resource rich regions such as the east of the state and will require transmission capacity.

Portfolio Composition: LAPP Cumulative New Builds during 2022 - 2041		Low Case							
		Avg PRM	BESS	PV	Wind	GT	RICE	SMR	**Total**
		%	MW	MW	MW	MW	MW	MW	**MW**
P1	SMR (8)+ solar + wind + storage	4%	25	165	90	0	0	8	**288**
P2	SMR (8) + solar + wind	4%	0	220	200	0	0	8	**428**
P3	solar + wind + storage	4%	35	185	100	0	0	0	**320**
P4	SMR (8) + solar + wind + SCGT	4%	0	165	110	24	0	8	**307**
P5	SMR (8) + solar + wind + RICE	4%	0	185	145	0	18	8	**356**
P6	SMR (8) + solar + wind + storage	15%	30	204	120	0	0	8	**362**
P7	SMR (8) + solar + wind	15%	0	340	200	0	0	8	**548**
P8	solar + wind + storage	15%	50	215	125	0	0	0	**390**
P9	SMR (8) + solar + wind + SCGT	15%	0	205	190	24	0	8	**427**
P10	SMR (8) + solar + wind + RICE	15%	0	255	170	0	18	8	**451**
P11	SMR (36) + solar + wind + RICE	6%	0	90	70	0	18	36	**214**
P12	SMR (36) + solar + wind + storage	4%	20	170	50	0	0	36	**276**

Min	Max
214	**548**
P11	**P7**

Note:
1) Portfolio 1, 2, 3, 4, 5, 11, and 12 has average Planning Reserve Margin of 4 -6 percent during 2023 - 2041.
2) Portfolio 6, 7, 8, 9, and 10 have average Planning Reserve Margin of 15 percent during 2023 - 2041.
3) Battery storage builds have the flexibility to charge from solar (as a hybrid project) or from the grid.

Portfolios Construction Summary: High Case

- Under the High Case, the cumulative new builds range from 826 MW (Portfolio 12) to 1,538 MW (Portfolio 7).
- All portfolios satisfy LAC's carbon neutral and LANL's renewable requirements.
- Wind builds are assumed to be sourced in resource rich regions such as the east of the state and will require transmission capacity.

Portfolio Composition: LAPP Cumulative New Builds during 2022 - 2041		High Case							
		Avg PRM	BESS	PV	Wind	GT	RICE	SMR	**Total**
		%	MW	MW	MW	MW	MW	MW	**MW**
P1	SMR (8)+ solar + wind + storage	4%	85	590	200	0	0	8	**883**
P2	SMR (8) + solar + wind	4%	0	1,080	200	0	0	8	**1,288**
P3	solar + wind + storage	4%	100	565	200	0	0	0	**865**
P4	SMR (8) + solar + wind + SCGT	4%	0	940	200	24	0	8	**1,172**
P5	SMR (8) + solar + wind + RICE	4%	0	830	195	0	36	8	**1,069**
P6	SMR (8) + solar + wind + storage	15%	90	650	200	0	0	8	**948**
P7	SMR (8) + solar + wind	15%	0	1,330	200	0	0	8	**1,538**
P8	solar + wind + storage	15%	115	630	200	0	0	0	**945**
P9	SMR (8) + solar + wind + SCGT	15%	0	1,165	200	24	0	8	**1,397**
P10	SMR (8) + solar + wind + RICE	15%	0	1,070	200	0	36	8	**1,314**
P11	SMR (36) + solar + wind + RICE	4%	0	700	140	0	36	36	**912**
P12	SMR (36) + solar + wind + storage	4%	55	555	180	0	0	36	**826**

Min	Max
826	**1,538**
P12	**P7**

Note:
1) Portfolio 1, 2, 3, 4, 5, 11, and 12 has average Planning Reserve Margin of 4 percent during 2023 - 2041.
2) Portfolio 6, 7, 8, 9, and 10 have average Planning Reserve Margin of 15 percent during 2023 - 2041.
3) Battery storage builds have the flexibility to charge from solar (as a hybrid project) or from the grid.

Portfolio Evaluation Factors

	Objectives	Objective Direction	Metrics
Trade Offs	1. Cost		1.1 Net Present Value (NPV) of portfolio cost ($)
	2. Sustainability		2.1 All portfolios meet RPS standards: ○ LAC net carbon zero electricity by 2040 ○ LANL 100 percent renewable by 2035
	3. Risks		3.1 Annual average market exposure (MWh) 3.2 Stochastic simulation of portfolio cost ($)
	4. Operational Exposure		4.1 New resources subject to transmission (MW) 4.2 Weather dependent new resources (MW)
	5. Reliability		5.1 Average Planning Reserve Margin (%) 5.2 Dispatchable new resources (MWh/day)
	6. Diversification		6.1 Number of new generation types

Portfolio Evaluation Results

- 9 factors across 6 equally weighted categories
- Portfolio 1 shows the highest overall performance, followed by Portfolios 3, 8, and 4

LAPP 2022 IRP Portfolio Assessment Dashboard											
Metrics	Index (0 = highest performance, 10 = lowest performance)										
	1. Costs	2. Sustainability	3. Risks		4. Operational Exposure		5. Reliability		6. Diversification	Weighted Sum	Overall Rank
	1.1 NPV	2.1 Sustainability	3.1 Market Exposure	3.2 Portfolio Costs	4.1 New Resources Subject to Transmission	4.2 Weather Dependent New Resources	5.1 Planning Reserve Margin	5.2 Dispatchable New Resources	6.1 New Resource Types		
Weight	16.67%	16.67%	8.33%	8.33%	8.33%	8.33%	8.33%	8.33%	16.67%	100%	
P1	1.49	0.00	0.55	3.08	0.12	0.53	9.31	8.01	0.00	2.05	1
P2	4.98	0.00	6.74	8.75	7.00	6.70	9.98	10.00	1.00	5.09	11
P3	0.00	0.00	0.00	4.63	0.00	0.53	9.58	9.20	1.00	2.16	2
P4	0.59	0.00	3.80	0.00	3.80	3.62	9.93	4.78	0.00	2.26	4
P5	1.61	0.00	4.33	1.95	4.38	4.15	10.00	6.09	0.00	2.84	7
P6	5.09	0.00	1.87	3.31	2.15	2.23	0.14	7.64	0.00	2.29	5
P7	10.00	0.00	10.00	10.00	10.00	10.00	0.29	10.00	1.00	6.02	12
P8	3.52	0.00	0.80	6.20	0.87	0.96	0.37	8.48	1.00	2.23	3
P9	5.71	0.00	6.96	4.23	7.19	7.13	0.38	4.78	0.00	3.51	9
P10	6.50	0.00	7.59	8.68	7.87	7.66	0.00	6.09	0.00	4.24	10
P11	5.25	0.00	3.45	9.36	2.36	1.60	9.68	0.00	0.00	3.08	8
P12	5.88	0.00	0.73	8.27	0.81	0.00	9.34	2.64	0.00	2.80	6

Portfolio Evaluation Results – Alternate Weightings

- Three alternate weightings were applied to emphasize market exposure, weather dependency, dispatchability
- Portfolio 1, 3, and 4 consistently rank as the overall top portfolios

Portfolio Evaluation Results – Alternate Weightings

LAPP 2022 IRP Portfolio Assessment Dashboard: Weighting Sensitivities					
Sensitivity		Base Case	Emphasis on Reducing Market Exposure	Emphasis on Reducing Weather Exposure	Emphasis on Dispatchability
Weighting		equal weight across six categories	heavy weight 3.2 Market Exposure	heavy weight 4.2 Weather Dependent New Resources	heavy weight 5.2 Dispatchable New Resources
P1	SMR (8) + solar + wind + storage	1	2	1	4
P2	SMR (8) + solar + wind	11	11	11	11
P3	solar + wind + storage	2	1	2	8
P4	SMR (8) + solar + wind + SCGT	4	6	6	2
P5	SMR (8) + solar + wind + RICE	7	7	8	7
P6	SMR (8) + solar + wind + storage	5	4	4	5
P7	SMR (8) + solar + wind	12	12	12	12
P8	solar + wind + storage	3	3	3	6
P9	SMR (8) + solar + wind + SCGT	9	9	9	9
P10	SMR (8) + solar + wind + RICE	10	10	10	10
P11	SMR (36) + solar + wind + RICE	8	8	7	1
P12	SMR (36) + solar + wind + storage	6	5	5	3

	Category	1. Cost	2. Sustainability	3. Risks		4. Operational Exposure		5. Reliability		6. Diversification	Total
	Metrics	1.1 NPV	2.1 Sustainability	3.1 Portfolio Costs	3.2 Market Exposure	4.1 New Resources Subject to Transmission	4.2 Weather Dependent New Resources	5.1 Planning Reserve Margin	5.2 Dispatchable New Resources	6.1 New Resource Types	
Sensitivities	Base Case	16.67%	16.67%	8.33%	8.33%	8.33%	8.33%	8.33%	8.33%	16.67%	100%
	Emphasis on Reducing Market Exposure	13.6%	13.6%	6.8%	25.00%	6.8%	6.8%	6.8%	6.8%	13.6%	100%
	Emphasis on Reducing Weather Exposure	13.6%	13.6%	6.8%	6.8%	6.8%	25.00%	6.8%	6.8%	13.6%	100%
	Emphasis on Dispatchability	13.6%	13.6%	6.8%	6.8%	6.8%	6.8%	6.8%	25.00%	13.6%	100%

Portfolio Costs

- The Net Present Value (NPV) of portfolio costs is calculated as the revenue requirement (including fixed operating and maintenance costs, variable operating and maintenance costs, fuel cost, PPA costs) at 5 percent discount rate during the planning horizon (2022 – 2041).
- Portfolio 3 show the lowest NPV of portfolio costs during the planning horizon, followed by Portfolio 4 and 1

Portfolio Costs

LAPP 2022 IRP Portfolio Cost Metric Dashboard				
1. Cost Metric		Avg Planning Reserve Margin (2023-2041)	1.1 NPV of Portfolio Costs (2022-2041)	Index Ranking (0-10 Scale)
Unit		%	2022$	X
P1	SMR (8) + solar + wind + storage	4%	464,710,468	1.49
P2	SMR (8) + solar + wind	4%	496,969,092	4.98
P3	solar + wind + storage	4%	450,953,720	0.00
P4	SMR (8) + solar + wind + SCGT	4%	456,418,199	0.59
P5	SMR (8) + solar + wind + RICE	4%	465,868,051	1.61
P6	SMR (8) + solar + wind + storage	14%	497,999,120	5.09
P7	SMR (8) + solar + wind	14%	543,399,865	10.00
P8	solar + wind + storage	14%	483,496,256	3.52
P9	SMR (8) + solar + wind + SCGT	14%	503,747,665	5.71
P10	SMR (8) + solar + wind + RICE	15%	511,045,469	6.50
P11	SMR (36) + solar + wind + RICE	4%	499,494,579	5.25
P12	SMR (36) + solar + wind + storage	4%	505,339,622	5.88

IRP Results Summary

- Preferred Resource Portfolio
  - Solar
  - Wind
  - Energy Storage
  - CFPP
  - Simple Cycle Gas Turbine/Reciprocating Internal Combustion Engine (RICE) generators
- Pivot Strategies to handle resource acquisition challenges

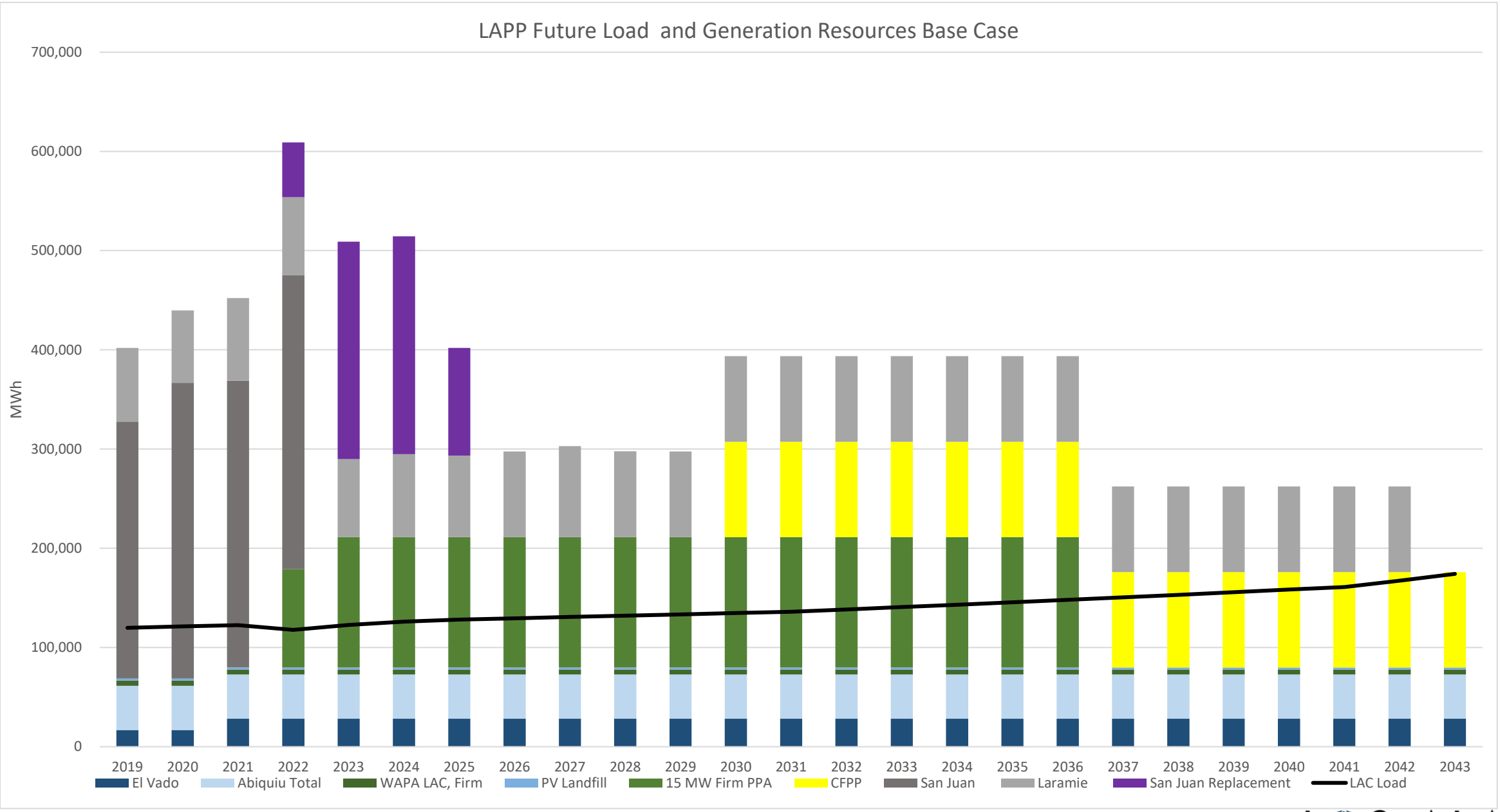
LAC Resource Position

- LAC Annual Load – FY2021 118,502 MWh Annually
- LAC resources
  - LRS 60,400
  - Uniper 15 MW PPA, firming 31,536
  - Abiquiu 25,226
  - El Vado 13,747
  - 1 MW Solar PV 586
  - WAPA Hydro 5,095
  - Uniper 15 MW PPA, Renewable 99,864

  Total Resource Energy 236,454 MWh

  Total carbon free energy 144,518 MWh

  Net Resource Energy (236,454 – 118,502 = 117,952 MWh)
- LAC approximately 100% oversupplied



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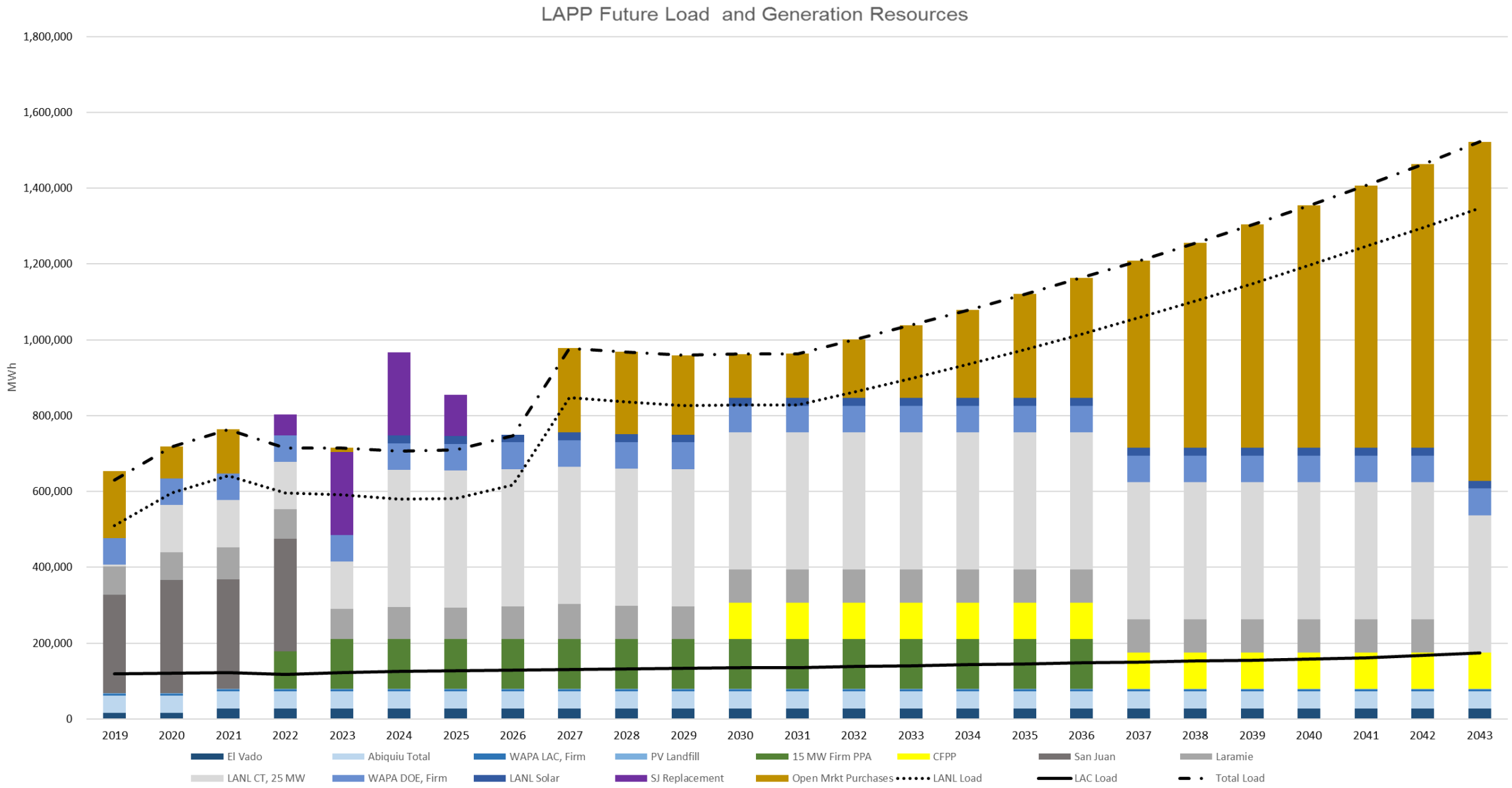
DOE-LANL Resource Position

- LANL Annual Load – FY2021 410,404 MWh
- LANL Resources - FY2021
  - Combustion Turbine 120,000
  - DOE-LANL WAPA Hydro 69,973
  - LANL 10 MW onsite solar 24% CF 21,024

    Total Resource Energy 210,997 MWh

    Total carbon free energy 90,997 MWh

    Net Resource Energy (210,997 – 410,404 = -199,407 MWh)
- Approximately 50% under supplied



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Implementation Plan Key Dates

- Los Alamos Power Pool (LAPP) May 12, 2022, conducted a Special Meeting to discuss implementation
  - LAPP has solicited DOE/NNSA input on implementation plan
- Staff presented the Draft Implementation Plan to BPU during a working Session on June 1, 2022
  - Electric Production Staff seeking BPU input on implementation plan
  - Staff will continue working with BPU and LAPP for final implementation
- Formalized Implementation Plan September 2022
- Completion of Interagency-Agreement (IA) Quarter 4 2022
- Post 2025 ECA Tentative Agreement July 2023
- IRP Updated in 2025 under new contract

Implementation Plan Key Dates Cont.

- Carbon Free Power Project, Sept. – Nov. 2022
  - Class 3 estimate with decision point on Combined Operating License Application (COLA) submittal to Nuclear Regulatory Commission (NRC)
- Consider 2-year extension of the 25 MW Uniper resource will give the operation time to acquire and construct resources per the IRP Implementation plan
  - New builds will be difficult to have online by 2025

Agreements

- Post 2025 Electric Coordination Agreement (ECA) contract renewal
- DOE Interagency Agreement (IA)
- a. IA between DOE-NNSA and DOE-WAPA allows for contracts up to 30 years using WAPA authority
  - b. WAPA currently procures the Power Purchase Agreement for Sandia/Kirtland
  - c. Los Alamos National Laboratory and Sandia/Kirtland in resource acquisition - long term PPA (Like Uniper) have economies of scale for carbon-free energy, cost effective etc. Sandia just started conceptual (50-100 MW) design feasibility solar tower (concentrated solar with thermal storage). No current timeline
    - Sandia/Kirtland's Power Purchase Agreement (PPA)-Current Contract expires at end of 2023.
    - Contract responses are valuable to all of us for a glimpse of the Market.

BPU Policy

- Resource Acquisition
  - New Resources required to serve LANL load, Staff needs clear direction through adopted policy. What contractual agreements are required for LAC to procure resources on DOE-NNSA behalf?
  - Add new Policies on resource acquisition on LANL's behalf
    - Example Policy: Continue to explore resource options to serve the combined load of LAC and LANL with the goal of meeting each parties established goals for new power generation resources, all resource acquisitions by LAC for LANL loads shall be contractually secured to ensure all obligations are covered by DOE-NNSA.
- Review and update Strategic Policy for Electrical Energy Resources
- Review and update Strategic Policy for Distributed Energy Resources and Rate Structure
- Review and consider as BPU policy the Los Alamos Resiliency Energy & Sustainability (LARES) Task force recommendations

Resource SWOT

Strengths Base Load Generation, Dispatchability, Marketability, Non carbon Emitting, Cost, Siting, etc.

Weakness Intermittency, Capacity Factor, Environmental footprint, Disposal cost, contract terms/risk, Transmission Availability/Develop

Opportunities Transmission expansion, complimentary resources, Regional Transmission Organization (RTO), formation & marketability, Dual use energy storage, resilience, capacity reductions from Distributed Energy Resources (DER), extended tax credits, Grant money

Threats Solar tariffs, regulatory, supply chain delays, weather events, cost of fuel/capital

Reliability

1. Prudent Utility Practice and PNM's expectations on balancing loads
   - COMPLIANCE (FERC, NERC, WECC, PNM BA)
2. Intermittency/Balancing generation to load
3. Timing of Production and load profile, resource adequacy

Operational Impacts

- Staffing
  - More Renewables require more name plate capacity
    - Current Real time Operation will not be able to handle the Marketing required for managing the over supply
    - Need for Additional full-time staff
- Third party support
  - Needed to maintain reliable, and economical operations

DOE-NNSA Feedback

May 12 ECA Mtg.

1. Supportive of 2-year Extension of 25 MW PPA with Uniper
2. Not interested in ownership of renewables, PPA preference
3. High value on reliability
4. In support of Interim transition resource, i.e., gas thermal unit
5. Finalizing Interagency Agreement
6. Awaiting Climate Action Plan Implementation instructions from Biden Admin.
7. Renewable Solar PV (10-20 MW) to fit daytime load curve

Recommendations / Pivot Strategies

1. Continue to work with DOE on Interagency Agreement and post 2025 ECA
2. Pursue stand alone contract with DOE-NNSA for 2-year PPA extension with price negotiation of UNIPER 25 MW Block, 2025 to 2027 buys two years to procure replacement resources due to current constraints
   a) Building any new resources prior to 2027 in this environment will be difficult
   b) Pool Considerations
      i. If the Pool executes an extension now, pricing will be more favorable due to the timing and market dynamics.
      ii. Transition plan with UNIPER and DOE to ensure off take
3. Issue RFI for indicative pricing on carbon free resources with storage with all condition's precedent noted

Recommendations / Pivot Strategies

4. Issue RFI, then RFP if favorable responses on RFI
5. Further Investigate thermal resource options
6. Perform economic analysis on gas unit with payback period and including a 30% hydrogen fuel supply option
7. Update and Amend BPU adopted policies
8. Update load forecasts and timing
9. Monitor viability of CFPP and make decision on continued participation