

EP Asset Management

July 17, 2019

Board of Public Utilities



Agenda

- San Juan Generating Station
- Laramie River Station
- County Hydro (Abiquiu and El Vado)
- Western Area Power Administration (WAPA)
- Utility Scale Solar and Battery Energy Storage System
- Economy Purchases
- Electric Coordination Agreement
- Potential Future Resource Mix
- County Gas Supply

San Juan Generating Station (SJGS)

- Capital- SJGS has completed the last major outage of its life. It will have a small outage for Boiler maintenance in Spring of 2021.
- O&M- SJGS continues to manage staffing issues as it prepares for shutdown. PNM, the plant Operator, has done a good job of balancing Contracting staff and Regular Staff
- Decommissioning is a major issue that has taken center stage.
 - PNM has submitted an “Abandonment filing” at the PRC, however Farmington is doing it’s best to keep operations going.
 - LAC would like to see the whole plant brought down and site cleared to eliminate future risks and costs, however this would require 100% support from all owners.

San Juan Generating Station (SJGS)-Cont.

- Mine Reclamation- LAC has funded a Mine Reclamation Trust and continues to ensure it is properly funded as study estimates fluctuate.
- Fuel- SJGS has benefitted from new pricing and better coal quality since Westmoreland became the supplier.
 - Westmoreland instituted a blending program to help the plant mitigate high sulfur coal.
 - There is dispute regarding the Force Majeure Coal Pile. PNM is trying to resolve with the coal provider. We have a supply of coal that belongs to the owners in the event of a mine issue that could be used to generate power. The ownership would like to burn this coal prior to the closure of the plant, however this would take away sales from the mine operator.
 - The 2018 coal silo accident caused a major issue with regard to revenue recovery for the miner as coal could not be sold as projected. They are asking for relief, monetarily or with the ability to not fully develop a panel of coal. This again, being negotiated by PNM as well as TEP and Farmington.

Laramie River Station (LRS)

Capital-

- Regional Haze regulation- LRS is in its final stages of completing its implementation plan using the Best Available Retrofit Technology (BART). The capital project began in 2016 and will be completed by the end of this year.
- O&M- LRS continues to be one of our LAC's most economical resources

Decommissioning-

- In 2015 LAC was provided Decommissioning Study for LRS. We have funded to our proportional share and continue to fund for inflationary adjustments.
- As of now, plant closure and decommissioning is slated for 2040-2042

Laramie River Station (LRS)- Cont.

Reclamation-

- Unlike SJGS, Mine Reclamation is built directly into fuel costs. LAC is in a good position with regard to funding obligations.

Opportunities-

- LAC is looking for opportunities to capitalize on its long-term agreement by potentially swapping for renewable resources.
- LAC, in parallel is also looking to negotiate a hard exit from LRS if the option exist in accordance with the Board adopted Strategic Initiatives.

Abiquiu

- Lake Levels- recently lake levels at Abiquiu have been a cause for concern. LAC has met with the Corps of Engineers to discuss water release forecasts. The Albuquerque Water Utility Authority has been withdrawing its San Juan/Chama water stored in the Abiquiu Reservoir. This has had a significant impact on the pool level of the reservoir. Staff will continue to work with the Corps on water releases in conjunction with the new pool elevation to forecast the hydroelectric generation in the coming years.

El Vado

- The Dam is in need of repair due to the structural integrity of the liner on the face of the dam and the spill way. Reclamation is in the process of securing funding and planning the necessary repairs. LAC will be effected in a couple of different ways:
 - Storage capacities at the dam will be restored to its design capacity providing more head resulting in increased generation
 - Rehab alternatives ranges from \$30 to \$100 million. Reclamation is considering the least expensive alternative.
 - Fifteen percent will be charge to Middle Rio Grande Conservancy District (MRGCD) and then distributed to the stakeholders. MRGCD is working on the allocation of the 15%.

El Vado- Cont.



El Vado- Cont.

- Transmission Northern Rio Arriba Co-op (NORA)-
 - The Transmission line that LAC utilizes to export power from EL Vado is in need of complete replacement (poles and wires). LAC is in discussions with NORA to find the most efficient and economical path for the repair.
 - There is a dispute regarding LAC's obligations to assist with a potential transmission line outage. LAC's attorney's office in conjunction with Staff is working to find a solution.

Western Area Power Administration (WAPA)

- WAPA's Hydro Allocation:
 - Demand: We are seeing low to moderate increases in demand costs for this resource.
 - Energy: The threat of drought is always prevalent in the west, however at this time this risk is very low.
- Board and Council approved the execution of the WAPA allocation of hydro power until 2057
- WAPA is one of our most economical resources

Landfill Solar PV array

- The current site continues to operate with little to no issues. Weed Control was the most pressing issue recently. The configuration of the panels makes it difficult for conventional solutions to obstacles at the landfill. Any services required at the site are very time and manual labor intensive. The January snow storms hindered generation immensely. The panels were almost completely covered.
- We have issued an RFP and are working to solidify a contract for the 2nd MW at the landfill site. We are planning to have a contract at the August regularly scheduled board meeting.
- Power Control System 1 of 3 HVAC unit failed this last spring

Battery Energy Storage System BESS

800 kW x 2.3 MWh lead-acid battery



1-MW x 6 MWh NaS battery



Battery Energy Storage System BESS Cont.

- Lead acid battery continues to have reliability issues as failing cells hinder storage capacity
 - Staff will continue to operate functional cells and permanently remove cells from service as they fail. Full decommissioning of the lead acid battery is being considered.
- NaS battery continues with minimal maintenance
 - LAC has reached out to industry partners on possible interest in purchasing NaS
 - LAC acquiring second cost quote for replacement Energy Management System (EMS)
 - LAC researching disposal cost
 - LAC acquired OEM shut down procedures
 - Full decommissioning of the NaS battery is recommended.

Economy Purchases

- LAC is preparing for this summer as market volatility is expected to be very high. Load requirements, high temperatures, and natural gas transportation outages are the main drivers.
- Our expected reliance on Economy Purchases is forecasted to grow due to increased demand with the Laboratory and shutdown of SJGS.
- LAC will be seeking a Purchase Power Agreement in the Fall to help meet energy requirements post SJGS shutdown.

Electric Coordination Agreement- (ECA)

- DOE- has made strides to increase it's on site generating capacity. They are adding a Combined Heat and Power system at TA-3 which will run baseload. In addition they are seeking to add solar to a 50 acre site. The solar site will be approximately 10 MW.
- Negotiations- Continue as the projects listed above and others bring more clarity and certainty to the participants. LAC is a strong believer that we are better off together and will continue to work with DOE to ensure a successful partnership.

ECA-Cont.

- Staff will be presenting staff's position on a post 2025 ECA to the Board and Council subcommittee to seek concurrence and/or guidance for continued negotiations.

Potential Future Resources

- UAMPS
 - Navajo Tribal Utility Authority- LAC is still investigating participation in a 66 MW solar site in Utah. Energy is economical, however transmission is proving to be more of a obstacle in terms of pricing than anticipated. We are working to find transmission alternatives.
 - Small Modular Nuclear Reactor-LAC is still investigating participation in the CFPP to be located at Idaho National Laboratory.

Potential Future Resources-Cont.

- Wind Resources- Together with LRS and as a stand alone, LAC has been in discussions with multiple marketers to participate in a wind site within New Mexico. Output profiles require additional analysis to ensure proper fit with load requirements, as well as delivery of a firm product.

County Gas Supply

- Purchasing- LAC believes the NMMEAA deal serves Los Alamos County well and will continue to do so with the new extension. Staff continues to manage the details of the contract.
 - Pricing continues to be favorable with supply coming from the Permian and San Juan Basins.
 - Transportation- NMGC has put forth a rule change before the PRC. Staff and the Attorney's Office are working together to determine our best path forward.