

## Council Meeting Staff Report

August 19, 2020

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<b>Agenda No.:</b>	7.B
<b>Indexes (Council Goals):</b>	DPU FY2022 - 5.0 Achieve Environmental Sustainability
<b>Presenters:</b>	Steve Cummins
<b>Legislative File:</b>	12987-20

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### Title

Approval of the Carbon Free Power Project Amended Budget and Plan of Finance and Approval of an Increase to the Department of Public Utilities Authorized Funding for Phase 1 of the Combined Operating License Application Licensing Period.

### Recommended Action

**I move that the Board of Public Utilities approve the motions as stated below and forward to Council for approval.**

**I move that Council authorize, contingent on DOE Multi-Year funding, an increase to the DPU authorized funding for Phase 1 of the Licensing Period of \$1.26 million (\$1.05 million plus a 20% contingency of \$210,000 to cover potential increases in Development Cost Share in the CFPP); and**

**I further move that Council authorize the Utilities Manager to reduce LAC's Entitlement Share in the CFPP as needed to keep LAC's Development Cost Share in the CFPP at or below \$1.26 million for completion of Phase 1 of the Licensing Period; and**

**I further move that Council hereby authorize the Utilities Manager to, should the County's remaining Phase 1 Development Cost Share exceed \$1.26 million, submit a Notice of Withdrawal to the PMC pursuant to the Power Sales Contract notice requirements.**

### Staff Recommendation

Staff Recommends the Board of Public Utilities approve the motion as stated.

### Body

Through DPU's membership with the Utah Associated Municipal Power Systems (UAMPS), staff has been participating in the development of the Carbon Free Power Project (CFPP), which is a projected 720MW nuclear generating station to be built at the Idaho National Laboratory site using small modular reactor (SMR) technology. As it is being designed, the facility would house up to twelve SMRs developed by NuScale Power, one module is up rated at sixty megawatts of electric power for a total plant capacity of 720MW. The County's share would be 11.186 MW.

On April 10, 2018 the Board of Public Utilities and the County Council approved a resolution authorizing and approving the Power Sales Contract with an Amended and Restated Initial Budget and Plan of Finance for the first phase of the CFPP. The Budget and Plan of Finance has broken the project into phases allowing the project participants an option to exit the project at the end of each phase if they determine the project is no longer appropriate for them. There are three options to exit the project at the beginning of phase I, beginning of phase II and beginning of construction phase. On July 14, 2020 DPU was notified of the first exit point through a notice of an amended budget and plan of finance to fund phase I of the CFPP and the County has 60-days to decide to remain in the

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project, increase or reduce subscription, or exit the project.

The first phase is the development of the Combined Construction and Operating License Application (COLA) to be submitted to the Nuclear Regulatory Commission (NRC) for review and approval in the second phase of the project.

The inherent risk of any long-term resource is predicting industry trends, market conditions, technological breakthroughs, and changing regulations that will have an impact on these long term commitments. It is for this reason the PMC has proceeded with caution while DOE, NuScale and the NRC continue to mitigate the risks through cost sharing, industry partnerships and design reviews. If the County continues its participation through the completion of the COLA an updated Integrated Resource Plan will be completed prior to submitting the COLA to the NRC in 2023. An updated IRP will use the most current information at that time regarding power markets and other resource options to see if the CFPP remains competitive.

The project is in alignment with the adopted Future Energy Resource recommendations and Los Alamos County Strategic Leadership Plan, specifically Environmental Stewardship by improving environmental quality and sustainability balancing costs and benefits.

This project also supports the County's Intergovernmental Relations through coordination and cooperation with Los Alamos National Laboratory. The DOE Nuclear Energy office has made NuScale's SMR design their highest priority. They continue to work with DOE NNSA on contracting options with the CFPP.

DPU is assuming that the County and LANL will continue partnering with generation assets post 2025 through a new Electric Coordination Agreement. Keeping this project as an option will support the large load increases LANL is forecasting. If the County and DOE-LANL decide not to partner with generation assets, our current 11.186 MW subscription in the project could replace our Laramie River Station coal fired plant eliminating all of the County's coal generation resources.

Based on what we know today regarding generation resource adequacy in the western interconnect, LAC needs to have 100% of its load covered with owned generation assets or long term power purchase agreements in addition to being carbon free to meet our 2040 carbon neutral goal.

The County's 2017 Integrated Resource Plan (IRP) made the following recommendations:

1. The County needs not to be in any rush to commit to new resources until several uncertainties regarding Small Modular Nuclear Reactors (SMNRs), solar and storage are resolved.
2. A portfolio with SMNRs could be competitive, if risk mitigation measures to protect ratepayers from cost overruns and schedule delays are in place.

Hence, the optimal approach is to preserve optionality by continuing to pursue SMNR risk mitigation measures and preserve the ability to take advantage of declining solar and storage costs. The 2017 IRP assumed a \$65 per megawatt hour (MWh) for the CFPP and for the solar with storage option. Currently the CFPP has a price target of \$55/MWh in 2018 dollars to match the next best alternative which is a combined cycle gas plant. Given that DOE has pledged \$1.4 Billion for the development and construction of the CFPP, DOE and NuScale paying for 85% of the COLA preparation, and this project is in alignment with resource costs identified in the IRP, it is recommended to continue LAC's participation in phase I of the CFPP.

## Background:

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Prior to signing the Power Sales Contract in April 2018, the following had been accomplished:

- DPU surveyed customers on Los Alamos County pursuing nuclear generation. Findings - 73% of residential and 60% of commercial customers agree or strongly agree that Los Alamos should pursue nuclear generation.
- DPU hired a third-party independent contractor to develop an Integrated Resource Plan (IRP) that evaluated all of the options to serve the County's Electric Demand on a Levelized Cost of Energy (LCOE) basis, while meeting our carbon neutral goal. The IRP determined solar with storage to have the lowest LCOE among the options considered. The CFPP came in second at approximately 3.5% higher cost based on the \$65/MWh cap. (The CFPP target price is now \$55/MWh)
- Several public meetings specific to the technology, project commitments, and IRP findings were held.

Since April 2018, UAMPS Project Management Committee (PMC) purposefully minimized the activities in the development of the COLA to allow more time to market the unsubscribed capacity of the project and to negotiate with the DOE and NuScale for additional cost sharing through the COLA development and NRC review minimizing the exposure to the participants.

On July 17, 2019 the BPU approved the JUMP resolution resulting in Los Alamos County acquiring an additional 3.186 MW above the base subscription of 8 MW.

This JUMP Allocation Resolution is for Los Alamos County to express their interest in their entitlement share of capacity and energy from the Joint Use Module Plant (JUMP) program after DOE has completed their research and development using the power output of the JUMP. UAMPS and DOE expected to have the terms and conditions of the JUMP Power Sales Layoff agreement completed by October 2019 however DOE funding was delayed by Congress.

After further evaluation by the DOE, and the federal appropriations committee, DOE was no longer interested in the JUMP program and wanted to pursue a new DOE Multi-Year Award in the nominal amount of \$1.4 billion representing approximately 23% of the estimated Development and Construction Cost of the CFPP, spread over a period of nine years, concluding with the commercial operation of the CFPP.

For more background information on the project please refer to the DPU's website:

[<https://rebrand.ly/DPU-CFPP>](https://rebrand.ly/DPU-CFPP)

### **Alternatives**

The County may choose to reduce their subscription or exit the project at this time and pursue other carbon free base load resources

### **Fiscal and Staff Impact**

If LAC were to exit the project at the end of the current phase, the total investment pursuing the CFPP as an option is approximately \$260k. DOE/LANL participated in the initial phase of which the DOE LANL share was approximately \$103k, leaving the remaining \$157k as LAC's current phase cost share. If the County commits to the next phase of the project for the completion of the application COLA, the additional investment is approximately \$1,046,849.00 plus a contingency of 20% (\$209,370.00) for a total cost of \$1,256,219.00 plus the initial investment as state above.

If the County stays in the project through construction and operation, all of these development costs will be capitalized and rolled into a single cost of power, currently targeted at \$55.00/MWh in 2018 dollars. It is only if the County chooses to exit the project during one of these phases that the costs

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described above would be incurred separately. The County's obligation would be due and payable within one year from the end of the phase during which the County elects to exit from participation. We are setting aside funds to cover an anticipated obligation should that decision to exit be made now or in the future. If we stay in the project, then those accrued funds will be utilized to pay for power under the PPA until exhausted. The interim amounts are relatively insignificant compared to our total cost of power. If cost of power continues at the current relatively low levels, no rate impacts are projected associated with approval of this current budget and plan of finance and continued participation in the project through this phase I of the CFPP.

There is no additional staff impact since resource planning is part of the job.

#### **Attachments**

A - CFPP August 19, 2020 Presentation

B - Carbon Free Power Project Open Forum Q&A

C - Amended Budget & Plan of Finance July 14, 2020