



City Council Report

Date: 10/21/2024
To: City Council
Through: Marc Heirshberg, Deputy City Manager
From: Scott Bouchie, Energy and Sustainability Director
Anthony Cadorin, Energy Resources Program Manager
Subject: Approval of Power Purchase Agreements and Other Agreements for up to Twenty-Five (25) Years and up to Twenty-Five (25) MW of Renewable Electric Power and Energy - Council Districts #1 & 4

Purpose and Recommendation

The City of Mesa Energy Resources Department (“Mesa”) recommends that the City Council authorize the City Manager or his designee to negotiate and enter agreements with a term of up to twenty-five (25) years (“Supply Period”) for the purchase of up to a maximum of twenty-five (25) megawatts (“MW”) of renewable electric power and energy with energy storage with the Arizona Electric Power Cooperative (“AEPCO”). The agreements will be in the form of Power Purchase Agreements (“PPA”) and Subscription Agreements.

Background

Mesa operates an electric service area of approximately 5.5 square miles encompassing the heart of the City, including the original town-site. As of August, 2024 electric service is provided to 18,266 customers of whom 15,479 are residential and 2,787 are commercial, interdepartmental or another public authority. The City, with the combined use of all City facilities served, is the largest electric utility customer. Summer peak demand in 2024 for the electric utility was 86.2 MW.

Mesa’s current electric power supply portfolio consists of a mixture of federal hydropower contracts, two (2) contracts for firm energy with Constellation Energy Generation, LLC and Exelon Generation Company, LLC, approximately 2 MW of customer-owned solar installations, and 804 kW of solar energy purchased through power purchase agreements with subsidiaries of Onyx Renewable Partners L.P. Mesa is currently reviewing proposals for additional summer peak and firm power at market prices.

This portfolio met about 96.2% of Mesa customers’ energy requirements of 334,960

megawatt-hours (MWhs) in the calendar year 2023 with 76.6% through competitively sourced market purchases and 19.6% through hydroelectric and solar resources. The remaining roughly 4% of the customers' requirements can vary significantly due to weather fluctuations and therefore are met by real-time purchases from the regional wholesale markets on an ad hoc basis. The Western Area Power Association ("WAPA") acquires these additional resources on behalf of Mesa (and other publicly owned utilities on an aggregate basis) through its Resources Management Services program. This multi-party aggregating allows Mesa to take advantage of economies of scale that would not otherwise be available.

Mesa has previously faced challenges with procuring economically competitive renewable energy supplies. The economics of renewable energy projects are dictated by economies of scale. Renewable energy generation equipment cost (solar modules, inverters, etc.) have fallen to record low prices, however, the cost to install the generation equipment remains somewhat labor intensive. Accordingly, companies can reduce their costs and achieve economies of scale with large projects where each trade can work near simultaneously to quickly install the project at a lower cost per unit. Mesa has found these economies of scale significantly manifest when projects grow to over 100 MW. Given Mesa's current peak load of approximately 90 MW, it is not feasible that Mesa could be the sole subscriber to a project that large as the utility would be massively oversupplied with solar energy in all but the highest peak hours of the summer.

Mesa has been working with other utilities in the region to determine how a large, inexpensive project might be feasible but where Mesa could take a more appropriate sized portion of that project (along with the other entities taking their proportionate size of the project). To this end, AEPCO is developing the Pinal Solar project.

Pinal Solar is planned to be 300-400 MW of single-axis tracking photovoltaics along with a commensurate amount of four-hour battery storage ("Project"). The Project will be located in Pinal County, Arizona, south of Eloy and is anticipated to be in service in the second quarter of 2026. Developer Nextera Energy Resources has obtained 100% site control of the Project, and the county has permitted the land use designation as green energy production in 2021. Critical to the Project, it will be using Empowering Rural America program (New ERA) funding to buy down much of the cost, creating a substantial discount in the energy price for Project participants.

Discussion

The Project represents a unique opportunity for smaller utilities in Arizona to purchase renewable energy supplies at a competitive cost to what other larger utilities in the state can achieve. Mesa has submitted an indication of interest for 25 MW of solar capacity and 20 MW of battery storage capacity in the Project. Prior to development commencement, Mesa will need to enter two subscription agreements with AEPCO for

the solar and storage ("Subscription Agreements"). Through the Subscription Agreements, Mesa agrees to cover its portion of the cost associated with AEPCO's staff time to carry the Project through the development process. Once the Project has been substantially developed, Mesa will then sign Power Purchase Agreements for both the solar and the storage which will commit Mesa to twenty (20) years of purchasing energy and associated storage from the Project.

Throughout this process, Mesa will be coordinating with WAPA to ensure Mesa has adequate electric transmission rights to deliver the power from the Project (at the ED5 substation in Pinal County) to one of Mesa's transmission receipt points. WAPA is currently studying the Project's output to determine if any transmission upgrades will be required to facilitate delivery of the power to any of the recipients. Should Mesa's cost share exceed \$100,000, Mesa will return to Council for authorization to participate in those upgrades.

Alternatives

An alternative to procuring these supplies would be to not to participate in the Project. If Mesa elected not to participate in the Project, Mesa would continue purchasing energy from the wholesale energy market, likely resulting in an increase in the cost of electricity to Mesa's electric customers. Mesa would also lose this unique partially grant-funded opportunity which includes storage of energy. Mesa would continue to look for alternative renewable energy opportunities, however, these opportunities are rare and take years to develop.

Fiscal Impact

The costs resulting from the proposed PPAs are recovered from electric utility customers through an energy cost adjustment mechanism which is revised as frequently as monthly ("EECAF"). The EECAF decreases when supply costs decline and increases when supply costs increase. Prices can vary significantly between indicative offers and refreshed, final pricing depending on the movement of the wholesale energy market, equipment pricing and contingent unknowns within the process of developing renewable energy projects. Mesa will evaluate the decision of whether to act on these supplies (and their optional storage provisions) based on the final pricing and PPA terms.

Coordinated With

The City Attorney's Office will assist with negotiation of, and approve as to form, any final PPA used to complete any electric power supply transactions pursuant to Council authorization.