



City Council Report

Date: December 11, 2017

To: City Council

Through: John Pombier, Assistant City Manager
Karolyn Kent, Assistant City Manager
Natalie Lewis, Deputy City Manager

From: Scott Bouchie, Environmental Management and Sustainability Director
Frank McRae, Energy Resources Department Director
Cindy Ornstein, Arts and Culture Director

Subject: Power Purchase Agreement with Ameresco for a Solar Electric Parasol at the Mesa Arts Center
Council Districts 1 and 4

Purpose and Recommendation

The purpose of this report is to provide information about a proposed Power Purchase Agreement (PPA) with Ameresco, Inc, a Delaware corporation (“Ameresco”) to construct a 500 – 538 kW elevated solar shade structure at the Mesa Arts Center (“the Project”) for a term of 25 years. The Energy Resources Department, Environmental Management and Sustainability Department and the Arts and Culture Department recommend that the City Council authorize the City Manager to enter into the PPA for the Project.

Background

Mesa, is interested in including additional renewable energy in its utility portfolio and at City facilities. Mesa has installed 8 solar systems at City facilities. Five of these systems are managed through similar PPA agreements. Mesa issued a Request for Qualifications for Solar Services (RFQ-2016011 or “RFQ”) and from the responses to that RFQ, Mesa selected 4 solar providers as qualified solar services contractors. In the RFQ, Mesa selected 10 sites within the electric utility’s electric service area (“ESA”), and ten sites outside the ESA (in SRP’s electric territory) for the solar providers to evaluate as candidates for the installation of solar generating facilities. From this list of 10 within the ESA, Mesa narrowed down the sites to a single, final site at the Mesa Arts Center. Of the 4 solar providers, Ameresco’s submittal was selected as the winning proposal for the Project.

The Mesa Arts Center was selected as the best site for this installation because the Project provides for three projects in one in that it:

1. Creates a premier shaded performance and event space that complements activities hosted by the Mesa Arts Center,
2. Provides shaded parking for Mesa Arts Center patrons, and
3. Provides locally generated, renewable energy.

Ameresco's proposal specified a 24-foot-high elevated solar generating system; a design which is patented by Strategic Solar Energy LLC and is commonly referred to as a "Power Parasol" system. Ameresco does not own the intellectual property associated with the Power Parasol, however, it has agreed with Strategic Solar Energy LLC to license use of the Power Parasol in the Project, which will allow for shade as part of the Project.

Through the PPA, Ameresco proposes to develop, finance, design, construct, own and operate the Project, and Mesa then purchases the energy from the Project at a known price across the 25-year term of the PPA.

Environmental Management & Sustainability, Energy Resources and Arts & Cultural Staff presented the Project to Council on Thursday, November 9th and received direction to proceed with negotiating a PPA with Ameresco. Mesa is now seeking authorization to allow the City Manager or designee to enter into a Power Purchase Agreement with Ameresco.

Discussion

After the selection of Ameresco as the winning bidder for the Project, Mesa developed its own Power Purchase Agreement at Ameresco's request. As such, negotiations are still under development, however, Mesa and Ameresco have agreed to the major deal points which will be inherent to the Project. The following terms have been negotiated and agreed to with Ameresco:

1. Energy Purchase Rates and the Term of the Agreement –
 - a. Mesa will pay a nominal \$0.145/kWh for energy generated by the system for a term of 25 years. Given the potential variation of energy generation and output of a solar system, there are conditions where Mesa will not pay \$0.145/kWh:
 - The Project is subject to an upper production limit. If the Project produces more energy than expected, Mesa will pay considerably less for that energy.
 - The Project is also subject to a lower production limit. If the Project produces significantly less energy than expected, Ameresco will pay Mesa as recompense for failing to deliver energy.
 - b. Upfront payment – Ameresco provided the price quote for the Project in January 2017 and since then pricing on steel and imported electronics has increased. As such, to make the Project happen, Mesa has negotiated an upfront payment of \$50,000 to Ameresco upon execution of the PPA as final consideration for the increase in those expenses.
2. Tax Attributes and Renewable Energy Certificates –
 - a. Ameresco will receive the applicable investment tax credits, production tax credits, tax deductions, accelerated depreciation and other benefits under the Internal Revenue Code or applicable federal, state or local laws.
 - b. Mesa will receive all Renewable Energy Certificates (REC) created by the production of renewable energy by the Project for the term of the PPA.

3. Early Purchase Options –
 - a. If Mesa determines it is in its best interest to own the system, the PPA provides for purchase of the system in the 6th, 10th, 15th 20th year and at the end of the term 25th year of the PPA.
 - b. The purchase value will be the greater of the early termination amount pre-determined in the PPA or the Fair Market Value as determined by a third-party appraiser in each respective buyout year. The requirement to purchase at a fair market value is an IRS requirement for Ameresco to receive the federal Investment Tax Credit which is critical to making the deal work.
 - c. At the end of the term of the PPA, if the City does not want to purchase the system, Ameresco must remove the system and return the property to its original condition.
 - d. Staff will notify Council prior to each early purchase option date.
4. Planning and Construction of the Project – Because of the sensitivity of the Mesa Arts Center to disruption of its activities during peak performance season, Mesa has delineated specific construction milestones, specifically when Ameresco must begin construction and finish construction on the Project. Any delays to either of those dates are subject to performance penalties.
5. Maintenance of the Project – Mesa will only be paying Ameresco for energy produced by the Project, so Ameresco is responsible for all maintenance associated with the energy generating system and so is motivated to keep it in good working order. Because of the visibility of the Project as a showpiece for Mesa, Mesa will be responsible for the maintenance of the aesthetics of the structure, including the supporting columns. This will ensure that the Project remains an aesthetically pleasing solar showpiece for its 25-year lifespan.
6. Coverage in case of Loss – If the Project sustains significant damage or loss, Ameresco is required to repair or replace the damaged system as quickly as practicable. In case of total loss or partial loss within the last 5 years of the term, Ameresco has the option to remove the Project or repair the Project. To ensure repair or replacement is completed within reasonable timeframes, the PPA contains financial penalties.
7. Change in Law – The PPA sets out a process for evaluating the impact of changes to federal, state and local laws that may affect the energy purchase rates. The parties agree to negotiate in good faith amendments necessary to preserve the economic value to both parties. In the instance of a change in law which results in a property tax on the Project, Ameresco has agreed to absorb up to \$5,000 per year of that property tax and if the property tax amount exceeds \$5,000 per year, all additional amounts will be split equally between Mesa and Ameresco.
8. Assignment – It is common throughout the solar industry for these projects to be developed by a solar development company who specializes in contracting, designing, and constructing these projects (such as Ameresco) and then for the projects to be assigned to a PPA holder/operator who has the

specialization of operating and maintaining these projects for the terms of the agreements. Ameresco has explicitly indicated it plans to assign this project to a PPA holder/operator, however, depending on the final terms of the PPA there may be a possibility that Ameresco would continue to hold the PPA through the entire 25-year term. Ultimately, whether Ameresco, or some other entity, the PPA holder will be responsible for all terms in the PPA. Ameresco cannot assign the PPA without Mesa's prior written consent, and any assignee must have comparable experience in operating and maintaining PV systems and must have the financial capability to maintain the Project.

9. Interruption of Mesa Arts Center Operations – The PPA has specific terms that limit Ameresco's ability to perform maintenance during events at the Mesa Arts Center, terms that limit the amount of parking spaces that Ameresco can occupy when performing maintenance, and terms that limit any disruption of any additional event features that will become integral to the use of the Project as an event space. The PPA establishes notice and communication requirements.
10. Event Features – In order to create a premier event space, additional features will be added to the Project that will transform the Project into a shaded performance space when needed. The PPA dictates that these additional features will not affect the operation or maintenance on the solar generation equipment and that Ameresco will allow the addition of these features without them interfering with the structural engineering of the Project. Mesa is working with Ameresco to determine how these features will be financed and this will be presented to the Council for its approval at a later date.

Alternatives

Taking no action will result in the termination or suspension of negotiations with Ameresco for this Power Purchase Agreement.

Fiscal Impact

The first-year energy payments for the energy from the Project are estimated to be \$126,762, but this is subject to vary based on how much energy the Project produces (based on the amount of solar insolation and final efficiency of the equipment installed on the Project). This \$126,762 will be split equally between electric utility customers and the City.

Of the half charged to the electric utility customers (\$63,381), this energy will go to offset the utility's other energy purchases and those energy purchases are estimated to have otherwise cost \$30,042. As such, there will be an increase in electric supply costs of \$33,339 that will be split among the 16,600 electric utility customers. The electric utility's total revenue for FY16/17 was \$31,041,133 and so the increase in costs results in a 0.11% increase in the revenue requirements for the electric utility which will be recovered through the customers' monthly electric supply cost recovery factor. This represents an average monthly bill increase to an average residential customer of nine (9) cents per month. As the Project ages, this bill impact to electric utility customers will become less and less because the Project will produce less

energy and because the cost for Mesa to purchase market power is projected to increase, thus decreasing the difference between the PPA price and the price for the energy Mesa would otherwise purchase.

The other half of the cost, applied only to City buildings, is estimated to impact the average City building's electric bill by \$49.77 per month.

Coordinated With

Environmental Management & Sustainability Department
Energy Resources Department
Arts & Culture Department
City Attorney's Office