

STAFF REPORT UTILITY MEETING

AGENDA DATE: April 25, 2023

DEPARTMENT: Electric Utility

TITLE:

FMPA Municipal Solar Phase III Project Power Sales Contract

SUMMARY:

Request for approval to enter into a Power Sales Contract for purchase of electric power from the Florida Municipal Power Agency (“FMPA”) Municipal Solar Phase III Project (“Project”)

BACKGROUND AND JUSTIFICATION:

FMPA has undertaken a competitive process on behalf of its members to purchase solar energy on their behalf at a scale otherwise not available to individual municipal electric utility members (“Members”). In undertaking this task FMPA has received Member interest in ~300 megawatts of solar production capacity. Lake Worth Beach’s previously expressed non-binding interest is for up to 30 megawatts of solar production capacity from the proposed Project, subject to approval by the City Commission. FMPA is seeking formal approval from Members of their desired participation level in the Project. City Staff and wholesale power consultant “Vantage” have evaluated various levels of City participation, detailed later in this document.

As structured by FMPA in negotiations with the selected developer, the Project will entail building solar power plants at up to four sites in the state of Florida, with FMPA entering into a Power Purchase Agreement (PPA) with the developer, and FMPA entering into Power Sales Contracts (PSC) with individual participating Members such as the City.

The Project is to be constructed and owned by a subsidiary of Origis Energy, a Miami, Florida based company (“Origis”). Based on information available on their web site, Origis Energy is bringing clean and cost effective solar and energy storage solutions within reach for utility, commercial and industrial as well as public sector clients. The Origis team has worked to ensure the interests of all stakeholders are upheld in over 170 projects worldwide totaling more than 5 gigawatts (“GW”) to date of developed solar and energy storage capacity. Headquartered in Miami, FL, Origis Energy delivers excellence in solar and energy storage development, financing, engineering, procurement and construction (EPC) and operations, maintenance and asset management for investors and clean energy consumers in the US.

FMPA and Origis have negotiated a fixed price per Megawatt-Hour of electricity, and agreed to keep the price confidential other than to state publicly that the PPA price is less than \$45 per megawatt-hour (MWhr). Under the terms of the PPA and PSC the price will remain flat for the duration of the twenty (20) year PPA with deliveries expected in 2026. City officials may view the actual confidential pricing and unredacted contract(s) in private with City and/or FMPA Staff.

City’s participation in the Project is a key component of its commitment to reduce greenhouse gas emissions associated with the production of electricity for its electric utility customers, and will further reduce its exposure to rising natural gas prices and market volatility. Under Resolution 05-2023 (approved February 28, 2023) City has committed to reducing its Electric Utility’s greenhouse gas emissions to net-zero by 2045.

Electric power received by City’s electric utility under the Power Sales Contract with the Project is anticipated to begin by December of 2026 and will immediately reduce its purchases under its supplemental electricity contract which is reliant on fossil fuels, and will directly replace like amounts of its electricity generated using fossil fuels.

City's has made substantial commitments to solar energy with its own 1.7 MW project atop the City's closed landfill, its popular and growing net metering program with 2.3 MW of customer-owned solar projects (includes 1.803 MW of existing installations plus 0.502 MW of projects under development but not yet operational), and its participation in the FMPA Municipal Solar Phase II Project anticipated to begin deliveries in December 2023 and 2024. Modeling performed by City's wholesale power consultant "Vantage" and City Staff anticipates that we may experience periods of time in calendar year 2027 when contracted solar deliveries exceed its needs, requiring implementation of battery energy storage projects which are recognized as being an integral element of achieving the City goal of net-zero greenhouse gas emissions by 2045, or alternatively, selling excess contracted electricity in the wholesale electricity market.

The periods of time in which the City may have excess contracted electricity involve daylight hours outside of summer months. During periods of high customer demand such as in summer months the issue is largely negated as customer energy needs increase significantly during that period of time. Staff has modeled multiple scenarios being mindful that its popular net metering program is essential and must have room to grow, as well as in-City community solar projects including an expansion of the solar project atop the City's landfill, as may be approved by the City Commission as a part of an in-City community solar initiative.

Table 1 provided in the backup details the potential exposure of excess electric purchases. This is a highly unlikely scenario and should only be considered to be the maximum potential exposure, it is likely that under certain market conditions as experience recently with high natural gas prices, that any excess purchases that are not able to be utilized by City's growing customer base could be stored in battery energy systems, or may even be sold in wholesale electricity markets. It is also likely that with growing electrification of additional appliances in homes, as well as growing electrification of vehicles expected to be mandated by the federal government, that City's need for renewable energy will grow significantly.

MOTION:

Move to approve/disapprove City's execution of a FMPA Municipal Solar Phase III Project Power Sales Contract at a participation level of ____ MW.

ATTACHMENT(S):

- Fiscal Impact Analysis- N/A
- Lake Worth Beach Solar III Approval; FMPA Presentation
- FMPA PPA with Origis (Redacted)
- Table 1; Solar III Commitment Analysis
- FMPA Power Sales Contract with City (Pending)

Table 1 - Solar III Commitment Analysis (2027)		
Solar III Commitment	Annual Production in MWhrs	Annual Cost
10 MW	26,951	\$1,212,795
15 MW	40,427	\$1,819,215
20 MW	53,903	\$2,425,635
25 MW	67,378	\$3,032,010
30 MW	80,854	\$3,638,430