

# Memorandum



CITY OF DALLAS

DATE April 8, 2022

TO Honorable Members of the Environment & Sustainability Committee

SUBJECT Responses to Questions from the April 4, 2022 Environmental & Sustainability Committee

This memo is a follow-up to the questions received from the Environmental & Sustainability Committee members on April 4, 2022 related to Council Agenda item File ID 22-436 Solar Photovoltaic (PV) on City Facilities.

## **1. How did Building Services Department (BSD) select Ameresco for implementing these projects?**

In December 2021, BSD requested cost proposals for installing solar PV on three City facilities under a cooperative purchasing agreement from four qualified contractors. Based on the cost proposals received, factors such as panel efficiency, panel performance, panel warranty period, design concept, and prior work experience were considered in selecting a qualified contractor for this project. Based on the above criteria, Ameresco, Inc was selected to perform the work.

## **2. Did Building Services Department (BSD) evaluate various financing models that best fit City's interest in implementing these projects?**

BSD worked with Ameresco in evaluating multiple scenarios for financing these solar projects that would best fit the City's needs and interests. Based on the two financing scenarios evaluated for the solar projects, BSD determined Scenario 1 would best fit the City's needs and interests for these solar installation projects.

### Scenario 1: City financing the project (direct procurement)

The City would use a combination of Coronavirus State and Local Fiscal Recovery Funds and Capital Construction Funds to finance the installation of these projects. The average pay-back period for the three projects was estimated to be 21.9 years.

### Scenario 2: Third Party Financing (power purchasing agreement)

In this scenario, Ameresco would pay for the capital construction cost and would be eligible to receive 26% solar investment tax credit. The City would sign an agreement with Ameresco to purchase power generated from the system for a 25-year period. Based on the financial model, the City would pay an average of 46% more in energy rates than what currently City is paying for the three projects combined.

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**3. Did Building Services Department (BSD) evaluate the feasibility of battery energy storage to capture excess energy and what is the return on investment?**

Due to the available roof space at the three facilities, there would be insufficient excess energy generation from the solar PV system to warrant the use of battery energy storage. Based on the proposed solar PV system size, the system would offset approximately an average 57% of the total energy used by the three facilities.

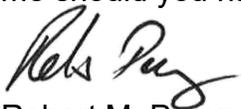
Adding a 1-hour battery energy storage system at all the three facilities would increase the project cost approximately by \$828,750 and would increase the simple pay-back period to 40.1 years compared to 21.9 years without battery storage.

Though adding battery energy storage would provide some resiliency to the facility, it may not provide any significant additional energy and cost savings to the project. Additional electrical improvements would be required at each facility to provide resiliency from battery energy storage.

**4. What are the Solar Photovoltaic procurement methods followed by other Cities and can the City leverage price discounts for large volume orders in collaboration with other organizations for future solar projects?**

Based on the available literature, most of the cities have procured solar and battery energy storage projects either through direct financing or through third-party financing, not much information is available on large volume procurement in collaboration with other municipalities and private entities. BSD will coordinate with other departments within the City to engage in broader discussions on how to leverage large volume orders for solar PV panels and battery energy storage systems to secure a beneficial rate for installing these systems on City-owned facilities.

Please contact John Johnson, Interim Director of the Building Services Department, or me should you have any questions or concerns.



Robert M. Perez, Ph.D.  
Interim Assistant City Manager

- c: Honorable Mayor and Members of the City Council
- T.C. Broadnax, City Manager
- Chris Caso, City Attorney
- Mark Swann, City Auditor
- Biliera Johnson, City Secretary
- Preston Robinson, Administrative Judge
- Kimberly Bizer Tolbert, Deputy City Manager

- Jon Fortune, Deputy City Manager
- Majed A. Al-Ghafry, Assistant City Manager
- M. Elizabeth (Liz) Cedillo-Pereira, Assistant City Manager
- Carl Simpson, Interim Assistant City Manager
- M. Elizabeth Reich, Chief Financial Officer
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