# CITY COUNCIL AGENDA REPORT

**Meeting Date:** October 7, 2021

**From:** Adrienne Etherton, Sustainability Manager

**Subject:** Recommendation to Participate in Peninsula Clean Energy's Public Facility Solar and Storage Procurement Process

**Community Goal/Result**

Safe Community - Residents and visitors will experience a sense of safety

Ecological Sustainability - Brisbane will be a leader in setting policies and practicing service delivery innovations that promote ecological sustainability

Fiscally Prudent - Brisbane's fiscal vitality will reflect sound decisions which also speak to the values of the community

**Purpose**

Provide Peninsula Clean Energy Authority (Peninsula Clean Energy or PCE) confirmation of the City's interest in participating in a collaborative procurement process for Solar Photovoltaic (PV) and battery storage for Mission Blue Center.

**Recommendation**

Adopt Resolution No. 2021-68, "Participate in Municipal Facility Procurement for Solar and Battery Energy Storage Systems with Peninsula Clean Energy".

**Background**

Peninsula Clean Energy has collaborated with its Joint Power Authority (JPA) members, including the City, to identify candidate critical facilities and develop Solar PV System designs for these sites. At its expense, PCE engaged an established independent engineering firm via a competitive solicitation and, working with City staff, designed a Solar PV System for Mission Blue Center as described in the attached proposal.

PCE is piloting a new aggregate procurement model for public facilities to help reduce the costs and complexities for its public partners to move forward. PCE will manage the procurement process, financing, installation, operations, and maintenance with no upfront cost to the City. This process is intended to repeat with subsequent procurement rounds; the City may add additional facilities in subsequent rounds.

A Battery Energy Storage System (Battery) will be included as an option in the procurement to provide added resilience benefits such as the ability to maintain an operational facility during an outage or emergency event. If a Battery is included, it may require City funding or result in a monthly cost above current energy bills. PCE, via a competitive solicitation, will be seeking best

pricing for applicable Battery systems and explore financial options with the City. There is no requirement to include the Battery but if no Battery is installed, the Solar PV Systems will be designed as "battery ready" to allow for a streamlined future addition of a Battery.

PCE will provide a long-term Power Purchase Agreement (PPA) for a specified $/kWh price that is lower than the current and future $/kWh price the City would pay for that same energy from the utility. The PPA will be provided "at cost" by PCE to cover equipment and installation. In addition, PCE will also retain a small $/kWh fee to cover its expenses and will be fully transparent with the City about all salient aspects of the project's financials. If PCE is unable to offer a PPA rate for the Solar PV System that will provide the City with net savings or other community benefits as determined by the City, there would be no obligation to move forward.

PCE cannot provide a specific PPA price until it knows equipment costs, which will be determined via competitive solicitation. However, to make the RFP as competitive as possible, Bidders need to know that there is a firm commitment by participating facility owners to move forward if they can provide pricing that results in net savings. PCE is requesting the City approve a resolution that demonstrates strong intent to participate per the attached Resolution.

**Discussion**

Solar PV Systems provide carbon-free renewable electricity to buildings and reduce electric bills. If included, the Battery can provide resilience benefits allowing Mission Blue Center, a designated emergency shelter, to continue to operate on a limited basis during a power outage using electricity stored and generated onsite.

The benefits of this project include:

- The City will obtain financial and environmental benefits of a Solar PV System with no upfront costs and without incurring the staff time, cost and complexity of hiring and managing consultants to design, including roof structural assessment, running its own solicitation, and overseeing construction and maintenance;
- The City will create local, renewable energy to advance its sustainability objectives;
- The City will receive enhanced energy resilience if a Battery is deployed;
- The City will hedge against rising utility rates, which over the course of a 20+ year system life are expected to be significant.

The California Public Utilities Commission (CPUC) is currently engaged in rulemaking for changes to the Net Energy Metering (NEM) tariffs governing solar PV resources. It is expected that the next iteration of NEM (NEM 3) will be less advantageous for solar and may negatively affect project economics. In the past, projects that had reached a defined stage were grandfathered in under the existing tariff at the time, and it is expected this might apply to the latest NEM revision as well. As such, it is important to get projects deployed as soon as possible. If NEM 3 is enacted prior to the deployment of Solar PV Systems from this procurement and

would prevent Peninsula Clean Energy from offering a PPA at net benefits to the City, PCE would have the right to terminate this pilot program at no cost or obligation to the City.

PCE is offering this first-of-its-kind group procurement model to local government partners across San Mateo County in support of its organizational objectives to increase local renewable generation, help reduce energy costs, and help its customers achieve sustainability goals. PCE has reduced risks to all parties by hiring an independent engineer to complete an analysis for buildings currently in the pilot portfolio and acting as the counterparty to the PPA which will bring down costs, streamline procurement, and reduce the amount of time required by City staff while obtaining the environmental, economic, and other community benefits.

This project is consistent with the City's Climate Action Plan, advancing the City's goals to:

- Provide state-of-the-art, well-maintained infrastructure, amenities, and facilities;
- Create a resilient, safe, connected, and prepared community; and
- Be a leader in addressing climate change, advancing environmental justice, and protecting human health and the environment.

**Fiscal Impact**

There is no cost to the City to participate in the procurement process. The Solar PV System is expected to provide modest cost savings initially, which are expected to grow over time due to avoided increases in utility costs. If a Battery is included, it may require City funding or result in a monthly cost. Staff would return to City Council for approval of battery funding if needed.

**Measure of Success**

Installation of a no-cost Solar PV system at Mission Blue Center and optional Battery Storage.

**Attachments**

1. Resolution No. 2021-68
2. Solar PV and Battery Storage System Proposal for Mission Blue Center

Adrienne Etherton, Sustainability Manager

Randy Breault, Public Works Director

Clay Holstine, City Manager

# RESOLUTION NO. 2021-68

## A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF BRISBANE TO PARTICIPATE IN MUNICIPAL FACILITY PROCUREMENT FOR SOLAR AND BATTERY ENERGY STORAGE SYSTEMS WITH PENINSULA CLEAN ENERGY

**WHEREAS**, the Brisbane City Council has demonstrated its commitment to a sustainable and resilient future through its policy goals and actions, including energy reduction, clean energy programs, and the expansion of local renewable power supply; and

**WHEREAS**, on September 17, 2015, the Brisbane City Council adopted the Brisbane Climate Action Plan to reduce greenhouse gas emissions by 15% of Brisbane's 2005 emissions level by 2020; and

**WHEREAS**, on July 15, 2021, the Brisbane City Council declared a Climate Emergency, establishing new greenhouse gas emission reduction goals of 66% below 2005 levels by 2030 and climate neutrality by 2040; and

**WHEREAS**, a Community Choice Aggregation program is a mechanism by which local governments assume responsibility for providing electrical power for residential and commercial customers in their jurisdiction in partnership with local commercial energy purveyors and owners of transmission and distribution facilities, which in the case of San Mateo County is Pacific Gas & Electric Co.; and

**WHEREAS**, on February 4, 2016, the City Council adopted Resolution No. 2016-03 authorizing Brisbane's participation in the Peninsula Clean Energy Authority, development of the Peninsula Clean Energy Community Choice Aggregation program, and authorized implementation of Peninsula Clean Energy as the City's Load Serving Entity; and

**WHEREAS**, on July 14, 2016, the City Council, via minutes action, adopted the Peninsula Clean Energy ECO100 Plan (100% renewable) electric service plan from Peninsula Clean Energy for all municipal accounts.

**NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF BRISBANE RESOLVES AS FOLLOWS:**

Section 1. The City Manager is authorized to deploy Solar Photovoltaic Systems at municipal facilities in partnership with the City's public power provider, Peninsula Clean Energy through a standard Power Purchase Agreement with Peninsula Clean Energy, should the project result in financial and/or community benefits. The Council further authorizes the City Manager to explore an optional Battery for these sites.

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Karen Cunningham, Mayor

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**PASSED AND ADOPTED** at a regular meeting of the City Council of the City of Brisbane held on the seventh day of October 2021, by the following vote:

AYES:
NOES:
ABSENT:
ABSTAIN:

ATTEST:

_____
Ingrid Padilla, City Clerk

## Solar PV and Battery Storage System Proposal for Mission Blue Center

The following City facility has been evaluated for solar photovoltaic and battery energy storage potential and a design developed as follows:

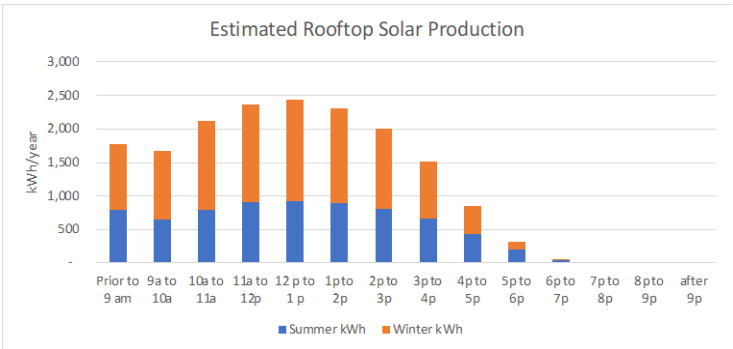
**Facility:** Mission Blue Center, 475 Mission Blue Dr, Brisbane, CA 94005

**Equipment:**

- Solar PV: 11.1 kW rooftop
  - 17,400 kWh/year generation
  - ~135% of total usage; may need to be downsized for interconnection approval
- Battery: 25 kW / 155 kWh
  - ~24 hours backup at maximum facility load with no solar production

**Site Design:**


**PV Production and Electric Bill Savings Estimate:**




| | |
|---|---|
| Total kWh (kWh/yr) | 17,397 |
| Total Savings Solar ($/yr) (Sized at 135% load) | $4,119 |
| Total Savings Solar ($/yr) (Sized at 100% load) | **$2,876** |
| $/kWh | **$0.24** |

**Financial Savings Summary (DRAFT):**

| Site | Rate | PV KW (DC) | Estimated Energy Savings ($/Yr) | Estimated Demand Savings ($/yr) | Estimated Total Electric Bill Savings ($/yr) | Estimated Solar Cost ($/yr simple) | Estimated PCE Costs ($/yr) | Net Savings to City ($/yr) |
|---|---|---|---|---|---|---|---|---|
| Mission Blue Center | B6 | 11.1 | $2,876 | $0 | $2,876 | $1,943 | $174 | $759 |

NOTES:

- No upfront costs to customer to obtain savings
- Yearly costs/savings based on 20-year project life
- Actual equipment and installation costs still to be determined
- PCE costs estimated at $.01/kWh
- 25 kW / 155 kWh estimated at $160,000 (Energy Toolbase). Smaller capacity (kWh) would cost less. Sizing based on resilience duration, not minimizing cost.
- NEM 3.0 revision could negatively impact financials – time is of the essence

**Utility Rate Escalation Analysis:**
An important additional value that a solar system can provide is a hedge against rising utility rates. The table below highlights the considerable additional value this can provide.

“PG&E is planning another round of rate increases for its gas and electricity customers, starting in 2023 with a roughly 18% bump over current rates, much of it to pay for safeguarding the power grid against wildfires…The proposed rate change PG&E officials say would amount to a roughly 5% average annual increase on residential bills through 2026” San Francisco Chronicle, 6/30/21

| **Assumptions** | |
|---|---|
| Regular utility bill escalation ($/kWh component) | 5% per year |
| PPA escalation | 1% per year |
| **Calculations** | |
| Year 1 savings | $759 |
| Year 20 savings | $4,710 |
| Savings (simple) | $48,484 |
| NPV savings (2% discount rate) | $37,450 |