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SAN DIEGO UNIFIED PORT DISTRICT

MEMORANDUM

Date: May 3, 2018

To: Board of Port Commissioners

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Subject: California Energy Commission Microgrid Grant Award Budget Update

The Board received a memo on March 29 regarding a grant award of \$4.9M from the Advanced Microgrid Program with the California Energy Commission (CEC). This is a timing and budget update related to that award.

In November 2017, the District submitted an application for the CEC's grant-funded Business Case Demonstration for Advanced Microgrids program. The project proposed to develop a new, permanent, renewable microgrid at the Tenth Avenue Marine Terminal (TAMT). The project will incorporate renewable energy generation with solar panels, battery energy storage, efficiency improvements, and a centralized microgrid controller which will allow portions of the terminal to remain operational when disconnected from the electrical grid for a period of time.

The District's application requested that the CEC fund \$4,985,272 of a total project cost of \$9,615,208. The match will be funded jointly by the District and the University of California San Diego (UCSD is a partner with the District on this project). The District's portion of the match funding will come from budgeted expenses related to a warehouse roof replacement, staff labor, energy efficiency retrofits, equipment costs, and a power purchase agreement for solar energy. The power purchase agreement for solar energy is expected to save approximately \$168,000 annually over current utility rates.

Subject: California Energy Commission Microgrid Grant Award Budget Update

District staff has been working with the CEC to finalize the project's scope of work and the grant terms and conditions. As part of this effort, staff brought an Addendum to the TAMT Final Environmental Impact Report to the Board in April.

While District staff has been working to advance the project, CEC staff has also been preparing to formalize the staff's recommendation and award funds at the Commission's May 9 business meeting. At the request of CEC staff, District staff has agreed to bring the full grant agreement to the Board of Port Commissioners following the CEC's business meeting. Staff expects to bring the full grant agreement to the Board in June for approval. Accepting the grant agreement will also necessitate its inclusion in the District's FY2019 annual budget. The CEC has requested that the project kick-off meeting be held in July.

The timing of the aforementioned CEC business meeting, the District's planned budget adoption in June, and CEC's request for an immediate start to the project has resulted in a very short timeline with which to formalize the project and budget funds appropriately. The District's budget team will be presenting the preliminary budget to the Board on May 8, which is one day prior to when the CEC is expected to make their award final on May 9. In order to provide clarity to the Board and transparency to the public, while also adhering to the administrative requirements of the CEC, staff plans to acknowledge the expected award as a part of the preliminary budget staff presentation at the May 8 Board of Port Commissioner's meeting.

Staff plans to request direction from the Board on May 8 to include changes to the FY2019 budget in anticipation of final award, including increasing the Capital Improvement Program (CIP) by \$4.85M, of which \$4.5M is for the CIP project "Microgrid Infrastructure at TAMT," and \$350,000 is for associated capital labor. Attached is a set of informational slides relating to project goals, siting, schedule and budget for background (Attachment A).

If you have any questions, please contact Aimee Heim at (619) 686-6390 or aheim@portofsandiego.org, or Renée Yarmy at (619) 686-8621 or ryarmy@portofsandiego.org.

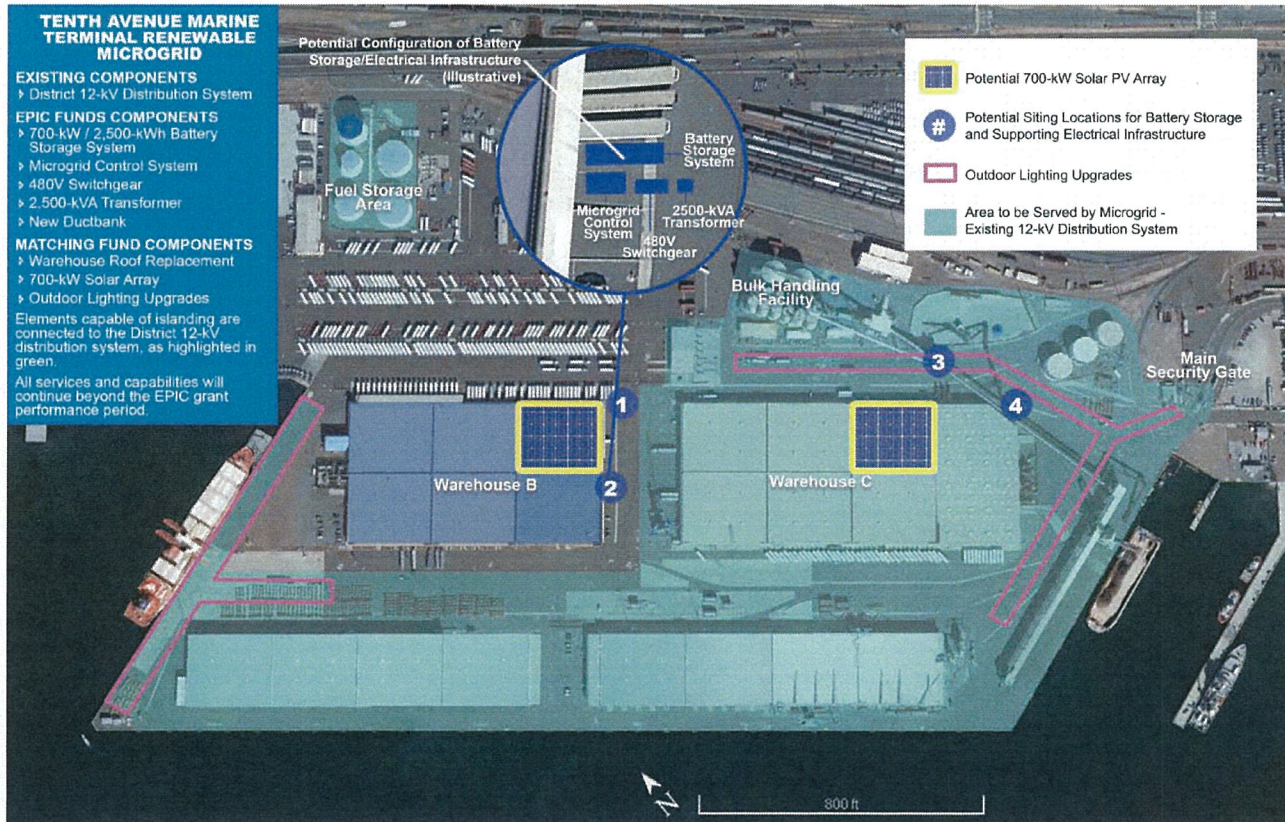
CEC Goals of Microgrid Grant

California Energy Commission (CEC) GFO-17-302: Demonstrate Business Case for Advanced Microgrids in Support of California's Energy and Greenhouse Gas Policies

- **Electrification**
Improve air quality and reduce greenhouse gas emissions. Supports Final Environmental Impact Report for Tenth Avenue Marine Terminal (TAMT).
- **Resiliency**
Demonstration of a reliable, resilient and safe system to increase the terminal's readiness.
- **Technological Advancement**
Provide technological advancement and breakthroughs to achieve the state's statutory energy goals.
- **Replicability**
Develop a model for port terminals and goods movement facilities.



Resiliency in Terminal Operations Project – Microgrid Infrastructure at Tenth Avenue Marine Terminal Preliminary Site Plan



Infrastructure to support the District's Electrical Distribution System includes:

- Electrical Infrastructure Improvements, Solar, Battery Storage, and Microgrid Controller.
- 858,000 kWh Reduction
Solar 700 kW
Battery Storage 2,500 kWh
- 280,000 kWh Reduction
Energy Efficient Site Lighting
- Estimated Reduction of 361 MTCO₂e
- Estimated Utilities Cost Savings 60%

Key Elements of the Grant

- **Key Dates**

- CEC Grant Agreement Approval Anticipated: May 9, 2018
- Grant Agreement Proposed to the Board of Port Commissioners for Approval: June 12, 2018

- **Application Ask**

- CEC Funding: \$4,985,272
- District Match: \$4,427,973
- UCSD Match: \$201,963



Estimated Budget Allocations Over Project (4 years)

| Budget Category | Budget Allocations | CEC Funded | District Match | UCSD Match |
|------------------------------------|---|--------------------|--------------------|------------------|
| Operational Funds | | | | |
| Personnel Expense | Non-Capitalized Labor – District Staff | | \$1,091,358 | |
| Non-Personnel Expense | Travel | | \$890 | |
| | Contractor Support – UC San Diego | \$200,000 | | \$101,963 |
| | Contractor Support – Electric Power Research Institute (EPRI) | \$279,997 | | |
| Environmental Fund | Special Project Port Staff Time (Capitalized Labor) | | \$154,000 | |
| | TAMT Site Lighting Retrofit | | \$80,000 | |
| Major Maintenance | MM Port Staff Time (Capitalized Labor) | | \$110,000 | |
| Warehouse Roof Replacement | Warehouse Roof Replacement (Funding in FY20 TBD) | | \$1,900,000 | |
| Capital Improvement Project | Capitalized Labor – District Staff | | \$894,725 | |
| Microgrid Infrastructure at TAMT | Contractor Support – Burns & McDonnell, UC San Diego, EPRI, and Geotechnical Analysis | \$694,931 | | \$100,000 |
| | Battery Storage – Lithium Ion Battery | \$1,500,000 | | |
| | Centralized Microgrid Controller | \$300,000 | | |
| | Contractor Support – Electrical Infrastructure | \$1,277,312 | | |
| | Electrical Infrastructure Equipment | \$733,032 | | |
| Solar Lease | Power Purchase Agreement for Solar | | \$197,000 | |
| TOTAL | | \$4,985,272 | \$4,427,973 | \$201,963 |