City Council Staff Report

DATE: May 3, 2017 CONSENT CALENDAR

SUBJECT: AUTHORIZATION OF PAYMENT TO SOUTHERN CALIFORNIA EDISON IN THE AMOUNT NOT TO EXCEED OF $75,000 FOR UTILITY UPGRADES AT THE ANIMAL SHELTER ASSOCIATED WITH THE SOLAR PHOTOVOLTAIC SYSTEM

FROM: David H. Ready, City Manager

BY: Engineering Services Department

SUMMARY

This action will authorize payment to Southern California Edison ("SCE") in the amount not to exceed of $75,000 to upgrade the existing SCE transformer serving the City's Animal Shelter.

RECOMMENDATION:

Authorize payment to Southern California Edison in the amount not to exceed of $75,000 to upgrade the existing SCE transformer serving the City's Animal Shelter.

BACKGROUND:

On June 23, 2016, the City Council adopted Resolution 24055 authorizing the City Manager to enter into certain infrastructure financing agreements and associated contracts with SolarCity Corporation for the design and construction of a 400.52 kW solar PV system capable of initially producing a total of 722,940 kWh, which can offset 100% of the typical annual electric load at the Animal Shelter of 646,102 kWh with the balance of over-production net metered with electrical load at Demuth Park.

The conceptual layout for the Animal Shelter Solar PV System is an array of ground-mount solar PV modules as shown in Figure 1:

ITEM NO. 1.I.

Figure 1
Animal Shelter Solar PV System

Agreements were subsequently executed with SolarCity Corporation, and final design has been completed. As a part of the final design, coordination with SCE is required to receive approval for an interconnection for the solar power generated by the system. In its review of the solar interconnection, SCE has reviewed its existing utility infrastructure, and determined that the existing electrical transformer will need to be upgraded to a larger 300 kVa transformer so that the transformer size accommodates the solar system size of 400.52 kW.

SCE has prepared a Preliminary Cost Estimate for Interconnection Agreement with a total non-binding order of magnitude cost estimate of $42,700 for costs associated to upgrade the existing transformer and related SCE facilities. These utility upgrades were not a part of the scope of work being provided by SolarCity Corporation. A copy of Preliminary Cost Estimate for Interconnection Agreement is included as **Attachment 1**.

As SCE has not yet provided a final invoice for the transformer upgrade, and to ensure construction of the new solar system commences without delay, staff is recommending that the City Council authorize payment to SCE in an amount not to exceed $75,000 in accordance with the final invoice submitted to the City for payment.

ENVIRONMENTAL IMPACT:

Construction of the Animal Shelter Solar PV System is considered a "Project" as defined by California Environmental Quality Act ("CEQA"). Pursuant to Section 15378(a) of Title 14 of the California Code of Regulations, (the "CEQA Guidelines"), a "Project" means the whole of an action, which has a potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment, and that is (1) an activity directly undertaken by any public agency including but not limited to public works construction and related activities, clearing or grading of land, improvements to existing public structures, etc.

Section 21084 of the California Public Resources Code requires Guidelines for Implementation of CEQA. The Guidelines are required to include a list of classes of projects which have been determined not to have a significant effect on the environment and which are exempt from the provisions of CEQA. In response to that mandate, the Secretary for Resources identified classes of projects that do not have a significant effect on the environment, and are declared to be categorically exempt from the requirement for the preparation of environmental documents.

The Animal Shelter Solar PV System is proposed to be installed on 1.5 acres of currently vacant land surrounding by urban uses located within the City's Wastewater Treatment Plant, consistent with the applicable general plan designation and all applicable general plan policies, applicable zoning designation and regulations, on a project site that has no value as habitat for endangered, rare, or threatened species, and would not result in any significant effects relating to traffic, noise, air quality or water quality. Pursuant to California Public Resources Code 21084, and Section 15332 of the CEQA Guidelines, the WWTP Solar PV System is considered an "In-Fill Development Project," defined as a Class 32 Categorical Exemption, and construction of the WWTP Solar PV System is considered Categorically Exempt from CEQA. On June 23, 2016, the City Council adopted Resolution No. 24055 approving and ordering the filing of a CEQA Notice of Exemption for the Animal Shelter Solar PV System.

FISCAL IMPACT:

Sufficient funding is available in Account No. 261-9002-50327 (Solar PV Projects), and Account No. 001-3305-43240 (Other Contract Services).

SUBMITTED:

Marcus L. Fuller, MPA, P.E., P.L.S.
Assistant City Manager/City Engineer

David H. Ready, Esq., Ph.D
City Manager

Attachments: 1) SCE Report

ATTACHMENT 1

NEM SCE-104132 City of Palm Springs

SolarCity Corporation

NEM SCE-104132
4575 E Mesquite Ave
Palm Springs, CA 92264
33°48'28.98"N, 116°29'47.51"W

FAST TRACK REVIEW
and
Preliminary Cost Estimate for Interconnection Agreement
pursuant to
SCE's Rule 21 Procedures

Prepared by

Jimmy Cheng

March 24, 2017

SOUTHERN CALIFORNIA
EDISON
An *EDISON INTERNATIONAL*™ Company

City of Palm Springs

BACKGROUND

City of Palm Springs (Interconnection Customer) submitted an Interconnection Request to Southern California Edison (SCE) for interconnection service and distribution service under the terms of SCE's Rule 21 Tariff, with billing under the Net Energy Metering (NEM) Tariff. City of Palm Springs will own and operate 0.29 MW of solar generation located at 4575 E Mesquite Ave in the city of Palm Springs, California. The gps coordinates are 33°48'28.98"N, 116°29'47.51"W. The assigned NMID number for this project is SCE-104132 with a requested in-service date of as soon as feasible.[1]

The generating system will consist of twelve (12) Fronius Symo 24.0-3 480 24 kW Inverters. The proposed project would receive interconnection service from SCE's existing Ike 12 kV circuit out of Eisenhower 115/12 kV Substation via an Underground line to the Customer-owned 480 V switchgear. The generated power would be delivered to the SCE system at the 480 V point of interconnection.

This project was evaluated against the thirteen (13) Initial Fast Track Screens found in Section G.1, "Initial Review Screens" of CPUC Rule 21. SCE concluded that the following Initial Fast Track Screen(s) was/were not met:

D. Transformer Rating

Although the project did not satisfy all of the Initial Fast Track Screens, per Section G.2, "Supplemental Review Screens," SCE determined that the project may nevertheless be interconnected consistent with safety, reliability, and power quality standards.

PRELIMINARY ESTIMATE

The estimated dollar amount (Preliminary Estimate) for the design, engineering, procurement and construction of the Interconnection Facilities, in 2017 dollars, is **$42.7 k.**[2]

SCE established the Preliminary Estimate using a standardized estimating approach. SCE must emphasize that the Preliminary Estimate is not tailored to this specific project. The actual cost may vary considerably from the Preliminary Estimate. SCE created this Preliminary Estimate to assist the Interconnection Customer in expediting execution of the Generating Facility Interconnection Agreement (GFIA) and initiating design/construction.

SCE calculated the Preliminary Estimate assuming the following conceptual method of service based on SCE's existing electrical systems in the area of the Interconnection Customer's proposed Point of Interconnection.
A breakdown of the Preliminary Estimate follows:

Distribution Upgrades

- None

[1] In-service date as requested in the Interconnection Request. The actual in-service date will be determined by the design and construction requirements.
[2] Cost estimate does not include 22% ITCC.

Interconnection Facilities	$ 35.0 k
○ One (1) new 300 kVA 12 kV/480 V transformer and secondary cable	
Subtotal	$35.0 k
ITCC (22%)	$7.7 k
Total non-binding order of magnitude cost estimate	**$42.7 k**

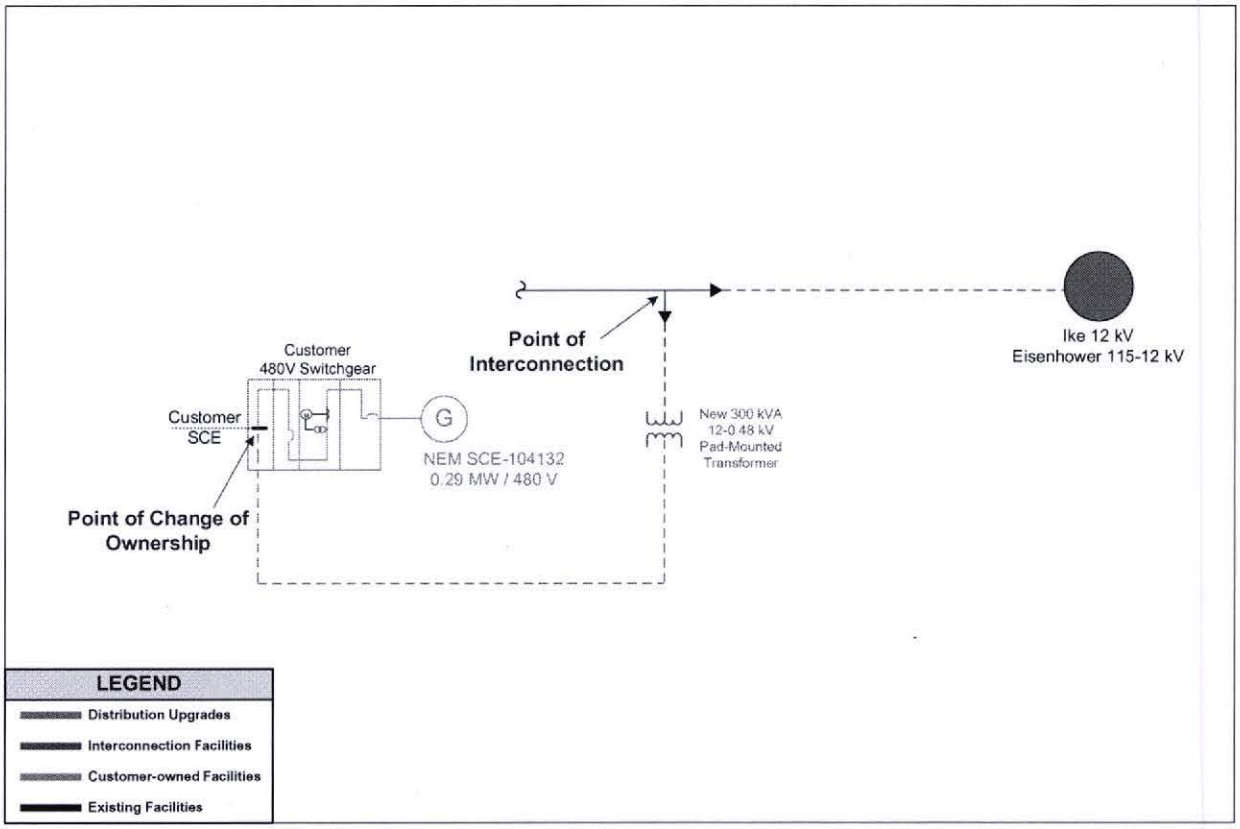

Figure 1: Proposed Method of Service

INTERCONNECTION AGREEMENT

The Interconnection Customer shall provide payments in accordance with the Interconnection Facilities Financing and Ownership Agreement (IFFOA) as agreed to by the parties. The IFFOA will be developed using the scope of work, design, and construction requirements for the project. SCE encourages full payment upon execution of the GFIA and IFFOA to reduce the risk of exhausting funds prior to completion of work.

DESIGN OF DISTRIBUTION UPGRADES & INTERCONNECTION FACILITIES

Design of the Distribution Upgrades (if applicable, will be the Distribution Provider's responsibility). The Interconnection Facilities is expected to be completed within **60 calendar days** from receipt of the following deliverables:

- Execution of the GFIA, IFFOA, and Project Payment is received.
- Approved panel drawings in compliance with SCE's Electrical Service Requirements (ESR): http://www.sce.com/AboutSCE/Regulatory/distributionmanuals/esr.htm
- Interconnection Customer information sheet
- Street improvement plans (if available)
- **Unique address** assigned by the Authority Having Jurisdiction for the Generating Facility Meter location (required for all New-Services)
- Public right-of-way (street) base maps, as required by the interconnection
- Site plot plan on a 30:1 scale or digital file
    - Easement/lease agreement(s)
    - Grading plan(s)
    - Sewer and storm plot plan(s)
    - Landscape, Sprinkler, Pedestal Location(s)

CONSTRUCTION OF DISTRIBUTION UPGRADES & INTERCONNECTION FACILITIES

Construction of the Distribution Upgrades (if applicable, will be the Distribution Provider's responsibility). The Interconnection Facilities are expected to be completed within **60 calendar days** from receipt of the following deliverables:

- Completion of SCE's final design
- Interconnection Customer provides payment of any remaining balance in accordance with the IFFOA
- Underground civil construction is released by SCE inspectors

ADDITIONAL REQUIREMENTS

SCE must clarify that although it was determined that this interconnection project is eligible to proceed under the Fast Track Process, the Interconnection Customer must comply with the following:

- The new generating facility will be required to operate within a power factor range from 0.9 leading to 0.9 lagging per Rule 21 requirements.
- The generation system must be designed to accommodate a VAR schedule provided by SCE.
- All civil construction related to SCE's Interconnection Facilities and Distribution Upgrades must be completed and approved by SCE inspectors prior to SCE scheduling the electrical construction of the Interconnection Facilities and Distribution Upgrades.
- All protection settings must comply with the SCE's interconnection requirements. These requirements can be downloaded at: https://www.sce.com/wps/portal/home/regulatory/open-access-information/

- A Final Commissioning Test will be performed to verify that the interconnection requirements have been met.
- The Interconnection Customer shall provide SCE with an electrical single line diagram that represents the final system design to be included in the GFIA.
- The Interconnection Customer is responsible for the cost of civil work which is required for the distribution and interconnection electrical facilities.
- The Interconnection Customer shall install all equipment necessary to comply with generation output ramp rates as provided by the Distribution Provider.

DISCLOSURE OF STUDY ASSUMPTIONS

- Current distribution standards are being updated to address generation interconnection systems. The proposed method of service in this report is subject to change during final design to comply with the updated distribution design standards.
- This Fast Track Response Letter does not include costs associated with environmental studies which may be required for the licensing or permitting of the proposed generating facility.
- This study assumes that all easements required for the construction of Distribution Upgrades and/or Interconnection Facilities will be secured in a timely manner to accommodate the requested in-service date.
- This report does not consider potential milestone setbacks that could result from the local jurisdiction requiring underground construction of distribution facilities. SCE encourages the Interconnection Customer to consult with the local jurisdiction to identify existing underground ordinance to reduce the risk of complication associated with said ordinance.
- This study does not include analysis related to the following system variability conditions, et. al.
    - Generator ramp rate: Solar photovoltaic generator's increasing output profile during sunrise, i.e. system start-up
    - Generator output variability: Solar photovoltaic generator's output variation correlated with weather conditions, i.e. cloud cover

  This study assumes that the Interconnection Customer's generating facility will include all equipment, software, and appropriate controls necessary to maintain the generator output profile per SCE requirements. The Interconnection Customer will be responsible for maintaining designated voltage levels under all conditions, including but not limited to the conditions identified above. Upon execution of the GFIA and the IFFOA, SCE will provide the Interconnection Customer with the required ramp rate control parameters. The ramp rate controls will be a function of the generation penetration on the distribution system, as well as SCE's distribution system configuration (additional parameters maybe considered, as need). Changes to the ramp rate control scheme may be required as determined by increased generation, changes in the distribution system topology, or other changes in the distribution system.

Applicable to projects requesting primary service: This study does not include analysis related to coordination of system protection equipment. A coordination study may be required during final engineering. The coordination study may identify additional interconnection requirements such as installing new protection equipment, reprogramming and/or relocating existing protection equipment. The additional scope of work may have an effect on the Interconnection Customer's requested in-service date.