



## City Council Staff Report

Date: September 2, 2015 NEW BUSINESS

Subject: REPORT ON THE FINAL SELECTION OF SOLAR FIRMS, AUTHORIZATION TO PROCEED WITH FINAL CONTRACT NEGOTIATIONS, AND APPROVAL OF AMENDMENT NO. 3 IN THE AMOUNT OF \$30,625 TO CONSULTING SERVICES AGREEMENT NO. A6401 WITH NEWCOMB/ANDERSON/MCCORMICK, INC. FOR THE CITYWIDE SOLAR PROJECT, CITY PROJECT NO. 15-03

From: David H. Ready, City Manager

Initiated by: Marcus L. Fuller, Assistant City Manager/City Engineer

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### SUMMARY

After a comprehensive and competitive qualifications and cost based solicitation of solar firms to provide design-build services for solar photovoltaic systems at various City facilities, staff is recommending authorization to proceed with final contract negotiations with SunEdison and SolarCity. Approval of Amendment No. 3 to Agreement No. 6401 adds Phase 2 "Contract Negotiations" allowing staff to coordinate with and proceed to develop final contracts for design and construction of solar photovoltaic systems with SunEdison and SolarCity for various City sites, at an added cost of \$30,625. Final contracts with SunEdison and SolarCity will be provided to City Council for review and approval at a future date, following successful contract negotiations based on the terms and conditions of the final and best offers included with the proposals submitted by SunEdison and SolarCity.

### RECOMMENDATION:

- 1) Authorize staff to proceed with final contract negotiations with SunEdison and SolarCity for design-build services for solar photovoltaic systems at various City facilities;
- 2) Approve Amendment No. 3 to Agreement No. 6401, increasing the contract amount by \$30,625, for a total not to exceed amount of \$176,563, with Newcomb/Anderson/McCormick, Inc., for contract negotiation and coordination services; and
- 3) Authorize the City Manager to execute all necessary documents.

**BACKGROUND:**

On September 18, 2013, the City Council approved an agreement with Newcomb/Anderson/McCormick, Inc., ("NAM"), with an initial scope to perform photovoltaic feasibility analysis related to potential development of photovoltaic ("PV") systems at various City facilities. A copy of the September 18, 2013, staff report is included as **Attachment 1**.

Also on September 18, 2013, the City Council approved a funding agreement in the amount of \$1,175,225 with South Coast Air Quality Management District ("AQMD") for funding to install PV systems at four City facilities, as follows:

- 1) \$284,915 for the Palm Springs Visitors Center
- 2) \$311,680 for Fire Station #3
- 3) \$190,365 for Train Station
- 4) \$388,265 for the James O' Jessie Desert Highland Unity Center

The AQMD funds were awarded to the City through its application in May 2012 under the AB 1318 Mitigation funds associated with the construction and operation of the Sentinal Energy Project Power Plant near Desert Hot Springs.

Subsequently, NAM performed the feasibility analysis and on June 4, 2014, the City Council received a presentation on the results of their analysis of 11 various City facilities. At that time, the City Council approved Amendment No. 1 to the agreement with NAM, in the amount of \$85,000, for development of a Request for Proposals ("RFP") to solicit proposals from the solar industry for design-build of PV systems at the 11 City facilities originally included in NAM's scope of services. A copy of the June 4, 2014, staff report is included as **Attachment 2**.

On November 19, 2014, the City Council approved Amendment No. 2 to the agreement with NAM, in the amount of \$12,088, to include the four additional sites funded by the AQMD grant as part of the comprehensive RFP being prepared for PV systems Citywide. The full list of 14 City facilities included in the City's RFP for PV systems included:

- |                              |                              |
|------------------------------|------------------------------|
| ❖ Animal Shelter             | ❖ Fire Station #4            |
| ❖ Convention Center          | ❖ Sunrise Plaza              |
| ❖ Community Center           | ❖ Tahquitz Creek Golf Course |
| ❖ Demuth Park                | ❖ Train Station              |
| ❖ Downtown Parking Structure | ❖ Visitor's Center           |
| ❖ Fire Station #1            | ❖ Wastewater Treatment Plant |
| ❖ Fire Station #3            | ❖ Unity Center               |

On January 21, 2015, the City Council received a presentation on the status of the project, and approved the City's release of the RFP, identified as RFP 03-15, Design-Build of Solar Electric Systems, which was officially released the next day.

On March 19, 2015, the City received 10 formal proposals from the following solar firms by the required deadline to receive proposals in response to the RFP:

- ❖ Baker Electric, Inc.; Escondido, CA
- ❖ BAP Power Corporation, dba Cenergy Power; Carlsbad, CA
- ❖ Borrego Solar; San Diego, CA
- ❖ La Salle Solar Systems, Inc.; Cathedral City, CA
- ❖ NEXtera Energy; Juno Beach, FL
- ❖ Nobell-MD Energy Partners, LLC; Palm Springs, CA
- ❖ Performance Contracting, Inc.; Anaheim, CA
- ❖ SolarCity Corporation; Thousand Palms, CA
- ❖ SunEdison; Belmont, CA
- ❖ SunPower Corporation Systems – Renova Energy Corp; Anaheim, CA

Subsequently, from March through June 2015 an Evaluation Committee reviewed the 10 proposals in terms of financial benefits, proposal package completeness, technical strengths, the amount of solar PV experience and qualifications of the firm and proposed team, the proposed schedule of performance, system aesthetics, implementation approach, and the use of local contractors and local expertise. The type of solar PV system proposed for each of the 14 sites and each site's aesthetic considerations were also taken into account in this analysis.

It is important to note that some solar firms did not propose on all 14 City facilities. Baker Electric proposed solar arrays at all 14 sites, and Borrego Solar proposed solar PV systems at the Convention Center, Sunrise Plaza Complex, Tahquitz Creek Golf Course, and Wastewater Treatment Plant. Cenergy Power and Nobell Energy Solutions proposed solar PV systems only at the Wastewater Treatment Plant, and LaSalle Electric proposed PV systems at all sites except for Fire Station #3.

After thoroughly reviewing all of the proposals submitted, a short-list of three solar firms was selected to present formal interviews conducted on June 11, 2015. The three finalists were:

- ❖ SolarCity Corporation; Thousand Palms, CA
- ❖ SunEdison; Belmont, CA
- ❖ SunPower Corporation Systems – Renova Energy Corp; Anaheim, CA

Final and best offers have been submitted by the three short-listed solar firms for the City's review, and the evaluations have been completed. On July 20, 2015, staff presented its final recommendation to the City Council sub-committee (Lewin/Mills); the sub-committee concurred with staff's recommendation with direction to schedule City Council approval to enter into final contract negotiations with SunEdison and SolarCity to provide design-build services for solar PV systems at the following sites:

	<b>Selected Vendor</b>	<b>Procurement Type</b>	<b>Power Offset</b>
<b>Animal Shelter</b>	SunEdison	PPA*	64%
<b>Convention Center</b>	SunEdison	PPA*	71%
<b>Demuth Park</b>	SunEdison	Purchase**	91%
<b>Downtown Parking Structure</b>	SunEdison	Purchase**	88%
<b>Fire Station 1</b>	SunEdison	Purchase**	91%
<b>Sunrise Plaza</b>	SolarCity	PPA*	71%
<b>Waste Water Treatment Plant</b>	SolarCity	Purchase***	88%
<b>Unity Center</b>	SunEdison	Purchase**	TBD <sup>1</sup>

\*PPA = power purchase agreement (lease)

\*\*Purchase will be via AQMD grant funds

\*\*\*Purchase will be via WWTP Funds (Fund 420)

Not all sites were selected for solar PV systems due to the very marginal benefits of systems proposed at the Demuth Community Center, Fire Station #3 & #4, Tahquitz Creek Golf Course, Train Station and Visitor's Center. It was also necessary to evaluate the direct purchase price of the various solar PV systems to aggregate the total cost of those systems within the available \$1.2 Million AQMD grant.

Conceptual layouts of the solar PV systems to be installed at the 8 selected City facilities are included as **Attachment 3**.

Given the highly technical and specialized nature of the solar industry, staff recommends that the City coordinate the final contract negotiations with the selected solar firms with NAM, who originally intended to provide contract negotiations support in its original proposal to the City provided in June 2014. Staff has prepared Amendment No. 3 to the agreement with NAM, which will add the contract negotiations services at an additional cost of \$30,625. A copy of Amendment No. 3 is included as **Attachment 4**.

**ENVIRONMENTAL IMPACT:**

The requested City Council action is not a "Project" as defined by the California Environmental Quality Act (CEQA). Pursuant to Section 15378(a), 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. The requested action is to authorize approval of an amendment to a professional services agreement to include performance of contract negotiation services in the preparation of final design-build contracts for solar PV systems, and is exempt

<sup>1</sup> The final solar PV system size is to be determined due to the new HVAC system being installed at the Unity Center Gym.

Organizational or administrative activities of governments that will not result in direct or indirect physical changes in the environment. However, Senate Bill 226, effective January 1, 2012, enacted California Public Resources Code 21080.35, which created a new categorical exemption under CEQA for the installation of solar energy systems, including associated equipment, on the roof of an existing building or at an existing parking lot. Those City facilities where solar PV systems will be installed on existing buildings or parking lots, will not require further environmental analysis pursuant to CEQA. Those City facilities where solar PV systems may be installed by ground-mount systems on native ground will require subsequent environmental review pursuant to CEQA prior to initiating construction of those solar PV systems.

**FISCAL IMPACT:**

On June 4, 2014, staff presented the preliminary feasibility analysis of implementing solar PV systems at several City facilities. At that time, the analysis demonstrated a value to moving forward with solar PV systems, in that these systems may generate a net benefit of approximately \$2,300,000 over the 25-year life of the systems. The results of the City's competitive solicitation for solar PV systems has identified significantly improved financial benefits to proceeding with solar PV systems, with a potential net benefit of approximately \$25,000,000 over the 25-year life of the systems as shown in the following Table.

Site	System Size (kWdc)	Capital Cost	PPA Price (\$/kWh)	25 Year Bill Savings	25 Year Net Benefit
Animal Shelter	638.4	N/A	\$0	\$7,000,225	\$4,725,034
Convention Center	957.6	N/A	\$0	\$8,611,789	\$5,693,472
Demuth Park	161.7	\$460,576	N/A	\$1,716,460	\$1,256,154
Downtown Parking Structure	75.6	\$255,314	N/A	\$744,750	\$456,899
Fire Station #1	50.4	\$169,795	N/A	\$408,223	\$200,379
Sunrise Plaza Complex	396.9	N/A	\$0	\$3,885,432	\$2,939,290
Wastewater Treatment Plant	1130.5	\$2,178,848	N/A	\$11,339,779	\$9,459,633
Unity Center*	40.0	\$150,000	N/A	\$84,143	\$8,713
<b>Totals</b>	<b>3451.1</b>	<b>\$3,214,533</b>		<b>\$33,790,801</b>	<b>\$24,739,574</b>

\*Site load, system size, and system cost estimated

The following provides a general outline of the final proposals to be negotiated for each City facility selected for a solar PV system:

- Animal Shelter to be awarded to SunEdison via a Power Purchase Agreement to install a 638 kWdc solar PV system (ground mount) to produce 1,380,603 kilowatt-hours (kWh) of electricity at a fixed cost of \$0.068/kWh<sup>2</sup>

<sup>2</sup> As a comparison, the City currently pays SCE a rate of \$0.153 per kWh at the Animal Shelter; the PPA will lock in a rate of \$0.068 per kWh (56% less than we currently pay) fixed for the 25-year term of the PPA.

- Convention Center to be awarded to SunEdison via a Power Purchase Agreement to install a 957 kWdc solar PV system (roof mount) to produce 1,573,806 kWh of electricity at a fixed cost of \$0.077/kWh<sup>3</sup>
- Demuth Park to be awarded to SunEdison via a direct purchase for \$460,575.50 (\$2.85/kW) to install a 162 kWdc solar PV system (parking lot canopy structure) to produce 278,875 kWh of electricity
- Downtown Parking Structure to be awarded to SunEdison via a direct purchase for \$255,314 (\$3.38/kW) to install a 76 kWdc solar PV system (parking lot canopy structure) to produce 117,930 kWh of electricity
- Fire Station #1 to be awarded to SunEdison via a direct purchase for \$169,795 to install a 50 kWdc solar PV system (parking lot canopy structure on the adjacent Henry Frank Arcade City parking lot) to produce 78,761 kWh of electricity
- Sunrise Plaza to be awarded to SolarCity via a Power Purchase Agreement to install a 335 kWdc solar PV system (roof mount<sup>4</sup>) to produce 518,510 kWh of electricity at a fixed cost of \$0.075/kWh<sup>5</sup>
- Wastewater Treatment Plant to be awarded to SolarCity via a direct purchase for \$2,178,848 (\$1.96/kW) to install a 1,110 kWdc solar PV system (ground mount) to produce 2,442,617 kWh of electricity
- Unity Center to be awarded to SunEdison via a direct purchase for \$118,607 (\$5.95/kW) to install a 20 kWdc solar PV system (roof mount) to produce 31,549 kWh of electricity<sup>6</sup>

A comparison of the financial benefits of the solar PV systems proposed by the solar firms at each of the 8 final selected City facilities is provided as **Attachment 5**.

The final financial analysis and net benefit will be fully detailed at the time the design-build contracts with SunEdison and SolarCity are presented to the City Council for approval; however, on the basis of the significant financial benefit to the City vis-à-vis avoided or reduced utility costs, staff recommends proceeding with final contract negotiations with SunEdison and SolarCity for the selected City facilities at this time.

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<sup>3</sup> As a comparison, the City currently pays SCE an average rate of \$0.164 per kWh at the Convention Center; the PPA will lock in a rate of \$0.077 per kWh (53% less than we currently pay) fixed for the 25-year term of the PPA.

<sup>4</sup> Solar panels will be installed on the roof of the Library, Pavilion, and Recreation Center, no parking lot canopy structures are proposed.

<sup>5</sup> As a comparison, the City currently pays SCE an average rate of \$0.225 per kWh at Sunrise Plaza; the PPA will lock in a rate of \$0.075 per kWh (67% less than we currently pay) fixed for the 25-year term of the PPA.

<sup>6</sup> The Unity Center system will be increased in size to accommodate increased power consumption due to the new HVAC system being installed at the Unity Center gymnasium; during contract negotiations a final system size to accommodate the estimated electricity load will be determined.

### ***California Solar Initiative (CSI) Program***

The California Solar Initiative (CSI) is overseen by the California Public Utilities Commission (CPUC) and provides incentives for solar system installations. The CSI Program provides upfront incentives for solar systems installed on existing residential homes, as well as existing and new commercial, industrial, government, non-profit, and agricultural properties within the service territories of SCE. The CSI Program had a budget of \$2.167 billion over 10 years, with a goal to reach 1,940 MW of installed solar capacity by the end of 2016. The goal includes 1,750 MW of capacity from the general market program, as well as 190 MW of capacity from the low income programs.

On July 2, 2014, the City Council authorized the City Manager to file CSI rebate applications to SCE for the 10 original City facilities evaluated by NAM, requiring payment of a non-refundable \$60,000 application fee to reserve up to \$1,881,562 in CSI rebates. A copy of the July 2, 2014, staff report is included as **Attachment 6**. Subsequently, the City Manager filed 4 additional CSI rebate applications to SCE for the 4 AQMD grant sites, requiring payment of a non-refundable \$6,250 application fee to reserve up to an additional \$127,691 in CSI rebates for those 4 City facilities. In total, the City has reservations for up to \$2,009,253 in CSI rebates for the 14 City facilities.

However, now that the City has identified the 8 City facilities warranting solar PV systems, the entire \$2,009,253 CSI rebate reservation is reduced to apply to these 8 City facilities. The total CSI rebates available to the City are reserved at a rate of \$0.088 per kWh for purchased solar PV systems over the first 5 years of operation, equivalent to \$1,271,224 over 5 years for the purchased solar PV systems. Additionally, for those City facilities with solar PV systems operated via PPA, the City is eligible for up to an additional \$0.025 per kWh discount to the PPA rates proposed by SunEdison and SolarCity – further improving the financial benefit for those sites.

The original performance schedule for receiving the CSI rebates required the City to enter into design-build contracts with solar firms by April 2, 2015, with construction completed by December 31, 2015. NAM, on behalf of the City, has continuously coordinated with SCE to advise them of the status of this complicated public solicitation process that has been underway since January 2015, and is currently coordinating with SCE for extension of time to the performance schedule given our current status.

### ***Anticipated Up-Front Capital Costs***

The final costs for the design-build services from SunEdison and SolarCity will be fully detailed as part of the City Council's future consideration of the design-build contracts with each solar firm for each City facility. However, based on the terms and conditions proposed in their final and best offers, the following is a general summary of the anticipated costs at each site:

- Animal Shelter: \$0<sup>7</sup>
- Convention Center: \$0<sup>7</sup>
- Demuth Park: \$460,576 (AQMD Site)
- Downtown Parking Structure: \$255,314 (AQMD Site)
- Fire Station #1: \$169,795 (AQMD Site)
- Sunrise Plaza: \$0<sup>7</sup>
- Wastewater Treatment Plant: \$2,178,848
- Unit Center: \$118,607<sup>8</sup> (AQMD Site)
- Total Anticipated Cost: \$3,183,140

To the extent the City receives the CSI rebates for the directly purchased solar PV systems, the up-front capital cost will be further reduced by \$1,271,224 over the next 5 years as the rebates are received from SCE, ultimately reducing the capital cost required for these 5 solar PV systems to \$1,911,916.

Staff will be recommending that the \$2,178,848 solar PV system for the Wastewater Treatment Plant be funded directly from the Wastewater Fund (Fund 420) Balance.

The 4 AQMD sites, at an estimated cost of \$1,004,292 will be paid from the \$1,175,225 AQMD grant received.

**NAM Agreement**

The City Council originally approved an agreement with NAM for \$48,850 on September 18, 2013, for feasibility analysis of solar PV systems Citywide. The agreement and its amendments are identified in the following Table:

<b>Table of Agreement Costs</b>	<b>Cost</b>
Original Agreement (Feasibility Analysis)	\$48,850
Amendment No. 1 (Develop RFP)	\$85,000
Amendment No. 2 (Add 4 AQMD Grant Sites)	\$12,088
Amendment No. 3 (Proposed)	\$30,625
<b>Total</b>	<b>\$176,563</b>

<sup>7</sup> There is no up-front capital cost required via the terms of a PPA; the solar firm absorbs all design, construction and project management costs which are repaid through the City's payment of electricity at the fixed rate per kWh over the term of the PPA.

<sup>8</sup> The direct purchase price of the Unity Center solar PV system is subject to change dependent upon the final system sizing yet to be determined.



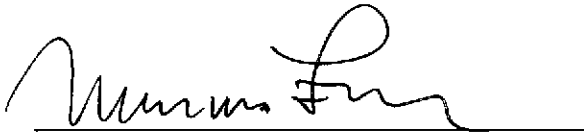
The City is the recipient of a grant in the amount of \$1,175,225 from AQMD for funding to install PV systems at four City facilities; these funds have been appropriated in Capital Projects Fund (Fund 261), Account No. 261-4491-50327. Funding for development of the project thus far has been appropriated from the following sources:

General Fund (Fund 001): \$66,250  
Sustainability Fund (Fund 138): \$133,850  
Capital Project Funds (Fund 261): \$12,088

Sufficient funds are available in account 261-4491-50327 for Amendment No. 3 in the amount of \$30,625.

Prepared by:

Approved by:



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



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

Attachments:

1. September 18, 2013, staff report
2. June 4, 2014, staff report
3. Conceptual Solar PV System Layouts
4. Amendment No. 3
5. Cost Comparisons
6. July 2, 2014, staff report

# ATTACHMENT 1



## City Council Staff Report

DATE: September 18, 2013 CONSENT CALENDAR  
SUBJECT: SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT (SCAQMD)  
AGREEMENT  
FROM: David H. Ready, City Manager  
BY: Public Works & Engineering

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### SUMMARY:

Approval of this item will give authorization to the City Manager to complete all actions relative to the execution of the agreement with SCAQMD for Sentinal funds.

### RECOMMENDATION:

1. Authorize the City Manager to execute the Agreement with the SCAQMD for reimbursement of funds for the Sentinal Power Plant funded, Palm Springs Solar Voltaic projects, subject to prior approval by City Attorney.
2. Authorize the City Manager to execute all necessary documents.

### STAFF ANALYSIS:

In May of 2012 the City applied for AB 1318 Mitigation funds associated with the construction and operation Sentinal Energy Project Power Plant. In February 2013, the City was informed that the SCAQMD Board approved \$1,175,225 for 4 solar voltaic projects as follows:

- 1) \$284,915 for the Palm Springs Visitors Center
- 2) \$311,680 for Fire Station #3
- 3) \$190,365 for Train Station
- 4) \$388,265 for the James O' Jessie Desert Highland Unity Center

SCAQMD has recently sent a proposed agreement to be executed by both City & SCAQMD. Once fully executed the City may begin the process to request proposals for design and construction of the four projects. At this time the agreement is still being

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finalized. Upon approval by the City Attorney and the SCAQMD, the final agreement will be presented to the City Manager for execution.

FISCAL IMPACT:

Funding will be provided by SCAQMD up to \$1,175,225. Design and Construction shall not exceed that cost.


Recommended by:

Approved by:



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David J. Barakian  
Director of Public Works/City Engineer



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David H. Ready, City Manager

Attachments:

~~1. Draft Agreement~~  
*not included*

# ATTACHMENT 2



## CITY COUNCIL STAFF REPORT

DATE: June 4, 2014 NEW BUSINESS

SUBJECT: SOLAR FEASIBILITY – PRESENTATION AND DISCUSSION

FROM: David H. Ready, City Manager

BY: Special Projects Coordinator

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### SUMMARY

The City Council will receive a presentation from Newcomb/Andersen/McCormick regarding solar alternatives for City facilities for consideration by the City Council.

### RECOMMENDATION:

Direct staff as appropriate.

### STAFF ANALYSIS:

The City hired Newcomb/Andersen/McCormick (NAM) to take a second look at the feasibility of installing Photo Voltaic (PV) Solar on many of the City facilities. More specifically NAM was to review the option of taking advantage of a seldom utilized SCE program (RES-BCT) that would allow the City to build a large PV array and have the power distributed to other facilities via bill credit and debit. (Copy of the report on file in the office of the City Clerk)

The California solar regulatory environment is constantly in a state of flux and as such the report goes into great detail on the current environment and programs that exist that the City could avail itself of. The one program that was of specific interest to the City was the RES-BCT self-generation bill-credit transfer program. This tariff program on the surface looks quite promising until one realizes that the credit transfer portion of the tariff only allows for offset of the "generation component charges" it does not allow for demand charges to be offset, thus the financial benefit is greatly reduced and in the instance of the City's facilities it does not pencil out. Any project that the City were to undertake will qualify for the California Solar Initiative Incentive Program, which is more thoroughly described in the study document. The most promising current SCE tariff

ITEM NO. 5A

program is the Net Energy Metering (NEM) program which gives credit to customers for excess energy that is produced.

The study document details how NAM goes about conducting a feasibility study, including all the parameters and assumptions that they utilize; all being very conservative. NAM reviewed numerous City sites for possible solar installations and narrowed down the possibilities to eleven (11) specific sites. Each site was modeled and evaluated based on three approaches to financing for the projects: 1) Cash Purchase, 2) Power Purchase Agreement (PPA) (Third Party Financing), or 3) Simple Loan (Bond Financing).

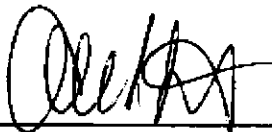
The study recommends that the City consider bidding all eleven sites under both a financing and PPA approach in an attempt to drive down the overall price with competition. Staff believes that the study provides an excellent base for a decision making process to follow and the data provided will be invaluable in developing and evaluating any future RFP process that might occur.

The decision making process must include discussions of such items as roof mounted vs carport mounted systems; what a carport might look like; what about the need to remove trees; as well as discussions on the use of currently owned City acreage for a ground mounted system. Once these policy type decisions are made the list of sites can be narrowed and an RFP process can be developed.

The study clearly indicates that a ground mounted system at the Animal Shelter would be a good investment as would the possibility of a ground mounted system for the Wastewater Treatment Plant if acreage could be utilized for this purpose. The Convention Center parking lot with carports is also a good possibility, however, the location of the permanent parking for the Convention Center is in a state of flux currently. The other sites, as stand-alone sites, are not as viable.

FISCAL IMPACT:

The NAM report reveals that the best results are achieved if the City were able to purchase the systems with cash. The analysis reveals that the 25 year net benefit of the financing and the PPA approaches are essentially the same.



Allen Smoot, Special Projects Coordinator



David H. Ready, City Manager



# City of Palm Springs

## Solar Feasibility Analysis Results





# Agenda

- Background
- Analysis Methodology & Assumptions
- Results
- Next Steps



5/28/2014

2

**NAM**  
Newcomb | Anderson | McCormick

04

## Background

- Investigation of solar across 11 sites
  - ❖ Downtown Parking Structure
  - ❖ Fire Station #1
  - ❖ Jaycee Frey
  - ❖ Demuth Community Center
  - ❖ Sunrise Plaza
  - ❖ Animal Shelter
  - ❖ Demuth Park
  - ❖ Fire Station #2
  - ❖ Tahquitz Creek Golf Course
  - ❖ Convention Center
  - ❖ Wastewater Treatment Plant
- Procurement Strategies: PPA vs. Direct Purchase
- Interconnection Strategies: NEM, NEMA, or RES-BCT

## Analysis Methodology

- Review of energy use across City facilities
- Use of aerial imagery to determine best locations for solar arrays
- Review of current and developing legal, regulatory, and program rules
- Development of three scenarios for analysis
- Estimation of energy project costs and savings over the project lifecycle
- Project Management and contingency incorporated into costs

## Critical Financial Analysis Assumptions

- *The price of energy purchased from SCE and annual escalation rate:*  
The analysis considers an annual escalation rate of 4.5%.
- *The amount of energy consumed and the profile of that consumption:*  
The models assume the load pattern observed so far is a good indication of future load patterns.
- *The cost of the solar system:*  
Considering recent procurement experience at other public institutions, we use conservative estimate for system cost assumptions:
  - \$4.00 per Watt dc, which includes O&M, inverter replacement, and performance guarantees
  - \$0.125 per kilo-Watt hour, for Power Purchase Agreements
  - \$3.25 per Watt dc, for centralized installations

## Results

- Of the 11 sites investigated:
  - Solar at two sites were estimated to create bill savings of over \$7 million over a 25 year timeline for each site (Convention Center & Waste Water Plant)
  - Solar at two sites were estimated to create bill savings of over \$2 million over a 25 year timeline for each site (Animal Shelter & Sunrise Plaza)
  - Solar at four of the sites produce marginal benefits with conservative cost estimates
- Net Benefit for entire portfolio is over \$2 million over a 25 year timeline
  - Net Benefit includes all costs: Construction, Performance Guarantee, Operation & Maintenance, Project Management, Simple Financing, etc.

5/28/2014

  
Newcomb[Anderson]McCormick

08

## Recommendation

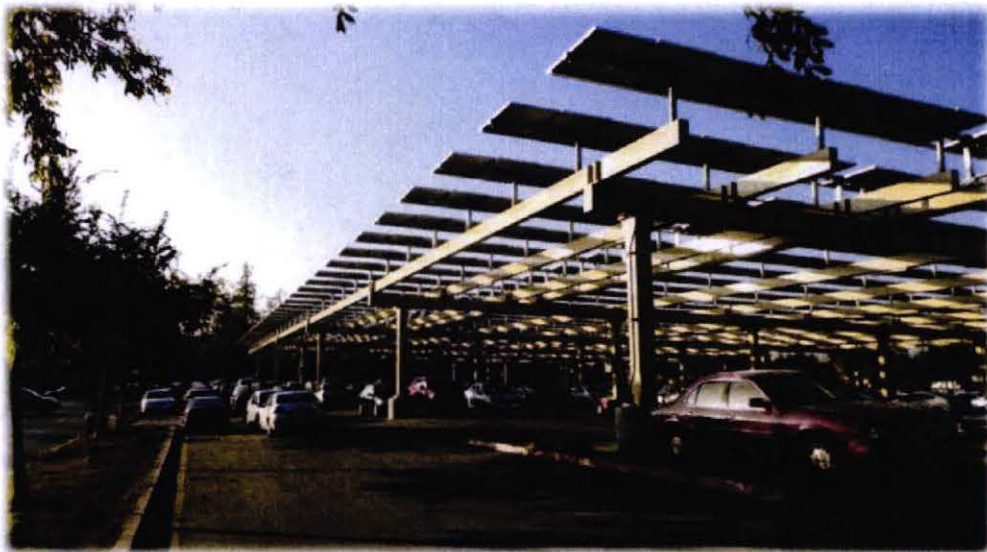
- Distributed NEM provides the highest value to the City
  - Both PPA and Purchase scenarios are viable
- RES-BCT scenario less viable
- Determine City's aesthetic requirement
  - Carports in parking lots
  - Visible roof systems
- Move forward with competitive bids
  - Capture both PPA and Purchase pricing
  - Ensure Performance Guarantee, Warranties, and Operation & Maintenance of system are in place

## Next Steps

- Develop and issue an RFP to the vendor community
  - Provide site details
  - Outline contractual obligations
  - Produce refined system layouts
  - Finalize system costs
  - Identify the best value solar vendor
- Secure project financing if proceeding with direct purchase scenario
- Contract Negotiations
- Construction Period Services

# Questions?

Parking Lot  
Tracking Solar  
System



5/28/2014

**NAM**  
Newcomb | Anderson | McCormick



# Photos

Playground Fix  
Tilt Solar System



5/28/2014

**NAM**  
Newcomb | Anderson | McCormick

# Photos

Field Fix Tilt  
Solar System



5/28/2014

**NAM**  
Newcomb | Anderson | McCormick

# Photos

Parking Garage  
Fix Tilt Solar  
System



5/28/2014

**NAM**  
Newcomb|Anderson|McCormick

# Photos

Parking Garage  
Fix Tilt Solar  
System



5/28/2014

**NAM**  
Newcomb|Anderson|McCormick

# Photos

Parking Lot Non-traditional Fix Tilt Solar System



5/28/2014

**NAM**  
Newcomb|Anderson|McCormick

# Photos

Parking Lot Non-traditional Fix Tilt Solar System



5/28/2014

**NAM**  
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## Reference: Likely Benefits

Site	System Type	25 Yr Utility Bill Savings	Total Costs	CSI Incentive	25 Yr Net Benefit	
Downtown Parking Structure	Shade Structure	\$616,388	(\$528,484)	\$56,000	\$143,903	
Demuth Park	Shade Structure	\$265,197	(\$276,126)	\$24,889	\$13,960	
Fire Station 1*	Shade Structure	\$306,465	(\$404,327)	\$36,444	(\$61,418)	
Fire Station 4	Ground Mount and/or Roof Mount	\$298,155	(\$296,266)	\$35,555	\$37,445	
Jaycee Frey	Roof Mount	\$68,808	(\$68,008)	\$5,333	\$6,134	
Tahquitz Creek Golf Course*	Shade Structure and/or Roof Mount	\$516,748	(\$631,145)	\$56,889	(\$57,508)	
Demuth Community Center*	Roof Mount and/or Shade Structure	\$334,692	(\$394,266)	\$41,778	(\$17,796)	
Animal Shelter	Ground Mount	\$2,317,801	(\$2,109,271)	\$271,110	\$479,639	
Convention Center - Roof	Roof Mount	\$3,668,511	(\$3,790,868)	\$426,665	\$304,307	
Convention Center - Carport	Shade Structure	\$3,976,734	(\$4,320,150)	\$457,776	\$114,359	
Sunrise Plaza	Roof and/or Shade Structure	\$2,653,287	(\$2,724,686)	\$306,665	\$235,266	
Wastewater Treatment Plant - Fixed	Ground Mount	\$8,274,607	(\$8,471,663)	\$1,157,231	\$960,175	
		<b>TOTAL</b>	<b>\$23,297,393</b>	<b>(\$24,015,260)</b>	<b>\$2,876,334</b>	<b>\$2,158,467</b>
		<b>Selective TOTAL*</b>	<b>\$22,139,487</b>	<b>(\$22,585,522)</b>	<b>\$2,741,223</b>	<b>\$2,295,189</b>
*Marginal sites removed						

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## Reference: System Information

Site	System Type	Potential System Size (kW DC)	Year One Estimated Energy Usage (kWh)	Year One Estimate Solar Generation (kWh)	Percent Offset
Downtown Parking Structure	Shade Structure	63	133,495	100,230	75%
Demuth Park	Shade Structure	28	59,795	44,547	74%
Fire Station 1	Shade Structure	41	86,475	65,229	75%
Fire Station 4	Ground Mount and/or Roof Mount	40	83,581	63,638	76%
Jaycee Frey	Roof Mount	6	12,603	9,546	76%
Tahquitz Creek Golf Course	Shade Structure and/or Roof Mount	64	134,898	101,821	75%
Demuth Community Center	Roof Mount and/or Shade Structure	47	112,452	74,775	66%
Animal Shelter	Ground Mount	305	646,102	485,239	75%
Convention Center (Roof)	Roof Mount	480	1,113,998	763,656	69%
Convention Center (Lot)	Shade Structure	515	1,091,374	819,339	75%
Sunrise Plaza	Roof and/or Shade Structure	345	2,773,670	2,071,242	75%
Wastewater Treatment Plant	Ground Mount	1225	2,773,670	2,068,234	75%

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## Reference: Scenario Comparison

Scenario	Total Life Cycle Cost	25 Year Net Benefit	25 Year NPV	Payback Period
NEM Purchase	(\$13,739,918)	\$12,433,809	\$4,705,714	14
NEM Simple Loan	(\$24,015,260)	\$2,158,467	\$1,358,369	Term
NEM PPA	(\$21,119,024)	\$2,178,369	\$947,544	16
RES-BCT Purchase	(\$13,882,239)	\$6,062,458	\$644,636	18
RES-BCT Simple Loan	(\$24,092,413)	(\$4,147,716)	(\$2,681,478)	Term
RES-BCT PPA	(\$23,843,507)	(\$7,441,354)	(\$5,496,615)	-

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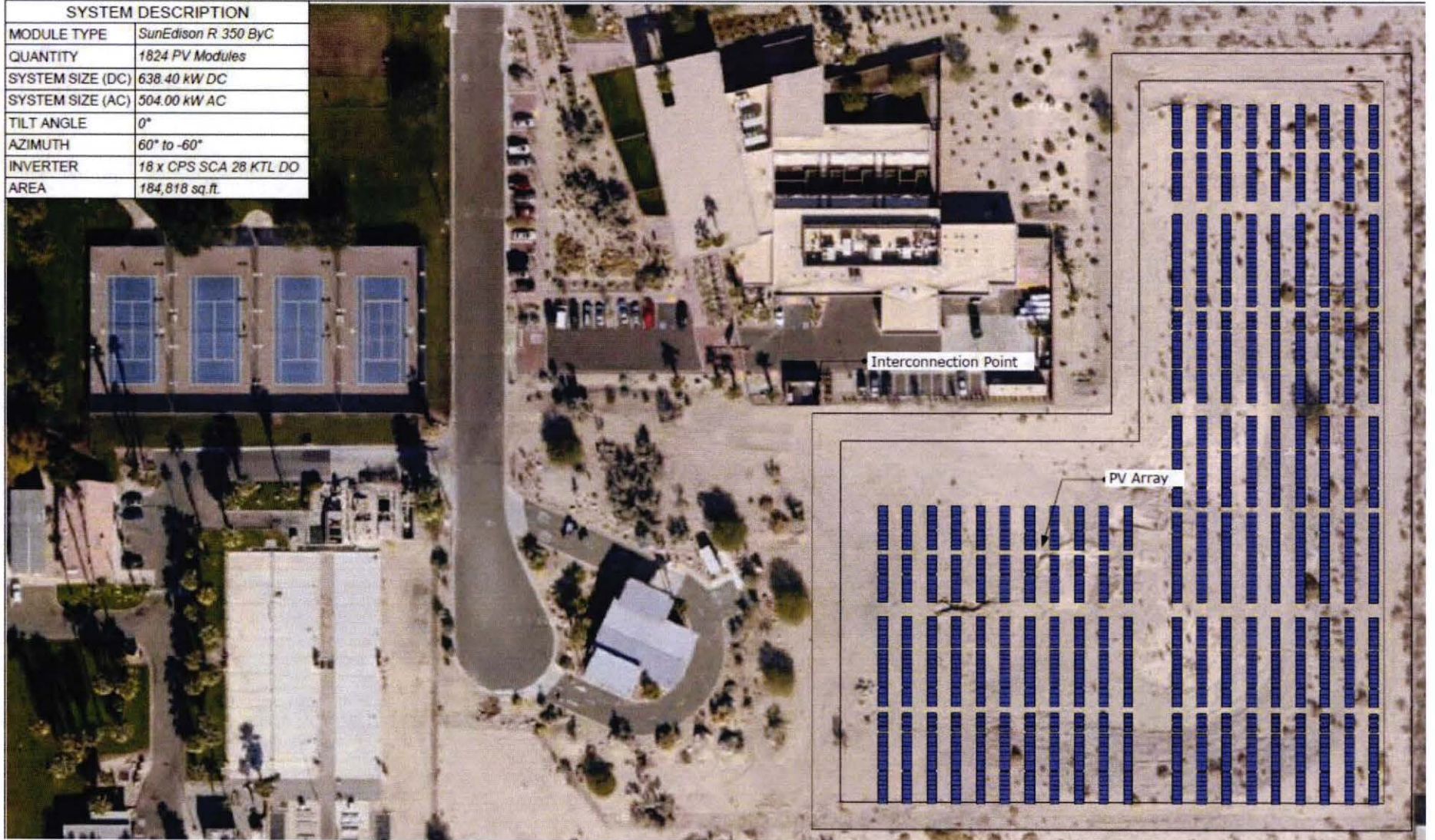
**NAM**  
Newcomb|Anderson|McCormick

# ATTACHMENT 3

# Solar PV System Conceptual Layout

## Animal Shelter

SYSTEM DESCRIPTION	
MODULE TYPE	SunEdison R 350 ByC
QUANTITY	1824 PV Modules
SYSTEM SIZE (DC)	638.40 kW DC
SYSTEM SIZE (AC)	504.00 kW AC
TILT ANGLE	0°
AZIMUTH	60° to -60°
INVERTER	18 x CPS SCA 28 KTL DO
AREA	184,818 sq.ft.



# Solar PV System Conceptual Layout Convention Center



# Solar PV System Conceptual Layout

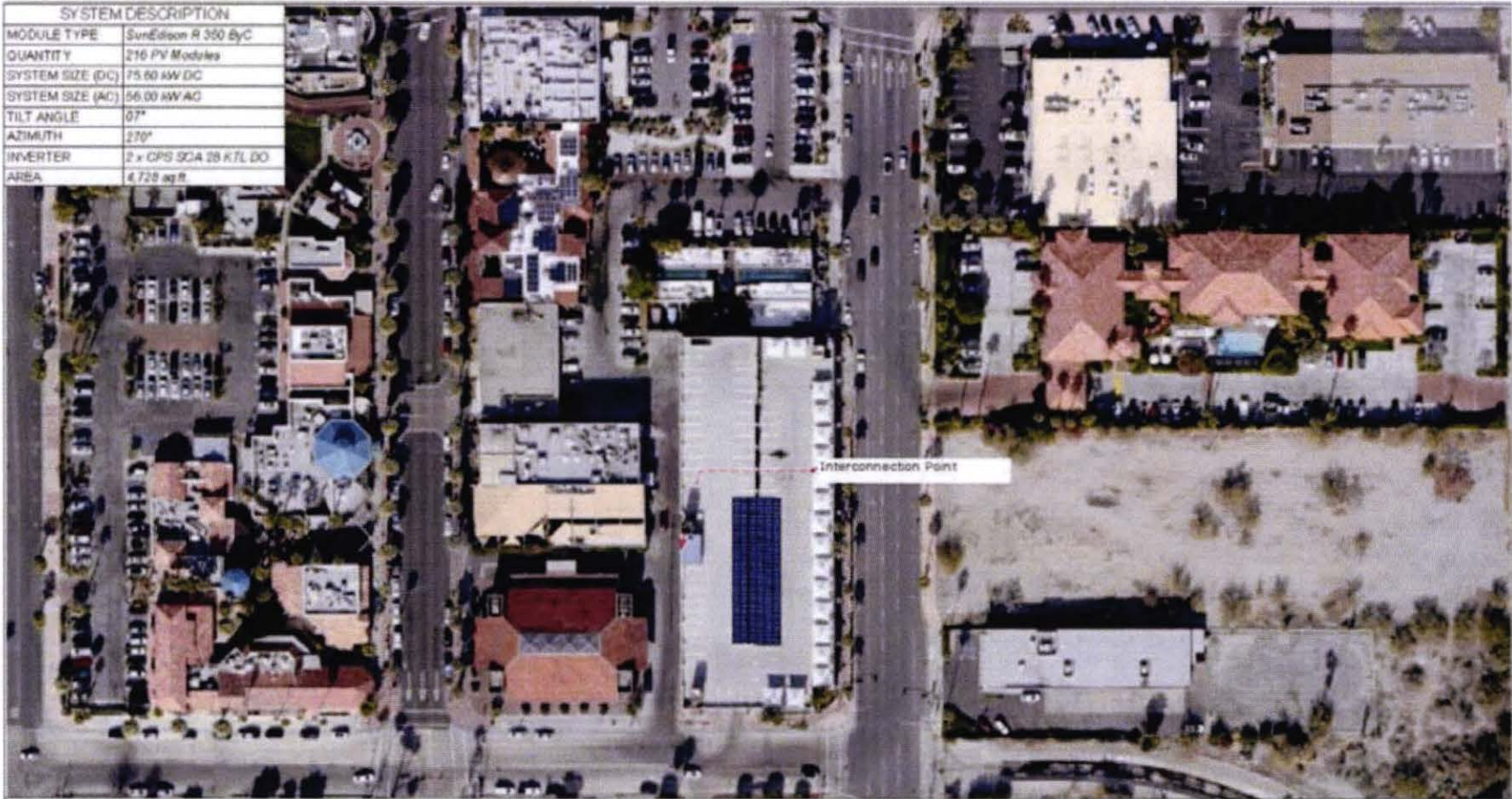
## Demuth Park



# Solar PV System Conceptual Layout

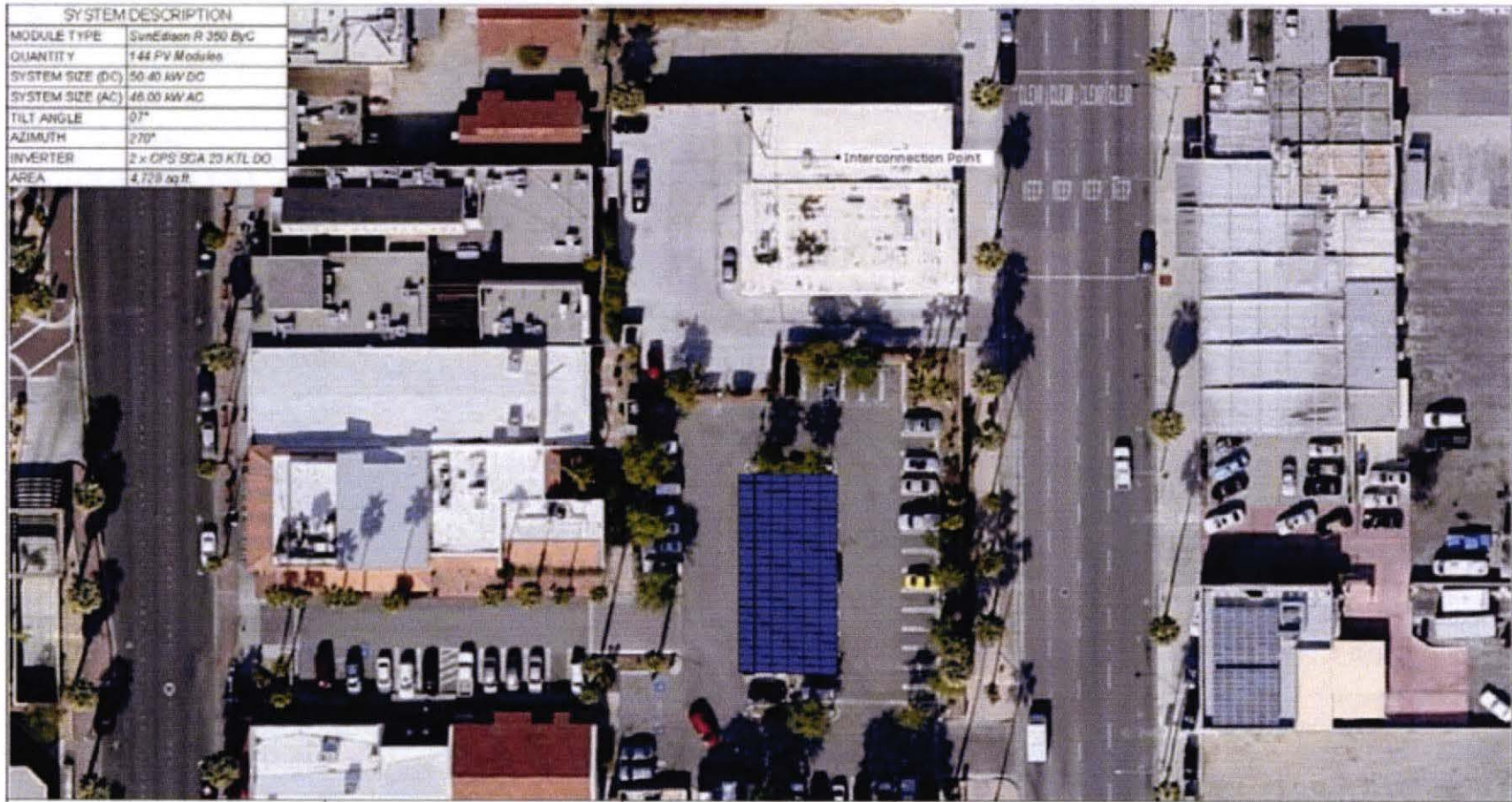
## Downtown Parking Structure

SYSTEM DESCRIPTION	
MODULE TYPE	SunEdison R 350 BiC
QUANTITY	216 PV Modules
SYSTEM SIZE (DC)	75.60 kW DC
SYSTEM SIZE (AC)	56.00 kW AC
TILT ANGLE	07°
AZIMUTH	270°
INVERTER	2 x CPS SCA 28 KTL DC
AREA	4,728 sq ft



# Solar PV System Conceptual Layout

## Fire Station #1



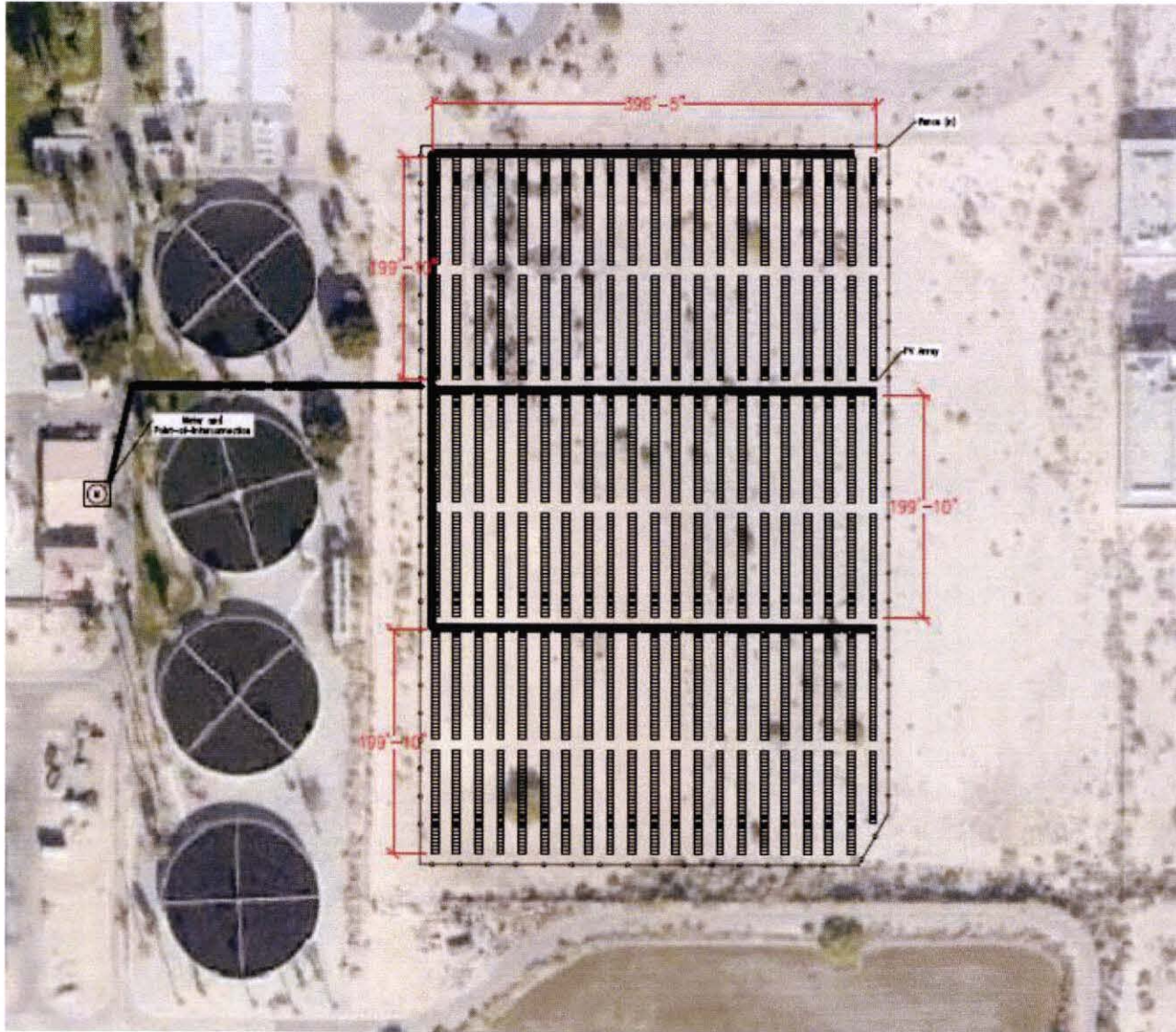
# Solar PV System Conceptual Layout

## Sunrise Plaza Complex





# Solar PV System Conceptual Layout Wastewater Treatment Plant



# ATTACHMENT 4

**AMENDMENT NO. 3  
TO AGREEMENT NO. A6401  
PHOTOVOLTAIC FEASIBILITY/RFP DEVELOPMENT SERVICES**

THIS THIRD AMENDMENT TO Agreement No. 6401 for consulting services, (herein "Amendment") made and entered into on the \_\_\_ day of \_\_\_\_\_, 2015, by and between CITY OF PALM SPRINGS, a California charter City and municipal corporation, (herein "City"), and NEWCOMB/ANDERSON/MCCORMICK, INC., (herein "Consultant"), is hereby amended as follows:

**RECITALS**

WHEREAS, City and Consultant entered into that certain Photovoltaic Feasibility Services (PV) Agreement No. A6401 for a feasibility study of installing PV at various City facilities ("Agreement"), as dully amended from time to time; and

WHEREAS, the parties wish to amend the Agreement to add additional services associated with Phase 2, "Contract Negotiations," as described on Exhibit "A", incorporated herein, whereby Consultant shall coordinate and participate on contract negotiations with certain solar vendors selected by City for installation of PV systems at various City facilities as part of the Citywide Solar Project, City Project No. 15-03.

Section 1. Scope of Services, Exhibit "A", is hereby amended by adding those services identified as "Phase 2 – Contract Negotiations", as described in the Consultant's letter dated August 13, 2015, included as Exhibit "A" attached hereto.

Section 2. Section 3.2, Compensation of Consultant, is hereby revised to reflect the total amended contract amount as herein specified by this Amendment. The Schedule of Fees, Exhibit "A", is hereby amended and increased by \$30,625 to add Phase 2 "Contract Negotiations" scope of work and is hereby revised as follows:

<u>Tasks from Proposal</u>	<u>Amount</u>
Initial Phase, Data Collection	\$8,400
Initial Phase, Site Visits/Analysis	\$8,400
Initial Phase, Feasibility Analysis	\$23,450
Initial Phase, Finalize Analysis	\$7,000
Initial Phase, Direct Costs	<u>\$1,600</u>
Total Initial Phase Cost	\$48,850

<u>Tasks from Proposal</u>	<u>Amount</u>
Phase 1, Develop RFP	\$44,841
Phase 1, Solicitation Support	\$22,421
Phase 1, Proposal Evaluation	\$28,826
Phase 1, Direct Costs	<u>\$1,000</u>
Total Phase 1 Cost	\$97,088

<u>Tasks from Proposal</u>	<u>Amount</u>
Phase 2, Contract Negotiations	\$30,625
Total maximum contract amount	\$176,563

Section 3. Time for Completion, Consultant shall provide the services provided herein by this Amendment as directed by City. Section 4.4 "Term" is hereby revised to reflect a new term extending through June 30, 2016, unless otherwise extended by mutual written agreement of the parties, and subject to termination pursuant to Section 4.5 of the Agreement.

Section 4. Full force and effect: Except as otherwise previously modified herein, all other provisions of the Agreement shall remain in full force and effect.

IN WITNESS WHEREOF, the parties have executed and entered into this Amendment as of the date first written above.

ATTEST:

CITY OF PALM SPRINGS,  
a California charter city and municipal  
corporation

By: \_\_\_\_\_  
James Thompson  
City Clerk

By: \_\_\_\_\_  
David Ready  
City Manager

APPROVED AS TO FORM:

By: \_\_\_\_\_  
Douglas Holland  
City Attorney

NEWCOMB/ANDERSEN/MCCORMICK, INC.

By: \_\_\_\_\_

\_\_\_\_\_  
Printed Name/Title

# **EXHIBIT “A”**



August 13, 2015

P- 2451.04

Mr. Craig Gladders  
City of Palm Springs  
3200 E. Tahquitz Canyon Way  
Palm Springs, CA 92263-2743

Re: Proposal: Solar PV System Support – Contract Negotiations

Dear Mr. Gladders:

Newcomb Anderson McCormick, Inc. (NAM) is pleased to submit this proposal to assist the City of Palm Springs (City) with contract negotiations in their current solar efforts.

NAM will support the negotiations by identifying cost drivers and other key issues for discussion with the selected PV vendor. Additionally, NAM will analyze the pros and cons of the options being discussed during the negotiation process and provide technical recommendations regarding alternative approaches, designs and equipment.

NAM will provide the following services in support of the negotiations and contract execution:

- Assist the City and the legal team with the contract negotiation phase with selected proposers, including negotiation strategies, economic and performance targets, schedules, and terms and conditions
- Develop a list of cost drivers for negotiations, including any “alternative” business arrangements proposed
- Review any changes to proposal based on negotiations prior to contract award
- Participate in negotiation process as requested by City
- Provide recommendations and assist City with final decision on a contract award

To accomplish the proposed scope of work, we estimate a total cost of \$30,625, including travel and expenses. The cost of each task is shown below, along with an estimate of direct expenses such as travel and document production. Direct expenses will be billed to the City for actual costs incurred by NAM with no markup.

**Proposed Project Budget**

Task	Activity	Task Owner*		NAM Effort	
		NAM	COPS	Hours	Est. Cost
Contract Negotiations	Develop negotiation strategies	1	1	175	\$30,625
	Identify cost drivers and other scope issues in need of negotiating	1	1		
	Participate in negotiations meetings	1	1		
	Develop and/or review contract modifications	1	1		
	Support City decision-making, including board meetings and materials	1	1		

We are enthusiastic regarding this opportunity and look forward to a follow-up conversation to further discuss our proposal. Please contact me at (415) 896-0300 to set up a meeting and to answer any questions you may have. We look forward to working with you and your staff.

Sincerely,



John M. Newcomb  
Principal

# ATTACHMENT 5



## Solar PV System Final Benefit Comparison

### Animal Shelter

	SolarCity	SunEdison	SunPower	Baker	LaSalle	Nextera	PCI
Utility Expenditures							
<i>Bill No Solar</i>	(\$12,768,029)	(\$12,768,029)	(\$12,768,029)	(\$12,768,029)	(\$12,768,029)	(\$12,768,029)	(\$12,768,029)
<i>Bill with Solar</i>	(\$7,767,574)	(\$5,767,804)	(\$4,717,102)	(\$10,245,789)	(\$10,926,828)	(\$9,576,832)	(\$10,743,015)
Revenue							
<i>Bill Savings</i>	\$5,000,454	\$7,000,225	\$8,050,927	\$2,522,239	\$1,841,201	\$3,191,196	\$2,025,013
Costs							
<i>PPA Costs</i>	(\$1,904,355)	(\$2,211,457)	(\$3,955,680)	(\$21,503,540)	(\$1,400,944)	(\$1,218,730)	(\$1,164,906)
<i>PM, Contingency</i>	(\$47,172)	(\$63,734)	(\$110,273)	(\$45,528)	(\$41,625)	(\$32,946)	(\$27,307)
Total Costs	(\$1,951,527)	(\$2,275,191)	(\$4,065,953)	(\$21,549,068)	(\$1,442,568)	(\$1,251,676)	(\$1,192,213)
Net Benefit	\$3,048,928	\$4,725,034	\$3,984,974	(\$19,026,829)	\$398,632	\$1,939,520	\$832,800

SunEdison selected based on greatest total Net Benefit.

## Solar PV System Final Benefit Comparison Convention Center

	SolarCity	SunEdison	SunPower	Baker	Borrego	LaSalle	PCI
<b>Utility Expenditures</b>							
<i>Bill No Solar</i>	(\$14,049,706)	(\$14,049,706)	(\$14,049,706)	(\$14,049,706)	(\$14,049,706)	(\$14,049,706)	(\$14,049,706)
<i>Bill with Solar</i>	(\$6,934,942)	(\$5,437,917)	(\$4,774,560)	(\$8,741,101)	(\$6,905,744)	(\$7,657,609)	(\$8,121,041)
<b>Revenue</b>							
<i>Bill Savings</i>	\$7,114,764	\$8,611,789	\$9,275,146	\$5,308,605	\$7,143,962	\$6,392,097	\$5,928,665
<b>Costs</b>							
<i>PPA Costs</i>	(\$1,874,480)	(\$2,854,583)	(\$4,254,390)	(\$42,480,564)	(\$3,932,622)	(\$5,162,831)	(\$2,531,531)
<i>PM, Contingency</i>	(\$62,955)	(\$63,734)	(\$142,834)	(\$70,980)	(\$81,460)	(\$98,140)	(\$64,726)
<b>Total Costs</b>	(\$1,937,435)	(\$2,918,317)	(\$4,397,225)	(\$42,551,544)	(\$4,014,082)	(\$5,260,971)	(\$2,596,257)
<b>Net Benefit</b>	\$5,177,329	\$5,693,472	\$4,877,921	(\$37,242,938)	\$3,129,881	\$1,131,127	\$3,332,408

SunEdison selected based on greatest total Net Benefit.

## Solar PV System Final Benefit Comparison

### Demuth Park

	SunEdison	Baker	LaSalle	PCI
Utility Expenditures				
<i>Bill No Solar</i>	(\$2,325,731)	(\$2,325,731)	(\$2,325,731)	(\$2,325,731)
<i>Bill with Solar</i>	(\$609,271)	(\$1,884,724)	(\$1,257,852)	(\$1,080,768)
Revenue				
<i>Bill Savings</i>	\$1,716,460	\$441,007	\$1,067,879	\$1,244,963
<i>Utility Rebate</i>	\$121,484	\$7,074	\$63,836	\$79,108
Total Revenue	\$1,837,944	\$448,081	\$1,131,715	\$1,324,071
Costs				
<i>Construction Costs</i>	(\$460,576)	(\$191,640)	(\$448,086)	(\$622,460)
<i>PeGu Costs</i>	(\$2,733)	(\$9,600)	(\$1,400)	\$0
<i>PM, Contingency</i>	(\$37,065)	(\$16,099)	(\$35,959)	(\$49,797)
<i>O&amp;M Costs</i>	(\$81,416)	(\$18,959)	(\$61,981)	(\$38,428)
Total Costs	(\$581,790)	(\$236,298)	(\$547,425)	(\$710,685)
Net Benefit	\$1,256,154	\$211,783	\$584,290	\$613,386

SunEdison selected based on greatest total Net Benefit.

## Solar PV System Final Benefit Comparison

### Downtown Parking Structure

	SunEdison	SunPower	Baker	LaSalle	PCI
Utility Expenditures					
<i>Bill No Solar</i>	(\$851,310)	(\$851,310)	(\$851,310)	(\$851,310)	(\$851,310)
<i>Bill with Solar</i>	(\$106,561)	(\$142,336)	(\$456,774)	(\$255,975)	(\$96,753)
Revenue					
<i>Bill Savings</i>	\$744,750	\$708,975	\$394,537	\$595,336	\$754,558
<i>Utility Rebate</i>	\$51,373	\$50,492	\$20,113	\$37,731	\$54,100
Total Revenue	\$796,123	\$759,467	\$414,650	\$633,067	\$808,657
Costs					
<i>Construction Costs</i>	(\$255,314)	(\$502,052)	(\$267,755)	(\$310,054)	(\$509,817)
<i>PeGu Costs</i>	(\$1,282)	\$0	(\$13,400)	(\$1,000)	\$0
<i>PM, Contingency</i>	(\$20,528)	(\$40,164)	(\$22,492)	(\$24,884)	(\$40,785)
<i>O&amp;M Costs</i>	(\$62,100)	(\$315,373)	(\$18,959)	(\$43,751)	(\$27,126)
Total Costs	(\$339,224)	(\$857,589)	(\$322,606)	(\$379,690)	(\$577,728)
Net Benefit	\$456,899	(\$98,122)	\$92,044	\$253,377	\$230,929

SunEdison selected based on greatest total Net Benefit.

## Solar PV System Final Benefit Comparison

### Fire Station #1

	SunEdison	SunPower	Baker	LaSalle
Utility Expenditures				
<i>Bill No Solar</i>	(\$571,627)	(\$571,627)	(\$571,627)	(\$571,627)
<i>Bill with Solar</i>	(\$163,403)	(\$211,841)	(\$322,737)	(\$293,304)
Revenue				
<i>Bill Savings</i>	\$408,223	\$359,785	\$248,890	\$278,322
<i>Utility Rebate</i>	\$34,310	\$31,829	\$20,113	\$22,900
Total Revenue	\$442,533	\$391,615	\$269,003	\$301,222
Costs				
<i>Construction Costs</i>	(\$169,795)	(\$366,613)	(\$244,605)	(\$215,420)
<i>PeGu Costs</i>	(\$844)	\$0	(\$12,250)	(\$1,000)
<i>PM, Contingency</i>	(\$13,651)	(\$29,329)	(\$20,548)	(\$17,314)
<i>O&amp;M Costs</i>	(\$57,864)	(\$324,487)	(\$18,959)	(\$36,459)
Total Costs	(\$242,154)	(\$720,430)	(\$296,362)	(\$270,193)
Net Benefit	\$200,379	(\$328,815)	(\$27,359)	\$31,029

SunEdison selected based on greatest total Net Benefit.

## Solar PV System Final Benefit Comparison

### Sunrise Plaza

	SolarCity*	SunEdison	SunPower	Borrego	LaSalle	Nextera	PCI
Utility Expenditures							
<i>Bill No Solar</i>	(\$6,403,365)	(\$6,403,365)	(\$6,403,365)	(\$6,403,365)	(\$6,403,365)	(\$6,403,365)	(\$6,403,365)
<i>Bill with Solar</i>	(\$2,517,933)	(\$1,985,276)	(\$2,256,139)	(\$2,292,148)	(\$2,056,101)	(\$1,945,027)	(\$2,377,812)
Revenue							
<i>Bill Savings</i>	\$3,885,432	\$4,418,089	\$4,147,225	\$4,111,217	\$4,347,263	\$4,458,338	\$4,025,553
Costs							
<i>PPA Costs</i>	(\$916,050)	(\$1,630,844)	(\$1,486,936)	(\$1,851,702)	(\$3,042,487)	(\$2,250,985)	(\$1,840,291)
<i>PM, Contingency</i>	(\$30,092)	(\$50,677)	(\$50,895)	(\$66,430)	(\$82,043)	(\$81,989)	(\$77,497)
Total Costs	(\$946,142)	(\$1,681,520)	(\$1,537,831)	(\$1,918,131)	(\$3,124,531)	(\$2,332,973)	(\$1,917,788)
Net Benefit	\$2,939,290	\$2,736,569	\$2,609,394	\$2,193,086	\$1,222,733	\$2,125,364	\$2,107,765

\*No aesthetic concerns - all roof mount

SolarCity selected based on greatest total Net Benefit.

## Solar PV System Final Benefit Comparison Wastewater Treatment Plant

	SolarCity*	SunEdison	SunPower	Baker	Borrego	Cenergy	LaSalle	Nextera	Nobell	PCI
Utility Expenditures										
<i>Bill No Solar</i>	(\$12,947,284)	(\$12,947,284)	(\$12,947,284)	(\$12,947,284)	(\$12,947,284)	(\$12,947,284)	(\$12,947,284)	(\$12,947,284)	(\$12,947,284)	(\$12,947,284)
<i>Bill with Solar</i>	(\$1,607,505)	(\$1,507,507)	(\$2,698,975)	(\$4,735,194)	(\$206,557)	(\$2,733,529)	(\$3,933,946)	(\$2,212,714)	(\$2,829,403)	(\$2,167,085)
Revenue										
<i>Bill Savings</i>	\$11,339,779	\$11,439,777	\$10,248,309	\$8,212,090	\$12,740,727	\$10,213,755	\$9,013,338	\$10,734,570	\$10,117,881	\$10,780,199
<i>Utility Rebate</i>	\$1,064,057	\$1,081,904	\$964,651	\$751,032	\$1,276,599	\$961,229	\$850,454	\$1,020,572	\$944,418	\$997,007
<b>Total Revenue</b>	<b>\$12,403,837</b>	<b>\$12,521,681</b>	<b>\$11,212,960</b>	<b>\$8,963,122</b>	<b>\$14,017,326</b>	<b>\$11,174,983</b>	<b>\$9,863,792</b>	<b>\$11,755,142</b>	<b>\$11,062,299</b>	<b>\$11,777,206</b>
Costs										
<i>Construction Costs</i>	(\$2,178,848)	(\$2,206,072)	(\$2,528,668)	(\$3,873,625)	(\$3,428,725)	(\$2,508,000)	(\$4,010,360)	(\$2,228,945)	(\$2,844,199)	(\$3,182,200)
<i>PeGu Costs</i>	\$0	(\$19,080)	\$0	(\$195,865)	\$0	(\$58,101)	(\$17,000)	(\$360,000)	\$0	\$0
<i>PM, Contingency</i>	(\$174,308)	(\$178,012)	(\$202,293)	(\$325,559)	(\$274,298)	(\$205,288)	(\$322,189)	(\$207,116)	(\$227,536)	(\$254,576)
<i>O&amp;M Costs</i>	(\$591,049)	(\$509,445)	(\$563,687)	(\$18,959)	(\$943,162)	(\$264,789)	(\$802,104)	(\$322,966)	(\$286,709)	(\$610,328)
<b>Total Costs</b>	<b>(\$2,944,204)</b>	<b>(\$2,912,609)</b>	<b>(\$3,294,648)</b>	<b>(\$4,414,008)</b>	<b>(\$4,646,185)</b>	<b>(\$3,036,178)</b>	<b>(\$5,151,653)</b>	<b>(\$3,119,026)</b>	<b>(\$3,358,443)</b>	<b>(\$4,047,104)</b>
<b>Net Benefit</b>	<b>\$9,459,633</b>	<b>\$9,609,072</b>	<b>\$7,918,313</b>	<b>\$4,549,114</b>	<b>\$9,371,141</b>	<b>\$8,138,805</b>	<b>\$4,712,139</b>	<b>\$8,636,116</b>	<b>\$7,703,855</b>	<b>\$7,730,102</b>

\*Best in class Performance Guarantee (PeGu) for ownership scenario superior to SunEdison and within margin of error

SolarCity selected based on total Net Benefit and Performance Guarantee.

## Solar PV System Final Benefit Comparison

### Unity Center

	SunEdison	SunPower
Utility Expenditures		
<i>Bill No Solar</i>	(\$1,007,562)	(\$1,007,562)
<i>Bill with Solar</i>	(\$842,179)	(\$537,617)
Revenue		
<i>Bill Savings</i>	\$165,382	\$469,945
<i>Utility Rebate</i>	\$13,743	\$39,723
Total Revenue	\$179,126	\$509,668
Costs		
<i>Construction Costs</i>	(\$118,607)	(\$303,659)
<i>PeGu Costs</i>	(\$350)	\$0
<i>PM, Contingency</i>	(\$9,517)	(\$24,293)
<i>O&amp;M Costs</i>	(\$50,872)	(\$319,019)
Total Costs	(\$179,345)	(\$646,970)
Net Benefit	(\$220)	(\$137,302)

SunEdison selected based on greatest total Net Benefit.

The financial benefit of (\$220) shown here is subject to change, based on a larger solar PV system to be designed and installed to accommodate increased power consumption anticipated at the Unity Center Gym due to the new HVAC system currently being installed.



# ATTACHMENT 6



## CITY COUNCIL STAFF REPORT

DATE: July 2, 2014 CONSENT AGENDA

SUBJECT: AUTHORIZE THE CITY MANAGER TO MAKE CALIFORNIA SOLAR INITIATIVE (CSI) PROGRAM REBATE RESERVATION DEPOSITS

FROM: David H. Ready, City Manager

BY: Special Projects Coordinator

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### SUMMARY

The proposed action would be to authorize the City Manager to make up to \$60,000 in CSI program rebate reservation deposits for the City wide photovoltaic (PV) project.

### RECOMMENDATION:

1. Authorize the City Manager to make up to \$60,000 in CSI program rebate reservation deposits for the City wide PV project.
2. Appropriate the funds from the General Fund Reserves and authorize the Director of Finance and Treasurer to initiate the appropriate documentation.

### STAFF ANALYSIS:

On June 18, 2014 the City Council took action to authorize Newcomb/Andersen/McCormick (NAM) to undertake the development of an Request For Proposal (RFP) document as well as file CSI rebate applications on behalf of the City for a City wide PV project; i.e. eleven (11) sites.

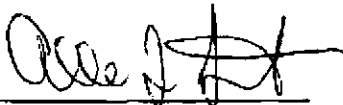
The CSI rebate application process is a multi-step process. First a rebate application is submitted to Southern California Edison (SCE); applications have been submitted for all eleven previously defined sites. Second, SCE has thirty days to review the applications and then the City will receive an invoice from CSI for the reservation deposits; the City has thirty days to remit. Finally, when the projects are completed the reservation deposits are refunded and the City begins receiving the rebates over a five year period. It should be noted that if after the RFP process the City decides to not proceed with a particular site, the deposit related to that site is forfeited. The following exhibit lists the eleven projects, System Size, CSI rebate and the Reservation Costs:

Site	System Type	System Size (kW DC)	Total CSI Rebate	CSI Reservation Cost
Downtown Parking Structure	Shade Structure	63	\$43,662	\$2,500
Demuth Park	Shade Structure	28	\$19,405	\$1,250
Fire Station 1	Shade Structure	41	\$28,415	\$1,250
Fire Station 4	Ground Mount and/or Roof Mount	40	\$27,722	\$1,250
Tahquitz Creek Golf Course	Shade Structure and/or Roof Mount	64	\$44,355	\$2,500
Demuth Community Center	Roof Mount and/or Shade Structure	47	\$32,573	\$1,250
Animal Shelter	Ground Mount	305	\$211,381	\$10,000
Convention Center - Roof	Roof Mount	480	\$332,665	\$10,000
Sunrise Plaza	Roof and/or Shade Structure	345	\$239,103	\$10,000
Wastewater Treatment Plant - Fixed	Ground Mount	1,225	\$902,279	\$20,000
<b>TOTAL</b>		<b>2,638</b>	<b>\$1,881,562</b>	<b>\$60,000</b>

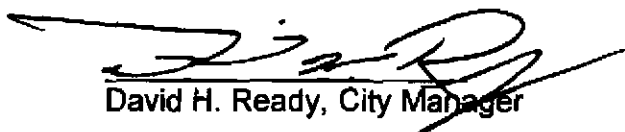
It is recommended that the City proceed with the application process and work with the Council Subcommittee before the fee payment deadlines to closely screen the projects to see if there are any that do not warrant proceeding with, thus saving the loss of the reservation fee for projects that will ultimately not be completed.

**FISCAL IMPACT:**

The total Reservation Fee cost is \$60,000 and is determined by the size of the proposed projects. It is recommended that funding be appropriated from General Fund Reserves.



Allen F. Smoot, Special Projects Coordinator



David H. Ready, City Manager