

City Council Staff Report

Date:

May 18, 2011

NEW BUSINESS

Subject:

CITYWIDE ENERGY MANAGEMENT PROJECT

From:

David H. Ready, City Manager

Initiated by: Public Works and Engineering Department

SUMMARY

On July 21, 2010, following a competitive, technical two-part qualification process, the City Council awarded Chevron Energy Solutions ("CES"), a subsidiary of Chevron USA, Inc., a professional services agreement for this project. Subsequently, CES has performed energy audits of all of the City's facilities, and completed its recommendations for a Citywide energy management project. On April 19, 2011, the Sustainability Commission reviewed the list of energy conservation measures ("ECMs") to be included in the overall Citywide energy management project, and has recommended the City Council approve the project which implements the most ECMs possible to be paid from savings. Following the Council's concurrence with the Sustainability Commission's recommendation, or an alternative recommendation by Council, staff will coordinate with CES to finalize the scope of the energy management project, confirm construction costs and prepare a performance based guaranteed fixed price contract for future Council review and approval.

RECOMMENDATION:

- 1) Review and approve the list of Energy Conservation Measures to be included in the scope of the overall Citywide energy management project; and
- 2) Authorize the City Manager to submit an application and pay applicable fees (estimated at \$15,000) to the California Solar Incentive Program as may be necessary to secure as much as \$600,000 in Performance Based Incentives and \$282,000 in renewable energy credits for the photovoltaic systems (if included in the scope of the overall Citywide energy management project).

STAFF ANALYSIS:

Since the City Council's approval of a contract with CES on July 21, 2010, CES has performed an audit of all City facilities (for a complete list, see Attachment 1), and

ITEM NO. 4.A.

completed analysis of various measures that could be implemented by the City to achieve the most energy savings possible. A significant amount of effort has been completed to analyze the City's co-generation plants, interior and exterior lighting systems, heating and cooling systems, and irrigation systems throughout all City facilities. CES has identified a list of measures that were reviewed and recommended for approval by the Sustainability Commission at its April 19, 2011, meeting.

The primary purpose of this project is to evaluate the City's co-generation plants, and to recommend cost effective improvements that enable the plants to run more efficiently, and to reduce the City's overall energy consumption. Other primary goals are:

- Lower electric consumption
- Reduce water consumption
- Lower green house gases
- Reduce natural gas consumption
- Achieve the City's adopted Sustainability Goals
- Develop a "paid from savings" project requiring no capital contribution from the City, and paid for entirely with energy and operation & maintenance ("O&M") savings resulting from implementation of the ECMs.

CES analyzed the City's two co-generation plants to determine what alternatives would best suit the City today, given its current energy demands and utility costs. For each of the co-gen plants, CES analyzed the following alternatives:

- Continue existing co-gen operations do nothing approach
- Replace existing co-gen engines with new lean-burn engines
- Abandon co-gen operations and purchase all electricity from SCE
- Retire co-gen operations and implement solar generation

Determining which alternative is best for the City requires an understanding of how the co-gen plants operate and provide electricity and heating/cooling to the various buildings they serve. Co-generation is the sequential production of two energy forms, usually steam and electricity, from a single fuel source. In our case, natural gas is used as fuel to run reciprocating engines that turn generators to create electricity. Waste heat (heat created by a running engine) that would normally escape into the air, is recovered from the engines and passed through an absorption chiller to provide cold water for air conditioning. Alternatively, in the winter, waste heat is used to heat water for space heating. Co-generation was originally selected as the most appropriate alternative energy solution for Palm Springs due to the City's tremendous cooling requirements in the summer. Therefore, a co-gen plant can be a very valuable asset, in that it provides not only electricity for the City's facilities, but through its internal mechanical process, provides thermal energy (heating and cooling).

At the Municipal Plant behind City Hall, the co-gen plant distributes power to City Hall, the Police Station, Fire Station No. 2, Airport and Riverside County administration buildings, and the City Yard. The co-gen plant also provides heating/cooling to all of the buildings (except the City Yard) through the use of its absorption chillers and cooling tower. An exhibit showing the existing City-owned utility infrastructure (electrical lines, and hot/cold water lines) connecting the various municipal facilities is included as Attachment 2.

CES' analysis of the Municipal Plant determined that maintaining operation of the cogen plant is the most economical alternative to providing electricity and heating/cooling to the facilities it serves. The direct cost to generate power through co-generation is less expensive than purchasing electricity from SCE directly (\$0.12 per kilowatt hour vs. \$0.08 per kilowatt hour)¹. During the 2009/2010 fiscal year, the total power load on the Municipal Plant was 10.9 Million kilowatt hours. Given that the direct cost to generate power through co-generation is 67% of the cost to purchase electricity from SCE, CES recommends that the City make certain upgrades to the Municipal Plant to take advantage of the lower direct generation cost, and to make the plant significantly more efficient than it is today.

At the Sunrise Plant at Sunrise Park, the co-gen plant distributes power and provides heating/cooling to all of the facilities at Sunrise Park except the Boys and Girls Club and the Senior Center.

However, CES' analysis of the Sunrise Plant determined that maintaining operation of the co-gen plant is not the most economic alternative at Sunrise Park. The overall electrical load on the Sunrise Plant is much lower than the load on the Municipal Plant, and since its construction, the Sunrise Plant has produced more power than necessary for the facilities it serves. The balance of electricity produced is sold as excess electricity to SCE at very low rates. Therefore, the analysis determined that retiring the Sunrise Plant and purchasing electricity from SCE directly is the most economic alternative for Sunrise Park. A 439 kilowatt solar system is proposed to be constructed at the Pavilion Parking lot at Sunrise Park which will supplement the electricity required to be purchased from SCE.

In addition to the recommendations related to the co-gen plants, CES has identified lighting, energy management system ("EMS") control technologies, and building optimization measures at many of the City's facilities. Installation of these cost effective energy efficient technologies is estimated to reduce electric consumption and demand by over 2.7 Million kilowatt hours. Retrofit will include over 14,000 lighting fixtures within various City buildings, at the airport, on the City's palm tree uplights, and downtown decorative street lights. An integrated web-based energy management system is

¹ The direct cost to generate power through co-generation was determined by calculating only the cost to purchase natural gas to generate power, and excludes other overhead and maintenance costs associated with the co-generation plant.

recommended that will allow buildings to integrate and optimize the use of lighting, and heating/air conditioning systems. Water saving measures are recommended that include a new web-based irrigation controls system and improved irrigation coverage for enhanced water performance and efficiency which is estimated to save over 100 Million gallons of water annually.

On April 19, 2011, the Sustainability Commission reviewed the list of ECMs to be included in the overall Citywide energy management project, and has recommended the City Council approve the project which implements the most ECMs possible to be funded through energy savings. The list of ECMs includes:

- Municipal Co-Generation Plant: replace two existing 650 kilowatt rich burn engines with one 1,135 kilowatt lean-burn engine, replace existing chillers, boilers and cooling towers with new efficient equipment
- Sunrise Co-Generation Plant: modify the co-generation operation and replace with a new gas and electric cooling and heating hot water plant
- 439 kilowatt solar system at the Pavilion Parking Lot to provide power to Sunrise Park facilities
- 103 kilowatt solar system at the Convention Center
- Install a new Energy Management System for City facilities connected to the Municipal and Sunrise Plants
- City-wide lighting retrofit and upgrade (approx. 14,000 interior and exterior fixtures)
- Install remote lighting control and monitoring program for Palm Canyon Drive palm tree and decorative lights
- Install a new automated utility metering and monitoring system at the Municipal Plant
- Utilize a CES Energy Resource Manager to manage and monitor the Municipal Plant operation, and monitor implementation of all energy conservation measures to ensure guaranteed energy savings are achieved

Solar System Installations

Included with the recommended list of measures are two solar system installations that, if installed separately, would not be covered entirely by energy savings. It is only with the use of energy savings resulting from measures implemented City-wide (i.e. Municipal co-gen upgrade, lighting retrofits and water savings measures) that these solar system installations may be paid from energy savings when bundled together as a single energy management project.

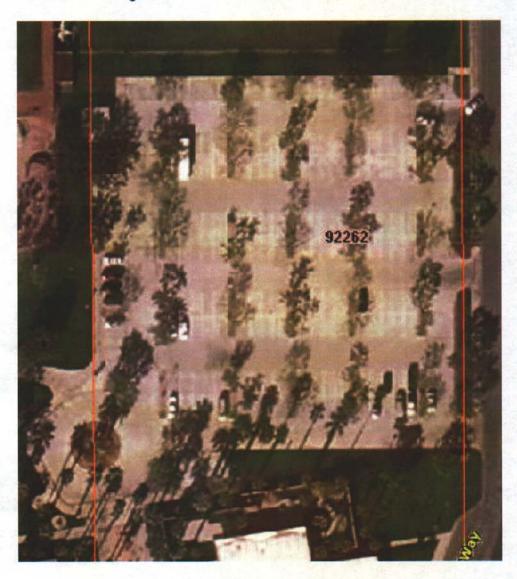
The proposed 439 kilowatt solar system to be installed at Sunrise Park would be constructed on new shade structures within the Pavilion Parking Lot. The shade structures with solar panels will provide covered parking and an opportunity to generate solar power. An example of the proposed solar system installation is shown on the next page:

A photo simulation of Sunrise Pavilion Parking Lot solar system with shade structures is shown here:



The location of the Pavilion Parking Lot is adjacent to Angel's Stadium, and includes mature landscaping and shade trees that would require removal to allow for construction of the shade structures to house the solar panels. The location of the Pavilion Parking Lot is shown on the next page:

Pavilion Parking Lot:



Although there is a slight risk of balls from the adjacent field flying into the parking lot, staff consulted with Parks and Recreation staff and determined that the Pavilion Parking lot has a low risk of fly balls, with most landing in the Library Parking Lot. However, installation of a solar system in this area will carry some degree of risk, which would not be covered or guaranteed by CES. Removal and replacement of solar panels damaged by fly balls (or vandalism and theft of panels) would be the responsibility of the City.

Moving forward with the proposed 439 kilowatt solar system at the Sunrise Pavilion Parking Lot represents an approximate \$2.7 Million cost to the overall energy management project. Taken separately, installation of this solar system does not pay for itself with energy savings over the 25-year life of the solar panels, as the capital cost to construct the shade structures and install the solar panels far exceeds the energy savings realized. What must also be understood is that the 439 kilowatt solar system will only supplement the average 550 kilowatt power demand from the various City

facilities connected to the Sunrise Plant. The City would continue to purchase electricity from SCE in addition to the power generated by the solar system. Eliminating this solar system from the overall energy management project would free up energy savings for our own use that would otherwise be used to offset the capital cost of the system. However, the Sustainability Commission recommended the City Council approve an energy management project paid from savings that encompasses as much solar (and other renewable energy sources) as possible regardless of the payback or economic cost of the measure itself.

The proposed 103 kilowatt solar system to be installed at the Convention Center would be constructed on the roof of the building, and although unseen by the public a real-time electronic display would be installed at a location inside the Convention Center to showcase generation of solar power at the facility. The size of the system is being recommended as it is the smallest system that qualifies for SCE renewable energy rate reduction, R-Rate (to qualify, at least 15% of the current overall energy demand at the Convention Center must be provided by the solar system). A larger solar system is not being recommended as the capital cost of the solar system is significant.

Moving forward with the proposed 103 kilowatt solar system at the Convention Center represents an approximate \$600,000 cost to the overall energy management project. Taken separately, installation of this solar system does not pay for itself with energy savings over the 25-year life of the solar panels, as the capital cost of the system far exceeds the energy savings realized. What must also be understood is that the 103 kilowatt solar system will only supplement the average 560 kilowatt power demand from the Convention Center. The City would continue to purchase electricity from SCE in addition to the power generated by the solar system. Eliminating this solar system from the overall energy management project would free up energy savings for our own use that would otherwise be used to offset the capital cost of the system. However, the Sustainability Commission recommended the City Council approve an energy management project paid from savings that encompasses as much solar (and other renewable energy sources) as possible regardless of the payback or economic cost of the measure itself.

Project Benefits

The benefits of implementing all of the recommended energy conservation measures as a single energy management project include:

- Energy Reduction = 2.7 Million kilowatt hours = 15% reduction of total energy used
- Solar Generation = 817,000 kilowatt hours
- Natural Gas Reduction = 250,000 Therms = 21% reduction of total natural gas used
- Water Savings = 100 Million Gallons = 17% reduction of total water used
- Carbon Footprint Reduction = 611 cars or 3,116 Tons CO₂, or power for 378 homes

- The City is enable to invest and construct significant capital improvements which are paid from resulting energy and Operation & Maintenance savings estimated at \$1.2 Million annually;
- New Municipal Co-Generation Plant is fully SCAQMD compliant, meeting all new stringent air quality permitting requirements;
- Remaining debt service on existing co-generation engines (approximately \$270,000) is paid off;
- Project will be implemented by CES with a focus on local job creation and local economic stimulus which is estimated at an additional 192 indirect and induced jobs and more than \$4 Million in additional economic impact (based on the National Renewable Energy Laboratory studies) – the local business preference program will be followed by CES to the greatest degree possible
- Project directly accomplishes 5 of the City's Sustainability Goals
- Project is an affirmation to the residents of Palm Springs of the City's focus on fiscal and environmental stewardship
- Project diversifies the City's energy generation mix and improves the City's air quality
- Project allows the City to take advantage of over \$1 Million in utility incentives and renewable energy credits

FISCAL IMPACT:

Implementation of all of the Energy Conservation Measures recommended for approval (including the two solar systems) is estimated at approximately \$20 Million (after crediting the City with incentives and rebates). Using the approximate estimate of \$20 Million (assuming financing at 5.25% for 20 years) requires an annual debt payment of approximately \$1.2 Million. According to CES' analysis, after implementation of all of the Energy Conservation Measures, \$1.2 Million in energy and O&M savings will be realized which offsets the annual debt service required to pay for construction.

This was the underlying factor of this project – that it would be a "paid from savings" project requiring no upfront capital investment.

As the City would incur additional debt to pay for this project (paid from energy and O&M savings), the City will be required to maintain existing budget levels for utility costs. According to CES' analysis, after the project is implemented the reduced energy and water costs will result in a surplus of funds from which the debt service is paid. The key issue here is that, although savings are realized, those savings pay for the project. Therefore, moving forward on an annual basis the City will need to maintain its current budget levels for energy and water costs to ensure the savings are available to pay the debt service. As a condition of a performance based contract with CES, CES will guarantee these savings.

In the current 2010/2011 fiscal year budget, the City budgeted \$6,439,908 for utility costs and another \$2,478,723 for facilities maintenance (including co-gen plant maintenance) for a total budget of nearly \$9 Million. Implementing this project is projected to reduce the City's energy and O&M costs by \$1.2 Million or nearly 15% of this total, allowing for the City to appropriately finance construction of this project from those savings.

Following Council's approval of the list of Energy Conservation Measures to be included in the scope of the overall Citywide energy management project, staff will work with CES to finalize the guaranteed fixed price to design-build all of the improvements. CES' proposal will subsequently be reviewed by a third party to confirm that all of the proposed costs are reasonable with industry standards, that the resulting energy and O&M savings are appropriate, and that the proforma proposed by CES establishing the financial terms to the City for financing construction and implementation of the project is supported.

Following the third-party review supporting the financial terms of the CES' proforma, staff will schedule Council approval of the performance based guaranteed fixed price contract with CES (estimated by September 2011).

This project will be financed directly between the City and a financial institution of the City's choosing; CES, or its parent corporation Chevron, Inc., will not finance this project. CES recovers its costs for the engineering phase through the construction contract, and as the General Contractor, will include an appropriate overhead margin on administration of it. The terms and conditions of CES' design-build contract will be detailed in a future staff report to Council at the time the performance contract is scheduled for approval.

The action taken at this time does not commit the City to constructing any of the measures recommended for approval; it merely confirms for CES the scope of the energy management project from which they can seek bids and finalize their design-build contract for City approval. However, in the event the Council determines not to proceed with the energy management project, pursuant to the terms of the current agreement between the City and CES approved by Council on July 21, 2010, the City is obligated to pay CES a project development fee of \$250,000 as payment for its costs to perform the energy audits and complete the preliminary engineering with which the recommended Energy Conservation Measures have been identified.

The only financial commitment recommended for approval by the Council at this time is to authorize application to the state for solar incentives (assuming installation of solar systems at Sunrise Park and the Convention Center remain in the scope of the project). Application for these incentives is time-sensitive as the program is administered as a "first-come – first served" basis, and the state can end the program without notice. The application fee for the proposed solar systems is approximately \$15,000 which would be

paid from the Sustainability Fund, account 138-1270-50000 (unscheduled capital projects).

SUBMITTED:

Prepared by:

Recommended by:

Marcus L. Fuller

Assistant Director of Public Works

David J. Barakian

Director of Public Works/City Engineer

Approved by:

Thomas J. Wilsøn, Asst. City Manager

David H. Ready, City Manager

Attachments:

- 1. List of City Facilities Included in Energy Audit
- 2. Municipal Co-Gen Plant Utility System Map

ATTACHMENT 1

· LIST OF CITY FACILITIES TO BE INCLUDED IN ENERGY AUDIT

Site	Building	address	Year	Size
city hall	admin. Offices/council chambers/annex restroon	3200 Tahquitz canyon way	1956	17,847
city hall	eoc admin offices	3200 Tahquitz canyon way	1965	14,116
City hall	canopies/covered walkways	3200 Tahquitz canyon way	1965	3,647
police station	admin. Offices/dispatch center/housing cells	200 s. civic drive	1985	44,946
tibrary center	library	300 s sunrise way	1975	33,920
plaza theater	theater	128 s. palm canyon	1938	15,100
city hall annex	admin offices	3200 Tahquitz canyon way	1983	12,573
city hall annex	canopies/covered walkways	3200 Tahquitz canyon way	1983	3,666
police station training site	training center classrooms	200 S. cvic Drive	1977	4,200
police station training site	indoor firing range/firing range addition	200 s. civic drive	1977	3,453
police station training site	Library office/conference room	200 s. civic drive	1977	1,081
police station training site	carport canopy	200 s. civic drive	1977	940
airport fire station #2	admin. Offices/fire station #2	300 N. El Cielo road	1975	18,109
airport fire station #2	hose drying canopy	300 N. El Cielo road	1977	1,200
airport fire station #2	boiler room	300 N. El Cielo road	1975	300
fire station #1	fire station #1	277 n. Indian canyon drive	1957	5,364
fire station #3	fire station #3	590 e. raquet club road	1964	5,807
fire station #4	fire station #4	1300 la verne way	1971	4,608
fire station #5	fire station #5	5800 bolero road	1981	3,764
city yard	shop repair bldg	425 s. civic drive	1961	22,671
city yard	admin offices/shops	425 s. civic drive	1985	19,627
city yard	welding shop	425 s. civic drive	1985	700
city yard	gas pump conopy/cover	425 s. civic drive	1985	850
taxi holding building	office/break room	310 s. el cielo	2000	1,990
downtown parking structure	parking garage	275 s. indian canyon	2002	124,251
train station	restroom/storage	63950 palm springs station roa	1998	1,483
co-generator, muni	generation station	201 north el cielo road	1984	1,914
co-generator, sunrise	generator building	402 south cerritos drive	1984	1,702
wastewater treat plant	administration building (10.9 mgd plant)	4375 mequite avenue	1960	2,412
wastewater treat plant	maintenance / shop building	4375 mequite avenue	1960	3,055
palm springs international alport	airport terminal - zones a, b, c, & d	3400 east tahquitz canyon	1966	104,846
palm springs international aiport	sonny bono concourse - zones g & f (gates 4-11)	3400 east tahquitz canyon	1999	78,722
palm springs international alport	east "t" hanger	3400 east tahquitz canyon	1968	10,114
palm springs international alport	west "t" hanger	3400 east tahquitz canyon	1968	10,114
palm springs international aiport	temporary holdroom #1 (gate #3)	3400 east tahquitz canyon	1999	3,471
palm springs international aiport	temporary holdroom #2 (gate #2)	3400 east tahquitz canyon	1999	3,471

715666,1

paim springs international alport	terminal walkways #1 (concourse area)	3400 east tahquitz canyon	1999	10,649
paim springs international alport	vehicle inspection plaza	3400 east tahquitz canyon	2003	2,000
paim springs international alport	vehicle inspection plaza shelter	3400 east tahquitz canyon	1999	9,000
paim springs international aiport	covered walkway	3400 east tahquitz canyon	1968	7,348
paim springs international alport	restroom building - (old commuter holdroom)	3400 east tahquitz canyon	1968	480
palm springs international alport	portable office building #1 (north)	3400 east tahquitz canyon	1990	480
palm springs international aiport	portable office building #2 (south)	3400 east tahquitz canyon	1990	480
paim springs international aiport	portable office buildign #3 (vsa office)	3400 east tahquitz canyon	2003	960
paim springs international aiport	covered baggage and maint shelter	3400 east tahquitz canyon	2003	2,176
welwood murray library	library	100 south paim canyon drive	1941	5,058
tahquitz creek golf course	gotf clubhouse/golf cart storage building	1885 golf club drive	1962	12,990
tahquitz creek golf course	golf maintenance building	1885 gotf club drive	1958	3,334
tahquitz creek golf course	restroom building #1 - legends course	1885 golf club drive	1994	279
tahquitz creek golf course	restroom building #2 - west side (modular)	1885 gotf club drive	1994	52
tahquitz creek golf course	concession/restroom building - legends course	1885 golf club drive	1994	1,068
tahquitz creek golf course	pumphouse #1	1885 golf club drive	1994	620
tahquitz creek golf course	pumphouse #2	1885 golf club drive	1994	603
tahquitz creek golf course	restroom building #4 - east side	1885 golf club drive	1960	304
tahquitz creek golf course	small equipment shelter #1 (maint yard)	1885 golf club drive	1994	1,670
tahquitz creek golf course	large equipment shelter #2 (maint yard)	1885 golf club drive	1994	2,900
tahquitz creek golf course	portable office (supt of golf course)	1885 golf club drive	1980	720
tanquitz creek golf course	equipment shelter #3 (near wwtp)	1885 golf club drive	1994	1,670
stadium park	stadium	1901 east baristo road	1949	15,000
stadium park	concession stand building #1 (third base)	1901 east baristo road	1984	713
stadium park	concession stand building #2 (first base)	1901 east baristo road	1985	713
Stadium Practice Field	angel	2099 East Baristo Road	1949	480
Skate Park and Swim Center	Leisure Center	401 South Pavillion Way	1975	15,155
Skate Park and Swim Center	Pavillion	401 South Pavillion Way	1975	20,200
Skate Park and Swim Center	Swimming Center	401 South Pavillion Way	1979	358
Skate Park and Swim Center	Pool Filter Building	401 South Pavillion Way	1979	1,200
Skale Park and Swim Center	Skate Park	401 South Pavillion Way	2003	30,000
Skate Park and Swim Center	Swimming Pool	401 South Pavillion Way	1979	7.680
James O. Jessie Dessert Highland Unity Cen	-	480 Tramview Road	1975	9,546
James O. Jessie Dessert Highland Unity Cen	•	480 Tramview Road	1975	2,357
Denmuth Park	Restrooms/ Storage/ Concession Building	Mesquite Avenue	1973	1.767
Denmuth Park	Small Restroom Building @ Playground	Mesquite Avenue	1973	222
Denmuth Park	Original Restroom/ Storage Building w/ Canopy	Mesquite Avenue	1973	1,337
Denmuth Park	Restroom Building @ Field #7	Mesquite Avenue	1990	1.080
Denmuth Park	Blue Restroom Building	Mesquite Avenue	2003	368
Ruth Hardy Park	Restroom Building	700 Tamarisk Road	1965	684
- concernment of the concernment		1		

715666.1

Victoria Park	Restroom Building	2650 Via Miraleste	1965	684
McManus Village	Cornelia House- Historical	211-233 South Palm Canyon I	1952	940
McManus Village	Museum / Gallery- Historical	211-233 South Palm Canyon [1952	3,310
McManus Village	Museum / Candy Shop- Historical	211-233 South Palm Canyon [1957	2,685
McManus Village	Ruddy's General Store	211-233 South Palm Canyon I	1987	916
Everybody's Village	Theatre Building	538 North Palm Canyon Dr.	1974	9,820
Everybody's Village	North Wing- Meeting Rooms	538 North Palm Canyon Dr.	1974	2,079
Everybody's Village	South Wing- Meeting Rooms	538 North Palm Canyon Dr.	1974	1,300
Arts Springs Center	Gallery/ South Meeting Room	550 North Palm Canyon Drive	1974	3,023
Arts Springs Center	North Meeting Room	550 North Palm Canyon Drive	1974	2,050
Jaycee Frey Center (Homeless Shefter)	Homeless Shelter	1911 Baristo Road	1964	3,617
Palm Springs Youth Boxing Club	Boxing Club	225 El Cielo Road	1963	2,095
Convention Center (with 2003 & 2005 Addition	on Convention Center	277 North Avenue Cabelleros	1987	264,479
Mizeli Senior Center	Senior Center	400 South Sunrise Way	1991	14,262
YMCA	YMCA	3601 E Mesquite Ave.		21,431

Downtown Decorative Street Lighting

715666.1

ATTACHMENT 2 MUNICIPAL CO-GEN PLANT UTILITY SYSTEM MAP



Program Options



Municipal CO-Generation Plant (1135 kW)	Yes	Yes	Yes
Sunrise Electric Plant	Yes	Yes	No
439 kW Solar at Pavilion Parking Lot	Yes	No	No
103 kW at Convention Center	Yes	Yes	Yes
EMS Upgrade for Municipal & Sunrise Plants	Yes	Yes	Yes
City-Wide Lighting Upgrade	Yes	Yes	Yes
Palm Canyon Drive Lighting Control & Remote Monitoring	Yes	Yes	No
City-Wide Irrigation Control and Remote Monitoring	Yes	Yes	Yes
 Automated Utility Metering / Monitoring 	Yes	Yes	No
CES Energy Resource Manager	Yes	Yes	Yes
Variable Air Volume Upgrade (City Hall, PD, FS#2)	No	Yes	No
Paid Through Savings Annual Cash Flow	YES Naukai	YES \$10K - \$50K	YES Seok Sizek