



COUNCIL AGENDA: 05-18-10  
ITEM: 7.2

# Memorandum

---

**TO:** HONORABLE MAYOR AND  
CITY COUNCIL

**FROM:** Lee Price, MMC  
City Clerk

**SUBJECT: SAN JOSE'S STRATEGIC  
ENERGY ACTION PLAN**

**DATE:** 05-12-10

---

## RECOMMENDATION

As recommended by the Transportation and Environment Committee on May 3, 2010 and outlined in the attached memo previously submitted to the Transportation and Environment Committee, approve the Strategic Energy Action Plan which establishes strategies and actions for achieving Green Vision Goals related to energy use reductions and increased use of renewables.



# Memorandum

**TO:** TRANSPORTATION AND ENVIRONMENT COMMITTEE

**FROM:** John Stufflebean

**SUBJECT:** SAN JOSE'S STRATEGIC ENERGY ACTION PLAN

**DATE:** 04-16-10

Approved

Date

4/20/10

**COUNCIL DISTRICT:** City-Wide

## RECOMMENDATION

Full consideration by the City Council to approve the Strategic Energy Action Plan which establishes strategies and actions for achieving Green Vision Goals related to energy use reductions and increased use of renewables.

## OUTCOME

Adoption of the attached Strategic Energy Action Plan (Action Plan) would establish the roadmap to achieve Goals 2 and 3 of the City's Green Vision by reducing energy usage per capita and increasing electricity from renewables. The Action Plan focuses on reducing energy use in the built environment. It also supports the City's greenhouse gas reduction goals and several other Green Vision goals, including: Goal 1 – create green jobs; Goal 4 – construct and retrofit green buildings; Goal 5 – convert waste to energy; Goal 7 – plan for sustainable development; and Goal 9: replace 100% of streetlights with smart zero-emission lighting.

## BACKGROUND

The City of San José (City) has long been a leader in green policies and environmentally friendly programs. This commitment was further strengthened when, in 2003, the City Council approved the Sustainable Energy Policy and Action Plan. With the adoption by Council of San Jose's Green Vision in October 2007 and subsequent direction from the Mayor and Council regarding municipal energy actions, the City's focus on energy was aligned and strengthened with specific and aggressive goals related to the use of energy and renewables.

This Action Plan focuses on the built environment and identifies strategies and tactics for achieving the energy and renewable goals of the City's adopted Green Vision -- reducing energy use by 50% per capita and receiving 100% of electricity from renewable sources.

Meeting these ambitious goals will require innovative strategies, advocacy, inventive financing and procurement processes, structural and behavioral changes in the marketplace, shifts in the funding structures, community engagement and partnerships, and significant focused investment in energy-efficient and renewable technologies and installation.

**ANALYSIS**

**San Jose's Energy Climate**

Citywide, the 2007 total energy (electricity and natural gas) usage by all sectors is nearly 11.6 billion kilowatt hours (kWh) according to PG&E data. The City used 339 million kWh for municipal operations that year. PG&E, San Jose's primary power provider, receives 14% of its energy from renewables as defined by the State of California. The remaining sources are natural gas (39%), nuclear (22%), large hydro (16%), coal (8%) and other (1%).

To achieve the Green Vision goal to reduce per capita energy use by 50% by 2022, energy use will need to be reduced by an average of about five percent per year through the 15 year goal period. Use of renewable energy will need to increase by 16% per year to reach 100% by 2022, Due to good solar exposure, San José is well positioned to transition to a wide variety of renewable energy sources, particularly solar energy.

San José Energy use by Sector	kWh/year (FY2006-2007)	Percentage
Residential	5.5 Billion	47%
Commercial*	5 Billion	43%
Industrial*	1.2 Million	10%
Total	11.6 billion	100%
* Municipal energy usage is incorporated into the Commercial and Industrial usage figures (Source data: PG&E)		

**Trends: Opportunities and Challenges in San José**

In preparing the Strategic Energy Action Plan (Attachment 1) for San José, several specific trends, opportunities and challenges were identified and evaluated.

- **Energy Efficiency First:** Energy efficiency saves the most money and reduces the need to find any new energy sources. It also generates technology, manufacturing, construction and installations jobs.
- **Smart Energy Makes Sense:** Clean, sustainable energy has the benefits of reducing energy costs, while driving demand for new, innovative technologies.
- **Energy Efficiency and Renewable Energy Creates Jobs:** Recent reports indicate that the two largest growth occupations in the San Francisco Bay Area over the next twelve months are building performance or retrofitting specialists and energy auditors.

- ***Smart Meters and Smart Grids:*** A smart grid delivers electricity using digital technology to save energy, reduce cost and increase reliability. Smart meters encourage consumers to reduce energy consumption by providing them with more detail on their energy usage, and notifying them of opportunities to adjust their electricity demands. Employing metering capability in the City's "smart" streetlights will enable the City to monitor its energy usage and get credit for reducing consumption.
- ***Economic Issues:*** The current national, state and local economic crisis has reduced household and business incomes, increasing the importance of reducing energy costs along with an increase in the number of households eligible to receive energy assistance services. Reducing energy dependency makes economic sense.
- ***Organics to Energy:*** Turning waste into energy advances multiple City goals. It reduces waste to landfills, reduces a major source of greenhouse gas emissions, and creates many more jobs than the disposal sector.
- ***Land Use and Energy:*** Decisions affecting land use directly affect energy use and the ability to use solar or develop renewable energy facilities. Ensuring effective and comprehensive energy policies within the City's General Plan and updating City Council Policy 4-3 on Outdoor Lighting on Private Developments will provide additional support to achieving the City's Green Vision/Energy Goals.
- ***Clean and Green Technology:*** The push to energy efficiency and renewables will drive technology and create jobs to meet the demand for smart, sustainable solutions.

### **San José as a Leader in Energy Policies and Programs**

In March of 2010, the 2009 Annual Report on San José's Green Vision was presented to the Council. That report provided information about the 2009 accomplishments in the energy area, areas of strategic focus for 2010, and outlined specific actions to continue progress toward attaining the City's ambitious Green Vision.

### **Strategic Energy Action Plan Summary**

The Strategic Energy Action Plan was guided by the framework of the City's adopted Green Vision and provides actions in the areas of:

- Leading by Example
- Advocating Policies at the Regional, State and Federal Level
- Financing Mechanisms
- Forming Strategic Partnerships, and
- Communications and Engagement.

The Strategic Energy Action Plan identifies specific two-year, and longer term actions needed to ensure implementation of the City's Green Vision energy goals. These actions are diverse, flexible and integrated. They are also linked to broader community, state and federal goals that will affect the economic, social and environmental well being of the community. Successful

implementation of these actions will also require building support at all levels of the community.

Strategy for Achieving 50MW of Renewables on Municipal Facilities

Additional direction from the Council concerning the achievement of Goal 3: Ensuring 100% electricity from renewables was provided to staff in June of 2009. Staff was directed to:

- Install 50MW of renewable electrical generation capacity on City-owned facilities and lands for municipal use; and
- Develop a procurement strategy to select a solar contractor/vendor to produce an installation and financing plan and schedule.

To understand the implications of achieving 50MW of renewables on city facilities, it is important to understand the current status of renewables and what is realistic within the next 3-5 years. The following chart provides an overview of municipal renewable generation.

**Current and Planned Municipal Renewable Installations**

6 MW	Water Pollution Control Plant on-site biogas/renewables
1 MW	Water Pollution Control Plant fuel cell installation (anticipated by late 2010)
1 MW	Central Service Yard solar installation
1 MW	Airport solar installation
20 kW	Community Development Block Grant installations (6)
<b>9MW</b>	<b><i>Approximate Total</i></b>

**Potential Municipal Installations—Next 2 - 5 Years**

19MW	Upcoming RFP for solar installations on prioritized city facilities (2011)
10 MW	Additional solar installations on city facilities (2012-13)
1 MW	Potential additional solar installations at the Airport
1.5 - 2 MW	Solar on municipal facilities using Qualified Energy Conservation Bonds
6-10 MW	Potential solar on selected city lands (e.g. Singleton, Story Road) through partnerships with PG&E and/or solar developers
1 MW	Anticipated solar at the Water Pollution Control Plant
<b>43 MW</b>	<b><i>Approximate Total—Next 2-5 Years</i></b>

A proposed strategy focused on the direction to achieve 50MW of renewables on municipal facilities is provided in Attachment 2.

**EVALUATION AND FOLLOW-UP**

Updates and progress on the Strategic Energy Action Plan will be reported to Council through the existing Green Vision process.

### PUBLIC OUTREACH/INTEREST

In developing this plan, the City was guided by a steering group comprised of business, environmental and community representatives, along with City staff from various departments. Starting in late 2008 through 2009, City staff also interviewed over 30 community-based organizations, non-profits, business associations, government agencies, and stakeholders for input into the energy actions.

- Criteria 1:** Requires Council action on the use of public funds equal to \$1 million or greater. **(Required: Website Posting)**
- Criteria 2:** Adoption of a new or revised policy that may have implications for public health, safety, quality of life, or financial/economic vitality of the City. **(Required: E-mail and Website Posting)**
- Criteria 3:** Consideration of proposed changes to service delivery, programs, staffing that may have impacts to community services and have been identified by staff, Council or a Community group that requires special outreach. **(Required: E-mail, Website Posting, Community Meetings, Notice in appropriate newspapers)**

### COORDINATION

The memorandum and attached Strategic Energy Action Plan has been coordinated with the City's Interdepartmental Energy Team, which includes representatives from the Departments of Finance; Parks, Recreation and Neighborhood Services; Planning, Building, and Code Enforcement; Public Works, Library, Airport; General Services; Transportation; Fire; Police; along with the Offices of Economic Development, City Attorney, Intergovernmental Relations, and City Manager's Budget Office.

### COST SUMMARY/IMPLICATIONS

More the 80% of the City's municipal and community energy activities are funded through various federal, state, or utility grants and contracts. All of the community activities (financing mechanisms and incentives, training, education) are grant funded. The majority of the current energy grants will end by the year 2012. Municipal facility improvements (energy efficiency and renewable/solar retrofits and installations) are primarily funded with federal economic stimulus funds or through power purchase agreements. First and second year savings achieved as a result of these installations are put in the City's Energy Fund to be re-invested for further energy improvements. Staff is also identifying potential bond funded activities for further installations.

TRANSPORTATION AND ENVIRONMENT COMMITTEE  
04-16-10  
Subject: San Jose's Strategic Energy Action Plan  
Page 6

**CEQA**

Not a project.

/s/  
JOHN STUFFLEBEAN  
Director, Environmental Services

For questions, please contact Mary Tucker, Energy Program Manager, Sustainability and Compliance Division at 408-975-2581

Attachment 1: Strategic Energy Action Plan  
Attachment 2: Status Report and Strategy for 50MW of Renewable Energy on Municipal Facilities  
Attachment 2A: List of City Facilities

## ATTACHMENT 1

### STRATEGIC ENERGY ACTION PLAN APRIL 2010

#### **Leading by Example**

##### *Two Year Action Plan*

- Reduce municipal energy use by 10%
  - Complete 50 energy audits and related energy efficiency projects on priority facilities to ensure General Fund Savings
  - Ensure a robust and effective data tracking and management system to evaluate the effectiveness of city energy activities, and ensure effective reporting and accountability
  - Continue and expand City's energy efficiency fund to ensure that first and second year savings and rebates, achieved as a result of energy efficiency and renewable project, are returned and employed for future City energy projects
  - Install Light Emitting Diodes, and other innovative lighting technologies, that will allow streetlights and other outdoor lighting to be programmed remotely, dimmed and ensure utility billing for actual consumption
  - Assist non-general funded departments in achieving their energy efficiency and renewable energy goals
- Install 50MW of solar on city facilities and lands
  - Develop effective and innovative city guidance documents, processes and procurement procedures in order to expedite and finance the installation of solar and energy efficiency measures
  - Implement two or more agreements for the installation of solar and renewable energy technologies on municipal facilities
  - Work to implement the Strategy (Attachment 2) for the installation of 50 MW of renewables on municipal facilities/lands and present to Council in 2010
- Work to ensure that the City's General Plan, legislation, permitting and other building focused rules offer integrated and streamlined systems for the implementation of energy efficiency and renewable energy technologies
- Promote land use patterns that increase energy efficiency in building and transportation systems by making energy efficiency and the use of renewables a critical element when developing General Plan policies, new zoning regulations, and other related land use policies and strategies.
  - Work with the Planning Department and the Envision 2040 Task Force to ensure effective energy efficiency and renewable energy policies related to land use and building opportunities.
  - Work with the Planning Department on the update of City Council Policy 403 on

### Outdoor Lighting on Private Developments.

- Implement energy conversion technologies as identified in the Zero Waste Strategic Plan
  - Incorporate an energy conversion option into the Commercial Solid Waste Request for Proposal process
  - Partner with private companies to develop demonstration scale or larger projects utilizing energy conversion technology in San Jose
  - Research and analyze energy conversion implementation options for their feasibility in San Jose
  - Further the development of a dry-fermentation anaerobic digestion facility on San Jose/ Santa Clara Water Pollution Control lands
  - Aggressively pursue any Federal or State grant funding which could offset the capital costs of energy conversion facilities in the City

### Long Term Plan

- Review and update the Strategic Energy Action Plan every two years.
- Continue to track existing and emerging energy efficiency, solar and other renewable technologies for adoption by the City
  - Work with local firms to identify opportunities for city technology partnerships and installations
- Identify research and demonstration opportunities that can be applied at Organics to Energy facilities that are developed in San Jose
- Analyze the feasibility of developing wood waste and biosolids gasification technology use in San Jose
- Establish Renewable Energy Zones within San Jose, similar to Enterprise Zones for increased economic development opportunities for renewable energy technologies development and business creation.
- Develop means for retrofitting streetlights with solar energy
- Identify opportunities for municipal utility and/or community aggregation opportunities for generating green/renewable energy for both the City and community use.
- Ensure implementation of design guidelines that encourage solar orientation, readiness, and installation
- Encourage use of solar covers on all parking areas

### Advocating Policies at the Regional, State and Federal Level

#### *Two Year Action Plan*

- Support and ensure local, state and federal legislation and regulation to enable cities and companies to increase energy efficiency and the use of renewables

- Identify and remove barriers to creating energy improvement areas, renewable generation, smart grids, microgrids, and other energy efficient and renewable technology uses
- Work with local governments and the California Public Utilities Commission to ensure effective implementation of the AB2466 legislation to allow cities to take advantage of financial credit mechanisms related to the installation of renewables on municipal facilities.
- File testimony in PG&E's rate case before the CPUC to reach a settlement with the utility and the CPUC regarding the methodology, process, and timeline that would enable the City to employ an advanced control and monitoring system to meter the City's streetlights.
- Work to ensure that the City's General Plan, legislation, permitting and other building focused rules offer integrated and streamlined systems for the implementation of energy efficiency and renewable energy technologies
- Promote land use patterns that increase energy efficiency in buildings and transportation systems by making energy efficiency and the use of renewables a critical element when developing General Plan policies, new zoning regulations, and other related land use policies and strategies
  - Work with the Planning Department and the Envision 2040 Task Force to ensure effective energy efficiency and renewable energy policies related to land use and building opportunities

#### *Long Term Plan*

- Monitor local, state and federal legislation related to energy efficiency and renewables on their potential impact and benefits to San Jose and its community.
- Advance and implement State Title 24 "beyond code" energy efficiency building standards and Title 20 Energy Efficient Appliance standards
- Ensure environmental safety in the manufacturing and disposal of existing and emerging energy efficiency and renewable energy technologies

### **Financing Mechanisms**

#### *Two Year Action Plan*

- Ensure cost-effective financing mechanisms are in place for municipal energy efficiency and renewable energy installations
  - Continue and expand City's energy efficiency fund to ensure that first and second year savings, achieved as a result of energy efficiency and renewable project, are returned and deployed for future City energy projects
  - Actively solicit grant and bond funding for energy efficiency and renewable energy municipal projects to leverage city dollars and efforts
- Identify and implement community financing mechanisms for energy efficiency and renewable energy installations

- Work with PG&E and other partners to use available local, state and federal funds to reduce San Jose's per capita energy use.
- Implement the Silicon Valley Energy Watch Program with PG&E to provide education, rebates, and energy efficiency installations for the low/moderate income community, small business and non-profit sectors of the community (Target 250 household/4,300kW over the three year term of the PG&E contract).
- Launch the CaliforniaFirst financing program for the San Jose community
- Launch the establishment of group solar purchase opportunities for both city employees and the community through Solar Block Parties and/or other educational outreach opportunities
- Analyze opportunities for the use of Clean Renewable Energy Bonds (CREBs) and Qualified Energy Conservation Bonds (QECBs) as financing mechanisms within the San Jose area for municipal and community installations

### *Long Term Plan*

- Evaluate the effectiveness of various community financing mechanisms for energy efficiency and renewable energy installations for their continued program implementation.
- Advocate for incentives in lieu of tax credits to support the cost of municipal solar installations
- Continue to pursue grant and bond opportunities
- Pursue opportunities to set up a municipal utility and/or community aggregation project
- Evaluate opportunities for a bond or tax measure to finance energy efficiency and renewable energy installations.

### **Forming Strategic Partnerships**

#### *Two Year Action Plan*

- Work in partnership with local, state and national organizations to achieve the energy efficiency and renewable energy goals of the Green Vision.
  - Work with regional organizations such as Sustainable Silicon Valley, Bay Area Air Quality Management District, and others to identify areas of cooperation and implementation activities
  - Work with PG&E, the California Energy Commission, the California Public Utilities Commission, and business/technology institutions to advance the use of Smart Grids and Smart Meters within San Jose
  - Collaborate with private businesses through the City's Demonstration Partnership Policy in order to develop energy efficiency and renewable energy installations and infrastructure.
- Ensure resources for the implementation of the Environmental Innovation Center

### *Long Term Plan*

- Establish partnerships with area businesses and the commercial sector for establishing the EPA Energy Star Buildings Program.

### **Communications and Engagement**

#### *Two Year Action Plan*

- Identify and engage with local, state and national partners to implement community educational programs to expand the knowledge and awareness of energy efficiency and renewable energy technologies and opportunities
  - Implement the PG&E Innovator Pilot program to provide grants for community based organizations that will provide increased educational opportunities on available energy efficiency and renewable energy opportunities
  - Establish a Silicon Valley Energy Map as a behavior modification tool for increasing energy efficiency, green building, and renewable energy installations.
  - Implement the Department of Energy Solar America City program to continue city-wide educational and outreach activities and identify opportunities to showcase and/or demonstrate energy efficiency and renewable energy technologies
  - Work with area partners to provide educational outreach to schools and universities
- Develop a Local Energy Assurance Plan for all critical city facilities and revise the City's Emergency Operations Plan to more comprehensively address energy planning and preparedness, using Department of Energy Grant funds.
- Work with area educational programs and institutions to create jobs and drive markets, ensuring comprehensive and integrated job training programs that build careers in the energy efficiency and renewable energy sectors.
  - Implement the Department of Energy Solar America City program to establish renewable energy training programs for at-risk youth
  - Work with Work2Future, area educational institutions, and other workforce development organizations to integrate energy efficiency and renewable energy workforce development opportunities
- Coordinate with the Plant Master Plan Communications Team in order to educate local stakeholders about energy conversion projects that could be developed on plant lands.

#### *Long Term Plan*

- Evaluate the effectiveness of community educational and outreach programs for their continued program implementation.

## ATTACHMENT 2

### STATUS REPORT AND STRATEGY FOR 50MW OF RENEWABLE ENERGY ON MUNICIPAL FACILITIES

#### Background

In October 2007, Council adopted the San José Green Vision, a 15 year roadmap to economic growth, environmental sustainability and an improved quality of life for San José residents and businesses. How the City uses energy has an effect on all of the City's ten Green Vision goals and is critical to the success of the Green Vision.

In June 2009, Council gave direction with respect to renewable energy, reduced energy consumption through efficiency and smart microgrid technology, and the design of a program for residential retrofits and green workforce development. This energy plan covered 3 main areas: renewable energy, energy efficiency and new technology, and community involvement. In the specific area of renewable energy, staff was directed to:

- Install 50MW of renewable electrical generation capacity on City owned facilities and lands for municipal use
- Develop a procurement strategy to select a Solar Contractor / Vendor to produce an installation and financing plan and schedule

Renewable energy can be generated from several natural resources such as sunlight, wind, water, biomass, and geothermal heat. Key considerations as we look at viable renewable energy sources and develop a renewable energy plan are: geographical location and access to natural resources, spatial constraints and availability of commercialized technology. At the Water Pollution Control Plant, the City currently receives about 6.25 MW of electricity from biogas and is exploring other ways to generate additional energy from organic waste.

Although staff will continue to explore wind, waste and biomass as potential sources of energy, based on the considerations outlined above, solar energy appears to be the most viable at this time and staff is developing a renewable energy plan based on an assumption that a majority of the renewable energy, or approximately 35-40 MW of energy, will be obtained from solar power.

A generation capacity of one megawatt of energy from solar costs approximately \$6 million to install, thus, a generation capacity of 35 - 40 MW would cost approximately \$210- \$240 million. Based on historic trends and projected energy prices, it is anticipated that the cost of energy obtained from PG&E will continue to rise. Thus, staff believes that in the long term an investment in solar generation capacity will translate into long term savings. Given the current fiscal climate, it is prudent to explore an array of financing options that minimize upfront costs, including third party financing mechanisms such as Power Purchase Agreements (PPAs) and leases as well as self-financing by the City that take advantage of municipal financing rates and alternative energy incentives available to local government.

#### Accomplishments to date

An important first step of the solar focused renewable energy plan was approval of a Power

Purchase Agreement (PPA) with SunEdison for the financing, installation, operation and maintenance of a 1.3 MW installation at Central Service Yard in January 2010. The Airport is also anticipating installation of a 1 MW system at the new rental car garage through its Terminal Expansion project and in 2009, 0.02 MW of solar was installed at six City facilities, with funding from the Community and Development Block Grant.

### **Proposed Strategy**

As staff develops a strategy to address all of the City's municipal energy needs, the following considerations provide guidance for a recommended path forward.

### ***Energy Efficiency***

Prior to installing any solar project, it is essential to complete all energy efficiency improvements in order to maximize the cost benefits of solar installations and to receive all applicable incentives and rebates. Staff looked at the following as viable locations for solar installations:

- a. New facilities that have been constructed to be energy efficient,
- b. Approximately 20 facilities at which energy efficiency improvements have been done recently, and
- c. Over 40 facilities that have energy efficiency improvements planned with funding from the American Recovery and Reinvestment Act.

### ***General Fund Savings***

Rising fuel prices, energy security, and climate change are excellent reasons to pursue energy from clean renewable sources. Equally important, if not more, in the current fiscal climate, is the City's desire to address the General Fund deficit and find ways to lower operational costs. Thus, staff is recommending a continued focus on facilities where savings in energy costs will have the maximum impact on the General Fund. This strategy aligns well with the fact that staff has been targeting facilities with the highest energy use for energy efficiency improvements.

### ***Excess Generation Capacity***

AB 2466 was signed into law in September 2008 and became effective on January 1, 2009. The law allows a local government to install renewable generation of up to 1 MW at one location within its geographic boundary and generate credits that can be used to offset charges at one or more locations within the same geographic boundary. Although, there are potential City sites that could accommodate solar arrays that would exceed anticipated usage, staff is currently focused on procuring generation capacity that is less than or equal to anticipated usage at a particular site. The primary reason for this is that the rate at which PG&E is willing to purchase excess power is still being determined by the California Public Utilities Commission, and staff is recommending that City lands with no electrical loads should not be considered as part of facility solicitation until we are able to develop a more definitive cost benefit analysis. Vacant lands, however, can be considered concurrently for potential partnerships with PG&E or their approved power providers, to generate renewable energy for PG&E. Staff is currently pursuing such a partnership at Story Road Landfill.

### ***RFP for first round of projects***

Staff released a draft RFP to the vendor community for comment in April 2010 and will be developing a final RFP based on input received. Based on the discussion above and criteria below, staff developed a list for the RFP of potential solar installations (see Attachment 2-A). Facility criteria include:

- a. Energy use
- b. Energy Efficiency (improvements completed or planned)
- c. Long term viability of the facility, based on operational needs
- d. Available square footage for roof or canopy mounted installations
- e. Solar access
- f. Roof age and condition

The draft RFP categorizes 38 City facilities into 3 distinct groups, in order to allow vendors of varying size and expertise to submit proposals. Vendors can bid on one or more groups; however, they will be required to submit proposals for all the facilities within each group. Vendors will be selected based on their experience, technical expertise, and cost, with staff then negotiating for each group of facilities with one or more vendor.

Based on the energy use and available square footage, it is anticipated that the maximum potential to generate a total solar power at these Phase I facilities would be approximately 20 MW. However, we must caution that the final total capacity may be significantly lower depending on factors relating to each site. We will only know the real potential after we have specific proposals from the vendors and they have had an opportunity to do more specific site assessments.

Following the issuance of this RFP, staff is currently planning to evaluate additional City facilities and lands, as Phase II in three groups:

1. All municipal facilities operated by the City
2. All City owned vacant lands
3. All City owned facilities operated by other entities

Upon completion of this Phase II evaluation, staff will be able to determine if installing 50 MW of renewable energy generation capacity on City lands and facilities is feasible and if not, to look at other ways of securing electricity for the City's needs with 100% renewable energy.

### **Issues and Policy Considerations**

There are several issues and policy considerations related to advancing the Phase I round of facilities as outlined below:

#### ***Parkland Facilities***

Using PPAs to finance solar installations requires leasing sites at City facilities or on land to non-City entities for a term of 20 years or more. Several of the facilities identified in the next round of procurement are located on parkland. Charter Section 1700 generally prohibits the granting of any leases, licenses or other permits in a City Public Park in excess of 3 years without voter approval. Section 1700.1 provides that the City Council may enter into long term leases, concessions, permits or other agreements ("Agreements") with individuals or non-City entities, to allow use of public parks for terms of up to 25 years at a time, without voter approval, if the Council determines that Agreement would benefit the community. Council Policy 7-8 specifies the circumstances when the City Council can approve Long-Term Agreements on Public Parks of more than five acres that have at least one Community Serving Amenity. A "Community Serving Amenity" is defined as one of the following: Pool, Community Center or Reservable

Sports Field or similar recreational improvements in a park and that is described in the City's approved master strategic plan for parks and community facilities.

In addition, there have been several ballot measures that specifically permit long term leases in certain City parks. Staff requested the City Attorney to analyze these measures with respect to the City's ability to enter into PPA on City parklands.

In accordance with the legal requirements discussed above, the City can enter into PPA's for public purposes in the following parks for a term of up to 55 years (20 years for the Stables) without a ballot measure and without an amendment to Policy No. 7-8:

1. Almaden Lake Park
2. Columbus Park
3. Kelly Park (including History Park and Happy Hollow Park and Zoo)
4. Lake Cunningham
5. Coyote Creek Chain
6. Police Athletic Facility (PAL)

For other parks above five acres in size with a Community Serving Amenity, the Council could approve a PPA if it also amends the Policy to include leases for solar generation facilities that enhance the recreational purposes for the park by providing power for those purposes. Facilities at parks over 5 acres in the attached list of facilities include:

1. Prusch Park
2. Seven Trees Community Center and Library (under construction)
3. Berryessa Community Center
4. Berryessa Library (new library)
5. Roosevelt Community Center
6. Alviso Library
7. Guadalupe River Park (office building)

For smaller parks, a PPA would require a ballot measure to approve the PPA or a ballot measure to amend the Charter to allow PPAs. Facilities in such parks have been grouped separately in the draft RFP to allow for vendors to propose financing mechanisms other than PPAs.

#### ***Review, Inspection and Project Management Costs***

All solar installations will require permitting costs which include environmental and design reviews as well as construction inspections. If the City structures its PPA's such that the provider pays for the permitting costs, these costs, including a premium for the provider's cost of financing, will be passed back to the City in the form of a higher rate for the energy procured through the PPA. Staff does not recommend financing the City's internal construction related costs through a PPA because PPA's generally have higher financing costs than what the City can obtain. In addition to the permitting costs, project management costs will also need to be funded. In the near term, staff is exploring using monies from the City Energy Fund to cover these costs.

However, in the long term, staff would recommend creating a dedicated source of funding to pay for all costs related to the implementation of the 50 MW renewable energy project.

### ***Requirements of Existing Financing Mechanisms***

The City has issued tax-exempt debt to finance the acquisition, construction and improvement of many City facilities. Internal Revenue Service (IRS) regulations require that facilities acquired, constructed, or improved upon by the use of tax-exempt bonds be used primarily for governmental purposes. Failure to meet this requirement may result in the loss of tax-exempt status of the bonds. If this occurs, the City will be subject to additional liabilities for those bonds. IRS regulations permit up to 10% of related private use.

In the event that the one of the tax-exempt financed facilities is a candidate for installation of solar through third party financing mechanisms (e.g. PPA or Lease), City staff will need to conduct research to determine the level of any existing private uses at the facility. This information along with the proposed terms and conditions of the agreement with the solar provider will need to be provided to the City Attorney's Office for review by bond counsel. This review typically can be done relatively quickly after the information is provided to bond counsel.

The City has also pledged certain City real property to support the City of San José Financing Authority's Lease Revenue Bonds and Commercial Paper Program. In some cases, the financing documents require that the City obtain the consent of the bond insurer for the deal or the bank providing credit support before entering into a lease with a third party. Should any of these properties be selected for installation of solar through third party financing mechanisms (e.g. PPA or Lease), the City will need to obtain the consent of the applicable financing participant.

### ***Long Term Outlook for Facilities***

To balance the \$116.5 million projected deficit in Fiscal Year 2010-2011, the City will be considering several partial and full facility closures. Given the near term fiscal outlook, it is possible that additional facility closures may be considered in the next few budget cycles. Given this uncertainty, it is a challenge to predict which facilities would be best suited for long term PPAs. Staff is working closely with the relevant operating departments to identify facilities with the best long term outlook. Not knowing how some of the service delivery assumptions may change in the future, it is important to note there is some risk in entering into long term agreements to buy power at facilities that may be closed in the future.

### **Next Steps**

Agreement(s) for solar on the next round of City facilities will be advanced for Council adoption in Summer 2010. In FY 2010-2011, staff will also provide status reports on the renewable energy plan to the T&E Committee on a periodic basis, along with any related issues or policy considerations.

Staff will continue to explore long term options to fund support costs such as assessments, environmental and design reviews, and construction inspections and bring back recommendations to the Committee as appropriate. A portion of the support costs are being covered through the American Recovery and Reinvestment Act, with \$2 million of the Energy Efficiency and Conservation Block Grant going to specifically advance the City's goal of 100% renewable energy.

**ATTACHMENT 2-A  
LIST OF CITY FACILITIES**

**Group 1: Facilities with Potential Generation Capacity of 0.5 MW or More**

Facility Name	Site Address	PG&E Rate Schedule	Energy Use (kWh)	Roof Area (s.f.)	Parking Lot and other (s.f.)	Potential MW	Shading Issues/ Other Notes
KELLEY PARK POLICE-ADMINISTRATION & COMMUNICATIONS BLDGS, HEALTH BLDG, OLD CITY HALL (closed)	1300 SENTER RD SAN JOSE 95112	A1	477,774	N/A	7,157,135	2.88	Most of park is shaded/ No roof options; solar est. only for parking lot solar; includes 6,795,360 sq ft for park in "other s.f.", not included in solar est.
SANTA TERESA LIB - Under Construction	201 WEST MISSION STREET/ 855 NORTH SAN PEDRO STREET/ 151 W. MISSION, SAN JOSE, 95110	E20P	7,505,110	216,187	155,083	1.95	Almost 25% of the Health Bldg parking lot is shaded/ All bldgs on one electric meter - solar est. only for PAC roof (90,006 sq. ft; track on roof of PAB & HB roof not option) and parking lots; 15+ yrs. roof life (PAC)
PRUSCH PARK	290 INTERNATIONAL CIR SAN JOSE 95119	N/A	374,000	22,000	90,743	0.90	None/ 15+ yrs. roof life
SEVEN TREES CC & LIB- Under Construction	S KING RD 75FT W/O SAN JOSE 95116	A10S	123,772	24,067	309,528	0.79	None/ Includes 234,000 sq. ft. for park in "other s.f.", not included in solar est.; 15+ yrs. roof life
SOUTH SERVICE YARD	3590 CAS DR SAN JOSE 95111	N/A	986,000	29,000	58,000	0.69	Unknown/ 15+ yrs. roof life
PAL SPORTS CENTRE	4420 MONTEREY HWY SAN JOSE 95111	A1P	262,580	18,124	63,658	0.65	None/ 15+ yrs. roof life
TULLY LIB	680 SOUTH 34TH STREET, SAN JOSE CA 95116	E19SX	577,077	N/A	74,200	0.59	None/ No roof options (portables at site)
EDUCATIONAL PARK LIB - Under Construction	880 TULLY ROAD SAN JOSE 95111	A10S	445,559	24,000	47,500	0.57	less than 5%/ 15+ yrs. roof life
ANIMAL CARE CENTER	1772 EDUCATIONAL PARK DR., SAN JOSE 95133	N/A	306,000	18,000	50,452	0.54	Unknown/ 15+ yrs. roof life
POLICE SUBSTATION - Under Construction	2750 MONTEREY HWY SAN JOSE 95111	E19SX	1,135,817	46,857	17,608	0.51	None/ 15+ yrs. roof life
BERRYESSA CC	6087 GREAT OAKS PARKWAY, SAN JOSE, CA 95119	N/A	2,400,000	1,156	61,722	0.50	No trees, new site/ 15+ yrs. roof life
	3050 BERRYESSA RD SAN JOSE 95132	A10S	264,204	13,700	62,404	0.50	Large lots with potential for carport solar (trees may need to be cut)/ 9 year roof life so roof not included in solar est.
<b>Total</b>			<b>10,306,312</b>	<b>413,091</b>	<b>8,148,033</b>	<b>11.06</b>	
				<b>11.1</b>		<b>MW potential</b>	

**ATTACHMENT 2-A  
LIST OF CITY FACILITIES**

**Group 2: Facilities with Potential Generation Capacity of Less than 0.5 MW**

Facility Name	Site Address	PG&E Rate Schedule	Energy Use (KWh)	Roof Area (s.f.)	Parking Lot and other (s.f.)	Potential MW	Shading Issues/ Other Notes
BASCOM CC & LIB- Under Construction	1000 S. BASCOM SAN JOSE 95128	N/A	680,000	20,000	37,940	0.46	/ Solar ready site; 15+ yrs. roof life
ROOSEVELT CC	901 E SANTA CLARA ST SAN JOSE 95116	A10S	114,880	30,000	24,815	0.44	Approximately 20% shaded/ 15+ yrs. roof life
CAMBRIAN LIB	1780 HILLSDALE AVE SAN JOSE 95124	A10S	357,712	27,000	25,482	0.42	None/ 15+ yrs. roof life
HILLVIEW NEW LIB	1600 HOPKINS DR SAN JOSE 95122	A10S	355,247	21,000	30,500	0.41	None/ Land leased from school district (lease expires 2/25/2053) - opened in 2007; 15+ yrs. roof life
SOUTHSIDE SC	5585 COTTLE RD SAN JOSE 95123	A10S	328,343	23,771	27,306	0.41	10% shaded at one of the parking lots/ 15+ yrs. roof life
BERRYESSA NEW LIB	3355 NOBLE AVE # A SAN JOSE 95132	A10S	461,351	26,000	22,000	0.38	Two parking lots less than 5% shaded/ 15+ yrs. roof life
MUNI OFFICE	3025 TUERS RD SAN JOSE 95121	A10S	204,798	6,457	40,000	0.37	Less than 5%/ 15+ yrs. roof life
ALUM ROCK LIB	3090 ALUM ROCK AVE SAN JOSE 95127	A10S	452,632	26,000	20,000	0.37	Less than 5%/ 15+ yrs. roof life
VINELAND LIB	1450 BLOSSOM HILL RD SAN JOSE 95118	A10S	335,113	24,000	20,000	0.35	Less than 5%/ 15+ yrs. roof life
WEST VALLEY LIB	1243 SAN TOMAS AQUINO RD SAN JOSE 95117	A10S	268,172	20,123	22,000	0.33	5-10% shaded/ 15+ yrs. roof life
PEARL LIB	4270 PEARL AVE SAN JOSE 95136	A1P	135,981	14,000	20,900	0.28	None/ 15+ yrs. roof life
EDENVALE CC - Under Construction	286 AZUCAR AVE SAN JOSE 95111	N/A	97,000	24,204	7,030	0.25	Unknown/ Land leased from school district, solar ready site; 15+ yrs. roof life
JOYCE ELLINGTON LIB	491 E EMPIRE ST SAN JOSE 95112	A1P	176,760	15,000	12,757	0.22	None/ Land leased from school district (lease expires 9/16/2025) - opened in 2008; 15+ yrs. roof life
EDENVALE LIB	101 BRANHAM LN. EAST SAN JOSE 95111	A10S	374,960	11,000	16,442	0.22	/ Solar ready site - opened in 2007; 15+ yrs. roof life
ALVISO LIB	5050 N 1ST ST ALVISO 95002	A10S	119,012	5,850	14,000	0.16	Less than 20% shaded/ 15+ yrs. roof life
STABLES-POLICE BRIEFING	2525 KENOGA DRIVE SAN JOSE 95121	N/A	N/A	N/A	17,565	0.14	None/ No roof options
E SJ CARNEGIE LIB	1102 E SANTA CLARA ST SAN JOSE 95116	A10S	115,488	11,658	5,580	0.14	Almost 25% of parking lot shaded/ Portion of land leased from school district - 99 yr lease (fr 1978) includes parking lot - opened in 2009; 15+ yrs. roof life
WILLOW GLEN LIB	1157 MINNESOTA AVE SAN JOSE 95125	A1P	97,181	13,000	0	0.10	Mostly shaded/ Small lot; 15+ yrs. roof life
WEST SJ CC & POLICING CTR	3707 WILLIAMS RD SAN JOSE 95117	A10S	119,078	5,171	7,320	0.10	20% shaded/ 15+ yrs. roof life
GUADALUPE RIVER PARK	W JULIAN 100' WEST OF GUADALUPE RIVER SAN JOSE 95110	A1	77,232	6,000	5,227,200	0.05	Entire stretch of the park along the river is shaded with trees/ Does not include parking lot(s) as unable to find on Google Earth - include for solar options when evaluated; 15+ yrs. roof life
<b>Total</b>			<b>4,577,448</b>	<b>306,063</b>	<b>364,317</b>	<b>5.58</b>	
				<b>5.6</b>	<b>MW potential</b>		

ATTACHMENT 2-A  
LIST OF CITY FACILITIES

Group 3: Facilities Not Eligible for Site Leases of More than 3 Years

Facility Name	Site Address	PG&E Rate Schedule	Energy Use (kWh)	Roof Area (s.f.)	Parking Lot and other (s.f.)	Potential MW	Shading Issues/ Other Notes
CAMDEN CC	3369 UNION AVE SAN JOSE 95124	A10S	465,149	42,000	178,058	1.75	None/ 15+yrs. roof life
ALMADEN CC & LIB	6445 CAMDEN AVE SAN JOSE 95120	A10SX	947,937	32,575	42,158	0.59	Less than 5% shaded/ 15+yrs. roof life
WILLOW CC & SC	2175 LINCOLN AVE SAN JOSE 95125	A1P	175,634	14,715	46,293	0.37	None/ 5 year roof life so roof not included in solar est.
EVERGREEN LIB	2635 ABORN RD SAN JOSE 95121	A10S	330,993	21,500	30,000	0.41	Less than 5% shaded/ 15+yrs. roof life
EVERGREEN CC	4860 SAN FELIPE RD SAN JOSE 95135	A10S	270,303	13,000	37,000	0.29	None/ 9 year roof life so roof not included in solar est.
MAYFAIR CC	2039 KAMMERER AVE SAN JOSE 95116	A10S	53,195	27,303	5,950	0.26	5% shaded/ 15+yrs. roof life
<b>Total</b>			<b>1,588,720</b>	<b>89,290</b>	<b>266,509</b>	<b>3.68</b>	
				<b>3.7</b>		<b>MW potential</b>	

**20.3 TOTAL MW Potential**