TO: HONORABLE CITY COUNCIL
FROM: CITY MANAGER
DEPARTMENT: UTILITIES
DATE: SEPTEMBER 15, 2008 CMR: 361:08

SUBJECT: FEASIBILITY OF MAKING PALOALTOGREEN THE “DEFAULT” ELECTRIC SERVICE OF CHOICE

This is an informational report to the Council. No action is required at this time.

BACKGROUND
Council Members have requested that staff evaluate the feasibility of making the existing PaloAltoGreen (PAG) program the default service for all classes of electric service customers. Any customer who does not wish to be enrolled in PAG could opt-out of the program. This report outlines the factors that need to be considered by the Council in evaluating the merits of implementing such a change to the PAG program. It also examines other options that may achieve the overarching Council priority of reducing the carbon footprint of the City’s energy supplies.

Existing PaloAltoGreen Program
The City established the PAG program on Earth Day in April 2003. The program offers a voluntary 100% renewable energy (electricity) resource-based portfolio option to all retail electric customers for an extra cost (1.5 ¢/kWh) above the otherwise applicable retail electricity rate. The PAG program at times has used Renewable Energy Certificates (RECs) from new wind and solar generation sources to meet the renewable energy needs of the PAG program. At other times, actual wind energy supplies have been purchased to meet the PAG program needs. Currently, RECs are being purchased to meet the environmental benefit goals of the program. RECs are used as an incentive for generators to build and expand renewable generation. Each REC is associated with one megawatt-hour of qualifying renewable energy generated and is individually tracked and audited to ensure accurate and appropriate accounting of this renewable energy.

The PAG customer-participants now account for approximately 5% of the City’s total load, and the program has achieved a customer participation of over 20%. In 2007, PAG was the top-ranked voluntary renewable energy program in the nation in terms of customer participation rate (number of customers in the program divided by number of total customers). The program has been especially popular with residential customers, but a lesser percentage of commercial customers, who account for approximately 85% of the electric load, participate in PAG.
Renewable Portfolio Standard
In addition to the PAG program, the Council approved the City’s first Renewable Portfolio Standard (RPS) for the Electric Utility in October 2002. The original RPS targets were to develop new renewable energy supplies to provide 10% of the City’s electric needs by 2008 and 20% by 2015, while ensuring that the retail rate impact did not exceed 0.5 ¢/kWh. In March 2007, the Council increased the original RPS profile targets to 20% by 2008 and 33% by 2015 with the same rate impact limitation. During calendar year 2008, renewable energy supplies are expected to account for 16.7% of total electric supply, short of the Council established target due to the scarcity of this type of supply and delays in renewable generation project start dates. However, the City has already made commitments to reach 21% by 2010 and it is confident the 33% eligible renewable target can be achieved ahead of 2015.

As about 50% of the City’s electric supplies are from hydroelectric sources, upon achieving the 33% RPS target, approximately 83% of the electric portfolio supplies would not produce carbon emissions.

Climate Protection Plan
With the RPS goals, the PAG program, implementation of the Council-approved 10-year energy efficiency plan for all customer classes, and research and development programs, the electric supply portfolio is anticipated to reduce the carbon footprint by 92% below 2005 levels by 2020. As outlined in the Council-approved Climate Protection Plan (CPP) of December 2007, the electric supply portfolio’s carbon footprint of 145,000 metric tons of CO₂ in 2005 accounted for 18% of the total community-wide emissions of 814,000 metric tons.

The natural gas supply portfolio, on the other hand, is responsible for 20% of the total community-wide emissions in 2005, but it has fewer supply options to reduce its share of carbon footprint. As a result, the CPP-targeted reduction for natural gas supply was a lesser (but equally) ambitious goal of a 10% reduction below 2005 levels by 2020. The newly-implemented solar water heating program and enhanced gas efficiency programs will enable the City to reach this goal, as will the potential implementation of a biogas program, similar to PAG for gas utility customers.

Staff is participating in various forums jointly with other municipal utilities, governmental agencies, and private sector suppliers and consultants to influence the development of robust and sustainable mechanisms to achieve long-term greenhouse gas (GHG) reductions at the local, state, and national level.

The state is in the preliminary stages of drafting regulations to implement the California Global Warming Solutions Act of 2006 (AB 32), resulting in a high degree of cost uncertainty to meet future regulatory mandates. In addition, many questions remain unanswered about the validity of using various instruments to meet AB 32 regulatory mandates (e.g. RECs are counted for renewable energy, but there are no rules yet on whether they count for emission reductions).

DISCUSSION
Since the adoption of the CPP in December 2007, Utilities staff along with community members have discussed ways to achieve a ‘carbon neutral electric portfolio’ in an expedited and
sustainable manner. Declaring the PAG program as the default electric service program is one option to be considered in achieving this goal.

Before discussing options to the current PAG program and identifying any issues, it is important for the Council to consider the goal to be achieved. For example, the goal could be to increase the renewable energy portion of the electric portfolio; or it could be to decrease greenhouse gas emissions. Identifying the goal(s) will enable a thoughtful and comprehensive discussion of the options.

Options for Making Changes to the PAG Program

There are many possible changes that could be made to the PAG program. Several of these options are identified and briefly described below.

1. **Maintain the existing voluntary PAG program.**
   The PAG program would continue to operate as a voluntary program and RECs would be purchased for 100% of the program’s energy subscription as described above.

2. **Redesign the voluntary PAG program by incorporating the benefits of RPS supplies.**
   Prior to the request to examine a proposal to make PAG the default service, staff has been redesigning the PAG program. One of the changes being developed is to let the PAG portfolio take advantage of the renewable energy supplies purchased for RPS. When PAG started, renewable supplies accounted for less than 5% of the portfolio. Therefore, RECs were purchased for all of the PAG program needs. However, in 2009, renewable energy supplies are expected to account for at least 20% of the electric supplies. These renewable energy supplies were purchased for all customers; therefore, RECs would only be required for the remaining 80% of the customer’s load. This change in accounting could lower the PAG premium or increase the fraction of solar RECs purchased for the PAG program (since solar RECs cost more than other RECs).

3. **Redesign the voluntary PAG program by incorporating the benefits of non-carbon emitting supplies.**
   The PAG program could be redesigned so that RECs are purchased only for the carbon-emitting fraction of the electric portfolio. Although hydroelectric supplies are not counted as renewable for RPS purposes, they are non-carbon emitting. As in an average year, hydro resources comprise 50% of the supplies and RPS supplies are expected to comprise 20% of the supplies in 2009, then RECs would only be purchased for 30% of the supplies. This change could lower the PAG premium significantly from the current program, which could encourage additional PAG participation.

4. **Make the PAG program the default electric service with opt-out provisions.**
   This proposal would required RECs to be purchased as required to meet the program goals. If the goal is that all supplies shall be new renewable energy supplies, then RECs would need to be purchased for all resources except for those that count for RPS. If the goal is to be carbon neutral, then fewer RECs would need to be purchased, as hydro resources have zero carbon emissions.
5. **Abandon the PAG program and increase the RPS to 50%.**
If the RPS target is increased to 50% and hydroelectric resources (in a normal year) are about 50%, then carbon neutrality could conceivably be achieved. The issue of what to do in dry hydro years when less hydroelectric generation is available would need to be addressed.

6. **Establish carbon neutrality as an electric portfolio goal**
There are several ways to move towards carbon neutrality in the electric portfolio. These could include increasing the RPS, buying RECs, making PAG the default program, and purchasing carbon offsets.

7. **Establishing a new carbon offset program for both electric and natural gas customers.**
The carbon offset program could also be expanded to cover all sources of community emissions. However, at this time, carbon offset certification programs are in a nascent stage of development.

**Issues for Council to Consider if PAG is designated as the “default” electric service of choice**
If PAG is made the “default” electric service of choice, there are several practical considerations regarding implementation of this change. Details such as roll-out, timing and communication to customers would have to be developed. In addition, the timeline for opting out of the service would need to be aligned with the timelines to purchase RECs to limit “stranding” any RECs. As the definition of RECs is still being determined by regulators, the market for RECs is a bit uncertain.

Making PAG the “default” electric service of choice may result in a backlash from both existing customers and current non-PAG participants. Existing customers are proud to have made the choice voluntarily and the success of the program has been roundly applauded across the country. In addition, commercial customers are likely to exercise their right to “opt-out” of the program, as the cost premium may negatively impact those customers’ ability to operate a profitable business. In fact, during recent months, there have been fewer new enrollments and a number of long-standing PAG residential customers have cancelled their participation. Many of the customers leaving the program attribute harder economic times and higher energy prices as the reason for their departure.

If PAG is declared the “default” service of choice, other programs offered by the Utilities Department may be less appealing and be more difficult to market. Potential participants in efficiency programs or photovoltaic incentive programs may reconsider their participation if they would be saving renewable energy, not ‘brown’ power. They may also feel that they are already paying, in effect, the PAG premium. On the other hand, the incentive to save energy could increase since the bill savings would be higher due to the higher cost of the PAG program.

Staff has consulted with the City Attorney on the issue of expansion of the PAG program. The City Attorney has analyzed the issue and determined that there are no legal restraints to switching to 100% PAG program or an “opt out” program. However, there are two legal issues that must be noted. First, this is effectively a rate increase and it must be passed by the Council using the formal rate increase procedure. Second, it is important that the public be fully informed concerning what the Palo Alto Green program really means if the underlying program is greatly expanded or modified.
Recommendations and Next Steps

If a “carbon neutral” electric portfolio is the Council’s goal, staff’s initial assessment is that there may be other long-lasting solutions to achieving the desired reduction in the carbon footprint of the electric supply instead of making PAG the default electric service. These options include expanding the RPS goal from 33% to 50%, implementing a new ‘carbon offset’ program for electricity and natural gas consumption, and expanding energy conservation programs. It is staff’s belief that working toward the long-term goal of higher renewable energy supplies to achieve higher RPS goals is a more sustainable and, ultimately, more effective carbon reduction option compared to buying short-term RECs for an expanded PAG program.

Staff plans to present to Council in the Spring of 2009 a comprehensive framework to meet the Council approved CPP targets. Possible changes to RPS goals and PAG would be proposed at that time. By Spring 2009, staff is expecting to have greater clarity about AB32-related regulations, though the final rules are not expected until 2010-11.

RESOURCE IMPACT

The impact on the average residential user who participates in PAG is about $10 per month. If the current PAG program were the “default” electric service of choice, the average residential participant would see this impact unless she opted out of the program. The impact for business customers would be 1.5 cents per kWh consumed.

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