TO:        HONORABLE CITY COUNCIL
FROM:      CITY MANAGER            DEPARTMENT: UTILITIES
DATE:       OCTOBER 11, 2005           CMR:386:05
SUBJECT:    ADOPTION OF A RESOLUTION OF THE COUNCIL OF THE CITY OF
            PALO ALTO APPROVING THE LONG-TERM POWER PURCHASE
            AGREEMENT WITH SHILOH I WIND PROJECT LLC FOR THE
            PURCHASE OF ELECTRICITY GENERATED BY A WIND ELECTRIC
            GENERATING FACILITY FOR A TERM OF 15 YEARS AND A
            ENTERPRISE FUND CONTRACT IN THE AMOUNT OF $75 MILLION

RECOMMENDATION
Staff recommends Council adopt the attached Resolution approving a Long-Term Power
Purchase Agreement with Shiloh I Wind Project LLC (“Shiloh”) for a 16.66% share of the 100-
150 MW-rated capacity of the proposed wind generating facility to be located in Solano County,
California for a term of 15 years and an estimated total cost of $75 million ($5 million per year).
The Resolution authorizes the City Manager to sign the contract on behalf of the City.

BACKGROUND
On October 21, 2002, the City Council approved the Long-Term Electric Acquisition Plan
(LEAP) Guidelines (CMR:398:02). The Finance Committee reviewed the implementation
parameters of LEAP Guideline #6: Renewable Portfolio Investments on October 1, 2002,
recommending renewable energy targets of 10% of the City’s annual electric load by 2008 and
20% by 2015, and within the system average rate impact limit of ½ ¢/kWh. The Finance
Committee recommendation was approved by Council as part of the overall LEAP Guidelines.
On August 4, 2003, Council approved the LEAP Implementation Plan (CMR:354:03). Task #1 is
to acquire renewable energy resources to meet LEAP Guideline #6.

Plan (Plan) to the Utilities Advisory Commission (UAC). The UAC report, presentation and
surrounding discussion summary were provided to Council as information on March 1, 2004
(CMR:168:04). The Plan has two tiers: (1) power purchase agreements (PPAs) for the near term
(2005-2008) to meet the 10% renewable investment target by 2008, and (2) exploring new
resource development opportunities for the longer term (2009-2015) to meet the 20% renewable
investment goal by 2015.
On November 8, 2004, Council approved power purchase agreements for a 20 MW share of wind energy from the PPM High Winds Project in Solano County (CMR:424:04) and a 50% share of the output from a 3.2 MW Ameresco Santa Cruz landfill gas-to-energy project in Watsonville (CMR:461:04). On January 18, 2005, Council approved a contract for 50% of the output from a 6-13 MW Ameresco Half Moon Bay landfill gas-to-energy project (CMR:100:05). On August 8, 2005, Council approved a contract for 50% of the output from a 2.8-4.1 MW Ameresco Keller Canyon landfill gas-to-energy project (CMR:350:05). Wind energy deliveries began in December 2004. The Santa Cruz landfill project is on schedule to begin operation in December 2005, and the Half Moon Bay and Keller Canyon projects are expected to begin operation by the end of 2006. Together, these four projects, when operational are expected to meet 10 to 13% of Palo Alto’s annual electric energy supply. Palo Alto also receives 1% eligible renewable resources from the small hydroelectric portions of the Calaveras Hydroelectric facility and the Western Central Valley Project.

DISCUSSION

Palo Alto issued a Request for Proposals (RFP 114134) on August 3, 2005 for Renewable Electric Power. Seven firms submitted proposals for 11 different projects, including wind, geothermal, biomass, solar thermal, and photovoltaic technologies. Proposal price and contract duration ranged from $63/MWh for 5 years to $300/MWh increasing at 3.5% for 25 years. The PPM Shiloh wind project was selected as the most viable proposal. According to the American Wind Energy Association, PPM is the fifth largest owner of wind energy installations and fourth largest purchaser of wholesale wind power in the U.S.

The contract is similar to the PPM High Winds project agreement approved by Council in November 2004, except that the energy is provided in monthly firm blocks and the facility will be owned and operated by PPM Energy. Northern California Power Agency (NCPA) will serve as the scheduling coordinator, managing the day-to-day balancing activities within the NCPA pool; verifying deliveries; monitoring supplier compliance with contractual obligations; and managing invoicing and payment. The remaining output of the Shiloh facility has been sold to Modesto Irrigation District (33% for 10 years) and PG&E (50% for 15 years).

A copy of the contract is attached and available to the public on file with the City Clerk. The key terms of the contract are as follows:

- **Term**: 15 years, with deliveries beginning between December 2005 and January 2007.
- **Quantity**: 16.66% share of the 100-150 MW rated capacity (16.7-25 MW) of the proposed Shiloh Wind Power project. CPAU’s share of the expected annual output is 50,000 to 75,000 MWh, or approximately 5-7% of Palo Alto’s annual electric retail load.
The contract includes a right to purchase the output from additions to the facility at a price set at the time, subject to Council approval.

- **Product:** The agreement includes monthly “firming” of the energy to facilitate more predictable energy deliveries. The energy is delivered in monthly firm flat blocks, which means that PPM will guarantee each day for the month ahead the energy deliveries for each hour, split into on-peak and off-peak hours. This month-ahead firming provides the ability for CPAU and NCPA to allocate other supply resources cost-effectively.

- **Price:** $62.95/MWh, for a total contract amount of $75 million ($5 million per year) based on estimated generation and firming energy requirements. The charges to Palo Alto will include an adjustment each month tied to the amount of firming energy required and a market price index to accomplish the firming obligations. The adjustment may be a charge (wind generated less than expected) or a credit (wind generated more than expected).

- **Credit Guarantees:** PacifiCorp Holdings, Inc. (PHI), is providing a corporate credit guarantee. The Shiloh I Wind Project is a subsidiary of PPM Energy, Inc. a subsidiary of PHI. PHI is currently rated A- (stable outlook) by Standard and Poor’s, and is a wholly owned subsidiary of Scottish Power. The contract includes provisions to provide collateral if needed in order to maintain adequate credit status during the course of the contract term.

- **Construction:** The project differs from the PPM High Winds agreement in that PPM will build, own, and operate the proposed Shiloh project. As the project has not yet been constructed, the agreement includes construction contingencies. These contingencies could result in a smaller project, a delayed project, or in some cases, no project at all. If the project is cancelled by Shiloh, Palo Alto retains a right to purchase the output should the project be resurrected and built within one year.

- **Off-Ramps:** Either party may terminate the contract if the other party does not meet its obligations under the contract, which include performance, payment, and adequate credit status. Should the contract be terminated due to default, any damages that may be incurred, such as wind energy replacement cost, are due only to the non-defaulting party. Palo Alto reserves to right to relinquish its share of the project output if the final installed capacity of the facility is less than 50 MW.

**RESOURCE IMPACT**
The estimated $5 million annual cost is included in the current Utilities Department budget, and will be included in future budget year proposals. Annual costs may fluctuate due to unpredictable nature of wind availability, but are expected to be within 5% of the estimated cost.
The 15-year fixed price of $62.95/MWh is about $3-5/MWh below the current forward price for base load electricity for the next four years, meaning that there could be a fairly modest short-term rate reduction of approximately -0.02¢/kWh. Electricity prices more than ten years in the future range from $65-75/MWh: at a market price of $70/MWh, long-term rates would be lower by approximately 0.05¢/kWh relative to buying the same quantity of energy from the electric market. The levelized long-term rate impact is minor, approximately 0.01 ¢/kWh favorable, based on a first year market price of $60/MWh and increasing at 2.0% per year. The contract facilitates meeting the Renewable Energy Supply Implementation Plan goals with a rate impact well below the ½¢/kWh limit recommended by the Finance Committee and approved by Council.

**POLICY IMPLICATIONS**

Investor-owned utilities have a legislated goal, referred to as the “RPS” for “Renewable Portfolio Standard”, of achieving 10% renewables by 2010 and 20% renewables by 2017, with “outs” if the cost is too high. The California Energy Commission and California Public Utilities Commission have adopted a more aggressive goal of 20% by 2010 and 33% by 2020, and the state legislature has made several attempts to adopt these same goals and make them apply to municipal utilities as well as investor-owned utilities. Although large hydroelectric generation is a renewable resource, it is not considered “eligible renewable” Approval of this agreement will accelerate achieving the renewable investment targets from 20% in 2015 closer to 2010, by bringing the projected total long-term renewable energy supply content to 14-20% by 2007 with an estimated retail rate impact between –0.1 and +0.2 ¢/kWh.

The proposed contract is a key element of the Utilities Renewable Energy Supply Implementation Plan (CMR:168:04), and supports the Council-approved Utilities Strategic Plan (CMR:432:02 and CMR:148:05) and the Utilities Strategic Implementation Plan (CMR:223:01).

Renewable energy supplies are required to meet the targets established by Council in LEAP Guideline #6 (Renewable Portfolio Investments) and also support LEAP Guideline #2 (Hydro Risk Management) and #3 (Market Risk Management) by diversifying Palo Alto’s resources and reduced dependence on supplies from the electricity market. Approval of this agreement will accelerate achieving the renewable investment targets from 2015 closer to 2010.

- **LEAP Guideline #6: Renewable Portfolio Investments**: The City shall continue to offer a renewable resource-based retail rate for all customers who want to voluntarily select an increased content of renewable energy. In addition to the voluntary program, the City shall invest in new renewable resources to meet the City’s sustainability goals while ensuring that the retail rate impact does not exceed 0.5¢/kWh on average. Pursue a target level of new renewable purchases of 10% of the expected portfolio load by 2008 and move to a 20% target by 2015, contingent on economic viability. The contracts for investment in renewable resources are not to exceed 30 years in term.
Implementing LEAP Renewable Portfolio Investments also supports City’s Sustainability Policy Statement, adopted April 2, 2001 (CMR 175:01), the Green Government Pledge, adopted July 19, 1999 (CMR 284:99) and elements of the Comprehensive Plan, specifically:

1. **GOAL N-9:** A clean, efficient, competitively-priced energy supply that makes use of cost-effective renewable resources, and Policies
2. **POLICY N-44:** Maintain Palo Alto’s long-term supply of electricity and natural gas while addressing environmental and economic concerns.
3. **POLICY N-48:** Encourage the appropriate use of alternative energy technologies.

**ENVIRONMENTAL REVIEW**
Execution of the Agreement does not constitute a project for the purposes of the California Environmental Quality Act (CEQA). Solano County is the lead agency for the Shiloh wind generation facility, but the City is not a responsible agency, because it currently lacks any responsibility for carrying out or approving the construction of the facility.

**ATTACHMENTS**

A: Resolution approving the long-term power purchase agreement (Shiloh Wind Power Project) with Shiloh I Wind Project LLC for the purchase of electrical power.

B: Long-term power purchase agreement (Shiloh Wind Power Project) made between Shiloh I Wind Project LLC, as Seller and the City of Palo Alto, as Purchaser. Attachment B is included as an attachment in Council member packets and available for review by the public in the City Clerk’s Office.

**PREPARED BY:**

KARL E. KNAPP
Senior Resource Planner

**DEPARTMENT HEAD:**

JOHN ULRICH
Director of Utilities

**CITY MANAGER APPROVAL:**

EMILY HARRISON
Assistant City Manager