



To: City of Portsmouth Council Members  
From: Ameresco  
CC: City of Portsmouth Energy Committee  
Date: November 3, 2006  
Re: Response to questions dated 10-23-06 from Bob Mollette 3<sup>rd</sup> Ward councilman

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1. All Pages indicate "Page content is subject to Confidentiality Restrictions." Please explain; I believe this entire document is a public record.

**It is understood that all paperwork and documents pertaining to a municipality are subject to public record. Our indication of proprietary and confidentiality are subject to the intellectual property of AMERESCO, Inc. Our specific preliminary work associated with developing our recommendations to the City, we ask that this material not be shared with other organizations inside the energy industry for their potential profit and gain.**

2. A question concerning the involvement of local labor was expressed by a citizen at the October 9, 2006 Regular City Council Meeting. Please characterize.

**Ameresco prides itself in working with communities across the country to manage conservation and renewal and to enlist the efforts of local contractors and local labor to accomplish the goal. Each contractor must meet Ameresco's standards for quality, insurance and bonding capabilities. Ameresco intends to maximize local involvement. By Ohio statute, this project will be a common wage project and Ameresco will make every attempt to utilize local union labor. Note: Portsmouth union labor was utilized when implementing the City of Gallipolis project by Ameresco as it was the closest hall to the city.**

3. Page 3; it would be helpful if an *estimated* cost breakdown for *each* energy conservation *project* was provided. The program investment was proposed at \$8.5 million for measures #1 through #6 and was increased to \$12 million with addition of projects A1, A2, and A3. These estimated project costs should be defined to provide Council the ability to assure the cost of these improvements will not be burdensome for our utility users or taxpayers.

ECM	Description	Investment
1	Water Meters	\$7,000,000.00
2	lighting	\$470,000.00
3	HVAC	\$100,000.00
4	Domestic H2O	\$30,000.00
5	Water Filtration plant	\$750,000.00
6	Waste Water Treatment Plant	\$ 750,000.00
A1	Sewer Line Extention	\$650,000.00
A2	ultraviolet	\$650,000.00
A3	Adelphia Bldg.	\$1,600,000.00
	<b>Total preliminary Budget</b>	<b>\$12,000,000</b>

Please note that the attached pricing breakdown is preliminary and budgetary. Firm fixed pricing for measures will be a result of the next step in the process: Letter of Intent phase (LOI).

**4. ECM 1: Water Meter Replacement Program;** I agree, the automated water meter reading ability to be an advantage as stated in Letter #05-015 dated November 17, 2005 (posted [www.mollette.info](http://www.mollette.info) Letters page) to the Mayor in which an existing water plant in Lucasville, Ohio (Water1) informed their workforce installed their new system in phases. Is this an option for our City workforce?

Based on committee discussion it was determined that current City manpower is not adequate for a project of this magnitude and timeframe. According to the water departments current annual install pace, on a like for like basis, would take more than 15 years to replace all of the Cities water meters. The current installations are a combination of replacement of old meters that have gone bad, new meters for new homes, homes that have transitioned from vacant to non vacant, replacement of stolen meters etc. This would include any commercial meters that were replaced or added as well. In addition, by implementing this measure in a comprehensive approach, the City will capture the savings and enhanced revenues upfront, which will assist in offsetting the investment. Implementing this project in a comprehensive and accelerated manner, protects the city budgets from the price inflation on material and labor that will occur over time.

Waterworks 2006 CIP Budget includes \$50,000 for meter upgrades and \$12,333 for Water System Improvement Contingency. The meters upgrades are installed by our workforce. During the 2006 CIP Budget the purchase of the new radio frequency water meters was requested but it was stated the new technology was not cost effective yet; has the market improved?

Is it possible to group areas within the City, due to the close proximity, to reduce the amount of locations for reception of the water meter signals; will this be considered?

This question applies to the installation of a "fixed-base" remote-reading system in which the water meters transmit data via a signal to repeater stations and base stations. The data is then collected and forwarded directly to a computer workstation in the utilities department office. This technology is proven and has been implemented successfully in numerous Cities across the country. Ameresco has evaluated other Ohio River towns for a possible fixed-based system. Our experience has shown us that this region can present some challenges for the technology due to the terrain. Therefore, to implement a "fixed-base" system an extensive propagation study will need to be completed. In the current proposal, Ameresco included a "drive-by" system where the meter reader uses a vehicle receiver unit to read the data signals from the water meters and downloads the information into the central computer system. During the letter of Intent phase, the detailed propagation study will be completed. Ameresco will work with the City to determine the most cost-effective approach.

The estimated values for the Enhanced Water Revenue @ \$323,354; Enhanced Sewer Revenues @ \$170,129, and Operational Savings @ \$119,7224 with a total \$613,207 *annually*... what is the total estimated program investment and will payment for the project be included in the Enterprise Fund or Capital Improvement Fund?

**Please see Answer to Question # 3. Payment for this investment can come from either fund and Ameresco will work with council and the Auditor's office to determine the best and most effective source for repayment. However, the additional revenues associated with this measure will be captured through the enterprise fund.**

Please elaborate on the expected maintenance for the radio frequency meters?

**In a "drive-by" approach, no maintenance is required for the water meter transmitters or vehicle transceiver unit. Occasional software upgrades may be required for the laptop computer that works with the vehicle transceiver, otherwise no regular maintenance is necessary. All required maintenance for a "fixed-base" system will be included in the cost/benefit analysis performed during the Letter of intent phase.**

**5. ECM 2: Lighting Retrofit - City Facilities and Traffic Signals; I agree, the City has a good opportunity to save energy through a lighting system upgrade.**

Does our workforce have the time and ability to retrofit and upgrade our systems?

**After discussions with the committee it was determined that the current City staff was not adequate to implement this lighting project. Ameresco would implement an accelerated pace to the installation completing the project in a matter of months. This accelerated pace allows the city to capture the energy savings immediately, and implement the project at current construction costs protecting the City's budget's from price inflation.**

Is it more economical to replace fixtures instead of retrofitting existing fixtures?

**During the LOI phase Ameresco will perform this cost benefit analysis. It is common for similar projects to have a combination of retrofit and replacements based on what is most economical to the City.**

How many City-owned Traffic Lights exist?

**Ameresco's proposal is based upon 57 intersections in which the traffic signals are City owned.**

Council passed an Ordinance this year to expend \$23,000 in matching ODOT funds to replace incandescent lamps with LED lamps. What is the estimated project investment and is it possible to complete in phases? The annual estimated cost savings is \$59,014.

**Ameresco's proposed lighting retrofit includes city-owned interior and exterior lighting fixtures in addition to City -owned traffic signals. The total energy savings includes this entire scope. Ameresco's proposal does not include cost or savings for the retrofit of the traffic signals that are part of the ODOT project (along Routes 23 and 52).**

**6. ECM 3: HVAC Upgrades - City Facilities; I agree, these improvements are necessary to be efficient and provide a safe working environment.**

**Many times HVAC upgrades are not implemented for energy savings reasons alone. Ameresco conducted preliminary life cycle costing and operational life expectance analysis to create this proposal. A real benefit captured by the City in implementing this measure, is the protection of the City's budgets from emergency repairs and replacements that will occur over the next 10 years on this identified scope of work. The equipment in this measure are all past their useful life and in poor condition.**

**Water Booster Stations; the replacement of the damaged glass window to avoid vandalism and freeze protection should be completed now to maintain the Facility?**

**Ameresco uncovered the broken glass during our proposal evaluation stage and included its repair as part of our comprehensive approach. Because there is no direct effect on energy savings with this repair, it could be performed immediately and outside this project if the City chooses. Given the location the risk of vandalism may not be high and the City has already installed electric strip heaters to provide freeze protection. Ameresco is proposing a more permanent solution.**

**11th Street existing IR heater documents a safety concern which should be corrected before heater is returned to use or monitoring equipment installed to advise employees of hidden hazards.**

**Because the occupancy of this facility is relatively low, the facility condition is not a high-risk situation for the City. However, it does need to be corrected and Ameresco included it as part of our comprehensive solution.**

17th Street Fire Station; the 2005 CIP Budget included \$15,000 for Hilltop carpet, concrete, gutters/roof, and lights. It would be helpful if the Mayor supplied previously requested five year plans for City Fire Stations to determine proper maintenance of our facilities. 2006 CIP Budget included improvements for the Sciotoville Fire Station of \$10,000 for door replacement, \$24,000 roof replacement, \$9,500 kitchen /office renovation. It was rumored during CIP Budget discussion that the Sciotoville Fire Station may need to be considered for replacement.

The total estimated energy savings for HVAC upgrades are \$12,271; what is the estimated project investment for this ECM?

**Please see Answer to Question # 3.**

**7. ECM 4: Domestic Water Retrofit - City Facilities; what is the estimated cost of this ECM with an estimated savings of \$1,456 annually?**

**Please see Answer to Question # 3. This is a measure of conservation and being prudent with resources. As the City's costs rise over time this measure increases in value as the fixtures, faucets and aerators replaced have long life expectancies. Based on that importance we included this measure, which fits within the cash flow. As we move through the LOI Ameresco will conduct a final cost/benefit analysis and work with the committee and council to determine if this measure should be part of the final project.**

**8. ECM 5: Water Filtration Plant Improvements; what is the estimated cost of this ECM with an estimated savings of \$6,512 annually?**

**Please see Answer to Question # 3.**

**Are their advantages to replacing motors with variable speed motors as failures occur?**

**Ameresco will install the variable frequency drives on the existing motors. Waiting until motor failure would have no benefit to the city and would slow down the capture of the energy savings associated with this installation.**

What is the estimated cost of the improvements to the SCADA System?

**This measure is included as an opportunity for the Water Filtration Plant and is a measure requested by the plant personnel. This complex system impacts the specific operation of the facility. During the LOI phase, Ameresco will work with the plant's personnel to develop a detailed scope and conduct a cost-benefit analysis to determine whether it should be added to the project. We have found it most successful to have the plant operators involved in this detailed design. There is NO firm budgeted dollars for this specific measure in the proposal. Ameresco budgeted \$750,000 for the water filtration plant's potential measures as numerous energy conservation measures have possibility of inclusion and all require extensive evaluation during the letter of intent phase.**

**9. ECM 6: Wastewater Treatment Plant Improvements; what is the estimated cost of this ECM proposed improvements (page 3 and 4)?**

**Please see Answer to Question # 3.**

**Elaborate service provided associated with the Sewer System Evaluation (I & I Study) for Sciotoville separated sewer system?**

**Ameresco has included I&I studies in similar projects across the country. A sewer system Inflow and Infiltration (I&I) analysis examines the conditions in a separated sewer system. This applies to the Sciotoville area of Portsmouth where there are both sanitary and storm sewer systems. The study will use smoke testing, dye testing, and CCTV camera work to evaluate the condition of the sanitary sewer and identify defects that allow storm water to enter the sanitary system. The benefit of correcting these defects will be reduced inflow to the wastewater treatment plant and the resulting treatment costs, as well as reduced overflow, or bypass of the sanitary sewer during periods of high rain, which is heavily scrutinized by the Environmental Protection Agency.**

**An I&I study was included in the proposal as a potential measure, NO firm costs or resulting savings are included in the proposal. During the LOI phase, a cost-benefit analysis will be performed in order to determine whether it should be added to the project scope. In our answer to question # 3, Ameresco included a budgeted amount for potential measures at the wastewater facility as there are numerous energy conservation measures with possibility of inclusion in the final project all requiring extensive evaluation during the letter of intent phase.**

If the Letter of Intent was signed by the City is it be obligated to complete the documented potential projects listed on page 4?

**The City does not have an obligation to implement each facility measure proposed. The final agreement between Ameresco and the City (the Energy Services Agreement) is the result of the Letter of Intent phase engineering and analysis. There will be numerous opportunities for feedback and input by City Officials during this process. The only time the City would pay the \$250,000 LOI fee is if the City elected not to implement any of these proposed projects with Ameresco where the engineering and development costs could not be recovered as part of the project.**

**10. ECM A1: Adelpia Building Renovation; explain the role to “to facilitate design meetings with architect” and “developing a complete architectural package.”**

**Ameresco will manage all of the design meetings with the architect and city personnel. We will work in conjunction with our selected architect to understand the city’s desires and the required design parameters for the new police station/emergency management center. At the same time, we will work with the architect in order to eliminate unnecessary costs from the project and present value engineering.**

**Ameresco will manage the entire construction project, utilizing the Architect selected to develop specific specifications (for general trades work) and the architectural plans necessary for final permits.**

What are the advantages to using Ameresco for this ECM A1?

**Ameresco will utilize a design/build format that will reduce engineering and project development costs.**

**Ameresco will ensure that the project design maximizes energy efficiency while remaining cost-effective.**

**By procuring in this manner, the City of Portsmouth will know its cost for construction up front and Ameresco will assume the construction risk for this measure. This protects the City’s budgets from cost overruns and provides single source accountability for this entire program.**

**What is the estimated cost for this ECM? Will the City be obligated to adopt if the Letter of Intent is approved?**

**Please see Answer to Question # 3. Please refer to Question 9 answer regarding letter of intent cost recovery.**

**11. ECM A2: Ultraviolet Disinfection at Main Wastewater Treatment Plant; what is the estimated cost for this ECM and has the Director of Wastewater requested this improvement? Please see attachment A. Will the City be obligated to adopt this project if the Letter of Intent is approved?**

**Please see Answer to Question #3.**

**12. ECM A3: Martha's Alley Lift Station Sewer Extension; I agree, gravity is always better than pumping; what is the estimated investment for this ECM?**

**Please see Answer to Question # 3.**

**Will the City be obligated to adopt this project if the Letter of Intent is approved?**

**Please refer to answer for question 9.**