



Minutes City Council's Community Sustainability Technology Sustainability Sub-Committee June 12, 2009

Minutes of the meeting of Friday, June 12, 2009, 8:00 a.m., in the 3rd Floor Conference Room, Tempe City Hall, 31 E. 5th Street, Tempe, Arizona.

Sub-Committee Members Present:

Vice Mayor Shana Ellis

City Staff Present:

Carol Clark, ITD

Lisa Collins, Deputy Development Services Manager and Committee Liaison

Travis Dray, Dep Mgr, Recreation

Tom Duensing, Financial Svcs

Kathy Gasperich, Comm Rel

Mary Helen Giustizia, Solid Waste Svcs Dir

Andy Goh, City Engineer

Michael Greene, Procurement Adm

Connie Krossschell, City Clerk's Office

Jeff Kulaga, Asst City Mgr

Lisa Lathrop, Administrative Asst. II/City of Tempe

David McNeil, Water Utilities

Tarja Nummela, Customer Svcs

John Osgood, Dep Pub Wrks Mgr

Mark Vinson, Principal Architect/City of Tempe

Guests Present:

Jason Bethke, Global Water

Greg Pitz, Legos Solar

Ted Ritter, VP, IFMA

Denise van den Bossche

Vice Mayor Ellis called the meeting to order at 8:10 a.m.

Agenda Item 1 – Approval of Meeting Minutes: April 17, 2009

The minutes of April 17, 2009, were accepted.

Agenda Item 2 – Public Appearances/Call to the Public

None.

Agenda Item 3 – Solar Demonstration Request for Information – David McNeil

Michael Greene summarized that a Request for Information was published to a list of solar providers to gauge interest regarding a partnership/demonstration project for solar capabilities and interest to expand that to offset energy costs for the buildings in the City complex. The RFI was issued to approximately 30 companies and additional companies may be added. The RFI is due on Monday, June 15th.

Lisa Collins added that this was discussed at the last meeting and the initial thought was that there may be companies that would like to do some solar demonstration projects to generate public relations, and the City would get the demonstrations and something to showcase sustainability for the community. The RFI will show whether an RFP is the next step.

David McNeil added that he and Chris Salomone met with APS earlier this week to assess their interest. APS is trying to target residential distributed energy and their service area in Tempe is primarily commercial. After discussing potential, they expressed interest. They have money available through their business partnership programs that can be distributed to various demonstration projects and the City is now on that list.

John Osgood added that grants for stimulus money are available through the American Recovery and Reinvestment Act. One of those grants is the Energy Efficiency and Conservation Block Grant (EECBG) and Tempe has about \$1.87M allocated for that purpose. There are specific requirements, however. The solar project fits into it because one of the categories is onsite renewable technologies. Currently, \$50K is allocated for that type of demonstration. The energy efficiency program has a main goal of getting the best value for the money into projects that could immediately begin to save energy. This project may not be aimed at immediate reduction in energy, but it might be. It would provide seed money to do some good things.

Agenda Item 4 – Automatic Meter Reading – Lessons Learned During Two Fixed Network Deployments

Jason Bethke, Global Water, provided a PowerPoint presentation outlining things that they have done with their utilities and why they are working toward automatic meter reading.

- This process was begun about 5 years ago in all of their utilities and they currently have no meter readers.
- Global Water currently owns 16 private water/wastewater/recycled water companies in Arizona, with about 80 people headquartered in Phoenix, with a service planning area encompassing about 500 sq. miles and 1.2M homes.
- The company is totally focused on water management and use of recycled water in those growing areas.
- They strive to pay close attention to scarcity management since this country has severe shortages.
- Population growth vs. total potential supply show the lines crossing in 2040.
- Water is a single resource (water, wastewater, recycled water) and it is important to focus on regional planning and automation to drive efficiencies.
- Education is a critical part.
- There has been a good focus in the state over the past twenty or thirty years on supply site activities to maximize the available water.
- Focus needs to move to the demand site principles—how much are we using and how to effectively change that to drive down consumption.
 - Standard consumption is about .4 acre/feet of water per home annually. Of that, .168 acre/feet goes to inside the home.
 - Global Water deploys advanced water recycling so all of that water comes back and is used to offset other demands. All of the .168 acre/feet comes back into the equation, so only .2 acre/feet is pumped.
 - This model is proven in the City of Maricopa, and it saves a lot of water.
 - Goal is to reach .2 acre/feet, which is essentially 5 homes per acre/foot of water.
- Why Automatic Meter Reading was deployed
 - To practice the demand site principles
 - To generate more timely and accurate data

- To improve customer service levels
- Manual meter-reading was a frustrating operation. Cost was increasing faster than revenue base.
- Automation of meter reading
 - Manual reading – every meter is read every month with handwritten data.
 - Touch release – touch the meter with a wand and an electronic reader on the box provides the readout.
 - Drive by – radios inside the meters talk to the truck and allows lower labor, but still uses gasoline.
 - Automatic meter reading – towers are installed in the community and the radios talk to those fixed collectors.
- Advantages of automatic meter reading
 - Instead of one read per month, generates 180 reads from each meter.
 - Green transfer of data, green bill, green remittance, and green reports.
 - 40,000 meters with one-half person running the program.
 - Customer service tool to show “odd usage” trends.
 - Information is available on the web.
- Benefits of integrating a totally green bill
 - Saves time
 - Saves money
 - Saves the environment
 - Uses less water
- Deployments
 - Santa Cruz (serves the City of Maricopa)
 - 16,000 connections
 - High frequency radios run a 224 GHz frequency (same as wireless for computers)
 - 12 towers - required purchase of a mobile unit to drive to inaccessible areas.
 - Lesson learned: Radio propagation is an important function and it needs to be tested.
 - Valencia
 - Complete change of technology
 - 6,000 connections, 12 sq. miles
 - changed from high frequency to a very low frequency.
 - 7 collectors on top of ground storage tanks
 - Lessons learned: Technology matters. 100% efficiency is necessary, project management of field deployment is critical, annual audit and meter box maintenance program.
- For Global Water, this is sustainability through technology foundation which goes to utility optimization. Over the last year, power costs have been decreased from 10% to 20%, despite rate increases. They have focused on asset management and green billing.

Vice Mayor Ellis noted that the City attempted automatic meters about 8 to 9 years ago.

Tom Duensing explained that technology was not there and it was pulled. The City does continue to look at it. The City has 42,000 accounts. Tempe is landlocked so the service mass isn't huge. The City is currently conducting a meter replacement program and the meters are able to be retrofitted with AMR devices. Our current push is to get old meters out of the ground with an eye on AMR in the future.

Tarja Nummela added that the biggest issue is how to justify the cost.

Mr. Duensing added that the bottom line is justification of the cost. The one benefit is good customer service, and the City is always considering this.

Vice Mayor Ellis asked for a cost per household.

Mr. Bethke responded that they are also experiencing the cessation of growth. They developed a financing program with municipal bond rate financing, so the last proposals have been about \$6 per bill per month on a 10-year ownership (a municipal lease purchase). That includes all of the GIS, billing systems, conversion, etc.

Vice Mayor Ellis stated that the City might not be able to look at the infrastructure piece at this time, but she asked about the green piece.

Ms. Nummela responded that an RFP was issued for a replacement of the utility billing system to provide additional services. There are two finalists. The decision-making process is ongoing, with hopes for Fall 2010 as a target date. Customers will be able to view their bill, make payments, receive consumption history, and maybe eventually provide turn-on and turn-off services.

Mr. Bethke added that Global Water prefers the E-care system. They have also tied in the IVR system (automated phone system), so it makes all the calls concerning late payments.

Vice Mayor Ellis asked Mr. Bethke to return to the committee with customer response data.

Agenda Item 5 – City of Tempe Green Waste Diversion/Composting Program

John Osgood summarized that about 18 months ago, an RFP was issued for the disposal program. One element was green waste, but no interest was generated from the traditional waste management companies. The former program was to take green waste to the landfill and some was composted but a good portion was landfilled. The focus changed from simply saving landfill cost to turning a waste into a product that can be used in the community. Staff has been working with Ken Singh of Ken Singh farms and has been developing a pilot program to take Tempe's waste, turn it into a high quality compost material that can return to the community. There has been multi-department involvement. Parks and Recreation is already using the material on the playing fields in the parks. The benefits are less water, less chemicals, less fertilizer and a higher quality grass. The Water Utilities Department spends a lot of time and money disposing of sludge from the South Water Treatment Plant. Public Works and the Rio Salado office have also generated ideas.

He outlined the next steps.

- When the landscape maintenance is done in the parks, a clean green waste is generated.
- Work with the neighborhood associations and identify areas where residents would be willing to prepare their green waste. It will be taken to Ken Singh farms where it will be turned into a product.
- Eventually, this may be done onsite with the potential grants and potential landfill savings.
- Staff believes it can work with existing resources.

Mary Helen Giustizia summarized the sludge issues.

- The first sludge was taken to Ken Singh Farms about three weeks ago where it was incorporated into green waste.
- It is creating a nutrient-rich material and looks promising and could be incorporated into the City's green waste program.
- Potentially, demonstration gardens could be done and if enough material is generated through this program, a new revenue stream could be created by selling it to buyers in the community.
- The program has huge potential.
- Norm Clark at the Water Utilities Department is a master gardener has been initially involved with the program.

She continued that there has been a growing interest in growing organic and green waste diversion away from the landfill and into recycling. Interest has been expressed in having the City compost food waste. There are many

materials in food waste that are compostable, but there are some (such as meat waste) that is not compostable. Eventually, once the basics of the essential compost and green waste diversion program are settled, the next step would be to incorporate manure produced by the horse properties and also food waste. Staff would like to work with restaurants that would be willing to meet very specific criteria for separating what is compostable and what is not before we roll it out into the general population. There is also potential to combine it with the grease collection program.

Ramon Saiz stated that the benefits of the compost are that it is chemical-free, and Mr. Singh has learned to use natural resources to prevent disease and pests. Other benefits are better air quality, filtration of ground water, and erosion control in drought seasons. It also helps in water conservation and combats the heat island effect.

Ms. Giustizia added that the public can come to Mr. Singh's farm on Saturdays to buy organic produce. The farm is located at the 101 and Thomas. Staff is working on changing the ordinance to clearly identify what can be composted.

Vice Mayor Ellis added that over 50% of garbage could be compostable.

Agenda Item 6 – Future Agenda Items

- Update on RFI (Michael Greene)
- Using IDA bonds to finance solar
- Stimulus funding for solar (John Osgood)
- ERIC Update (Mary Helen Giustizia)

Agenda Item 7 - Future Meeting Dates

The next meeting will be scheduled for August 14, 2009, at 8:00 a.m.

Agenda Item 8 – Announcements

None.

Meeting adjourned at 9:05 a.m.

Prepared by: Connie Krosschell
Reviewed by: Lisa Collins

Jan Hort, City Clerk