

Streetlights Working Group

September 20, 2010

Meeting Highlights- DRAFT

Attendance: Shahid Abbas, Arlington County; J. Davis, Greenbelt; Bob Grow, BOT; Lee Ingram, Prince George's County; Jennifer Langfield, MDE; Walt Seedlock, MWAA; Luke Wisniewski, MDE; Alan Proctor, Petitioner; Tim Reichert, VeriGreen

On Conference Call: Graham Cecil, Dominion ; Susan Hafeli, Fairfax County; Allen Hedgepeth, Prince William County; Kanti Srikanth, VDOT- NOVA

MWCOG Staff: Joan Rohlfs, Jeff King, Maia Davis, Jeannine Altavilla

1. Call to Order, Introductions: Chair J. Davis, Mayor of Greenbelt

- Meeting called to order at 10am.

2. Review of Meeting Summary from July Meeting; Amendments to Agenda: Chair Davis and Jeff King, Principal Environmental Planner, COG/DEP

- Luke Wisniewski mentioned twice in July attendance, remove one mention. Minutes approved with no further changes.

3. Update from Arlington County- Street Light Initiative: Shahid Abbas, Arlington County

- Arlington initially began a trial program. Some of the lights were free and some were purchased. These lights are still in operation.
 - During trial Arlington examined the price-life cost
- Lights come from Relume in Oxford, Michigan that will enable the use of smart technology, with remote controlling capabilities. They were the only company with this feature.
- Lights get 86 lumens per light, the others tested were around 50 lumens per light
- Lights meet Dark Sky compliance- no horizontal or vertical loss of light. The lights receive 2 and 3 on a 1 to 5 scale. 3 is ideal, the higher ratings have more glare.
- Lights have a 7 year warranty with 100% replacement in case of failure, through Relume
Calculated 6 year payback
- Good climate here for LEDs with the average evening temperature at 70 degrees
 - Calculations show that these lamps will have a 45 year life
- Hoping to save \$2.5 million in electricity charges to reduce 70-80% of use. Comfortable saying that we will see 60% savings in electricity cost.
 - Over \$500,000 saved last year with only 10% of lights changed
 - Arlington owns 4,700 lights- 40% will be LEDs by the end of 2010
 - Arlington will maintain the lights
 - Expect to save 20% in maintenance costs with the LED lights
- Shortlisted a cobra light. It is designed by a Montreal company but produced in the USA

- Dominion pilot used first generation lights which get 50 lumens, 2 year warranty and cost \$900
- Next step is to work with Dominion for Arlington to pay conversion fee in their bill, currently disagree on the light. May try to buy to have County operate, but can Arlington use the poles?
- Will put \$500,000 more annually towards conversion, in 5 years all lights will be LEDs.
- Used \$1 million so far from County and ARRA funds
- Greater than 80% of the traffic lights are LEDS, 100% by the end of 2010
- (J. Davis) Can you produce a chart comparing the LEDs that you tried?
 - Yes, we have it. The most important number is the cost. \$549 per light, with the next closest being \$800. Arlington has installed the \$549 light in its existing fixtures.
 - Please send to Jeff.
- (Shahid) Caltron was the first to use LEDs. Now Caltron is asking for specifications from Arlington. Some fixtures don't work with this light.
- (Lee Ingram) Pepco typical charge to install is \$500 per light.
- (Tim Reichert)- Are the lights varying wattage?
 - All are 69 W with 81 lumens per watt. The cobras are 79-80 W with 88 lumens per watt.
- (Shahid) The lights are a white/blue color. The only drawback is the added brightness perception. Most of our time is spent in yellow light.
- (Alan Proctor) DOE and PGE study shows that most people don't notice the difference in white v. yellow light. Those who did notice liked the LEDs. MV is blue and is not as much of an issue.
- (Shahid) Hopes IES changes lumen standards. Arlington uses .7 lumens as a standard, lower than IES standard of 1.7 lumens. Convinced VDOT to accept.
- (J. Davis) What about the backlight, uplight, and glare (BUG) ratings?
 - Relume provided these.
- (Bob Grow) Control Technology?
 - We have the technology and will use it once everything is installed. It requires a wireless network, which is expensive. Arlington is changing to fiber optics, so when public safety switches their system, we will use their current wireless system. The lights all have the chip. Relume could also pre-program a timer into the lights through the manufacturing company if there wasn't a wireless network, at no extra cost.

4. Status Report from Dominion: Graham Cecil, Dominion

- Pilots started last year
 - 60 fixtures from 10 manufacturers in operation in Purcellville, Charlottesville, Fairfax County and Newport News
 - Looking to Prince William, Loudoun County, and Alexandria for further testing of 82 units
- LED performance is verified, with a good potential for roads. It is still too early to tell reliability, but it looks good so far.
- Dominion has negotiated with VEPGA and the rate is under discussion now.
 - LEDs may be available through Dominion by the end of the year.
- Manufacturer is coming out with second generation products that increase consistency
- Dominion has found limited decorative options

- Higher watt fixtures are not readily available, but the manufacturer is considering 250-400 watt replacements that may be available by the end of the year
- (Allen Hedgepeth) What is different in the second generation models?
 - The original product array design is rearranged or the housing and heat sync are utility-friendly with sturdier designs.
- (Bob) Is Dominion using Relume?
 - No, not yet. Their second generation product looks promising.
- (Kanti Srikanth) What is your schedule for certifying products?
 - Dominion is testing for internal purposes, but will probably offer 1 or 2 models that meet regulations.
- (J. Davis) When will the report be completed?
 - Dominion has some data now and is finishing some reports. Total data and reports are expected July 2011.
- (Bob) What are the initial savings?
 - LEDs that replaced MV and HPS are seeing greater than 20%, many 30-50% savings.

5. Discussion of Maryland PSC Case 9217- Petitions to Intervene/Street Light Issue: Alan Proctor, Petitioner

- Resident of the town of Somerset, member of the Somerset town government since 2002
- There are 37,000 street lights in Montgomery County and 170 in Somerset
- Somerset is trying to skip transitioning from mercury vapor (MV) to high pressure sodium (HPS) and upgrade straight to LEDs
- The town is part of the Pepco pilot: 2 manufacturers' lights; people are generally pleased; a "glare" is noticeable, however, people don't notice the glare when driving
- Personally filed a complaint with the Maryland Public Service Commission (MD PSC) in October of 2009 focused on incomplete information Pepco was providing about purchasing the lights:
 - Under Maryland law municipalities have a right to purchase their street lights
 - 2 years ago Pepco quoted \$2,300 per fixture for the town to purchase the lights
 - When approached again Pepco quoted a removal charge of \$470 per fixture, which is the same price as buying new MV fixtures. This doubles the cost of any town initiative, making it financially less attractive
 - Pepco responded that the complaint was inappropriate and out of the PSC realm
- Pepco then submitted a rate increase case: MD PSC 9217
 - Filed a petition as a private customer, which Pepco opposed but the PSC allowed.
 - Testified as a private customer.
 - Installing HPS fixtures seems to be inconsistent with the state's policy of switching to efficient lights
 - There is an issue with how Pepco calculates fair market value (FMV) and how Pepco calculates maintenance costs.
 - Pepco cannot provide Somerset with an inventory of lights. It would cost the town \$50-100 per fixture for Pepco to inventory the town's lights in order to determine how expensive it would be to buy the lights from Pepco.

- There was a motion to bifurcate the case:
 - Phase 1 was anything not street lights and Pepco worked on the rate study
 - This phase finished at the end of July.
 - The PSC said that Pepco did not have a current rate study and could not justify the rate increase.
 - Pepco has appealed the PSC's decision.
 - Pepco must update their rate study by February 2011.
 - Phase 2 was street lights
 - Presents great opportunity to look at street lights in Maryland.
 - Parties must agree on a scope and process.
 - Would like to see Pepco fix removal charge.
 - Recommending to look at FMV calculation (which includes removal charge)
 - Arguing 60 year old lights have low FMV if they are being replaced anyway.
- Decoupling of generation and distribution for competitive sourcing has not been done with street lights. Pepco should show explicit electricity costs, rights to use of lamp poles. The poles were paid for by the public. Municipalities should have the right to look for fair costs.
- Pepco bid to upgrade to HPS would cost \$87,000. Somerset went to a contractor and received a quote of \$27,000 for the same switch; this is a big difference for the same product and services
- (J. Davis) Several jurisdictions are looking at purchasing lights. There is a continuous push back from the utility that the municipalities do not have the expertise to manage or maintain them.
- (Joan Rohlf) In a mailing from Constellation Energy there was an advertisement saying everyone is free to switch service to another provider?
 - Yes, the provider is decoupled for residents. It is not decoupled yet for towns or street lights.
 - (J. Davis) Clean Currents is another option. Since decoupling, options are arising but there has been no rate effect yet.
- (Tim Reichert) Generally a dozen suppliers exist in the region. There are ways to aggregate to meet minimum kilowatt hours. Electricity costs could decrease if municipalities pull together.
 - (J. Davis) Municipalities are prevented from aggregating due to barriers and obstacles.
- (Shahid) Distribution lines are owned by one company. There is a high charge for others to use them.
- (Shahid) Disposal of MV lights is also expensive because they contain mercury and PCBs.
- (Alan) Installation of new LED fixture is less than 20 minutes per fixture.

6. DOE Energy Efficiency and Conservation Block Grant (EECBG) Program Project Summary - including street lights & Revised Street Lights Survey Results: Jeannine Altavilla, COG Staff

- \$46 million was awarded to local jurisdictions and distributed to nearly ninety (90) projects. Local EECBG spending was 2.4% completed when data was reported to COG. Danger in continuing funding in future budgets due to slow spending, as reported in the Office of the Inspector General report released in August.
 - (J. Davis) The National League of Cities is concerned that there is a disconnect of understanding between the federal and local partners. There is a process that includes an RFP, bidding, and plan and design of the projects. This takes time.
- The street light survey was updated with data for Greenbelt and Rockville. There were no changes in the general breakdown of types of lights.
 - (J. Davis) Greenbelt has a low cost per light on the survey. The city uses the Baltimore Washington Corridor Chamber of Commerce Electricity Cooperative Purchasing Program, which gives a lower rate than directly contracting with Pepco. The rate lasts two or three years. Employees can use the same rate as the municipality or County. The City is asking if residents can use this rate, too. It's a gamble what rate is selected though at the end of the process though.
- (Bob) Loudoun has a low number of street lights

7. Utility and Local Government Updates- conversion programs, ownership, pilots: All

- Prince George's County
 - Working with Pepco to be a location for an LED pilot. A location will be selected within the next month using 3 vendors.
- MWCOG
 - (Joan) A draft letter is being considered by CEEPC at their meeting Wednesday to support continued funding for the EECBG program. Is it appropriate for CEEPC to send a letter to the President?
 - (J. Davis) Check with National League of Cities- Carolyn Berndt (berndt@nlc.org). She is the staff liaison to the Energy, Environment, and National Resources Steering Committee who handles federal legislation information.
- VeriGreen
 - Some technology has been excluded here. Induction lighting is not made in the USA. Now municipalities can use induction lights with EECBG funds. The lights can go below \$300 for retrofit. ARRA funds can be used.
- Airports Authority
 - Color balance is a challenge. LED lights are in elevator and traffic lights. Planning to use in the walkway tunnel; maintenance has been a big issue with blocking traffic and having LEDs would help alleviate these problems
- Board of Trade
 - Commend Arlington and Somerset for their flexibility to work through new technology. Municipality budgets can be a challenge. The money savings and greenhouse gas reductions are very valuable.
 - (J. Davis) Technology changes so fast. Think of cell phones. LEDs are now in their second generation.

- Arlington
 - Discussion of switching to jurisdiction maintenance. Big challenge to track and maintain. The county receives about 50 calls per day for the street lights. In anticipation Arlington has mapped all street lights in GIS. It helps streamline reporting issues to maintenance staff. It was an 8 month project.
- Prince William County
 - Starting LED conversion. Will receive lights within 2 weeks. Dominion will install them.
- Fairfax County
 - Nothing to report.
 - (Jeff King) Piezoelectric?
 - Because the DOE is asking for money to be spent quickly the money for this project has been reallocated. The county cannot control the speed at which Metro moves forward with its plans so we cannot move the project any faster.
- Greenbelt
 - Greenbelt is excited to be working with Maia Davis on the WE CAN campaign.
- (Bob) Remember to use things like this to demonstrate the green competitive advantage of the area. Documentation and ads in publications would be really beneficial for the region. New York, Chicago, and California are already taking credit for being green.
 - (Maia Davis) It is also a great way to show household savings and justify future money.
 - (J. Davis) Trend to have green mean save environment and saving money
- (Walt Seedlock) Who establishes the frequency of street light locations?
 - (Shahid) Lumens standard from ASHTO, FHWA or IES
 - (Bob) Some jurisdictions have shut off some lights to save money
 - (Shahid) Studies show that accidents and incidents are often related to a lack of consistent lighting. Eye adjustment between light and dark is an issue that can make situations dangerous.
 - (J. Davis) Safety is constituent driven; municipalities must create a balance between a safe environment and making it too bright

8. Other Business- All

- Send potential agenda items to Jeff
- (Jeff) Regional Greenhouse Gas Inventory Plan waiting for utility data to arrive
- Environmental finance committee will be looking at home retrofits and identifying new funding opportunities next Monday with a meeting at COG.
- (Lee) No street light funding?
 - The EECBG funding line has been removed from the President's proposed 2012 budget. The program existed prior to being funded, but it wasn't funded until the American Reinvestment and Recovery Act.

9. Set Next Meeting Date and Adjourn: Chair Davis, All

- November 15 (was subsequently cancelled). Next meeting is March 28. Will allow conference call option, but prefer face to face.