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**MWCOG Built Environment & Energy Advisory Committee (BEEAC)
Meeting Summary: May 15, 2014**

Attendance:

Joan Kelsch, Arlington County (Co-chair)

Jeffrey Bond, Prince George's County
Bill Topper, Military District of Washington
Rachel Healy, WMATA
Blaine Collison, Altenex
Jeannine Altavilla, Arlington County
William Marsh, Fairfax County
Sam Brooks, DC DGS
Lisa Orr, Frederick County (*conference call*)
Najib Salehi, Loudoun County (*conference call*)
Louisa Robles, City of Greenbelt (*conference call*)
Bill Eger, City of Alexandria (*conference call*)
Bill Updike, DDOE (*conference call*)

Staff:

Leah Boggs, COG DEP
Jeff King, COG DEP
Isabel Ricker, COG DEP
Steve Walz, COG DEP
Maia Davis, COG DEP

1. Call to Order: Joan Kelsch, Arlington County (Co-Chair)

2. WMATA Sustainability Plan: Rachel Healy, WMATA

WMATA contributes to regional sustainability just by the nature of its work

- Sustainability is a way to promote responsible savings of regional tax dollars
- Transit improves air quality by avoiding 260 tons of VOCs, 22 tons of PM, and 0.5 million tons of CO2 each year due to reduced auto use.
- Momentum strategic plan created a comprehensive & systematized approach to suitability, but has been part of good business practice for a long time
- Sustainability is not just about livability, also good fiscal stewardship
 - Hug taxpayer dollars savings potential

Current sustainability work:

- 100% of new track = 100% recycled steel
- Number of LEED buildings growing
- More efficient buses & cleaner fuels:
 - Fuel economy of buses has grown 30% in last 8 years

- Natural gas buses have 53% lower NOx, 85% lower TPM and 89% lower CO emissions that conventional diesel buses.
- Garage LED lighting contract
 - Will save WMATA \$1.5 million per year
 - Upgrades paid for out of savings (performance contract)

Scale of potential

- WMATA's annual utility bills: ~ \$36 million (fuel, power & CNG ~\$90 million/year) = ~126 million
 - If could achieve 1% savings, save over \$12 million per year!
 - If focus on energy, and reduce 15% by 2025, could save \$20 million per year

New sustainability initiative: www.wmata.com/sustainability

- Things WMATA can do today: energy star purchasing, green award, behavioral changes, etc.
- Long-term goals: TOD
- Sets targets that are both aggressive and achievable
 - First focus on regional impact, then on internal things

External Targets:

- 25% increased ridership by 2025
- Increased mode share (shifting away from cars)
- Increasing share within regional "transit sheds" (work on TOD: e.g. Brookland Station)
 - New TOD requirements in property transfers
- 10% increase in GHG displacement by 2025
 - Displacement is amount of GHG that you prevent from happening

Internal Targets:

- 50% reduction in GHG emissions per vehicle mile by 2025
- 15% reduction in energy use per vehicle by 2025
 - This is difficult, WMATA has already invested in more efficient buses
 - New steel metro vehicles are much safer, but are heavier than previous aluminum cars. They have tried to minimize the weight increase, but they are more fuel intense.
- Reduce water use per vehicle mile 20% by 2025
- 100% diversion rate (zero waste)
- Purchase or generate 30% electricity from renewable sources

Sustainability Lab

- Goal = push technology change in the industry
- Transit tends to be conservative, safety oriented and cautious, and to move as a block
- Pilot new technology to prove ROI and functionality so it can be adopted here and elsewhere

Discussion:

Jeff King: is WMATA pursuing electric buses?

- They have applied for federal funding to retrofit and test 10-5 current buses to electric
- Mid-life of buses is 7 years, retrofitting for electric gives the buses another 12 years
- Zero tailpipe emissions, less vibration, less noise, less smelly

Bill Topper: Are new Silver Line stations built for sustainability?

- The Silver Line station designs were done many years ago, and have not yet been transferred to WMATA
- If it makes financial sense, WMATA will likely retrofit the stations to make more energy efficient
- Working to incorporate sustainability more in the next phase of stations

3. Northern Virginia Greenhouse Gas Inventory: Steve Walz, COG DEP

Note: these are preliminary results, and have not been shared with the Alexandria City Council yet

NVRC got a request from NOVA localities to do a regional inventory

- Previous ones had used very different methodologies
- Wanted a common method, and across all localities to reduce cost
- Worked with COG to gather data and to create a template for a region-wide inventory

Used ICLEI Community Protocol for Accounting and Reporting of GHG emissions, V. 1, October 2012

- Does not assign all emissions from power plant to the locality where it is located, assign it to where the fuel is used
- Beta version of calculation tool for ICLEI (version 0.9) – future inventory should use final tool

Included in the inventory:

- On and off-road emissions were calculated using the same modeling used by Transportation sector so that it is comparable to other transportation models, e.g. TPB
- Air travel added into the methodology
 - Had been counted in COG 2005 baseline but not included in most localities inventories

Not included in the inventory:

- Emissions changes from land use
- Electric generation inside the locality
- Upstream emissions for goods and materials consumed
- Forestry practices

Data sources:

- Utility Sales data
- Statewide fuel data from EIA
- US DOT data on airline passenger miles per airport & COG data
- COG transportation data
- Water and wastewater data from localities and utilities
- Solid waste data from NVRC Annual Recycling Report

Preliminary Results for Alexandria

- Per capita GHG emissions decreased 12.5%
- Total emissions decreased 6%
- ¾ of decrease attributable to lower emission factor in SERC Virginia / Carolina Zone
 - Other factors: lower natural gas and electric consumption
- Includes wastewater related emissions

- Electric and mobile combustion are largest sources (mobile = 36%, electric = 47%)
- GHG emissions from school & transit bus together = 0.4%, passenger car + truck = ~ 50%
- See slides for more analysis: <http://www.mwcog.org/uploads/committee-documents/aV1YX1tX20140515121003.pdf>

Conclusions:

- Alexandria *did* meet NCR climate target for reducing emissions back to 2005 levels by 2012
- Includes emissions not covered in 2005 baseline: commercial air travel and wastewater treatment

Challenges:

- Choosing and understanding the protocol
 - Looked at methodologies used by other localities and GMU
- Data challenges
 - Proprietary data, not available data, not for locality scale, etc.
- Adjust 2005 data for comparison purposes

Discussion:

Bill Eger: Granularity and availability of appropriate data is always a challenge,

- Sharing information on how to conduct inventory in a more robust way would be very helpful
- Was difficult to get to a methodology that everyone was comfortable with
- The tools have been improved, ICLEI has developed a web platform: Clearpath
 - Assists in implementing the protocol
- Bill led the team that developed the built environment section of the protocol for ICLEI
 - Feedback and outcomes of this inventory will be very helpful to ICLEI
 - Need to catalogue this information and share it with them

4. Leveraging Renewable Energy for Cost Control, Risk Management, and Environmental Performance: Blaine Collison, Altenex

DC region has emerged as a national leader on clean energy issues

The stakeholders trying to understand the issues around renewable energy have a big information gap.

Corporate Drivers for Renewables:

- Cost
- Risk Management
- Differentiation
- Corporate Social Responsibility (this is nice, but NOT the main decision driver)

If you are not sourcing some part of your energy portfolio from long term renewables, that is the ultimate risky, un-hedged position.

- Many in the region are moving past REC purchasing to look at on-site renewables (DC, Montgomery, WMATA)

Altenex works on large utility scale projects, usually off-site, PPAs

- This is where companies encounter the most issues and complications – the portfolio of suppliers is fairly opaque
- Altenex role = bridge between end user to get renewable sourcing goal
 - Have a database of 2000 renewables projects (gathering info is a huge pain, time cost)
 - Help companies “Get to Yes”

There are over 500 nodes in PJM → it matters where you interconnect

Discussion:

Walz: PPAs have not been viable in VA because they are subject to the M&T tax. This may be changing due to legislation this year and last. How does Altenex see the solar market in Virginia?

- Altenex works mostly in the wholesale market, which is different
 - It may already make financial sense in some places, if high congestion prices (pricing varies across PJM)
 - It matters exactly where the project is located, need more granular data to determine
- Even though Dominion has very low prices, solar PPAs are being done at 4 and 5 cents/kWh, so it may be economical to do soon.
- Two GOC jurisdictions have RFPs out and have pricing of the applications coming in that are very pleasing. Prices are getting very close to parity.

Sam Brooks: DGS has tried to get away from focus on current day pricing and assumption that we could know what the future energy price for the next 20 years.

- For DGS, the hedge value is the driver. But it is a very long term play, so due diligence is key.

5. Regional Energy Infrastructure: Steve Walz, COG DEP

COG Board priority this year is the region’s infrastructure, yesterday was the meeting on energy infrastructure.

- Focus on what was out there and what improvements need to be made, and the cost
- Panel with Pepco, Dominion, Washington Gas and National Regulation Research Institute (research arm of NARUC)
- Audience: elected officials and others on COG board.

Recognized the various types of infrastructure: electricity and natural gas, petroleum and other liquid fuels, barge and rail transit

3 new Natural Gas plants in the works in the region

- Yesterday SCC issued certificate for Panda plant outside of Leesburg

There are a lot of sunk costs in infrastructure: \$10.2 billion

- Big investments planned: \$4+ billion over next 5 years
- All utilities have plans for increased reliability

Washington Gas: \$650 million over 5 years for upgrades, and \$536 for new customers & expanding service territory

Challenges:

- Interdependencies between water, energy, transportation infrastructure
- Distributed energy, intermittent resources
- Resilience to climate change, other risks
- Cost of replacing old steel transmission towers that are nearing the end of their engineering life – has not yet been factored into investment plans
- Aging workforce, talent pipeline
- Changing regulations and business paradigms

Outcomes:

- Utilities value good relations with local governments
- Speakers all recommended that the elected officials get voices in front of commissions, they can and should be an active influence in these decisions

Discussion:

Sam Brooks: how does this fit in with the Exelon acquisition of Pepco?

- Sam moving from DGS to be a consultant for DC on this transaction
- Pepco is DC's only monopoly
 - City is going to seek commitments to improve reliability and decarbonize the supply

Exelon acquisition bid:

- Pepco is committed to the undergrounding and other reliability investment plans
 - Pepco stressing that Exelon has been able to improve reliability of other acquisitions
- Pepco will be run as a separate subsidiary
 - They may have more resources for power, use Exelon's generation rather than purchase all from PJM market
 - No union changes for 1 year, no management changes for 2 years
 - Do not see rates increasing
- Will have to go through at least 3 PSCs, FERC and the Department of Justice for approval
- Exelon has offered \$100 million rate payer fund for use as the PSC decides + \$50 million for charitable contributions
- Exelon is seeking expedited review
 - Unless they amend the proxy statement, it must be done by next July
 - Filing with DC PSC in July 2014

Nearly $\frac{3}{4}$ of Pepco commercial customers choose their supplier. What will happen to customer choice?

Will retail suppliers still have access to customers?

- If Pepco is run as the same business entity it won't change, but it is something to be aware of looking down the road.

6. Roundtable Discussion/Project Updates

Jeannine Altavilla:

- Arlington is working on a building efficiency roadmap: additional metering and other tech to have better data on County buildings

Sam Brooks:

- Based on DC's estimates, they think the price for the 40 site solar PPA chosen from the RFP responses will be between 5-6 cents per kWh (conservative guess)
 - COG will circulate this info when available
 - End of June will shortlist 3 projects and hopefully release cost estimates
 - Part of value of PPA is to catalyze more investment around the city
- Very successful green schools challenge: 3 week challenge, leaderboards for schools participating, in partnership with USGBC, great engagement from kids and teachers just by having the data
 - 14% savings for 30 schools, 2 saved more than 30% during challenge

Bill Updike:

- Report on cost/benefits of net zero buildings forthcoming
- Five new grants:
 - Greening the MLS system
 - Greening appraisals, educate banking and appraisal community
 - Smart Buildings plan – city wide model to analyze the efficacy of policy making
 - Quality assurance for benchmarking data: building a tool to determine when receive bad data

Jeff King:

- Solar RFPs from DC and Montgomery County are out, WMATA coming soon
- DOE FOA for solar planning grant: community solar, low income solar, cost and benefits of solar, solar for resiliency
 - Contact Jeff if you want to participate
- Small Solar Working Group in VA: Steve is on the steering committee
 - VA GA has requested that they do a report
- June 16 workshop in COG Board Room on Microgrids
 - DOE and possibly military participating
- Homeland security
 - UASI funding for Microgrids did not pan out
 - COG has funding for a tabletop exercise on power outage for water utilities
 - Let us know if you want to be on the design team
- DOE FOA on microgrid controller demonstrations
 - One submission in MD and two in VA

Maia Davis:

- Region Forward meeting in April focused on Sustainability
 - RF Coalition provides strategic direction for COG
 - Panel of local best practices, poster session on national examples, discussion on how to do this in activity centers
- Eco District summit September 24-26
 - Discount rate for the conference
 - Hosting at COG a pre-conference training on Eco Districts for practitioners and city planners. COG will cover cost for 30 members.
- EPA Green Power Communities Workshop: June 25 in the morning

- Molly Lemon will give an overview of the program and participants will talk about their experience
- Climate and Energy Awards Pilot: applications due June 18!

Leah Boggs:

- Regional portfolio manager sharing session
 - 80% are benchmarking government buildings
 - Local governments sharing
 - Regional account allows us to better compare apples to apples
 - Have 5 jurisdictions and one school district sharing with each other and with us so far
 - Working to get more jurisdictions, schools, utilities online
- Tours:
 - Arlington Passive House – May 29
 - Rockville Passive House – June 11
 - Cardozo tour & green schools roundtable – TBD

7. Next Meeting Date, Proposed Topics, Other Announcements and Adjournment

- CEEPC – May 28, 2014
- BEEAC Planning Call – June 5, 2104
- BEEAC Meeting – June 19, 2014