

**AIR QUALITY ADVISORY BOARD
REGULAR MEETING
MONDAY, NOVEMBER 21, 2011**

DATE: November 21, 2011
LOCATION: 214 N. Mason Conference Room 1-A
TIME: 5:30 – 8:30 pm

For Reference Greg McMaster, Chair - 484-3348
Ben Manvel, Council Liaison - 217-1932
Lucinda Smith, Staff Liaison - 224-6085

In Attendance: Greg McMaster, Dennis Georg, John Schroeer, Rich Fisher, Dave Dietrich, Nancy York, Hugh Mackay,

Absent: Michael Lynn and Scott Groen

Staff: Alexis Hmielak, Lucinda Smith, Helen Migchelbrink, Dennis Sumner, John Phelan

Call meeting to order

Greg McMaster called the meeting to order at 5:35 pm

Introduction of Guests – CSU student Flynn Senn

Public Comments - none

Agenda Review - none

Review and Approval of October 17, 2011 minutes

As there was an internet email issue, the October 17, 2011 minutes were not reviewed. They will be presented at the December meeting for review along with the November minutes.

- Greg McMaster asked the board if the AQAB wanted to send a recommendation to Council about tiered electric rates. He was concerned the rates might penalize people with electric vehicles and did not think Fort Collins should discourage the use of electric vehicles.
 - There was concern the tiered rates were a done deal, however, it was mentioned Council could make amendments on second reading of the issue.
 - Hugh Mackay suggested the AQAB send a recommendation the AQAB supports the tiered rate system but were concerned about their impact on alternative fuel vehicles.
 - The group agreed to discuss this at the December meeting.
- Greg McMaster also asked the board wanted to weigh in about the planned development overlay district.
 - Lucinda Smith stated it will not be voted on until February. The AQAB could look at the matrix of strategies by category and discuss at the December meeting along with the AQAB annual report. The group agreed to do this.

Mason Corridor Update

- City Engineer Helen Migchelbrink made a presentation on the status of the Mason Corridor. She pointed out this is the largest capital project that Fort Collins has ever undertaken. It could be the first Bus Rapid Transit line in the state. It had been in the Planning department since 1997. The City has finalized its agreement with the Burlington Santa Fe railroad and the plan is now in Engineering and moving forward for build out. It will be a five mile corridor from the downtown transit center to the south transit center.
- The MAX busses will be articulated, 60 ft. long with 63 passenger capacity and powered by compressed natural gas (CNG). Bikes can go right onto the bus.
- Standard station elements will include safety cameras, next bus sign and way finding signage.
- To answer John Schroeer, Helen Migchelbrink explained the bus will travel through CSU in a fixed guide way behind the stadium.
 - Dennis Georg asked if the bikeway has enough room for electric bikes. Helen stated this was designed for pedestrians and bicycles. Dennis was disappointed the City is not thinking ahead to address the future of mixed-modal transportation. Helen explained the environmental process to approve the EA for this project took ten years.
- There will be curbs and gutters on either side of the railroad tracks to prevent people from weaving back and forth across them.
- Each station will be designed to capture the ambiance around it. CSU was very involved with the design of their stations because they wanted them to look and feel a certain way.
 - The art will be brought through a public process.
- There will be two separately-funded projects as part of the Mason Street Corridor project: a NRRC/Bay Farm pedestrian overpass at CSU and a key bicycle and pedestrian underpass at Troutman.
- The NRRC pedestrian overpass connects to high density employment and shopping areas. They will have elevators on either side large enough to accommodate a bicycle with a trailer.
 - The guide way will be on the east side and bike trail on the west side.
 - Greg McMaster was concerned that only a few bikes can be accommodated on the elevators at a time. He asked if there will be a major path to get across to the proposed Grove student housing complex. Helen Migchelbrink stated the overpass also has stairs and she anticipates most bikes will take the Spring Creek underpass. She also would like to see a more viable seamless access to that underpass.
 - Helen stated several citizens complained about the \$3 million cost for the overpass, but this is the best solution given various constraints. Currently lots of people are illegally crossing the railroad tracks and this will provide them a safe, legal way to cross. They are also spending \$1.5 million to improve the crossings and signals.
 - To answer Dave Dietrich, Helen stated this will be a legal crossing designated and approved by the railroad. The fence will remain behind Avos.
- The Troutman Pedestrian Underpass will cost about \$1.7 million and will be for bicycles and pedestrians only.

- The railroad tracks will be shut down for seven days next July to replace tracks in downtown. The overpass and underpass will be built during that down time.
- The South Transit Center will begin construction next summer. It will have a park and ride for users.
 - They will be expanding the maintenance facility to store and fuel the buses.
 - There have been complaints there is not enough parking here, but Helen explained purchasing property for parking is not part of the current project. She will review it at a later time.
- Helen stated there has been much outreach to the public via a website, public presentations and open houses. They have had much positive feedback.
- Max operations will be Monday through Saturday, 5:00 am to 12:00 midnight. The fare will be the same as Transfort (\$1.25) including transfers to other bus routes. CSU students will also ride for free because of ASCSU fees of \$500,000. It will take 20 minutes to go end to end and will be shorter than driving a vehicle the same distance.
- Max funding is 80% by the Federal Transit Administration (FTA) and 20% from non-federal sources (mostly state). The City of Fort Collins' portion is \$4 million.
- Next steps
 - 2011-2012 – Complete the final design and obtain FTA grant agreement, hopefully by February, 2012 and start construction in March.
 - 2011 – 2014 – Convert Mason Street , STC and BRT construction, including Troutman and NRCC under and overpasses by next fall.
 - 2014 – Begin MAX service

Discussion:

- To answer Rich Fisher who wondered who will be riding the MAX bus instead of Transfort on College, Helen Migchelbrink stated the majority will be students because student and other housing is being planned along the route. Others would be people who work downtown.
 - MAX will connect the downtown area to the southern part of the City.
 - East-west connectors need to be developed later so people from all parts of the city can use MAX.
 - Lucinda Smith stated when she rides FLEX from Loveland to downtown Fort Collins it is usually full. These riders could also become MAX riders.
- Nancy York suggested the developers of housing and retail should have to pay a fee to support the MAX system because it relieves them of having to provide parking.
- To answer Dave Dietrich, Helen stated the maintenance cost of the system is approximately \$1.4 million. Cost is to run the buses, snow removal, pavement repair, etc., computed over 20 years.
- Greg McMaster voiced his concern that bicycle and mixed use is not being designed for greater capacity such as ebikes and possible future transportation.
 - Dennis George stated the west coast often dedicates part of the trails for ebikes and the other part for pedestrians and bikes.
 - Helen Migchelbrink stated the by way is constricted by the railroad at CSU so the bike trail can only be 12 feet wide. Maybe there is a way to segregate the trail, but the Engineering Department does not set the standards on the trails.

- Dennis suggested there be more pedestrian trails on campus to relieve trail traffic. Helen pointed out that suggestion would be better addressed to the Planning Department.
- Dennis Georg stated he was disappointed the MAX plan is not more integrated with other systems and felt the \$80 million appropriated for it could be used better elsewhere.

FortZED RDSI Update

Dennis Sumner, Senior Electrical Engineer, reported on the FortZED jumpstart project.

- As background, Dennis Sumner stated the Department of Energy (DOE) awarded \$55 million to nine renewable and distributed system integration projects across US in 2008 to encourage use of distributed resources to provide power during peak load periods. Fort Collins was awarded a \$6.3 million grant with \$5.1 million in matching funds. The project is targeted in the FortZED downtown area and CSU east campus. The goal is demonstrating that a mix of distributed resources could be operated to reduce peak load by >20%-30%, especially during the summer. The mission of FortZED is to transform the downtown area and the main campus of Colorado State University into a net Zero Energy District through conservation, efficiency, renewable sources and smart technologies.
- Total assets included photovoltaics, diesel generators, biogas and HVAC load shed.
- The timeline of the project was three years
 - 2009 – specifications and design
 - 2010 – installation and operational tests
 - 2011 – demonstration and data collection
- Lessons learned were:
 - The software was successful at maintaining a flat load.
 - To achieve 5 megawatts of load reduction, they needed to enable 10 megawatts of distributed assets
 - Real world constraints such as communications, genset issues, staffing schedules, emissions, noise, comfort, regulatory, etc., were a challenge.
- Overall RDSI results:
 - The Fort Collins RDSI Project gave more definition of the challenges of coordinating a system of mixed distributed energy resources and shed light on how to meet those challenges in a future FortZED.
- This was a cooperative project among City of Fort Collins, Fort Collins Utilities, New Belgium Brewing, CSU, Larimer County and technical partners who provided resources and engineering support.
- Projects – load shedding
 - Turn off pumps for fountains
 - Reduce fan speed in HVAC
 - Increase thermostat set points during cooling season
 - Lock out stages of compressors in building cooling systems
 - Lock out plug-in hybrid electric vehicles
 - Thermal storage to shift cooling load
- Local Energy Generation
 - Solar photovoltaic (PV) projects
 - Local, backup generators
 - Dual-fuel (natural gas/biogas) generator

- Project highlights –
 - CSU solar PV array
 - Larimer County Justice Center fountain control
 - New Belgium –store thermal energy for recapture and capture biogas from wastewater treatment into methane gas
 - Integrid/EECL Lab – Several generation assets form a mini-grid, capable of simulating “islanding,” variable contributions from renewables, and “spinning reserve.”
- Where do we go from here
 - The experience of FortZED jumpstart can elevate the City to progressive thinking

Discussion

- To answer Dave Dietrich, Dennis Sumner stated this project had a very narrow focus and did not include residential or conservation efforts.
- Dennis George asked what was learned about turning air conditioning on and off and how it would relate to smarter appliances in the future.
 - Dennis Sumner stated some challenges they had was that the operating site partners were working long hours with HVAC on, building in extra staff time to deal with complications, and thermostat malfunctions. They also used both wireless and non-wireless controls.

Energy Policy Update

John Phelan, Energy Services Manager, reviewed the 2010 Annual Update of the Fort Collins Energy Policy prepared in June, 2011 for City Council. He focused mainly on energy efficiency.

- The Fort Collins Energy Policy covers three areas: reliability; efficiency & climate; and economic health. There is also a fourth area that covers our cooperation with Platte River Power Authority.
- Efficiency in practice has goals for a portfolio approach that includes residential, commercial and industrial customers.
 - Pieces of the portfolio are: funding incentives, technical assistance, service providers, retailers, regulation and education.
- Utilities offers many efficiency programs with aggressive goals and a wide variety of end uses in order to have a chance to get to the Energy Policy goals.
- Efficiency results – 2010 was a good year for efficiency
 - Gross customer savings was 20,500 megawatt-hours for the year.
 - The net Utility savings was 17,800 megawatt-hours.
 - Lifecycle (of the measure) cost was 3.8 cents per kilowatt hour (wholesale electricity cost = 4.5 cents per kWh).
- Calculating efficiency results for:
 - Commodity products (e.g. appliances, CFLs), based on research in the industry, to determine the deemed savings per unit (energy and demand) and number of units incentivized
 - Standardized projects (e.g. commercial lighting), deemed savings per unit and project specific data
 - Custom projects (e.g. chiller plant), project specific data and savings, measurement and verification plan

- All programs – net to gross discount rate, measure life and distribution system savings
- The 2010 efficiency results, broken down by residential and commercial, were the highest ever for Fort Collins, but still did not hit the goal.
- The annual efficiency program savings continue and compound over time
 - In 2011 will be buying 84 million kWh less energy.
 - Goal over a 10-year period is to reach a 15% reduction, or 1.5% per year.
- Utilities works with many community partnerships and plugs into other activities in alignment with what we want to do.

Discussion

- Dennis George asked where is next low-hanging fruit for energy efficiency. John Phelan stated Utilities has stopped incentivizing well-accepted things like regular CFLs. However, they are continue to have rebates for specialty bulbs and are adding LED bulbs.
- Greg McMaster stated there does not seem to be any incentive for landlords of students to do any energy conservation. He sees that population segment as a huge energy user and suggested Utilities consider addressing that area.
 - John Phelan stated students are a tough audience, but the Utilities have done projects with the CSU Student Union to get students more involved in a porch light project.
- The 2012 work plan also identifies creating a program to target multi-family housing.
- To answer Dennis Georg who suggested the Healthy Sustainable Homes audit, John Phelan stated Utilities offers an audit focused on efficiency, but which also mentions the Healthy Homes audit.
- To answer John Schroeer, John Phelan stated Utilities does have energy meters (to see how a house is working and where the energy going) available at the library for check out.
- Greg McMaster asked the AQAB if it wanted to weigh in on tiered energy rates.
 - To answer Hugh Mackay John Phelan stated tiered rates could be a disincentive for owning an electric vehicle. The advanced metering program might pilot rate options for electric vehicles but we can't do that yet since we don't have the meters.
 - John Schroeer asked if tiered rates would penalize larger families. John Phelan stated it is hard to correlate family size, income or square footage to electric use. The average household uses 750 kWh per month.
 - Lucinda Smith clarified the Climate Action Plan didn't recommend tiered rates but did talk about energy policy. The tiered rates were recommended by the Climate Task Force but they then realized it might not be most effective as a time of use rate. The goal was reduced consumption.
 - Dennis Georg was concerned that the meters are scheduled to be installed during the summer when use and cost will be highest.
 - John Phelan pointed out there are several dynamics happening at the same time: Platte River Power Authority overall rate increase; a seasonal change in pricing; and the Utility tiered rates. Meters will be installed at the same time but will not impact rates because of other funding for them.
 - Dennis Georg suggested City Council should have a communication plan that takes place over many months. It should take people through various scenarios they are likely to see to inform them of the frequency the rate structure will be revisited.

- Greg McMaster also suggested the City's education should use real numbers and comparatives to help people make energy use decisions.
- John Schroer suggested suggesting time periods when customers should run various appliances.
- To answer David Dietrich, Dennis Sumner stated the rate increases are not for the advanced meters project. The expense of this project is being paid by the combination of funding from the SGIG grant and operational cost savings. It was also noted that the advanced meters have many functional capabilities including the ability to support time-of-use rates.
- Dennis Georg suggested the AQAB not weigh in on tiered rates because he did not think they had enough information.
- David Dietrich recommended the Council reconsider the tiered rates after the smart meters were installed.
 - Greg McMaster stated this could be in the AQAB's future work plan to make this recommendation after the meters are installed.

2012 Air Quality Board Work Plan

- The group discussed and finalized their 2012 work plan.
- Dennis George suggested the AQAB be proactive in the BFO process recommend offers that support the Air Quality Plan.
 - Greg McMaster stated he would like to see a high level staff person to champion air quality.

Dennis Georg moved and Nancy York seconded a motion to approve the 2012 AQAB work plan as finalized.

Motion passed unanimously

Brief updates & announcements

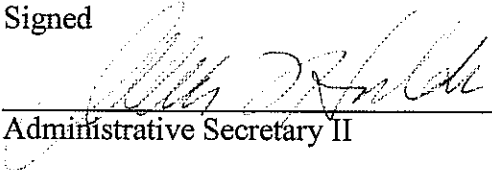
As Michael Lynn was not present there was not a Bike Advisory Committee report

Adjourn

- John Schroer moved and Dennis Georg seconded a motion to adjourn. Greg McMaster adjourned the meeting at 8:25 p.m.

Approved by the Board on December 19, 2011

Signed



 Administrative Secretary II

12 19 11
 Date / /

