



Minutes of the Board of Directors Meeting at 12 pm on January 21, 2010, RVTD Translink, 239 E. Barnett, Medford

Board members in attendance: Steve Vincent (Avista) John Vial (Jackson County Roads), Mike Montero (RVACT), Mike Quilty (MPO), Julie Brown (RVTD), Gabe Rowland (Rogue Biofuels), Gary Hall (Gary Hall & Associates), Sue Kupillas (RVCC Coordinator) and Melissa Stiles. Out of town: John Becker. Guests in attendance: Monte Mendenhall, Pacific Power, Kris Ransom, Avista Utilities, Ken Boni, Avista Utilities, Alan Welburn, Welburn Electric, Kelly Madding, Jackson County Development Services Director, Kevin Schneider, Pacific Northwest National Laboratory (teleconference), Dan Kirschner, Northwest Gas Association (teleconference)

Availability of power and natural gas supply to support an increase in natural gas and electric vehicles in the Rogue Valley

Mike Montero started the meeting by citing to the Rogue Valley Clean Cities mission statement of reducing dependence on foreign oil. Among the strategies being explored is the use of alternative fuels. Inasmuch as the auto industry will soon begin delivery of plug in hybrids and CNG vehicles to follow, RVCC has commenced a process to identify implementation strategies. RVCC is planning a March conference for home builders about pre-plumbing garages for natural gas and electric vehicles. In preparation for the conference, RVCC is asking the utilities about supply, distribution and transmission of energy. Is it adequate to support an increase use in natural gas and electric vehicles?

Kris Ransom complimented Rogue Valley Clean Cities' vision and forward thinking. She said Avista is part of a natural gas work group that will meet in February to discuss similar topics. "It's an interesting time to discuss renewable energy. We know the success of Rogue Valley Transportation District and Julie's group; they are doing great work." Steve Vincent agreed that it is important to work from the foundation up, beginning with the building codes, especially for home fueling technology that might be new and mesh with state codes.

Education of Consumers, Electricians

Monte Mendenhall said Pacific Power is planning for future loads within the context of electrical demand in Southern Oregon. Most of the Pacific Northwest generation comes from the mountain states, 65 percent from coal and 14 percent from hydro or other renewable energy resources. Pacific Power routinely performs 5-year engineering studies to manage load growth and identify service reliability needs for the transmission and distribution systems. The question is who will purchase these types of vehicles. In terms of charging the vehicles at home, Pacific Power estimates 7 kw of load for the average home. That number would need to increase for consumers using quick-charging stations at home. We need to educate electricians who will be installing or retrofitting these homes to report loads associated with electric vehicle charging systems.



Mike Quilty (RVMPO Chair) said he serves on the West Coast Corridor Coalition and they heard from Nissan and Ford that the new electric vehicles will have smart chargers that may ask utilities permission before charge. The chargers may also display information about the cost to charge at peak hours. If drivers are willing to pay the higher rate for peak-hour charge, they can override the charger.

Mike Montero (RVACT Chair) agreed the education component is an important factor. Dealerships could benefit from regional energy-related assessments to help manage expectations of consumers about longer charging cycles and potential pricing cycles – you may pay more for charging during peak hours. Monte Mendenhall said there may be tariffs established that will create a price point that will encourage energy use during off-peak times of the day. Currently the rates are the same 24/7 and only tiered based on the amount of use. But the way to change behavior may be to hit with price points at a peak period.

John Vial (Jackson County Roads) said there are so many types of alternative fuels that it is a guessing game as to which direction the market will move, whether hybrid, CNG, EV or others. He asked if Pacific Power anticipates growth in electric vehicles. Monte Mendenhall responded that Pacific Power has invested in the battery technology of BYD Company, which has an electric vehicle on the market that can travel 186 miles on a charge and is priced at about \$40,000. However, the infrastructure is not yet in place for drivers to travel throughout the state in electric vehicles.

Supply: Another Perspective

Kevin Schneider (PNNL) said it will take coordination between utilities and developers. Some houses may have two electric vehicles in the garage. A high to moderate EV penetration in a retrofitted neighborhood could put pressure on a transmission system. Dan Kirschner (NGA) said utilities are well equipped to provide the energy needed for alternative fuel vehicles. The world has changed the last 1.5 years. Six months ago, the industry estimated a 60 year natural gas supply and now, with advanced extraction technology, they estimate 120 years of reserve. It makes sense to use a fuel that mostly comes from North America. The market will drive the demand for natural gas vehicles, but what we can do now is facilitate the build out for infrastructure by introducing policies. Kris Ransom said Avista has an integrated, looping infrastructure in the Rogue Valley to accommodate an increase in natural gas vehicles. The utility is constantly reinvesting in infrastructure as evidenced by new piping to take away more gas from the North Phoenix Station.

Consumer Changes

Mike Montero advanced the question, “What would it take to persuade people to have an alternative fuel vehicle?” He indicated that tax incentives have had an influence on buying decisions. Ken Boni said he was motivated by economics when he bought a Prius in 2001 and estimates a \$7,500 savings in fuel costs. With 160,000 miles, the car still operates on the original battery. He gets 46.1 miles per gallon consistently and has

consistent battery power. When it comes time to change the battery, he estimates the cost will be about \$2,500.

In-Home Fueling

Mike Quilty raised the issue of road maintenance tax collected as fuel tax from drivers who fuel at home. Kris Ransom suggested having a separate meter on the fueling device. One of the Board members cited an unintended adverse consequence; One user of bio-diesel was assessed road taxes and a penalty of \$8,000 retroactive to the start date of his bio-diesel use because he was unaware of road tax liability. Gary Hall said the tax should be collected at the re-distribution center similar to a postage meter. He suggested the self-serve law will have to be amended to accommodate alternative fuels at the service stations. Kelly Madding said it might be more effective to invite state fire marshal and state building code representatives to the March meeting. She suggested asking questions ahead of time such as, “How would you deal with this issue?” or “What have you seen in the field?”

Many questions have been raised. To illustrate the need to assess infrastructure issues well in advance, Mike Montero gave the example of a homeowner wanting to upgrade a hot water heater to the “demand based” system. Most residences have the natural gas line “sized” to meet historical demand from traditional appliances. The new systems utilize “on demand” technology that, in many cases, cannot be met by existing supply line sizes. Mike Quilty said when it comes to increasing natural gas and electric vehicle use, the question comes up about whether local building codes allow for home fueling devices to be installed inside garages. Kris Ransom said in Klamath Falls, local building officials allowed a natural gas fueling device to be installed indoors at an ice rink. The rink’s Zamboni ice machine is powered by natural gas. She said with proper ventilation, the fueling devices can be installed indoors.

Dan Kirschner said the in-home fueling technology is probably not going to be widely adopted in the market because of costs. The cost to install the equipment is \$6,000 to \$10,000 and that’s in addition to the \$4,000 premium you pay to get an NVG. He said the Honda GX, the natural gas-powered Civic, was only available in New York and California in the beginning and just last year became available in Utah. That may have been the result of the State of Utah partnering with the utilities to put alternative fueling infrastructure in place for long-distance driving. Now Utah leads the nation with the highest number of natural gas vehicles. Today, natural gas is 88 cents per gallon delivered in Utah.

Next Steps: Staff will reach out to CCC to gather information regarding fire code interpretations and building code modifications that might need to be evaluated. The next meeting will bring the regional fire marshals and building officials together to develop strategies for the building industry in anticipation of the March 10 RVCC Meeting.

Next regular meeting of the RVCC Board will be noon Wednesday, February 17, 2010, at RVTD Translink, Medford.

