

ADVISORY COUNCIL MEETING

RHODE ISLAND STATE ENERGY PLAN (RISEP)

Thursday May 9, 2013

1:00 PM-2:30 PM

Narragansett Room

RI Economic Development Corporation

315 Iron Horse Lane

Providence, RI

ATTENDANCE:

Advisory Council Members: Abigail Anthony, Bill Ferguson, Doug McVay, Ian Springsteel, Jack Leyden, Jeff Broadhead, Jerry Elmer, John Gilbrook, Jon Hagopian, Julie Gill, Ken Payne, Melissa Long, Nick Ucci, Sheila Dormody

Steering Committee & Project Team Members: Marion Gold, Danny Musher, Chris Kearns, Rachel Sholly, Hannah Morini, Kristine Daly, Kristina DiSanto, Michael Giles, Mike Guerard, Paul Gonsalves

Other Attendees & Members of the Public: Stephan Wollenburg, Charles Hawkins, Lisa Frantzis, Ben Barrington

AGENDA:

1:00 Welcome – Danny Musher, RIOER

1:10 Scenario Modeling Presentation – Ben Barrington, Navigant Consulting

2:00 Questions & Discussion

2:20 Public Comment

2:30 Adjourn

MINUTES:

The meeting was called to order at 1:05 PM.

Danny Musher welcomed everyone to the fifth meeting of the RI State Energy Plan (RISEP) Advisory Council (AC) Meeting. Currently the AC is working on the third task (scenario modeling) of the first phase (research and data) of the RISEP. The RISEP, when completed will be incorporated in the State Guide Plan (SGP). The Consultant team from Navigant, Lisa Frantzis and Ben Barrington, were introduced to present a power point (Attached) on the scenario modeling process.

Today's meeting will introduce the target setting exercise and explain how this fits with strategy development and the scenario modeling

process. The purpose of the meeting is to solicit feedback from the AC on the proposed targets and the new straw-man scenarios. The AC will develop scenarios aimed at meeting key targets for change in energy supply and demand that represent alternative energy futures. Parallel to developing scenarios is developing the strategies, such as on-bill financing or increased renewable energy (RE). Low, moderate and aggressive targets were set for each aspect of the energy supply infrastructure or demand profile. This was done in ten categories in the electric sector, six in thermal and seven in transportation.

An illustrative chart was then displayed that showed how this would work with vehicle miles traveled which is a transportation target. Jerry E. said that nine months ago the AC was asked to submit recommendations for targets in each sector. What use did Navigant make of that feedback? Ben B. said he was not aware of which targets to which Jerry was referring. Danny M. clarified that he had shared this information with the project team and with Navigant. Ben B. said he would make sure the information was incorporated.

Ben B. then went over the ten targets for the electric sector. Nick U. commented that the targets for RE should not be resource specific. The problem with these targets is that they ignore other developing technologies, which may be more cost effective. RE technologies are treated equally in RI RE laws like the Renewable Energy Standard (RES). Will these technologies, like landfill gas and clean wood, be excluded in the RISEP? Ben B. said that if AC members want

additional technologies added to the targets please provide that feedback. Nick U. would encourage the AC to let the market determine what is cost effective. It appears to him that the RE resources the state will pursue have been pre-selected. The RI RES and DG long term contracting statutes treat wind and landfill gas equally. It is always better to be more inclusive. Ben B. acknowledged that the AC needs to make sure they have a complete menu to choose from and would make sure that all resources defined as renewable under the statute were included.

Jon H. said that the AC should go through the RI RE laws and use them as a guide. Go through the entire Title 39, which deals with these laws and lists eligible RE sources. Danny M. said the project team will be doing this. Ken P. said the list should be RE technologies as of now, because no one knows what will happen in the future. It should not be limited to the current list. He mentioned clean wood. The SGP says that 53% of RI is forested and that 20 years ago RI crossed a line and now has mature forests it does not know what to do with. Nick U. said it goes to the fuel diversity question which is a core Directional Objective (DO) of the RISEP. A limited RE list could retard business opportunities from other sources that could stimulate in-state jobs. Ben B. said a DO is increasing state jobs. Lisa P. said that Navigant will be reviewing everything in Title 39.

Ian S. said the AC should look at recent National Renewable Energy

Lab (NREL) research on new technology for developing wind blades with increased capacity. He said that a 1.5 MW turbine that had a 25 % capacity before could be as high as 40% with these new blades, making it more cost effective. Danny M. said that capacity factor would be looked at during scenario modeling. Reacting to the aggressive on-shore wind target, Bill F. felt it was unrealistic to think that every RI town had adequate resources to support wind. Ken P. agreed and cited Central Falls. Jerry E. said it also ignores OER's wind survey that says some towns don't have the wind capacity. Lisa F. said the real number to look at is the 78 MWs developed by 2035 in the aggressive target. The "per-town" calculation is just a reference-point to give a flavor for how much capacity that would look like. Some AC members thought that if you look at it from a perspective of total capacity the target might be too low, but if you look at it from a per-town perspective, the target might be too high.

Julie G. asked if the study on why Germany abandoned their solar rebate program has been looked at. They discovered that it was not cost effective. Lisa F. said that Germany has a feed in tariff (FIT) that was paying 60 cents a KWh and was costing too much. They are now in the process of lowering that FIT. Germany is still the leading solar market. Ben B. said that in the scenarios economic factors, like rebates, net metering and FITs, will be factored in. Jon H. mentioned that ratepayer impacts should be modeled, and Ben B. confirmed they would be.

On the out-of-state hydropower slide, Bill F. asked why they were using megawatts for some slides and percent of load for others. Ben B. said it can be converted to MWs but in this slide they were looking for percent of load. Nick U. said you have to look at nameplate capacity factor for both on-shore and off-shore wind because they will be different. Lisa F. said that the models will look at capacity factor.

Next Ben B. then showed a slide on the expansion of natural gas (NG) fired power plant capacity, which could get to 2,800 MWs by 2035. Jerry E. asked why they were modeling an increase of fossil fuels in light of climate change. He feels the aggressive target should be zero. Sheila D. would like to see a scenario where NG decreases. Ben B. says the strategies don't always look at a decrease in GHG emissions. Lisa F. suggested making the bounds for NG below the BAU and lower it from 1,850 to 1,000 MWs. Test a model where NG decreases. Julie G. asked why they were looking for an expansion of NG when it might not be the answer. She feels the methane NG produces is worse than carbon dioxide. Sheila D. would like to see a model where we get off NG. Ben B. said any scenario that addresses Greenhouse Gas (GHG) will be looking to expand RE and offset the demand for NG fired power. Ian S. said that NGrid was very concerned about methane, especially leakage from gas pipelines. If people are concerned about methane they need to improve the gas infrastructure to eliminate this leakage.

Ken P. said Navigant is using the definitions aggressive & moderate differently depending on the source of supply. He said inconsistent definitions in any statutory framework are a killer. You need to use the definition the same way with the same variables. Navigant is not using the terms in the same way. Definitions are critical.

Bill F. would leave the NG slide the way it is. What happens if off-shore wind does not develop? You need to get at the MWs wind does not produce. It could be from NG. Jon H. said that the AC should review the procurement documents at the PUC that look at the fuel and energy mixes. Navigant should look at what is happening in RI, on the ground now, in a more focused manner. Ben B. said that Environment Northeast did a BAU forecast that looks at the fuel mix in power generation. Ben B. said that Navigant was looking for feedback on whether these low, moderate and aggressive targets are realistic. Marion G. said we need to look at out of state RE procurement.

Ben B. then moved on to slides that showed the residential thermal sector targets. Ian S. asked about commercial geothermal. Ben B. said they would look into commercial geothermal applications. The aggressive target for NG heating was 84% of homes by 2035. The forecast for commercial EE was flat because there are not that many opportunities to increase it that have not already been pursued.

Ben B. then proceeded to the transportation targets. The vehicle

miles travel data comes from the USDOE Office of Highway Policy Information. EV penetration rates are 9.7% by 2035 in the aggressive case and flat in the BAU. Ian S. asked Ben B. to translate the aggressive EV target into MWhs so he can understand the load growth. Sheila D. asked if the targets include the same number of cars on the road. Ben B. said it was the same as in the vehicles miles traveled. John G. asked how old the data is, NGrid may have more recent information. He also said that load growth would be higher in EVs than hybrids. Jerry E. feels a new assumption is needed, that is modeled separately, that has the same number of cars, EVs and hybrids included, and assumes increased public transportation. Introduce a whole different variable where the number of cars, instead of increasing to 2035 as it has for the last fifty years, actually decreases. Sheila D. said it would be helpful to have a model with fewer cars on the road. Lisa F. said that would be captured in the public transportation slide.

Ben B. then went over the targets for increased use of bio-fuels in transportation. John G. asked if they were using the RFS definition of bio-fuels that includes bio-gas. Ben B. said they had not factored that in. The NG in Transportation slide looked at fuel switching in public buses. The aggressive target calls for 100% of buses powered by NG in 2035. Jerry E. asked about aggressive targets for electric powered buses. Ian S. thought commercial truck fleets, like UPS and post office trucks, should also be included.

In the public transportation slide the low target is based on RIPTA's five year program to expand ridership by 10% and the aggressive target aims to increase this by 20% and targets 35 million riders by 2035. Melissa L. said that RI's aggressive rail program has to be considered. You can't just look at RIPTA. Freight rail also has to be looked at because it reduces truck travel. Jerry E. said the low, moderate and aggressive figures for RIPTA ridership, by 2035, are all lower than RIPTA's BAU forecast for ridership growth. This is why he is recommended RIPTA be part of the AC. The aggressive target is actually lower than RIPTA's BAU data for the last two years. Danny M said that RIPTA has been invited to the implementation group workshop scheduled for May 24th.

Ben B. then showed a slide that had the three straw-man scenarios for discussion, which will be modified base on AC feedback. Scenario 1: aims to reduce emissions and expenditures through aggressive demand reduction. Scenario 2: aims to reduce emissions through significant investment in DG and EVs. Scenario 3: aims to reduce emissions through fuel switching and industrial scale RE. These were arrived at through discussions with the project team. Ian S. felt these scenarios seem to be tactical and resource specific and overlap. When he thinks of scenarios he looks at different social and political outcomes. He feels one viable scenario would be political gridlock and stalemate resulting in no action. Sheila D. said another scenario is reducing demand and getting all energy from clean sources. Ian S. said that these scenarios deal with tactics to get at a

goal but do not deal with society's willingness to pay. Bill F. said what is missing is a cost-effectiveness aspect. He feels that these scenarios do not deal enough with affordability. Lisa F. said affordability could be one scenario. Ian S. said that when he thinks of scenarios he thinks of specific pathways. He feels the state is already doing all three scenarios aggressively and should stay on that path. John G. feels we should look for a happy medium in scenarios. He wants to know what the balance is. The definition of scenario may be causing a conflict. He would like to move between the three scenarios to get at this balance.

The next step is to get feedback from the AC on modifying the scenarios. Navigant will integrate the feedback to develop strategies to meet each target. Then a workshop will be held at the end of the month with the implementation teams.

The meeting was adjourned at 3:00 PM.