

RPS Working Group Meeting

8:45 a.m., June 18, 2018

Renditions in Davidsonville, MD

Meeting Minutes by Topic

Presentation on Working Group Roles and Responsibilities, Process and Protocols – David Tancabel, PPRP

David Tancabel of PPRP (David T.) described the provisions in HB1414; the agencies involved; study topics; logistics; etc.

Communications as much as possible to be handled via website

Schedule – Interim report Dec 1, 2018 (can request additional study topics if resources and time permit)

Attendees will break up into two groups—Environment and Economic—to review and discuss the SWOT Analysis on a 50 percent RPS

Presentation on Comments Received on the 2017 Inventory of Renewable Energy Generators Eligible for the Maryland RPS Report – Kevin Porter, Exeter Associates, Inc.

Comments Received on Renewable Energy Inventory

Purpose of study is to identify the delta between RPS-eligible resources available and RPS targets/requirements in Maryland and in PJM

Report methodology 2018-2030: aligned to MD-certified; acknowledged resources can be outside of PJM

Report shows deficit, which doesn't square with market as states are not having trouble with compliance with their RPS policies

Comments indicated that non-MD certified resources should be included in resource availability

Solar was not expressly included in non-carve-out Tier 1 compliance; excess solar above Tier 1 solar carve-out should be applied to Tier 1

Projecting additional renewable energy capacity: explained methodology; noted low addition of wind capacity and will revisit

Report does not include increase in New Jersey RPS to 50 percent by 2030, which is something else to consider

Anne Lindner of Exelon noted that Brookfield's comment contained policy recommendations for hydro, and asked whether these policy questions will be addressed either in the Inventory or the RPS Study. David T said that policy will be addressed in RPS Study.

Mike Volpe, Open Road Renewables (Mike V.)— Believes that with changes recommended by the commenters, the report will find that we'll be able to expand the Maryland RPS to 50 percent and meet it

Presentation on Draft 50% Working Group SWOT Analysis – David T.

MDE – Will there be an opportunity for updated analysis (as compared to the LTER)?

David T – There is no plan for additional analysis

Susan Gray, PPRP (Susan G.) regarding additional analysis, probably not, but updated data would be helpful

Grid stability brought into question if state RPS policies are increased

Alex Pavlak, Future Energy Initiative (Alex P) How does Maryland's Greenhouse Gas Recover Act fit in? If RPS is at 50%, then how do we reach zero emissions? David T. referred the comment for environmental break-out group discussion

Susan G.: Focus on what's missing; what's misplaced; and what should be added

Mike V. asked if there will be a new analysis re: percentages of 50 percent? David T. responded that there will likely not be additional analysis

Susan G: A lot of industry folks performed analyses for previous legislation. It would be helpful to have those analyses, so please provide them to us.

50% Working Group SWOT Analysis Comments from the Environmental Working Group – Kevin P.

Assumptions

Lindsey Robinett Shaw, Montgomery County (Lindsey S.) asked if it was realistic to assume requirements would be met with resources and not ACP's.

Kevin P.: Yes, because REC prices are low.

Other questions regarding the assumptions included:

Will REC prices increase enough to cause ACPs?

How does RGGI fit in?

How does this interact with GHG Act?

Increase in emissions due to intermittency?

The effect of an increase in storage on emissions?

Role of offshore wind?

Impact on grid-wide emissions?

Looking at life cycle GHG or emissions?

Impact on EV's: Could higher electricity prices lead to higher vehicle emissions?

Potential loss of forested land as well as ag land should be considered.

Issue of in-state v. out-of-state generation – which one is better environmentally?

What is the risk of a 50 percent requirement?
How does 50 percent affect nuclear?

Specific topics discussed

Emissions

- Carbon pricing in addition to RGGI
- Effect of higher electricity prices on the use of EV v. gas vehicles
- Use of storage and effect on emissions, i.e., type of energy resource used for generation
- Use of life cycle analyses
- Concern that a higher level of RPS requirements could inadvertently lead to higher emissions due to emitting renewables
- Accounting for emissions reductions attributable to ACP investments

Siting/Operational Considerations

- Land use: prime farmland; forested land
- View concerns pertaining to tourism and/or glare
- Concept of proposing targeted areas for renewable development, possibly brownfields
- Restrictions due to DoD facilities (air space and glare)
- Note that not all project sizes/types face the constraints listed.

Availability of Generation

- Potential for “common mode” failure
- Intermittency of renewable energy
- Impact of the increase in requirements for VA and NJ
- Decommissioning schedule: who does retirement of plants affect the “50 percent by 2030” goal?
- Concern over the rate of growth, and the concept of RE capacity “caps”

Energy Storage

- Energy storage could be included in RPS in some way
- Concerns remain over storage safety

Transportation and Distribution Infrastructure

- Concerns over grid stability
- Environmental impacts of new transmission lines
- Additional investment in T&D infrastructure (strength to some; weakness to others)
- Resiliency seen as a benefit attributable to greater investment in distribution system; could facilitate recovery after natural disasters

- Net metering – expansion potentially increases availability of renewables; changes to net metering policies could affect the viability of projects

Environmental Justice/Social Responsibility

- Improvement in EJ through more equitable distribution of power generation
- Increase access to renewable energy for low-moderate income (LMI) populations
- Community Solar programs
- Attract socially responsible corporations to Maryland; DG infrastructure would also be a draw

PJM/FERC

- PJM needs to update the Renewable Energy Integration study
- Higher RPS could strain PJM and distribution interconnection process
- Need to be aware of the impact of the FERC/PJM capacity market designs on renewables
- Transmission constraints? Matthew Laroque, PJM (Matt L.) said previous transmission projects were primarily for reliability; current projects are mostly related to market efficiency

Group suggestions

- Survey successes and failures of other states' policies, acknowledging that Maryland may have a different renewable energy framework from those states
- Request that PJM update the renewable energy integration study performed approx. 2 years ago
- Categorize uncertainties, such as solar tariffs.

Comments

David T. mentioned environmental justice aspect; as well as DOD aspects

Audience asked about solar panel recycling? David Murray of MDV-SEIA said recycling is manufacturer-specific, but he notes the salvage value of the solar power plant is quite high.

50% Working Group SWOT Analysis Comments from the Economic Working Group – Ken Capps

Areas of consensus

- Need to consider the impacts of the RPS on different time scales
- Many impacts can be viewed both as possible threats and opportunities
- Assessing reliability is beyond the group's expertise, but concerns should be acknowledged
- Best to provide a range of potential ratepayer impacts, rather than one number
- Need to do better work w/communities where RE development has been proposed

Resources flagged

- Reliability - PJM's RE Integration Study conducted by GE
- Ratepayer Impacts - DHS's scoring of the RPS Bill (differing views on methodology used)
- Ratepayer Impacts – PSC's report on the cost of the current RPS
- Stability – PHI has applied for an ARPA-E grant to conduct a stability study for PJM

Specific topics discussed

Ratepayer impacts

- Best to provide a range of potential impacts, perhaps from ACP to current prices
- Hard to predict offshore wind costs today; only one project. But projects coming online soon; more data should be available soon...

Carve out(s)

- Economic benefits in MD are tied to the size of any carve out(s)
- Consider a carve-out for in-state biomass

Reliability and Stability

- Not sure where to put it in SWOT, but concerns should be acknowledged in report

Transmission and distribution - two sides

- PV may help to avoid the need for new transmission investments or create the need for new investments, including in distributed energy resource (DER) control equipment

Land use and ag industry – two sides

- PV/Wind can be a new source of income for farmers, tax income for counties
- 65% of ag land is rented by farmers, loss of ag land can have spillover impacts on support industries
- Opportunities to incentivize deployments on brownfields, rooftops, parking lots
- Need to do a better job of working with communities facing possible renewable energy development

Resource eligibility

- Expanding eligibility could mitigate RPS costs
- What is the role of large-scale hydro, black liquor, waste to heat, biomass?
- What is the purpose of the RPS? Is it to drive new RENEWABLE ENERGY development? What is "new"?
- Consider the role of non-emitting generation

Business Development – two sides

- Higher RPS may attract fortune 100 & 500 firms w sustainability goals
- Reliability concerns might scare firms away from locating in MD

Economic and Environmental Justice

- RPS should strive for equitable distribution of economic opportunities – e.g., rooftop PV, brownfields
- Most PV jobs related to installation
- Transportation and out-of-state generation are major sources of urban pollution

Time frame for impacts

- Need to think about different time frames
- Expanding market drives innovation, costs go down
- Climate change is a long-term threat

Risk avoidance

- RPS might mitigate exposure to future CO₂ legislation, natural gas costs

Follow-up Comments from the Whole Group

Mike V. discussed economic impacts, specifically to wages. He utilized the NREL tool (JEDI) for economic impacts related to projects.

There was a group discussion related to the possibility of higher rates for customers due to a higher RPS. California and Germany were cited for their high RPS and prices. Kevin P responded that these prices are not apples to apples comparison to Maryland's situation, because some of the are driven by policy, or in the case of Germany and Ireland, by taxes.

Mike V. brought up an anticipated decline in costs for solar due to technology improvements.

Andrew Gohn, AWEA (Andrew G.) stated that he has a white paper that demonstrates that a high RPS does not necessarily mean higher prices.

Bruce Burcat, Mid-Atlantic Wind Partnership (Bruce B.) stated that, in the Northeast in particular, the states already had high rates prior to their high RPS requirements.

Bill Fields, OPC (Bill F.) stated that a limited time of use rate is in the works.

In closing...

David T. said that today was only one scenario (50 percent), and other scenarios will be considered for SWOT analysis.

Kathy Magruder, Maryland Clean Energy Center (Kathy M.) said – why 50 percent?

David T.: Because that was the most viable legislation that was proposed.

Kathy M. Can stakeholders help develop methodology for formulas that determine outcomes, specifically economic models? Rate projections are straightforward, but what about economic impacts which are of importance to the state?

Kevin P.: We will be doing input/output models (JEDI and IMPLAN).

Kathy M.: Can the model be shared with the working group? The economic benefits to the state are going to drive the decision-making.

Shawn Seaman, PPRP (Shawn S.) asked about how to factor in coal (for example) emissions when comparing renewables.

Solar Industry Representative: What is the term which we are evaluating... 5 year, 25 year, 50 year?

David T.: It has not yet been clearly defined, but it will be.

David T.: Please send along comments

Audience comment: What is the tipping point in terms of the economic impact from higher RPS requirements? Should we be advising the General Assembly on percentages/timeframes?

Ken Capps: Thank you for your participation.