

**Maryland RPS Work Group Meeting/Webinar
April 26, 2018**

Agenda:

- Introductions (all)
- Study Requirements and Expectations (Susan Gray, PPRP)
- U.S. Renewable Portfolio Standards (Galen Barbose, LBNL)
- PJM Renewable Energy Integration Study (Ken Schuyler, PJM)
- 2017 Inventory of Renewable Energy Generation Eligible for Maryland RPS (Kevin Porter, Exeter Associates)
- What's Next (Susan Gray, PPRP)
- Closing Remarks (All)

Slides from the presentations are available at the RPS Study Work Group webpage (<http://dnr.maryland.gov/pprp/Pages/RPS-WorkGroup.aspx>). If there are additional questions regarding the presentations or the RPS study in general, email them to Susan Gray (susan.gray@maryland.gov).

Summary of Questions and Answers (Q&A) During the Presentations

Presentation: Study Requirements and Expectations (Susan Gray, PPRP)

Q: Will PPRP share the 2017 Renewable Inventory Report with the Working Group?

A: The Working Group will hear more about the 2017 Renewable Inventory Report during this WebEx. In addition, PPRP will circulate the draft to this Group for review and comment next week.

Q: Is PPRP encouraging or discouraging Working Group members to circulate materials among the group or should they go through PPRP? Is there an email distribution list?

A: PPRP encourages open communication, and an email distribution list will often be used for communication and dissemination of materials. To ensure consistency, however, there should be one person to circulate materials to everyone. Send any materials, documents or other information to Susan Gray first, who will then circulate it to the Work Group and as well as post necessary items to the Work Group website.

Presentation: U.S. Renewable Portfolio Standards (Galen Barbose, LBNL)

Q: Does the data show that Maryland has met the RPS?

A: Yes, that is what the data show. The Maryland RPS targets ramp up year by year, but the use of ACPs to satisfy the RPS has been limited or non-existent over the past several years.

Presentation: PJM Renewable Energy Integration Study (Ken Schuyler, PJM)

Q: Did the study contemplate storage online at the time?

A: The Study looked at the storage that was online and what was in the queue at the time of the Study. The Study determined that additional frequency regulating reserves would be needed to manage moment-to-moment variability of wind and solar generation, and that may present opportunities for additional storage.

Q: In regard to solar and wind, there was a comment about upgrading or a need for more transmission buildout. Is additional transmission capacity needed to accompany buildout?

A: Yes. The Study focused on the transmission system and concluded that under all of the Study's renewable energy scenarios, additional transmission is needed. This is because wind and solar resources are typically not located where load centers are.

Q: Where the high solar scenario assumes 50 GW, is there an indication across PJM as to the number of GW of solar? Over the last year, we've seen 20 GW of utility-scale solar enter the queue. Was this not included in the study?

A: The study was conducted in 2011; therefore, anything more recent was not considered. There was limited solar in the PJM queue as of 2011. The 14% scenario probably had 10 GW of solar.

Q: Does PJM compare their renewables approach to the nuclear approach? Are you confident that this effort will get PJM to zero emissions in the future?

A: PJM is technology and fuel agnostic. PJM does not prefer one over another. This study was conducted at the request of PJM stakeholders.

Presentation: 2017 Inventory of Renewable Energy Generation Eligible for Maryland RPS (Kevin Porter, Exeter Associates)

Q: Regarding the Solar supply in PJM, how recent that data gathered? Does it include the 20 GW of solar currently in the queue?

A: For the 2017 Renewable Inventory Report, the PJM queue data were gathered through December 2017. At that time, there was 21 GW of solar active in the queue for all of PJM, with 1,583 MW proposed for Maryland, excluding solar projects that were in-service or were withdrawn from the queue.

Q: Is a percentage factor applied to PJM projects in the queue to represent the amount of capacity that actually comes on-line?

A: Yes. Assumptions were made based upon the number of queue projects that have historically come to fruition. The exact methodology is discussed in the report.

Q: If we anticipate that the NJ Governor signs the most recent RPS bill, should we expect the deficit projected to be greater?

A: Yes, it will increase the deficit of Tier 1 non-carve out renewables.

Q: Should we assume the black liquor scenario, if we eliminated waste-to-energy, would it be a similar scenario?

A: While the elimination of waste-to-energy would increase competition of Tier 1 non-carve out resources, it would not be as severe as the black liquor scenario.

Next steps (Susan Gray, PPRP)

Slides from the presentations today will be posted to the RPS Study Work Group webpage (<http://dnr.maryland.gov/pprp/Pages/RPS-WorkGroup.aspx>). If you have any additional questions from today's presentations, email them to Susan Gray, who will compile the questions for the presenters.

1. PPRP will send out the 2017 Renewable Inventory Report as soon as possible.
2. PPRP will hold a feedback call on the 2017 Renewable Inventory Report.
3. PPRP will be reaching out to individual stakeholders regarding the RPS Study over the coming weeks.
4. The next RPS Study Work Group meeting will be held in person. A date and location will be announced in the near future.