

**DEQ Solar Energy Regulatory Advisory Panel (Solar RAP)**

July 20, 2010 Meeting

Draft Meeting Notes

**Location:** DEQ Piedmont Regional Office  
4949-A Cox Road  
Glen Allen, VA 23060

**Start:** 9:45 a.m.  
**End:** 12:35 p.m.

**RAP Leader/Facilitator:** Carol Wampler, DEQ

**Recorder:** Jennifer Perkins, DEQ

**RAP Members Present:**

Tom Smith, DCR  
Ray Fernald, DGIF  
Julie Langan, DHR  
Ken Jurman, DMME  
Rick Weeks, DEQ  
Larry Jackson, Appalachian Power/AEP

Cathy Snyder, Lockheed Martin  
John Hart, AEC Idom  
Dan Holmes, Piedmont Environmental Council  
Robert Meyers, Northampton County/Exmore  
Richard Street, Spotsylvania County/Fredericksburg  
Larry Land, VACO

**RAP Members Absent:**

Tony Watkinson, VMRC  
Ron Jenkins, DOF (attended afternoon session)  
Stephen Versen, VDACS  
John Daniel, Troutman Sanders/Invenergy  
Bob Bisha, Dominion

Scott Sklar, The Stella Group  
Richard Good, Solar Services  
Nikki Rovner, TNC  
Debra Jacobson, GWU Solar Institute  
Larry Lombardi, City of Norfolk

**Public Attendees:**

Oula Shehab-Dandan, Dominion  
Danette Poole, DCR (alternate)  
Eric Hurlocker, Williams Mullen  
Russell Deppe, DEQ-CO Enforcement  
Kelly McClary, DCR  
Tom Fitzgerald, Lockheed Martin/GWU Solar Institute  
Robert Bennett, US Green Energy (attended afternoon session)

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**Agenda Item: Opening Comments**

**Discussion Leader:** Carol Wampler, RAP Leader, DEQ

**Discussion:** Carol convened the meeting with a request for everyone in the room (RAP members and members of the public) to state their name and the organization/company that they represented. Then Carol provided a very brief review of the last meeting and welcomed everyone.

**Agenda Item: Overview & RAP Discussion**

**Discussion Leader:** Carol Wampler

**Discussion:** Carol used a PowerPoint presentation to present an overview of the RAP process, the currently-proposed Wind Permit-by-Rule (PBR), the meaning of “consensus,” and the path forward for the Solar RAP. She accepted questions throughout the presentation, which is described in greater detail below.

Carol provided a review of the main language directing DEQ to create a PBR for solar projects. She reviewed the definition of a small renewable energy project for the purposes of the Solar RAP (less than 100 MW). She noted that the statutory deadline is July 1, 2012, and that although this date may seem far away, the regulatory-promulgation process – which includes the RAP process – generally takes at least two years. She expressed a hope that the Solar RAP can move forward expeditiously in order to meet our statutory deadline.

Carol explained that until the PBR becomes a final rule,, the current practice with the State Corporation Commission (SCC) remains in effect for small solar projects. She provided a brief overview of the SCC process and mentioned the Highland Wind Project as a recent example from the wind arena of a project using the SCC process.

Carol then explained the new system of the PBR. In the PBR, everything that an applicant is required to do for the permit is supposed to be explained up front in the PBR regulation. If an applicant sufficiently meets these requirements (as determined by DEQ after consultation with DEQ’s sister agencies), then the applicant gets the permit coverage.

Carol provided a brief history of the PBR, which originated in the waste department. She noted a key difference between the waste PBRs and the PBR that the Solar RAP will be working on—mainly, that a complete application automatically gives permit coverage in the waste department. For the solar PBR, a complete application leads to consultation with the sister agencies and a determination on the sufficiency of the application. The applicant still needs to obtain all state regulatory permits. The PBR will address primarily wildlife and historic resources, in accordance with statutory provisions. Wildlife and historic resources, under current law, are the subject of advisory input from state agencies like DGIF and DHR for most projects.

Carol proceeded to review the basics of the PBR (the makeup of the PBR, the criteria from the legislation, and other general facts about PBRs). She reminded the RAP that, under the PBR, DEQ can require analysis for all natural resources, but can only make a determination of adverse impact and require mitigation and post-construction monitoring for impacts to wildlife and historic resources. Under the PBR, DEQ does not deal with siting the project, but does deal with the

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construction and operation phases, as well as the site plan of the project (how the applicant uses the site, but not where the applicant has the site).

Carol also noted the special challenges facing the Solar RAP. She mentioned that although the regulatory authority lies with DEQ, the substantive expertise is in DEQ's sister agencies. Most of the experience in renewable energy comes from outside the state government (e.g. private sector). Additionally, the Solar RAP has a relatively short amount of time to complete the PBR process.

Carol noted that this is the first time that a permit regulation will go to the Director of DEQ for approval, and not to a citizen board.

Carol recapped the original Wind RAP, which has already released a PBR for public comment. She explained that the group had agreement on all but three issues, and provided some background for the discussion surrounding those issues as it may impact the Solar RAP's discussions.

The RAP discussed that the current language in the Wind PBR may not transfer easily to solar because of the difference in the impacts.

A RAP member brought up the issue of stormwater runoff, and Carol noted that stormwater permitting remains as it currently is – with DCR and SWCD's -- and is outside the scope of the PBR. Stormwater permits would be one of the "environmental permits" that an applicant must certify he has obtained or applied for when he applies for the PBR.

The RAP also discussed the impact on the PBR of a change in requirements for a permit that an applicant is required to apply for prior to applying for the PBR. Carol commented that she believes that unless an applicant's noncompliance impacts the mitigation plan for wildlife and historic resources, noncompliance and other issues related to permits that the applicant applies for prior to applying for the PBR would be dealt with by the agency that issued the permit. The RAP discussed how multi-permit projects typically work and how that process would remain the same for the PBR.

Carol returned to her presentation. She presented to the group the determination made by DEQ's director that it should not be more difficult to permit a renewable energy facility than to permit other types of development unless there is a very good reason, a unique and special threat presented by the renewable energy facility to natural resources (chiefly wildlife or historic resources). Carol provided the issue of wind turbines' impact on bats as an example of a unique and special threat. Carol rephrased the concept as a threshold question, does the solar project present any greater harm than a different construction? If the Solar RAP finds that solar energy facilities do present greater harm, then the PBR needs to deal with this harm. If there is no special threat, then PBR protections are probably not called for. She asked the RAP to consider this threshold question in considering what, if any, PBR protections are necessary for wildlife and historic resources concerning PV solar projects.

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The RAP discussed the advisory role of wildlife and historic resource agencies in the permitting of other types of development. The RAP also discussed the conclusion reached by the original Wind RAP, in consultation with the Office of the Attorney General, that impacts to habitat would not be considered as part of the impacts to wildlife (and thus would not be part of the determination or mitigation sections), but could be required in the analysis section.

Carol then presented an idea box to help frame the PBR for the Solar RAP. The box is meant to help the Solar RAP members think of the PBR's need to balance the statutory goals of promoting renewable energy and protecting local resources, as well as the issues of legality and application in reality.

Carol provided some guiding questions for the Solar RAP members to consider throughout their meetings. If there are no special and unique threats, are the PBR protections needed and warranted? If there are special and unique threats, what PBR protections are needed?

Carol briefly discussed decorum and meeting etiquette – the need for all participants to show respect and courtesy toward all other participants, and to discuss issues in a constructive rather than argumentative manner.

Carol provided an overview of the Solar RAP process and guidelines for being on a RAP. She explained that, in the context of the RAP, “consensus” means that even though every member does not necessarily like a provision, they (1) can live with the provision and (2) will not oppose the PBR or the provision in another venue. She noted that reasonableness and time are part of part (2) of the working definition, and that the intent is to avoid such comments during the public comment period for the proposed PBR. Carol also explained that agencies are required to revisit their regulations, including PBRs, every 4 years.

Carol explained her role as the facilitator for the Solar RAP. She noted that, once consensus has been reached, the facilitator acts as an advocate for the proposal before the Director of DEQ. If consensus is not reached, then the facilitator explains the different views of the members before the Director of DEQ.

At the end of the presentation and discussion, Carol passed out blank index cards and requested that RAP members and the members of the public anonymously write down what they would like to see come out of the RAP process (i.e. specific issues they would like to see discussed/dealt with in the PBR, etc.).

**Break:** 10:48-11:04 AM

After the break, those RAP members and members of the public who arrived late introduced themselves.

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**Agenda Item: Overview & RAP Discussion (continued)**

**Discussion Leader:** Carol Wampler

**Discussion:** Carol reminded the RAP that solar projects over 100 MW would remain under the jurisdiction of the SCC. She then asked the RAP to begin thinking about a threshold under which there would be fewer or minimal requirements. She also noted that the renewable technology is itself a threshold question, with the Solar RAP dealing with electric generation only from sunlight.

The RAP members discussed how a project with multiple renewable sources would be handled by the PBR process. Carol noted that, for other renewable sources, historic and wildlife resources may not be the hot button issues, such that the PBR approval may not be the deal breaker for a project. For example, obtaining an air permit may be the most difficult task in permitting a biomass project.

The RAP then discussed whether the linkage of a project to the electric grid mattered as far as the PBR was concerned; i.e., should projects be exempt from PBR requirements if they do not connect to the grid? Carol noted that this was not currently the case, but that connection to the grid could be something the RAP used as a threshold question. It was noted that currently there are no statutory limits on net metering, that the limits are determined by the utility involved. It was further noted that some localities did not regulate self-generation, and only regulated projects that intended to sell electricity. A RAP member noted that the impact to natural resources is the same whether the project is connected to the grid or not. Carol noted that it is very important that the RAP members think about for what projects they want to have reduced requirements.

A RAP member asked about the land size per MW. Carol reminded the group that at the previous Solar RAP meeting, the estimate was given at 8-10 acres per MW. The Solar RAP had also agreed to discuss photovoltaic (PV) arrays for the PBR but to work on a provision that would trigger a process or greater review (if needed) for the other solar technologies. She also reminded the RAP that the regulation has to be reopened every 4 years and can otherwise be reopened via petition.

The RAP briefly discussed the legislation itself. Carol noted that if there is an insurmountable obstacle in the statute itself (e.g. if a resulting PBR was unworkable in reality) then it was possible that the legislature would modify the statute. A RAP member suggested that one way to think about the projects that would have reduced requirements would be to think about them first at the project level (e.g. projects on parking lots) and then to think about them at the MW or land size level.

Carol requested that the RAP members submit any regulatory language that they may come across or create that they felt would be useful in the creation of the PBR.

The RAP briefly discussed the difference between the potential use of sites like brownfields in the Solar RAP context versus in the Wind RAP context.

The RAP briefly discussed what reduced reporting requirements would mean in the context of the statute, which does not explicitly provide an exemption for certain sizes or types of renewable

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projects. Carol noted that the Office of the Attorney General advised that, under certain circumstances, the Department could determine that a full-blown PBR is not necessary to protect natural resources.

The RAP briefly discussed the definition of a “natural resource.” Carol remarked that an easy way to think about the definition is that it encompasses anything within the purview of the Secretariat of Natural Resources. The RAP also briefly discussed the extent to which solar projects create an impervious surface, which the group decided was dependent on the specific design of the specific project.

**Agenda Item: Summary of Photovoltaic Research & RAP Discussion**

**Discussion Leader:** Jennifer Perkins, Graduate Intern, DEQ

**Discussion:** Jennifer presented a very brief overview of her research pertaining to research on the potential impacts of PV projects as well as the current practices of other states in permitting PV projects. She noted that she could not find much material on the potential impacts of PV projects, and that the Department of Interior’s Tribal Energy and Environmental Clearinghouse provided a starting point for the majority of her research. Jennifer explained that there were time limits and other restrictions on her research, but that she had found only one journal article on the impacts of PV projects. She also explained that the fact that she had found only one article should not be construed as saying that no other articles existed.

She further noted that she had attempted to ascertain the lead agency, and the role of the wildlife and historic agencies as advisory or regulatory, in the permitting process of 14 other states. The majority of wildlife and historic resource agencies in other states acted in an advisory capacity during permitting reviews, much as is the current practice in Virginia. In several states, it was unclear in what capacity the wildlife resource agencies operated. Jennifer also noted that the State of Florida’s wildlife agency appeared to be regulatory.

A RAP member questioned where concentrated PV technologies fit in the spectrum of solar technologies as they relate to potential impacts on natural resources. Another RAP member volunteered to follow up on this question, as well as the question of the possible application of this technology in VA.

A RAP member questioned Jennifer as to the possible negative impacts of solar facilities mimicking water. Jennifer responded that she had come across that topic, but had been unable to find any information on it as far as PV arrays were concerned. She remarked it could be a potential impact for other solar technologies, but that it did not appear to be a potential impact for PV arrays.

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**Agenda Item: Introduction of Possible Historic Resource Provisions**

**Discussion Leader:** Julie Langan, DHR

**Discussion:** Julie explained that scale makes a big difference in impact potential. She noted that DHR had no experience reviewing large-scale PV projects, but had some experience reviewing small PV projects. She noted that DHR had more experience in reviewing wind projects than in solar, but believed that PV projects would present far fewer impacts to significant historic resources than wind projects. The main potential impacts seemed to be to archaeological sites and the visual effects on architecture. She explained that the issue of increased public access to archaeological sites, which had been mentioned in Jennifer's documents, was not an issue in VA since access already existed. Julie further explained that if really flat terrain is needed for PV projects, as it appears, then that would exclude many concentrations of historic areas and battlefields.

Julie did not believe that fixing of PV panels to existing historic structures was covered under the PBR statute. Thus, the potential impacts were largely a potential direct impact to archaeological sites and a potential indirect impact to architectural sites.

Carol noted that the threshold for special and unique threat to historic resources appeared to be clearer in the case of wind. Whether there is a special or unique impact on historic resources from PV solar projects is a threshold question that the RAP will want to discuss.

Julie explained that large PV projects have the potential to have a significant visual impact on historic resources simply because of their large size. Julie provided the example of a 40 acre PV project near a battlefield.

**Agenda Item: Introduction of Possible Wildlife Resource Provisions**

**Discussion Leader:** Ray Fernald, DGIF

**Discussion:** Ray explained DGIF's initial process of starting with the potential impacts discussed during the original Wind RAP and working backwards to remove impacts that no longer applied. He gave the example of the potential impact to bats from wind projects but not from PV projects. He further noted that threatened and endangered species need to be considered, as well as coastal birds. However, he noted that he did not think PV projects presented an operational impact in the same way as wind projects. He did not foresee a need for many follow-up studies but suggested that there may be increased requirements based on triggers like the presence of threatened and endangered species at a site. He believed that this could be discovered with a desktop analysis, and then without field studies, mitigation using the site plan/design could be accomplished.

Ray suggested that the post-construction monitoring could be as simple as measuring the number of a species at a site at the end of the construction phase, as species may continue to use the site after construction.

Ray noted that DGIF would have a better understanding of potential coastal issues after more discussion at the Offshore Wind/Coastal RAP.

Carol noted that the original Wind RAP embraced the threatened and endangered species trigger.

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Ray further explained that VA's threatened and endangered species law does not provide for pre-project permits for "take." There is no state incidental take process, but there is in federal law. Ray explained that there are two separate threatened and endangered species lists, one at the federal level and one at the state level. The species encompass all wildlife except for insects, since T&E insects fall under the jurisdiction of the Department of Agriculture and Consumer Services. He explained that the state list includes every species on the federal list, and estimated that about 50 species would apply to PV projects. Ray said that since the species on the list are scattered throughout the state, he could not provide a smaller estimate of species that might be particularly affected.

**Agenda Item: Public Forum**

**Discussion Leader:** Carol Wampler

**Discussion:** No one signed up for the public forum.

**Agenda Item: Close of RAP Business**

**Discussion Leader:** Carol Wampler

**Discussion:** Carol asked if there were any other concerns before the close of official RAP discussions.

A RAP member noted that he was concerned about the ability of localities to handle siting and permitting because of the new and unknown nature of renewable technologies. The RAP briefly discussed possible ways in which localities could obtain guidance in the permitting process at the local level.

An alternate RAP member asked how the PBRs would apply to state agencies who wish to construct renewable energy facilities on their sites.

The RAP adjourned its official business for the day. Following lunch, the RAP and interested members of the public would convene to discuss ideas for encouraging solar projects in Virginia.