

Virginia Department of Environmental Quality

Solar Permit By Rule Regulatory Advisory Group (RAP) Second Meeting Minutes October 7, 2019

Location: DEQ Piedmont Regional Office
Training Room
DEQ, 1111 East Main St. Richmond, VA

RAP Members Present:

Francis Hodsol for Jon Hillis; SolUnesco
David Krupp; Community Energy
Sarah Cosby for Richard Gangle; Dominion Energy
William Reisinger; (Maryland-DC-Delaware-Virginia Solar Energy Industries Ass. MDV-SEIA)
Dan Holmes; Piedmont Environmental Council
Judy Dunscomb; The Nature Conservancy
Joe Lerch, Virginia Association of Counties
Ken Jurman; Virginia Department of Mines, Minerals and Energy
Cliona Mary Robb, Virginia Solar Energy Development and Energy Storage Authority
Roger W. Kirchen; Virginia Department of Historic Resources (DHR)
S. René Hypes; Virginia Department of Conservation and Recreation (DCR)
Terrance Lasher; Virginia Department of Forestry (DOF)
Ernie Aschenbach; Virginia Department of Game & Inland Fisheries (DGIF)
Hannah Coman; Southern Environmental Law Center

RAP Members Absent:

Harry Godfrey; Advanced Energy Economy
John D. Hutchinson, V; Shenandoah Valley Battlefields Foundation

DEQ staff:

Trieste Lockwood
Mary Major
Tamera Thompson
Kerri Nicholas
Todd Alonzo
Christopher Egghart
Sharon Baxter
Irina Calos

Guests and Public Attendees:

Gray O'Dwyer
Denise Nelson
Jonah Fogel
Julia Campus
Bill Chamblis
Arlen Bolstad
Ray Fernald
Carrie Hearne
Sarah Vogelsong
Tim Faherty

1. Welcome and Introductions:

The meeting convened at approximately 9:30a.m. Trieste Lockwood, (DEQ), provided the framework for the day by outlining the issues to be addressed. RAP membership made introductions as well as the public attendees.

Ernie Aschenbach , (DGIF), provided a power-point presentation explaining the Permit by Rule; (see attachment 1).

William Chamblis, (SCC), provided a brief explanation of the role of the State Corporation Commission. Title 56 of the Code of Virginia contains the statutory authority for the SCC which has four primary areas of review and oversight with respect to energy: generation, transmission, distribution and storage. The SCC considers the PBR to cover the generation of the power only and that transmission is the purview of the SCC to determine if a certificate of public convenience and necessity is required for transmission connection associated with a small renewable energy project.

Joe Lerch (Virginia Association of Counties), provided a quick review of the concerns of the localities with respect to solar projects. They include: adjustments to the program for state agencies to cover costs, the need for time limits for approval for commencing constructions so that permits are not valid indefinitely, the need to track amount of forest and agricultural land being utilized by the solar projects, the need to track leased versus owned land, the need to track employment pre and post construction, the need for state agency support for information regarding decommissioning, assessing potential impacts to the Chesapeake Bay, erosion and sediment controls and the need for mandatory notification to county administrators prior to posting Notices of Intent. The group discussed the need for interfacing between agencies to ensure appropriate data base development for information integration and tracking land use impacts, especially designated prime agricultural and forestland.

Terrance Lasher (VDOF) explained the importance of forest lands to the Commonwealth; third largest economy but that on average 16,000 acres of forest is lost each year aggregating all sectors of development. He indicated that based on notices for solar projects alone, more than 17,000 acres would be lost due to just that type of development.

The RAP engaged in a discussion of land use, siting of facilities, need for mitigation of lost forest land, specific types of conservation areas identified in the Conserve Virginia data base, brownfields and the need for early coordination with state agencies to ensure that resources are being identified prior to development. The membership also identified the need for a better system of providing necessary information to localities, the developers and the public for better siting decisions. As in the first meeting, questions were raised pertaining to local government interaction and coordination with the state agencies regarding the state identified conservation lands, the siting of solar facilities on those identified lands as well as a discussion of private property owner timbering rights with regard to potential solar development on those lands.

Break for lunch at 12:00

Reconvened at 1:09 p.m.

After lunch, the RAP discussed specific items within the current PBR regulation that need clarification; (see attachment 2).

Public Comment: Comment from the audience was taken throughout the day's discussions as comments pertained to the topic being discussed.

The meeting ended at approximately 4:10p.m. The group will reconvene on October 21, 2019.

THE DGIF REVIEW PROCESS FOR DEQ SOLAR PERMIT BY RULE (PBR) APPLICATIONS



CONSERVE. CONNECT. PROTECT.

The Virginia Department of Game and Inland Fisheries (VDGIF), as the Commonwealth's wildlife and freshwater fish management agency, exercises law enforcement and regulatory jurisdiction over those resources, inclusive of State or Federally *Endangered* or *Threatened* species, but excluding listed insects. We are a consulting agency under the U.S. Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.), and we provide environmental analysis of projects or permit applications coordinated through the Virginia Department of Environmental Quality, the Virginia Marine Resources Commission, the Virginia Department of Transportation, the Federal Energy Regulatory Commission, the U.S. Army Corps of Engineers, and other state or federal agencies. Our role in these procedures is to determine likely impacts upon fish and wildlife resources and habitats, and to recommend appropriate measures to avoid, reduce, or compensate for those impacts.



DGIF pre-application guidance

- DGIF does not review nor comment on Solar project pre-application information.
- Pre-Notice of Intent (NOI) assessments are solely the responsibility of the applicant or consultant. For guidance pertaining to development of an Initial Project Assessment (IPA), please see our website <https://www.dgif.virginia.gov/environmental-programs/fish-and-wildlife-information-section/>.
- DEQ typically considers a project “active” after the proponent submits a NOI.
- Upon receipt from DEQ, we review the Permit By Rule (PBR) Application and provide comment directly to DEQ.
- Please coordinate with Ernie Aschenbach via email at ProjectReview@dgif.virginia.gov if you have any questions regarding this process.



We recommend that the proponent discuss project scope and eligibility for a Solar Permit By Rule (PBR) with DEQ Renewable Energy Program staff. For more information regarding this Permit By Rule, please see:

<http://www.deq.virginia.gov/Programs/RenewableEnergy.aspx>;

<http://www.deq.virginia.gov/Programs/RenewableEnergy/SolarEnergy.aspx>;

<http://law.lis.virginia.gov/admincode/title9/agency15/chapter60/>

Contact DEQ Renewable Energy Program:

Mary E. Major
Environmental Program Manager
Renewable Energy Permitting
Office of Regulatory Affairs
Virginia Department of Environmental Quality
P.O. Box 1105
Richmond, VA 23218
mary.major@deq.virginia.gov
Office: (804)698-4423
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DGIF general recommendations for PBR applications

- **Initial project assessment (IPA):** Applicants must address beneficial and adverse impact on natural resources (9VAC15-60-40 *et seq.*) and provide for agency review. For guidance pertaining to development of an Initial Project Assessment (IPA), please see our website: <https://www.dgif.virginia.gov/environmental-programs/fish-and-wildlife-information-section/>.
- **Cross-reference VAFWIS Bald Eagle nest presence/absence with CCB:** We recommend performing an updated search of bald eagle nests known from the area using Conservation Biology (CCB) website to evaluate whether active bald eagle nests are known from the project area: <http://www.cbbirds.org/what-we-do/research/species-of-concern/virginia-eagles/nest-locator/>.
- **Wetland, stream impacts:** If instream work or wetland impacts become necessary, we anticipate a Joint Permit Application (JPA) will be distributed for agency review. We will review and provide additional comments as appropriate.



- **Tree removal and T&E bats:** If tree removal becomes necessary, we recommend adherence to our standard tree removal – T&E bat guidance (coordinate with USFWS & check DGIF online bat tools).

<https://www.dgif.virginia.gov/environmental-programs/environmental-services-section/>

<http://www.dgif.virginia.gov/wildlife/bats/northern-long-eared-bat-application/> You will need to contact Troy Anderson, USFWS – Virginia Field Office, for guidance pertaining to USFWS – Initial Project Assessment (USFWS – IPaC).

Our recommendation for the protection of the state Endangered (SE) little brown bat and SE tri-colored bat is that all tree removal adhere to a Time of Year Restriction (TOYR), as described in our Best Management Practices for conservation of little brown bats and tri-colored bats:

<https://www.dgif.virginia.gov/wildlife/bats/little-brown-bat-tri-colored-bat-winter-habitat-roosts-application/>.

If the project proponent elects not to adhere to these recommendations, they may select the voluntary option to prepare a Conservation Plan in case incidental take occurs. For additional guidance we recommend the proponent refer to our Best Management Practices for conservation of little brown bats and tri-colored bats:

https://www.dgif.virginia.gov/wp-content/uploads/LBBA_TCBA_Guidance.pdf and contact DGIF Bat Biologist, Rick Reynolds, at (540) 248-9360 with any further questions.



- **DCR-DNH resources known from the region:** The applicant needs to conduct a preconstruction desktop survey of natural heritage resources within the disturbance zone. Therefore, we recommend coordination with VDCR-DNH regarding the protection of these resources.
- **Enhanced Native Vegetation & Grass Habitat Improvements:** We recommend using native plant-seed mix for all ground cover. We recommend contacting DCR-DNH for guidance on native plantings. We also recommend strict adherence to E&S controls during all land-disturbing activity.
- **Invasive species control plan:** We recommend invasive species control be included as an integral component of the native plant-seed mix planting and pollinator seed mix plan. Post construction monitoring and control of invasive species is recommended, based on site-specific conditions.
- **Coastal Avian Protection Zones:** The applicant needs to identify whether the proposed site is located within a Coastal Avian Protection Zone (CAPZ; 9VAC15-60-60 *et seq.*).
- **Mitigation Plan:** We recommend the applicant explain how potential impacts to the above-referenced resources will be addressed (avoided, minimized, mitigated) in the project mitigation plan.



- **Wildlife passage through the fenced site:** We recommend documenting wildlife travel corridors and observed passage prior to construction activities and encourage the consultant/applicant to coordinate with DGIF regarding wildlife fencing that allows ingress and egress to the enclosure. Adaptive strategies may include lowered overall fence height in wildlife corridors and dividing large contiguous sites with single perimeter fencing into smaller fenced sub-parcels.
- **Fence design recommendations:** We remind the applicant that under certain conditions wildlife (e.g., deer) may seek refuge within or become entrapped within fenced enclosures. To address white-tailed deer concerns, perimeter fences around solar facilities should either be no more than 61" high OR greater than or equal to 96" (8') high. Fences lower than 61" should provide free ingress and egress of deer. Fences of heights between 61" and 96" are more likely to entrap deer that are motivated to enter but not leave. Hunting deer is prohibited by law within any area having fences higher than 61" (29.1-525.1, 4VAC15-90-291). Fences over 96", if properly maintained, should exclude deer so that they do not become entrapped. Maintenance along the bottom of an exclusionary fence is critical to prevent deer incursions: fences should be erected tight to the ground and any gaps should be filled with rip rap or other barriers.



The sections of Code of Virginia (29.1-525.1) and Virginia Administrative Code (4VAC15-90-291) cited in our PBR recommendations pertain to construction of fences to intentionally confine deer, and to prohibition of hunting within such enclosures. Except for these circumstances, there is no law or regulation under which VDGIF can prohibit, require, or condition construction of fencing for projects such as solar energy facilities.

The recommendations we submit regarding design of fences around solar energy facilities are provided as a service to DEQ and to project applicants, to advise them of our recommendations to prevent incidental confinement of deer within their fenced enclosures, and to facilitate wildlife movement around and/or through such facilities. The Code and regulatory citations are provided as references, and to confirm that hunting within enclosures that do not comport with these recommendations (e.g., greater than 61 inches in height) is prohibited.

To summarize, our recommendation is that the fence enclosures at solar facilities should either be 61 inches or less in height, so that deer will have easy ingress and egress to/from the enclosure; or that the fence (including barbed wire if desired) be at least 96 inches in height, so that deer would not normally enter the site to begin with. These are VDGIF's recommendations to efficiently and safely manage deer at these facilities: VDGIF has no statutory or regulatory authority to enforce these recommendations. That said, we encourage all applicants to abide by these recommendations, and we encourage DEQ to include our recommendations as a condition of the PBR. Authority to do so, however, rests solely with DEQ or local authorities, not with VDGIF.







We recommend localities evaluating solar energy development projects encourage the developer, consultant, or applicant consider the following potential wildlife impacts:

Wetland, stream impacts: If instream work or wetland impacts become necessary, we anticipate a Joint Permit Application (JPA) will be distributed for agency review. We will review and provide additional comments as appropriate.

Tree removal: If tree removal becomes necessary, we recommend adherence to our standard tree removal – T&E bat guidance (coordinate with USFWS & check DGIF online bat tools) protective of T&E bats known from the region:

<https://www.dgif.virginia.gov/environmental-programs/environmental-services-section/>

<http://www.dgif.virginia.gov/wildlife/bats/northern-long-eared-bat-application/> Applicants need to contact Troy Anderson, USFWS – Virginia Field Office, for guidance pertaining to USFWS – Initial Project Assessment (USFWS – IPaC). [USFWS CONTACT INFO?]

<http://www.dgif.virginia.gov/wildlife/bats/little-brown-bat-tri-colored-bat-winter-habitat-roosts-application/>

Wildlife Passage through the fenced site: We recommend documenting wildlife travel corridors and observed passage prior to construction activities and encourage the consultant/applicant to coordinate with DGIF regarding wildlife fencing that allows ingress and egress to the enclosure. Adaptive strategies may include lowered overall fence height in wildlife corridors and dividing large contiguous sites with single perimeter fencing into smaller fenced sub-parcels.

We remind the applicant that under certain conditions wildlife (e.g., deer) may seek refuge within or become entrapped within fenced enclosures. To address white-tailed deer concerns, perimeter fences around solar facilities should either be no more than 61" high OR greater than or equal to 96" (8') high. Fences lower than 61" should provide free ingress and egress of deer. Fences of heights between 61" and 8' are more likely to entrap deer that are motivated to enter but not leave. Hunting deer is prohibited by law within any area having fences higher than 61" (29.1-525.1, 4VAC15-90-291). Fences over 8', if properly maintained, should exclude deer so that they do not become entrapped.

Potential Lake Effect: It has been suggested that contiguous aggregate of panels could result in avian impacts known as "lake effect," in which birds may mistake the reflective solar panels for a water body. Waterbirds are especially at risk because some species require a running start on the water surface and cannot take off from the ground. Further search and study of available scientific literature is recommended. Post construction monitoring may be recommended, based on site-specific conditions.

Potential Thermal-Island Effect: It has been suggested that potential "thermal island" impacts may result from large solar facilities, similar to thermal-island resulting from large paved parking areas. To date, there has been relatively little scientific analysis of those effects. Further search and study of available scientific literature is recommended. Post construction monitoring may be recommended, based on site-specific conditions.

Enhanced Native Vegetation, Plant Pollinator Species, & Grass Habitat Improvements Plan: We recommend the applicant prepare and implement a plan using native plant-seed mix for all ground cover. We recommend the consultant/applicant contact DGIF and DCR-DNH for guidance on native plantings and pollinator seed mixes.

- **Invasive species control plan:** We recommend invasive species control be included as an integral component of the native plant-seed mix planting and pollinator seed mix plan. Post construction monitoring for invasive species is recommended, based on site-specific conditions.
- **Strict adherence to Erosion and Sediment Controls:** We also recommend strict adherence to E&S controls during all land-disturbing activity.

Initial project assessment (IPA): Based on the instructions in the Permit By Rule (PBR) guidance, applicants must address beneficial and adverse impact on natural resources (9VAC15-60-40 *et seq.*) and provide for agency review. As we do not routinely pre-screen project sites for potential environmental/wildlife impacts, any pre-Notice of Intent (NOI) assessments are solely the responsibility of the applicant or consultant. For guidance pertaining to submitting project review requests to DGIF, please see our website: <https://www.dgif.virginia.gov/environmental-programs/environmental-services-section/>

- **DCR-DNH resources known from the region:** The applicant needs to conduct a preconstruction desktop survey of natural heritage resources within the disturbance zone. Therefore, we recommend coordination with VDCR-DNH regarding the protection of these resources.

Cross-reference VAFWIS Bald Eagle nest presence/absence with CCB: We recommend the applicant perform an updated search of bald eagle nests known from the area using William and Mary Center for Conservation Biology (CCB) website to evaluate whether active bald eagle nests are known from the project area: <http://www.ccbirds.org/what-we-do/research/species-of-concern/virginia-eagles/nest-locator/>

Coastal Avian Protection Zones: The applicant needs to identify whether the proposed site is located within Coastal Avian Protection Zone (CAPZ; 9VAC15-60-60 *et seq.*).

Mitigation Plan: We recommend the applicant explain how potential impacts to the above-referenced resources will be (avoided, minimized, mitigated) addressed in the project mitigation plan.





THE DGIF REVIEW PROCESS

Please call me if you have any questions. Thanks

Ernie Aschenbach

Environmental Services Biologist

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Virginia Department of Game & Inland Fisheries

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Application Issues for Solar RAP Discussion

The underlined and italicized language represents DEQ's thoughts on each topic at this time and these points are intended to help cultivate discussion.

Current Definitions needing modification, definition, and/or clarification:

"Applicant"

- Just use this term
- Suggestion: Legal entity who is responsible, including contact information and process for notification if ownership transfers. Ask for a registered agent, including contact information.
- Responsible party (=legal entity) and point of contact, which should be updated within 30 days of when it changes ("change of contact requirement")

"Developer, Owner, Operator"

Suggestion: applicant is catch-all for applicant, developer, owner, operator. Should clarify that consultant submitting for applicant is not the applicant.

"Commence commercial operation"

Suggestion: Within 30 days of first sending power to the grid (not test power; tie to PJM definition)

- Look for other definition in code or from PJM, essentially it is when you are selling power that is no longer test power

"Commence construction"

- Consider including land-clearing/tree removal
- Suggestion to look at reversibility of each part of this process: timbering vs land-clearing.
- Note that options are often 5 years.
- DHR: within reason, access roads are fine—people need access to the site to conduct studies in preparation of development.
- Consider which rules should apply to wetlands (there are silvicultural and ag exemptions)
- Emphasized that landowners won't take out stumps for no reason, and that timbering is different hen land clearing as it's less reversible

"Modification"

- **Consider change of ownership/project plan**

"Application certification"

- Consider a statement similar to what is currently required in air permitting:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering and evaluating the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

"Notice of Intent"

- Define when it should be submitted
- Could require an annual update and fee
- Could include how much land is forested, agricultural, or other
- Should it be received prior to land use permit?

- Possibly ask if applicant has already submitted application to county for land use. Ask if applicant has an estimate for when the project will move forward (for annual update)
- Could state that NOI has to be submitted minimum of 30 days (or similar) before application

Additional information needed with application submittal:

1. Cover letter containing name, contact information of individual receiving authorization.

2. Signed Application certification.

Suggestions: GIS datasets? Digital application submittal?

Issues that need timeframe clarification:

1. Timeframe for applicant to notify DEQ after receipt of incomplete determination of their intent to correct deficiencies.

2. Timeline for updates to incomplete application

3. Ask for a plan for how deficiencies will be addressed within a certain number of days after incomplete determination. Allow some flexibility if the applicant remains in communication. Remind applicant that DCR analysis expires after 6 months. Suggestion: within 30 days, provide DEQ notice of intent to proceed, and provide a plan to address deficiencies within 90 days.

2. Timeframe for invalid PBR if applicant has not commenced **continuous** construction or requested an extension from the department.

Note: in air permitting, this is 18 months with one 18 month extension (possibly longer?)

Suggestion: substitute “ongoing construction” or “land-disturbance” for “continuous construction.”

3. Timeframes for phased construction.

4. Post construction map submitted within 60 days of commencing operation.

5. Submittal of final interconnection agreement and studies submitted within 30 days of receipt.

Issues under Analysis of impacts to natural resources:

1. DHR Cultural Resources:

- Conduct a Phase I historic resource analysis and receive approval by DHR prior to submitting application. (currently, this is already in guidance)
- Clarify when a mitigation plan should be developed/adhered to (typically DHR tries to provide comments within 30 days)
- Possibly state that if DHR does not make determination within 30 days, presumption is in favor of consultant’s statement

2. DCR Natural Heritage Review:

- Conduct Habitat Scorecard
- Conduct cost benefit analysis of planting vs. not planting pollinator/native grasses
- Consider having a standard formula for analysis so that we get a consistent comparison

Content of Operating plan:

- Include emergency procedures/contact information if operated remotely

Content of Mitigation plan:

- Approved by DHR prior to submittal
- Highlight resources that need to be avoided- okay to clarify a checklist of things that need to be avoided and ask for clarity around the mitigation plan
- Basically, DEQ is requesting an *actual* mitigation plan, and/or a 1-pager summary of the mitigation plan.

- Suggestion that submitting a mitigation plan is not a requirement in the absence of finding environmental/natural heritage impacts. Question: does avoidance necessitate a mitigation plan? Yes. If you have identified resources to avoid, the mitigation plan is required.

Public Comment Required for a complete application:

- Conduct public meeting during evening hours
- Post application documents on the internet; identify URL in public comment notices
- Provide a timeline for public comment process
- Ask local government and developer to enhance outreach to EJ communities.
- Can we put it in the reg that the developer shall consult with the local government to identify sensitive communities and hold at least one outreach meeting to reach that population?

Change of ownership/modification criteria:

- An Administrative amendment fee for change of ownership
- Footprint changes and changes to impact/natural resources
- Should every modification go out for public comment?
- Suggestion that a change in ownership shouldn't require public notice, comment, fee.
- Suggestion that a modification could be required if a change in operations impacts resources
-

Recordkeeping/Reporting:

- Notification of commence construction within 30 days
- Notification of commencing operation within 30 days
- An as-built map post construction within 90 days
- Demonstration of completed mitigation-
 - o Revisit components of the mitigation plan 60-40
- 30 days to supply address any information requested by department for compliance issues
-

Permit termination:

- Consider an expiration date and/or a permit renewal requirement
- Criteria for a PBR termination/Enforcement language