Virginia's Permit By Rule, Distributed Wind, and Financing Options

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PBR materials provided by Carol Wampler

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Wind Project Permitting

- **Federal**
- **State**
  - Air?
  - Waste?
  - Water?
  - Renewable Energy – *Wildlife & Historic Resources*
- **Local**
  - Land Use
  - Health, Safety, Welfare

State Permitting: Virginia's Permit by Rule Approach

DEQ's Small Renewable Energy Projects Permit by Rule

2009 Legislation Gave DEQ Authority

Wind PBR Regulation Finalized December 2010

9VAC15-40

Agency Guidance on DEQ Website:

http://www.deq.virginia.gov/Programs/RenewableEnergy.aspx

Renewable Energy PBR Legislation

§10.1-1197.5 et seq.

Directs DEQ to develop by regulations
"permits by rule . . .
for the construction and operation
of small renewable energy projects,
including such conditions and standards necessary
to protect the Commonwealth's natural resources."

Key Terms in DEQ's Statute

- "Small Renewable Energy Projects"
- "Construction and Operation"
- "Permits by Rule"
- "Protect Natural Resources"

What is a

"Small Renewable Energy Project"?

Small Renewable Energy Projects: Wind

- A “small renewable energy project” has rated capacity not exceeding **100 MW**.
- SCC retains jurisdiction over projects with rated capacity >100 MW.
- Both SCC and DEQ have minimal or no requirements for projects **<5 MW**.

"Construction and Operation"

"Construction & Operation"

- §10.1-1197.6.A gives DEQ permitting authority over **CONSTRUCTION** and **OPERATION** of small renewable energy projects.

- DEQ has **no** statutory authority over **SITING** and **DECOMMISSIONING** (usually local government jurisdiction).

What is a "Permit by Rule"?

A Permit by Rule is…

- Expedited permitting process originally used by DEQ for certain solid waste facilities.
- Regulation stating up front the criteria that applicants must meet – “one size fits all.”
- Requirement that applicant submit docs/certification that has met requirements.
- Requirement that DEQ review submission within 90 days, in cooperation with sister agencies.
- If complete & adequate, then DEQ notification to applicant that project is authorized under the PBR.

Unlike the SCC Process, A Permit by Rule is Not…

- An individual permit/approval.
- Site-specific.
- Based on a case-by-case technical analysis.

DEQ PBR Statute

Sets forth 14

PBR requirements

each applicant must meet.

PBR Criteria §10.1-1197.6.B

1. Notice of intent.
2. Local-government certification – *project complies with land use ordinances.*
3. Interconnection studies.
4. Final interconnection agreement.
5. PE certification of generation capacity.
6. Analysis of impacts on NAAQS.

PBR Criteria

(Continued)

7. Analysis of impact on natural resources.
8. Determination of likely significant adverse impacts; mitigation plan & post-construction monitoring.

PBR Criteria

(Continued)

9. PE certification of design.
10. Operating plan.
11. Site plan.
12. Certification re environmental permits – *applied for or received.*
13. Public meeting.
14. Public comment period.

"Protect the Commonwealth's Natural Resources"

KEY STEPS:

(PBR requirements #7 & #8)

- **Analysis** of likely natural-resource impacts
- **Determination** of significant impact
  - Wildlife
  - Historic resources
- **Mitigation** & post-construction monitoring

Taken together, these key statutory terms and provisions direct DEQ to accomplish <u>two goals</u> . . .

Statutory Goals

- **Promote renewable energy** – Provide certainty, timeliness, reasonable regulatory requirements via a permit by rule.

- **Protect natural resources** – Provide enforceable standards that are protective of wildlife & historic resources at/near project site.

Note . . .

Neither current SCC process nor DEQ's new PBR approach:

- Abrogates applicant's need to obtain state regulatory environmental permits.

or

- Removes from local-government jurisdiction issues like siting, health, safety, nuisance.

Advantages of the PBR Approach

What do stakeholders potentially achieve in the Wind PBR?

Is the regulation . . .

- *Flexible?*
- *Certain?*
- *Timely?*
- *Reasonable?*
- *Protective?*

Local Government's Authority

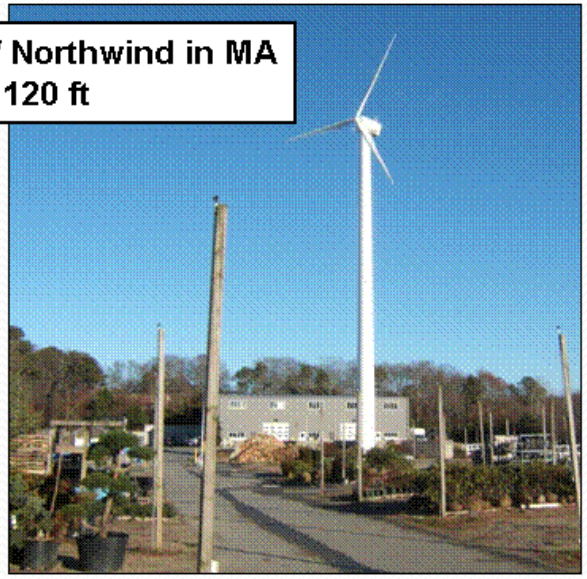
- Siting
- Decommissioning
- Health, Safety, Welfare, & Nuisance

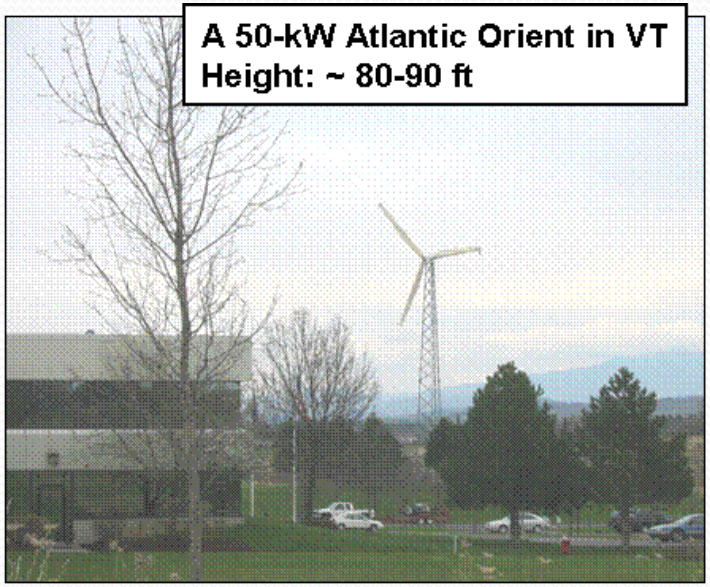
Questions from Local Governments

Distributed Wind Generation

What is Distributed Wind Generation?

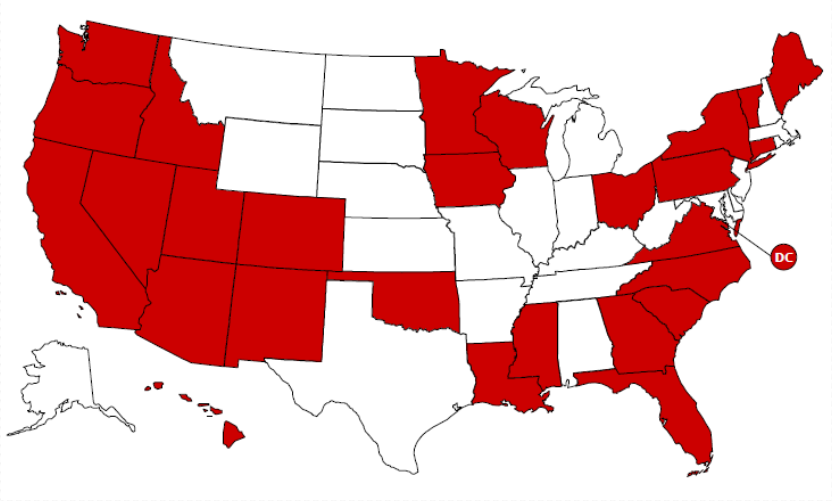
- Wind turbines that are installed at or near the point of end-use, to support local energy demand or the distribution grid.
- Wind turbines that are connected behind the meter of a residential, agricultural, or commercial customer, directly to the local distribution grid, or even off-grid in a remote location.
- Wind turbines that provide a direct benefit and opportunity, in terms of both power production and economic advantage to the community within which they are installed.





Net Metering

- Virginia is one of 27 states where net metering is on the table. Net metering provides an opportunity to connect a renewable energy (RE) generator behind the meter.
- Virginia customers of investor-owned utilities (IOUs) may net meter up to 20 kW (residential) or 500 kW (commercial).
- Net metering allows for excess power generated to be exported to the grid and credited toward one's power bill.
- Net metering improves the economics of a RE system.

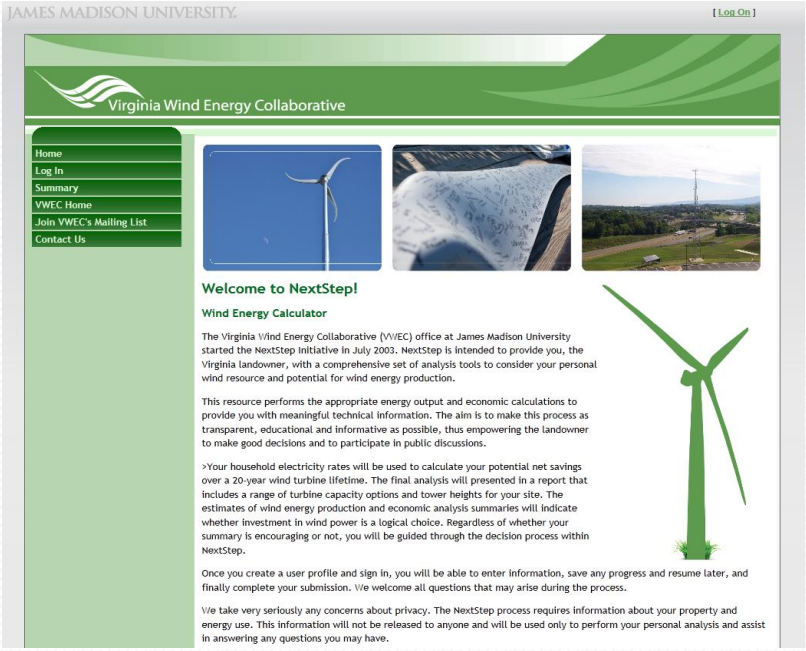


Costs

- **Residential wind turbine (1-20kW):** $10,000-75,000 installed
  - Most of the cost is in the tower
  - Production vs. height
- **Small commercial wind turbine (20-100kW):** $75,000-650,000 installed
- **Community scale wind turbine (100kW-1.5MW):** $650,000-5,000,000 installed
- **Large scale wind turbine (1.5-10MW):** $3,000,000-8,000,000 installed (per turbine in a farm)

Words of advice

- *Match your turbine to your:*
  - *energy needs*
  - *wind speeds*
  - *budget*
- *Go to* ***http://nextstep.cisat.jmu.edu*** *for an online tool to help!*



Financing DW Generation

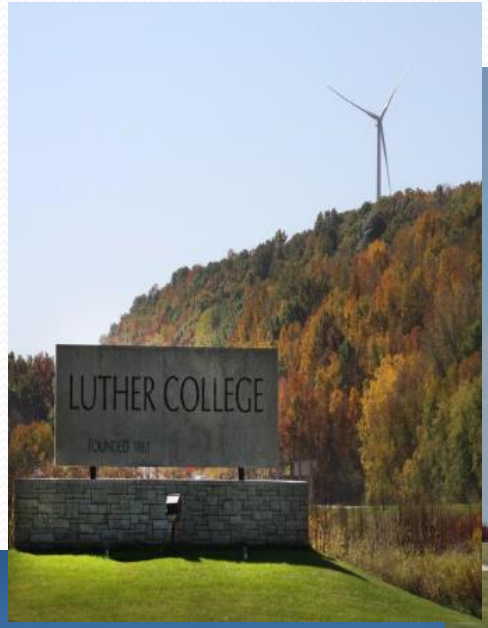
- State revolving loan fund
- RE property grant fund (authorized, not yet funded)
- Property Assessed Clean Energy (PACE) funding (not currently available)
- New Markets Tax Credit (NMTC)
- Rural Energy for America Program (REAP)
- Federal loan guarantees
- Federal tax credit (set to expire 12/31/16)

A 660-kW community system in Hull, MA, less than 10 miles from Boston.

The Iowa Experience

The Iowa Experience

The Iowa Experience



The Iowa Experience

The Iowa Experience

The Iowa Experience

- REAP investments, 2003-2013
  - 647 wind projects
  - Grants totaling $69,640,803
  - Loan guarantees totaling $45,422,876
  - Leverage amount $627,575,736
  - Total project cost $741,972,182
- Iowa incentives
  - Wind and other RE facilities tax credit ($0.015 per kWh)
  - Wind energy facilities tax credit (PTC of $0.01 per kWh)
- Installed wind capacity: 5,177 MW, 3rd in the nation
- Wind projects online: 101


Visit http://www.dsireusa.org/
http://windpowerVA.org
http://offshorewindVA.org
Questions ???