

Improving Evaluation and Permitting of Large Energy Facilities



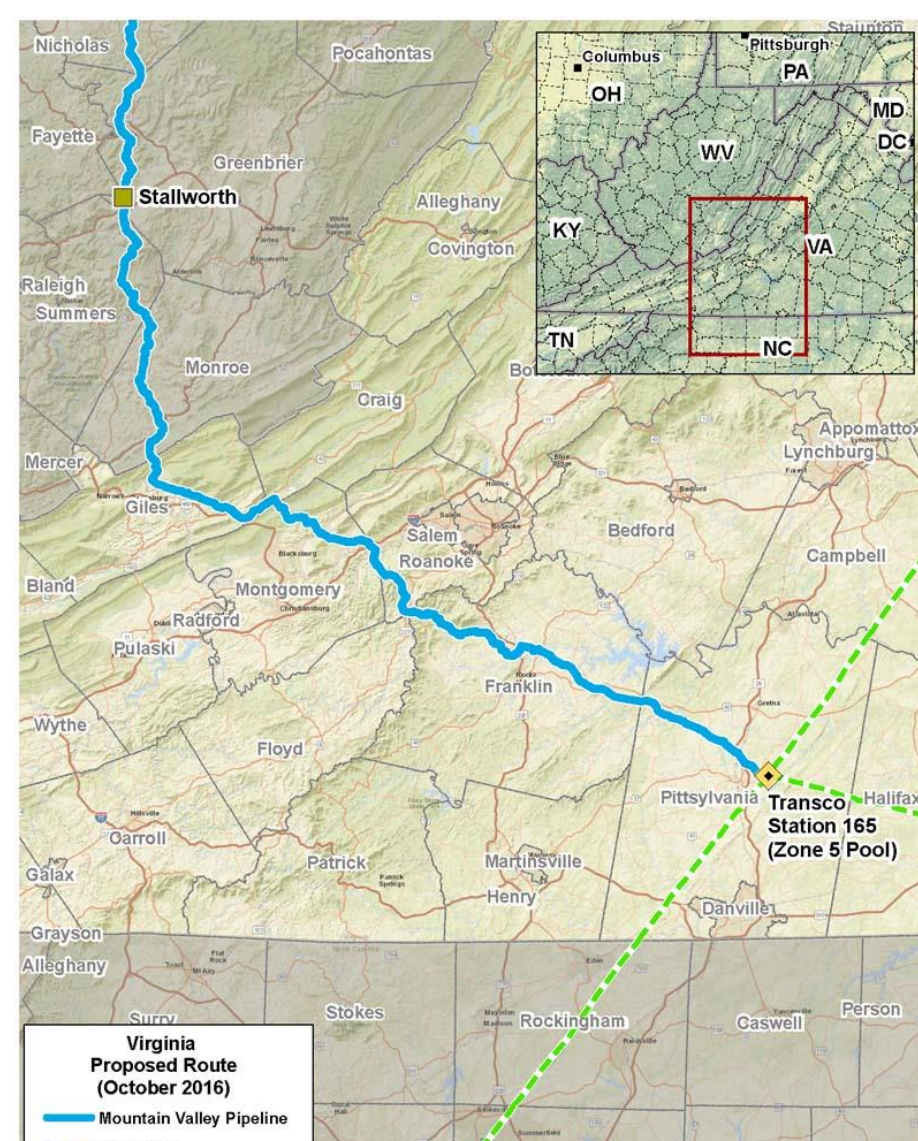
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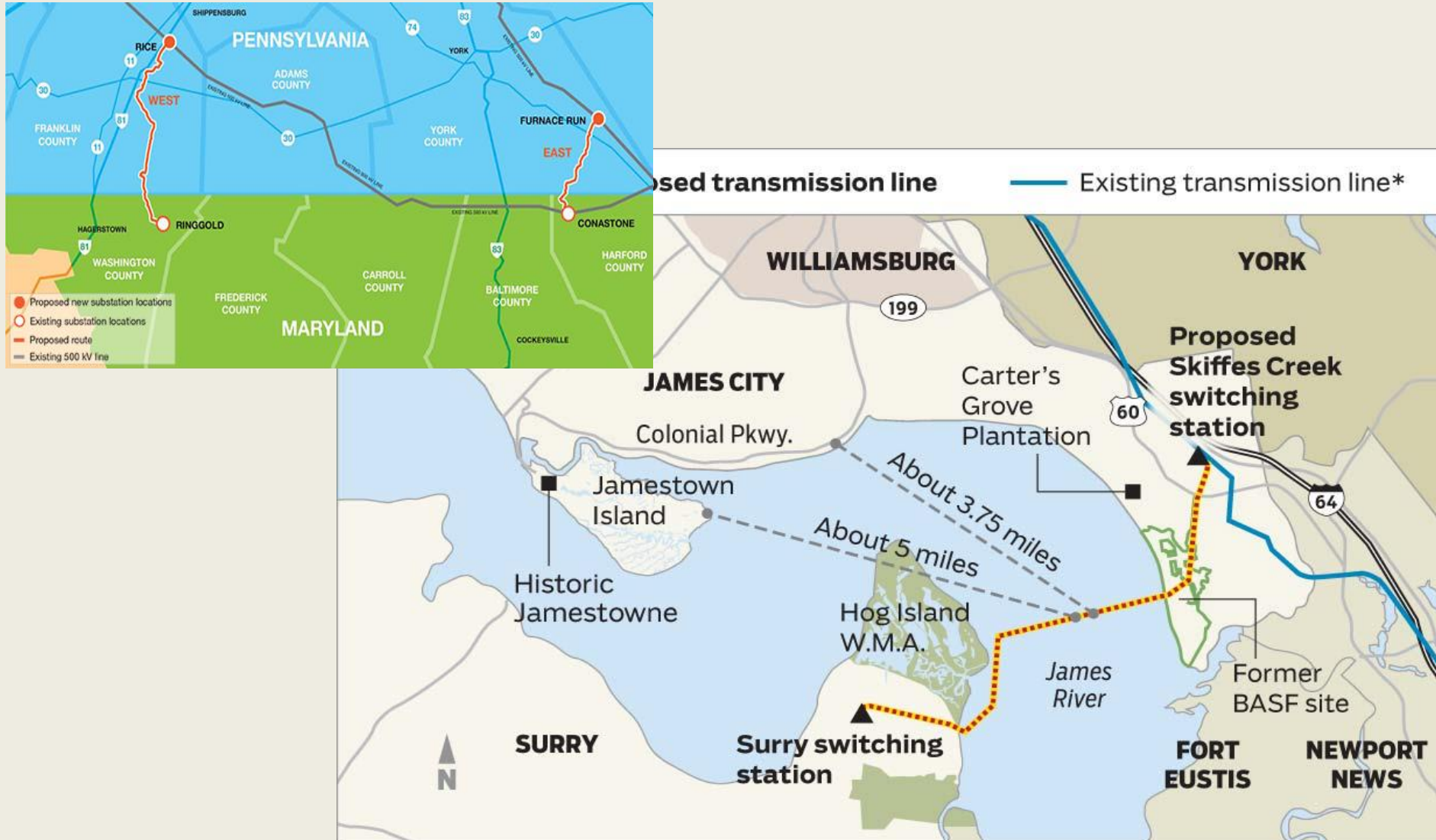
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Pipelines & More Pipelines



More Electrical Transmission Projects



Current Approach

- A series of one-off decisions by federal and state regulators – FERC, PUCs, State DEQs and DNRs.
- Largely reactive to proposals by applicants.
- Frequently opaque to the public (and even to state agencies themselves).
- Mitigation is *ad hoc*, driven by proponents' willingness to deal.

A Better Approach

DEFINE THE LANDSCAPE OBJECTIVES AHEAD OF TIME

- Government agencies should make effective use of their legal and policy tools to define important landscapes and watersheds, recognizing that such efforts can support their future reviews of energy facilities. States and federal agencies should use datasets and planning tools to identify priority areas by type and habitat spatially (including by watershed).
- Defining landscape objectives in advance of any applications makes it possible to derive the most benefit from approval processes for electricity transmission lines, gas pipelines, or solar or wind facilities.

A Better Approach

CHANGE THE CONCEPTUAL APPROACH TO PERMITTING

State agencies often focus only on specific permit requirements (e.g., impacts of individual stream crossings, acreage impact on crossings of state-owned forest lands), an approach that does not facilitate looking at broader direct and indirect impacts and cumulative impacts of the project as a whole. An improved approach to project permit review processes should support:

1. Expanded identification of important areas for project developers to avoid;
2. Defining potential project impacts on a landscape-wide, cumulative basis, not just permit-by-permit;
3. Defining mitigation for the whole project with respect to these impacts.

New Pipeline and Electric Power Transmission Proposals Could Mean Opportunities for

- Better Siting Choices
- Better Decisionmaking
- Meaningful Mitigation at Scale

Chesapeake Conservation Partnership

Opportunities to Improve Landscape-Scale Mitigation for Energy Projects in the Chesapeake Region

Section 401 Water Quality Certification

SECTION 401 PROVIDES STATES WITH SUBSTANTIAL AUTHORITY OVER FEDERALLY-PERMITTED PROJECTS

- Use “purposes and policies” of state laws.
- Define landscape level mitigation per adopted rigorous models to link to water quality outcomes.
- Issue upland 401 certification guidance.
- Require individual certifications where multiple uses of NWP/SPGPs.

Q. How would these recommendations change current practice?

FERC Decisions on Alternatives and Mitigation

IMPROVE FERC EVALUATIONS AND DECISIONMAKING

- States and other commenters should apply well-supported, consistent landscape analyses and consistent mitigation methodologies based on natural heritage priorities and state-approved water quality/habitat models
- Update FERC's 1999 Natural Gas Pipeline Policy to add natural resource protection goals, co-location and alternatives, minimization of landscape fragmentation

Q. What would persuade FERC to evaluate (1) alternatives, and (2) robust mitigation conditions? What would improve this?

Public Utility Regulation

PROVIDE MORE ROBUST CONTENT TO PCN REVIEWS

- Define siting criteria:
 - Alternative siting requirement for routes
 - Preference for avoidance, minimization, then defined offsets
- State agency coordinated review – preferences for disturbed lands/co-location
- PUC role in safety enforcement – opportunities for advance activities

Q. How best to give content to standards such as: “minimum adverse environmental impact” (PA), “due consideration” to “esthetics” “historic sites” “air quality and water pollution” (MD), “reasonably minimize adverse impacts” (VA)?

Adopt Statewide Mitigation Policies

ADOPT STATEWIDE POLICIES FOR MITIGATION

- Adopt for broad range of resource types
- Sequencing: Avoid, minimize, compensate
- Goals? -- No net loss? Net benefit? Public Trust?

Q. How is such a statewide policy best adopted – what method would be most effective, most permanent? What would affect all parts of state government (including independent commissions, utility regulators)?

Natural Heritage Improvements

OVERCOME “REACTIVE” APPROACH

- Define landscapes and prioritized protection for each habitat type – build into heritage explorer/data manager mappers and databases
- Connect State Wildlife Action plans with mitigation by region
- Model/voluntary approaches for best practices – siting, design, ops

Q. How to handle tradeoffs of public data versus closely held natural heritage data?

Q. Are there key habitats we cannot or should not do this for?

Forest Conservation

FOREST CONSERVATION/OTHER HABITAT TYPES

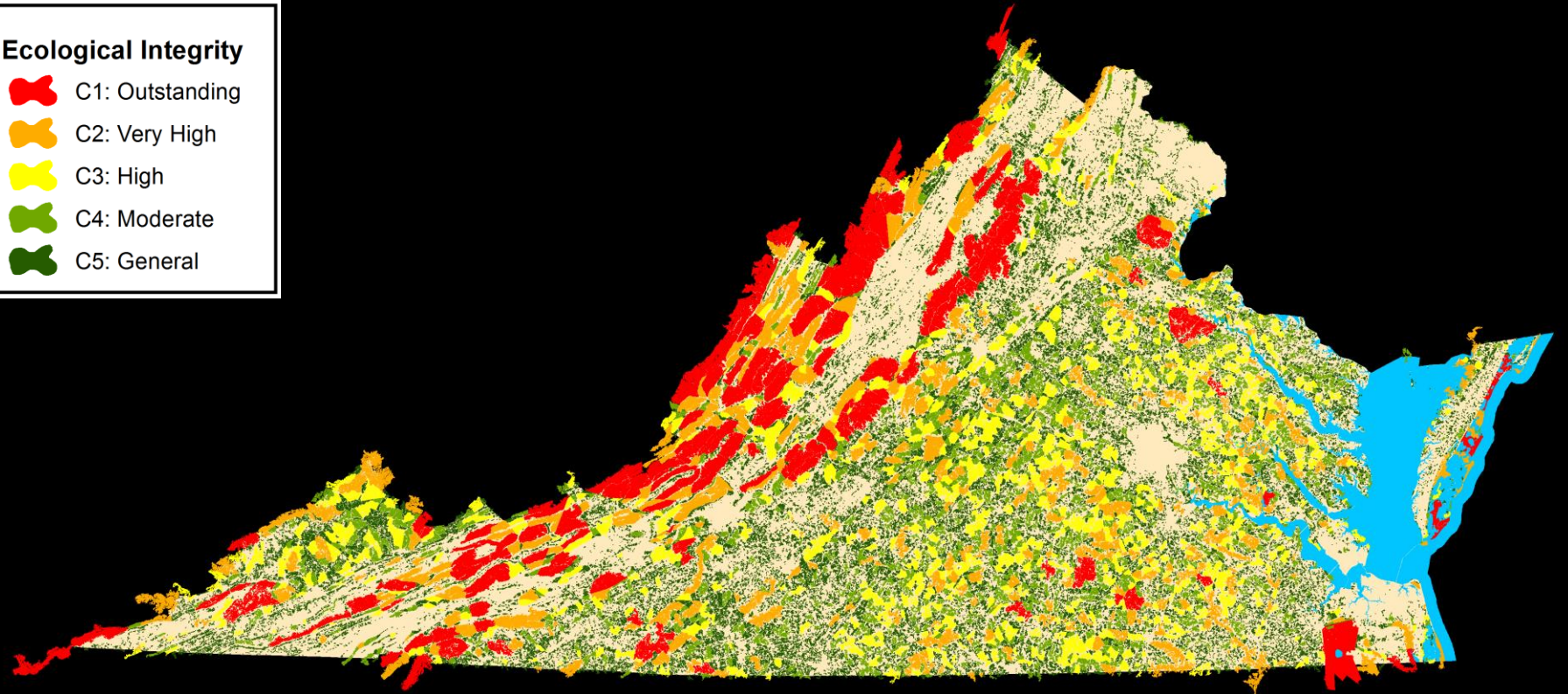
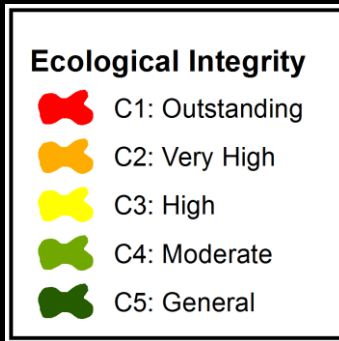
- Require impact evaluation as part of 401 WQC methodology.
- Account for indirect impacts
- Adopt additional forest conservation requirements
- Public trust – includes forest lands

Q. How difficult would it be to conduct impact evaluation? How closely can it be linked to water quality and habitat models?

Example – Virginia Forest Mitigation

VA DCR

Analysis of Direct
and Indirect Impacts
for Pipeline
Mitigation



Virginia Forest Mitigation Procedure

Impacts

Direct Impacts – lost forest in the footprint

- Loss of the ecological function
- Loss of the ecosystem services

Indirect Impacts -- fragmentation

- Diminished ecological function
- Diminished ecosystem services.

Ratios for Forest Mitigation

Activity	Forest Habitat Class	Direct Impacts	Indirect Impacts
Afforestation	C1-C2 Cores	5:1	n/a
	C3-C5 Cores	3:1	
	Non-Cores	1.5:1	
Avoided Deforestation	C1-C2 Cores	7:1	4:1
	C3-C5 Cores	5:1	2:1
	Non-Cores	3:1	n/a
Forest Habitat Improvement	C1-C2 Cores	n/a	3:1
	C3-C5 Cores		1.5:1

Easement Lands

EVALUATE/MITIGATE OCCUPATION OF CONSERVATION EASEMENT LANDS

- Limitations/exclusions from state eminent domain absent findings of physical necessity, lack of alternatives.
- Define compensatory mitigation – cumulative impacts, not just acreage
- Consider legal definitions on wind/solar siting on easement parcels

Q. When appropriate? What kinds of trade-offs should public be getting?

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