

Background

As states look to increase electric generating capacity to meet increasing demand and economic development and environmental policy goals, the issue of siting has become increasingly contentious. New clean power projects located on undeveloped “greenfields” are more likely to encounter public opposition. Using previously degraded lands to site clean energy generation facilities – a practice commonly known as “brightfield” development – presents an opportunity for states to balance new resource deployment with greenfield preservation. To date, however, project developers have been leery of degraded lands. Absent favorable policy, they may continue to forgo brownfields for conventional greenfield sites. By crafting policy that encourages energy facility siting on degraded lands, states can achieve three goals in concert: greenfield preservation, brownfield remediation, and sustainable power generation.

Policy Opportunities

1. *Build upon existing programs.*

Policymakers should undertake an inventory of clean energy or land reuse initiatives within the state before designing a brightfields program. Numerous states have stalwart brownfield programs and proven clean energy incentive programs. While these may not encourage brightfield development directly, they can be adapted to do so. Rather than creating new programs, including brightfields within existing policies can be an effective strategy to expedite deployment.

2. *Commission a feasibility study.*

Policymakers may be unaware of the resources existing in their state. As a preliminary step, policymakers can commission a feasibility study. Studies can evaluate the social and political context of clean energy project development, as well as energy market conditions within a state to first determine if brightfield projects are economically and socially viable. Studies should also inventory and map degraded sites. Effective studies will additionally analyze clean energy potential, site suitability, and estimated costs of development. Preliminary studies are critical because they can expose state specific obstacles and suggest policy recommendations for crafting programs that align with the state’s specific circumstances to maximize success. Commissioning a study can involve appropriating state funds to allow a contractor or state agency to carry out the research.



A 158-unit, 237 MW Wind Farm on the Dave Johnston Coal Mine, Wyoming.

Photo Credit: Chet Skilbred
Source: [Wyoming DEQ](https://www.wyomingdeq.gov/)

3. Create and publish a database of available sites.

For brightfield development to occur, developers must be equipped with detailed information on available sites. State environmental agencies can compile site information into a single database to facilitate brightfield projects. States may have existing databases of degraded sites, but they may be fragmented and difficult to access. To successfully promote brightfields, databases should be easily accessible, comprehensive, and include information that is useful and relevant for energy project developers.

4. Define clean energy generation as a permitted use.

Local zoning ordinances may not include energy generation as an approved use on degraded lands. This requires that project developers obtain a zoning variance, thereby protracting the approval process. State policymakers can clarify, in statute, that clean energy development on degraded land is a permissible use, regardless of local zoning.

5. Waive state voluntary cleanup program fees for brightfield developers.

State voluntary cleanup programs (VCPs) allow independent developers who are remediating or redeveloping low risk contaminated properties to receive benefits like liability protection, tax relief, and technical assistance. VCPs often require that developers seeking to participate pay an application fee. To encourage participation and improve access to VCP liability protections, states could pass legislation creating a VCP fee waiver for clean energy project developers.

6. Create specific liability relief provisions.

States can expand existing liability protections to include tenants, current operators, and lessees of a contaminated site who did not contribute to the contamination, as these would be more likely to apply to energy developers. Because statutes typically do not include language addressing energy generation directly, policymakers could add liability protections expressly for brightfield developers.

7. Expedite state environmental review.

State environmental review policies, often mimicking National Environmental Policy Act (NEPA) requirements, can create hurdles for deploying clean energy projects on degraded lands. Like NEPA, state policies include categorical exemptions for projects that typically have little to no significant environmental impact, allowing these projects to circumvent the often arduous creation and review of an environmental impact statement (EIS). Policymakers can adopt an exemption for projects constructed on degraded sites, removing this hurdle for brightfields projects.

8. Create an educational campaign for energy project developers.

Lack of information is an important barrier to development on degraded lands. Developers are frequently unaware that such properties are available, and developers may not be aware that energy facility development is allowed on contaminated lands. To ensure that a state's policies to promote brightfield development are capitalized upon, it will be crucial to inform developers of the availability of such sites and programs.

9. Provide direct technical assistance to communities and developers.

Municipalities and prospective developers will likely have specific questions throughout the brightfield planning and construction process. To address these as they arise, state energy, economic, and environmental agencies can create programs to provide direct technical assistance related to site remediation, liability, available incentive programs, and other state policy initiatives to promote brightfield development. This can be performed by dedicated staff or contractors.

For more information on brightfields development:

https://cnee.colostate.edu/wp-content/uploads/2024/10/Brownfields-to-Brightfields_FINAL.pdf