

Erik Glenn, executive director of the Colorado Cattlemen's Agricultural Land Trust, and landowner Keven Turecek watch the sunrise on the Great Plains east of Denver, the future renewable energy transmission super highway. CCALT worked with Turecek to place a conservation easement on his Stacked Lazy Three ranch that is compatible with transmission lines.

DJ GLISSON, II

orking in the nation's most densely populated state keeps a land trust busy. For six decades the accredited New Jersey Conservation Foundation (NJCF) has worked hard to defend the state's woodlands, wetlands and farmlands against sprawling development like rural corporate parks and what Executive Director Michele Byers calls "cornfield Colonials." But now a new form of development looms.

Land conservation groups around the nation are confronting explosive growth in energy infrastructure—transmission lines, pipeline corridors, fracking operations, wind farms and utility-scale solar arrays. A September 2016 article in the *PLOS ONE* scientific journal (see Resources) predicts that the rate of energy development in coming decades could far surpass the rate of urban and residential development between 1970 and today. By 2040, lands affected by new energy development could exceed the area of Texas.

Energy infrastructure projects pose complex challenges and unavoidable conflicts for land trusts. "They face an urgent need to engage and be well-versed in energy siting and transmission issues," notes Ethan Winter, New York senior program manager with the Land Trust Alliance. "Yet land trusts can use these opportunities to increase credibility and relevance."

Challenging Conservation Easements and Preserved Lands

NJCF received its wake-up call when representatives of a proposed 118-mile gas pipeline approached the land trust for survey information. The pipeline would run through the Delaware River Valley of Pennsylvania and New Jersey, crossing 4,300 acres of preserved land. Donors and landowners soon began calling NJCF, Byers recalls, to say, "'We thought these lands were permanently preserved; aren't you going to defend them?' It put us right on the spot."

NJCF contracted out a needs analysis for the pipeline, which found New Jersey did not need additional natural gas supplies. "There's a big risk of overbuilding [infrastructure]," Byers says, "and creating stranded assets." With partner organizations, NJCF launched a campaign against the pipeline that generated unprecedented public support, raising more than \$10 million. The Rethink Energy NJ campaign now works to stop unneeded fossil fuel infrastructure, educate residents about the need for a swift transition to renewable energy and ensure that those projects are sited in an environmentally appropriate manner.

After nearly three years of persistent effort to defeat the pipeline, Byers learned of a major victory (while being interviewed for this story!): The state Department of Environmental Protection had closed the project's application. However, the win may be short-lived. Byers still expects that the pipeline company will receive its public need certification from the Federal Energy Regulatory Commission, institute eminent domain condemnation action against NJCF and more than 200 landowners and reapply for the needed permits.

Gas pipelines, with their clear-cut corridors, compressor stations and threats to water quality, can degrade the ecological and scenic values of conserved lands. Yet land trusts like NJCF have discovered that few preserves or easement lands are exempt from being condemned for energy development.

Blair Calvert Fitzsimons, chief executive officer of the accredited Texas Agricultural Land Trust and a Land Trust Alliance board member, believes, "We need some protections as a land trust community against condemnation." Expanded shale fracking has generated a web of new pipelines across Texas, and wind farm transmission lines now number more than 600.

Only in cases where the state has purchased development rights through the Texas Farm and Ranch Lands Conservation Program do landowners have some protection against condemnation, which that program deems a "method of last resort." Frustrated that she has nothing to offer other landowners, Fitzsimons plans to work with other land trusts in the state and approach the Texas Legislature seeking parameters on the use of eminent domain for conserved lands. That won't make them immune to condemnation, she notes, but it would force energy companies to explore alternate routes and adhere to prescribed practices.

With ranch owners that have developed the mineral rights beneath their lands, Fitzsimons works to strengthen surface-use agreements. Texas is the only major energy-producing state not to have any statutory protection restraining surface damage. Land trusts "need to be

NEW JERSEY CONSERVATION FOUNDATION/ROBERT BELL

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Local community members gather for New Jersey Conservation Foundation's annual Donald Jones Hike in 2016 and to learn about the proposed PennEast pipeline route. The theme of the post-hike party celebrates "pints not pipelines."

A NEW REALITY LAND TRUSTS FACE EXPANDING Energy Infrastructure



Tug Hill Tomorrow Land Trust (accredited) hosted Alliance staff at Maple Ridge Wind Farm, a utility-scale wind project in New York.

aggressive in working with companies on site reclamation," she says, and to remember that "reclamation is a process not a project."

Fitzsimons collaborates with range biologists and attorneys specializing in mineral development to hone and disseminate best practices for site reclamation—such approaches as reducing impervious cover, using erosion mats and reseeding with native seeds. In some instances, she says, it's even possible to "make lemonade from lemons," creating a more desirable habitat through the reclamation process.

Even best practices have their limits, though, in a state where 97% of lands are privately owned and energy development is rapidly accelerating. It can be hard for a land trust or landowner, Fitzsimons says, when "you have no recourse."

Working with Industry

Colorado is an epicenter of new energy development and Erik Glenn, executive director of the accredited Colorado Cattlemen's Agricultural Land Trust (CCALT), acknowledges that "we're facing all of the challenges." CCALT currently has five land projects involving transmission lines for utility-scale renewable energy, and he says pipelines "are starting to ramp back up since the administration changed in January."

Transmission lines and pipelines can coexist with agricultural or open space easements, in Glenn's experience, but they become far more challenging in settings with significant wildlife habitat and scenic values. He finds oil and gas extraction projects easier in terms of agricultural easements because the land use is temporary and remediation standards are clear. At CCALT, he says, "We struggle a lot with how large-scale renewable generation can be compatible with easements."

Energy proposals are a concern both for existing conserved lands and for prospective easement projects at CCALT. A proposed transmission line, for example, recently prompted the Natural Resources Conservation Service "to abandon an easement project in priority sage-grouse habitat because the former administration determined that expanded renewable energy infrastructure was a higher priority over habitat protection for the sage-grouse," says Glenn.

Siting of transmission lines can get highly political, and Glenn has found that renewable energy often wins out over species preservation. The challenge, he says, is to "think more creatively about how to achieve renewable energy goals but still do really good conservation." In some cases, for example, CCALT has asked an energy company to cover easement acquisition costs when grant funders preclude energy projects.

In areas with many conserved properties, siting new infrastructure is particularly challenging because corridors can't easily be shifted to adjoining lands. "We've got to think beyond the four corners of the easement property," Glenn reflects, to consider impacts and siting alternatives on a regional scale.

To date, there has been little dialogue with those engaged in energy development. The land trust community, Glenn asserts, "needs to get serious about really transparent discussions with industry—outlining needs on both sides and looking for solutions that work for the land and for a growing population that demands more energy."

Planning for Inevitable Change The hard truth is that humans' growing need for energy will have an impact on

Resources

"Energy Sprawl Is the Largest Driver of Land Use Change in United States," http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0162269

"When Forever Proves Fleeting: The Condemnation and Conversion of Conservation Land," www.massland.org/files/When%20Forever%20Proves%20Fleeting.pdf

"Siting: Finding a Home for Renewable Energy and Transmission," http://americaspowerplan.com/wp-content/uploads/2013/09/APP-SITING-PAPER.pdf

Federal Energy Regulatory Commission, www.ferc.gov/resources/get-involved.asp

Contact Ethan Winter at ewinter@lta.org for the recommendations of the Renewables on the Ground Roundtable (expected in October 2017).

lands. Alongside lands directly developed for energy generation and transmission is the intensifying threat of climate disruption—upending ecosystems, accelerating extinction rates and inducing ever-more catastrophic weather events.

That threat prompted the accredited Nature Conservancy to get more involved in climate mitigation work. When New York adopted a Renewable Energy Standard in 2015 mandating a target of 50% renewable energy supply by 2030, "The Conservancy jumped in with both feet," observes Cara Lee, a senior conservation manager, recognizing that the ambitious vision outlined would "run on the shoals without addressing appropriate siting."

In 2016 the Conservancy teamed up with the Alliance for Clean Energy NY to convene a "Renewables on the Ground Roundtable" to foster intense discussion among several conservation groups (including Scenic Hudson (accredited), Open Space Institute (accredited) and American Farmland Trust), clean energy advocates, wind and solar developers and land use experts. Charged with drafting principles within nine months, the group recently met its deadline, outlining current barriers to renewable energy development and recommending what should be done to address them.

The Roundtable's summary will help state agencies, energy developers, conservationists and community leaders in New York—and potentially other states—navigate the complex, dynamic landscape of energy development. Lee sees land trusts as critical "thought leaders in their communities around these issues," a perspective shared by the Alliance's Winter. Community reactions to energy projects can be highly subjective, he notes, and often focused on perceived economic benefits. "Land trusts play an important role in identifying potential impacts on water quality, wildlife and cultural resources as informed by good science."

With support from the Doris Duke Charitable Foundation and the New York State Conservation Partnership Program, Winter is working with Kelly Watkinson, the Alliance's climate change program manager, to better understand how undeveloped lands in New York might foster



Through careful work with landowners on site reclamation, Texas Agricultural Land Trust has been able to enhance habitat in some cases following oil or gas drilling.

natural climate solutions (e.g., agricultural soils and forests serving as carbon sinks) and potentially serve, where appropriate, as sites for community-supported renewable energy development. The Alliance's Land and Climate Program also focuses on the role of natural lands in fostering resilience and climate adaptation through strategic protection of wildlife habitat and of wetlands, riparian buffers and coastal areas that can help absorb extreme rain events and storm surges.

New York aspires to follow the lead of California on renewable power, but California has a far larger land base for energy development and much more infrastructure in place. For densely populated states like New York and New Jersey, siting new projects will be particularly challenging.

Across the country, state land trust associations are stepping up to develop and share expertise on questions involving land use regulations and energy policies. But even those with energy experience can find it hard, Winter says, "especially when there is uncertain legal guidance, weak regional planning and shifting goal posts in terms of state-level policy, federal incentives and market drivers."

Land trust representatives "are eager to learn," in Lee's experience, "but don't know where to start and feel a little overwhelmed." A recent survey of New York land trusts found that just under half are starting to form renewable energy policies for their conserved lands and less than 10% have incorporated renewable energy into strategic planning.

Their reluctance is understandable. Inescapable tensions arise between the

societal and climate change benefits that these projects promise, which accrue at a regional and global scale, and the very local impacts development has on open space and community character. "There is a lot of work to be done to close that gap," Lee notes.

Tensions can be assuaged when communities directly experience the economic benefits of solar and wind facilities—gaining decades of predictably low electricity prices that can, in turn, draw new businesses and generate jobs.

Winter suggests that land trusts look at the potential for co-benefits—where renewable energy might enhance the existing values of a conserved parcel. He cites the example of the accredited Brunswick-Topsham Land Trust in Maine, which installed a 76-kilowatt solar array on its Crystal Spring Farm preserve last year. By supplying clean power for the farm and seven other local households, this "community solar" project will help keep the farm operation sustainable while reducing the local carbon footprint.

Land trusts can find mutually beneficial opportunities, and will have to—given the staggering projections for energy development in coming decades. Many will find themselves, as NJCF did, working to defeat specific projects while openly endorsing increased energy efficiency and some new development—carefully sited—for renewable power. NJCF sees its role now as convincing more people that "saving energy saves land and money."

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