Comparing the Benefits and the Costs of Energy Development

Jonathan A. Lesser

As best I can tell, opposition to new energy infrastructure—including pipelines, electric generating plants, high-voltage transmission lines, and the like—is de rigueur among the better class of environmentalists these days. Whatever, wherever, and whenever a new development is announced, someone or some group will immediately denounce it as endangering something, somewhere, somehow.

Of course, living itself has an environmental cost, and some environmentalists go so far as to decry the human race's "anthrocentrism" (our desire to survive) as the source of all our environmental woes. Beneath the rancor, however, lies an important question: how can environmental costs be measured against the benefits of energy resource and infrastructure development?

It is particularly ironic that this question has come up in connection with the burgeoning renewable energy industry. Renewable energy—wind, solar, geothermal, and so forth—is environmentally "friendly," but somehow delivering the electricity generated by those technologies has become problematic. The *New York Times* put it deftly: "The dirty secret of clean energy is that while generating it is getting easier, moving it to market is not."[1]

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The difficulty in wheeling electricity generated from renewable resources to the end-user lies in the regulatory processes used by states to approve siting for new infrastructure. Siting and environmental agencies—sometimes working together, sometimes not—typically impose stringent requirements that new infrastructure provide measurable benefits to, or at least not impose any harm on, the public. In some ways, of course, this makes perfect sense because it appeals to the notion of balanced costs and benefits. Saddling one group with environmental costs while another group enjoys all of the benefits violates our idea of basic fairness. But we appear to have reached the point where seemingly minor environmental costs can derail projects that can provide huge overall benefits.

Some states have imposed complex siting requirements that require developers to "prove" their projects are beneficial. Pennsylvania law requires developers to "[e]xplain how the benefits of the proposed facility significantly outweigh the environmental and social costs imposed within this Commonwealth as a result of the proposed location."[2] That explanation has to include *all* environmental costs, including the "impacts on 'sensitive' populations (i.e., children and the elderly)," "quality of life issues (odors, noise, and traffic congestion)," and even considerations of "environmental justice."

Similarly, Vermont requires that new electric and gas infrastructure development "not have an undue adverse effect on esthetics, historic sites, air and water purity, the natural environment and the public health and safety" and, moreover, that such infrastructure "is required to meet the need for present and future demand for service which could not otherwise be provided in a more cost effective manner through energy conservation programs and measures and energy-efficiency and load management measures."[3] In other words, when it comes to energy infrastructure, for Vermont, energy conservation is the answer until proven otherwise.

The vagueness of siting and permitting laws such as these is staggering. For example, in a case involving

Jonathan A. Lesser, PhD, is a partner with Bates White, LLC, an economic and litigation consulting firm in Washington DC. He can be reached at (202) 747-5972, or via e-mail at jonathan.lesser@bateswhite.com.

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development of a new landfill in Berks County, Pennsylvania, former Chief Judge Krancer stated as follows:

> Among the various benefits, some are easy to quantify and others are not. Some are too "intangible" to measure, others are not. Moreover, while some supposed benefits might theoretically be expressed in dollar amounts, others cannot. Some of the "benefits" are financial while others are aesthetic. Aesthetics cannot be measured at all in any consistent way. To one person the Mona Lisa is a timeless masterpiece, to another it was not worth the trip. (*County of Berks v. Commonwealth of Pennsylvania, Department of Environmental Protection*, EHB Docket No. 2002-155-MG, March 31, 2005 [Concurring Opinion of Chief Judge and Chairman Michael Krancer], at 70)

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Judge Krancer's words are compelling. After all, how can we possibly evaluate considerations of aesthetic impacts or considerations of environmental justice? Yet, evaluate we must—not only because various agencies require us to do so but because such comparisons of costs and benefits are always made, one way or another, directly or not. The best way to make those comparisons, if they must be made, is monetarily. The only better alternative—rewriting siting and permitting laws in ways that eliminate their ethereal requirements—is unlikely to occur. These requirements remain in place because they are politically expedient and provide regulatory cover for the rejection of any development that is not to the liking of particular (i.e., powerful) constituents. Such outcomes are hardly "fair" or in the public's best interest.

Of course, opponents of rigorous cost-benefit analysis will recoil in horror. How, they ask, can we value Grandma's life, which may be cut short by exposure to pollution, or place a value on biodiversity, our children's health, and so forth? The answer is simple: we do it all the time, through the choices we make in our daily lives. Moreover, opponents of cost-benefit analysis are not at all reluctant to impose their own values on those same ill-defined and "intangible" things like "life." For example, some versions of the 1970 Clean Air Act (CAA) amendments imposed requirements that emissions standards be based on technical and economic feasibility. Those versions were jettisoned in favor of the adopted language requiring emissions standards to be based on protecting "public health and welfare," a laudable goal, but one that could hardly be less vague.

Basing decisions to build new energy infrastructure only on the "public health and welfare" criteria removes the *benefits* side of the economic cost-benefit equation. From society's standpoint, that may be fine. In fact, one case, *Lead Industries*,[4] set legal precedent when the Supreme Court ruled that cost-benefit analysis for some CAA regulations was *prohibited*. A non-economic goal—in that case, protecting the health of children—was determined to be paramount, regardless of the costs it imposed. At least with public health concerns, one can measure some outcomes, such as infection rates, birth and death rates, and other similar items. Concepts like "environmental justice" or "environmental racism" look only at the cost side of the equation: these terms are an entree into the Humpty-Dumpty world where concepts mean whatever someone decides they mean.

If we are to provide the energy people need to live, we need new infrastructure—not only new transmission lines but also new pipelines and generating plants. Contrary to what environmentalist and other interest groups contend, we are not faced with, nor should we allow ourselves to be forced into, propositions of economic well-being or environmental quality. Development plans that take economic benefits into consideration—lower energy prices, improved reliability, and so forth—also bring us closer to meeting statutory requirements for improving public health and welfare.

Some environmentalists believe that a "sustainable" future means one in which we never use fossil fuels, metals, and any other nonrenewable resource. How ironic, then, that we are now faced with the prospect that access to all the benefits of "clean" renewable resources will be forestalled by vexatious siting, permitting, and other regulatory requirements—most of which were developed to protect the environment. All this prompts me to ask: who, exactly, *is* looking out for the "public health and welfare"?

In a future column, I'll review some of the actual methods that can be used to place monetary values on environmental impacts and examine how those values can be compared with the benefits of energy infrastructure.

NOTES

1. Wald, M. (2008, August 27). Wind energy bumps into power grid's limits. *New York Times*, p. A1.
2. 25 Pa. Code §127.205(5), Section 22.D.
3. 30 V.S.A. § 248(b)(2).
4. *Lead Industries Association, Inc.* v. *EPA*, 647 F.2d 1130; (D.C. Circuit, 1980), cert. denied 101 S.Ct. 621.

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