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SHIFTING THE BURDEN: WHY CLEAN ENERGY FOR EUROPE MAY MEAN ENVIRONMENTAL DESTRUCTION FOR RURAL AMERICA

[Natural Resource \(/full-blog/category/Natural+Resource\)](#)

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Most environmental groups and climate change activists are committed to reducing the amount of carbon dioxide that enters the atmosphere. So, it should come as no surprise that a major tenant of such groups is that energy production should be geared to being either “carbon free” or “carbon-neutral” – either no additional carbon dioxide should be allowed to enter the atmosphere or, at worst, the carbon dioxide that is allowed to enter the atmosphere should be offset with an equal carbon dioxide reduction at some point in the energy making process. Since fossil fuels *must* release carbon dioxide when burned – and release even more carbon dioxide in the atmosphere when they are initially mined or drilled – most environmentally-minded persons wish to see them cast aside for a more renewable, and less carbon intense option. However, there are other considerable problems with renewable sources of energy as well.

While nuclear power produces little in the way of carbon dioxide, it does produce nuclear waste that can remain deadly for more than 24,000 years. Hydroelectric power is a safe technology that produces little in the way of carbon (or radioactive waste), but also requires massive environmental damage to be done to existing water sources and the species that depend upon them and cannot be readily utilized by places distant from large bodies of water.

Finally, wind and solar energy are promising, but suffer from a serious flaw: the duck. “The duck” refers to the so-called “duck curve;” this is the curve that is created when energy consumption ramps up as people get home at the end of the day, turn on their lights, begin to make dinner, and mainline the next installment of *The Great British Baking Show*.^[i] Since neither solar nor wind energy can reliably amp up at the end of the day in order to meet this need, they need to be supplemented.^[ii] And, if you’re interested in a carbon-neutral energy future, they need to be supplemented by something other than fossil fuels.



credit (<https://www.drax.com/technology/this-is-how-you-make-a-biomass-wood-pellet/>)

This has led many European countries (as well as Australia) to invest heavily in “biomass” energy. Biomass energy is simply energy that is stored from the sun in plants or animals and is in theory as renewable plants and animals themselves. The most obvious example of biomass energy is the burning of wood – trees store energy gathered from the sun through photosynthesis, and this energy is released and harnessed in the process of burning wood from the tree. Moreover, this can be made a basically carbon neutral process by replanting enough trees to absorb the carbon created by burning wood from other trees. Such renewability and carbon-neutrality has led several European countries to embrace a particular kind of biomass energy. In particular, they have embraced “wood pellet” biomass. Wood pellet biomass energy involves processing wood into pellets that retain most of the qualities Europeans want – it burns well – with few of the downsides of wood burning, namely it minimizes the release of carbon into the atmosphere when it is burned. If wood pellet biomass energy is paired with reforestation practices, then it can (in theory) become completely carbon-neutral, although it is controversial.[iii]

However, it may be the case that wood pellet biomass energy has not solved the environmental problems of energy production as much as relocated them to places like North Carolina. Recently, groups have become critical of both the human and environmental costs of the pellet biomass production process as done by plants operated by Evira.[iv] The Energy Integrity Project (EIP) released a report accusing Evira biomass pellet plants in Virginia and North Carolina of skirting the “intention” of the Clean Air Act (CAA) by adding additions to their existing plants that will cause greater pollution, but not so much as to trigger a New Source Review (NSR) by the EPA.

To counter, Evira argues that it has done nothing that is not in compliance with the applicable state and federal environmental laws, even if it happens to be a beneficiary of some of the policy decisions built into those laws. And Evira has a point, the federalist heart of the CAA allows states to regulate emissions of different criteria pollutants so long as the air in those states meets a minimum performance threshold.[v] That is, North Carolina has a pretty wide discretion as to how they regulate the quality of their air so long as it meets certain performance-based standards for quality.

What is for certain, however, is that the environmental costs of energy production – whether traditional or renewable – are often born by rural areas with a relatively poor (and often non-white) populace.[vi] While Evira may be doing an overall good by providing energy that does not further

warm the planet, it may still be measurably harming the lives of people close to its plants. As nations debate and, eventually, transform their energy infrastructures to focus more upon renewables and carbon-neutrality, they also need to realize that even such promising new technologies will have their costs.

[i] David Roberts, *Solar Power's Greatest Challenge was Discovered 10 Years Ago. It Looks Like a Duck*, Vox.com, <https://www.vox.com/energy-and-environment/2018/3/20/17128478/solar-duck-curve-nrel-researcher> (last visited July 16, 2018).

[ii] *Id.*

[iii] Fred Pearce, *Why is Wood Burning Counted as Green Energy?*, Yale260.com, <https://e360.yale.edu/features/carbon-loophole-why-is-wood-burning-counted-as-green-energy> (last visited July 16, 2018).

[iv] Elizabeth Outzts, *Report: Wood Pellet Mills Threaten Public Health in North Carolina*, Energy News, <https://energynews.us/2018/05/22/southeast/report-wood-pellet-mills-threaten-public-health-in-north-carolina/> (last visited July 16, 2018).

[v] *Id.*

[vi] *Dirty Deception: How the Biomass Industry Skirts the Clean Air Act*, Environmental Integrity Project, <http://www.environmentalintegrity.org/wp-content/uploads/2017/02/Biomass-Report.pdf> (last visited on July 16, 2018).

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