



*Building People Power for Climate & Energy Justice*

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November 21, 2016

Dr. Richard Brodhead, President  
Duke University  
Durham, North Carolina

Subject: Bridging the gaps in understanding about the proposed Duke Energy power plant

Dear President Brodhead,

Two weeks after sending you our October 24th report on an alternate path to Duke Energy's proposed gas-fired CHP plant, we learned that on October 6 the University had issued to the campus a lengthy report describing the project. Obviously, authors of your report could not benefit from NC WARN's written analysis (although we had conveyed much of it to your staff in person prior to your report's release). But your report and public statements by University officials in recent weeks continue to conflict with our findings. We therefore ask you to publicly clarify your position regarding the following key aspects of the project.

**1. The Duke University gas-CHP plant would increase the natural gas burned on campus – and greenhouse gas emissions – by 61% over current operations.**

The University report and officials' later statements claim the gas-CHP plant would reduce GHG emissions by "cutting Duke University's use of natural gas by 50%." This simply doesn't pass the straight-face test. As explained in our report, that characterization includes only gas burned directly by the University, as if fuel burned in the new gas-CHP plant on campus should be ignored simply because Duke Energy would be burning it.

**QUESTION #1:** Why shouldn't the campus community and statewide residents hold the University responsible for a 61% increase in carbon emissions from a fracked gas-burning plant on campus – operated primarily for the University's benefit – simply because it would be operated by Duke Energy instead of by the University itself?

**2. The plant would increase local air pollution and ground level ozone.**

As we explained, Duke Energy chose not to use the best available air pollution controls for the gas-fired CHP plant. Nitrous oxide emissions would be at least ten times greater than those from a similar CHP plant at Cornell University using better pollution controls. Staff, students and neighbors

would be exposed to far higher emissions of NOx than is currently being emitted from the on-campus natural gas boilers.

**Question #2:** How do you explain to the campus and Durham communities that you would allow Duke Energy to use equipment that causes local ground level ozone to be far higher than it would be using best available air pollution controls?

**3. The gas-CHP power plant would not reduce the burning of fossil fuels elsewhere in the Carolinas.**

Duke University's report states that, "The CHP plant provides 20 MW of power that would otherwise be generated by burning coal or natural gas in other, less efficient, more [greenhouse gas] intense plants in North and South Carolina." We are sympathetic to the likelihood that Duke Energy made the claim that system-wide dispatch of various power plants are coordinated in the way you suggest. However, Duke Energy's 15-year Integrated Resource Plan and other current data clearly disprove that position. As we explained earlier, the data show that Duke Energy plans to greatly expand natural gas capacity over the next 15 years while closing only a few small, little-used coal-fired plants. As customer demand within its service territory has failed to grow, Duke Energy continues seeking new wholesale markets instead of shutting down excess power plant capacity. So a Duke University gas-CHP plant would not displace natural gas or coal-fired generation elsewhere; it would be built and operated in addition to Duke Energy's existing and proposed fracked gas power plants.

**QUESTION #3:** Did Duke Energy provide any evidence to support the claim that a fracked gas plant on campus would displace the burning of fossil fuels elsewhere in the Carolinas?

**4. The plant would burn fracked gas, and thus contribute to the disastrous shale gas boom and the global climate crisis at the worst possible time.**

Although your officials insist that they did not intend to burn fracked gas – and we believe them – NC WARN's report explained that the vast majority of the current natural gas supply comes from shale gas plays (two-thirds, according to the US Energy Information Administration), and that Duke Energy is investing heavily in fracked gas pipelines. This is critical because, although all natural gas drilling, processing, transportation and burning involves some amount of leaking and intentional venting of methane, fracking wells result in the highest emissions rates – up to 12% of total production.

Leading scientists say methane leaking and venting makes the use of natural gas for electricity even worse for the climate than burning coal due to methane's super-potency as a heat trapping gas. Meanwhile, 2016 is on track to far surpass the all-time global average heat record set in 2015 and weather extremes continue ravaging communities around the world, including large parts of both eastern and western North Carolina.

**QUESTION #4:** How do you reconcile the University's wish to avoid burning fracked gas with the reality of the natural gas supply chain and its impact on the acceleration of climate change?

## **5. The Duke Energy proposal raises basic issues of fairness.**

The University report and your officials conclude that the Duke Energy plant would provide benefits to the University, but have identified none for the broader community. As our report explained, the University would be shifting the \$55 million cost to build this unneeded plant onto Duke Energy's general customers, even though Duke Energy and surrounding utilities own many power plants that sit idle much of the year – with large amounts of excess capacity projected for decades.

**QUESTION #5:** How do you reconcile that Duke Energy's other customers would pay for an unneeded power plant constructed to save money for, and meet other needs of, a private university?

## **6. Switching to biogas in the future remains a pipe-dream.**

University officials continue to insist that, "The long range goal is for both the CHP and Duke's steam plants to be sourced with biogas." As we reported, long-standing technical, economic and social justice challenges associated with biogas have remained intractable for more than a decade. At the end of October, the NC Utilities Commission granted Duke Energy's request to delay the swine waste biogas requirement for the fifth consecutive year.

**QUESTION #6:** Even if the technical and economic obstacles of biogas can ever be overcome, how would Duke University ensure that those technologies also relieve the devastating impacts of hog waste on local air and water quality?

## **7. Duke University lacks critical analysis of the campus's potential for renewable resources.**

The University's report referenced estimates for a few specific solar PV projects, which led you to deem solar power uneconomical at 13 cents per kilowatt-hour. But almost all of those estimates are three to seven years old and are remarkably higher than the prices solar installers are achieving at similar institutions in this state in 2016 (4.5 to 7 cents per kilowatt-hour), as we reported to you. This disparity further supports our suggestion that the University conduct a comprehensive technical and economic assessment of all on-campus solar potential.

The University's own report stated that energy efficiency is the, "most cost-effective and simplest-to-achieve method of carbon footprint reduction," and has indicated that the University is studying solar hot water as an alternative to steam in some buildings. Therefore, NC WARN also reiterates its call for you to set a new, aggressive campus energy efficiency goal to build on your success to date, and to perform an evaluation of the potential for solar thermal systems to displace campus steam needs.

**QUESTION #7:** Why doesn't the University prioritize potential renewable energy paths for reducing its steam and energy needs before committing to having a fracked gas power plant constructed on campus?

President Brodhead, we increasingly believe that Duke Energy misled you about key aspects of its proposal, as reflected above. We are asking you to personally take a critical look at these contentious issues and to widely publish your answers to the seven questions posed above.

I hope you will agree that every one of these questions is so important that any unsatisfactory answer should require cancellation of the project.

Finally, I also remain hopeful that, as you understand the truth about the project and its ramifications for the accelerating climate crisis and the broader wellbeing of our society, you will steer the University away from Duke Energy's effort to expand the burning of fracked gas on campuses. This is a time to develop innovative energy projects that serve as a model and inspiration for students and universities across the country.

I look forward to your reply on or before December 5.

Sincerely,

A handwritten signature in black ink that reads "Jim Warren". The signature is written in a cursive, slightly slanted style.

Jim Warren  
Executive Director