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The Ohio State University Combined Heat & Power Facility
Ohio Power Siting Board
Case 19-1641-EL-BGN
Public Hearing Testimony
Dr. Elena Irwin
Faculty Director, Sustainability Institute at Ohio State
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Dear Chairman Randazzo and Members of the Board:

Thank you for the opportunity to speak with you today in support of Ohio State's proposed combined heat and power facility. My name is Elena Irwin. I serve as the Faculty Director for the Sustainability Institute at Ohio State. I am also a Distinguished Professor of Food, Agricultural and Environmental Sciences in Economics and Sustainability. I am speaking as a faculty member with expertise in environmental economics and a citizen who is gravely concerned about the catastrophic impacts of human-induced climate change on our communities, nation, and world. To be clear, I am not speaking on behalf of the University.

Recently, the Sustainability Institute led the university's effort to issue an updated Climate Action Plan. This Plan outlines how the university can achieve long-term carbon neutrality, and most critically, how we can address 55% of our current carbon emissions by 2030, which would exceed the recommendations of the Intergovernmental Panel on Climate Change (IPCC) (to reduce global net human-caused emissions of carbon dioxide from 2010 levels by 45 percent by 2030).

The Plan relies on a mix of strategies to achieve this target. The proposed combined heat and power (CHP) facility is the most significant singular factor within the Plan to achieve the university's carbon emissions reduction target goal by 2030. While it would be powered by conventional natural gas, CHP provides advanced energy efficiency in delivering electricity and heating to the university campus in comparison to Ohio State's existing operations and electric grid purchases. These efficiencies will result in improved carbon emissions avoidance and reduction. Further, natural gas has a better emissions profile than our current grid purchased electricity mix, which will continue to include a significant amount of coal fired electricity generation for the foreseeable future. The CHP facility will largely replace the university's grid energy purchases, thus also resulting in carbon emission reductions.

From a carbon emissions standpoint, it would be ideal to generate all of the university's electricity from renewable sources. This is the long-term goal, of course, in getting to zero emissions. However, this is neither economically nor technically feasible right now for a large institutional buyer like Ohio State. The CHP facility provides the most cost effective approach to meeting our climate action goal. It is far from perfect and is still a substantial source of greenhouse gas emissions, but it moves us in the right direction in

achieving significant near-term carbon emission reductions. And, while progress towards more renewables is not as rapid as many of us would ideally like, renewable energy continues to be a dedicated area of focus for Ohio State.

Equally important is the fact that the CHP facility gives Ohio State the flexibility to use renewable fuel sources in the future as those become economically viable. The intention is that over the course of the next decade, new research innovation can enable a transition to a green hydrogen fuel source. This is a key focus area for innovation collaboration between Ohio State researchers and energy sector partners at the university's planned Energy Innovation Center. Of course, renewable natural gas (RNG, also known as biogas), is another potential alternative fuel source for the CHP facility. This fuel is already currently available, but it is cost prohibitive at this time.

Although progress towards more renewables is not as rapid as many of us would ideally like, renewable energy continues to be a dedicated area of focus for Ohio State. Currently, 14% of the university's electricity is delivered from an Ohio wind farm via an energy power purchase agreement. Our Climate Action Plan envisions expanding that percentage of renewable energy through additional purchase agreements. The Plan also targets developing 10 MW of on-campus solar generation capacity by 2030 through a combination of ground mount and rooftop arrays. We believe this amount of on-site solar energy generation would place Ohio State among the leaders for institutions of higher education in this regard.

In sum, then, I am supportive of the proposed CHP facility given the immediate, significant, and financially viable emission reductions it would lead to, as well as the longer term opportunity it presents to transition to alternative fuel types. The CHP fits within a broader university energy portfolio that increasingly incorporates new renewable energy sources and energy efficiency measures, in pursuit of long-term carbon neutrality. Most importantly, it delivers substantial near-term carbon emissions reductions aligned with the IPCC's 2030 recommendations.

Thank you for the opportunity to provide comments, and I would be happy to try to answer any questions the Board may have.

Summary: Comments Testimony of Elena Irwin electronically filed by Ms. Mary E Fischer on behalf of Ohio Power Siting Board