

53-R-15

**A Resolution to Reevaluate Current Plan for Combined Heat and Power Plant to Include Carbon Capture and Storage Technology**

Daniel Levine (for himself, Lauren Sutherland, and Kira Jones) introduced the following legislation to the floor where it passed/failed.

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**Whereas** the Undergraduate Student Government represents all undergraduate students at the Ohio State University, and

**Whereas** the Ohio State University proposed a new Combined Heat and Power (CHP) Plant on West Campus across from the College of Veterinary Medicine, and

**Whereas** on September 17<sup>th</sup>, the Ohio Power Siting Board approved the application for the new power plant,<sup>1</sup> and

**Whereas** the CHP plant will consist of “two natural gas combustion turbine generators and one steam turbine generator” that will be fueled by natural gas,<sup>2</sup> and

**Whereas** obtaining natural gas involves fracking which releases large amounts of CO<sub>2</sub> and methane into the atmosphere,<sup>3</sup> and

**Whereas** methane emissions trap 20 to 25 times more heat in the atmosphere than CO<sub>2</sub>, leading to an enlarged contribution to global warming by the university,<sup>4</sup> and

**Whereas** the CHP plant is anticipated to release 464,278 tons of carbon dioxide (CO<sub>2</sub>) per year among other pollutants, excluding the emissions from fracking,<sup>5</sup> and

**Whereas** high concentrations of carbon-based greenhouse gases such as methane and CO<sub>2</sub> expedite the process of global warming,<sup>6</sup> and

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<sup>1</sup> <https://buildingthefuture.osu.edu/combined-heat-and-power-plant>

<sup>2</sup> <http://dis.puc.state.oh.us/TiffToPDF/A1001001A19K06B10538J01706.pdf>

<sup>3</sup> <https://canadians.org/sites/default/files/publications/fracking-climate-change.pdf>

<sup>4</sup> <https://canadians.org/sites/default/files/publications/fracking-climate-change.pdf>

<sup>5</sup> <http://dis.puc.state.oh.us/TiffToPDF/A1001001A19K06B10538J01706.pdf>

<sup>6</sup> <https://nca2014.globalchange.gov/highlights/overview/overview>

**Whereas** global warming leads to a host of environmental detriments, such as ocean acidification, rising sea levels, an increase in extreme weather events, habitat damage, reduced efficiency of agriculture, and decreased quality and quantity of drinkable water,<sup>7</sup> and

**Whereas** if the global temperature increase exceeds 1.5°C when compared to pre-industrial times, irreversible damage will likely occur, such as loss of ecosystems,<sup>8</sup> and

**Whereas** the International Panel on Climate Change reports that to keep global warming under 1.5°C, human CO<sub>2</sub> emissions must drop by 45% by 2030 and global carbon neutrality is necessary by 2050,<sup>9</sup> and

**Whereas** the Sierra Club issued a statement stating that the CHP plant is “a failure of climate and public health leadership” from the university that requires the OSU community “to [bear] the brunt of that failure for years to come,”<sup>10</sup> and

**Whereas** former university president Michael V. Drake released the Ohio State Climate Action Plan in April 2020 which opened by claiming that “The Ohio State University is deeply committed to solving sustainability challenges in our communities and beyond,”<sup>11</sup> and

**Whereas** this Climate Action Plan reiterated a 2008 commitment to “achieving carbon neutrality by 2050,”<sup>12</sup> and

**Whereas** carbon neutrality is defined as “having no net greenhouse gas emissions to be achieved by either eliminating net greenhouse gas emissions, or, by minimizing greenhouse gas emissions as much as possible, and using carbon offsets or other measures to mitigate the remaining,”<sup>13</sup> and

**Whereas** the CHP plant will be equipped with an oxidation catalyst that will reduce carbon monoxide (CO) emissions by over 85 percent,<sup>14</sup> and

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<sup>7</sup> <https://nca2014.globalchange.gov/highlights/overview/overview>

<sup>8</sup> <https://www.ipcc.ch/2018/10/08/summary-for-policymakers-of-ipcc-special-report-on-global-warming-of-1-5c-approved-by-governments/>

<sup>9</sup> <https://www.ipcc.ch/2018/10/08/summary-for-policymakers-of-ipcc-special-report-on-global-warming-of-1-5c-approved-by-governments/>

<sup>10</sup> <https://www.sierraclub.org/press-releases/2020/09/controversial-ohio-state-university-gas-plant-proposal-clears-first-hurdle>

<sup>11</sup> [https://si.osu.edu/sites/default/files/CAP\\_Final\\_04082020.pdf](https://si.osu.edu/sites/default/files/CAP_Final_04082020.pdf)

<sup>12</sup> [https://si.osu.edu/sites/default/files/CAP\\_Final\\_04082020.pdf](https://si.osu.edu/sites/default/files/CAP_Final_04082020.pdf)

<sup>13</sup> [https://si.osu.edu/sites/default/files/CAP\\_Final\\_04082020.pdf](https://si.osu.edu/sites/default/files/CAP_Final_04082020.pdf)

<sup>14</sup> <http://dis.puc.state.oh.us/TiffToPDF/A1001001A19K06B10538J01706.pdf>

**Whereas** CO<sub>2</sub> capture and storage (CCS) is a commercially available process that involves the separation of CO<sub>2</sub> from energy-related sources within the plant and the transportation of this gas to a long-term storage location isolated from the atmosphere,<sup>15</sup> and

**Whereas** CCS innovations capture roughly 85-95% of CO<sub>2</sub> produced by power plants and industrial facilities and reduces emissions by upwards of 80-90%,<sup>16</sup> and

**Whereas** as of 2017, 21 carbon capture projects were operating worldwide and there were 22 more in development, allowing Ohio State University to be a leader in the utilization of this environmental advancement,<sup>17</sup> and

**Whereas** CCS technologies are challenging to integrate into existing facilities, requiring a reevaluation and reworking of the existing plan for the CHP plant prior to construction,<sup>18</sup> and

**Whereas** OSU representatives for the project have privately revealed that the plan will likely save the university over \$10 million a year on heat and power expenses, and

**Whereas** Ohio State University prides itself on being a research institution and advertises that it is a “top 12 public research university and No. 3 nationally in industry-sponsored research,”<sup>19</sup> and

**Whereas** the Climate Action Plan includes recommended tactics to achieve carbon neutrality, including an objective to “advance CHP fuel source from natural gas to green hydrogen and/or renewable natural gas.”<sup>20</sup>

**Therefore, Let it Be Resolved** that the Undergraduate Student Government recommends that the Ohio State University, stays accountable to their long-term sustainability goals, particularly regarding carbon neutrality, or alters their plans with much transparency, and

**Let it Further Be Resolved** that the Undergraduate Student Government recommends that the CHP plant plan extends their efforts to reduce carbon beyond just carbon monoxide to include emission mitigation for the more abundant gas CO<sub>2</sub>, especially considering emissions from private fracking companies cannot be controlled, and

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<sup>15</sup> [https://www.ipcc.ch/site/assets/uploads/2018/03/srccs\\_summaryforpolicymakers-1.pdf](https://www.ipcc.ch/site/assets/uploads/2018/03/srccs_summaryforpolicymakers-1.pdf)

<sup>16</sup> [https://www.ipcc.ch/site/assets/uploads/2018/03/srccs\\_summaryforpolicymakers-1.pdf](https://www.ipcc.ch/site/assets/uploads/2018/03/srccs_summaryforpolicymakers-1.pdf)

<sup>17</sup> <https://www.c2es.org/content/carbon-capture/>

<sup>18</sup> <https://www.energy.gov/fe/science-innovation/carbon-capture-and-storage-research/carbon-capture-rd>

<sup>19</sup> <http://undergrad.osu.edu/majors-and-academics/quick-facts>

<sup>20</sup> [https://si.osu.edu/sites/default/files/CAP\\_Final\\_04082020.pdf](https://si.osu.edu/sites/default/files/CAP_Final_04082020.pdf)

**Let it Further Be Resolved** that the Undergraduate Student Government recommends that the Ohio State University reevaluates the current plan for the combined heat and power plant to include carbon capture technologies to significantly reduce carbon emissions, and

**Let it Further Be Resolved** that the Undergraduate Student Government recommends that the Ohio State University reallocates the expected gross income from the CHP plant to the implementation of carbon capture and storage and heightened sustainability research at the university, particularly regarding hydrogen fuel, and

**Let it Further Be Resolved** that the Undergraduate Student Government recommends that the Ohio State University use the provided CHP Plant Carbon Capture Technology Timeline as a realistic and sustainable guide for new technology implementation.<sup>21</sup>

Floor Vote: Passed with Unanimous Consent



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Roaya Higazi  
President



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Nathan Rush  
Speaker of the 53rd General Assembly

Date Adopted: October 9, 2020

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<sup>21</sup> Appendix A