Comments on Atlantic Sunrise Pipeline Project
DEP Review of Chapter 105 and 102 Permits
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The Pennsylvania Department of Environmental Protection (DEP) is evaluating the Chapter 105 applications and Chapter 102 notice of intent, for the proposed Atlantic Sunrise Pipeline. By granting these permits, DEP would be declaring that the construction and operation of this pipeline would not be injurious to this Commonwealth or its residents. We cannot subdivide this project into many small pieces and declare each piece to be of insignificant impact, and thus the whole to be without consequences. This pipeline would not exist without a supply of, and a customer for, the natural gas that it will carry. No single component of this system would function without the others. Therefore, we must consider the whole of this activity. We will identify the impact of that activity. These permits and this pipeline will be responsible for every bit of gas that will enter it.

The Project would move 1.65 billion cubic feet per day (Ref. 1, Page 1-2) of natural gas. Using the approximation that this is pure methane (at most a 10% error), there are 12 million metric tons of methane transported per year. If this methane is burned by the customers, it yields 33 million metric tons of CO_2, and some water. Methane escapes into the air at the well site, during storage, processing, and delivery to customers. The total leak rate is estimated to be in the range of 3.6% to 7.9% of production, with a mean value of 5.8% of production (Ref 2). Taking production to be 12 million metric tons of methane, which is an underestimation, the total leaked in a year is 0.71 million metric tons of methane. Methane has an enormous Global Warming Potential (GWP) in the first few decades after release, before it undergoes chemical reactions and is no longer methane. This prompt surge in global temperature rise could trigger any of several tipping points. For instance, a large sudden rise in temperature for a few decades could melt the polar ice cap, so that it absorbs more summer sunlight, rather than reflecting it as snow and ice would. Thus, the short term is important to consider here. Using the GWP of methane for the first 20 years of 86 (Ref. 3), the 0.71 million metric tons of methane has the same effect as 61 million metric tons of CO_2, or 61 million metric tons CO_2 equivalent (CO_2e). The total warming effect due to operation of this entire system for one year is the sum of the methane burned, 33 million metric tons CO_2, or leaked, 61 million metric tons CO_2e. The sum is 94 million metric tons CO_2e, considering the effect on the climate for the first 20 years after emission. After 10 years of operation, the total would be 940 million metric tons CO_2e. This pipeline would not operate, or exist without these other emissions. This is equivalent to 15 million automobiles operating for the same 10 years. This is almost twice as many passenger cars as are registered in Pennsylvania (Ref. 4).

Every ton of CO_2e that is added to the atmosphere contributes to changing our weather and climate. Not only does it change the climate in Pennsylvania, but also everywhere on earth, and for many years into the future. Consider how this state agency, DEP, is to evaluate the impact on Pennsylvania, and Pennsylvanians.

Many religious traditions address the question of who is my neighbor. Christianity gives us the story of the good Samaritan. This suggests that even persons normally rejected by society

are actually neighbors, which implies that all persons on earth count equally. Native American tradition suggests that neighbors extend seven generations into the future. This should be the value of environmental protection embodied in DEP. We are all brothers and sisters together now, in the past and into the future. We in this location depend on people across the globe for the clothing we wear, some of the foods we eat, and many other things. When our CO2e emissions contribute to a drought in some part of the world that ruins a banana crop, we may not have bananas. If a drought creates a food shortage in one part of the world, those people may migrate to Pennsylvania to live where food is more available. We are all connected.

The Atlantic Sunrise Pipeline will contribute to harming people around the planet, and in Pennsylvania for centuries to come. Its approval would encourage and justify continued use of fossil fuels far into the future, thus continuing and amplifying the destruction by drought, flood, wildfires, and violent storms. People's homes and businesses will continue to be destroyed now and increasingly so in the future. The Federal Emergency Management Agency (FEMA) is now facing costs for emergencies which increase from year to year. This project would supply "cheap" natural gas and many more costs for later generations. We do not want to have more flooding like we experienced along the Susquehanna river in 1972. Allowing this pipeline takes us down the path of more dirty fossil fuels, and impedes the establishment of the sustainable solutions of the future in renewable energy. Approval of these permits would be immoral and wrong.

References

1. U.S. Federal Energy Regulatory Commission, 2016, Draft Environmental Impact Statement, Atlantic Sunrise Project, Transcontinental Gas Pipeline Company, LLC, FERC/EIS-0269D, Docket No. CP15-138-000, Accessed May 2016.

2. Howarth, R.W., 2014, A bridge to nowhere: Methane emissions and the greenhouse gas footprint of natural gas, Energy Science and Engineering ; **2**(2): 47-60 DOI: 10.1002/ese3.35

3. IPCC. 2013. Climate change 2013: the physical science basis. Intergovernmental Panel on Climate Change. Available at: **https://www.ipcc.ch/report/ar5/wg1**, Accessed July 2014

4. Pennsylvania Department of Transportation, Bureau of Motor Vehicles, Report of Registrations for Calendar Year 2016, available at: http://www.dot.state.pa.us/public/dvspubsforms/BMV/Registration%20Reports/ReportofRegistration2016.pdf

Pennsylvania Interfaith Power & Light is a community of congregations, faith-based organizations, and individuals of faith responding to climate change as a moral issue, through advocacy, energy conservation, energy efficiency, and the use of clean, renewable energy.

Attached: the Resolution on Fossil Fuel Infrastructure of Pennsylvania Interfaith Power & Light