

May 25, 2016

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President Littlefield and Ms. Boomgard:

Friends of the Earth U.S. writes to provide comments on OPIC's potential support for a proposed power plant in Senegal, crude oil infrastructure projects in Brazil, and the expansion of natural gas storage in Ukraine. We have reviewed the project environmental impact statements, and we submit these comments in light of OPIC's environmental and social policies, as well as its development mandate. We raise the following concerns about the projects:

Continued financing of fossil fuel projects will result in devastating impacts on the climate: Recent studies have found and the international community agreed in the Paris Agreement that the world must keep global warming to 1.5 degrees Celsius to avoid the worst impacts of climate change.¹ Scientists have found that to have a good chance of keeping global warming at safe levels, 75% of existing fossil fuel reserves must stay in the ground. In order to have a 50 percent chance of accomplishing the higher 2 degree Celsius target, an Oxford study from this year found that new fossil fuel power plants cannot be built after 2017.² This research reinforces the 2011 International Energy Agency finding that to have a half a chance of reaching the same goal, unless old fossil fuel-based infrastructure is scrapped before the end of its economic lifespan, which is unlikely, only zero carbon-based utilities and infrastructure should be built after 2017.³ Therefore, supporting the expansion of fossil fuel power plants and related infrastructure will put the planet at greater risk of missing the important and internationally agreed 1.5 degree Celsius target.

The environmental assessments for these three projects fail to properly consider – or consider at all – the climate impacts of these projects. The assessment for the Senegal power plant uses emission factors from 1994,⁴ which is absurdly outdated; in the 22 years since those factors were created our understanding of climate change has grown tremendously, including the severity of the issue and its causes. Using emission factors from the most recent Intergovernmental Panel on

¹ Reto Knutti, et al. *A Scientific Critique of the Two-Degree Climate Change Target*. NATURE GEOSCIENCE (2015), <http://www.nature.com/ngeo/journal/vaop/ncurrent/full/ngeo2595.html>.

² Alexander Pfeiffer et al. *The '2°C Capital Stock' for Electricity Generation: Committed Cumulative Carbon Emissions from the Electricity Generation Sector and the Transition to a Green Economy*, APPLIED ENERGY (2016), <http://www.sciencedirect.com/science/article/pii/S0306261916302495>.

³ INTERNATIONAL ENERGY AGENCY, WORLD ENERGY OUTLOOK 2011 (2011), <http://www.worldenergyoutlook.org/weo2011/>.

⁴ GOVERNMENT OF SENEGAL, ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT FOR THE CONTOURGLOBAL – CAP DES BICHES THERMAL POWER PLANT EXTENSION PROJECT, p. 52 (2016), <https://www3.opic.gov/environment/eia/capdesexpansion/ESIA.pdf> [hereinafter “Senegal”].

Climate Change report would be much more appropriate and would reveal the true climate impacts of the project.⁵ The assessment for the Ukraine project merely reports the emissions without discussing the impacts on the climate.⁶ The evaluation of the Brazil project fails to consider the climate impacts of crude oil all together. These assessments must accurately and sufficiently consider what impacts these projects will have on the climate both during its operation, as well as the decades that they will potentially be in operation.

These assessments all fail to properly account for methane, greatly underestimating its impacts. For the Senegal plant, the assessment discusses the potential to convert to natural gas, which could increase the plant's lifespan, as well the country's dependence on fossil fuels, but then fails to assess the impacts on the climate, especially with relation to methane.⁷ The Ukraine natural gas project states that venting will be used, but provides no calculation of the impacts.⁸ In addition, this assessment mistakenly finds that "the release of significant amounts of gas should only occur in an abnormal situation."⁹ This is out of touch with the reality – the release of emissions from this type of infrastructure is a significant problem. Some estimates put methane leakage from oil and gas production occurring during extraction, transportation, and storage at 17 percent.¹⁰ The misconception that leakage is not a problem stems from the fact that these emissions are grossly underestimated by up to 50 percent even by government agencies in developed countries.¹¹

Development mandate not fulfilled by these fossil fuel projects: These three projects will help fossil fuel companies and perhaps other countries to financially benefit, but how the projects help with development in the host country remains unclear. Similar fossil fuel projects in the past have actually hurt local communities, aggravating poverty and causing serious health, social, and human rights impacts. For example, a liquefied natural gas project on Sakhalin Island, Russia resulted in many negative impacts for the local population, including an increase in still born deaths, a greater incidence of HIV/AIDS, and hyperinflation.¹² Since local populations usually do not have the requisite skills and experience to work on these projects, an influx of workers is

⁵ INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, CLIMATE CHANGE 2014: MITIGATION OF CLIMATE CHANGE (2014), <http://mitigation2014.org/report/publication/>.

⁶ WSP PARSONS BRINCKERHOFF, ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT: GAP ANALYSIS AND AUDIT GOLDMAN SACHS GAS STORAGE PROJECT, UKRAINE, p. 50 (2016), https://www3.opic.gov/environment/eia/ukrainegas/Gap_Analysis_Audit.pdf [hereinafter "Ukraine"].

⁷ Senegal, *supra* note 4, at 58.

⁸ Ukraine, *supra* note 6, at 41.

⁹ *Id.* at 40.

¹⁰ Oliver Schneising et al., *Remote Sensing of Fugitive Methane Emissions from Oil and Gas Production in North American Tight Geologic Formations*, 2 EARTH'S FUTURE 548 (2014), <http://onlinelibrary.wiley.com/doi/10.1002/2014EF000265/pdf>.

¹¹ A. R. Brandt et al., *Methane Leaks from North American Natural Gas Systems*, 343 SCI. 733, 734 (2014), http://nature.berkeley.edu/er100/readings/Brandt_2014.pdf; see also A.J. Turner et al., *A Large Increase in U.S. Methane Emissions over the Past Decade Inferred from Satellite Data and Surface Observations*, 43 GEOPHYSICAL RES. LETTERS 2,218 (2016), <http://onlinelibrary.wiley.com/doi/10.1002/2016GL067987/full> (finding that U.S. methane emissions have increased by more than 30 percent from 2002 to 2014 even though EPA has estimated no significant increase).

¹² FIDANKA BACHEVA ET AL., BOOM TIME BLUES: BIG OIL'S GENDER IMPACTS IN AZERBAIJAN, GEORGIA, AND SAKHALIN (2006), <http://bankwatch.org/sites/default/files/boomtimeblues.pdf>.

required that causes greater violence and puts a strain on health, water, and sanitation systems.¹³ A U.S. government-financed liquefied natural gas project in Papua New Guinea even resulted in 27 deaths from a landslide that the project caused.¹⁴ Development goals would be better achieved by financing projects that would help these countries improve social systems, such as education and healthcare, and transition their economies toward sustainable and clean energy, such as off-grid solar systems. Moreover, climate scientists are increasingly making clear that poorer countries will suffer the worst impacts of climate change. By claiming faux development benefits of fossil fuel projects while worsening climate change and its impacts on developing countries, OPIC fails to achieve its development mandate and hurts the very people that the agency claims to be helping.¹⁵

These countries will further their dependence on fossil fuels, rather than beginning to transition to renewables: These projects support fossil fuel infrastructure all over the world, furthering the world's reliance on fossil fuels. The more institutions like OPIC finance these types of projects, the further down the road the transition to renewables is pushed. The expansion of the fossil fuel fired power plant in Senegal will give the plant a lifeline, ensuring that the plant stays in use potentially for decades to come. The natural gas storage project in Ukraine will encourage the increased reliance of the region, including much of Europe, on natural gas, as well as continue Ukraine's economic reliance on a volatile commodity. The crude oil projects in Brazil will have a similar impact, encouraging Brazil to continue its economic reliance on crude oil even as the country is reeling from a fossil fuel company corruption scandal. Now is the time to instead be financing small distributed renewable projects to start putting the necessary infrastructure in place.

Cumulative impacts not properly analyzed: When considering the environmental impacts, especially the effects of these fossil fuel projects on the climate, it is important to consider the impacts from the sector as a whole. The assessment for the Senegal power plant found that the emissions from each power plant would be negligible.¹⁶ Using this logic, almost no single fossil fuel project would have a disastrous impact, but when these projects are taken together, the impacts on the climate are devastating. The assessment must consider the cumulative impact that this project will have in conjunction with other fossil fuel power plants in the region. The other two projects make similar mistakes. The Ukraine assessment failed to evaluate the impacts of the natural gas industry as a whole. Ukraine has a large natural gas industry, so when all the storage sites, transportation lines, and related infrastructure are taken as a whole, the impacts on the

¹³ Dick Wittenberg, *Oil, Gas and Mining: the Bonny Island LNG Project*, ECA WATCH, July 13, 2004, http://www.eca-watch.org/problems/oil_gas_mining/bonnyisland/BonnyIsland130704.html.

¹⁴ Ian T. Shearn, *ExxonMobil's New Guinea Nightmare*, THE NATION, Apr. 20, 2014, <http://www.thenation.com/article/exxonmobils-new-guinea-nightmare/>; Ian Shearn, *Exxon Mobil's Rocky Road to LNG Project in Papua New Guinea – Video*, THE GUARDIAN, May 1, 2014, <http://www.theguardian.com/environment/video/2014/may/01/exxon-mobil-rocky-road-lng-papua-new-guinea-video>.

¹⁵ University of East Anglia, *Poor Countries to Bear Brunt of Climate Change Despite Emitting Least Carbon Dioxide*, SCI. DAILY, May 16, 2016, www.sciencedaily.com/releases/2016/05/160516212709.htm; Suzanne Goldenberg, *Climate Change: The Poor Will Suffer the Worst*, THE GUARDIAN, Mar. 31, 2014, <http://www.theguardian.com/environment/2014/mar/31/climate-change-poor-suffer-most-un-report>; John Vidal, *Climate Change Will Hit Poor Countries the Hardest, Study Shows*, THE GUARDIAN, Sept. 27, 2013, <http://www.theguardian.com/global-development/2013/sep/27/climate-change-poor-countries-ipcc>.

¹⁶ Senegal, *supra* note 4, at 223.

climate, especially from methane, are significant. While the Brazil project discusses the cumulative impacts on the local environment, which are important, the assessment fails to consider the impacts of this and similar projects on the climate.

Energy access will not be improved: An important aspect of development is access to electricity, which allows for better health care systems, education, etc. Unfortunately, other countries and wealthy users will be the ones to benefit from these projects. The evaluation for the Senegal plant finds that the project will serve the country's need for more capacity.¹⁷ While the project will add capacity, it is unlikely to reach the users who need it most. Large centralized projects, such as natural gas power plants, do not solve the distribution issue, so they merely provide more electricity for those already connected and industrial users.¹⁸ In addition, the Ukraine project's purpose is to transport natural gas through Ukraine to Western Europe, so the project has no plans to improve Ukraine's access to or affordability of its electricity.¹⁹

In light of the concerns raised in this letter, we urge OPIC to reject financing for the expansion of the heavy fuel oil power plant in Senegal, the crude oil infrastructure projects in Brazil, and the gas storage projects in Ukraine. Instead, we encourage OPIC to consider financing for projects that do not embed fossil fuels, but rather support the transition to clean renewables.

Sincerely,

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¹⁷ *Id.* at 170.

¹⁸ RYAN HOGARTH & ILMU GRANOFF, SPEAKING TRUTH TO POWER: WHY ENERGY DISTRIBUTION, MORE THAN GENERATION, IS AFRICA'S POVERTY REDUCTION CHALLENGE (2015), http://policy-practice.oxfamamerica.org/static/media/files/FINAL_speakingpowertotruth_SH.pdf.

¹⁹ Ukraine, *supra* note 6, at 13.