

March 20, 2017

Mildred Callear  
Acting President & CEO  
U.S. Overseas Private Investment Corporation (OPIC)

Mary Boomgard  
Director, Environmental Affairs  
U.S. Overseas Private Investment Corporation (OPIC)

President Callear and Ms. Boomgard:

OPIC has recently made great strides in shifting more of its financing toward renewables. Recently, OPIC has provided on average of \$1 billion for renewables projects over the past seven years.<sup>1</sup> Moreover, OPIC has recognized the importance of distributed renewables to improving access to energy in the world's poorest countries and in the most remote communities. In 2016, OPIC provided \$55 million for off-grid energy projects, including companies acting as needed financial intermediaries like SunFunder and companies creating innovative solar technologies like Greenlight Planet.<sup>2</sup> Friends of the Earth U.S. would like to encourage OPIC to continue this shift in its energy portfolio and move away from natural gas power plants, which actually hinder the necessary transition to renewables.

With this in mind, Friends of the Earth U.S. writes to provide comments on OPIC's potential support for the proposed 150 megawatt (MW) gas-fired electric power plant in Sapele, Nigeria. After reviewing the environmental and social impact assessment for the Proton Delta plant, 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 project:

**Development mandate not fulfilled with this gas power plant:** The assessment claims that 80 percent of the jobs created by the project will go to local communities,<sup>3</sup> but similar projects in the region have failed to accomplish this. The assessment should clearly establish the type of jobs that would be created and the required skills, thus allowing local communities to understand how they could benefit or not benefit. Further, Proton Energy should lay out any plans for job

---

<sup>1</sup> OPIC, 2016 Annual Report p. 19, [https://www.opic.gov/sites/default/files/files/OPIC\\_Annual\\_Report\\_2016\\_web.pdf](https://www.opic.gov/sites/default/files/files/OPIC_Annual_Report_2016_web.pdf) [hereinafter "OPIC Annual Report"].

<sup>2</sup> OPIC, Energy and Infrastructure, <https://www.opic.gov/content/energy-and-infrastructure> (last visited Feb. 9, 2017); OPIC Annual report, *supra* note 1 at 18, 35.

<sup>3</sup> Fugro Nigeria Ltd., 150 MW Gas Powered Plant in Ogorde, Delta State (With Option to Expand to 500 MW): Environmental Impact Assessment, ch. 3, p. 3, [https://www3.opic.gov/Environment/EIA/protondelta/Final\\_ESIA.pdf](https://www3.opic.gov/Environment/EIA/protondelta/Final_ESIA.pdf).

training, which the assessment fails to do. Such training will likely be necessary as many locals will probably lack the requisite skills for the jobs being created.

Smaller, distributed solar projects would improve energy access in Nigeria faster than large centralized natural gas power plants. While Ghana's rate of energy access is much higher than much of the rest of sub-Saharan Africa, roughly 30 percent of Ghana's population still lacks access to electricity.<sup>4</sup> Recent case studies have found that distributed solar systems provide access to electricity much faster than fossil fuel projects.<sup>5</sup> Moreover, centralized grid power is often more expensive than distributed power with many communities not being able to afford power even after they are connected. Therefore, the assessment should consider the cost to the poorest consumers who are often forced to pay higher rates.

**Putting the world on the path toward climate disaster:** Supporting this power plant runs counter to what the world must do to avoid the worst impacts of climate change. A recent Oxford University study that found that no new fossil fuel-fired power plants, including natural gas, can be built starting this year in order to have at least a 50 percent chance of keeping global warming at no more than 2 degrees Celsius.<sup>6</sup> Averting the devastating impacts of climate change is especially important for sub-Saharan Africa, which experiences a disproportionate amount of the negative impacts, including increased drought and food insecurity.

For the initial 150 MW, the Proton Delta plant plans to use an open-cycle gas turbine, which is much less efficient and more polluting than the alternative combined-cycle gas turbine. Open-cycle gas turbines are less expensive to build,<sup>7</sup> but are also much less efficient, producing 40 or 50 percent more air pollution than closed-cycle gas turbines. In order to secure OPIC financing, OPIC should require that the Proton Delta power plant use combined-cycle gas turbines from the start to minimize the air emissions from the project. The assessment claims that the initial plant will be converted to combined-cycle, but there is no guarantee that this will happen. The Azura Edo power plant remains a polluting open-cycle gas plant even though its developers said it might be converted to a combined-cycle plant.<sup>8</sup>

**Environmental impacts underestimated:** This project will destroy a large track of forested land and pollute local land and water. The power plant will be located in the middle of a forest, requiring the clearing of 5.29 hectares of forest,<sup>9</sup> which includes at least 45 plant species and

---

<sup>4</sup> World Bank, Access to Electricity (% Population), <http://data.worldbank.org/indicator/EG.ELC.ACCS.ZS> (last accessed Feb. 15, 2017); Francis Kemausuor & Emmanuel Ackom, Toward Universal Electrification in Ghana, 6 WIREs ENERGY ENVIRON. (2017), <http://onlinelibrary.wiley.com/doi/10.1002/wene.225/epdf>.

<sup>5</sup> Lucy Stevens et al, Poor Peoples' Energy Outlook 2016 (Practical Action Publishing Ltd: Warwickshire, United Kingdom 2016), <http://infohub.practicalaction.org/oknowledge/bitstream/11283/620101/1/PPEO2016.pdf>.

<sup>6</sup> Alexander Pfeiffer, Richard Millara, Cameron Hepburna, & Eric Beinhocker, *The '2°C Capital Stock' for Electricity Generation: Committed Cumulative Carbon Emissions from the Electricity Generation Sector and the Transition to a Green Economy*, 179 APPLIED ENERGY 1395 (2016), <http://www.sciencedirect.com/science/article/pii/S0306261916302495>.

<sup>7</sup> Fugro Nigeria Ltd., *supra* note 3, ch. 3, p. 4.

<sup>8</sup> Azura, Azura Edo IPP, <http://www.azurawa.com/index.php/projects/azura-edu-ipp/> (last accessed Feb. 15, 2017).

<sup>9</sup> Fugro Nigeria Ltd., *supra* note 3, ch. 5, p. 23.

over 110 species of animals.<sup>10</sup> The destruction of this habitat would be place vulnerable and near threatened species, such as the dwarf crocodile, the Africa wart frog, African grey parrot, hippopotamus, West African manatee and two types of otters, at even greater risk.<sup>11</sup> Proton Delta's plans to try to move species and monitor their progress is insufficient to prevent the destruction of habitat and the resulting strain that will place on the over a hundred animals that now live in this area.<sup>12</sup> In addition, the project will result in the discharge of pollutants, including detergents, oil, grease, and sewage into the surrounding water.<sup>13</sup> Finally, the release of carbon monoxide, volatile organic compounds, nitrogen oxide, and sulphur oxide will pollute the local air quality, causing increased respiratory illness, heart disease, cancer, and death.<sup>14</sup> The mitigation measures Proton Energy has established with regard to reducing air pollution lack specificity and contradict other aspects of the project.<sup>15</sup> For instance, the assessment claims that the plant will use higher energy-efficient systems, but it is already using less efficient, more polluting technology by using open-cycle rather than combined-cycle turbines. These air pollutants remain as major impacts despite the assessment classifying them as minor after mitigation.

The assessment finds that the greenhouse gas impacts will be minor once steps are taken to avoid leakages.<sup>16</sup> First, the assessment fails to specifically mention methane, which is important because methane is 87 times as potent as carbon dioxide over a 20 year timeframe,<sup>17</sup> so its impacts must be properly considered. Second, the assessment oversimplifies the process of addressing methane leaks from the usage of natural gas. In the United States, where the natural gas industry is one of the most advanced in the world, methane leaks at alarming rates. Some estimates put methane leakage from oil and gas production in the United States at 17 percent.<sup>18</sup> Even these estimates are probably quite low as studies have found that the U.S. Environmental Protection Agency has underestimated the methane emissions in the United States by about 50 percent.<sup>19</sup> Part of the reason for this is that the technology commonly used to measure methane from industrial sources probably greatly underestimates those emissions.<sup>20</sup> Therefore, Proton

---

<sup>10</sup> *Id.* ch. 4, pp. 39–49.

<sup>11</sup> *Id.*

<sup>12</sup> *Id.* ch. 6, p. 6.

<sup>13</sup> *Id.* ch. 5, p. 24.

<sup>14</sup> *Id.* ch. 5, pp. 24–25.

<sup>15</sup> *Id.* ch. 6, p. 11.

<sup>16</sup> *Id.* ch. 6, p. 10.

<sup>17</sup> IPCC, WORKING GROUP I CONTRIBUTION TO THE IPCC FIFTH ASSESSMENT REPORT CLIMATE CHANGE 2013: THE PHYSICAL SCIENCE BASIS (2013), [http://www.climatechange2013.org/images/uploads/WGIAR5\\_WGI-12Doc2b\\_FinalDraft\\_All.pdf](http://www.climatechange2013.org/images/uploads/WGIAR5_WGI-12Doc2b_FinalDraft_All.pdf)

<sup>18</sup> 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>

<sup>19</sup> 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](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).

<sup>20</sup> Touché Howard, *University of Texas Study Underestimates National Methane Emissions at Natural Gas Production Sites Due to Instrument Sensor Failure*, 3 *ENERGY SCI. & ENG'G* 443 (2015), <http://onlinelibrary.wiley.com/doi/10.1002/ese3.81/pdf>

Delta should specify how exactly they are going to measure the plant's methane emissions; it seems unlikely that they have technology not used in the United States. Methane leakage from pipelines is a major issue that companies in the United States struggle with,<sup>21</sup> but the assessment fails to provide a detailed plan for what magical solution it will use that has evaded companies in the United States.

**Insufficient alternatives assessment:** The ESIA did evaluate different technologies and their suitability for providing electricity to the area. Unfortunately, the assessment provided insufficient facts to inform accurately which project would best meet the development needs of the local communities. When talking about energy in sub-Saharan Africa, a major issue is affordability. Just because you provide an energy source, does not mean that local communities will be able to pay for that electricity. While the assessment looked at the investment cost, it did not evaluate the cost that customers will probably be paying for that electricity. Solar in Nigeria costs about 15.5 Naira per kilowatt hour (approximately 0.05 USD).<sup>22</sup> Meanwhile consumers of natural gas pay about 50 percent more.<sup>23</sup> With the volatility of the price of gas, especially in Nigeria where security issues and a devaluation of the local currency – the naira – have caused an increase in the price of gas, the stability of solar becomes a much more attractive technology. Even for the investment cost, solar is not significantly greater than gas. The assessment states that gas is cheaper based on “project site peculiarities and condition,” but does not provide any support or specifics for why that is the case. In fact, solar investment is less than 10 percent more than investment costs for natural gas.<sup>24</sup> In addition, the assessment brushed off environmental concerns by choosing to compare only the impacts of gas with the impacts of coal, completely ignoring how much worse the natural gas plant would be on air, water and the climate than solar.<sup>25</sup>

**Risks posed by possible corruption:** The applicant for project financing and CEO of Proton Delta, Otimeyin Andrew Ikomi, has reportedly been involved with corruption and money laundering. The allegation relates to accounts opened with Keystone Bank, of which Mr Ikomi was Managing Director, by Malabu Oil and Gas. Ikomi is accused of ignoring banking regulations to aide Malabu's banking fraud, including forgery and misinformation.<sup>26</sup> OPIC should not become involved in supporting a project whose sponsor is the subject of credible

---

<sup>21</sup> Kathryn McKaina et al., *Methane Emissions from Natural Gas Infrastructure and Use in the Urban Region of Boston, Massachusetts*, 112 PROC. NATURAL ACAD. SCI. 1,941 (2015), <http://www.pnas.org/content/112/7/1941.full.pdf>

<sup>22</sup> EnergyDatar (Nigerian solar webinar)

<sup>23</sup> Emelee Onu, *Nigeria to Raise Electricity Rates Up to 40% as Costs Increase*, Bloomberg, Oct. 26, 2015, <https://www.bloomberg.com/news/articles/2015-10-22/nigeria-to-raise-electricity-rates-up-to-40-as-costs-increase>; Damilare Opeyemi, *Here's What You Need to Know about Nigeria's New Electricity Tariff*, Ventures Africa, Feb. 3, 2016, <http://venturesafrica.com/is-the-new-electricity-tariff-justifiabe/>.

<sup>24</sup> Nigeria solar webinar – contact Erabor A. Okogun [eokogun@nemoante.com](mailto:eokogun@nemoante.com) for source

<sup>25</sup> Fugro Nigeria Ltd., *supra* note 3, ch. 2, p. 5.

<sup>26</sup> Idris Akinbajo, *Malabu N155bn Fraud: How Keystone Bank Helped Presidency, Ministers Broker Huge Money Laundering Deal*, PREMIUM TIMES, Nov. 25, 2012, <http://www.premiumtimesng.com/parliament-watch/108489-malabu-n155b-fraud-how-keystone-bank-helped-broker-huge-money-laundering-scheme.html>.

corruption allegations, without further enhanced due diligence, for example by seeking assurances from Nigeria's investigatory agencies. To move forward with such a deal absent assurances that Mr. Ikomi is not under investigation would put millions of taxpayer dollars at risk and potentially pull the U.S. government into a banking fraud scandal.

In light of the environmental, social, and corruption concerns raised in this letter, we urge OPIC to reject financing for the Proton Delta Sunrise gas power plant in Nigeria and to consider financing for other projects, such as mini and off-grid renewable projects that will increase energy access without displacing communities and negatively impacting the environment.

Sincerely,

Kate DeAngelis  
International Policy Analyst  
Friends of the Earth U.S.  
202-222-0747  
[kdeangelis@foe.org](mailto:kdeangelis@foe.org)