

Comments Received on the ESIA and OPIC's Responses:

Comment Summary: Lack of compliance with domestic and international law with respect to the following:

- I. The ESIA failed to consider project alternative, in violation of OPIC's ESPS and the law of Neuquén Province.
- II. The ESIA failed to appropriately assess direct and indirect greenhouse gas emissions, in violation of OPIC's ESPS and Argentina's commitment under the Paris Agreement.
- III. The ESIA failed to conduct an appropriate public consultation, in violation of OPIC's ESPS and Argentine law.
- IV. The project sponsors failed to consult with and obtain the free, prior, informed consent of local Indigenous Peoples in violation of OPIC's ESPS, and Argentina's commitments under the Convention Concerning Indigenous and Tribal Peoples in Independent Countries and United Nations Declaration on the Rights of Indigenous Peoples.
- V. The ESIA failed to conduct a complete analysis.
- VI. The project threatens human rights, as warned in the recommendations of the United Nations Committee on Economic, Social, and Cultural Rights.

Comment I: The ESIA failed to consider project alternatives, in violation of OPIC's ESPS and the law of Neuquén Province.

Response: The ESIA posted on the OPIC website is a comprehensive document that addresses all aspects, activities and facilities that make up the Project. The ESIA is based in part on ESIA's for individual facilities that make up the Projects and which have been submitted to the Province of Neuquén for authorization and licensing. For a complete list of those facilities that have already been authorized and licensed by the Province and those facilities whose licenses are pending, please see Section 2.10.2 (Project Description) in the ESIA posted on OPIC's web site.

Vista and Aleph have considered alternatives for producing oil and gas. These alternatives, including drilling options and site selection for preliminary processing of oil and gas prior to their sale to customers, are detailed in Section 2.7 (Project Description) of the ESIA. The ESIA's submitted for approval to the Province of Neuquén for authorization and licensing also address alternatives in those cases where alternatives analysis is required by the Province. OPIC's review included consideration of alternative drilling and processing sites. OPIC's review did not identify any deficiency in the Projects' selected alternatives.

Argentina is pursuing renewable energy projects as a part of its energy mix, which also includes development of oil and gas projects as part of its future plans. Wind projects are being pursued by other developers for producing electricity and OPIC is considering several of these renewable energy projects for support (see <https://www.opic.gov/doing-business-us/OPIC-policies/environment/documents>).

Comment II: The ESIA failed to appropriately assess direct and indirect greenhouse gas emissions, in violation of OPIC's ESPS and Argentina's commitment under the Paris Agreement.

Response: GHG emissions from oil and gas projects are dependent on the stage of the project (construction, drilling, production, or processing) and the exact inventory will vary over time. Therefore, OPIC uses conservative assumptions and estimates future GHG emissions based on maximum potential to emit GHG emissions and annually confirms emission estimates with project sponsors. OPIC's annual GHG accounting is verified by an independent consultant. The inventory of Vista's current assets (acquired from Petrolera Entre Lomas) is discussed in Section 2.10.1.12 of the ESIA. Vista and Aleph's GHG estimates for the proposed Project are based on: estimated fuel consumption rates in its drilling and oil and gas processing, estimated methane losses, estimated GHG emissions from purchased electricity, and other minor sources. OPIC has reviewed the Projects' GHG emissions estimates (420,000 tons of carbon dioxide equivalent per year for Vista and 420,000 tons of carbon dioxide equivalent per year for Aleph) and found them to be conservative, complete and consistent with the GHG emission rates from similar projects.

Comment III: The ESIA failed to conduct an appropriate public consultation, in violation of OPIC's ESPS and Argentine law.

Response: The public consultation captured within the ESIA documentation was that which was required on the part of national or provincial regulators for permitting and approval purposes to date. Stakeholder mapping and engagement programs that will meet OPIC requirements are under development and will be a condition of OPIC support.

Comment IV: The project sponsors failed to consult with and obtain the free, prior, informed consent of local Indigenous Peoples in violation of OPIC's ESPS, and Argentina's commitments under the Convention Concerning Indigenous and Tribal Peoples in Independent Countries and United Nations Declaration on the Rights of Indigenous Peoples.

Response: No recognized Indigenous Communities are within the direct area of influence for this specific concession, as noted in Section 5.3.2.2 of the ESIA. Given the challenges related to land tenure and recognition in the region, OPIC will require that the Project's stakeholder mapping and engagement programs are sufficiently responsive to ensure appropriate avoidance, mitigation, and management for these identified risks.

Comment V(a): The ESIA failed to conduct a complete analysis. The ESIA lacks sufficient information about the most dangerous air pollutants and their impacts on human health, such as hydrogen sulfide (H₂S); volatile organic components (VOC); methane and ethane; benzene, ethylbenzene, toluene, and xylenes (BTEX); glycols; and polycyclic aromatic hydrocarbons (PAHS).

Response: Since emissions of hazardous air pollutants (HAPs) such as volatile organics (except methane), benzene, ethyl benzene, toluene, xylenes, glycols, and PAHs are mostly associated with oil refining and petrochemicals manufacturing, their releases were not expected to be significant and are not expected to be present at detectable in stacks, vents, or in fugitive

emissions. However, these HAPs will be tested in the Projects' air emissions (both from stacks/vents and fugitive releases) and will be monitored if detected during emissions testing. Appropriate pollution control measures will be undertaken if these are detected in air emissions testing. Hydrogen sulfide is not released by the Project at significant levels. Methane and ethane emissions have been accounted for in the Projects review and their emissions will be regularly monitored.

Comment V(b): The ESIA failed to conduct a complete analysis. The ESIA provides wholly inadequate detail on the stages of the construction, operation, and maintenance of the midstream portion of the project.

Response: In OPIC's opinion that ESIA does address all projected impacts associated with construction, operation and maintenance of midstream facilities and activities, which are well known. OPIC's review and monitoring have and will include the midstream project and OPIC will ensure that it conforms to both OPIC's policies and guidelines and the applicable local regulations. The Midstream (Aleph) Project is a staged development and some facilities that make up the midstream Project are still pending approval by the Province of Neuquén and subject to site-specific change per regulator direction. For a complete list of those facilities that have already been authorized and licensed by the Province and those facilities whose licenses are pending, please see Section 2.10.2 (Project Description) in the ESIA posted on OPIC's web site. OPIC disbursements will be contingent on regulatory approval.

Comment V(c): The ESIA failed to conduct a complete analysis. The ESIA provides insufficient explanation and detail on how negative impacts will be avoided or mitigated. For example, it states, "Impacts to native flora and fauna habitats will be reduced given the reduction of clearing activities, vehicle and machinery movements, and consequently the reduction of particulate and noise emissions; and risks for environmental contingency (leaks and/or spills of fluids from vehicles, dispersion of solid wastes, etc.) occurrence will be reduced." However, specifics on how such negative impacts will be reduced are unclear or absent.

Response: A draft Environmental and Social Action Plan (ESAP) has been provided as a part of the disclosure. Specific management plans will be developed as provided for in the ESAP and these plans will provide more detail regarding the specific actions that will be taken to mitigate specific risks. These management plans will be subject to review and approval by OPIC. OPIC's review will be further informed by future regular requirements in licenses and independent review's by OPIC's independent engineers and consultants. This process is one commonly followed by Development Finance Institutions.

Comment V(d): The ESIA failed to conduct a complete analysis. Terrestrial flora is analyzed, however, there is no mention of impacts on microbiota and ichthyofauna related to the affected flora. Further, the analysis is static and fails to address expected impacts of climate change on the various organisms. Yet another section of the ESIA emphasizes "the effect on the plant cover will last for a long time due to the low natural recovery capacity of vegetation."

Response: The Project area is characterized as a semi-arid environment with low soil moisture and relatively high salinity in the first 50 cm of soil. Section 5.2.6 (Ecosystem Services) of the

ESIA notes that key soil microbial activity is associated with shrub patches. OPIC will require that shrub patches be specifically addressed in the biodiversity management and monitoring plan. Biodiversity management and monitoring will be undertaken during the entire project term and will account for any observed changes due to climate or other factors.

The nearest surface water body is the Neuquen River, located 20 km south of the Project area. Creeks found on the Project site are ephemeral and the presence of ichthyofaunal (fish) is unlikely.

Comment V(e): The ESIA failed to conduct a complete analysis. The ESIA asserts that significant risks related to physical hazards affecting nearby communities are not expected due to the distance to the project areas. However, this assertion is premature, as the ESIA fails to consider the impacts of waste disposal, despite many of the project sites being located in cities. Also, the ESIA should have considered the impact of strong winds that facilitate exposure to hydrogen sulfide and/or other hazardous compounds in air, as well as dust and combustion gases, that could result in dangerous chemical products affecting people's health.

Response: Waste disposal will be at licensed facilities. These facilities will be reviewed and monitored by both the local regulators and OPIC's Independent Engineer. Hydrogen sulfide emissions will not be at detectable beyond the fence-line. Hazardous air pollutants (HAPs) such as volatile organics (except methane), benzene, ethyl benzene, toluene, xylenes, glycols, and PAHs are mostly associated with oil refining and petrochemicals manufacturing, their releases were not expected to be significant and are not expected to be present at detectable in stacks, vents, or in fugitive emissions.

Comment V(f): The ESIA failed to conduct a complete analysis. The ESIA does not include information on the chemical substances used for the preparation of water-based and oil-based mud as well as their quantities. It only very inadequately states that they "will be finally defined by the specialized third-party company contracted by VOG for providing mud services and agreed with VOG mud specialists." This also raises concerns about when and where VOG's responsibility ends. In another example, the flow-back water treatment is expected to be collected and transported for off-site treatment at authorized and licensed third-party contractors' facilities.

Response: The main chemical compounds that will be used in the preparation of both water-based and oil-based drilling muds may be found in Section 2.10.1.3 (Project Description) of the ESIA. Quantities of these compounds that will be used will vary depending on drilling conditions. OPIC reviewed the chemicals used in both the water-based and oil-based drilling muds and found them to be consistent with the industry norms and are approved for use by the local regulators.

Flow-back water will be collected in metal containers, conditioned, treated and reused in the fracking process to the maximum extent possible (see Section 2.10.1.8 of the ESIA). The local regulators have found the flow-back water treatment system to be adequate and in compliance with the domestic regulations. OPIC's Independent Engineer will also review the flow-back

water treatment system to ensure that it complies with the domestic regulations and is consistent with the industry norms.

Comment V(g): The ESIA failed to conduct a complete analysis. The ESIA chapter about waste should include an analysis of the impact of the Añelo's landfill on the total amount of waste this project will generate (at least 30kg/day of solid waste). With regard to the oil-based mud and the flow-back sands, the ESIA states that all hazardous wastes will be transported "for proper treatment at authorized and licensed hazardous wastes external operators." However, it lacks critical information on the treatment and the operators that will be involved in this process, which is particularly dangerous due to the environmental impacts of the drilling process. Further, the ESIA lacks an examination of the cumulative impacts of waste disposal.

Response: Both the waste disposal landfill and the drilling muds' disposal sites will be monitored during the project term by both the local regulators and OPIC's Independent Engineer to ensure that they comply with the domestic regulations. In addition, the Independent Engineer will review these to ensure that they meet the industry norms and applicable IFC Guidelines. Organics present in drilling wastes are destroyed during bio-remediation and OPIC's site visit confirmed that the bio-remediation facilities were adequate. Recyclables are removed from the wastes generated and sent for recycling. Waste management will be reviewed and monitored to ensure that cumulative impacts are at acceptable levels in accordance with the industry norms.

Comment V(h): The ESIA failed to conduct a complete analysis. La Pampa and Mendoza provinces are very close to the areas of direct influence of the Vaca Muerta basin, but there is no mention of them as part of the indirect area of influence.

Response: La Pampa is at least 30 km from the nearest project site and Mendoza is at least 40 km from the nearest project site.

Comment V(i): The ESIA failed to conduct a complete analysis. The sand suppliers mentioned in the ESIA have questionable environmental records. In fact, Jan De Nul (Arenas Argentinas S.A.) is extracting sand from Paraná River without having completed the process of studying environmental impacts. Further, the site is a buffer zone of a Wetland of International Importance (RAMSAR site).

Response: The advice is noted. Environmental and social impacts of all major suppliers will be monitored and corrective actions taken when needed. Both the local regulator and OPIC's Independent Engineer will monitor these during the entire Project term. OPIC's review is mindful of the presence of a Ramsar Wetland and will review and monitor any activity (including those of the suppliers) which may potentially impact the Ramsar Wetland's buffer zone.

Comment V(j): The ESIA failed to conduct a complete analysis. The section on ecosystem services is very deficient. All of the noted services are related only to shrubs, and there is no mention of provisioning services (cattle raising, for example), nor cultural services. Also, there

is no mention of cumulative impacts on ecosystem services such as climate regulation, pest regulation, erosion regulation, soil fertility, water cycling, etc.

Response: The Ecosystem Services Assessment in Section 5.2.6 of the ESIA is labeled “Preliminary”. Ecosystem services monitoring, including cumulative impacts on ecosystem services, will be a part of the biodiversity management and monitoring plan.

Comment V(k): The failure to conduct a complete analysis is especially concerning in the wake of the recent audit of OPIC from the Office of Inspector General (OIG) of the US Agency for International Development. This audit reviewed OPIC’s investments in Chile’s renewable energy sector and determined that OPIC was unable to meet its requirements for data collection and oversight. In particular, it noted that “weak processes and internal controls—including unverified borrower self-assessments, outdated policies and procedures, and poor records management—hindered the ability of OPIC staff to ensure its projects comply with environmental and social laws, adequately manage and monitor OPIC-backed projects, and identify risky clients.”

The Vaca Muerta project now under consideration poses enormous risks to communities and the environment in the surrounding area, and it should not proceed without a thorough understanding of what its impacts are likely to be. OPIC should not approve a project with so many gaps in its analysis. The OIG’s audit raises significant concern that, if approved, there will not be the necessary rigorous review, oversight, and monitoring of project development to ensure compliance with OPIC policy and applicable Argentinian and international law.

Response: Noted.

Comment VI: The project threatens human rights, as warned in the recommendations of the United Nations Committee on Economic, Social, and Cultural Rights.

In October 2018 the Committee on Economic, Social, and Cultural Rights (CESCR) published their recommendations for the State of Argentina. Among the recommendations was a conclusion that unconventional oil and gas development – commonly known as hydraulic fracturing or fracking – threatens the rights of those in the region and exacerbates the climate crisis.³² This proposed project to drill 110 unconventional wells is in direct contravention to the recommendations of the CESCR, and threatens the human rights of those in the region where drilling would take place as well as those affected by the ongoing destabilization of the climate. OPIC should not support projects which are likely to result in considerable and foreseeable human rights violations.

Response: Noted.