**Host Country**  
South Africa.

**Name of Borrower(s)**  
Tetra4 Proprietary Limited, a limited liability company organized and existing under the laws of the Republic of South Africa (the “Borrower”).

**Project Description**  
The project is the first phase of development and commercialization of a 36.4 billion standard cubic feet (“Bcf”) natural gas and 0.87 Bcf helium field in South Africa, and the construction and operation of a 52-kilometer (“km”) gas gathering pipeline system and of a new micro-scale liquefied natural gas (“LNG”) and helium liquefaction plant with an expected daily production capacity of up to 50 tons per day of LNG and up to 450 kilograms (“kg”) per day of helium (the “Project”).

**Proposed OPIC Guaranty**  
Up to US$40,000,000 to be financed by OPIC (12 year term).

**Total Project Costs**  
Approximately US$55,721,195

**U.S. Sponsor**  
Not Applicable.

**Foreign Sponsor**  
Renergen Limited, a public for-profit company organized and existing under the laws of the Republic of South Africa.

**Policy Review**

**U.S. Economic Impact**  
The Project is not expected to have a negative impact on the U.S. economy, as helium is critical to the U.S. economy, and the U.S. supply of helium will not be sufficient to meet increasing demand. There is no U.S. procurement and therefore the Project is expected to have a neutral impact on U.S. employment. The Project is expected to have a neutral impact on the U.S. trade balance.

**Developmental Effects**  
This Project is expected to have a highly developmental impact in South Africa. As the first and only onshore gas concession in South Africa, the Project will introduce LNG to the domestic market, as well as install helium processing technology that is entirely new to the country. The introduction of LNG will provide immediate cost efficiencies to the Project’s customers that currently run on diesel fuel. The Project is expected to have significant macroeconomic benefits by displacing current imports of natural gas and helium, as well as through exports of helium. The Project’s location in the Matjhabeng municipality of Free State is expected to bring positive economic benefits to the local economy, which has an unemployment rate of 37% and a high level of income inequality. It is estimated that the Project, at steady state gas production, could add approximately 2.3% to the total output of Matjhabeng’s economy. The Project aligns with the Government of South Africa’s Gas Utilization Master Plan, which aims to increase natural gas usage to reduce the country’s reliance on coal.

**Environment**  
**Environmental and Social Categorization and Rationale:**  
The Project has been reviewed against OPIC’s categorical prohibitions and determined to be eligible. The Project has been screened as Category B because it involves the development of
small-scale natural gas and helium gas production and LNG distribution infrastructure all of which have potential impacts that can be mitigated to acceptable levels through the implementation of internationally-accepted safety and environmental management practices. The major risks are associated with the potential for accidental releases of methane (the primary component of natural gas) from process upsets resulting in fire and explosion, but such risks have been determined to be at acceptable levels at the Project fence-line because of the moderate gas pressure (with a maximum pressure of 275 bars) and low volume of gases (helium and LNG) being produced. In addition there are also potential impacts and risks commonly associated with LNG transport, solid and hazardous waste management, occupational health and safety.

**Applicable Standards:** OPIC’s environmental due diligence indicates that the investment will have impacts which must be managed in a manner consistent with the following International Finance Corporation’s (IFC) 2012 Performance Standards (P.S.):

- P.S. 1: Assessment and Management of Environmental and Social Risks and Impacts;
- P.S. 2: Labor and Working Conditions;
- P.S. 3: Resource Efficiency and Pollution Prevention;
- P.S. 4: Community Health, Safety, and Security; and
- P.S. 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources.


The Project’s greenhouse gas (carbon dioxide equivalent) emissions have been estimated to be less than 35,000 tons of carbon dioxide equivalent (CO$_{2\text{eq}}$) per year.

**Environmental and Social Risks and Mitigation:** The nearest residential community is located approximately 2 kilometers (km) or greater from the Project site. Air dispersion modeling of a potentially harmful vapor cloud resulting from an accidental methane release indicates that hazardous concentrations of
methane will be limited to less than a 553 meters radius around the point of release which is within the Project fence-line. Therefore, all residences will be outside of the impact zone. To further mitigate this unique safety risk, an emergency response plan will be in effect which includes evacuation of on-site personnel. In the event of a fire or an explosion, minor damage (such as broken glass windows) may be expected to buildings and facilities within the Project fence-line and some injuries may occur to facility personnel. A detailed hazard analysis was undertaken by an independent expert to identify opportunities to reduce the potential for accidental release of methane and other volatile organic compounds ("VOC"), fire, and explosion.

The Project has an environmental and social management system in order to achieve consistency with the requirements of the IFC’s 2012 Performance Standards. The Project has put in place procedures consistent with internationally-accepted good practices to address both occupational and community safety risks associated with the accidental release of methane and other VOCs, fire, and explosion. The LNG distribution infrastructure will be developed in compliance with the South African regulations and the WBG’s EHS Guidelines, both of which will ensure occupational and community safety.

The Project is expected to follow internationally recognized best practices in process safety and properly manage hazardous materials including methane. The Project will implement a comprehensive Environmental Management Program ("EMP") which will address: process safety; accidental gas releases, fire and explosion; petroleum resource management; air emissions; wastewater treatment and sewage discharges; solid and hazardous waste disposal; emergency management; occupational health and safety; spill response; monitoring; stakeholder engagement; and an Environmental Action Plan.

The Project has adopted detailed procedures relating to the safety of operations including recommendations resulting from the hazard analysis. Detection equipment located within the Project facility will monitor gas releases. These monitors will detect any accidental release of methane and other VOCs and automatically shut down the relevant gas processing facility. The Project will implement its Emergency Response Plan to ensure that appropriate emergency response measures are in place including its own emergency service vehicles and responders. The Project will also implement its Occupational Health and Safety Plan and Fire Prevention and Control Plan both of which are designed to ensure workplace and community safety. Employees will be trained on emergency response measures in addition to being trained on safety and environmental and social impacts management.
| **Social Assessment** | The Project will have impacts that must be managed in a manner consistent with the International Finance Corporation’s Performance Standards, OPIC’s Environmental and Social Policy Statement and applicable local laws. OPIC’s statutorily required language will be supplemented with provisions concerning the rights of association, organization and collective bargaining, minimum age of employment, prohibition against the use of forced labor, non-discrimination, hours of work, the timely payment of wages, and hazardous working conditions. Standard and supplemental contract language will be applied to all workers of the Project, including contracted workers.  
Because of the Project’s limited physical footprint, its small and skilled workforce, low population density in the Project area, and ongoing engagement with stakeholders, overall Project social risks are assessed to be limited.  
The Project is preparing an Environmental and Social Management System that includes a stakeholder engagement plan and a grievance mechanism for external stakeholders. The Borrower will submit these finalized plans to OPIC.  
This review covers the commensurate human rights risks associated with LNG projects in South Africa. |