

## **SAFEGUARDS AND SOCIAL DIMENSIONS SUMMARY**

### **A. Safeguards**

1. In compliance with the Safeguard Policy Statement (2009) of the Asian Development Bank (ADB), the Eastern Indonesia Renewable Energy Project Phase 2 is classified as category B for the environment, and category C for both involuntary resettlement and indigenous peoples. The proposed loans of up to \$12.49 million will be utilized to finance the construction, operation, and maintenance of a portfolio of four solar power subprojects all owned by Equis Energy: a 21 megawatt (MW) solar power plant in Likupang (North Sulawesi), and three 7 MW solar power plants in Pringgabaya, Selong, and Sengkol (Lombok, West Nusa Tenggara).

2. To meet Safeguard Policy Statement environment category B project requirements, Equis Energy has prepared environmental and social impact assessments for the four solar power subprojects including power transmission lines.<sup>1</sup> It also prepared an environmental management plan outlining appropriate measures to avoid, minimize, and mitigate any impacts. Most of the project components, such as the solar panels and transmission line poles, will be situated on rain-fed dry agricultural land historically planted with corn, cassava, and beans. None of the four solar subprojects or their surrounding areas are located in or near an environmentally sensitive area. The approximate distance of nearest sensitive receptors (i.e., residential areas, schools, and mosques) to the boundary of each of the four solar power plants ranges from 150 meters to 650 meters. The transmission line route was designed to avoid sensitive areas and minimize disruption and inconvenience to the community. Short-term impacts during construction will likely be limited within the subproject sites and include dust, noise, traffic disturbance because of the frequency of delivery trucks, solid waste generated by construction workers, and health and safety risks. Potential impacts during operation are wastewater, solid-waste generation and glaring effects from solar panels. Modern solar panels that will be used for the project include an anti-reflective coating that significantly reduce the glare effects upon local communities and aircraft. Septic sewage treatment systems will be installed to dispose of domestic wastewater generated during construction and operation. Broken photovoltaic modules will require storage and disposal during operation and potentially during construction.<sup>2</sup> Only a small volume of hazardous waste is expected to be generated by the project during construction and operation. Perimeter fencing, lighting and general security will be provided around the site boundary of each subproject for security. Drainage system to drain the runoff water during the rainy season will also be constructed to prevent flooding. Meaningful consultation and socialization in relation to environment and local disclosure of the environmental assessments have been conducted at each of the four solar subproject sites. The institutional capacity and commitment of Equis Energy to manage the project's environmental and social impacts are deemed adequate. Dedicated resources for managing and monitoring the grievances and complaints from the community will be established by Equis Energy. Equis Energy will submit annual environmental and social monitoring reports to ADB. The engineering, procurement and construction (EPC) contractor will be required to prepare site-specific environmental and social management and monitoring plans (ESMMPs) and designate its own environmental, health, and safety officer to ensure compliance with the site-specific ESMMPs. The majority of the subproject area population in North Sulawesi belong to the Sainghe Talaud ethnic group, a subgroup of the Minahasa which is the dominant ethnic group in the province. In Lombok, West Nusa Tenggara, 80% of the subproject area

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<sup>1</sup> Necessary government regulatory permits including environmental permits have been obtained for all solar farm sites and transmission lines. The construction of the transmission line will use the existing PLN right of way and no new substation will be constructed therefore no properties or crops will be damaged.

<sup>2</sup> Photovoltaic modules that reach the end of their life (over 20 years) will be recycled at dedicated facilities or disposed of as general waste.

population originated from the Sasak Tribe, the dominant ethnic group in the area. The subproject areas are not situated in or overlapping any traditionally owned land or lands with customary rights. The ethnic groups residing in the subproject area villages are not separate from mainstream North Sulawesi and West Nusa Tenggara society, and are neither distinct nor vulnerable.

3. The project will have a total footprint of about 58 hectares (ha) comprising 30 ha in Likupang (North Sulawesi), and 11 ha in Pringgabaya, 8 ha in Selong, and 9 ha in Sengkol (West Nusa Tenggara). Each site will consist of a solar panel field, main station and facilities, inverter station, internal and access roads, drainage and water distribution system, high voltage control station (for Likupang), and 20-kilovolt (kV) overhead transmission line to the nearest PT Perusahaan Listrik Negara (PLN) substation, the power off-taker. A 100 m underground transmission line will be constructed from the high voltage control station to the PLN Likupang substation immediately adjacent to the solar powerplant. The transmission line for the three other sites will be subsequently transferred to PLN. For this purpose, siting of the transmission line poles will follow PLN guidelines which do not provide land use compensation for transmission poles below 35 kV erected on private land. The transmission lines will pass through both private land and existing rights of way.<sup>3</sup> The transmission pole diameter is 363 millimeters, and the location of each poles will be determined with and the consent of the landowner, and poles can be relocated or adjusted by PLN should there be need in the future. Equis Energy, through the respective special purpose vehicles (SPVs) of each solar power plant, procured project land using a willing buyer–willing seller process without using the provisions of the National Land Agency Law No. 2/2012 on land procurements for development in the public interest. The irregular shape of the solar power plant sites proves that land was excluded from the project in cases of failed negotiations, or where consent of all members of the family owning the parcel of land was not obtained. A land appraisal report was commissioned to determine the market price of the subject parcels of land.<sup>4</sup> The land procurement process and the grievance mechanism were disclosed to landowners from September 2016 at the commencement of land acquisition procedures. Concerns raised during this process were resolved through further information on the price of land parcels, land measurements, and land boundary disputes.

## B. Other Social Dimensions

4. Each SPV and their contractors will comply with ADB's Social Protection Strategy and monitor and report annually to ADB on their compliance with national labor laws and internationally recognized core labor standards.<sup>5</sup> The environment and social management action plan will include provisions requiring SPVs and their contractors and subcontractors to comply with national labor laws and regulations consistent with internationally recognized core labor standards (i.e. core labor standards and safe working conditions for both men and women). The project is categorized as having *some gender elements* and will monitor employment and other capacity building activities targeting women in the project area.

<sup>3</sup> The length of the transmission line passing through private lands is 3.1 kilometers (km) in Pringgabaya, 3.6 km in Selong, and one or two poles in Sengkol.

<sup>4</sup> The majority of purchased land parcels are rice fields not immediately adjacent to roads and fetch an appraised value of Rp 30,610 per square meter (m<sup>2</sup>) in Likupang, Rp 40,000- Rp 70,000 per m<sup>2</sup> in Pringgabaya, Rp, 35,000-Rp 90,000 per m<sup>2</sup> in Selong, and Rp50,000-Rp 95,000 per m<sup>2</sup> in Sengkol. Based on negotiations with landowners, final purchase prices were Rp35,000 per m<sup>2</sup> in Likupang, Rp 42,000 per m<sup>2</sup> in Pringgabaya, Rp39,000-Rp 90,000 per m<sup>2</sup> in Selong, and Rp 95,000 per m<sup>2</sup> in Sengkol.

<sup>5</sup> ADB. 2003. *Social Protection Strategy*. Manila (adopted in 2001).