

PHILIPPINE NATIONAL OIL COMPANY (RENEWABLE ENERGY)

CORPORATE PROFILE AND INVESTORS' KIT

PNOC wanted to showcase their range as a clean energy provider.

Services and Competencies

PNOC RE has the necessary capabilities to manage, design, develop, operate, maintain and finance renewable energy projects. We can enter into EPC, O&M, or power purchase agreement (PPA) contracts, covering hydro, geothermal, wind, solar, biomass, and other renewable energy sources. PNOC RE is the lead joint venture partner in renewable energy generation in the Philippines.

Site Identification

PNOC RE can assist the local government in the process of site identification, assessment, and development of renewable energy projects. We can also assist in the identification of potential sites, and in the assessment of the economic viability of potential sites, to seek the consent of the community.

Pre-development Work

PNOC RE can assist the local government in the process of site identification, assessment, and development of renewable energy projects. We can also assist in the identification of potential sites, and in the assessment of the economic viability of potential sites, to seek the consent of the community.

Development

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Commercial Operation

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**Your Reliable Partner
in Renewable Energy Development**

"The Philippines is a good place for renewable energy investment. First because the economy is growing quite fast. Then there is also a market, the electricity demand is there."

Dr. Tsingping Zhuo, Asian Development Bank

Renewable Energy Technologies

Geothermal Energy
The Philippines has the second largest geothermal energy potential in the world, with over 27,000 MW of potential. The country's geothermal resources are widely distributed across the country, with the highest concentrations in the Cordillera region and the southern part of Luzon.

Solar Energy
The Philippines has a high solar potential, with an average of 4.5 hours of peak sunlight per day. The country's solar resources are widely distributed across the country, with the highest concentrations in the northern part of Luzon and the southern part of Mindanao.

Wind Energy
The Philippines has a high wind potential, with an average of 6.5 m/s of wind speed. The country's wind resources are widely distributed across the country, with the highest concentrations in the northern part of Luzon and the southern part of Mindanao.

Hydropower
The Philippines has a high hydropower potential, with an average of 10,000 MW of potential. The country's hydropower resources are widely distributed across the country, with the highest concentrations in the Cordillera region and the southern part of Luzon.

Biomass
The Philippines has a high biomass potential, with an average of 10,000 MW of potential. The country's biomass resources are widely distributed across the country, with the highest concentrations in the southern part of Luzon and the southern part of Mindanao.

Ocean Energy
The Philippines has a high ocean energy potential, with an average of 10,000 MW of potential. The country's ocean energy resources are widely distributed across the country, with the highest concentrations in the southern part of Luzon and the southern part of Mindanao.

FACTS AND FIGURES

Renewable Energy Potential in the Philippines

- 76,000 MW POTENTIAL WIND POWER
- 10,500 MW POTENTIAL HYDROPOWER
- 1,200 MW POTENTIAL GEOTHERMAL
- 170,000 MW POTENTIAL OCEAN ENERGY
- 263 MW POTENTIAL BIOMASS
- 65 MW POTENTIAL SOLAR

TARGET IS AT LEAST 50%

TOTAL ENERGY DEMAND

- 2015: 12,000 MW
- 2030: 30,000 MW

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The Saktan B Hydropower Project

The Saktan B Hydropower Project is located in the upper portion of Saktan River, which is a tributary of the West Cebu municipality of Buhisan. The project is currently in the pre-development and design phase.

Key Data:

- Service Contract:** REC 2010-10-122
- Location:** Upper portion of Saktan River, Buhisan, Marikina City (Marikina River)
- Potential Installed Capacity:** 24 MW
- Potential Annual Generation:** 108.24 GWh
- Initial Water Head:** 150 m
- Wicket Gate:** 2500
- Initial Generator Details:** 2 x 12 MW Francis Turbine (in a wide x 4 m deep)
- Initial Power Station Details:** 125 m
- Net Head:** 125 m
- Rated Flow:** 250 m³/s
- Equipment:** 2 x 12 MW Francis turbine units

PNOC RE is currently in the pre-development and design phase of the project. Interested parties may contact Mr. Paul C. Balboa of the Business Development Unit of PNOC RE at +632 880 3600.

The Dulangan Hydropower Project

The Dulangan Hydropower Project is located in the upper portion of the Dulangan River, which is a tributary of the Marikina River. The project is currently in the pre-development and design phase.

Key Data:

- Service Contract:** REC 2010-10-122
- Location:** Upper portion of Dulangan River, Buhisan, Marikina City (Marikina River)
- Potential Installed Capacity:** 8.25 MW
- Potential Annual Generation:** 42.43 GWh
- Initial Water Head:** 20m
- Wicket Gate:** 2,730m
- Initial Generator Details:** 2 x 4.125 MW Francis Turbine (in a wide x 4 m deep)
- Initial Power Station Details:** 125.5m
- Net Head:** 125.5m
- Rated Flow:** 8.25 m³/s
- Equipment:** 2 x 4.125 MW Francis turbine units

PNOC RE is currently in the pre-development and design phase of the project. Interested parties may contact Mr. Paul C. Balboa of the Business Development Unit of PNOC RE at +632 880 3600.

The Pacuan-Guinobaan Hydropower Project

The Pacuan-Guinobaan Hydropower Project is located in the upper portion of the Pacuan-Guinobaan River, which is a tributary of the Marikina River. The project is currently in the pre-development and design phase.

Key Data:

- Service Contract:** REC 2010-10-122
- Location:** Upper portion of Pacuan-Guinobaan River, Buhisan, Marikina City (Marikina River)
- Potential Installed Capacity:** 6.8 MW
- Potential Annual Generation:** 33.53 GWh
- Initial Water Head:** 20m
- Wicket Gate:** 2,730m
- Initial Generator Details:** 2 x 3.4 MW Francis Turbine (in a wide x 4 m deep)
- Initial Power Station Details:** 125m
- Net Head:** 125m
- Rated Flow:** 6.8 m³/s
- Equipment:** 2 x 3.4 MW Francis turbine units

PNOC RE is currently in the pre-development and design phase of the project. Interested parties may contact Mr. Paul C. Balboa of the Business Development Unit of PNOC RE at +632 880 3600.