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Forecast Development of Electricity Supply in the Indonesian Archipelago

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Indonesia is an archipelago consisting of 17,000 islands, of which some are heavily populated and others have no inhabitants or even a name. The country's population is growing by 1.1% per year, so the demand for electricity has been increasing as well. The Indonesian archipelago—as a location for renewable energy sources such as micro-hydro, wind, solar, geothermal and biomass—presents unique opportunities to invest in expanding power production.

In the industrialized regions and on large islands, such as Kalimantan, the electricity demand is highest. Most of the electricity is supplied by large power plants using fossil fuel—coal, oil and gas—which causes an increase in the volume and concentration of greenhouse gases.

Moreover, the currently installed power plants do not meet the energy needs of Indonesia's population of two hundred million. As a solution, within the next five years, the Indonesian Government plans to build power plants adding 35 000 MWe. The electricity demand forecast for 2050 will be around 200 GWe, with 160 GWe coming from renewable and conventional energy sources and 40 GWe from alternative sources such as nuclear power.

To meet the demand for electricity in Indonesia, an expansion strategy is needed for alternative sources of energy on the islands around the Java Sea and on the island of Kalimantan at locations safe from earthquakes. The Indonesian Government has provided some guidelines for commercial nuclear power plants, such as those contained in Government regulations No. 5 and No. 43 of 2006.

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Country or International Organization

Indonesia

Primary author: SOEDYARTOMO, Tri Murni (Women in Nuclear Indonesia)

Co-authors: Mrs WIDAYANTI, Ester (University of Gajah Mada, Yogyakarta, Indonesia); Prof. GIRIANTARI, Ida Ayu (University of Udayana, Bali, Indonesia); Prof. HARTATI, Rukmi Sari (University of Udayana, Bali, Indonesia)

Presenter: SOEDYARTOMO, Tri Murni (Women in Nuclear Indonesia)

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