VIETNAM RENEWABLE ENERGY DEVELOPMENT: POTENTIAL, REALITY AND SOLUTIONS

Dr. Dung Tran Khanh Viet*, Dr. Binh Phan Minh Quoc**, Dr. Sy Le Van**

Annual GDP growth in Vietnam is about 7% in the period of 2016-2030. In order to meet this growth, Vietnam power system needs a corresponding development of power plant, power distribution and transmission networks.

The total installed power capacity of Vietnam reached approximately 60 GW at the end of 2019, expected to increase to around 80GW in 2025 and 100GW in 2030.

Currently, Vietnam power sources are based primarily on coal-fired power plant (35%), hydro power plant (32%), gas-fired power plant (25%) and a negligible proportion of other power sources including renewable energy. However, fossil fuels are being depleted, large scale hydro power plants with controversial environment impacts will not be prioritized for development.

Besides, Vietnam has great potential for the development of renewable energy (wind power, solar energy). Therefore, the Vietnamese government target to promote the development of power sources from renewable energy, gradually increasing the proportion of electricity produced from renewable energy sources in the generation mix, to increase the total wind power generation capacity from 140 MW to 2,000 MW in 2025, reaching 6,000 MW in 2030; and aim to reach 850 MW solar power in 2020, 4,000 MW in 2025, 12,000 MW in 2030. To achieve this goal, the Vietnamese government will have more synchronous solutions related to energy policies, electricity pricing mechanisms, tax priorities, support for transmission and distribution, etc.

This paper introduces an overview of Vietnam's power system, power source structure, power distribution & transmission systems and development trends; analysis of the potential development of wind energy, solar energy, causes and limitations (economic, technical, policy ...) of the development of renewable energy in Vietnam and successful experiences of countries in the world. From an investor's perspective, this paper proposes appropriate policy solutions to the government to achieve the goal of renewable energy development.

Keywords: Vietnam's power system, renewable energy, energy policy, perspective

(*) Vietnam Oil and Gas Group

(**) PetroVietnam University