

COBENEFITS Studies in Vietnam

- 1. Energy Access & Energy Security areas (providing electricity access for the remaining unelectrified 1% in Vietnam) and local value creation in remote areas (economic prosperity generated through diversification of household income sources and growth of small- and medium-scale businesses in rural areas)**
- 2. Employment effects (number of jobs created nationally through the growth of the renewable energy sector, and future skill requirements to meet growing renewable energy demand in Vietnam).**

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The Vietnamese government targets provision of electricity services by 2030 to the remaining 2% of the population, comprising rural households and rural enterprises. However, most of these areas without electricity are very far from the existing grid network with limitation to connecting to further grid expansion into these areas appear unfeasible. The government's rural electrification program is targeting an ambitious national electricity access by 2020.

The objective of the research study is to analyze the feasibility of enabling off-grid renewable energy generation in rural areas with restricted/impossible access to national power grid infrastructure with the associated socio-economic benefits. The study results will show areas to focus on to drive the socio-economic benefits of increasing renewable energy (wind, solar, geothermal and biomass) investments in Vietnam. The study's purpose is to show how rural electrification hinged on renewable energy off-grid solutions can help accelerate and ease access to electricity to the remaining un-electrified 2% while enhancing socio-economic development in the country. Additionally the study aims to develop methodologies and generate results on secure and reliable energy access in order to stimulate public awareness, and to support decisions towards a viable energy transition process in Vietnam.

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It is becoming increasingly important to ensure that energy policy, planning and decision-making processes effectively and accurately consider the broader socio-economic impacts associated with the increased deployment of renewable energies. Job creation has become an important factor in promoting power system transformation. However, estimating jobs created due to renewable energy deployment is incomplete without consideration of resulting job losses in other sectors. This includes both job losses due to the replacement of conventional sources of generation, especially coal, and job losses resulting from dynamics within the coal

sector. Further, the type and quality of jobs created are important: Policymakers need to know how many low/medium/highly skilled jobs are created and lost over time.

Therefore, the study will be assessing the following aspects of future development of employment in the power sector through growing shares of renewable energies in Vietnam:

- The net and gross employment effects of low carbon energy technology in the country. This entails an analysis of jobs created (direct, indirect, and induced jobs) by renewable energy technologies and the job losses in the coal power sector and coal regions in the country.
- The types of jobs generated, skills requirements, and education needs in the renewable energy sector.

These analyses will be based on climate mitigation and renewable energies deployment scenarios in the power sector which are accepted by relevant ministries and government agencies in Vietnam.