

## **Impact of the Photovoltaic Integration in Power Distribution Network: Case Study in Badak Liquefied Natural Gas (LNG)**

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**Abstract :** This paper objective is to analyze the impact from photovoltaic system integration to power distribution network. The case study in Badak Liquefied Natural Gas (LNG) plant is presented in this paper. Badak LNG electricity network is operated in islanded mode. The total power generation in Badak LNG plant is significantly affected to feed gas supply. Meanwhile, to support the Government regulation, Badak LNG continuously implemented the grid-connected photovoltaic system in existing power distribution network. The impact between train operational mode change in Badak LNG plant and the growth of photovoltaic system is also encompassed in analysis. The analysis and calculation are performed using software Power Factory 15.1.

**Keywords :** power quality, distribution network, grid-connected photovoltaic system, power management system

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