

Paris Session 2022



Performance and Reliability of the Wind Turbines at Lam Takong Jolabha Vadhana Power Plant: A Review

A1 - ROTATING ELECTRICAL MACHINES

PS2 - ASSET MANAGEMENT OF ELECTRICAL MACHINES

Q2.9 - Many countries have been installing wind farms of varying sizes over the last decade or more. What is the experience of other wind farm owners/operators in terms of capacity factor, availability, and operation costs of wind farms, and are similar hybrid wind-hydrogen-battery storage schemes as described in this paper being considered or installed?

PRAPAPONG VANGTOOK,
Thailand



Group Discussion Meeting

© CIGRE 2022

1

© CIGRE 2021

What is the experience of other wind farm owners/operators in terms of capacity factor, availability, and operation costs of wind farms, and are similar hybrid wind-hydrogen-battery storage schemes as described in this paper being considered or installed?

- Almost of wind farms in the private sector have a capacity factor between 30 – 40 % annually depending on produced energy, rated power, and survey time, availability factors are over 95 % guaranteed by the O&M partnership, and its operating costs are based on the balance of plant by the local company.
- The government sector wind farms have the capacity factor same as above, the operating costs are based on the balance of the plant by the own employees, but the availability factor is 80% approximately as below reasons:

What is the experience of other wind farm owners/operators in terms of capacity factor, availability, and operation costs of wind farms, and are similar hybrid wind-hydrogen-battery storage schemes as described in this paper being considered or installed? (continued)

- (1) force outage with issue spare part replacement requirements (almost all spare parts purchased from OEM supplier),
 - (2) force outage with issue line to ground fault (this issue takes time to investigate and repair), and
 - (3) plan outage with yearly inspection (semiannual and annual inspection).
- The hybrid wind-hydrogen-battery storage schemes wind farm is only installed in the research project of the EGAT (Electricity Generating Authority of Thailand) as the government sector only. There is neither consideration nor installation of the hybrid wind-hydrogen-battery storage schemes windfarm in Thailand's private sectors.

Thank you.