A-Core Container

Wind power costs for Guatemala communication base stations

Overview

Can wind energy be used to power mobile phone base stations?

Worldwide thousands of base stations provide relaying mobile phone signals. Every off-grid base station has a diesel generator up to 4 kW to provide electricity for the electronic equipment involved. The presentation will give attention to the requirements on using windenergy as an energy source for powering mobile phone base stations.

How much does a distributed wind energy system cost?

The residential and commercial reference distributed wind system LCOE are estimated at $240/MWh and $174/MWh, respectively. Single-variable sensitivity analysis for the representative systems is presented in the 2019 Cost of Wind Energy Review (Stehly, Beiter, and Duffy 2020). Analysts included the LCOE estimate for a large distributed wind energy.

Who provides funding for wind energy technologies?

Funding provided by U.S. Department of Energy Office of Energy Efficiency and Renewable Energy Wind Energy Technologies Office. The views expressed in the article do not necessarily represent the views of the DOE or the U.S. Government.

Why do telecom companies use wind power?

They help telecom companies lower carbon emissions, meeting client expectations and sustainability goals. Wind power enables companies to achieve these targets while reducing their carbon footprint. Small wind turbines generate electricity on-site, minimizing dependence on grid power and expensive diesel fuel.

What is the GPRA target for a fixed-bottom wind plant?

The GPRA target is $61/MWh by FY 2035 (commercial operations date [COD] 2034) (in 2022 USD) and is derived for a fixed-bottom wind plant at the

reference site based on cost reductions informed by industry learning (Shields et al. 2022) and expert elicitation (Wiser et al. 2021). Note that values are rounded to the nearest dollar.

How much does a reference wind system cost?

These two reference projects give a single-variable sensitivity range of $76–$234/MWh (see Slides 46 and 47). This range is primarily caused by the large variation in CapEx ($3,000–$9,187/kW) and project design life. The residential and commercial reference distributed wind system LCOE are estimated at $240/MWh and $174/MWh, respectively.

Wind power costs for Guatemala communication base stations

Contact Us

For catalog requests, pricing, or partnerships, please visit: https://a-core.pl