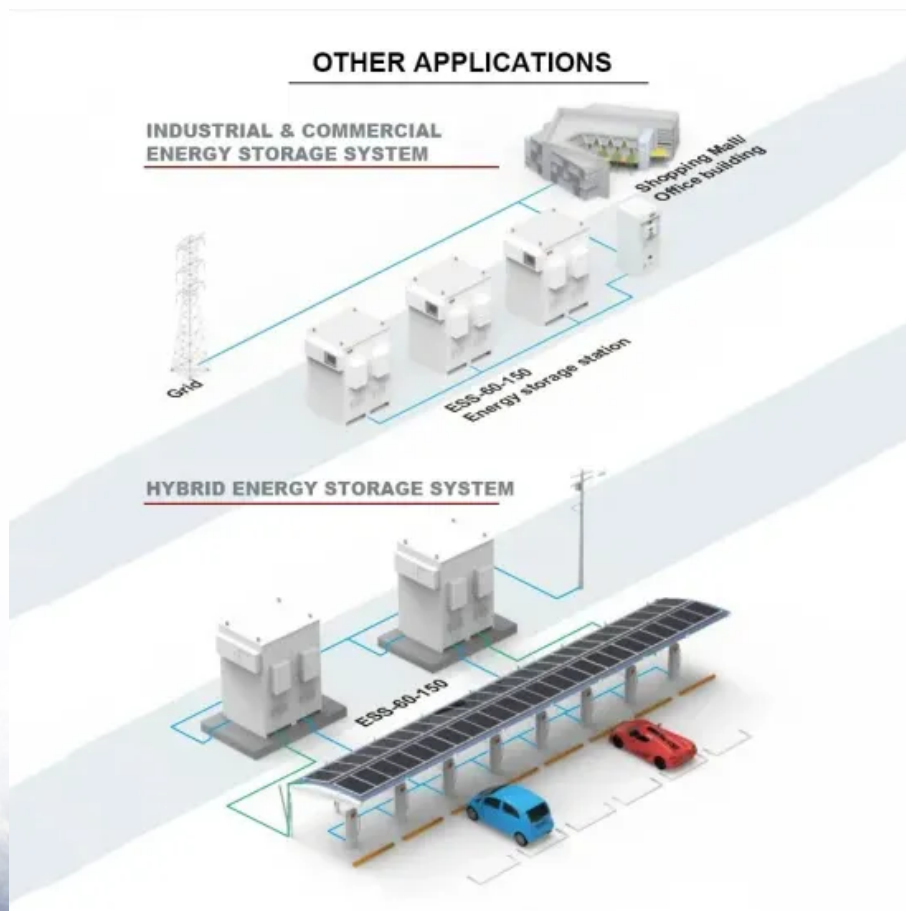


SolarInnovate Energy Solutions

The cost of building a communication base station inverter and connecting it to the grid



Overview

How to estimate the cost of building and operating a cellular network?

A simple method for estimating the costs of building and operating a cellular mobile network is proposed. Using the empirical data from a third generation mobile system (WCDMA), it is shown that the cost is driven by different factors depending on the characteristics of the base stations deployed.

Are solar base stations economically interesting?

Based on eight scenarios where realistic costs of solar panels, batteries, and inverters were considered, we first found that solar base stations are currently not economically interesting for cellular operators. We next studied the impact of a significant and progressive carbon tax on reducing greenhouse gas emissions (GHG).

How much does it cost to build a 30m tower?

Per site capex costs include \$39k for all active equipment, \$47k to build a full 30m tower and \$27k for installation. Internet access is essential for economic development and helping to deliver the Sustainable Development Goals, especially as even basic broadband can revolutionize available economic opportunities.

How does the cost module work?

The cost module first calculates the total discounted cost of capital and operating expenditures over the 10-year horizon, to obtain the Net Present Value in the first year of the assessment period (2020).

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18650 3.7V
Li-ion
RECHARGEABLE BATTERY
2000mAh



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