

Base station wind power supply life





Overview

The paper proposes a novel planning approach for optimal sizing of standalone photovoltaic-wind-diesel-battery power supply for mobile telephony base stations. The approach is based on integration of a compr.

Does wind power affect base load?

Wind power has no effect on base load. However, since base load providers can not be ramped down, if wind turbines produce power when there is no or little peak load, the extra electricity has to be dumped (e.g., into the ground) or the wind turbines turned off ("curtailment"). How does wind power affect peak load?

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Why do wind turbines need to be treated like variable demand?

As demand draws off more power, supply must be increased. As demand slows, the supply must be decreased. Because wind turbines respond to the wind rather than the grid dispatchers, they must be treated like variable demand rather than reliable supply.

How does demand affect wind power supply?

As demand slows, the supply must be decreased. Because wind turbines respond to the wind rather than the grid dispatchers, they must be treated like variable demand rather than reliable supply. The grid has to adjust supply in response to the fluctuations of wind power as well as those of demand.

What percentage of electricity is generated by wind?

Wind power provided 0.4%. In 2010, coal provided 45%, natural gas 24%, nuclear 20%, oil 0.9%, renewables 10% (of which 60% was hydro), and wind 2.3%. Electricity generation increased from 2004 to 2010 by almost 4%.



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[Life Cycle Cost Analysis and Payback Period of 12-kW](#)

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[How many years can the base station wind power supply ...](#)

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[Base station wind power supply function](#)

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important cost ...



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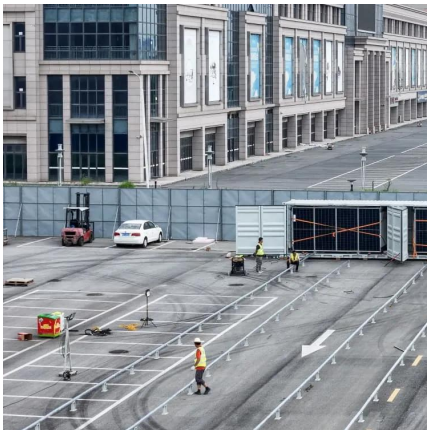
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National Wind Watch , The Grid and Industrial Wind Power

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