

Application of PV/Wind-Based Green Energy to Power Cellular Base Station

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Abstract : Conventional energy sources based on oil, coal, and natural gas has posed a trait to environment and to human health. Green energy stands as an alternative because it has proved to be eco-friendly. The prospective of renewable energy sources are quite vast as they can, in principle, meet many times the world's energy demand. Renewable energy sources, such as wind and solar, can provide sustainable energy services based on the use of routinely available indigenous resources. New renewable energy sources (solar energy, wind energy, and modern bio-energy) are currently contributing immensely to global energy demand. A number of studies have shown the potential and contribution of renewable energy to global energy supplies, indicating that in the second half of the 21st century, it is going to be a major source and driver in the telecommunication sector. Green energy contribution might reach as much as 50 percent of global energy demands if the right policies are in place. This work suggests viable non-conventional means of energy supply to power a cellular base station.

Keywords : base station, energy storage, green energy, rotor efficiency, solar energy, wind energy

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