

# Green Base Stations: Renewable Energy Becomes a Reality in Cellular Infrastructure

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## Report Summary

In just the last few years, the number of worldwide cellular base stations has grown from numbering in the hundred thousands to the many millions, and with this explosion in base station numbers has come with it the fear for all the greenhouse gases and pollution that powering a cellular network creates. To support solar and wind powered base stations off-grid, and to reduce the power demands and indirect pollution generated by base stations on-grid, base station equipment makers have offered a variety of solutions to make their base stations more environmentally friendly by greatly reducing their power demands. Infrastructure manufacturers are reducing or eliminating the need for base station air conditioning, they are reducing power amp cable loss with remote radio heads, and they are greatly increasing power amp efficiency.

This report cover these two important aspects of green base stations: 1) powering base stations with solar and wind where reliable power doesn't exist and 2) reducing the energy demands of all cellular infrastructure. Five-year forecasts in this report include the number of on-grid base stations in developing regions, the number of off-grid/unreliable-grid base stations in these areas, and the number of solar, wind, and solar/wind combo base stations in these areas. Forecasts are broken out for three regions: Africa, South Asia, and Latin/South America & Caribbean.

### HIGHLIGHTS

- By 2014, over 230,000 cellular base stations in developing countries will be solar or wind powered.
- The number of off-grid base stations is growing at a 30% CAGR.
- Cost savings, not the environment, is driving the move to solar and wind.

For more information or to purchase, see the [report online](#) or call 1.480.483.4441.

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