

# **WORLD MAP: RELIABILITY AND ACCESS**

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**Using real data, this map shows world population and average access to electricity and reliability.**

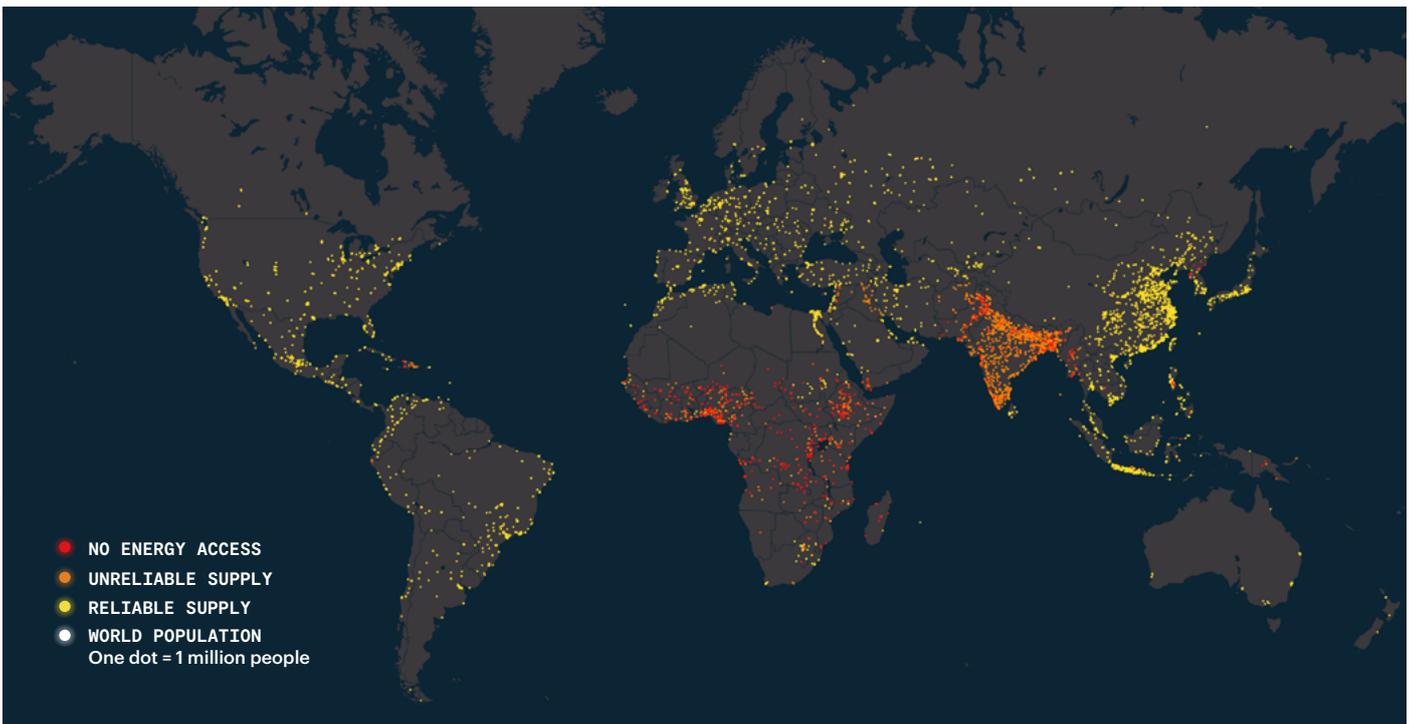
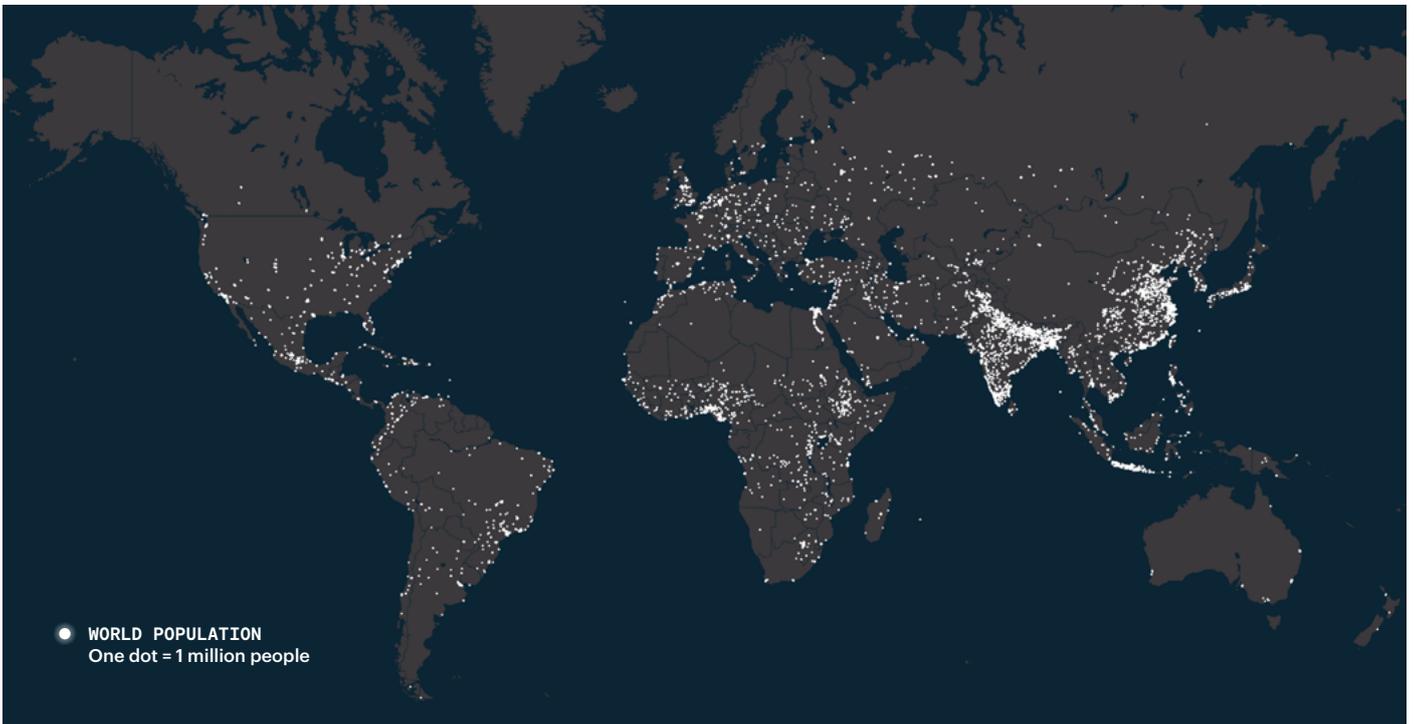
The map follows the principles of a dot density map to display UN population estimates. Each dot represents one million people. The dots are randomly distributed across urban areas (i.e. agglomerations of over 200,000 inhabitants), based on data for each country.

The dots are therefore not an exact representation of reality: small settlements and countries with fewer than one million people will not receive any dots, and random dot distribution means that not all urban areas will be represented by a dot, while some might receive multiple dots.

Red dots represent population with no energy access, taken from IEA, IRENA, UNSD, World Bank, and WHO data on “Tracking SDG7.” Today, this figure is around 789 million people.

Orange dots represent those with unreliable access, calculated based on the average reliability of power systems in each country. World Bank Enterprise Surveys provide the average frequency and duration of electrical outages. We consider a power system with fewer than 12 hours of outages in an average month to be reliable—this represents down-time that could be made up with a few hours’ overtime at a production facility, for example. In the countries with more than 12 hours of outages per month, not all enterprises reported outages. We consider the percentage of organizations reporting outages to represent the percentage of the (electrified) population experiencing unreliable supply. Thus, we conservatively estimate that 1,456 million people have unreliable access to power globally.

Over the coming decade, we assume that a large part of the population will be electrified using (reliable) distributed energy, while grid system reliability will increase in line with estimates in the IEA’s Africa Energy Outlook.



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## **ELECTRIFYING ECONOMIES**

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### **The Electrifying Economies project**

demonstrates the role distributed energy will play in ending energy poverty and catalyzing a green and equitable recovery from the Covid-19 crisis. It draws on the latest data and research from around the world to show how distributed renewables can provide sustainable, affordable, and reliable power for all. The project provides information to support policy makers and investors in taking action today, to realize this potential.



**#ElectrifyingEconomies**  
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