

The Magic of Solar Cells

Powering our World with Sunshine



THE AMAZING SOLAR CELL

Invented by scientists at Bell Labs in 1954, the silicon solar cell's unique ability to convert sunshine into electricity with no moving parts seems almost magical.



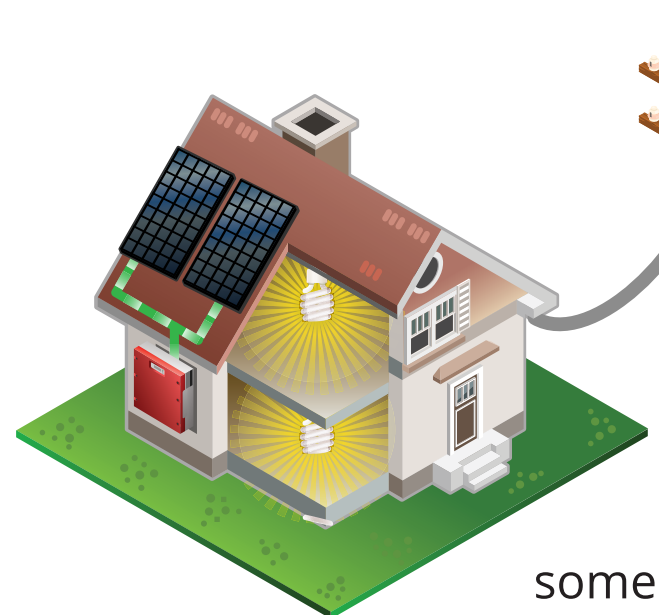
Solar cell performance is described in their power rating, in units of watts, or how much power the cell can produce on a clear sunny day. The amount of power a solar cell can produce – its efficiency – has steadily improved, while the cost to produce has dropped dramatically. These improvements have made solar cells the power of choice for many.

Since the invention of the silicon solar cell in 1954, other materials are also being used to create solar cells, though Silicon represents the vast majority of cells made today.

Standalone systems, where the right size solar module is typically paired with a battery to power a specific load, have been found to be the best option for hundreds of applications throughout the world, providing clean electricity with no noise or air pollution, day after day. These systems, independent of grid power, operate reliably for years without interruption, while enhancing quality of life.



The electrical grid is one of most innovative inventions of the 20th century, connecting a web of power plants to communities over long



distances. Every solar cell added to the electrical grid, on rooftops (homes, businesses, schools and more) and in fields (solar farms), help reduce the need for fossil fuel based generation and help to shape a clean energy future.

This poster is meant to illustrate some of the many uses of solar cells and to encourage you to learn more about how this amazing technology is increasingly powering our world with sunshine as the fuel.

A video and additional resources are found at solarschoolhouse.org/magicsolarcells

TRANSPORTATION

Lightyear Solar Car



Tesla Charging Station



Solar Impulse Plane



Sion Solar Electric Car

One Person Cars



Planet Solar Catamaran



Solar Boat Competition



AROUND THE WORLD

Water Well Pumps



Navigation Signals



Wearable Lights



Small Shelter Lights



Medical Clinics



Refrigerated Vaccine Delivery



GRID COMMUNITIES

COMMUNICATION

Home Energy



Solar Farms



Schools



Bike Share Networks



Umbrella Table Chargers



Cell Phone Charging Kiosks



Telecom Towers



Satellites



Remote Wildfire Cameras



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