More NASA Tech Helping to Solve Climate Challenges

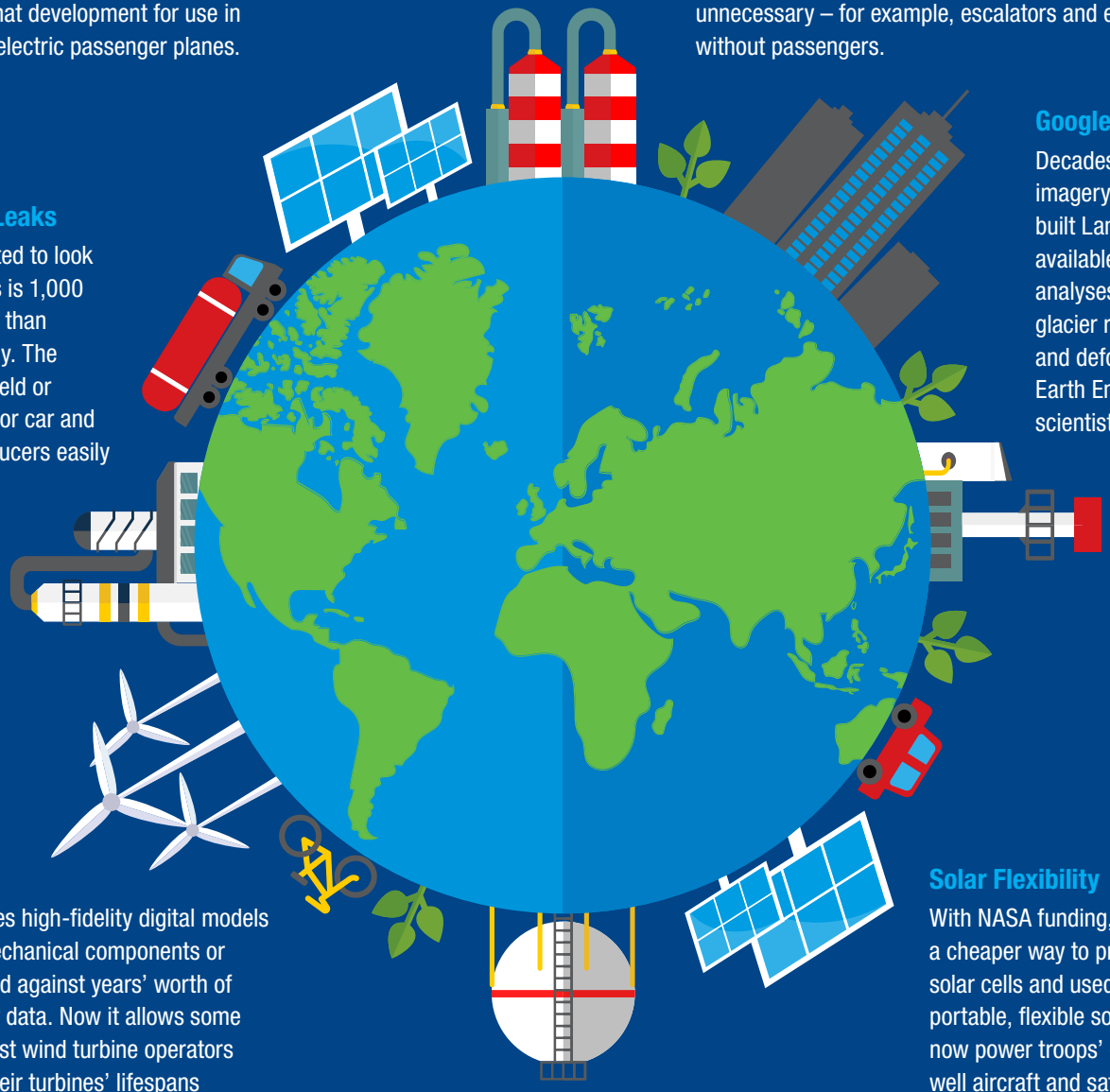
NASA research and innovations have led to more environment-saving spinoffs than we can count. Besides the ones described in this feature, here are a handful of additional technologies helping curb greenhouse gas emissions, advance renewable energy technologies, and better understand the processes leading to warming.
For more, visit spinoff.nasa.gov/climate-change

All-Electric Flight

With NASA's help, a company designed a high-power battery pack that could meet safety requirements for the agency's all-electric experimental airplane. Now the company is selling batteries based on that development for use in some of the first all-electric passenger planes.

Running on Empty

The voltage controller, invented by a NASA engineer in the 1970s, is one of NASA's most-used innovations. It enables machinery to automatically decrease energy consumption when full power is unnecessary – for example, escalators and elevators without passengers.



Google Searches Earth

Decades' worth of Earth imagery gathered by the NASA-built Landsat satellites is now available for free, enabling global analyses of surface trends like glacier retreat, desertification, and deforestation. Google Earth Engine is partnering with scientists to mine all that data.

Sniffing Out Gas Leaks

A spectrometer created to look for methane on Mars is 1,000 times more sensitive than competing technology. The device can be handheld or mounted on a drone or car and lets natural gas producers easily spot and stop leaks.

Send In the Clone!

A program that creates high-fidelity digital models – or "clones" – of mechanical components or systems was validated against years' worth of NASA helicopter gear data. Now it allows some of the country's largest wind turbine operators predict and extend their turbines' lifespans

Solar Flexibility

With NASA funding, one company developed a cheaper way to produce high-efficiency solar cells and used it to make affordable, portable, flexible solar panels. Its solar cells now power troops' devices in the field, as well aircraft and satellites.