Going Solar in China

1 In the Anhui province of China, 166,000 floating solar panels are strung together atop the rippling surface of a lake. It is the largest solar-power farm in the world, an immense blanket of renewable energy strong enough to power 15,000 homes.

2 The floating solar-power farm, which harvests the sun's rays for power, was first conceived by the Sungrow Power Supply Company after heavy rains flooded a collapsed coal mine and created a lake. Sang Dajie, a former coal miner from the area, is now an electrician for the farm, which occupies the original mine site where he used to work. Now, instead of working under the dangerous conditions at the mine, he spends his days maintaining the solar panels on the water. "The coal mine," says Dajie, "was very hot and the air was bad. . . . But here I feel safe. The new energy is safe." People in China rely primarily on the burning of coal in massive power plants to create electricity. While the burning of fossil fuels, like coal, is a reliable source of energy, the process releases massive amounts of carbon dioxide into the atmosphere, creating air pollution and harming Earth. Solar power, on the other hand, is clean and safe for the environment.

3 Solar panels are typically placed on rooftops or in open fields, but experts in China determined that the newly formed lake was a great spot for the solar-power farm. Solar-power farms over water are efficient because the water keeps the panels cool. A water-based solar-power farm can potentially generate more power than one based on land. Additionally, with the solar-power farm on the lake, the land in the surrounding area remains available for farming, which is another source of income for Anhui residents.

4 Originally, China displayed minimal interest in solar energy. The use of solar energy was limited primarily to rural areas that had no access to a power grid. Without access to other means of electricity, people in these areas used solar panels as an alternative to lighting candles and kerosene lamps. China began to manufacture solar panels for other countries in the late 1990s when the German government offered its people financial incentives for installing solar panels. The heightened demand for solar panels was instantaneous, and Chinese businesses were quick to seize the opportunity. Soon the governments of Spain and Italy also offered incentives for using solar technology, and Chinese manufacturers were ready for the increased demand.

5 Between 2008 and 2013, China improved its manufacturing technology and processes so much that it effectively lowered the worldwide cost of using solar energy by 80 percent, further increasing demand. However, a point came when Chinese manufacturers had become so efficient at producing solar-power equipment that they outpaced the demand. The manufacturers were producing two solar panels for every one solar panel they sold. In order to make manufacturing a profitable industry again, the Chinese government offered its own financial incentives to Chinese citizens for using solar energy. Now, projects like the floating solar-power farm are putting those surplus panels to use, in addition to providing jobs and cleaner energy.

6 A second solar-power farm has already been constructed near the massive one in Anhui as part of a government initiative to build more low-emission power plants. The goal is to meet 20 percent of the country's energy needs with renewable, clean energy sources by the year 2030.

7 As Sang Dajie puts it, "I'm glad we are reusing this area to create a better future." China's dedication to increasing its production of renewable energy through solar power demonstrates that patience, time, and flexibility can result in transformation.