
Name: _____

Date: _____

Class: _____



TECHSHEETS.DEV

GREEN TECH SERIES

Jigar Shah

Making Solar Affordable for Everyone

When we think of "Green Tech" pioneers, we usually think of scientists inventing new batteries, wind turbines, or solar cells in a laboratory. But a man named **Jigar Shah** proved that sometimes, the biggest breakthrough isn't a new machine—it's a new way of doing business.

In the early 2000s, solar panels already existed and worked well. However, hardly anyone was using them. Why? Because they were incredibly expensive. To put solar panels on a school or a business, the owner had to pay hundreds of thousands of dollars upfront. Even though the panels would save them money on their electricity bill over the next 20 years, most people simply couldn't afford that giant initial price tag.

Jigar Shah saw this problem and founded a company called **SunEdison** in 2003 to fix it. He invented a financial model called a **Power Purchase Agreement (PPA)**. Instead of asking a school to buy the expensive solar panels, SunEdison would pay for the panels and install them on the school's roof for free! In return, the school agreed to buy the clean electricity those panels generated. SunEdison charged a rate that was slightly *cheaper* than what the school was already paying the local, dirty power plant.

This "no-money-down" solar model was a total game-changer. Customers got cheaper, clean energy from day one without spending a dime upfront, and SunEdison made a steady profit selling the power. Because of Jigar Shah's brilliant business model, the solar industry exploded, creating thousands of jobs and drastically reducing carbon emissions. Today, Shah uses his financial genius to lead the U.S. Department of Energy's Loan Programs Office, helping to fund the next generation of massive green technology projects!

Part 1: Reading Comprehension

1. Why were very few people using solar panels in the early 2000s, even though the technology worked well?

2. What is the name of the company Jigar Shah founded in 2003?

3. Under a Power Purchase Agreement (PPA), who actually owns and pays for the solar panels on the roof?

4. Under Jigar's model, what exactly does the school or business pay for?

Part 2: Critical Thinking

5. Imagine you are trying to convince your town's mayor to switch the local library to solar power using Jigar Shah's "no-money-down" model. Write a short, persuasive argument explaining why this is a smart choice for the town.

Part 3: The Solar Savings Challenge

Let's do the math to see exactly why Jigar Shah's business model was so successful. Imagine a local middle school is thinking about going solar.



The Old Way

Paying the Grid

\$1,000 / month



The New Way

Paying for Solar (PPA)

\$800 / month

Step A: Calculate the monthly savings.

If the school switches to solar, how much money do they save in just **one month**?

$\$1,000 - \$800 =$ _____ saved per month

Step B: Calculate the yearly savings.

There are 12 months in a year. How much money does the school save in a **full year**?

Your answer from Step A $\times 12 =$ _____ saved per year

Step C: Long-term impact.

Solar contracts often last for 20 years. If they save the amount from Step B every year for **20 years**, what is the grand total saved? What is one cool thing the school could buy with that extra money?
