

Host Question and Answer Guide



(Answers in bold)

Round 1:

Solar System Technology

1. Often referred to as “PV” for short, this 12 letter word

Photovoltaic

2. Solar Panels are made up of multiple cells. Putting together multiple panels gives you this word, which can also be used to mean a display or range.

Array

3. The inverter in a solar power system transforms the type of electric current produced by your solar panels. First, what type of current is produced by the panels, and second, what type of current comes out of the inverter?

DC, AC

4. The capacity of a solar system is typically measured in this International System of Units measure, denoted by a capital W.

Watts

5. The first modern silicon PV cells were invented in what decade?

1950s (1954)

Round 2:

Solar Policy

1. What President was the first to put solar panels on the White House? (It was hot water solar not PV)

Bonus: Name the 2 other presidents that have put solar panels on the White House.

Jimmy Carter

Bonus: George W. Bush, Barack Obama

2. What is the policy called that allows you to collect credits for the excess power you produce and send back on to the grid?

Net Metering

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(Answers in bold)

3. Many states have enacted RPS legislation to promote clean energy. What does RPS stand for?

Bonus: Which US State or Territory has the most ambitious RPS (in terms of highest % of renewable energy over the shortest timeline) (2020)?

Renewable Portfolio Standard

Washington, DC (100% renewable energy by 2032)

4. Name one of the two companies presented an International Trade Commission case in 2017 for tariffs on solar panels imported to the United States.

Suniva, Solar World

5. What program allows local solar facilities to be shared by multiple community subscribers who receive credit on their electricity bills for their share of the power produced?

Community Solar (OR) Virtual Net Metering (OR) Shared Solar

Round 3: Visual Round! Electric Vehicles

Pass out EV Visual sheet

1. Nissan Leaf
2. Chevrolet (Chevy) Bolt
3. Tesla Model S
4. BMW i3
5. Ford Focus (OR) Ford Focus Electric
6. Smart Fortwo (OR) Smart ED (OR) Smart Fortwo Electric Drive
7. Mitsubishi i (OR) Mitsubishi i-MiEV
8. Chevrolet (Chevy) Volt

Round 4: Solar Geography

1. What state has the greatest solar energy capacity (2019)?

California

2. Which State receives the most direct sunlight (kWh per Sq. Mi.)?



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(Answers in bold)

Arizona

3. With an efficiency of around 6%, Bell laboratories created this first 'practical' solar panel in this 'garden state.'

New Jersey

4. Which US city has the greatest solar energy capacity (2019)?

Bonus: Which US city has the highest solar energy capacity per capita (2019)?

Los Angeles (420 MW)

Bonus: Honolulu (646 watts per person)

5. Which country has the greatest solar power capacity in the world (2018)?

Bonus: Which country has the highest solar power capacity per capita (2018)?

China (175,018 MW)

Bonus: Germany (565 watts per person)

Round 5: Solar Science

1. Who discovered Alternating Current, and who discovered Direct Current?

Nikola Tesla, Thomas Edison

2. Cobalt is often used as the anode in lithium-ion batteries. In these batteries, lithium is used to make this opposing battery component.

Cathode

3. As this environmental factor increases, the efficiency of solar panels decreases (independent of the amount of sunlight the panels receive).

Temperature

4. Solar panels work by using these light particles/waves to generate the flow of electrons.

Photons

5. Solar cells are primarily composed of this metalloïd semiconducting element

Silicon