

SCENARIO: ENERGIZING TOMORROW: THE SHIFT TO SUSTAINABLE POWER



Read the scenario carefully, focusing on how smart home devices and the electric vehicle improve your daily routine. Then, answer the questions by referring to specific details from the scenario and thinking about the benefits of each technology.



Imagine your day as a high school student with a new smart home and an electric vehicle (EV). At 6:30 am the smart thermostat gradually increases the temperature to ensure a warm morning wake-up. At 6:45 am the smart blinds automatically open, letting natural light seep into your room as the smart speaker plays your wake-up play list. In the kitchen, you find that the smart coffee maker brewed your coffee and there is a message on the smart fridge suggesting a healthy meal based on the available ingredients.



You leave home at 7:30 am to go to school and lock the front door using your smartphone app, ensuring the smart security system has been activated. You then check the app for the smart irrigation system to note how long it will run based on the weather forecast for the day.



Your EV charged overnight using solar panels installed on your roof. On your quiet ride to school, you reflect on how the car's battery storage also helps power your home during peak hours, reducing the energy bills. You enjoy driving the EV knowing how it produces zero tailpipe emissions, which helps reduce air pollution and greenhouse gas emissions. You can't help but notice passing by several gas stations



because your EV can travel over 200 miles on a single charge. As you get out of the car at school, you receive a notification that a package was delivered, verified by the smart doorbell camera.



When you return from school, the smart lighting welcomes you home by automatically turning on in the key areas. You walk in the kitchen and the smart fridge suggests a snack, while the smart oven is set to bake dinner. You receive an alert on your phone when the cooking is done. After dinner you work on your homework and appreciate the enhanced voice assistant queries that you use to assist you. At 9:30pm you get ready for bed while your smart speaker plays a podcast, and the house gradually dims the lights. You double check the security system before falling asleep.



SCENARIO QUESTIONS

What are your initial reactions to living in a smart home and driving an EV? Do you think this type of lifestyle is realistic? Explain.

What are the key technologies used in smart homes and what are the economic benefits to smart energy systems?

What are the benefits and potential challenges of your neighborhood or city transitioning to smart homes?

Do you think having an EV reduces carbon emissions compared to traditional gasoline-powered cars? Explain.

How do you think the widespread adoption of renewable energy and smart technologies will transform societies and economies in the next decade?
