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Green Transportation Solutions

by Brooke Harris

1 Americans own around 250 million cars, nearly one for each person. A typical car travels an average of 19,000 kilometers (12,000 miles) per year. That's equal to going halfway around the world. Covering that kind of territory takes a lot of energy. Most of it comes from burning oil and gas. These fuels, called fossil fuels, are in a limited, and dwindling, supply.





2 Burning fossil fuels also produces air pollution, such as when a truck belches a cloud of black smoke. Even worse, burning fossil fuels releases carbon dioxide, a gas. Carbon dioxide and other gases float high into the sky. They trap the sun's heat, like a greenhouse, and raise the planet's temperature. This is called global warming. The result is climate change, which has been linked to extremes in weather, such as droughts, hurricanes, and other weather-related disasters.

3 Fortunately, environment-preserving "green" technologies are being developed. Some of these technologies reduce or replace fossil fuels burned by cars. Other technologies lower people's dependence on cars.

Green Cars

4 In a June 2013 speech, President Barack Obama said, "I'm announcing a new national climate action plan . . . to keep the United States of America a global leader in the fight against climate change." He called for a new minimum gas mileage standard of 23.2 kmpl (54.5 mpg) by 2025. That's about twice what most gas-powered cars get now. He also encouraged further development of battery-powered and hybrid cars that run on gas or batteries. Both types of these "green" cars are already on the roads.

Battery vs. Hybrid*

	Pluses +	Minuses -
 BATTERY-POWERED PLUG-IN CAR (\$40,000)	<ul style="list-style-type: none">• Doesn't burn fossil fuels.• Cost to fuel is around one-third the cost of gasoline.	<ul style="list-style-type: none">• Many power plants that make electricity to charge the car's battery burn fossil fuels.• Only goes around 161 km (100 miles) per charge.• Charging stations are not available in many places.
 HYBRID CAR (\$30,000)	<ul style="list-style-type: none">• Battery recharges when driving; no need for charging stations.• Gets 64 km (40 miles) per gallon.	<ul style="list-style-type: none">• Burns fossil fuels (amount depends on how much the gas engine is used).• Maintenance and repairs can be costly.

*Statistics are estimates based on the range of choices in each category for a similar-size car.

- 9 The Washington, D.C. Orange Line, part of the city's Metrorail, or Metro, is a model of transportation planning. The Orange Line was built underneath a main street of suburban Arlington, Virginia, in the 1970s. People moved to live near the Metro. High-rise apartment buildings soon developed along nearby Fairfax Drive. Dying businesses in the Virginia Square area came alive and new ones opened. More stores, restaurants, and movie theaters followed. In 2008, the American Planning Association named the main street one of the top 10 "Great Streets" in the United States.
- 10 "I think we were bold at the time, and it has paid off. I can't imagine what this area would be like without it," says Jay Ricks, a former board member in Arlington County, Virginia.



Thousands of people in Arlington, Virginia, commute to Washington, D.C. each day.



An efficient subway system called the Metro has drawn new residents to Arlington, Virginia.

- 11 Tens of thousands of people today ride the Orange Line to their jobs in Washington, D.C. The daily commute is easier than driving. "I can relax or read instead of losing my temper while sitting in traffic," says Joel Max, a Metro rider for over thirty years. "The Beltway is a living nightmare during rush hour." In the past ten years, Max's company has paid for part of his Metro pass. They, too, want to combat congestion and encourage the use of public transportation. "With the rising price of gas and parking, commuting is now actually cheaper," Max says happily.

Boulder, Colorado: Biped Power

12 Green cars and alternative fuels help reduce car emissions. Public transportation helps reduce car pollution and traffic problems. There's another green transportation solution that's simple, effective, and right in front of your eyes—your own two feet! Walking and bicycling eliminate the need for cars and public transportation. These low-tech solutions need little more than the support of governments to put into place.

13 Heatherwood Elementary School in Boulder, Colorado, more than tripled the number of kids who now walk and bike to school. The percentage increased from 12 to 43 percent. How did they do it? The school worked with the state to add sidewalks and crosswalks, lower the speed limit near the school, and provide crossing guards. An annual bike rodeo teaches bicycle safety. The school also gives a "Golden Sneaker" award to the classroom that logs the most of both bicycle and walking distances.

Walking and riding bikes to school is good for kids' health and the health of the planet.



▲ Many cities have created bike paths and bike-sharing programs.



◀ In Boulder, Colorado, an annual bike rodeo teaches bicycle safety.

14 Walking and biking to and from school also sends children on their way to the sixty minutes of daily exercise recommended by the American Public Health Association. A 45-kilogram (100-pound) person who walks at a moderate pace (5 kilometers, or 3 miles, per hour) will burn 100 calories in a half hour. Biking at a good rate (21 kmph, or 13 mph) for fifteen minutes achieves the same results.

15 Students win in other ways, too, explained teacher Tom Ampson. "In addition to feeling good about being part of the solution against pollution, students get more exercise and have fun. Walking or riding together builds friendships and a healthful lifestyle."