

УДК 629.33.03-83:811.111

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## **Green Transportation**

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Transportation is one aspect we cannot do without. However, the current transportation systems come along with a wide range of problems including global warming, environmental degradation, health implications (physical, emotional, mental, spiritual), and emission of greenhouse gases. In fact, the transport sector attributes to 23% of the globe's greenhouse gas emission resulting from burning of fossil fuels. Out of the total greenhouse gas emissions, road transport takes up a lion share, 75% and this trend is projected to increase in the future.

Transportation is the major contributor to greenhouse gas emission. The immediate and obvious solution to this environmental pollution is greening of the transport sector, which suggests any sort of transportation vehicle or transportation habit that is environmentally friendly and doesn't emit toxic gasses that could impact the environment and human health. This leads to Green Transportation, which means any kind of transportation practice or vehicle that is eco-friendly and does not have any negative impact on the immediate environment.

Green transportation revolves around efficient and effective use of resources, modification of the transport structure and making healthier travel choices, innovation and production of vehicles that utilize renewable sources of energy such as wind, solar, biofuels and hydroelectricity.

## **Modes of Green Transportation**

The existing modes of transportation require enormous amounts of energy, for example, fossil fuels to power vehicles on the roads. Promising innovative technologies could be the ultimate solution, but before such innovations come to fruition, the world can play a significant role by utilizing eco-friendly modes of transportation. Being a responsible citizen one should opt for green transportation that is easily accessible to everyone. Some of the modes of green transportation are available nowadays.

**Electric bikes.** Electric bikes are great modes of green transportation, because they don't release any harmful emission into the environment. The speed of electric bikes is greatly regulated by law, you must have a special registration, license, and insurance to be able to ride an electric bike.

**Electric vehicles.** Some kinds of electric vehicles include cars, motorcycles, lorries, trains, boats, and scooters. Electric vehicles powered entirely by electricity do not emit any dangerous gasses, even though the toxic emissions might be produced by plants generating the electricity. Still, the power can be tapped from renewable technologies like geothermal, hydroelectric, solar power and wind turbines.

**Green trains.** The innovative hybrid locomotives utilize similar technologies applied in hybrid cars. The modern electric trains make use of electrified third rail, overhead lines or devices that store up energy like fuel cells and batteries. The advantage of these electric trains is that they travel at top speeds of more than 200 mph, yet maintaining high levels of safety.

**Electric motorcycles.** Like other electric vehicles, electric motorcycles do not give off emissions. They are typically battery powered. Some top range motorcycles even have their parts designed from recycled materials. Experts are projecting that they may be mass-produced in the near future.

Multiple occupant vehicles. The explosion of vehicles around the world has been due to the booming world economy. Multiple occupant vehicles, also referred to as carpools, reduce the number of vehicles on roads, hence, minimizing levels of pollution. Multiple occupant vehicles are very eco-friendly and favorable mode of green transportation.

Instead of 5 individuals driving their own cars in similar direction, it's a lot more economical (saves money and fuel) and ecologically sensible to make use of a single car to take all of you to the destination.

Service and freight vehicles. These kinds of vehicles attribute to about 9% of the total toxic gas emissions. Utilizing electricity and biofuels instead of the regular fossil fuel sources in services and freight vehicles, administering travel demands and offering many travel alternatives will go a long way towards aligning the transportation sector to conform to green transportation.

Hybrid cars. Hybrid cars also rely on electricity. A vast majority of hybrid cars are designed to automatically recharge their batteries by converting energy in the course of braking. Greenhouse emissions in hybrid cars are extremely low; emissions can range from 26% – 90% lower compared to standard cars. According to experts, hybrid cars cut down health-threatening emissions by over 90%. While hybrid cars contribute little to no greenhouse emissions, they lack in some areas. The batteries have some environmental impacts.

Green transportation has wide-ranging benefits – environmental, health, economic and individual budgets. Some of the key benefits of using green transportation are:

#### **Fewer to no environmental pollution**

The existing modes of transportation utilize sources of energy such as fossil fuels, which emit vast quantities of greenhouse gases to the environment. Shifting to green transportation would help rid the atmosphere of these toxic

gases since these modes of transportation have few to zero emissions.

### **Contribute to building of a sustainable economy**

Manufacturing and distribution of green vehicles will go along with improving existing transport systems. This will lead to creation of more jobs in the transport sector, hence, minimizing social-economic disparities and building up a sustainable economy. It will also minimize over-reliance on fossil fuels, which drain an economy.

### **Improved health**

Energy sources from fossils fuels like natural gas, coal, and oil emit toxic gases that negatively affect our health. In fact, these gasses have been associated with rising cases of cancer and other cardiovascular diseases. The emissions produced by green vehicles are not harmful to human health, so embracing green transportation will only improve a country's health status.

### **Saves your money**

Embracing green transportation modes like bicycles, multiple occupant cars, and electric motorcycles will save you a lot of out-of-pockets costs related to buying fossils fuels at the pump.

There are many other benefits associated with green transportation, which will enhance healthier lifestyle and improve quality of human life. It's a difficult task to convince the entire population to change up to green transportation, but with significant steps underway, the future of green transportation is bright [1].

### **References:**

1. Mode of access: <https://www.conserve-energy-future.com/modes-and-benefits-of-green-transportation.php>. – Date of access: 12.03.2018.