

U.N. Sustainable Development Goals in Relation to Solar Powered Charge Stations

Solar powered charge stations for electric vehicles provide many benefits related to sustainable development. "The Future We Want" is the outcome document of the Rio +20 Conference on sustainability that took place in Rio de Janeiro, Brazil in June 2012. In the first paragraph of the document, the members of the U.N. re-declare their commitment to further sustainable development and "ensure the promotion of economically, socially, and environmentally sustainable future for our planet" (Article I, Sec. 1) Installation of solar powered charge stations and adoption of electric vehicles are very good practices that benefit all three of these areas.

Green Economy

One of the main focuses of "The Future We Want" is the eradication of poverty through the development of a green economy. The document dictates that one of the roles of green economies is to "promote sustainable consumption and production patterns" (Article III, Sec. 58, SS. o). Solar powered charge stations perfectly fit this role. The energy produced by the stations can be used directly to charge the vehicles using them or the energy can simply go back into the grid to be used elsewhere if there are no vehicles charging. Furthermore, consumption of fossil fuels would decrease in the energy and transportation sectors with the addition of charge stations and electric vehicles.

Energy

According to the document, "access to sustainable modern energy services contributes to poverty eradication, saves lives, improves health and helps provide basic human needs" (Article V, Sec. 125). Solar energy fits under this category. Other than the cost to create solar panels, there is very little money spent on maintenance and there is no cost of fuel, which drives down the cost of electricity for consumers. This would increase the ability for people with low incomes to pay for electricity. Solar energy also produces no emissions, which is a huge benefit to human health. Other forms of electricity generation burn fossil fuels that release harmful chemicals like sulfur dioxide and particulate matter into the atmosphere. The document also addresses renewable energies as a way to combat climate change. As with improved human health, this stems from the lack of emissions from solar energy. Energy is also key to production of resources, which is an important aspect of having a sustainable production and consumption relationship.

Transportation

"The Future We Want" outlines sustainable transport as "central to sustainable development. Sustainable transportation can enhance economic growth as well as improving accessibility. Sustainable transport achieves better integration of the economy while respecting the environment" (Article V, Sec. 132). Electric vehicles are a great form of sustainable development. Other than the initial purchase cost, electric vehicles are much cheaper than conventional gasoline-powered vehicles since their fuel is cheaper and they usually require less maintenance. They also produce zero emissions by themselves. If charged from a solar powered charging station, then they produce even fewer emissions, as charging from the grid creates indirect emissions from fossil-fuel burning power plants.