

Benefits of using renewable energy resources

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ТОВ ВКФ«СЕНС ЛТД».

Анотація

Показано мету розвитку альтернативної енергетики. Розглянуто переваги та недоліки відновлюваних джерел енергії.

Ключові слова: *зелена енергія, відновлювані ресурси, вуглецевий слід, парникові гази, зелене джерело енергії.*

Abstract

The purpose of the development of the alternative energy is shown. Advantages and disadvantages of renewable energy sources are considered.

Keywords: green energy, renewable resources, carbon footprint, greenhouse gases, green power source.

Introduction

Renewable energy comes from naturally occurring and virtually inexhaustible sources such as the sun, wind, water, and plants. Any energy source deemed “renewable” cannot be used up or depleted, and it must be renewed frequently (within the average human lifespan) and naturally.

This includes: Solar energy, Wind energy, Geothermal energy, Biogas energy, Biomass energy, Low-impact hydropower.

Additionally, renewable energy is not the same thing as clean or green energy. While many renewable sources of energy are considered clean energy, that term specifically refers to the environmental impact of a power source. This is why nuclear energy can be considered, in some circles, clean (but not green).

Renewable energy sources not considered green include: Large-scale hydropower, Energy from burning solid waste.

Process

Advantages:

Renewable Energy Generates No Emissions.

Generating electricity from fossil fuels creates a lot of greenhouse gas emissions. In Ukraine, electricity produced from fossil fuels accounts for a significant percentage of all greenhouse gas emissions. This includes not only carbon dioxide but also methane, nitrous oxide and fluorinated gases. With renewables, the environmental benefits are clear: Electricity generated from renewable resources like solar panels and wind turbines generate no emissions and no air pollution.

Renewable Energy Lowers Your Carbon Footprint.

We're all more aware of how our actions impact on the environment. It's more than just straws and sea turtles. From the clothes we buy and the food we eat to the electricity that powers family movie night, almost every choice we make affects the environment. We just might not be aware of it. Those everyday decisions make up your carbon footprint, a metric used to calculate your environmental impact. Using energy from renewable sources in your home lowers your carbon footprint by "offsetting" or replacing the need for fossil fuel emissions with zero-emissions energy sources like wind and solar.

Renewable Energy Reduces Harmful Air Pollutants

When fossil fuels are burned to create electricity, they react with oxygen to form nitrogen oxide or NO_x, a dangerous greenhouse gas. Not only can it gas create smog and acid rain, the gas chemically reacts to produce ground-level ozone, a harmful air pollutant. Stratospheric ozone — otherwise known as the ozone layer — protects us from harmful UV rays emitted by the sun. Ground-level or tropospheric ozone, however, can cause a variety of health problems, including: Coughing, Throat irritation, Airway inflammation, Reduced lung function, Damaged lung tissue.

Ground-level ozone is created by combining heat, sunlight, and volatile organic compounds — specifically human-made chemicals used and produced in the manufacture of paints, pharmaceuticals, and refrigerants.

Renewable energy sources do not release nitrous oxides when generating electricity. So, not only does renewable energy not release greenhouse gases, but it also lowers your carbon footprint and helps offset the need for fossil fuel power that can contribute to excess air pollution in urban areas.

Renewable Energy Benefits the Economy

Renewable energy is not only good for the environment, but also for economy. Firstly, renewable energy plants need less maintenance. Secondly, because they are using sun, wind, steam, biomasses – they don't need to refuel. Thirdly, we do not have to rely on foreign energy sources. If our country use renewable energy sources, we will be independent.

Disadvantages:

Storage limitations

The biggest benefit of natural gas over renewable energy is that it can be stored and shipped easily. Nowadays there are some alternative energy storage technologies, but they are still in their infancy, which means that they are either not efficient enough or expensive. Although the storage-related cons of alternative energy are getting smaller day by day, natural gas storage will remain more effective for a long time.

Availability

What is an advantage of alternative energy technology from one point of view, can be a disadvantage from another. Clean energy is renewable – but it is not available 24/7. The wind may blow on one day, but may not on the other. The sun may be shining today, but may not tomorrow.

Really high upfront cost

Green energy systems have much bigger upfront costs than traditional fossil energy systems. These costs can deter many, because it will not be profitable in years, only in decades.

Conclusion

Renewable energy has the power to change our lives forever. Whether it's solar or any other green power source like wind, hydro or biomass, using renewable energy creates proven environmental, economic and even human health benefits.

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