

## Opinion Article

# Renewable Energy Usage of Nuclear Fuels and Its Implementation

J. Samuel\*

*Department of Nuclear energy, University of Roehampton, London, United Kingdom*

### Corresponding Author

J. Samuel  
Johnsamuel@gmail.com

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Linxiao Qiang

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## Description

As opposed to flows of energy, fossil and nuclear fuels and oil are energy stocks that are only available in finite quantities. About 10.9% of the world's energy needs were met by renewable energy in 2002, and this percentage is increasing at a rate of 1.5% annually (World Bank, 2004). Standardized certificates serve as documentation for the generation of renewable energy, and they are paired with organizations and trading regulations that distinguish between the renewable characteristics and the physical energy they are linked with.

In spite of actual electricity sales and flows, this makes it possible to establish a paper market for renewable energy. In a number of nations, green certificate marketplaces are beginning to take shape, enabling individuals who generate or buy renewable energy and receive green certificates to sell those certificates to those who must fulfil commitments but haven't produced or bought the renewable energy themselves. Energy sources that can be replenished include solar, wind, water, biomass, and geothermal. Green energy is a subset of sources that has the greatest environmental advantages, despite being identical to renewable energy. In addition to nuclear power, clean energy sources also include renewable energy sources.

A system's physics is characterized by energy. On the other hand, renewable energy is related to the source of the energy; as a result, beliefs and opinions about renewable energy are sometimes mixed up with facts. Recent steep price increases in the wholesale markets for natural gas and electricity have rekindled conversations about the potential risk-mitigation benefit of renewable resources in the USA and other countries. Renewable energy usage and implementations are still lagging behind, despite government support in the form of grants, lower taxes, and lower national insurance for various types of renewable energy projects, as well as to customers willing to switch their systems from fossil fuels to renewable energy, as well as laws and regulations to enforce the approach.

The three primary categories of renewable energy sources are as follows

**Direct uses of solar energy:** Let's look at seven everyday applications of sunlight

**Solar electricity:** This power can be converted into electricity, or it can be stored thermally or in batteries. These solar energy systems produce electricity to balance out the property owner's consumption and transmit any extra output to the power grid.

**Solar water heating:** Most solar water heaters produce hot water that is used in homes. Through the systems, water is heated by sunlight as it circulates to a collector. After that, the heated water is pumped back into the pool by the system.

**Solar heating:** By taking into account window placement and the materials used in construction, passive solar home design can also be used to heat buildings during the winter. Solar air collectors have the capacity to pre-heat the air entering a heat recovery ventilator or going through the air coil of an air-source heat pump in addition to directly heating specific rooms.

**Solar Ventilation:** Applications for solar process heat in business and industry can include



solar ventilation systems. In frigid climates, these technologies may warm the air in a building, which lowers energy expenses.

**Solar lighting:** These solar lighting technologies are affordable and widely accessible. Everywhere from your neighborhood hardware store to internet retailers like Amazon, you may find affordable to upscale designs.

**Portable solar:** Solar cell integration into phones is already possible thanks to technology that has long been used in watches. These solar panels also transform sunlight into power or heat. They include a collection of solar cells.

**Solar transportation:** Unless you own an electric car and utilize solar panels to charge it, this usage of solar energy is not yet commonplace.

**Indirect uses of solar energy:** One of the earliest methods of obtaining energy from the environment was the utilization of wind energy, which dates back to ancient times.

Indirect Solar Energy Can Be:

**Water power:** Water turbines convert the energy of the water flow into rotational energy, which is then converted by generators into electricity. This vast amount of water is a result of the sun's radiation, which occurs continuously.

**Wind power:** The turning power is converted by a generator in a wind converter into alternating current that can be provided immediately. The windmill was eliminated with the development of the steam engine.

## Conclusion

It results from gravitational interactions between the moon, sun, and earth. Tidal energy is produced by the ocean's surge when the tides rise and fall. Depending on its properties, geothermal energy can be utilized to produce clean electricity or be used for heating and cooling. Geothermal energy is used by people to produce power, heat buildings, and take baths.