

What's in Store for the Future of Clean Energy Technology?



Introduction

Despite the global pandemic and the economic crisis of 2020, the **accelerating shift towards cleaner energy** has been commendable.

On the one hand, there has been **a significant drop in the global emissions** caused by telecommuting and the slump in travel and trade activities.

However, there have also been many advances in technology and policies **to drive sustained declines in emissions** in the years ahead.

In this piece, we'll discuss some of the <u>clean energy</u> <u>technologies</u> that are paving the way for a greener world ahead.





1. Solar energy

In 2010, the global solar energy market was small and **highly dependent on subsidy regimes** in Germany and Italy.

Today, a decade later, **over 115 GW of solar energy** was installed across the world last year.

Future advancements in technology will ensure that the average price of solar energy becomes even cheaper. In fact, research indicates that by 2050, the **sun could be the world's largest source of electricity.**





Some examples of tech advancements in solar energy include:

- Countries like Vietnam, India and the UAE are undertaking several clean energy technology projects using solar power.
- Researchers at the University of Houston have developed a novel hybrid device to squeeze more energy from solar panels, and store it until it is consumed.

An Indian IEEE solar energy project offered a solution to address the **energy-access of rural areas** by providing them with at least 200 watt-hours of solar-powered electricity every day.



2. Electric vehicles

The **electric vehicle revolution** is speeding up like never before, with automobile giants across the globe shifting from fossil fuels to all-electric models.

This also means that we will see new and innovative evolutions in the **automobile electrification industry**, which is estimated to be worth over €110 billion by 2025.

From **ultra-fast wireless charging** to repurposing car batteries, the future possibilities are endless.





Some examples of automobile giants that are implementing clean energy technologies include:

 Cadillac's president said that the majority of the brand's models would be electric by 2030. Cadillac will also start manufacturing a large Escalade-like electric SUV by late 2023.

- Volkswagen intends to spend **over €30 billion** to develop EVs by 2030.
- Toyota targets **5.5 million EV sales** annually by 2025



Hydrogen is slowly but surely becoming a part of the clean-energy mix to build a sustainable and **greener future**.

The development of **green hydrogen markets** is gathering pace and traction in the transport, power, and distributed energy industries.

According to research conducted by the Hydrogen Council, hydrogen technologies will **supply 18% of the world's total energy** needs and power over 425 million vehicles by 2050.





Wrap it up!

According to the European Commission's Energy Roadmap for 2050, **85% of power** will be produced by renewables such as solar and wind.

The long-term advantages of **clean energy technologies** are exciting, and present a promising picture for energy transition.

The future is now.

Thank you



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