

## Green Energy: Where Do We Stand?

We all should know by now what we mean by green energy as it refers to energy sources that can be naturally replenished and are not carbon based. This includes sunlight, wind, water, geothermal heat and more recently, white hydrogen. The growing focus on transitioning to green energy in order to combat climate change and reduce our reliance on fossil fuels has become a central component of energy policy in North America and much of Europe.

### The Rise of Green Energy

The past few decades have seen significant progress in green energy technology. Solar and wind power costs have plummeted, making them increasingly competitive with fossil fuels. In addition, there have been major advancements in energy storage, which is essential for making green energy more reliable.

At the most recent RE+ event, attended by over 40,000 people, it was clear that storage became a bigger part of the story. As a result of these developments, the use of green energy is growing rapidly. In 2022, renewable energy accounted for about 12% of global energy consumption, and this is expected to rise to 30% by 2030.

### Challenges and Opportunities

Despite the progress that has been made, there are still some major challenges that need to be addressed in order to fully transition to green energy. One challenge is the intermittency of some renewable sources, such as solar and wind power. These sources cannot always produce electricity when it is needed. That is why the excitement about storage is front and center when it comes to decarbonizing the grid. New technologies and/or approaches to utility scale storage has become more economical and if you want to find out about the feasibility of dynamic change, just follow the money. My money is on storage at present.



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Another challenge is the need to upgrade and expand the electrical grid in order to accommodate the increasing amount of green



energy, with former rate payers now becoming prosumers. Interoperability is a major challenge when power flows in so many different directions, up and down the grid, which has been designed in a flow down to the end user. In the past, generation preceded transmission which preceded distribution. Now distribution has become generation through DER.



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However, there are more opportunities for green energy as the continued development of technology makes green energy even cheaper and more reliable. In addition, there is growing public support for transitioning to clean energy, and governments around the world are starting to implement policies that support green energy development.

### **The Future of Green Energy**

The future of green energy is bright. The technology is rapidly improving, the costs are falling, and public support is growing. While there are still challenges to overcome, it is clear that green energy is the future of our energy system.

Additional points for us to consider when it comes to green energy are;

- The role of green energy in job creation. Again, follow the money.
- The impact of green energy on air and water pollution.
- The potential for green energy to help developing countries. Let's empower those without access to power through microgrids based on green energy.

We believe that green energy is one of the most important issues of our time. It is essential for our planet and our future. We encourage our industry to stay up to date with ever-changing technology and to support green energy generation, transmission, and distribution. Let's move from hope and hype, to real world-changing application.

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Alan has decades of experience in the power systems industry and is one of the greatest reliability experts out there.

