VIBRANT CLEAN ENERGY STUDY

The Path to an Affordable, Carbon-Free Future Runs Through Nuclear Energy

VIBRANT CLEAN ENERGY'S STUDY SHOWS...

A study from Vibrant Clean Energy (VCE) utilizes one of the most detailed models available to assure that low-carbon solutions align with the reliability that the electricity grid of the future will demand.

Its models found that the most reliable, affordable low-carbon energy system requires an increase in nuclear generation globally alongside increases in wind, solar and battery storage.

VCE's climate modeling shows two nuclear scenarios in a U.S. electricity system that will require **65% more** electricity and a **95% reduction** in greenhouse gases—**all by 2050**.

The VCE study shows how nuclear energy is the key to attaining abundant, affordable energy that works for consumers' pockets—and the planet.

NUCLEAR RIGHT NOW

- Generates nearly **50%** of our nation's carbon-free electricity.
- Saves consumers an average of **6%** on electricity bills and adds **$60 billion** to the U.S. GDP.
- Provides reliable electricity **24/7/365**.

As the electrical grid reduces its reliance on fossil generation, there is a growing need for firm, carbon-free sources that can provide reliable power to replace it. Wind and solar can expand, but more of these technologies have less and less impact on maintaining a reliable system, requiring more storage and a higher cost to the system.

A strong deployment of advanced nuclear meets this need as the backbone of the electricity grid, providing reliable, affordable, carbon-free energy when the sun isn't shining and the wind isn't blowing.

Scenario 1 in the VCE Study:

Nuclear energy would provide nearly **43%** of all generation in 2050 alongside wind and solar. This is the lower cost scenario.

A significant portion of this nuclear capacity that is needed could repurpose hundreds of retiring fossil generation sites.

By 2050, it is estimated there could be as many as **230,000 jobs** at nuclear plants, many of which are in states that had previously been home to fossil fuel plants.

Scenario 2 in the VCE Study:

Solar and wind would generate **77%** of all generation in 2050 and the share of nuclear energy declines. This scenario would result in over **$400 billion** in higher costs to consumers between now and mid-century.

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