Nuclear Energy

Essential Clean Energy for a Low-Carbon Economy

BACKGROUND

A consensus is forming that as important as renewables are to reduce carbon emissions, achieving a 100 percent clean, carbon-free energy system requires a mix of fuels. We should encourage all zero-emissions technologies in the clean energy policies designed to achieve carbon-reduction goals. Nuclear power—the nation's largest source of carbon-free electricity—is an essential part of the U.S. clean energy portfolio.

KEY POINTS

Experts urge policies to decarbonize the energy sector to fight climate change. The 24/7 clean energy that nuclear provides is essential to meet climate and clean energy goals.

- The United Nations International Panel on Climate Change predicted in October 2018 severe effects of climate change by 2030 and identified nuclear as one of the technologies necessary to hold warming to 1.5 degrees Celsius.
- The Union of Concerned Scientists acknowledged in November 2018 the impact that nuclear plant closures have on climate and air quality, embracing the idea of implementing policies to preserve financially struggling nuclear plants.

Nuclear energy is critical to decarbonize the energy sector and the loss of current nuclear energy will set us significantly backward in our nation's effort to reduce carbon emissions.

- In 2017, nuclear energy generated 20 percent of U.S. electricity and 56 percent of our emissions-free generation, more than all other sources combined.
- Twelve nuclear units have been announced for closure, which combined produce 90 million megawatt-hours (MWh) each year or as much residential electricity used in California in 2017.
  - 90 million MWh of lost clean energy is more than all solar generation in the United States and more than all wind generation to the east of the Mississippi River in 2017.
- A single nuclear plant produces as much emissions-free electricity as it took to power all electric vehicles in the United States in 2017.

We must take a technology-neutral approach to clean, carbon-free energy.

- According to research from Harvard University, Massachusetts Institute of Technology, and the Organization for Economic Cooperation and Development, powering the grid with 100 percent renewables isn't the most affordable way to create a zero-carbon grid. Instead, the best way to eliminate emissions from the grid is by combining intermittent low-carbon sources, such as wind and solar, with one or more "firm" sources, such as nuclear energy.

Actions must be taken to preserve nuclear plants.

- Beginning in 2016, states began taking action to preserve their nuclear generating capacity in order to constrain carbon emissions. These states include Illinois, New York, Connecticut and New Jersey. Similar legislative action will be under consideration in Pennsylvania and Ohio.
- In October 2018, Google published a white paper that warned "governments, utilities, and other energy market players carefully consider retirement of existing firm carbon-free generation," including nuclear power.