

Carnegie Mellon Power Sector Index tracks 24 percent decline in carbon emissions

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Yesterday during Carnegie Mellon Energy Week, Mitsubishi Hitachi Power Systems (MHPS) Americas President & CEO Paul Browning unveiled the initial results of a new Carnegie Mellon University (CMU) index measuring carbon dioxide emissions from the U.S. electrical power generation sector. The Carnegie Mellon Power Sector Carbon Index found that U.S. power producers had cut carbon dioxide emissions intensity by 24 percent since 2005.

"The Carnegie Mellon Power Sector Carbon Index highlights what is taking place in the industry as older, inefficient coal-fired [power](#) plants have been replaced with renewables and highly efficient natural gas power plants," Browning said. "Power generators are making significant strides in reducing [carbon](#) dioxide and other emissions, while at the same time meeting growing demands for affordable and reliable electricity. The Carnegie Mellon Power Sector Carbon Index sponsored by Mitsubishi Hitachi Power Systems shows that the industry has made remarkable progress during the past decade."

The Carnegie Mellon Power Sector Carbon Index provides a comprehensive picture of the environmental impact of electricity production in the U.S and will measure the environmental impact of the U.S. power grid during the previous 12 months and over an extended period to 1990. The CMU [index](#) will also provide a summary of how much electricity generation is from coal, natural gas, nuclear, and renewables. According to the Carnegie Mellon Power Sector Carbon Index, U.S. power plant emissions averaged 1,001 lbs. CO₂/MWh in the

Fourth Quarter of 2016, which was up 1 percent from the same time frame in 2015 but down 24 percent since peaking in 2005.

The data released as part of the [Carnegie Mellon Power Sector Carbon Index](#) found:

- More than half of the reduction in CO2 emissions intensity since 2005 is due to a shift from coal to natural gas.
- Emissions intensity of the [natural gas](#) fleet has reduced by 17 percent since 2001, as more efficient turbine technologies and operating schedules have been introduced.
- Since 2005 renewable electricity has grown from 9 percent of U.S. generation to 15 percent—an increase of nearly 75 percent.

"We are really excited about providing this information to the public, and look forward tracking how the power sector evolves in the future," said Professor Samaras. Professor Azevedo added: "The pace of change in the index is varying, because the speed at which we are adding new, lower carbon capacity increased—that's a great thing for de-carbonization, but we are still a long way from the large levels of de-carbonization that are needed. We look forward to the day where we can report that we are 50% below the levels of 2005."

Provided by Carnegie Mellon University

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