

The Clean Energy Transformation: Electric Companies Are Leading the Way

EEd's member companies—the nation's investor-owned electric companies—are leading a clean energy transformation. We are united in our commitment to get as clean as we can, as fast as we can, while keeping customer reliability and affordability front and center as always.

Working with their customers, as well as with cities, communities, and states, electric companies are making significant investments in clean energy and smarter energy infrastructure. These investments have reduced the power sector's emissions significantly, while keeping electricity affordable and reliable. The sector's emissions are expected to decrease even more, as electric companies continue to transition and transform their energy mix to meet their customers' expectations for clean energy.

Electric companies are reducing overall carbon dioxide (CO₂) emissions.

- As of year-end 2018, the electric power sector's CO₂ emissions were down 27 percent from the 2005 baseline—nearly the lowest level in three decades.
- This impressive trend is expected to continue, as many EEd member companies have announced significant voluntary commitments to further reduce CO₂ emissions by 2030 and 2050, many of which aim to reduce emissions 80 percent below 2005 levels by 2050.
- Total power sector CO₂ emissions have been lower than transportation sector emissions since 2016.
- Electric company customer-funded energy efficiency programs saved enough energy in 2017 to power 22 million U.S. homes for one year, avoiding the generation of 147 million metric tons of CO₂.

Electric companies are adding more clean energy to the nation's energy mix.

- Since 2005, coal generation has dropped almost in half. As electric companies continue to transition their generating fleets, their emissions are going down significantly.
- Over the past five years, more than half of new electricity generation capacity was wind and solar. In fact, EEd member companies have quadrupled the percentage of renewable sources in their energy mix since 2005.
- More than one-third of the nation's electricity now comes from carbon-free sources, like nuclear and hydropower and other renewables, and another one-third comes from low-carbon-emitting sources.
- Electric companies use more than 90 percent of all energy storage installed in the country. Energy storage offers multiple benefits for the energy grid and for electricity customers. It facilitates the integration of renewable energy resources, such as wind and solar, into the energy grid by keeping supply and demand balanced at all times. Energy storage also helps to improve electric reliability by providing grid stability services, reducing transmission constraints, and meeting peak demand.

Electric companies are investing in technologies that will power a clean energy future.

- Increasing electrification in the transportation sector would greatly reduce emissions of CO₂ and air pollutants.
- Electric companies are expanding access to environmentally friendly electric vehicle (EV) charging infrastructure by deploying more than 95,000 EV charging stations across the country.
- Today, there are more than 1.3 million EVs on U.S. roads. That number is projected to reach 2 million by early 2021, and more than 18 million in 2030, or about 7 percent of the vehicles expected to be on U.S. roads by then.
- About 9.6 million charge ports will be required to support the expected number of EVs on U.S. roads by 2030.
- EEI's member companies are investing more than \$1.3 billion over the next five years to deploy charging infrastructure and to create customer programs and projects to accelerate electric transportation.

With the right policies, further emissions reductions are possible.

- To ensure that the clean energy transformation reaches its full potential, public policies should put customers first, focus on outcomes, support progress, and accelerate innovation. And, policymakers should:
 - **Increase research and development funding and support for the range of technologies** needed to achieve clean energy goals, including energy efficiency, energy storage, renewables, existing and next-generation nuclear, other carbon-free technologies, and carbon capture utilization and storage.
 - **Help to electrify the transportation sector**—recognizing that transportation emissions now are the largest source of emissions in the United States—by modernizing federal transportation programs to encourage investments in electric transportation and charging infrastructure. Transportation electrification provides an opportunity to leverage the reductions in power sector emissions to achieve reductions in transportation sector emissions.
 - **Support ongoing investments in the energy grid**, which are necessary to increase cost-effective electrification and to integrate advanced clean energy technologies reliably and affordably.
 - **Encourage the development of more robust battery technologies** for both electric vehicles and energy storage.
- With the right policies in place, electric companies can further reduce their emissions, help dramatically reduce the most significant emissions from other industries, and deliver the clean energy future that Americans want and expect.

December 2019