Technological Challenges and Trends in Electric, CNG/LNG and Hydrogen Powertrains

Busworld Academy North America
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Resource Mix

2008 National Energy Resource Mix

- Coal: 48.2%
- Natural Gas: 21.4%
- Nuclear: 19.6%
- Hydro: 6.2%
- Non-Hydro Renewables: 3.1%
- Fuel Oil: 1.1%
- Other: 0.4%

2018 National Energy Resource Mix

- Coal: 27.2%
- Natural Gas: 34.9%
- Nuclear: 19.2%
- Hydro: 6.9%
- Non-Hydro Renewables: 10.7%
- Fuel Oil: 0.6%
- Other: 0.5%

SOURCE: EIA. Percentages reflect Megawatt hours.
Energy Companies Leading in Reducing Carbon

Reducing Carbon Emissions Significantly

Carbon-Free Sources
>1/3
More than one-third of all U.S. power generation comes from carbon-free sources, including nuclear energy and hydropower and other renewables.

Carbon Dioxide Emissions
↓27%
As of year-end 2018, our industry’s carbon dioxide emissions were 27% below 2005 levels—nearly the lowest level in 3 decades.

Carbon Dioxide Emissions
↓50%
Based on projected trends and member goals, CO₂ emissions from EEI members are projected to be 50% below 2005 levels by 2030.
Energy Companies Leading in Adding Renewables

ADDING MORE RENEWABLES

NEW GENERATION CAPACITY

>1/2

Over the past 5 years, more than half of new electricity generation capacity was wind and solar.

SOLAR ENERGY

69%

Electric companies provide 69% of the solar energy in the country.
Energy Companies Leading in Promoting Electric Transportation

**FEWER CO₂ EMISSIONS**
54%
Driving on electricity emits 54% fewer CO₂ emissions per mile than the average new gasoline car. As a result, electric vehicles help improve air quality and reduce smog.

**ELECTRIC VEHICLES**
1.3 million+
Today, there are more than 1.3 million electric vehicles on U.S. roads. By 2030, that number is projected to reach 18.7 million.

**CUSTOMER PROGRAMS & PROJECTS**
$1.3 billion+
Electric companies are investing more than $1.3 billion in customer programs and projects to deploy charging infrastructure and to accelerate electric transportation.