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Energy Use in 2035: Who Will Consume the Most?

U.S. Energy Use Increases

By Venessa Wong

Despite marked improvements in the energy efficiency of cars, appliances, lighting, and other devices in recent decades, Americans are expected to continue using more power. Energy consumption is forecast to rise in the residential, commercial, industrial, and transportation sectors as the U.S. population grows to more than 390 million people in 2035 and economic activity increases, according to the U.S. Energy Information Administration. Here's how the EIA, which serves as the U.S. Energy Dept.'s statistical and analytical agency, expects U.S. consumption to change from 2009 to 2035: Total usage will rise by an average rate of 0.7 percent per year, with the fastest increases coming to the commercial sector (1.1 percent) and the industrial sector (0.9 percent). Energy use in the transportation sector is expected to rise by 0.6 percent annually and residential energy consumption by only 0.3 percent. These numbers seem small, but they mean that annual U.S. consumption in 2035 will have exceeded 2009 levels by 14.05 quadrillion Btu, equal to all the energy consumed by Canada in 2008, EIA data reveal. *Photographer: Bloomberg*

What Do You Think Is the Most Important Thing America Can Do to Improve Its Energy Future?

Expert Advice

David Blittersdorf

What he does: CEO and founder of AllEarth Renewables
Where: Williston, Vt.

"We need a paradigm shift to 80 percent renewable energy, and we need it fast. We hit the jackpot of hundreds of millions of years of stored-up fossil fuels, and, like most lottery winners, we're now going broke. Now we must shift from 300 years of reliance and extraction of finite fuels toward the sun and wind. By doing so, a renewable renaissance will generate millions of local jobs, inspire new manufacturing, dramatically cut carbon pollution, and reduce social, economic, and national security risks. We simply cannot afford to wait."

Wendel E. Dreve

What he does: CEO and Managing Member, Farmers' Ethanol
Where: Adamsville, Ohio, USA

"Common sense energy solutions must include controlling regulatory bureaucracy [and] using available domestic resources with a 'unified energy plan.' Recapturing past distributive electrical generation, copying showroom-ready, 65-plus mpg cars from Europe, and fostering private enterprise energy technology (solar, wind, sea, biomass, etc.) must become our primary focus. We must waste less energy, use it more efficiently, and create a countrywide understanding of the problem and our willingness to fix it. We cannot continue to use 20 percent of the world's energy for 4 percent of the world's population. The U.S. must invent (or reinvent) its way to a better energy solution while educating our population."

Michael Kracauer

What he does: Architect and principal, Architropic
Where: Boulder, Colo.

"The driving force behind my work as an architect today is the desire to address climate change, which I do by making the houses I design as energy efficient as possible and utilizing renewable energy sources such as solar for the greatly reduced remaining energy loads. I believe this is a good model for America's energy policy—get real about climate change, reduce our energy loads through much greater energy efficiency, and strongly promote renewable energy. And all of this would happen if America had a carbon tax or cap-and-trade law."

Bilal Zuberi

What he does: Principal, Catalyst Partners
Where: Boston

"America must recognize the true cost of its energy needs, including the full cost of maintaining fossil fuel imports from unfriendly nations and environmentally adverse effects of energy related pollution on heath and the ecosystem. We have somehow fooled ourselves into thinking energy is cheap when it is really not. We need a comprehensive energy policy that is not drafted by lobbyists and that prioritizes diversity in the energy mix while aggressively supporting activities that lead us toward greater energy independence: energy efficiency, low carbon fuels and transportation, renewable power generation, and continuous innovation across the spectrum."

Shreya Dave

What she does: Master's of science student at Massachusetts Institute of Technology
Where: Cambridge, Mass.

"America must continue to enable technology-to-market strategies, accepting more of the risk associated with early-stage investment, especially in the face of an uncertain economic climate. Less talked about, but equally crucial, is prioritizing the education of our next generation. Energy issues are not going to be solved in the next five, 10, or 20 years. It is equally our responsibility to foster future ideas, innovations, and successes as it is to invest and develop them today."

See how each region is expected to boost consumption, starting with the largest anticipated increase.

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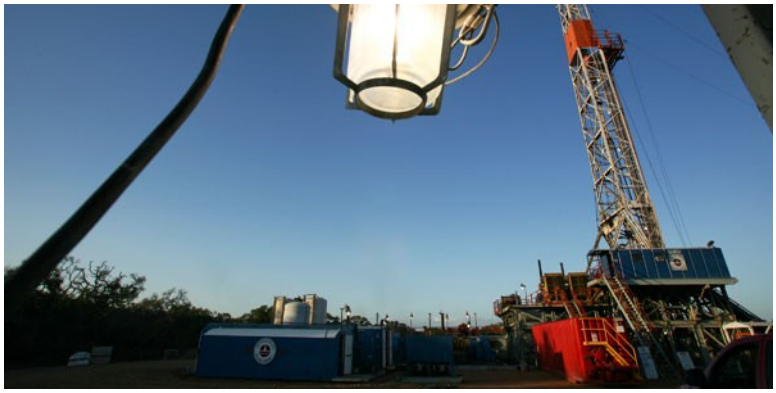
Forecast 2009 to 2035: Pacific region*

Total energy consumption: +0.9% annually
Residential consumption: +0.8% annually
Commercial consumption: +1.5% annually
Industrial consumption: +0.8% annually
Transportation consumption: 0.7% annually

With the population of the Pacific region expected to grow by over 15 million through 2035, it's no wonder that energy use is forecast to increase by 0.9 percent annually, bringing consumption in the region up by 2.98 quadrillion Btu by 2035 over 2009—a difference that's about equal to Belgium's energy consumption—according to EIA data. *Photographer: Bloomberg*

**Forecast data on all slides: U.S. Energy Information Administration figures*

Forecast 2009 to 2035: West South Central region



Total energy consumption: +0.8% annually
Residential consumption: +0.3% annually
Commercial consumption: +1% annually
Industrial consumption: +0.7% annually
Transportation consumption: +1% annually

The West South Central region, which includes Texas, Louisiana, Oklahoma, and Arkansas, is growing both in terms of economic activity and population. Transportation and commercial energy consumption are each expected to increase by 1 percent annually from 2009 to 2035.*Photographer: Bloomberg*

Forecast 2009 to 2035: South Atlantic region

Total energy consumption: +0.8% annually
Residential consumption: +0.4% annually
Commercial consumption: +1.1% annually
Industrial consumption: +0.6% annually
Transportation consumption: +1% annually

The South Atlantic states, which stretch along the coast from Delaware to Florida and also include West Virginia, are expected to gain more than 23 million residents through 2035, according to the EIA. Energy use by the commercial and transportation sectors is expected to grow particularly fast. *Photographer: Bloomberg*

Forecast 2009 to 2035: West North Central region

Total energy consumption: +0.8% annually
Residential consumption: +0.1% annually
Commercial consumption: +0.7% annually
Industrial consumption: +1.5% annually
Transportation consumption: +0.3% annually

Energy use in the West North Central region—which includes Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, and South Dakota—is expected to grow fastest in the industrial sector, with an expected annual growth rate of 1.5 percent from 2009 to 2035. *Photographer: Bloomberg*

Forecast 2009 to 2035: Mountain region

Total energy consumption: +0.8% annually
Residential consumption: +0.3% annually
Commercial consumption: +1.3% annually
Industrial consumption: +0.4% annually
Transportation consumption: +1.3% annually

By 2035 an additional 12.58 million people are expected to live in the Mountain region, which covers the area from Montana and Idaho south to Arizona and New Mexico. Use of renewable energy is expected to pick up by 2 percent annually—faster than the U.S. rate of 1.7 percent, according to EIA data. *Photographer: Bloomberg*

Forecast 2009 to 2035: East South Central region

Total energy consumption: +0.8% annually
Residential consumption: +0.8% annually
Commercial consumption: +1.6% annually
Industrial consumption: +0.7% annually
Transportation consumption: +0.5% annually

Total annual energy use in the East South Central region, which includes Alabama, Kentucky, Mississippi, and Tennessee, is expected in increase by 1.74 quadrillion Btu by 2035. The anticipated growth roughly equals total energy consumption in Algeria, EIA data show. The industrial sector is the region's leading energy user, though commercial energy consumption is expected to experience the biggest increase. *Photographer: Getty Images*

Forecast 2009 to 2035: East North Central Region

Total energy consumption: +0.6% annually
Residential consumption: -0.1% annually
Commercial consumption: +1% annually
Industrial consumption: +1.2% annually
Transportation consumption: 0% annually

While the population in the East North Central region (Wisconsin, Illinois, Indiana, Michigan, and Ohio) is expected to grow by 3.98 million through 2035, residential energy use is actually forecast to decrease by 0.1 percent annually, EIA data indicate. The industrial sector, the region's largest consumer of energy, also represents the biggest share of the projected 0.6 percent annual increase. *Photographer: Bloomberg*

Forecast 2009 to 2035: New England

Total energy consumption: +0.5% annually
Residential consumption: +0.4% annually
Commercial consumption: +0.9% annually
Industrial consumption: +1.1% annually
Transportation consumption: +0% annually

The sparsely populated New England region will see its number of residents grow by only 1.26 million through 2035, with annual energy use expected to increase by 0.43 quadrillion Btu from 2009 levels—about equal to the energy consumed by Paraguay. *Photographer: Getty Images*

Forecast 2009 to 2035: Middle Atlantic region

Total energy consumption: +0.3% annually
Residential consumption: +0% annually
Commercial consumption: +0.7% annually
Industrial consumption: +0.9% annually
Transportation consumption: -0.1% annually

Mid-Atlantic America is forecast to have the lowest growth rate in energy consumption, 0.3 percent annually, through 2035. The population is set to grow by 3.74 million over 2009 and total annual consumption is forecast to jump by 0.91 quadrillion Btu. The commercial sector is expected to overtake transportation as the region's biggest energy user. *Photographer: Bloomberg*

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