

Powering America's Growing Energy Needs

An Interview with Gale E. Klappa, Chairman Emeritus, WEC Energy Group

EDITORS' NOTE Gale Klappa is the former chairman and CEO of WEC Energy Group and has more than 45 years of experience in the energy industry. Based in Milwaukee, WEC Energy is one of the nation's premier energy companies serving 4.8 million electric and natural gas customers in Wisconsin, Illinois, Michigan and Minnesota. He has served as a director of the Edison Electric Institute, the American Gas Association and the Electric Power Research Institute.



Gale E. Klappa

There is much speculation about how much electricity the U.S. will require in the next few years, particularly with the major needs of AI and data centers. How fast will demand grow?

Depending upon what company you're looking at across the country and how much hyperscaler demand they will be seeing, I think many of the energy companies, many of the utilities in the U.S., will need to increase their power generation capacity by between 50 percent and 100 percent over the next several years. It really is a complete sea change in terms of demand for electricity.

How will this get done?

Given the reliability needs of society, but also the extraordinary reliability requirements to serve data centers, I think we're going to need every tool available. So, I really believe energy policy in the U.S., simply stated, has to be all of the above. Just the publicly traded utilities, for example, have announced capital investment plans that total more than \$1 trillion between now and the end of 2029.

Where will the additional power come from?

I believe we're going to see substantial increases in investment in renewable energy, in particular solar and wind. With the advent of cost-effective battery storage, you can actually deliver some sunshine after sunset, if you will. Being able to absorb some of the renewable energy output during the daytime and then dispatch it at night.

What about other energy sources?

In the near term, over the next decade or so, the country will also need a significant increase in natural gas-fired power plant capacity. Power from renewables and natural gas will be the major items of focus as the energy sector works to meet this huge energy demand from the hyperscalers.

There are reports that natural gas turbines are sold out through 2030. What sort of challenge is that?

There is no question that the queue is filled up. But the good news is that many of those orders will serve the hyperscaler data centers. So, in terms of meeting the initial demand from these hyperscalers between now and 2030, I think we have enough production capacity on the way.

What about nuclear?

Nuclear is the promise for the long term. But given the state of the technology today, I just don't see nuclear playing a huge, additional role until perhaps the second half of the next decade, 2035 and beyond at the earliest. However, there are a number of initiatives that over time could significantly increase the role of nuclear power. These include extending the licenses and restarting existing plants. There are about 100 operating reactors in the U.S. There are also innovative new technologies coming online like small modular reactors that can be prefabricated, and there are many new nuclear startup companies. Long-term, this all looks very promising.

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Where do oil and coal fit in?

Power plant after power plant burning coal has either been retired because of EPA rules or refurbished to switch to natural gas. I don't see any significant expansion of coal as a power source compared to where it is today.

As for oil, the industry has been moving away from oil for decades. But there are still some uses,

modest uses, where peaking units – those units that run only at the highest hours of demand – still run on oil. Oil is very diminished as a fuel for the electricity network.

With electricity demand growing so quickly, what effect is that going to have on business and consumer prices?

I think the issue is actually being tackled very well. And I can give you an example from Wisconsin, with which I'm very familiar. Regulators there have just gone through a one-year review process – very transparent, lots of public input, lots of input from not only the hyperscaler companies, but also utilities and consumer groups. And there is now in place, and approved by the regulator, what we call a VLC, a very large customer tariff.

What is it exactly?

It is a very explicit tariff assuring that these data center developments will pay their own way, will pay their share of all of the construction costs, operating costs, and energy delivery costs that are needed to serve them.

Specially designed rates and tariffs are being put in place and approved by regulators to assure that existing customer bills are not going to rise because a region suddenly has a huge energy demand from data centers. It's already happening around the country.

What are the biggest challenges?

One of the challenges that has to be worked out, especially for the hyperscalers, is the bottlenecks for new transmission. Obviously, power plants and solar farms are not built in the middle of New York City. So there's an increasing need to build new transmission to move the energy from these power plants that are in remote areas to where the demand really is. And historically, there have been very long lead times and very long approval times to expand the transmission network. We need to de-bottleneck, if you will, the building of new transmission.

How do you foresee the next five years in energy?

If the projections are correct, demand for new energy and its infrastructure will soon grow at historic levels and fuel, so to speak, what really is a revolution. It will require a lot of work, a record level of investment and financing and thoughtful policies to protect other businesses and consumers beyond the hyperscalers. I believe it can and will be done. And the economic future of the U.S. will be brighter and more secure because of it. ●