

Panel

7-29-25 7a.
Item 1

Report compiled for the Woodbury County Supervisors Meeting -- July 29, 2025

Rita Iversen, 3430 Concordia Drive, Sioux City, Iowa

I'm here to speak against putting a nuclear power plant in Woodbury County.

Five disadvantages of nuclear energy:

1. **Radioactive waste.** Nuclear waste requires long term storage, posing a significant environmental challenge. Radio-active waste will be stored in two locations for centuries. The half- life of uranium isotopes is 4.5 BILLION years. That's 4.5 BILLION years for HALF of the radio-active waste to become harmless.

According to international reporting, the capping system at the Chernobyl nuclear power plant has already begun leaking and needs repairs. That plant accident happened 25 years ago, not 4.5 billion years ago. Chernobyl is in Ukraine, a country in the midst of a war with Russia.

2. **High up front costs:** Builds of nuclear power plants are expensive – typically 6-9 Billion dollars. The state of Georgia recently built 2 plants. The projected cost was 7 Billion, each. Final cost was 15 Billion, each. The plants opened in 2023 and 2024.

Who pays for these huge costs? The tax payers! Their electric bills went up 40%. The developer is suing the state for unpaid bills. Georgia taxpayers will take another financial hit! The cost for nuclear plants has TRIPLED since 2005 and is predicted to continue to rise. Basic build times used to be 10 years. Now builds are as long as 15, 20, or even 30 years. Construction and financing extends over time, so costs accelerate!

In contrast to the rising costs of nuclear plants, the cost of solar has fallen 83% since 2009. Onshore wind turbine costs have declined by 63%. According to a 2025 United Nations Report, 92.5 % of new global construction in 2024, was renewables -- sun, wind, and water.

3. **Accident risk:** While rare, accidents at nuclear power plants have severe consequences. Death at the plant site. Terminal cancers in the following years.

If there was a nuclear accident here, people and animals living within a 10-mile radius would need to be evacuated. Radio- active particles are severely dangerous to your health. People living within a 50-mile radius would possess unsafe food (from gardens and fields) and unsafe water. They would also face evacuation. So, people living in 15 counties, in the tri-state area, would need to be evacuated.

Farmers would lose their crops. Their grounds and crops would be infected with radio-active particles. People's property values would decline if their homes were in the "50 mile danger zone". Many people would refuse to live so close to a nuclear power plant!

You may say, I don't think an accident to a nuclear power plant could ever happen here. Remember . . . we live in Tornado Alley. Iowa, on average, has 50 tornadoes a year. In 2024 there were 100 recorded tornadoes in Iowa.

Here is a nuclear plant. Here's a tornado. BAM !

We also have frequent flooding, a fast-moving river, bolt lightning, and high velocity windstorms. Remember the McCook Lake flood when whole buildings were washed away? All of this puts us at a much greater risk for a nuclear plant accident. IT COULD HAPPEN HERE.

During and after an accident the Missouri River would carry radio-active particles to other cities and towns downstream. Fish and other wildlife would die and the ecology of the river we love would be affected.

There is another river concern. Nuclear plant equipment is kept safe by being constantly cooled. Water from the Missouri River would be used for that process. Heated water would then be returned to the river. The heated water kills fish and damages river ecosystems.

4. **Nuclear proliferation:** Technology used in nuclear power plants could be stolen for weapons production. This raises concerns about equipping terrorists with nuclear weapons. A nuclear plant near Sioux City could become a target for a terrorist.

Unfortunately, we are also seeing nuclear power plants used as a way to threaten and intimidate other countries during the current Russian and Ukrainian war.

5. **Public perception:** Negative public perception, due to safety concerns and past accidents, slows or stops the development of nuclear plants. Currently, 40 of the 91 nuclear plants in the US are closed or being closed. Sioux Falls and Omaha have closed their plants. Germany and Japan are closing all their plants. Nuclear energy is looking backward for energy solutions. People all over the world are coming to that conclusion.

At the last public meeting on this issue, a smaller nuclear reactor (SMR) was mentioned as a possibility for our county. SMRs have been theorized, but have not been constructed. There's no guarantee one will EVER be completed. Besides, if a small reactor ever does become available, it will still have the same 5 problems listed earlier in this report

Good news. There are many other, safer, cost-effective, and currently available methods of energy production. Many countries are using those energy options. Common sense demands looking into these other sources to create more electricity for the county. One final thought: There are no price spikes on sunlight. No embargoes on wind. Thank you.

Can solar energy power an industrial complex?

AI Overview

Yes, solar energy can effectively power industrial complexes, offering various benefits, especially in reducing operating costs and promoting sustainability

How solar energy powers industrial complexes

- Industrial facilities often have large rooftops and unused land area that are ideal for installing photovoltaic (PV) systems or solar farms.
- These installations convert sunlight into electricity, providing a renewable energy source for the complex's operations.
- Energy storage systems, such as batteries, can be integrated with the solar array to store excess energy generated during peak sunshine hours for use at night or during periods of low sunlight.
- Some systems utilize net metering, allowing businesses to sell excess energy back to the grid and receive credits, which can offset the cost of electricity purchased from the grid when solar generation is insufficient.

Benefits for industrial complexes

- **Reduced Energy Costs:** Solar power can significantly lower or even eliminate electricity bills by generating on-site power, providing a buffer against fluctuating and rising utility costs.
- **Energy Independence:** Generating electricity on-site reduces reliance on the grid, providing a more stable and predictable energy supply, especially important in areas with unreliable or expensive grid electricity.
- **Environmental Benefits:** Transitioning to solar power significantly reduces an industrial complex's carbon footprint and greenhouse gas emissions, contributing to a cleaner environment and enhanced public image.
- **Increased Property Value:** Installing solar panels can increase the value of the property by lowering operating costs and appealing to environmentally conscious buyers.
- **Government Incentives:** Various government incentives, such as tax credits and grants, can help offset the initial investment costs of solar installations, making them more affordable for businesses.

Examples of industrial complexes utilizing solar power

Many industries are adopting solar power, including:

- Agriculture (for irrigation and processing)

- Manufacturing (to power facilities and equipment)
- Textile, cement, paper, steel, chemical, and dairy industries (to reduce energy costs and environmental impact)

Key considerations

- **Energy Needs:** Determine the specific energy requirements of the industrial complex to design a suitable solar system size.
- **Space Availability:** Assess the amount of rooftop space or land available for solar panel installation.
- **Geographic Location:** Locations closer to the equator receive more intense solar radiation, generally leading to higher energy generation.
- **Upfront Costs and Financing:** While solar offers long-term savings, consider the initial investment and available financing options, including government incentives.

In conclusion, solar energy provides a viable and advantageous solution for powering industrial complexes, enabling cost savings, promoting sustainability, and increasing energy independence. Consultation with experienced solar providers can help businesses assess their needs and implement the most appropriate solar energy solution.

United Nations says booming solar, wind and green energy hits global tipping point for even lower costs

BY SETH BORENSTEIN

Updated 10:20 AM PDT, July 22, 2025

NEW YORK (AP) — The global switch to renewable energy has passed a “positive tipping point” where solar and wind power will become even cheaper and more widespread, according to two United Nations reports released Tuesday, describing a bright spot amid otherwise gloomy progress to curb climate change.

Last year, 74% of the growth in electricity generated worldwide was from wind, solar and other green sources, according to the U.N.’s multiagency report, called Seizing the Moment of Opportunity. It found that 92.5% of all new electricity capacity added to the grid worldwide in that time period came from renewables. Meanwhile, sales of electric vehicles are up from 500,000 in 2015 to more than 17 million in 2024.

The three cheapest electricity sources globally last year were onshore wind, solar panels and new hydropower, according to an energy cost report by the International Renewable Energy Agency (IRENA). Solar power now is 41% cheaper and wind power is 53% cheaper globally than the lowest-cost fossil fuel, the reports said. Fossil fuels, which are the chief cause of climate change, include coal, oil and natural gas.

“The fossil fuel age is flailing and failing,” United Nations Secretary-General Antonio Guterres said in Tuesday morning speech unveiling the reports. “We are in the dawn of a new energy era. An era where cheap, clean, abundant energy powers a world rich in economic opportunity.”

“Just follow the money,” Guterres said, quoting the reports that showed last year there was \$2 trillion in investment in green energy, which is about \$800 billion more than in fossil fuels.

Thomas, who did not work on the reports, added that they debunk the myth that clean energy cannot compete with fossil fuels, instead showing a clean energy future is not just possible but likely inevitable.

The U.N. reports are “right on the money,” said University of Michigan environment dean Jonathan Overpeck, who also wasn’t part of the studies. He said the economic tipping point leads to a cycle that keeps driving renewable costs down and makes fossil fuel power less and less desirable.

Renewables grow despite high subsidies for fossil fuels

And renewables are booming despite fossil fuels getting nearly nine times the government consumption subsidies as they do, Guterres and the reports said. In 2023, global fossil fuel subsidies amounted to \$620 billion, compared to \$70 billion for renewables, the U.N. report said.

But just as renewables are booming, fossil fuel production globally is still increasing, instead of going down in response. United Nations officials said that’s because power demand is

increasing overall, spurred by developing countries, artificial intelligence data centers and the need for cooling in an ever warmer world.

"A typical AI data center eats up as much electricity as 100,000 homes," Guterres said. "By 2030 data centers could consume as much electricity as all of Japan does today."

So Guterres called on the world's major tech firms to power data centers completely with renewables by 2030.

Solar and wind power face US cuts to renewable energy programs

In the United States, solar and wind power had been growing at a rate of 12.3% per year from 2018 to 2023, the IRENA report said. But since President Donald Trump took office earlier this year, his administration has withdrawn the nation from the landmark Paris climate accord and cut many federal renewable energy programs, with a renewed emphasis on fossil fuels.

Guterres warned nations hanging on to fossil fuels that they were heading down a dangerous path that would make them poorer not richer, without naming the United States specifically.

"Countries that cling to fossil fuels are not protecting their economies, they are sabotaging them. Driving up costs. Undermining competitiveness. Locking in stranded assets," Guterres said.

Renewables are the smart way to go for energy security, Guterres said. With renewables, he said, "there are no price spikes for sunlight. No embargoes on wind."

Guterres said he understands how young people could have a sense of "doom and gloom," and regrets what his generation has left them — but all is not lost.

"This is not inevitable. We have the tools, the instruments, the capacity to change course," Guterres said. "There are reasons to be hopeful."

The Associated Press' climate and environmental coverage receives financial support from multiple private foundations. AP is solely responsible for all content. Find AP's standards for working with philanthropies, a list of supporters and funded coverage areas at AP.org.



SETH BORENSTEIN

Borenstein is an Associated Press science writer, covering climate change, disasters, physics and other science topics. He is based in Washington, D.C.