

Notes from **Peter Wirth** <pwirth2@verizon.net>

State, county offer incentives:

New York State and Onondaga County attracted Micron with a slew of tax credits, grants and other incentives.

Empire State Development, New York's economic development engine, has offered Micron \$5.5 billion in Green CHIPS Excelsior tax credits. In exchange, Micron must commit to job creation, investment and 100% renewable energy.

In addition to state tax breaks, Micron and the Onondaga County Industrial Development Agency (OCIDA) have brokered a "49-year PILOT (payment in lieu of taxes) agreement and abatement of state and local sales tax on construction expenses," according to the governor's office.

Onondaga County also will provide the following grants:

- **Façade grant:** \$5 million
- **Research and development:** \$10 million to establish a semiconductor research and development center at the Syracuse Center of Excellence in partnership with Syracuse University
- **Jobs:** \$5 million workforce attraction grant to help with initial hiring; \$5 million workforce sustainability grant to develop job skills in conjunction with Onondaga Community College and other institutions

"The Onondaga County Department of Water and Environment Protection and the Onondaga County Water Authority will make necessary water and wastewater infrastructure improvements over the project life cycle to support the project and surrounding community," read a release from the governor's office.

New York State also has pledged \$200 million for road and other infrastructure improvements near the site and \$100 million toward the Green CHIPS Community Fund, a \$500 million community investment initiative.

# How would Micron's electricity-hogging plant here live with NY's war on fossil fuels?

- Updated: Feb. 28, 2023, 6:17 p.m. |
- Published: Feb. 28, 2023, 6:00 a.m.



Rendering shows Micron Technology Inc.'s planned semiconductor fabrication facility in Clay. Micron says the \$100 billion plant will create 9,000 jobs over 20 years and four times that many support positions at related suppliers and service companies. (Micron Technology)

279 shares

By [Tim Knauss | tknauss@syracuse.com](mailto:tknauss@syracuse.com)

Syracuse, N.Y. – Micron Technology’s planned semiconductor fabrication plant in Clay would consume more electricity than the entire state of Vermont.

When fully built, the complex of four chip fabs would use 640 million kilowatt-hours a month, more than enough for 1 million average New York homes.

Micron has promised to buy all that electricity from renewable sources, a promise that reflects New York state’s commitment to have an emission-free electric grid by 2040.

But Micron could find it tough to keep that promise unless the floodgates open to new wind and solar farms.

It’s one of the least-discussed challenges of the Micron project, as New York’s signature economic development success story collides with a major environmental aspiration.

[Micron announced in October](#) that it planned to invest up to \$100 billion building four giant chip fabs at a 1,400-acre site in Clay. The fabs would employ up to 9,000 people directly and could spin off 40,000 more jobs, state officials said.

The development won’t happen all at once. Micron said it plans to start producing chips in 2026 and will fully build the complex within 20 years.

That timeframe coincides with what state officials hope will be a wholesale transformation of the energy sector.

In addition to Micron’s anticipated leading role in the Central New York economy, the company could play a big part in the state’s effort to fight climate change.

To reduce greenhouse gas emissions, state law calls for eliminating fossil fuels by 2040 from the electricity system, where they now supply nearly half the power. By 2030, the law calls for 70% of all electricity to be produced by renewable sources like wind, solar and hydro.

At the same time, state officials hope to gradually convert every building and new vehicle to [run entirely on electricity](#) rather than gasoline, natural gas, propane or other fossil fuels. That will add to the challenge.

Even before Micron surfaced, operators of the statewide electric grid were estimating an 8.7% increase in electricity consumption by 2035, according to forecasts by the New York Independent System Operator.

Micron could add another 5%, according to estimates worked up by National Grid and Micron as part of a term sheet agreement with state officials. The documents

indicate that Micron could draw an average of 928 megawatts – the output of a large nuclear plant – as soon as 2035.

Micron officials support the move to renewable energy.

In the United States, where Micron will operate facilities in New York, Idaho and Virginia, the company promises to use 100% renewable energy beginning in 2025, said Scott Gatzemeier, a Micron vice president in charge of expansion efforts in the U.S.

Micron recently made a deal with Idaho Power to build a 40-megawatt solar farm near Micron's headquarters in Boise.

And last year Micron bought enough renewable power in Malaysia to supply its operation there, which does not include a chip fab.

But both of those initiatives pale in comparison with the electric needs it will have in Central New York. A 40-megawatt solar plant in Clay would provide less than 1% of the Micron megafab's anticipated power supply.

### **The Green CHIPS pledge**

Micron's promise to use all renewable power is more than goodwill. Its ability to collect up to [\\$5.5 billion in state subsidies](#) depends on that pledge.

According to the term sheet Micron signed with economic development officials, the company agreed to use "100% renewable energy for electricity."

Micron must enter a state-approved sustainability plan in exchange for the billions in aid. The plan has not been finalized yet, but there will be plenty of wiggle room. State economic development officials aren't likely to box in Micron if it prevents the company from building.

For example, Micron will have leeway to buy renewable energy credits from out of state and still qualify for the tax credits, although the company must prioritize in-state sources if possible, said Kristin Devoe, speaking for Empire State Development, the state's economic development agency.

Wind, solar and hydro projects sell renewable energy credits equal to the amount of power they produce. The credits provide extra revenue to the power plants and can be bought by customers such as Micron to fulfill a renewable energy commitment.

If Micron cannot meet the terms of its sustainability plan, it has the option to donate money to a nonprofit chosen by ESD to meet its obligation for that year, according to the proposed regulations for the Green CHIPS program.

Micron plans to use natural gas for heating. Gatzemeier said the company will investigate alternatives, such as hydrogen. But the company also would be exempt, as a manufacturer, from [proposed state legislation](#) that would require most buildings eventually to go all-electric.

### **A rush of renewables**

State energy leaders are banking on a wave of new wind, solar and hydro power sources to come online in the coming years. They are also counting on huge power savings from energy efficiency programs and tighter building codes.

New York is expected to add at least 18,200 megawatts of renewable generating capacity by the time Micron is complete, Devoe said.

There's a long list of proposed renewable energy projects in various stages of planning and development. But officials at the New York Independent System Operator pointed out in a report last November that it could be difficult to hit the state's deadlines.

The NYISO said the state will need to add 20,000 megawatts of renewable capacity in just seven years to meet the goal of 70% renewable power by 2030. By comparison, only 12.9 gigawatts have been added to the grid in the past 24 years, and most of that was fossil-based.

The NYISO report cited the need for "an unprecedented pace of project deployment."

There are at least five wind farms and six solar farms under construction, representing 669 megawatts of total capacity, according to the Alliance for Clean Energy NY, a renewables industry group. Another four wind projects and 33 solar farms, totaling 3,198 megawatts, have secured permits to build but have not yet begun, the group reports.

The approval process for new power producers takes years, said Deb Peck Kelleher, deputy director at the Alliance for Clean Energy. Just getting a site permit can take up to three years, she said. Developers also can face delays waiting for permission from the NYISO to connect to the power grid.

The long development process, plus the need for new transmission lines to carry renewable energy to customers, makes some industry observers skeptical that New York will meet its aggressive timeline for renewable power.

"These numbers are unattainable," said Gavin Donohue, executive director of the Independent Power Producers of New York, whose members include both fossil and renewable power companies.

New York's energy policy is ambitious because of the increasingly urgent threat from climate change, officials say. Removing gas-fired power plants also will eliminate air pollutants, reducing the rate of asthma and other respiratory illnesses, Peck Kelleher said.

But if new energy sources come online too slowly, the retirement of natural gas-fired power plants will likely be delayed. To keep the system reliable, "continued operation of fossil will be required" until new technologies emerge that can provide power on demand, the NYISO concluded.

For now, NYISO officials are working to assess how Micron will impact the electric grid.

"Due to the size and scope of the project, our planning engineers are already working closely with Micron and National Grid to identify potential impacts on the bulk electric system," said Andrew Gregory, speaking for the NYISO.

*Do you have a news tip or a story idea? Contact reporter Tim Knauss: [email](#) /*