

Going solar at the Pine Bend refinery



**LARGEST DIRECT
USE OF SOLAR POWER
IN THE U.S.**

Project at-a-glance

Number of panels	100,000+
Panel size	9' – 14'
Project area	~300 acres; panels cover about 200 acres
Total power produced	45 MW or ~92,000 megawatt hours per year, enough to power more than 8,400 homes per year
Construction timeline	~1 year
Project cost	~\$75 million



Artist Rendering

Flint Hills Resources plans 45-megawatt solar installation of at least 100,000 panels to help power the Pine Bend refinery complex.

Located 17 miles southeast of Minneapolis, the Flint Hills Resources Pine Bend refinery produces transportation fuels used throughout the Midwest, including most of Minnesota's gasoline, diesel fuel and jet fuel, as well as other essential products such as asphalt, heating fuels and the chemical building blocks used to make countless everyday products.

To improve energy efficiency and lower the refinery's energy costs, Flint Hills is building what is believed to be the largest-of-its kind solar installation on about 300 acres of its land immediately adjacent to the refinery complex in Rosemount.

The refinery requires approximately 135 megawatts (MW) of power to operate. An existing state-of-the-art, highly efficient Combined Heat and Power (CHP) unit, completed in 2019, currently supplies about 50 MW of electricity, or roughly 40% of what is required to power the refinery's daily operations. Under optimal conditions, the solar and CHP together will be able to satisfy as much as 70% of Flint Hills Resources power needs, making the Pine Bend refinery one of America's most energy efficient fuel producers.

In the past five years, Pine Bend has improved its energy efficiency by 10%, advancing it into the top quartile of all U.S. refineries. The refinery has earned the U.S. Environmental Protection Agency's ENERGY STAR® certification for the past three years.

Flint Hills plans to add pollinator-friendly habitat within the solar development, which will add several hundred acres to the complex's overall habitat management program. The program currently includes property east of the refinery near the Mississippi River.