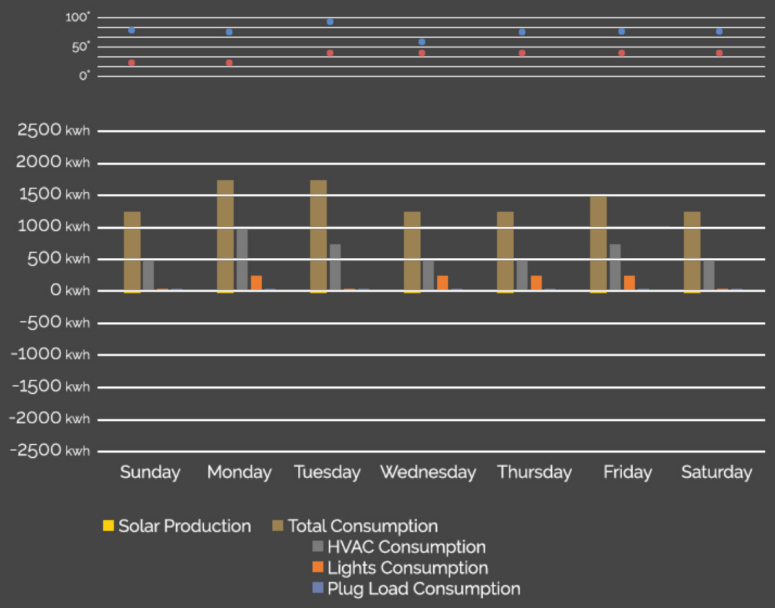
TECHNY PRAIRIE ACTIVITY CENTER

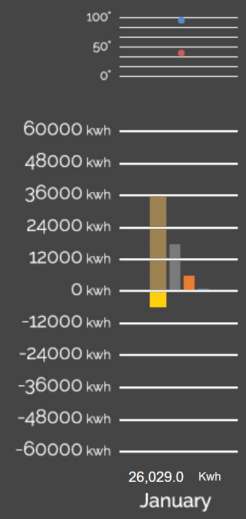
NET ZERO ENERGY DATA || JANUARY 2023

Weekly | Annual | Solar Production | HVAC | Lights & Plug Loads | Carbon Emissions

7 Day Rolling Energy Usage and Generation



Month to Date Total



7 Day Rolling Net Energy Usage

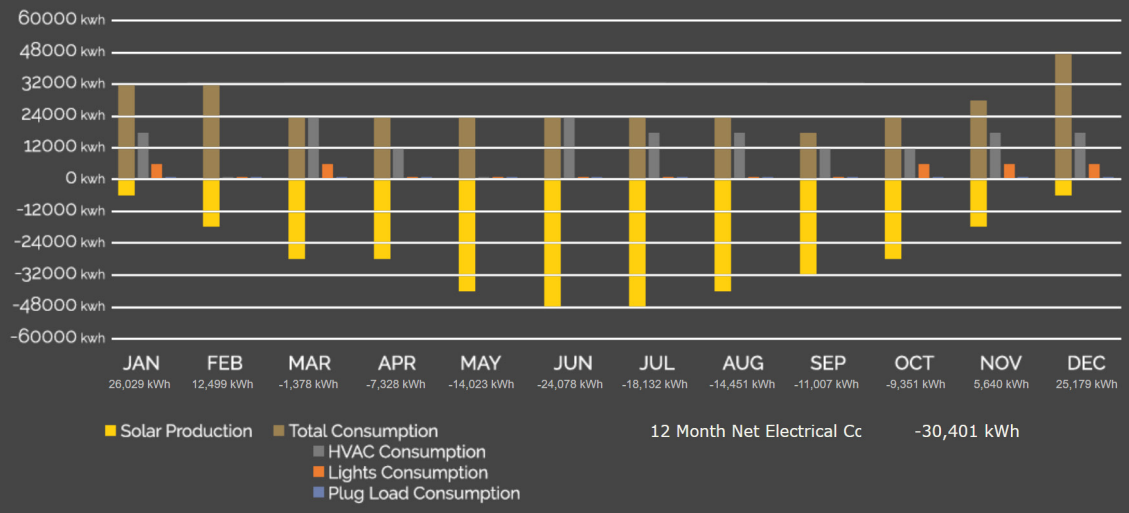
According to the US Department of Energy, the state of Illinois receives a yearly average of 4 to 5 peak sun-hours per day. Those are the best hours for generating solar power. In other words, you can expect to get from 4 to 5 kilowatt hours (kwh) of electricity each day for every kilowatt (kw) of solar power capacity installed.

TECHNY PRAIRIE ACTIVITY CENTER

NET ZERO ENERGY DATA || JANUARY 2023

Techny Prairie Activity Center
NORTHBROOK PARK DISTRICT

Annual Energy Usage and Generation



Year to Date Net Usage

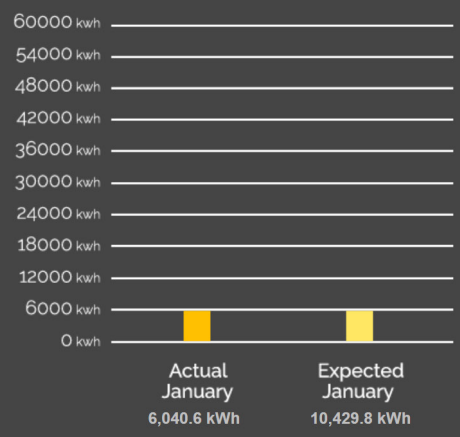
This building is 44% more efficient than a conventionally built, code compliant activity center. To learn how we built this facility, see the building construction information near the gym.

TECHNY PRAIRIE ACTIVITY CENTER

NET ZERO ENERGY DATA || JANUARY 2023

Weekly | Annual | **Solar Production** | HVAC | Lights & Plug Loads | Carbon Emissions

Solar Panel Generation



Actual vs Predicted Solar Generation

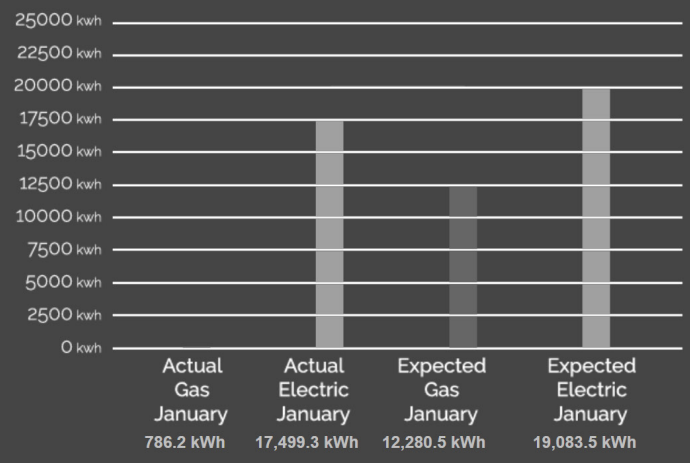
As of March 2019, net electricity generation in Illinois by source was 7% natural gas, 30% coal-fired, 53% nuclear and 10% renewables.

Illinois ranks second in the Midwest for installed renewable power capacity and fifth in the nation for installed wind power capacity. Installed renewable energy capacity includes: 3,667 megawatts (mW) of wind power; 53 mW from solar photovoltaics; 40 mW from hydropower. (Source: IEC – Illinois Environmental Council)

TECHNY PRAIRIE ACTIVITY CENTER

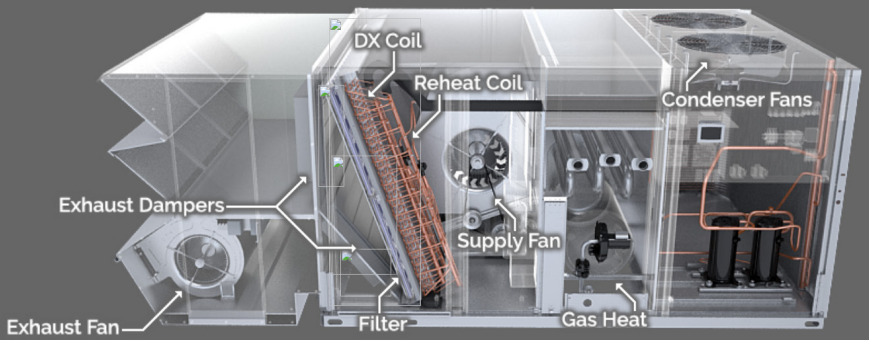
NET ZERO ENERGY DATA || JANUARY 2023

Heating Ventilation & Air Conditioning (HVAC) Energy Consumption



HVAC Actual vs Predicted Energy Usage

Roof Top Unit



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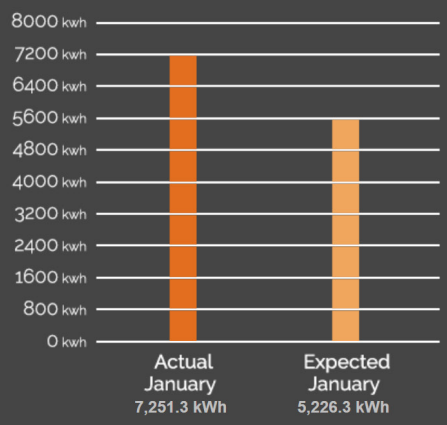
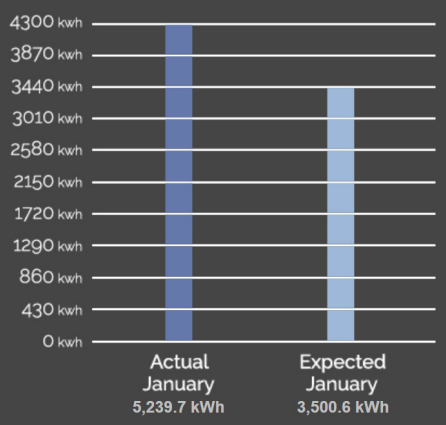
NET ZERO ENERGY DATA || JANUARY 2023

Lights Consumption



Plug Loads Consumption



Actual vs Predicted Energy Usage

Lights

Plug Loads

The lighting load for TPAC is almost 50% more efficient than a conventional code compliant building. This energy savings is achieved through the use of LED lights along with daylight harvesting - the utilization of natural sunlight instead of electric fixtures during the day.

Plug loads are the energy used by treadmills, computers, monitors - anything that is plugged into the wall. The metrics for this category are highly affected by how people use the building. For instance, turning off equipment can reduce the plug load.

TECHNY PRAIRIE ACTIVITY CENTER

NET ZERO ENERGY DATA || JANUARY 2023

Monthly Avoided Carbon Emissions

Monthly Actual vs Predicted Avoided Carbon Emissions

54 Cars Removed From the Road

Lifetime Avoided Carbon Emissions

Tree Seedlings Grown for 10 Years **4,216**