Building Energy Performance Award winners are benchmarked buildings showing high performance in 2016. Building Energy Challenge Award winners have committed to the Building Energy Challenge and are making great progress toward the goal.

Building Energy Performance

Business

Parking ramps may not seem like large energy users, but large footprints and a need for significant lighting can add up to large energy costs. Luckily with advances in lighting efficiency and falling prices for the new technology, the return on investment for many lighting retrofits is now less than two years and can be attractive to many businesses. Such was the case at the **Stinson Ramp** in Northeast Minneapolis, a parking structure with more than 800 parking stalls. By upgrading lighting fixtures to LEDs, the ramp cut electricity usage by more than 46%.

Community

The iconic **Basilica of Saint Mary** has seen a tremendous 21% drop in weather normalized energy use since 2014. Facilities Assessment and Ecological Stewardship volunteer committees have worked with staff and contractors to identify energy saving solutions in the historic building. Over the past three years, the team replaced the original 1913 boilers with new efficient ones, replaced 35 window AC units with central air, and installed LED lights throughout the campus, the bell towers, church sanctuary, and lower level. Dave Laurent, the building operator, said the payback of their LED retrofits has been great and that "everything we do now is LED." Converting lights to LEDs saved even more energy, because the church now requires less cooling in the summer. The Basilica's future energy saving plans include investing $80,000 in converting 24-30 100W lamps to LED next year and replacing all lights by 2021.

Building Energy Challenge

Outstanding ENERGY STAR Score Increase

Hennepin County's **Government Center** improved its ENERGY STAR score 6 points in the past three years to a high of 84 thanks in part to established goals. The County's annual aim of 3% energy reduction across their portfolio has generated an impressive list of efficiency projects in the building. Among them, many old appliances, computers, and monitors have been replaced with efficient models; atrium glass has been tinted to control solar gain; new LED lighting and lighting controls in much of the building have been updated; new pump motors with VFDs more accurately control pool operation; new plate frames, dry coolers, and other equipment have been installed to improve data center efficiency; and the renovated exterior revolving doors and curtain wall doors have helped reduce energy loss. Results from these projects are most noticeable in the building's 17% electricity reduction.

Outstanding GHG Emission Reduction

The four-building campus of **Wells Fargo Home Mortgage** has shown a 12% reduction in greenhouse gas emissions since 2014. In that time, building management have completed a number of projects including a parking ramp LED lighting retrofit, which cut the structure's electric consumption by more than half, and a restructuring of their central heating and cooling plant to better serve the three office buildings. The company not only uses technology upgrades, it also considers space occupancy when optimizing energy use. By grouping employees with similar schedules together, energy needs are concentrated in both time and space. This allows lighting and HVAC systems to be powered down in unoccupied areas. Going forward, Wells Fargo has committed to purchase renewable electricity to power 100% of operations by 2017, and with these actions, they are on track to far exceed the Challenge goal.

Outstanding Energy Performance

Butler Square's energy use per square foot (50 kBtu/sqft), the lowest of any building in the Challenge, is outstanding on its own, and is even more impressive knowing the building is over 100 years old. Though Butler Square is blessed with a thick masonry envelope, it had equipment of various vintages and efficiency. Staff recently addressed that issue by installing over $1 million in new pumps and drives and converting pneumatic to direct digital control (DDC) building management systems. Staff were also pragmatic in the purchase of new efficient chillers. As opposed to one large chiller, staff chose five smaller units, which can be selectively ramped up and or turned off based on need, thereby saving energy. Upcoming plans include replacing track lighting and exterior lightings with LEDs.

Outstanding Energy Reduction

Calhoun Square, an urban shopping center managed by The Ackerberg Group, has seen energy use cut in half due to major lighting and HVAC upgrades. In 2015, lighting was upgraded in the large parking ramp, followed by conversions in common areas. Knowing that tenant energy use is a crucial component of whole building efficiency, Ackerberg has worked with a tenant on upgrading to LED lighting, and they are encouraging more tenants do the same. On the heating and cooling side, Ackerberg swapped two oversized 60-ton HVAC units to one 40-ton and one 20-ton units. Following the installation of programmable thermostats at the end of 2016 and with staff currently enhancing their sustainability knowledge through the LEED Green Associate program, even more energy savings are likely in the future.