



## SHOWCASE PROJECT: SPRINT: CORE SWITCH/REGIONAL DATA CENTER

### SOLUTION OVERVIEW

This Kansas City building houses legacy wireline, data, and core wireless network equipment and has evolved from a long distance switch to a Regional Data Center supporting Sprint's new Network Vision Plan. Through this plan, upgrades to the Holmes Street Switch and other similar sites allow Sprint to decommission many other facilities, and thus reduce Sprint's overall energy consumption significantly.

Due to the nature of business at Sprint, 87% of electricity consumption by the company derives from the Sprint Network. With a focus on new technologies, Sprint developed the Network Vision Plan which increases efficiency at select sites while enabling decommissioning of 30,000 cell sites and 48 wireless switch facilities across the country. Network Vision will continue to enable energy efficiencies through IP based networking and service "layering" using the Network's 800, 1900, and 2500 MHz spectrum while supporting future wireless technology advances. The Network Vision program has reduced network energy intensity more than fivefold to 0.45 MWh per Terabit by year end 2013.

### SECTOR TYPE

Commercial, Data Center

### LOCATION

Kansas City, Missouri

### PROJECT SIZE

\$68,000 square feet

### FINANCIAL OVERVIEW

Project cost \$1.07 Million

### SOLUTIONS

The Network Vision Plan is a strategy that includes network upgrades, advancements in power and performance efficiencies, portfolio right sizing, operational changes, and building upgrades. Building efficiency projects include: HVAC variable frequency drive (VFD) upgrades (12,406,496 kBTU/yr); lighting management system and external LED lighting improvements (2,132,025 kBTU/yr); and DC rectifier upgrades (2,416,764 kBTU/yr).

Projects were identified through an EnergyMaster™ Site Assessment. All improvements identified in the assessment were evaluated against the return on the required investment and their scalability.

## **OTHER BENEFITS**

Through Network Vision, Sprint is shutting down 30,000 cell sites and 48 switch sites required to support the legacy iDEN network. In doing so, Sprint expects to save more than 727,994 MWh hours of energy consumption and 450,035 MT of CO<sub>2</sub>-e of greenhouse gas emissions annually.

## Annual Energy Use

(Source EUI )

Baseline()



Expected()



## Energy Savings

7%

## Annual Energy Cost

Baseline()



Expected()



## Cost Savings

7%



Chilled water pumps with VFDs



Controls



VFDs on computer room air handler units



Ferro-resonant rectifiers replaced with switch mode rectifiers