

Client



Morgan County Jail was built in 1898, with a Courthouse in 1907. The Morgan County Courthouse and Jail has grown into a large facility, over the years. Ft Morgan replaced the county's original facilities after county had outgrown them.

The facilities director, a progressive person, looking for new technologies for efficiency came across MPTS Technology in 2012. He did his due diligence by requesting a demonstration of the MPTS technology device. He later shared his findings about this amazing technology and shared it with his council members. The first MPTS was funded and installed in 2012 and is still working in the county office.

In 2020, the facilities director got funding for the additional MPTS device and installed it in the prison complex. The prison is a very complex operation, a combination of several activities within the facility. The largest loads are the HVAC chiller load, pumps and motors. The complex also has several types of loads such as laundry, cafeteria, security systems, automations, electronics and computers as loads on the electrical network. It has several energy conservation measures that also includes a large solar system rated over 200 Kilowatts.. The MPTS was commissioned in June 2020 and is running since then with no maintenance. MPTS is performing well and is exceeding expectations. MPTS is working well with changing loads. The measured energy demand reduction is an average 70 Kilowatts compared to the benchmark.



The Morgan county facility is 377,000 Square feet and can hold up to 325 detainees. It is a 100-bed jail facility in the City of Fort Morgan, Morgan county, Colorado. MPTS is installed for power quality improvement that is much needed in the electrical network. MPTS mitigates the transient voltages and the increased harmonics to make the electrical network reliable and resilient.

The performance of the MPTS has proved to be very successful with 30 percent reduction in Peak Demand. More than 70 Kilowatts savings average savings at any given moment as this is a24 hour operation. **The results are attached.**

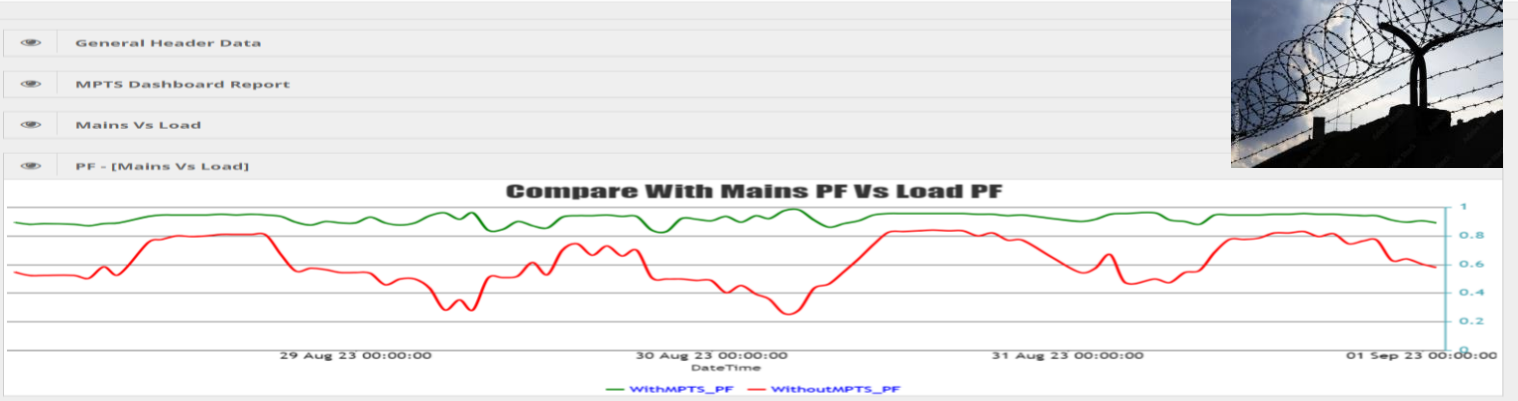
Morgan County Prison

Measured Performance Results:

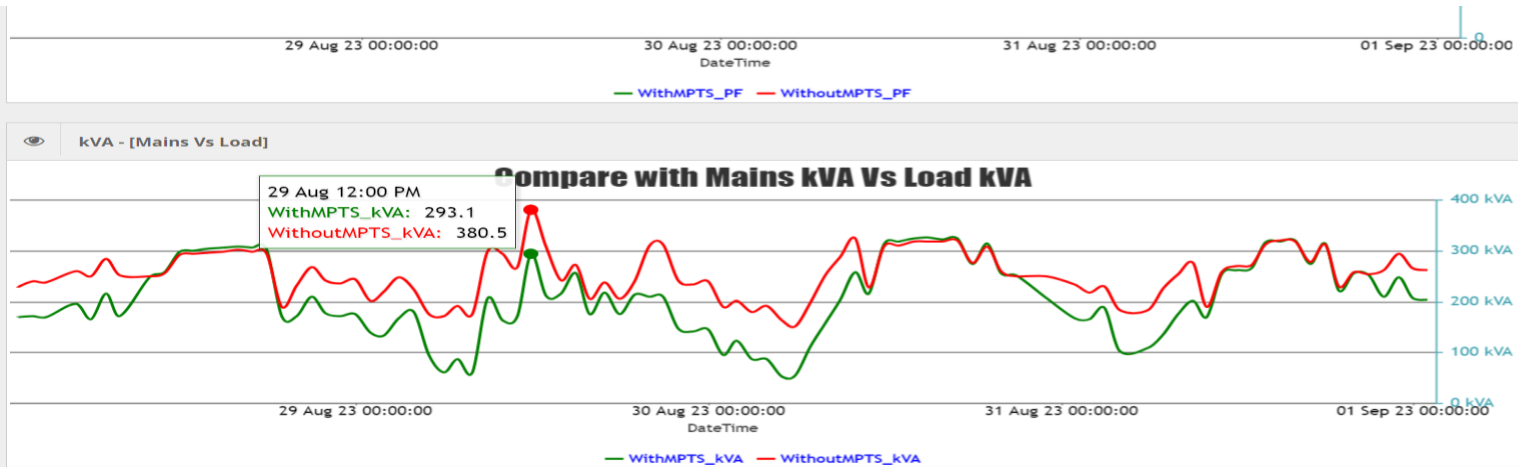
First Four Months – Green Color values with MPTS. Red Color without MPTS.

Top graph is Power Factor or Electrical Efficiency. Bottom graph showing Peak Kilowatts.

August 2023



August 2023



MPTS is reducing the Carbon Footprint significantly with every installation.

Morgan County Prison

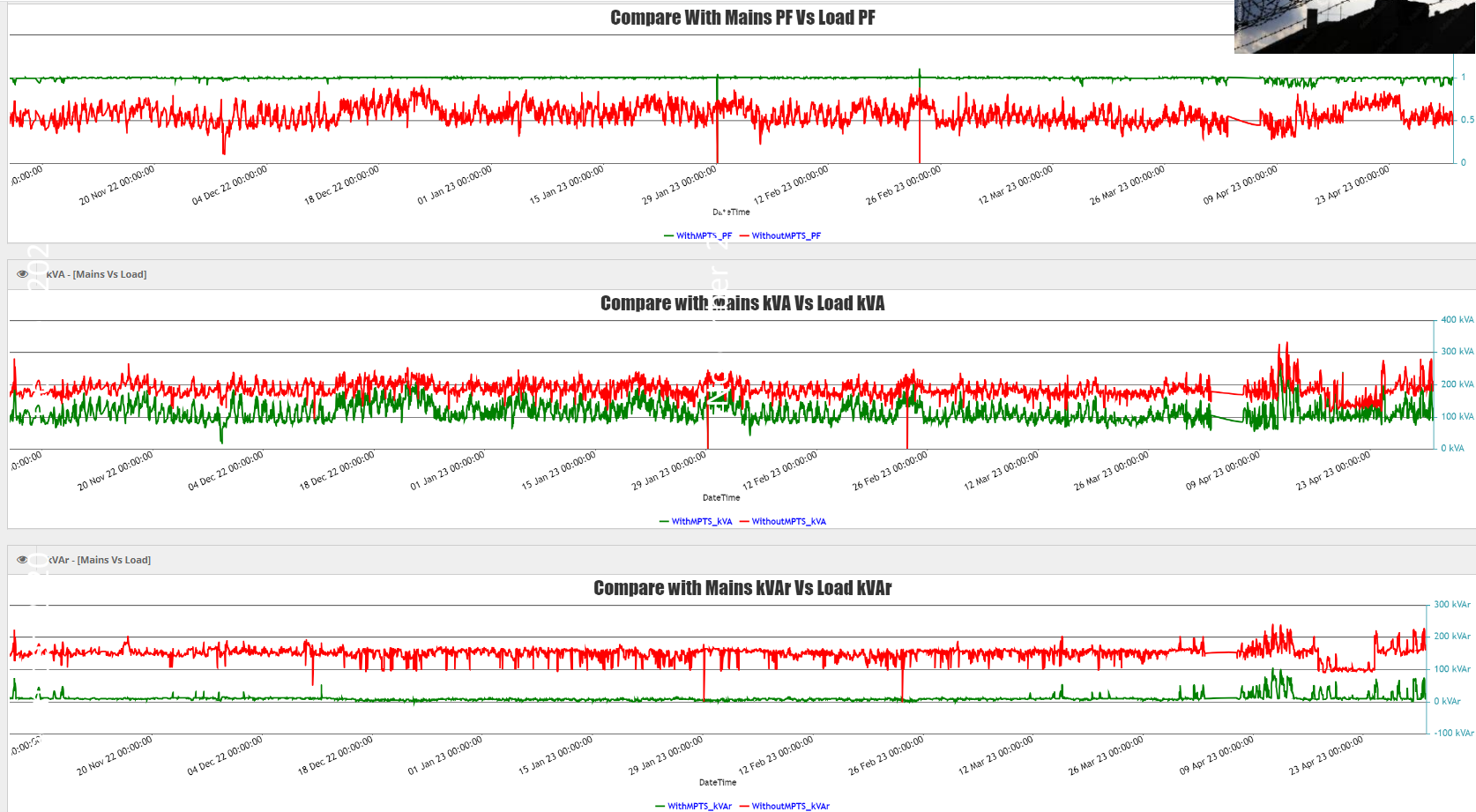
Measured Performance Results:

First Four Months – Green Color values with MPTS. Red Color without MPTS.

Top graph is Power Factor or Electrical Efficiency, followed Peak Kilowatts & KVAR



Six Month Performance 2022 - 2023



MPTS is reducing the Carbon Footprint significantly with every installation.

Morgan County Prison
Measured Performance Results:
CO2 Emissions reduction each year

← → ↻ epa.gov/energy/greenhouse-gas-equivalencies-calculator#results

Enter data:

Unit	Amount
<input type="radio"/> Gallons of gasoline	<input type="text" value="613200"/>
<input type="radio"/> Gasoline-powered passenger vehicles ⓘ	
<input checked="" type="radio"/> Kilowatt-hours avoided ⓘ	
<input type="radio"/> Kilowatt-hours used ⓘ	
<input type="radio"/> MCF of natural gas	
<input type="radio"/> Therms of natural gas	



Performance data Measured and Verified by two metering systems

MPTS is reducing the Carbon Footprint significantly with every installation.

Step 2 - View results

435 Metric Tons of Carbon Dioxide (CO₂) equivalent

This is equivalent to greenhouse gas emissions from:

96.7 gasoline-powered passenger vehicles driven for one year	1,114,026 miles driven by an average gasoline-powered passenger vehicle
48,899 gallons of gasoline consumed	42,688 gallons of diesel consumed

**Power Quality Improvement Solution:
MPTS - 21st Century power quality improvement Technology**

MPTS, maximum power transfer solutions, are next generation power quality products that **decrease the Electrical Demand,**

Total Electrical Power requirement or Generation (KVA) and

the Carbon Foot Print without replacing/retrofitting inefficient electrical and mechanical equipment by cleaning and recycling

wasted electrical power in the electrical network – a renewable energy solution

inside the building!

