VSI solutions
Building Smart. Saving Energy.

Case Study: Wailana at Waikiki

Continental Mechanical of the Pacific (CMoP) was contacted by their customer Wailana at Waikiki, a 24 story condominium with the famous Wailana Coffee House on the ground floor. Their domestic booster system, which consisted of (2) constant speed pumps, was failing and need to be repaired. Rather than repair the dated system, CMoP suggested that they consider upgrading their system to variable speed. Since their old system had constant speed pumps with pressure reducing valves (PRV's), they were wasting a lot of energy. As a condo, the system runs 24/7/365. VSI Solutions was contacted to perform an energy analysis. A proposal was presented to the customer for the new variable speed system (along with the energy analysis) and they decided to upgrade the system right away. The new system was a skid-mounted system with (2) stainless steel pumps with integrated VFD's, and a control panel.

Removing the old system and installing the new one, including piping and electrical modifications took CMoP less than one day. As soon as the new system was commissioned by VSI Solutions, the building maintenance staff noticed how much quieter it was than the old one.


Original Equipment

Original Equipment:
(2) 15Hp Constant Speed Pumps.

Retrofitted Equipment:
(1) Armstrong Booster Pump Skid c/w (2) 15Hp pumps and integrated VFDs.
(1) Drawdown Tank.

Old system consumed approximately 73,000 kWh annually.

New system is on track to consume only 27,000 kWh annually.
Annual savings is estimated to be almost $14,000/year.

That's a reduction of over **63%!!!**


Retrofitted Equipment

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Other Benefits:

Pump Alternation: Pumps will be exercised evenly to ensure that they receive equal run times, thereby increasing the life cycle of the pumps and motors.

Pump and Drive Redundancy: If a drive or pump fails during operation or is taken out of service for maintenance, the remaining pumps continue to operate. The other drives on the network will automatically recognize when the drive and pump are restored to active healthy status and put them back into the pump rotation.

Low Suction pressure monitoring: The system will monitor inlet pressure with programmable PSI settings for faults, alarms and station controlled shutdown.

Soft Start and Sleep mode: Upon starting after power outage or shutdown, system ramps slowly to avoid water hammer. If there is no demand, system will be pre-charged and pumps will be shut down, saving money and increasing pump life.

Drawdown Tank: Allows for the system to remain off for longer periods of time where very little water is required.

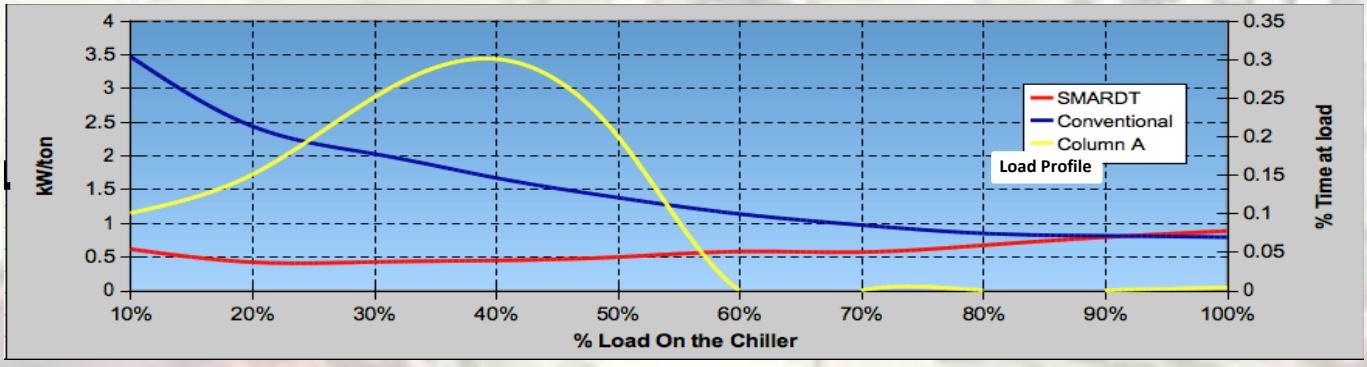
See how much energy we can save in your building!

Utilizing the latest technologies, we can reduce your chiller plant efficiency by as much as 40% or more with typical returns in the 3-4 year timeframe.

We specialize in:

- **Commercial Air Conditioning**
- **Domestic Booster Pumping Systems**
- **Hot water heat pump systems**
- **Variable Speed Drives**
- **Lighting**
- **Air Handlers**

Typical Performance Chart from Energy Analysis



To schedule your free energy analysis*, please contact Kimberly De Souza at **(808) 542-8279** or kim@vsihi.com