

White Paper Report

Project: Pioneer Petroleum

The Energy-Efficient Site

New system offers precise control and smart options for cutting energy consumption.



Pioneer Petroleum

As a gasoline retailer, Pioneer Petroleum is in the energy business. We know that energy conservation is top-of-mind with many of our customers, but did you know that it is also becoming a strong area of focus in site operations.

"Conserving energy where we can at our sites is becoming ever-more important," says Bob Reid, Pioneer's Manager of Development and Construction. He continues to say, "The more precise control we have over our own energy consumption, the more we can control costs. Even with the current industry-standard systems, there's still a lot of room for improvement, and that's what we're focused on. Smart energy management means we can reduce costs and cut waste. A 'greener' site is better for the customer, our retailers and the company."

At the forefront on Pioneer's energy conservation strategy is a new control system being installed at all new site builds. The heart of this system is a state-of-the-art energy demand management panel offering control of all exterior lights and HVAC (heating, ventilation and air conditioning) services at a site. The system is controlled at the site, with the capability of being monitored remotely via the Internet. Reid says, "We can't control the price of energy we use...but we now have much better control over how much we consume."

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Canopy lighting is a key area managed by the system. Outside photocell sensors are linked to automatic controls that allow lighting to adjust to outside conditions. The canopy lighting can be adjusted manually during times such as very grey days, but after a short time, the system reverts to its preprogrammed status. This means an end to the situation we have all seen where canopy lights are on during the middle of a bright and sunny day! The system also allows intelligent 'staging' of canopy lighting- where lights can be set up and turned on/off in zones to match conditions in short periods.

HVAC controls can be pre-set with this new system, replacing thermostats with temperature probes in the store area to allow more effective flow of air. "Because of the complexity of some of our sites, we've chosen ten sites to install a smaller lighting-only version of this system to evaluate savings," says Reid. "We've just started the first system, and we're seeing significant initial energy savings already. Down the road, all new sites will be built with this system," Reid adds.

Reid said that as these new systems are more fully tested, controls will also be added to car wash heating and lighting. "We're going to take our car wash conservation strategy even further. All newer washes being built to offer the option of using reclaimed water in the future. If utility rates dictate the need for this down the road, we'll be fully prepared," Reid notes.



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