

# Reducing Energy Costs and Preserving the Environment with Kentrox Site Solutions



Protecting the environment has become extremely important to businesses worldwide. Greenhouse gas emissions rose nearly 25 percent between 1993 and 2003 from transportation alone. At the same time, more customers are choosing companies, products, and services that are making an effort towards reducing greenhouse gas emissions and energy consumption.

Mobile operators spend billions of dollars every year to expand capacity, add new services, and improve network quality. During this process, operational resources are strained. Can protecting the environment enable operators to lower expenses and improve network availability?

Kentrox site solutions enable carriers to significantly reduce their impact on the environment while improving network quality. This is achieved through:

- Fewer technician dispatches
- Improving energy efficiencies

## Reduce greenhouse gas emissions

According to the Environmental Protection Agency (EPA), light duty vehicles account for 62 percent of all greenhouse gas emissions in the United States. Each gallon of gas a car burns emits 19.4 pounds of carbon dioxide.<sup>1</sup>

For mobile carriers, technician dispatches to sites are a common practice to maintain network availability. Figure 1 shows an example of the CO<sub>2</sub> emissions. Reducing the number of dispatches by just one per day makes a significant impact on the environment over a one year period.

Managing sites remotely help carriers reduce the global emissions of greenhouse gases by reducing the number of required technician dispatches. Kentrox site solutions monitor remote sites and equipment

	<b>Eliminating 3 truck rolls/week/truck</b>	<b>Eliminating 2 truck rolls/week/truck</b>	<b>Eliminating 1 truck roll/week/truck</b>
Annual CO <sub>2</sub> emissions saved for 1000 trucks	3.3 million pounds	2.2 million pounds	1.1 million pounds

Annual CO<sub>2</sub> emissions saved for 1000 trucks. Assumes 20 miles/truck roll and 18 miles/gallon.

<sup>1</sup> Source: EPA February 2005 report: <http://www.epa.gov/OMS/climate/420f05004.htm>

Kentrox site solutions enable carriers to protect the environment while reducing operational expenses by:

- Reducing site visits using remote management
- Enabling intelligent dispatches to fix issues faster
- Saving energy by ensuring systems run efficiently
- Meeting EPA air quality compliance and providing easy-to-run reports for showing compliance

while providing remote troubleshooting capabilities, maintenance, and repairs, reducing or eliminating site visits.

If, for example, a Network Operations Center (NOC) receives an alarm from a site, a technician can use Optima site solutions to identify where and what the problem is before a dispatch. In many cases, the problem can be fixed remotely, eliminating a dispatch. If a dispatch is required, the technician will know what the problem is and can take the correct equipment to the site to fix the problem on the first trip instead of multiple visits, reducing the amount of carbon emissions.

It is common in many areas of the world to have a fuel truck visit sites at a designated time during the month to refuel generators. By using Kentrox equipment to monitor the generator fuel level remotely, trucks can be dispatched when the fuel reaches a designated capacity instead of at a designated timeframe.

Reducing the truck rolls lowers operational costs and significantly lowers carbon emissions from the refueling trucks.

# Protect the Environment

## Improve energy efficiencies

Service providers utilize site-based equipment that require 24 hour electricity. Making this equipment more efficient saves a company thousands or millions of dollars per year on energy costs while protecting the environment.

Proactive performance management helps operators ensure that equipment using a large amount of energy, such as air conditioning systems and generators, run more efficiently. Kentrox site solutions allow carriers to monitor these systems and equipment remotely instead of having to dispatch a technician.

Thermostat settings often need to be changed when seasons change. Instead of a site visit, Kentrox can automate the schedule and remotely change the thermostat levels. This optimizes the energy that is used at each site by changing the temperature at the appropriate time.

Optimizing backup power at a site also improves energy efficiencies and reduces the carbon footprint. When primary power is not available, it is common to use a combination of battery and generator power. By implementing the Kentrox remote monitoring and management solution, the generator can be automatically turned on to recharge low batteries and then turned off, improving energy efficiency and extending power coverage during primary power outages.

## Industry compliance

It is critical for mobile operators to be EPA and Federal Communications Commission (FCC) compliant to eliminate the possibility of fines. For example, if a generator is tested or running on an EPA's designated "Bad Air Day", the fine could be thousands of dollars per instance. If a generator isn't checked per state or national standards at designated intervals, the service provider can be fined.

Kentrox site solutions enable operators to show EPA and FCC compliance and manage these activities remotely. For instance, assume that generators in a given area are scheduled to start every Monday as part of an operator's internal preventative maintenance objectives. Using Kentrox remote site monitoring and management, a technician can start the generator remotely, eliminating a site visit. If Monday is a "Bad Air Day", the testing can be managed remotely and rescheduled to an appropriate time, reducing the risk of a compliance fine.

The remote monitoring and management capabilities enable carriers to check batteries, generators, and HVAC status - from anywhere. A site visit is no longer required. Additionally, Kentrox provides the data necessary to generate compliance reports without having to visit the remote site. These capabilities reduce greenhouse gas emissions significantly and provide carriers with the information necessary to remain compliant with industry standards.

For more information, visit [www.kentrox.com](http://www.kentrox.com), email [info@kentrox.com](mailto:info@kentrox.com) or call 800 733 5511 or +1 614 798 2000.

## Why be environmentally conscience?

Studies have proven that businesses that are environmentally-aware and proactive:

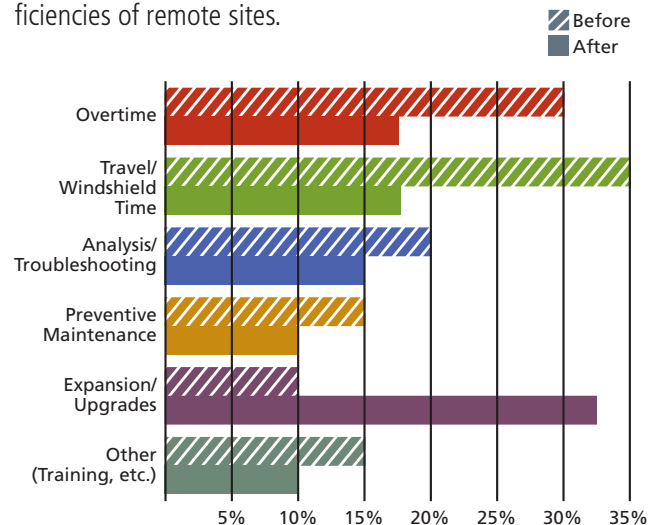
- Boost employee morale and company loyalty by setting a positive example
- Provide a healthier work environment
- Potentially lower operating costs while improving efficiencies
- Gain a competitive advantage because customers are becoming more environmentally-aware
- Minimize the risk of inflation on items such as energy, gas, insurance rates, etc.

## Improve employee morale

Creating a positive work environment that shows a company's dedication to the environment increases loyalty and improves morale. Employees learn the value of protecting the environment through many means, such as reducing energy usage or fuel consumption. A company's positive values improve their image while lowering the carbon footprint. In today's move towards protecting the environment, environmentally-friendly companies also attract and retain more customers.

## Solutions to protect the environment

Kentrox site monitoring, management, and control solutions enable mobile and fixed line carriers worldwide to reduce the impact of doing business. Through remote capabilities, Kentrox enables carriers to cut repair time by 50%, reduce WAN-related outages by 50%, increase technician efficiency by 25%, and reduce maintenance costs by 30%. These improved efficiencies reduce truck rolls by 50%, reducing greenhouse gas emissions by millions of gallons per year while optimizing the energy efficiencies of remote sites.



Savings using Optima site solutions