



# The Linde Group

## Continuing to Produce Significant Energy Savings

### Load Management Has an Important Role in Our Operation

When it comes to reducing energy usage, “every kilowatt-hour that’s not used is the most efficient and cleanest. That alleviates system constraints [when power demand rises], resulting in lower costs, improved power reliability, and a better environment benefiting all ratepayers in our communities.”

Steven Castracane, manager of energy and regulatory affairs for the Southeast and West Coast at The Linde Group—a leading international supplier of industrial, specialty, and medical gases, as well as engineering products and services—said this belief represents an important aspect of Linde’s corporate focus on making a difference by saving energy.

But while Linde believes that energy management means more than lowering costs, that’s clearly still important.

“Electricity comprises 65% to 70% of our production costs,” Castracane said. “Energy efficiency and effective load management play an important role in our operation. Everyone here is looking for any way possible to reduce operational and energy costs”—and that’s where Linde’s partnership with us comes in.

“With cost pressures on the rise in California, industrial customers need to identify innovative ideas to remain competitive,” Castracane said. “SCE recognizes that and provides support to help keep costs down.”

### Five-Year Savings of 5,500,000 kWh

The company works closely with its SCE Account Manager on energy efficiency and demand response (DR) programs to receive incentives for upgrades to more efficient equipment and to earn bill credits for load reduction during high-energy-use periods.

From 2010 through mid-2014, Linde’s four Southern California sites—in Carson, the City of Industry, El Segundo and Torrance:

- Completed 17 energy efficiency projects for an impressive total savings of 5,500,000 kilowatt-hours—the equivalent of reducing annual greenhouse gas emissions from nearly 800 passenger vehicles.
- Utilized the Energy Efficiency Express and Customized Solutions programs to receive incentives that in many cases covered up to 50% of the project investment cost for upgrades to lighting, compressed air and air dryer systems,

## Project Overview

### SCE Programs Utilized:

- Energy Efficiency Express and Customized Solutions
- Industrial Energy Efficiency Program
- Demand Response Programs
- Automated Demand Response

### Results:

Five-year savings of **5,500,000 kWh**

Incentives of up to 50% of project costs for energy efficiency improvements

Nearly 20 megawatts of load reduced per demand response event



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valve changes, sub-coolers, variable frequency drives, motors and pumps, and more.

- Also used the Industrial Energy Efficiency Program for third-party, industry-specific assistance—helping adapt demand-side management programs to best meet Linde’s needs.

Noted Region Operations Manager Stuart Becker, “The relationship we’ve leveraged [with SCE] allows us to get a better look at what its energy programs are and connect them to our equipment and our processes.”

### Nearly 20 MW of Load Reduction Per DR Event

Besides working on energy efficiency, Linde also takes part in our DR programs. With DR, by reducing energy consumption during peak-demand hours, Linde relieves stress on the electric grid,

helps prevent power shortages, and improves the environment, in turn earning bill credits to offset energy costs during DR events.

Through DR, Linde reduces nearly 20 megawatts of load per event. To maximize benefits from DR participation, Linde received technology incentives to utilize Automated Demand Response, which allows the company to automatically initiate load reduction activities.

Castracane said that, whenever possible, Linde will shut down its plants during DR events—not only reducing costs, but also helping to alleviate grid system constraints during high-demand periods and avoiding the need for SCE to rely on more costly, less-efficient generation plants.

Castracane said Linde works with utilities nationwide, and that “SCE is one of the top utilities in being proactive and in customer focus. It explores what it can do to understand our operations and help us meet energy goals and cost management. The corporate culture of SCE is about looking to partner and explore new opportunities”—an approach, he said, that you also can utilize to help achieve your own energy management goals.

**He concluded, “SCE listens to ideas and says, ‘Let’s build on that.’ When these projects are successful we both share the celebration of success.”**

As a business owner or manager, you have a wide selection of savings opportunities, and SCE can deliver energy management programs and solutions with incentives and bill credits to go with them. Our energy management solutions offer a range of efficiency options, developed with your industry in mind, to help your business maximize savings over the long term through the permanent and temporary reduction of electricity usage.



**To learn more about SCE energy management solutions, ways to reduce your energy usage, and manage your energy costs, visit [sce.com/business](http://sce.com/business) or call your SCE Account Manager.**

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