



## **Green Garages Case Study**

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Among the many regulations governing fleet maintenance facilities and operations are rules that mandate effective environmental protection practices. To meet the challenges these regulations present, leading fleets have made shop equipment and design decisions to ensure regulatory compliance and promote environmental friendliness. They have also implemented waste management programs for disposal of materials that could be toxic and routinely provide training for technicians to ensure the effectiveness of environmental protection programs and regulations.

Included in the many environmental regulations affecting fleet maintenance operations are the following:

- U.S. Environmental Protection Agency (EPA) rules covering hazardous wastes defined and regulated by the Resource Conservation and Recovery Act, known as RCRA ("Rick-Rah"), including recycling and pollution prevention options
- Federal Underground Storage Tank (UST) regulations and state UST programs approved by EPA that are allowed to operate in lieu of the federal program and may have more stringent regulations than the federal requirements
- Safe fuel handling regulations designed to prevent accidental spills and overfills
- Resource Conservation Recovery Act, Clean Water Act and Clean Air Act requirements that may pertain to vehicle painting

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- Refrigeration service activities regulated under the Clean Air Act
  - Regulatory requirements for pollutant discharge and storm water runoff systems
  - Requirements for Hazmat Incident Reporting

What environmental regulations pose the greatest challenges for the operation of fleet maintenance facilities and how are fleets meeting them? For a closer look into how fleets are addressing these challenges, and their views on the benefits of environmental compliance to their companies and the communities they serve, FleetAnswers turned to three leading utility fleets in three different parts of the U.S.

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## **NICOR GAS**

“We look at environmental compliance as an opportunity for continuous improvement,” says Jeff Price, Manager, Fleet Operations at Nicor Gas. “We are always seeking out best practices and applying them whenever feasible. For example, as shop equipment becomes dated we look at the environmental benefits as well as the functionality of replacement technologies.”

Servicing approximately 2,000 units, Nicor's Fleet Management Department operates five large maintenance facilities and seven satellite shops throughout northern Illinois. The department has a total staff of 57, including 47 hourly employees who are directly involved in maintenance operations, and eight management personnel.

Price relates that Nicor Gas has constructed a new maintenance facility that opened in December 2009 and that the utility is now building another new shop scheduled for completion by the end of 2011. “In these locations,” he says, “we have several environmentally friendly features and our goal is to have the structures certified as energy efficient. To achieve that, among other things, we have included prism sunroofs, high efficiency fluorescent lighting, radiant floor heating and variable speed exhaust systems in the design. We are also moving away from chemical solvent tanks to hot water alternatives, and we’re using recycled glycol products, and are considering a similar program for our base engine oil products to the extent one is available.

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“When it comes to ensuring compliance with environmental regulations,” Price continues, “our Environmental, Health, and Safety Department does an excellent job inspecting our sites. We also stay abreast of changes through our alliances with vendors, associations and best practice seminars. If a change is identified, we take steps to handle these in a timely, efficient and economical manner.”

One way that Nicor Gas is meeting the challenge of addressing changes in and ensuring compliance with environmental regulations is through annual compliance training, monthly formal updates and refreshers in the form of tailgate meetings. “We take the training of our employees seriously and will continue to do so,” Price states. “Occasionally, we look to outside sources to keep our techniques fresh and up to date.”

Price goes on to say that there is no single challenge when it comes to environmental compliance and initiatives in shop operations. “It’s more like managing the changing landscape and seeing that best practices are followed correctly,” he concludes. “We also try to follow the examples set in our communities. Many of our shop locations are in forward thinking areas, and we want to be a good partner to these municipalities. It is our neighborhood, too, and it is the right thing to do.”

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*Nicor Gas, headquartered in Naperville, Illinois, is one of the nation's largest gas distribution companies. Owned by Nicor Inc., a holding company, Nicor Gas serves two million customers in a service territory that encompasses most of the northern third of Illinois, excluding the city of Chicago.*

## **CENTRAL HUDSON GAS & ELECTRIC**

“We are constantly working to be sure we are complying with all environmental regulations,” says John McCormack, Transportation Foreman at Central Hudson Gas & Electric. “At the forefront of that effort is the annual HAZCOM training for our maintenance staff and instructional training for new employees on the use of equipment designed to help us protect the environment.”

The environmental compliance training that McCormack describes is now taking place at Central Hudson Gas & Electric’s six repair facilities. Included in the fleet’s maintenance operation is one main truck garage where all major inspections and repairs on trucks, buckets, diggers, backhoes and tractors are performed. There are also five district garages for major work and maintenance on light-duty vehicles. All of the facilities also handle repairs on vehicles that are driven in and make road calls for breakdowns.

“We’re especially focused on managing the waste stream at our facilities,” McCormack states. “Our shops no longer have any floor drains to allow anything

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to go into a storm drain. In addition, we're making sure that engine and hydraulic oils, antifreeze, and used filters and tires are all being disposed of properly. We use only qualified contractors to handle that removal, and all of our vendors are registered and comply with all environmental regulations.”

Central Hudson Gas & Electric's shops are equipped to properly and safely handle waste materials. In the truck garage there is a 500-gallon waste tank with an evacuation system to empty portable oil drain buggies and pans. The tank has an automatic alarm and shut off to alert the staff when it is nearly full, and it will not accept oil when it is full. In the district garages there are 275-gallon waste oil tanks, which are now being converted to double wall models, and 55-gallon barrels for used filters and antifreeze.

“There are clearly benefits to all of our environmental compliance initiatives,” McCormack concludes. “A safer environment is better for our company, our employees and the communities we serve.”

*Central Hudson Gas & Electric Corporation, a regulated transmission and distribution utility headquartered in Poughkeepsie, New York, serves approximately 376,000 residential and business customer locations in eight counties of New York State's Mid-Hudson River Valley. Its 2,600 square-mile electricity and natural gas service territory extends from the suburbs of metropolitan New York City north to the state capital in Albany.*

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## **SOUTHERN CALIFORNIA EDISON**

“When it comes to environmental regulations,” says James Kennedy, Manager at Southern California Edison (SCE), “operating a fleet in California is an ever-growing challenge. If I had to pick the latest challenge it would have to be air quality permits on our mobile equipment, including stringing equipment, generators, specialty vehicles and mobile fueling units.”

To help SCE stay on top of and meet regulation changes at its 44 fleet maintenance locations, the company employs an environmental specialist. Located across the utility’s service territory, the shops are staffed by 246 technicians. All maintenance on its 7,000-vehicle fleet is done in house and a large majority of repairs are handled internally as well.

“In our shops we’ve been upgrading to Rotary Model 30 and SL212I lifts,” Kennedy reports. “Rotary’s new hoists are self-contained, eliminating the need for an external hydraulic tank with underground piping and the potential for leaks. At the same time, we’re now using water-based parts washers, water recycling systems for our wash bays and all electric steam cleaners. To ensure this equipment is used properly, manufacturer’s training is provided to our employees when it is purchased and we enlist the help of our in-house training organization if follow up instruction is required.”

*In June 2010, Kennedy presented details on SCE’s “Greening Utility Fleet*

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*Garage Facilities” activities during the 57<sup>th</sup> annual Electric Utility Fleet Managers Conference ([www.eufmc.com](http://www.eufmc.com)) in Williamsburg, Virginia. The following are highlights from that presentation.*

“Southern California Edison and the U.S. Green Building Council (USGBC) have collaborated to support energy efficiency and sustainability through a whole-building approach,” Kennedy said. “USGBC sponsors LEED® (Leadership in Energy and Environmental Design), a certification process that provides a green building rating system for established practices and emerging concepts of sustainability.”

LEED certification is evaluated and points are awarded in several key areas, Kennedy reported. Included are Sustainable Sites, Water Efficiency, Energy & Atmosphere, Materials & Resources, Indoor Environmental Quality and Innovation & Design.

“Our Wildomar Service Center was constructed to meet growing energy demand in that region, southwest of Los Angeles,” Kennedy related. “It includes a 63,497-square foot office building for up to 300 people and an assembly space for up to 250 people, and a 12,940-square foot Yard Management Warehouse Building. In addition, the facility is home to a 21,116-square foot, two-story garage with six truck bays, a welding bay and a wash bay.

“Along with being a state-of-the-art service center,” Kennedy continued, “this facility serves as a model of innovative and sustainable design in new building

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construction for SCE. In building this garage we focused closely on environmentally-sensitive planning, design and construction.”

For example, Kennedy pointed out that skylights and glass bay doors in the garage were placed to optimize the use of natural light. Also used were low Volatile Organic Compound (VOC) emitting, non-toxic paints, coatings, adhesives, carpets and floor coverings to promote high indoor air quality. In addition, he noted that the building has an HVAC system with CO2 monitoring devices and HEPA filters to regulate fresh-air ventilation when indoor CO2 levels reach a pre-determined threshold. The garage is also fully air conditioned.

For its Green Building Education practices, SCE earned LEED credits for providing the public information on the sustainable features of its Wildomar facility. The utility has also implemented a plan that will include a Green Housekeeping program, and has been awarded additional credits for using nontoxic cleaning supplies and methods.

Additional LEED credits have been earned by SCE for achieving over 40 percent water savings through the use of high-efficiency plumbing and landscaping fixtures. Credits have also been awarded to the utility for reaching at least a 70 percent Green Power level through the purchase of renewable energy credits to offset the facility’s energy usage.

The SCE Wildomar facility has now achieved LEED's Platinum certification. “That alone speaks to our commitment to environmental compliance and how much our

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company values environmental stewardship,” Kennedy stated. “Our efforts enhance and protect ecosystems and biodiversity, improve air and water quality, reduce solid waste and conserve natural resources.

“There are many benefits to this program,” Kennedy concluded. “Economically we are boosting profits by reducing operating costs and enhancing the value of our assets. We are also realizing improved employee productivity and satisfaction and optimizing lifecycle performance. Additionally, we are providing our employees and customers with an improved air, thermal, and acoustic environment that enhances comfort and health, minimizes strain on the local infrastructure and contributes to overall quality of life.”

*Southern California Edison, an Edison International company, is one of the nation’s largest electric utilities, serving a population of nearly 14 million in a 50,000-square-mile service area within Central, Coastal and Southern California. SCE’s Transportation Services Department manages and maintains 1,000 heavy-duty and 1,900 medium-duty trucks, 3,000 passenger and light-duty vehicles, and 1,100 pieces of equipment.*

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## **MEETING THE CHALLENGES**

Fleet managers charged with meeting the challenges of environmental protection regulations are certainly rising to the task. The shop equipment and design decisions, waste management programs for potentially toxic waste materials, and technician training programs put in place by these three fleets represent the type of activity that is taking place daily in fleet maintenance operations across the country.

As the fleets in this case study have demonstrated, it is critical to develop and implement programs and practices that prevent pollution and protect the environment.