SUSTAINABILITY REPORT 2016





environmental policy

CONTENTS

Environmental Policy 2
President's Message3
Corporate Initiatives: EPA Recognition4 Eco Eagles4 Conservation4
Global Initiatives: Canada5
Asia Pacific6 Europe, Middle East, and Africa6
Mexico, Central America, and
Caribbean7 China7
Conservation Trends8

Energy Performance....9

Team Member Safety.. 10

Community Activities..11

GUIDING PRINCIPLES

Among the principles laid out in the S&C Electric Company Statement of Purpose and Guiding Principles is a determination that "all of S&C's dealings will be bound by a rock-solid course of integrity" and a commitment to "maintain" a strong and supportive relationship with our neighbors and the communities in which we work."

These guiding principles are brought to life every day in a variety of ways, from a refusal to tolerate unethical conduct in any aspect of our business to an expectation that all S&C team members will work in a manner that respects the safety and well-being of those around them.

One of the key manifestations of these guiding principles is a commitment to responsible corporate citizenship with regard to the environment. Toward that end, S&C Electric Company



Abide by all accepted environmental practices, including meeting or exceeding applicable compliance obligations



Minimize waste and implement prevention of pollution strategies, while striving for protection of the environment and greater use of sustainable sources of energy and materials



Continually improve environmental performance by setting, reviewing, and achieving environmental objectives and targets as applicable new knowledge and technology become available



S&C: LEADING THE WAY IN RESPONSIBLE STEWARDSHIP

By Kyle Seymour, President and CEO, S&C Electric Company

One of S&C's core values is "Responsible Stewardship," and we have been a good corporate citizen for over a century. Every team member has a personal obligation to ensure his or her actions positively impact the environment in which we live and work, and we measure and track our results.

Being a sustainable company takes a lot of hard work. That's why I was very proud that our efforts were recognized when S&C became one of the first manufacturing companies to be certified under the new ISO 14001: 2015 Environment Management Systems standard. It's a clear recognition of S&C's commitment and the value all of our team members have brought to this effort.

Certification to the new standard was not the only environmental highlight in 2016. We made a major step toward our ultimate goal of landfill-free waste, and we added composting to the Chicago campus, where our cafeterias shifted to all compostable materials for carryout meals.

As part of our composting initiative, S&C created the Eco Eagles. This team of environmentally conscious team members rapidly grew to almost 50 volunteers who are working to improve S&C recycling efforts by helping educate others on the proper use of the different disposal bins located throughout the campus to separate out our compostable materials, glass and plastic, and paper for recycling. Today, more than 93% of our waste never makes it to a landfill. Eventually, we'd like to reach 100%.

As a provider of reliability solutions for the electric grid, S&C demonstrates our commitment to sustainability through products and services that help integrate renewable generation into the grid. We also walk the talk on our Chicago campus, where 100% of the electricity we buy comes from renewable sources. Our commitment to sustainability was recognized when the U.S. Environmental Protection Agency (EPA) named S&C Electric Company a member of the 2016 Green Power Leadership Club.

Employee safety has long been our top operating priority at S&C, and we continue to search for

new and better ways to improve. In 2016, we extended our performance metrics beyond tracking lost-time injuries to include all close-call and First Aid cases as well. We also created a cross-functional standalone ergonomics action team whose goal is to identify which body parts are most likely to experience an injury so we can engineer new solutions.

Being a sustainable company also means being engaged in our local communities. The S&C Foundation spends more than \$1 million each year in activities supporting basic human needs, community development and health services, arts and culture, and education.

Our efforts around sustainability are broad and ongoing. Never satisfied, we stick to a plan that is constantly updated—all with the goal of being not just one of the world's leading suppliers of electrical switching, protection, and control equipment, but also a guardian to the Earth, a protector of our team members, and a supporter of the communities in which we live and work.



Kyle H Symon



EPA RECOGNITION

The U.S. Environmental Protection Agency (EPA) named S&C Electric Company a member of the 2016 Green Power Leadership Club, enabling S&C to join an elite group of Green Power Partners. The EPA requires members of the group to meet a minimum percentage of their electricity use with power generated from eligible renewable resources, including solar, wind, geothermal, biogas, eligible biomass, and eligible low-impact hydroelectric sources. All electricity used at S&C's main Chicago manufacturing facility comes from renewable sources.

The EPA automatically includes in the club all partner organizations that report using the qualifying amount of green power. To meet the minimum green power use requirement for the club, members must use 100 percent "new" renewables, according to the EPA. The green power must be sourced from eligible U.S.-based generation facilities, and it must be applied to U.S.-based operations only.

ECO EAGLES

S&C in 2016 established the ICONtrol My Impact initiative to address team member responsibility in minimizing air emissions and waste shipped to landfills and in conserving energy and natural resources.

As part of the ICONtrol My Impact initiative, S&C formed the **ECO Eagles**, an organization composed of team member volunteers tasked with keeping their "Eagle eyesight sharp and identifying ways to empower fellow team members to improve the environment" through the ICON program. Among their initial tasks was to promote best practices in the use of new grouped trash bins placed throughout the main U.S. manufacturing facility in Chicago to separate cans and bottles, compost, paper, and landfill waste.



The ICON initiative, originally launched as ICON for Safety in 2006, has as its central goal to promote personal responsibility for staying safe at work by putting the emphasis on team members taking control of their own behavior, environment, equipment, and the safety of others. New Impact posters that address air emissions, energy use, water conservation, and waste recycling further help to remind team members of important things they should know and remember to stay environmentally friendly, both while on the job and in their private lives.

CONSERVATION

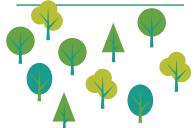
Using measurements taken the previous year in the number and types of publications it was regularly producing, the **S&C Marketing Support** team within Marketing Communications in 2016 analyzed which documents were the least requested. The result was the implementation of a solution that changed their work practices.

As a result of that initiative, the team members eliminated the paper inventory of 11 publication types identified as being requested infrequently, and they are now printing these publications only when requested. Besides saving approximately \$9,328 in material cost, 576 labor hours (\$28,800), and 250 **trees** per year, the team experienced an approximate 41% reduction in Catalog Room publication stock.

A change in work practices in S&C's Marketing Communications department saved



trees per year



CANADA

ENHANCED EFFICIENCY

With S&C's manufacturing facility in Toronto having already undertaken efforts to decrease waste going to landfills through more recycling and other sustainable activities, 2016's focus was on lower-return items coupled with replacement of older equipment to improve efficiency. Implementation of various LEDlighting projects resulted in small but notable effects:

- > Building 2 cafeteria and Building 4 reception: A shift from compact fluorescent to LED lighting is resulting in expected savings of 1,100 kWh per year.
- > Buildings 2 and 3 (various areas): A shift from T8 fluorescent lights to LED replacement bulbs is resulting in expected savings of 13,780 kWh per year.
- > Exterior wall pack replacement: A move to replace high-intensity discharge lamps with LED lights is expected to save 32,180 kWh per year.

Expected savings of S&C Canada's implementation of LED-lighting projects:

kWhs annually

COMMUNITY EVENTS

In 2016, S&C team members in Canada participated in two community events:

- > On June 5, the Becel Ride for Heart, a 5-km/10-km run and 5-km walk, benefited the Heart & Stroke Foundation.
- > On September 30, the Toronto Corporate Run, a 5-km run/walk fundraising event helped the Barbra Schlifer Community Clinic & the Centre for Addiction & Mental Health.

ENVIRONMENTAL IMPACT

Activities designed to reduce the S&C Canada facility's environmental impact included:

> The replacement of the Building 2 heat pump with an air conditioning unit, which resulted in an annual average conservation of 496 cubic meters (131,029 U.S. gallons) of water, enough to fill healthy-sized swimming pool.

Water Conserved by S&C Canada's new HVAC unit

U.S. Gallons

- > An upgrade to an air conditioning unit in Building 5 provided associated efficiency improvements. Moving the physical unit to the roof freed up plant space and allows the introduction of fresh outside air, which both leverages the available seasonal temperatures and a reduction in filters to reduce energy consumption and waste generation.
- > S&C commissioned capacitor banks with an associated improvement in the facility's power factor to near unity. Though the benefits are difficult to quantify, they include a reduction in the load demand applied to the facility's transformers and the associated power lines, extending their operational lives.

- > Through Chemical Safety & Environmental Gemba Walks, the facility identified opportunities for improvement, including:
 - Some chemicals were used in areas where they shouldn't be used. This resulted in the replacement of a high-alkaline degreaser in an assembly area with a safer one.
 - > One assembly area used three different chemicals to clean a part; each shift had its own method.
 - > Standard work procedures were developed for various chemical processes throughout the facility.
 - > New chemistry was found to replace three chemistries on two parts washers. The new chemistry eliminates foaming issues, reduces per-liter costs, and eliminates crosscontamination issues.
- > Installation of a white roof on the north section of Building 5 completed the entire building rooftop (approximately 17,500 square feet), thereby lessening the heat gain into the building on a year-round basis and resulting in less generation of smog.

2016 Non-Hazardous Waste Removal

Destination	2016 Weight, kg (lbs.)	2015 Weight, kg (lbs.)	Difference
Landfill ¹	0	1,190 (2,624)	-100%
Energy from waste (or waste to energy)	169,381 (373,421)	133,543 (294,412)	27%
Recycling ²	711,347 (1,568,252)	888,575 (1,958,974)	-20%

- 100% of non-hazardous waste was diverted from landfill.
- The recycling total includes scrap metal, cardboard, wood, mixed paper, bottles and cans, mixed plastics, and organics

2016 Hazardous Waste Removal

2016 Weight, kg (lbs.)	2015 Weight, kg (lbs.)	Difference
1 (2)	475 (1,047)	-100%
16,769 (36,969)	12,762 (28,135)	31%
3,262 (7191)	1,434 (3,161)	127%
556 (1,226)	528 (1,164)	5%
106,357 (234,477)	28,789 (63,469)	269%
	Weight, kg (lbs.) 1 (2) 16,769 (36,969) 3,262 (7191) 556 (1,226) 106,357	Weight, kg (lbs.) Weight, kg (lbs.) 1 (2) 475 (1,047) 16,769 (36,969) 12,762 (28,135) 3,262 (7191) 1,434 (3,161) 556 (1,226) 528 (1,164) 106,357 28,789

- Includes mixed batteries, lamps, e-waste, cafeteria grease trap
- The figure is for drums that go out for cleaning and re-use.
- Includes the alkaline cleaner disposal on the powder coating line.

ASIA PACIFIC

Under a new Environmental Management System policy, S&C's Asia Pacific business based in Melbourne, Australia, in 2016 began implementing a paper and hard plastic recycling system. The goal was to encourage team members to recycle and reduce the volume of content filling regular trash bins and going to landfills. All

waste paper, cardboard, plastic containers, glass bottles and jars, and aluminum cans now



are placed in dedicated bins, which are regularly collected by a third party and returned to a material-recovery facility.

Individual paper baskets previously located in offices and at workstations were removed to ensure all staff correctly place waste in the proper bin. This initiative also encourages team members to get up from their workstations and increases their mobility during their time in the office.

The office also now has new signs reminding staff to turn the lights off when offices and meeting rooms are not in use, and it has installed a new water filter in the kitchen to reduce the use of bottled water, thereby reducing plastic waste.

Like S&C's U.S. operations, the Asia Pacific office in June 2016 received certification under the new ISO 14001: 2015 **Environment Management** Systems standard.

EUROPE, MIDDLE EAST, AND AFRICA

S&C's Europe, Middle East, and Africa (EMEA) business in 2016 provided a wide array of community services and financial assistance to help organizations in the region.

CHARITABLE ACTIVITIES

S&C started its charitable activities for the year by donating all of its old laptop computers to "Computers for Africa." In doing so, S&C complied with the international ISO 27001 and British OHSAS 14001 standards for information security and environmental responsibility.

S&C has engaged with the CEMARS association for several years to record and offset its carbon emissions. Via the CEMARS process, S&C records the amount of carbon produced during the year, which relates to an offset cost, and then takes steps to offset this carbon. In 2016, S&C decided to use the carbon-offset funding to support three local sustainable organizations: the Siavonga Solar Project, the Swansea Siavonga Partnership, and Coeden Fach Swansea Community Tree Nursery.

At the start of 2016, 26 schools in the Siavonga district of Zambia, Africa, had no access to grid power or to any electrical energy. S&C's assistance led to the installation of a 305-W solar panel, a 220-Ah battery, a solar-charge controller, and the necessary cabling to bring electricity to the district's Dambilo School. The Siavonga Solar Project and the Swansea Siavonga Partnership work together, each concentrating on a separate issue for the schools to bring a stable educational and community space for the villages.

Schools Helped by S&C in Zambia, Africa

As part of the Swansea Siavonga Partnership, whose goal is to reduce costs to low-income families in the Zambia district, S&C's technical expertise and assistance through a carbon-offset grant helped:

- > Ship out donated LED bulbs and transfer them to the Siavonga Nutrition Group, which then distributed them to families in need
- > Educate families on the benefits of low-energy lighting

For the Coeden Fach Swansea Community Tree Nursery, S&C assisted in the goal to plant and grow 2,000 local provenance trees and hedgerow plants, which would then

be available for sale in the local community or for possible donation to other community projects. The project's goal is to avoid the use of imported stock, which can bring in

disease and may damage or override other native plants of importance or endangered species.

ENVIRONMENTAL IMPACT

In addition, S&C's EMEA business unit reported that it:

- > Continued to meet the standards for CEMARS registration, "having measured its greenhouse gas emissions in accordance with ISO 14064-1:2006 and committed to managing and reducing its emissions in respect of the operational activities of its organization, including product sales and engineering support
- > Recycled 92% of its industrial waste for 2017
- > Successfully managed and maintained compliance with the ISO 14001:2004 environmental standard

MEXICO, CENTRAL AMERICA, AND CARIBBEAN

S&C's Mexico, Central America, and Caribbean business in 2016 continued to advance its efforts to improve the environment and employee safety.

ENVIRONMENTAL ACTIVITIES

Environmental activities included reducing waste (solids contaminated with resin, catalyst, hardener, and thinner; and fiberglass tube sludge) disposal by 24 tons, representing a 20% reduction from 2015. Helping contribute to the reduction was compliance with a best practice from S&C's Asia Pacific business that involved the use of a plastic cover on the filament winding machine. The cover reduced thinner use by cutting back on the need to clean the machine to twice a week instead of every day.

Hazardous Solid Waste Reduced by S&C Mexico, Central, & South America



Tons

TEAM MEMBER SAFETY

Improving safety also was a key driver in 2016. During the year, the S&C business:

- > Increased team member safety training by 15% compared with 2015, reaching 44% of total training conducted for the year
- Added plastic curtains to the front of the filament winding machines to prevent operator hand injuries caused when the machine is winding the tube
- > Replaced two 200-liter (211-quart) thinner drums on the filament winding tube line with 10-liter (10.6-quart) containers and placed them on a cart to facilitate less stressful transportation to the production area

Successfully carried out its internal ISO 14000:2014 audit and one from Occupational Health and Safety Advisor in preparation for audit certification in 2017

S&C Mexico, Central, and South America Safety Training



of Total Training

COMMUNITY ACTIVITIES

Local community activities involved:

- Donating old chairs from all offices to three public schools, thereby helping two IT laboratories and one teachers' room
- > Organizing disability-awareness workshops in conjunction with Centro de Rehabilitación Infantil Teleton Aguascalientes (CRIT), a live simulation on how blind people eat, how people in wheel chairs move around the facilities, and how people with one hand dress (The event prompted some team members to start a donation to help offset the institution's cost to treat low-income disabled children.)
- > Inviting team members' children to the S&C facility to demonstrate the company's workplace safety culture in the hope they would use similar practices in their homes

CHINA

Working to reduce and recycle solid hazardous waste, S&C's business in Suzhou, China, disposed of 38.4 tons of solid hazardous waste in 2016, about the same weight as the engine in a modern express train. The plant also recycled 35.2 tons of epoxy resin (about 90% of the total solid waste) through the use of government-qualified recycling companies, helping minimize solid hazardous waste incineration and landfill use. Epoxy resin waste is generated in fuse tube winding and machining, and S&C uses a special process to dry the liquid to a solid form for easy and safe handling.

Hazardous Solid Waste Recycled by S&C China



Tons

To improve team-member safety, S&C installed an infrared sensor in the fuse tube winding area to prevent accidents caused by moving winding fiber. The business also in 2016 installed two powered lifting actuators, applying ergonomics in the cutout assembling line to help load heavy porcelain and to unload the finished product, relieving weight stress for assemblers.

To further improve safety, S&C's China business conducted an online safety training program. It hired a local consultant to record that everyone had read all of the training material and passed the safety quiz at the end of the training.





RECYCLING AND WASTE DIVERTED FROM LANDFILL

Following up on an initiative that began a year earlier at the S&C plant in Chicago, S&C's waste contractor evaluated waste from two waste compactors over a 24hour period to identify what was in them. In 2016, the amount of cardboard that was recyclable found in both compactors was substantially less than the previous year, demonstrating efforts to do more cardboard

recycling were having a positive



Composting was introduced in 2016 through the ICONtrol My Impact training. All carryout items in the cafeteria, with the exception of condiments, were converted over to compostable materials. Recycling and composting containers were custom-built for outside durability

and were placed outside three eating areas at S&C's Chicago campus.

New recycling containers were placed in the cafeteria, office areas, and in production vending areas for composting. Training was conducted for all shifts to educate team members on recycling and what materials can be placed in which bins.

The new environmental team known as the Eco Eagles was formed with volunteers from office and production areas to help spread the word and monitor recycling containers in their areas. These team members work on special projects and ideas to keep our recycling efforts moving in the right direction. Moreover, other S&C team members came forward with ideas and volunteered to add and manage recycling containers in their areas.

In addition, while S&C had been recycling all of its wood, it entered into a better recycling

is reusing wood pallets and other scrap wood to repair other pallets. And that saves both trees, and money. In a typical November, S&C normally would ship five to six roll-offs of wood to its previous waste contractor. In November 2016, it shipped just one.

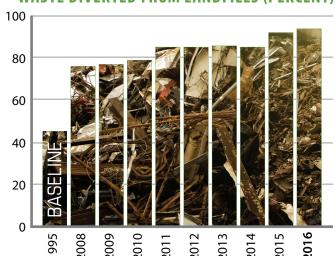
arrangement where a company

S&C also has seen continued increases in recycling of shrink wrap. In addition, placement of special containers for specific things, such plastic banding, is also helping in S&C's drive to become a landfill-free company.

Waste Diverted from Landfill Million Pounds (the equivalent of a large submarine)

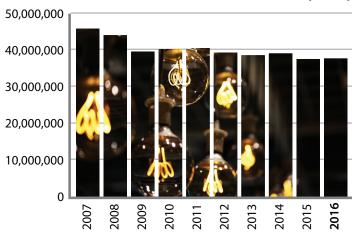
For the year, S&C was able to avoid sending 92.6%, or 14.3 million pounds, of its waste to landfills, up 2.4 percentage points from the previous year.

WASTE DIVERTED FROM LANDFILLS (PERCENT)

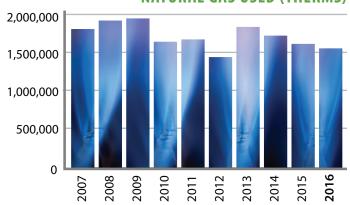


energy performance

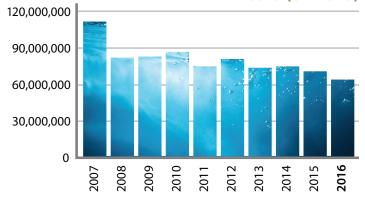
ELECTRICITY USED (MWh)



NATURAL GAS USED (THERMS)



WATER USED (GALLONS)



ELECTRICITY, NATURAL GAS, AND WATER USE

S&C's energy conservation efforts in 2016 included upgrading building automation to a new platform. S&C saw a slight uptick in electricity use, but that followed a year of the company's lowest use of electricity by kilowatt hour in well more than a decade. Water-conservation efforts also were reflected in the 2016 results, as consumption was the lowest in decades, while natural gas use also fell to its lowest level in nine of the past 10 years.

Among the main drivers behind the reduction in electricity use is an ongoing effort to replace incandescent and traditional inefficient florescent lighting with more efficient T5 and T8 florescent-lighting fixtures, with a conversion to LED-based lighting technology also in the works. All power used at S&C's U.S. facilities is acquired using renewable-energy credits. In 2016, S&C acquired offsets totaling 40,000 MWhs.

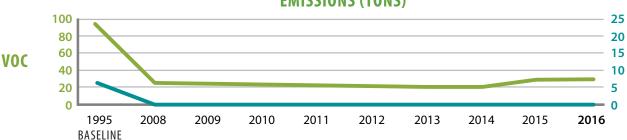
EMISSIONS

In June 2016, S&C put in a new fixture that helped reduce emissions of SF₆ gas, which S&C uses as a fault-interrupting medium in some of its equipment. S&C had been recovering only about 35% of its SF₆ gas from returned products, and the new fixture brought the amount up to about 65%. Newer equipment ordered in 2016 was expected to bring the percentage closer to 95% through automation in 2017. **S&C recovered about 99% of SF₆ gas used in the refilling process.**

Despite the reduction in SF₆ gas emissions, S&C's main manufacturing facility in Chicago in 2016 produced 30.4 tons of volatile organic compounds (VOCs), representing a 4.6% increase from the previous year. The paint department was working almost every Sunday, and it ran a lot of special colors that require more solvent to flush the line in between color changes. Both issues helped drive the increase.

S&C's production of hazardous air pollutants (HAPs) was relatively small. In 2016, S&C produced 0.9 tons of HAPs, down 22 percent from the previous year. A vigilant chemical-approval process and close monitoring of existing HAP-containing materials helped to drive the continued downward trend.

EMISSIONS (TONS)



HAP



GLOBAL DART AND TOTAL CASE INCIDENT RATES



SAFETY INITIATIVES

In 2016, S&C began working on behavior-based lead indicators to not just track injuries but also close-call and First Aid cases, with an additional emphasis on measuring close-call cases and tying those with injury rates. The result was the creation of the TCIR, which stands for Total Case Incidence Rate. Looking back at 10 years of OSHA logs, S&C identified a major breakthrough year in 2016, when it had 35 total injuries, down 44% from 63 the previous year. These incidents equated to a 2016 TCIR of 1.25 compared with a 1.98 rate the previous year.

Contributing to the decrease was greater leadership involvement in monthly meetings, and sharing thought processes on what it means to lead as it relates to safety, health, and the environment. S&C implemented daily safety talks and published summaries of those each month. Training with hourly team members also grew, focusing on ergonomics, hand safety, and environmental impact.

Safety action teams also were a prime focus. Through over-consolidation, specifically in assembly, what had been individual safety action teams for switches and fuses and for metalenclosed and Vista® Underground Distribution Switchgear condensed to just one team, which was deemed ineffective. S&C began building out those teams so each area now has its own safety action team to concentrate on producing better outcomes.

Reduction of Total Injuries in 2016

S&C's Days Away, Restricted, or Transferred (DART) and Lost-Time rates also are well below the average for similar types of manufacturers*. Such low rates, however, mean

slight increases in occurrences can generate significant year-over-year rate differences, as occurred in 2016, when the DART rate increased to 0.44 from 0.34 in 2015, and the Lost-Time rate increased to 0.28 from 0.21.

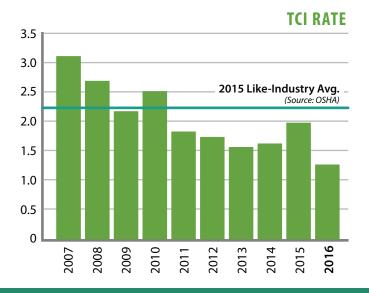
*Based on North American Industry Classification System (NAICS) code standards.

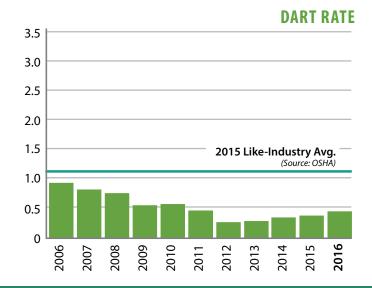
ERGONOMICS

S&C in 2016 created a cross-functional standalone ergonomics action team consisting of about 14 team members in engineering, operations, and other production areas. Extensive training helped S&C team members to understand special software that uses historic data to identify, through colorcoded prioritizing, which body parts are most likely to be affected by an injury.

The engineers' involvement in the action team will carry over as they design and work on other projects, keeping in mind those ergonomic issues.

In 2016, S&C also tested "3-minute warm-up" exercise training, starting with finance and accounting team members. At the start of each shift, they use principles derived from sport medicine to warm up the body before the day begins. Benefits include improved blood circulation, increased body temperature for more pliable ligaments, tendons and muscles, and production of synovial fluid to improve joint movement.





community activities



LOCAL INITIATIVES

S&C each year spends more than \$1 million to support local initiatives, with a particular focus on education and community outreach. Specifically, in 2016, S&C financial assistance went toward:

> Science, Technology, Engineering, and Math (STEM) education (Some 16 organizations received S&C funding, including Adler Planetarium, multiple Chicago public schools, local libraries for their summer reading programs, robotics clubs, IEEE, the Society of Women Engineers, and the University of Illinois College of Engineering. The grant funds also helped the Museum of Science & Industry's Center for the Advancement of Science Education, which supports both teacher professional development and science education for educators who traditionally haven't taught science. In past years, S&C's grants focused exclusively on the professional development. The new 2016 grant expanded to the museum's other outreach programs, such as after-school science clubs and youthdevelopment programs.)

> Educational Organizations Receiving Grants from S&C

16

> Basic human needs, including support for 13 different organizations, such as homeless and domestic-violence shelters; Misericordia, an organization near S&C's headquarters that houses more than 600 children and adults with developmental and physical disabilities; North Side Community Resources; United Way; and the American Red Cross

Human Needs Organizations supported by S&C

13

- Arts and culture organizations, including support for the Lincoln Park Zoo and Chicago's various museums, including the Museum of Science & Industry, Adler Planetarium, the Field Museum, and the Shedd Aquarium
- Health-related activities, including a grant to help Presence Saint Francis Hospital in nearby Evanston, Illinois, to expand its community cancer-support services

Arts and Cultural Organizations supported by S&C



- > Community development, with beneficiaries that included the Chicago Community Trust, the Jane Adams Resource Corp., and a community event sponsored by Loyola University
- Also, two student groups from Loyola University's Occupational Health Nurse program visited S&C's Chicago plant to examine some ergonomic and other occupational issues and activities. S&C plans to continue such visits as it works with Loyola to give its students some first-hand experience in working on occupational health issues.







