

# HealthPower Infrastructure Program

Integrated service solution to enhance  
your environment of care.

Make the most of your energy<sup>SM</sup>

**Schneider**  
 Electric



# Thinking about power shouldn't start when the electricity goes out.

Continuous power is critical to your operations. Disruptions or fluctuations can have life or death implications across your facility. Adding to this is the expanding environment of regulatory compliance issues that can impact your facility.

Without a comprehensive plan and coordinated support services, your hospital can quickly become at risk.

# Your challenges are many



## Reliable power

From 2006-2008 there were dozens of disruptions to the electrical grid leaving millions of customers without power. With every province recording at least one major outage per year, power continuity should be a major concern. In 2008 more than 15 hospitals across Canada faced a significant power loss and although they were prepared for disruptions by having emergency power systems that keep critical areas functioning, those systems can and do fail. *How reliable is your emergency power system?*



## Power Quality

Hospitals are unique environments because they are loaded with a wide array of electrical loads that are susceptible to power quality issues. Distribution Equipment may run hot, breakers may nuisance trip, and electronic equipment may be destroyed from transient voltages and poor harmonics. *Are your critical applications protected from the effects of poor Power Quality?*



## Electrical Hazards

Electrical hazards are a serious threat to any facility, but are particularly dangerous in hospitals. Fires, shocks and burns caused by electricity occur every year and risk the safety of patients and employees. Electrical distribution and lighting is a leading cause of fires in healthcare facilities. Annually, these fires cause damage and injuries and accidental contact with electrical currents results in injury to employees each year. Many of these incidents could be avoided with a proactive approach to safety, maintenance and training. *With the potential impact to patients, employees and property, how important is having a robust electrical safety and maintenance program to your facility?*



## Energy Costs

With billions of dollars spent by healthcare organizations on energy each year, your facility faces an increasing burden to meet the expanding needs of patients while managing your operating expenses. In a recent Health Facilities Management survey, 91% of hospitals reported higher energy costs over the previous year and over 50% cited double-digit increases.\* *How will your facility manage the rising costs of energy?*



## Environmental Impact

Hospitals consume a tremendous amount of energy serving the needs of various departments. In fact, hospitals have the second highest energy use per square meter in all commercial and institutional buildings which results in a larger carbon footprint than most other buildings. Canadian hospitals produce millions of tonnes for greenhouse gas primarily from the use of natural gas and electricity. *How do you plan to reduce greenhouse gas emissions at your hospital?*

\*Source: Health Facilities Management ASHE 2006 Hospital Energy Survey



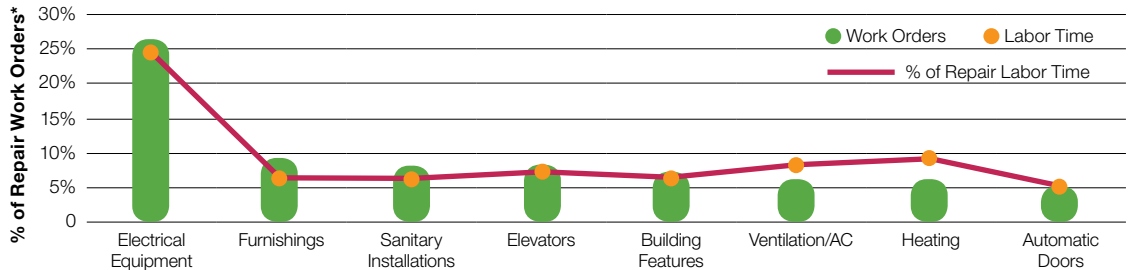
## Facility operations

Hospitals operate 24/7 to support patients. Keeping the electrical system up and running is paramount. This can be particularly challenging in hospitals considering that electrical equipment represents the single largest source of repairs in terms of work orders and labour time. While much of this work can be attributed to simple lighting tasks-bulb replacements, fixture repair. ect., there remains a significant opportunity to improve the productivity of personnel and reduce maintenance cost. *What steps have you taken to reduce unnecessary repairs on your electrical infrastructure and improve staff productivity?*

25% of repair work orders are due to electrical equipment

### Work Orders In Hospitals

#### Leading Cause of Equipment Repairs in Hospitals

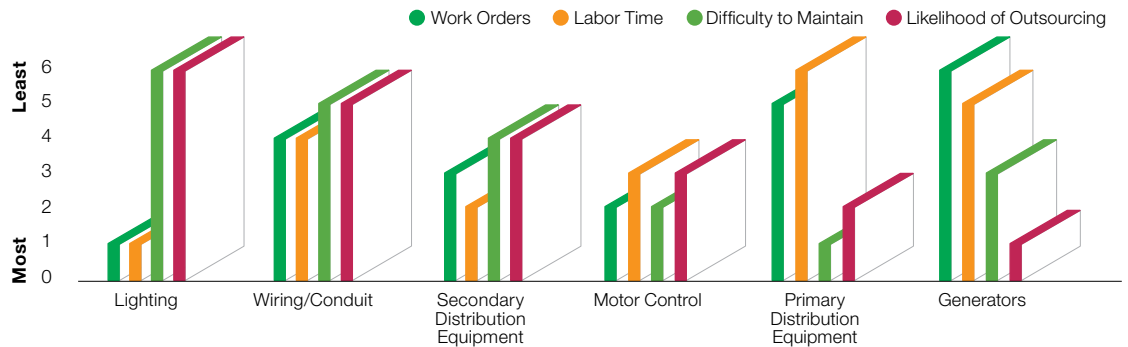


Source: Step-by-Step Process for Hospital Facility Management, Facilities Vol 23, 2005, Lennerts, Abel, Pfrunder, Sharma

\*67% of work orders in hospitals are associated with repairs, while 33% are due to planned maintenance.

Primary distribution and generators are difficult to maintain and likely to be outsourced.

#### Electrical Equipment Rankings

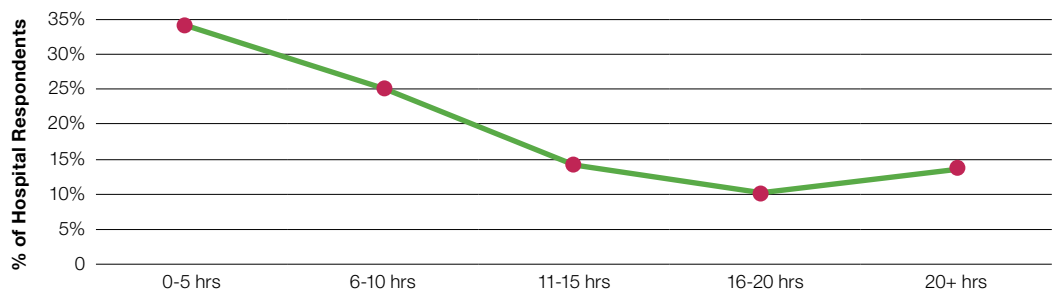


Source: Schneider Electric Healthcare Electrical Services Survey June 2007

40% of hospitals spend more than 10 hours per week on electrical repairs.

### Maintaining Electrical Equipment

#### Average Time Spent Per Week Repairing Electrical Equipment



Source: Schneider Electric Healthcare Electrical Services Survey June 2007

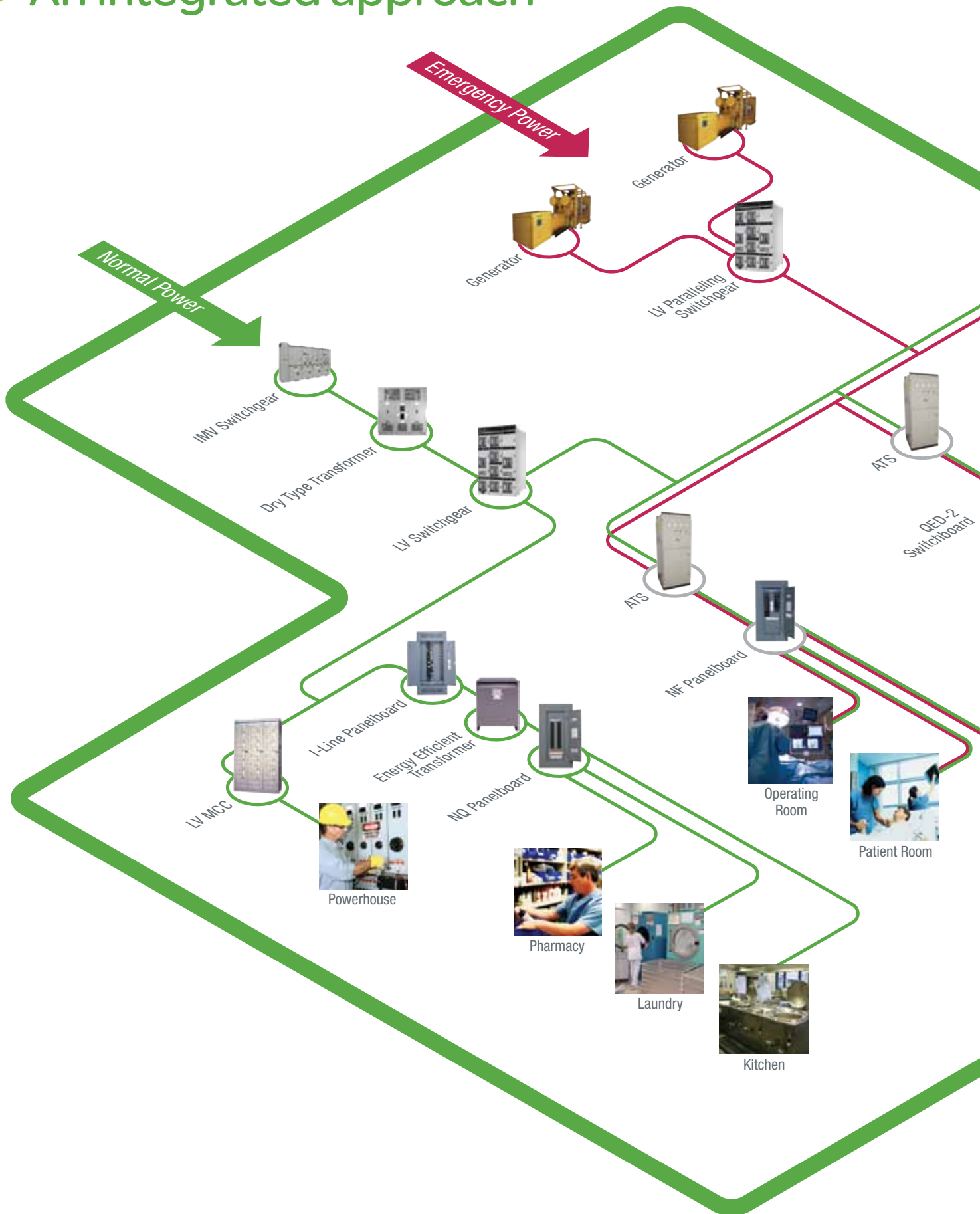
We have the solution.

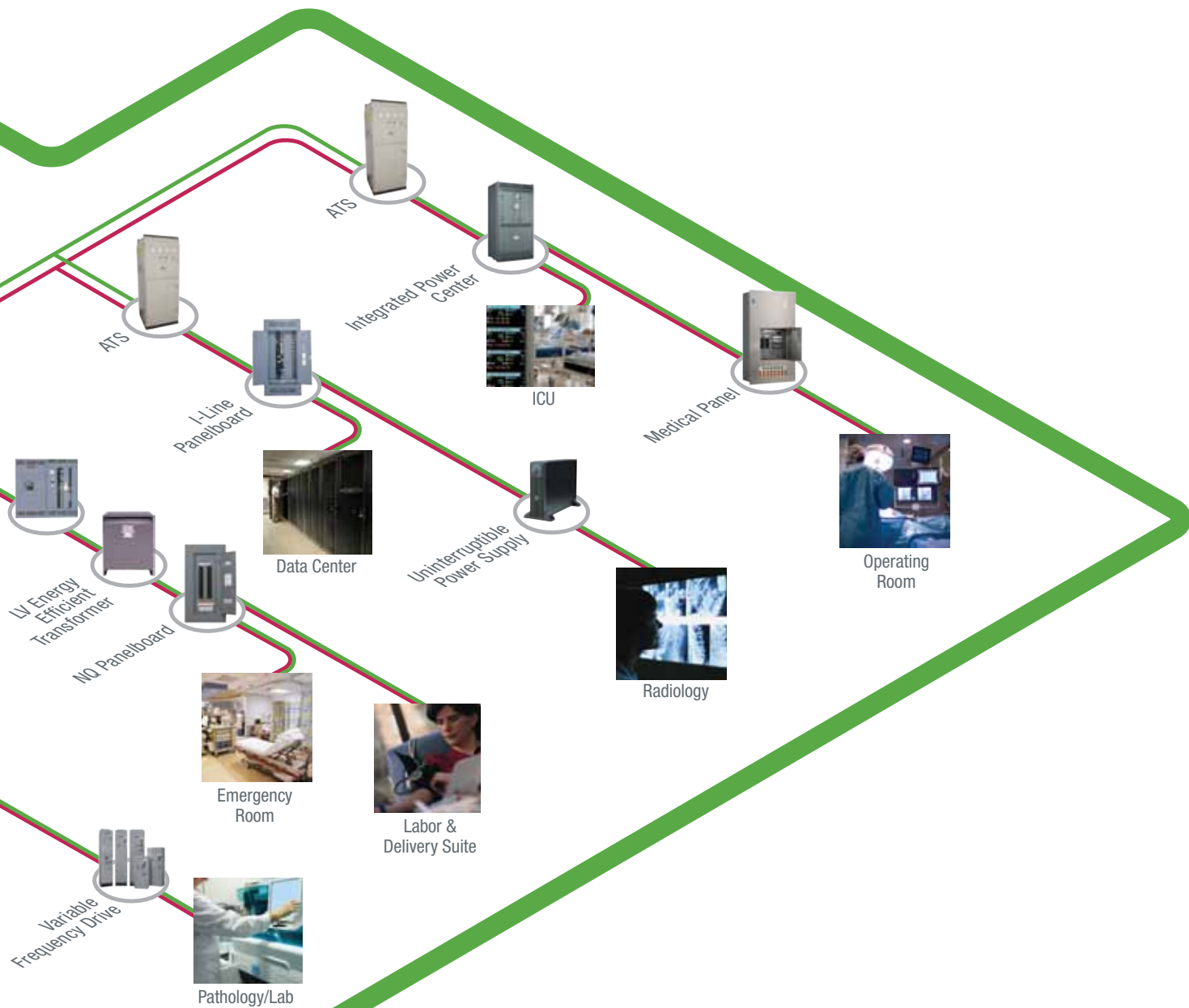


# HealthPower Infrastructure Program

Designed specifically for hospitals, this program mitigates risk and reduces associated costs of operation, maintenance, upgrade, and regulatory compliance of your electrical infrastructure. By leveraging Schneider Electric's expertise and broad range of value-added capabilities, we are your single source for optimizing the reliability, safety and efficiency of your facility's power.

# > An integrated approach





With a scope of work that can cover your entire electrical system, from the utility service entrance to the individual receptacle, we help ensure reliable performance across your hospital's electrical infrastructure, including your emergency power system equipment. Schneider Electric's comprehensive program creates peace of mind by delivering the right mix of maintenance services, accounting for electrical hazards, managing equipment repairs, and assisting in regulatory compliance.



## Customized solutions from energy specialists

The Healthpower Infrastructure Program is a strategic consulting service. Our comprehensive analysis of your site will evaluate the supply and demand side areas of your operation and consider specific department functions such as:

- Critical care areas (intensive care units, operating suites, emergency rooms)
- Clinical support (radiology, pathology and other services)
- Inpatient care
- Food preparation
- Linens and laundry
- Medical office space
- Central energy plants



## Much more than an energy audit

The total infrastructure approach is one of continuous interaction and improvement. Together, we will develop a customized plan to meet your expectations, work to reduce the total cost of energy at your facility, and deliver the results you need.



# Program Elements

Consisting of four primary elements that may be implemented as an individual solution, or linked together to maximize effectiveness. Schneider Electric's **HealthPower Infrastructure Program** can be customized to your specific needs.



## Identify – Risk Assessment Activities

Systematic evaluation and analysis of the hospital's electrical infrastructure that identifies risk and translates findings into potential impact to patient care.

- Review condition of equipment, identify code compliance issues and update all documentation.
- Conduct engineering studies to determine defects and deficiencies in the electrical system.
- Define and prioritize power system issues based on impact to patient care and other critical facility operations.
- Assess probability of occurrence for each issue identified and outline appropriate corrective measures including approximate estimated costs useful for capitol planning.
- Evaluate potential system failure scenarios associated with major electrical infrastructure issues and the level of effort required to resolve.

## Plan – Risk Assessment Output

Develop a comprehensive roadmap that works in concert with the facilities' existing Utility Systems Management Plan, detailing policies, procedures and maintenance activities for the electrical infrastructure.

- Provide step-by-step procedures and schedule for all electrical infrastructure maintenance and testing activities including planned shutdowns.
- Highlight areas that improve Environment of Care.
- Offer emergency response planning support.

## Measure – Power Quality & Energy Efficiency

Develop an Action Plan tailored to the facility to identify and prioritize power quality issues and efficiency projects to improve overall performance while lowering operating expenses.

- Measure and analyze power to improve equipment performance while driving productivity
- Evaluation of both the energy supply and demand impacting areas of operation.
- Annual plans that identify energy saving projects to address current and future energy prices
- Monitor projects, verify results and modify the plan to maximize savings

## Execute – Maintenance, Testing and Upgrade

Assist in the execution of various preventative maintenance and testing activities including major electrical upgrade projects identified in the Risk Assessment.

- Perform complete, multi-year maintenance and testing services on the facilities' entire electrical infrastructure at intervals dictated by the Policy Development and/or customer request.
- Turnkey major electrical retrofit, replacement or other upgrade projects.

# Program Benefits

From your patient rooms to the equipment room, the **HealthPower** Infrastructure Program adds value to your entire facility.

## Reduce facility risk

- Minimize disruptions to patient care and reduce employee injury.
- Increase reliability of the facilities' electrical infrastructure
- Decrease potential compliance issues associated with electrical utility systems
- Minimize employee turnover by centralizing system design and knowledge with Schneider Electric.

## Increase operational efficiency

- Reduce long-term maintenance costs by extending the life and reliability of equipment.
- Reduce exposure to costly unplanned expenditures and improves overall power system performance.
- Reduce operating costs through the deployment of energy saving technology

## Enhance productivity

- Single point of contact to reduce the need to manage multiple vendors
- Improve facility staff productivity by working on planned activities and avoid time lost on trouble-shooting emergencies.





# Total healthcare solutions from a global leader in energy management

## **Integrated, Single-Source Service Solution**

Services from Schneider Electric offers a broad range of solutions to support any manufacturers' electrical distribution. Whether the solution is refurbishment, replacement, maintenance or recommendations to optimize your existing system, our nationwide network of qualified experts offers a complete service package.

## **Emergency Services & Disaster Recovery**

24-hours/day • 7-days/week

1-800-265-3374

## **Put our experience to work for you.**

Our team of technicians, professional engineers, certified energy managers, and LEED® Accredited Professionals work with you to help ensure the success of your energy strategy.

To learn more, visit [www.schneider-electric.ca](http://www.schneider-electric.ca)

### **Schneider Electric**

Head office  
19 Waterman Ave.  
Toronto, Ontario M4B1Y2  
Tel: (416) 752-8020  
[www.schneider-electric.ca](http://www.schneider-electric.ca)

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