

# Industrial Assessment Center Students & Schneider Electric

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**Let's share a  
vision**





**A world where we can all  
Achieve more  
while using less  
of our common planet**



# Energy is a key challenge

The fact

**x2**

Energy  
demand

By 2050

vs.

The need

**÷2**

CO<sub>2</sub> emissions  
to avoid dramatic  
climate changes  
(vs. 1990 level)



Investment in:

- Clean energy generation
- Energy efficiency

Source: IEA 2007

Source: IPCC 2007

# Schneider Electric: The Global Specialist in Energy Management



# Our positioning

## Energy production

Wind energy



Solar energy



Tides



Biofuels



Oil



Nuclear



## Energy management

### Making energy:

- Safe
- Reliable
- Efficient
- Productive
- Green

## Energy use

Appliances



HVAC

Security



Motors



Machines

IT servers



# From plant to plug™, helping customers make the most of their energy

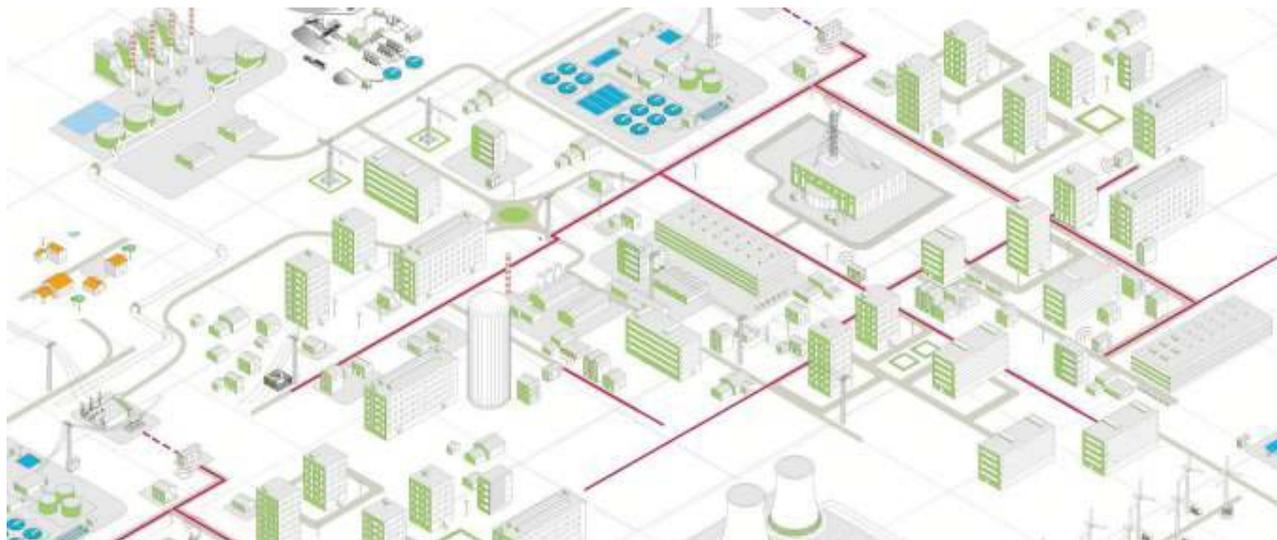
## 5 end markets

- Energy and infrastructure
- Industry
- Data centres & networks
- Buildings
- Residential

72%

part of the worldwide energy consumption of these five markets

up to  
**30%**  
energy saving



Offering integrated solutions for segments like...

- Electric utilities
- Water & waste water
- Oil & Gas
- Marine
- Mining, Mineral, Metals
- Machine builders
- Data centres/IT
- Hospitals
- Hotels
- Office buildings
- Retail
- Residential

# Making energy...



## Safe

Transform and distribute power safely



## Efficient

Measure and control energy, automate, provide accurate diagnosis



## Reliable

Prevent from power outage and energy quality variances



## Productive

Manage processes, enhance any Infrastructure utilities management

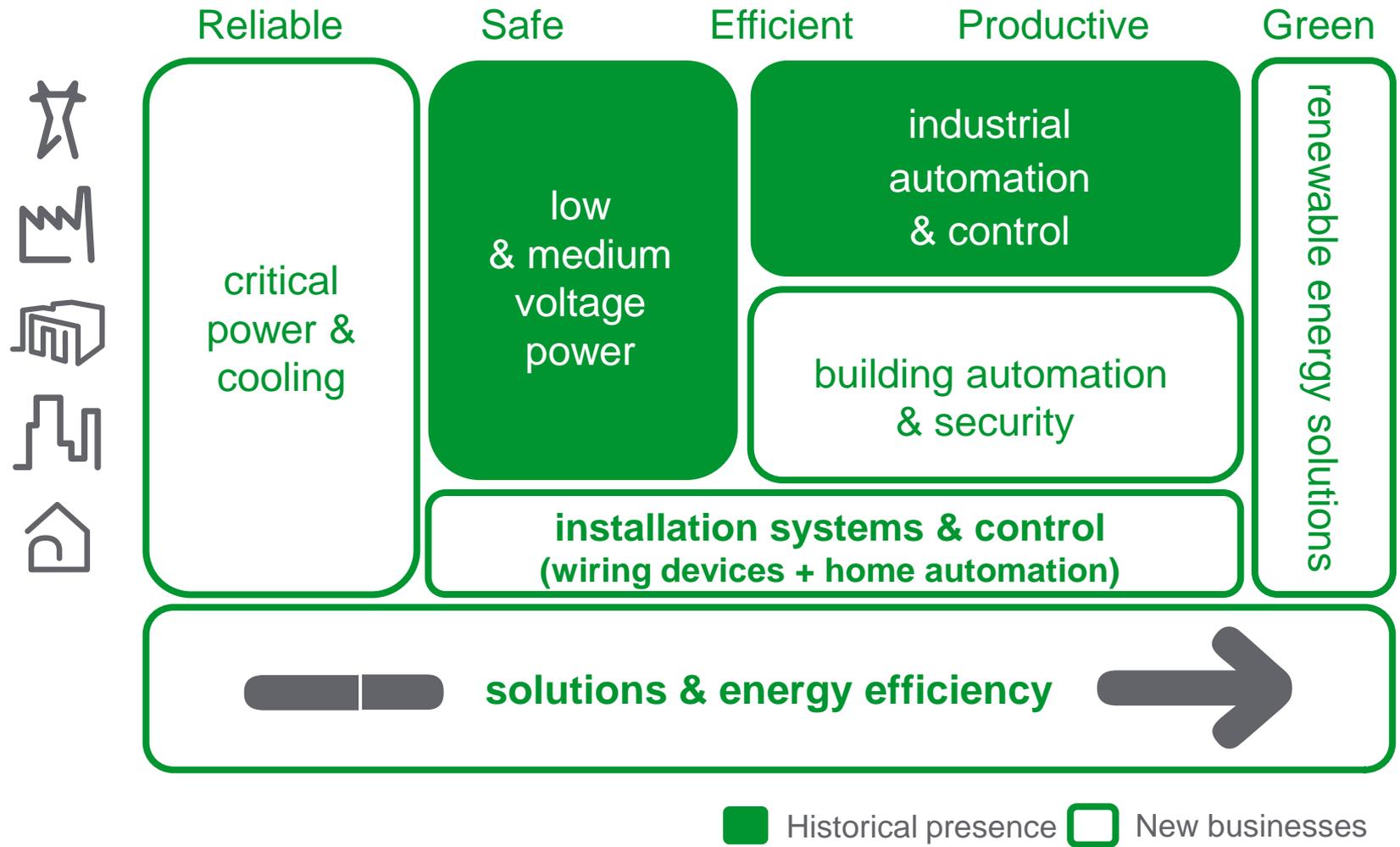


## Green

Make the connection of renewable energy sources easy, reliable and cost-effective



# The most comprehensive and integrated portfolio in energy management



# World market positions

Low & medium voltage

Installation Systems & Control

Critical power & cooling

Industrial automation & control

Building automation & security

Renewable

**Schneider**  
Electric

Legrand

**Schneider**  
Electric

Siemens

Honeywell

SMA

ABB

**Schneider**  
Electric

Emerson

**Schneider**  
Electric

Siemens

Fronius

Siemens

Panasonic

Eaton

Rockwell

JCI

**Schneider**  
Electric

Mitsubishi

**Schneider**  
Electric

**Leader in Energy Efficiency**

# A global company

**18.3**  
billion sales in 2008 (in €) 

**32**  
% of sales in new economies 

**114 000**  
people in 100+ countries 

**330**  
Rank in *Fortune 500* ranking 

**800**  
Million € devoted to R&D 

North America

€ 27%

 28,000

Europe

€ 44%

 48,000

Rest of the world

€ 10%

 9,000

Asia-Pacific

€ 19%

 29,000



# A responsible commitment

- Energy efficiency
- Eco-production and eco-conception
- Access to energy
- Health and diversity
- Communities support

## 15%

Energy savings on our sites through our energy efficiency programme

## 100%

Employees have a medical coverage

## €5.8 Millions

worth of equipment donated to communities in the last 3 years

**What does it  
mean for you?**





# A company with strong values



## Passionate

- About our Customers & People
- About the Environment
- Positive

## Effective

- High Performance
- Pragmatic
- Fast



## Straightforward

- Walk The Talk
- Integrity
- Talk Straight

## Open

- Curious
- Collaborative
- Cultivates Diversity



# Developing all types of talent

- International mobility opportunities
- Global projects with multi-cultural teams
- Nurturing leadership through Schneider Electric University
- Rewarding performance
- Numerous career opportunities from marketing to industry, logistics, IT, communication etc.



# Contact



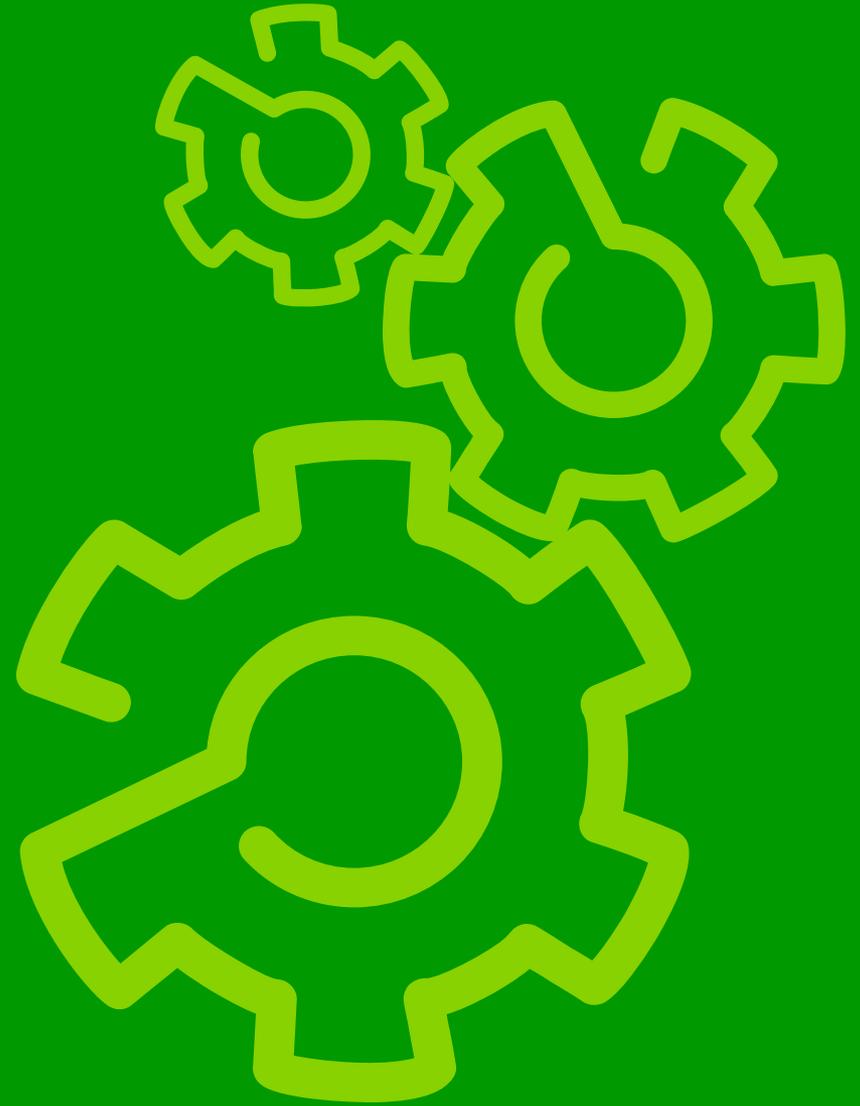
Human Resources Department

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[www.schneider-electric.com](http://www.schneider-electric.com)

Make the most of your energy

# Changing Gears



**Schneider**  
 **Electric**

**Total Energy  
Control**



A man with grey hair, wearing a blue long-sleeved shirt, is standing in a factory or industrial setting. He is pointing his right index finger towards a control panel mounted on a piece of machinery. The control panel has a digital display and several buttons. The background shows a large industrial facility with various pieces of equipment and structural elements.

## Who we are

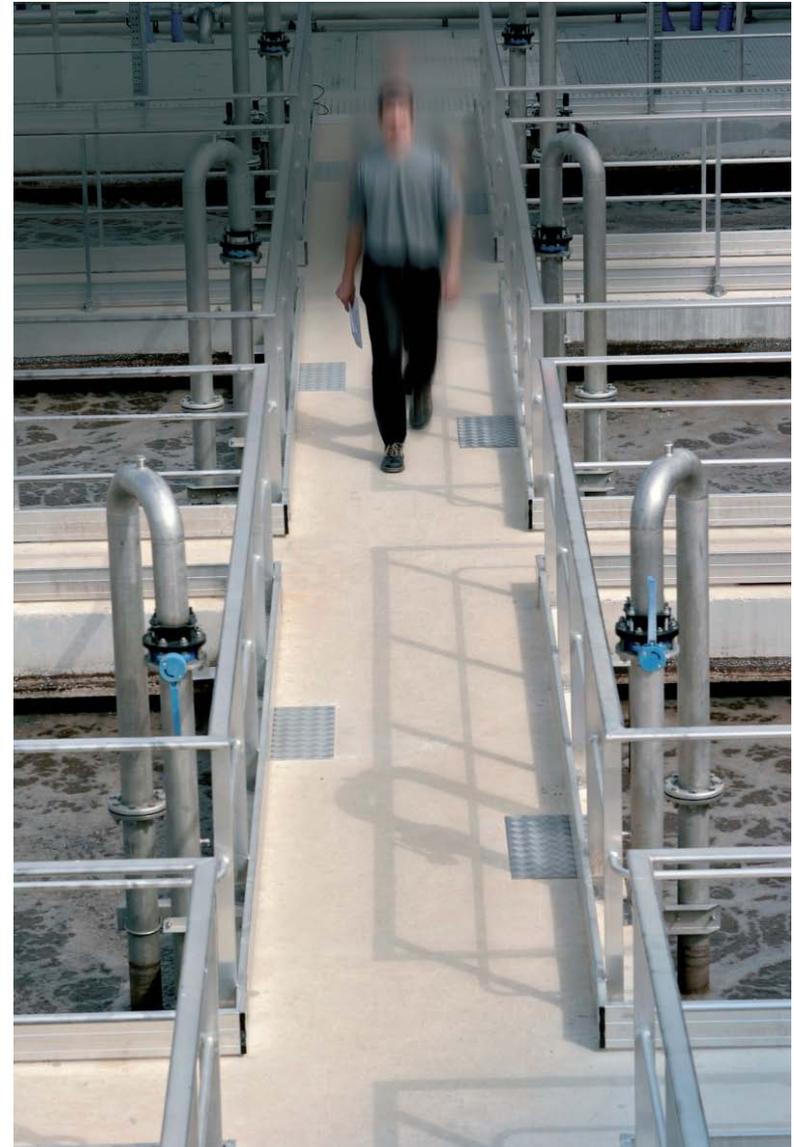
**Total Energy Control<sup>SM</sup>** (TEC), part of Schneider Electric Energy Solutions, is a **specialized** engineering team that provides **Energy Action Plans<sup>TM</sup>** and **customized** solutions to our clients.

# About TEC:

**Part of Schneider Electric  
Energy Solutions**

## Core Team

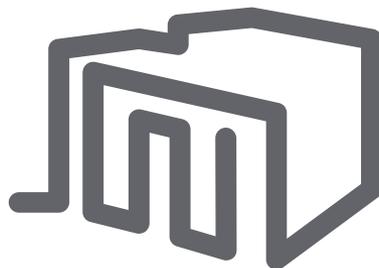
- Headquartered in Raleigh, NC
- Professional Engineers, Certified Energy Managers, and LEED Accredited Professionals
- Senior Engineers with over 20 years of experience in the energy industry
- Division grew 200% in 2007-2009
- Plans to expand and double by 2012



# Target Markets



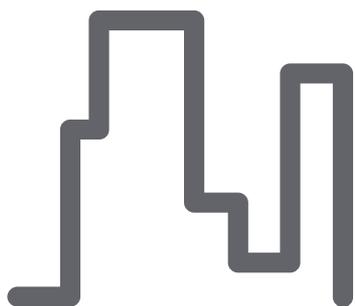
**Industrial**



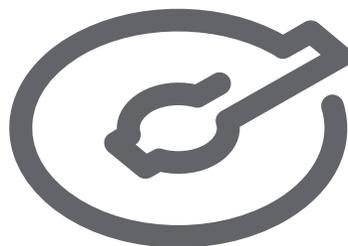
**Data Centers**



**Healthcare /  
Pharmaceutical**



**Large Commercial  
/ Education**



**Water /  
Wastewater**



**Large Government  
/ Municipalities**

# Not a performance contractor

- Schneider Buildings (formerly TAC)

# Not a provider of static energy audits

- One time audits have very little impact
- An Energy Action Plan evaluates the concerns of a specific site as they relate to high level issues
- It gives insight and tools to understand energy and sustainability as they affect the client's bottom line



# We provide customized solutions

Bringing the synergy of Schneider Electric's entire family of hardware, products, and services

Customized Solution Example <input checked="" type="checkbox"/>					
Renewable Energy – Alternative Fuels Planning	LEED® Certification Planning/ Design	System Energy Studies	Carbon Footprint Analysis	Rebates Incentives Financial Analysis	Demand Response Study
Essential <input type="checkbox"/>	Essential <input type="checkbox"/>	Essential <input checked="" type="checkbox"/>	Essential <input checked="" type="checkbox"/>	Essential <input type="checkbox"/>	Essential <input type="checkbox"/>
Enhanced <input checked="" type="checkbox"/>	Enhanced <input checked="" type="checkbox"/>	Enhanced <input type="checkbox"/>	Enhanced <input type="checkbox"/>	Enhanced <input checked="" type="checkbox"/>	Enhanced <input checked="" type="checkbox"/>

# Case Study

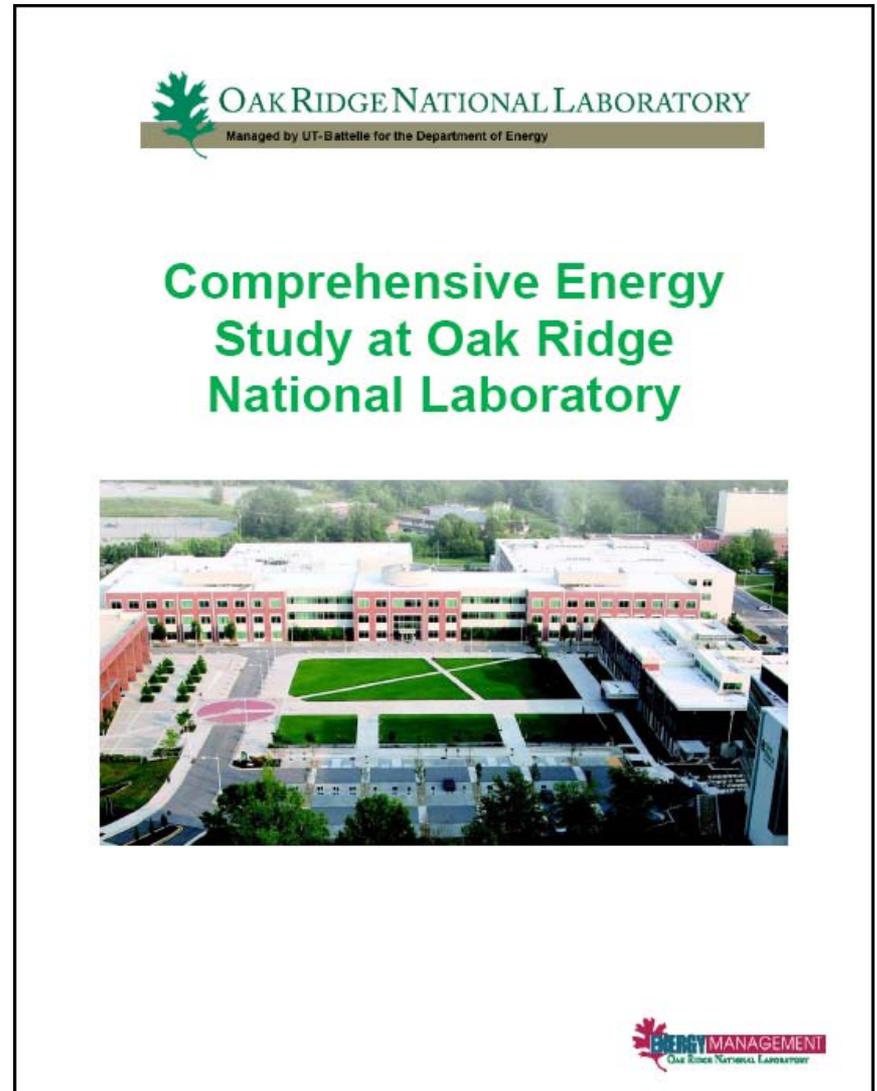




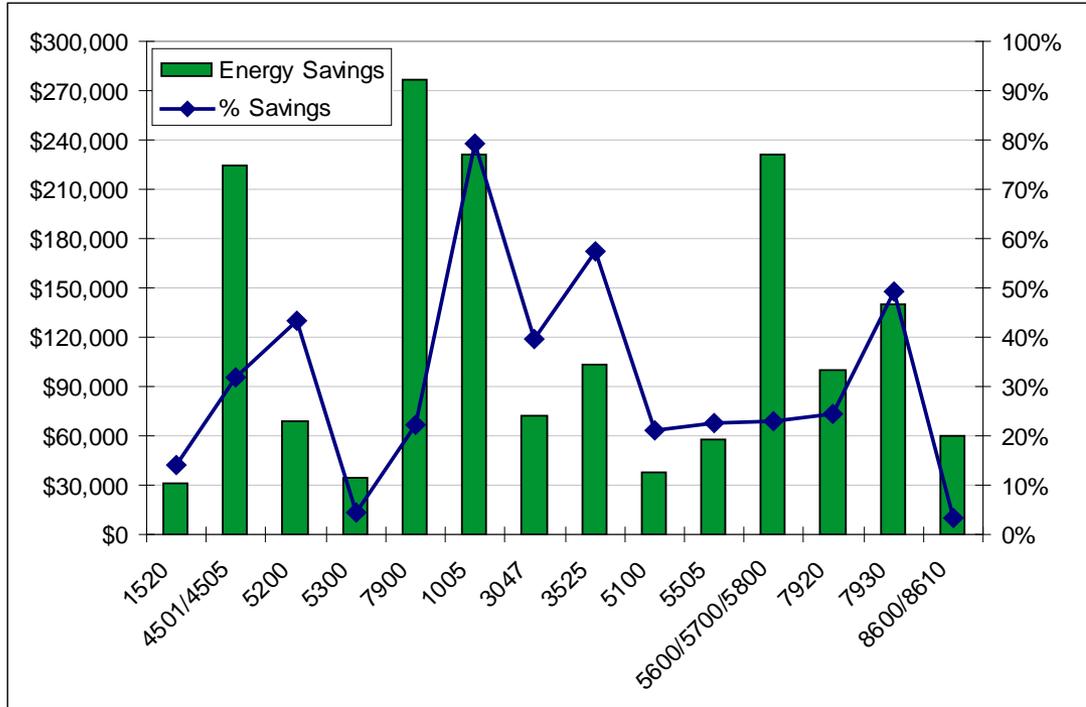
**Oak Ridge National Laboratory is a multi-program science and technology national laboratory managed for the United States Department of Energy by UT-Battelle**

# Report Contents

- Executive Order 13423  
and DOE Order 430.2B
- Overall
  - Renewable Feasibility
  - Metering Plan
  - Sustainability and Green Power
- Per Building
  - Energy Star Assessment
  - LEED Assessment
  - Utility Benchmarking
  - ECMs
  - Carbon Reduction
  - FEMP Commissioning



# Results



## Project Facts

**1.3 million square feet**  
**19 buildings**  
**578 page report**  
**8 weeks to complete**

## Summary

**120 ECMs**  
**\$1,687,000 annually**  
**22% savings**  
**2.2 year payback**  
**13,792,500 kWh**  
**66,500 MMBtu**  
**13,600 Tons of CO2**

**We Are Hiring  
Now (Right now)!**



Job Title	Application Engineer
Location	USA – NC - Raleigh
Requisition #	16765
Job Responsibilities	<p>Utilize unique engineering skills and industrial experience to identify and implement energy solutions.</p> <p>Conduct on-site investigations; identify, overcome obstacles, and collect necessary data; organize and analyze information, model systems, develop conceptual engineering design, provide budgetary cost analysis, prepare detailed documentation of recommendations, and present to plant management in industry.</p> <p>Support marketing and sales initiatives as an expert in key industries and technologies.</p> <p>Manage and develop other engineers performing such investigations.</p>

# Contact



Total Energy Control

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Make the most of your energy