**CISCO** 

Networked Sustainability

Helping Customers Meet Green and Business Goals



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## **Cisco's Green Mission**

## **Operations**

Impacting how we operate as a business

### **Products**

Creating efficiencies and innovations in our products

#### Architecture

Providing **solutions** to our **customers** to address global environmental issues

## **Employees & Advocacy**

**Inspiring** our **employees** to get involved and take action

## **Environmental Concerns and Regulations**



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## **Customers Green Goals**



#### **Optimize business operations, cut costs**



#### **Reduce GhG emissions**



#### **Reduce energy consumption & cost**



**Comply with government directives** 



#### **Create competitive differentiation**



## **Cisco Networked Sustainability**

Virtual Worker Remote Collaboration Resource Virtualization

Innovative Business Processes

# Operational Efficiency

Extended Lifecycle Optimized Processes Simplified Architectures

#### Energy Savings

Power Management Tracking & Reporting Infrastructure Consolidation

## **Recently Announced**

## Cisco EnergyWise Technology

- Innovative software added onto Cisco Catalyst switching portfolio
- Available to customers for download now or with technology refresh
- Enables reduction of GhG emissions impacting other 98%
- Drives significant cost savings
- Network intelligence monitors, reports and reduces energy usage across entire infrastructure
- Open technology for greater partnering

## **Collaborative Cross-Industry Effort**



## **EnergyWise Operating Cycle**

#### Optimize Power Delivery of Policies



Poll Power of Network Attached Devices: Phones, APs, PCs, Building Systems

Show Power and Cost Savings Correlate Power and Actions

## **Cisco EnergyWise Components**



## **Energy Efficiency in Bank Branch Office**

#### **Business Objectives:**

- Bank Operates 9am 5pm
- Reduce energy usage: Power off PoE devices after-hours

#### **Solution:**

- EnergyWise deployed on existing Cisco Catalyst Switches
- Power down 500 APs and 5000 IP phones across 100 branches

#### **Business Value:**

- \$36,997 annual savings (\$0.10/kWh)
- 185 tons less GhG (equals electricity used in 67 homes in a year)

#### EnergyWise Policy : Power Off at 7 PM



EnergyWise Policy : Power On at 7 AM



# **Optimizing Corporate HQ Peak Power Load**

#### **Business Objectives:**

- Reduce grid load & peak surcharges
- Smooth and time shift power usage
- Control Laptops, PCs, APs, Phones
  Solution:
- EnergyWise deployed on existing Cisco Catalyst Switches + PC Agent

#### **Business Value:**

- 51 tons GhG/\$20,558 savings = 15 mid-sized cars off road for a year
- 371 tons GhG/\$74,230 savings from Phase 1 power-down =111 cars



1000 Phones, 100 APs 700 laptops, 300 PCs

# **Hotel's Substantial Power Savings**

#### **Business Objectives:**

- Eliminate unoccupied energy waste
- Frequent traveler personalization
  Solution:
- Catalyst Switches with EnergyWise
- IP Phones + WLAN, IP connected HVAC, Lighting, TV, Window Blinds.

#### **Business Value:**

- Save energy when room unoccupied
- \$400, 2 tons GhG yearly per room
- 200-room hotel, saves 396 tons GhG and \$80,000 per year (equivalent to driving a mid-size car around the world 338 times!

#### Guest Arrives -EnergyWise Notified



## EnergyWise Ecosystem

#### Phase 1 : Network Control Feb '09

PoE Devices Power Levels Policies Discovery Management Reporting

#### Phase 2 : IT Control Summer '09

Non-PoE Devices (PCs) Partner IT Power Mgmt Enhanced Management Assess location

#### Phase 3 : Broad Control Early '10

Building Automation Control Partner Building Power Mgmt Enhanced Management Prediction and automation

#### Cisco EnergyWise Ecosystem

# **The Impact of Phase 1**



79.5 million IP phones

20% for 4 hours a day

40% for 8 hours a day

50% for 12 hours a day

8.5 million WLAN APs

12,710 acres forest

106 Megawatts electricity

40,971 cars

426 Megawatts electricity

72,431 homes

800 Megawatts electricity 95,327 Acres of forest 199,732 Ibs coal burned

## **EnergyWise Partnerships**



# **EnergyWise Customers**



- Demonstrate, promote and improve Corporate Social Responsibility (CSR)
- Lower energy costs
- Reduce travel, improve productivity



- Lower energy costs
- Attract new office tenants
- Leverage the network to manage centralized disparate systems

# John Lewis

- Minimize environmental impact
- Improve energy efficiency by 20% by 2010
- Measure CSR programs to ensure objectives are met

CONNECTED URBANDEVELOPMENT

ALASURE

REPORT

Cisco EnergyWise

Ministry of Education

- Sustainable connected schools
- Elevate educational experience
- Reduce energy consumption

# Seeing The Impact – CO<sub>2</sub> and \$ Savings



Create a customer profile Correlates power usage to typical vertical use Demonstrate cross-enterprise Watts, \$s and Carbon savings www.cisco.com/go/energywise

#### cisco

Cisco Green Business Value Calculator



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## **Cisco Mobility Solutions Designed for Power Efficiency**

**Eco-Pack Ordering Options** 

- Reduce packing materials
- Eliminates seldom-used components
- Documentation on CD no paper
- Potential savings of 2200 trees per year

Adaptive Power Management

- Turn off radios on pre-determined schedule
- Decrease power consumption by 50%
- Managed by Cisco Wireless Control System

EnergyStar Rated Power CordsMore efficient power transmittalLess power loss

## **Cisco Virtual Office: Security for Extending the Enterprise**

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#### **A Complete Security Solution**

- Office caliber experience for the remote workforce
- Converged data, voice, wireless services
- Centralized management for zero touch deployment

#### **Environmental Sustainability**

- Reduces commute hours
- Cuts down on emissions and roadway congestion
- Helps conserve energy
- Improves flexibility and quality of life

#### Changing the Way Cisco Works\*

- > 13,000 CVO users today
- 62,899,200 commuting miles avoided
- 30,435 tons of CO<sub>2</sub> emissions reduced
- \$168k reduction in reforestation projects to offset carbon footprint

\* Carbon footprint and US reforestation metrics derived from data published by Carbonfund.org and Volkswagon of America.

# **Innovations From Cisco for Greener IT**



## Helping Our Customers Meet Their Green Goals



Behavior Change-Innovative Business Practices

#### Optimizing Energy Savings



Operational Efficiency

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