





Green Technology & Sustainability

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Many Motivations to Go Green

Reduce hazardous waste

Reduce global warming

Reduce carbon footprints

Reduce energy consumption

Reduce cost of operations



Data Centers

“IT consumed about 61 billion kilowatt-hours in 2006—about 1.5 percent of the total electricity consumed in the US—at a cost of about \$4.5 billion. Power consumption in the industry could nearly double by 2011.”

Report to Congress on “Server and Data Center Energy Efficiency,” Environmental Protection Agency, Aug. 3, 2007

“The price of building a new data center has quadrupled since 2000, in large part due to the costs associated with the infrastructure needed to power and cool the building.”

Bruce Taylor, chief analyst at the Uptime Institute featured in eWeek Magazine, Aug. 14, 2007

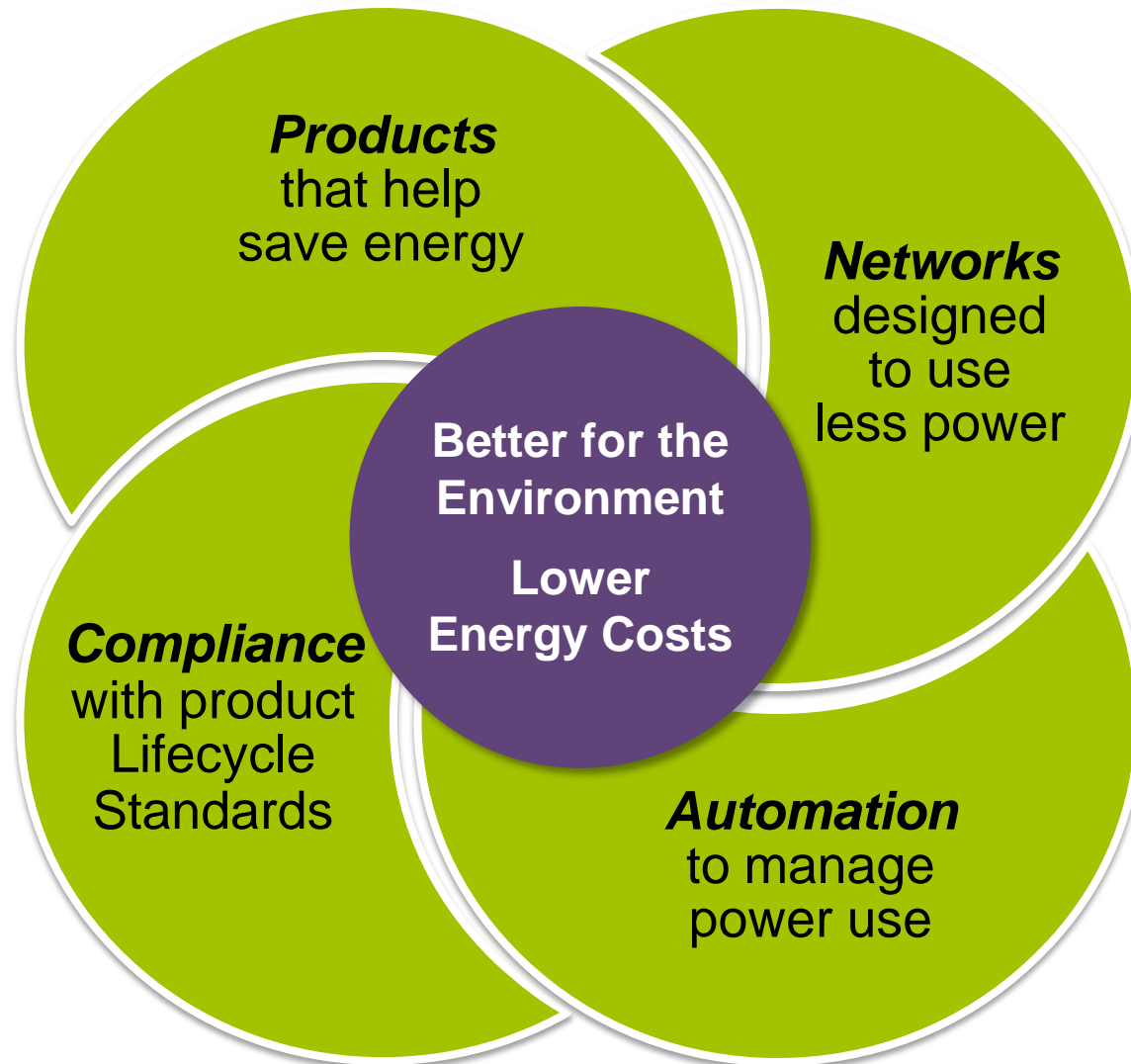


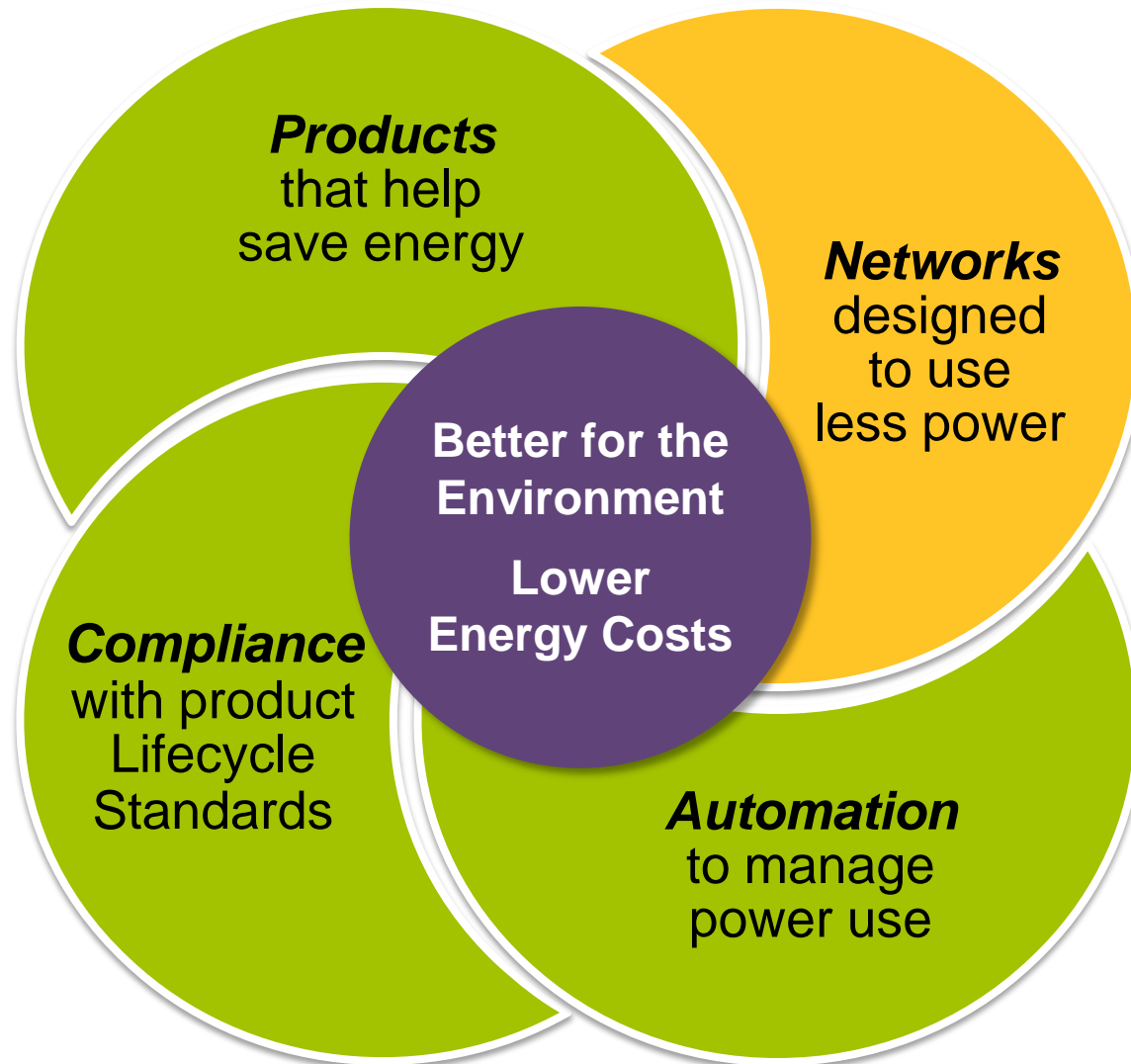
Converged Communications

Enterprise IP Telephony

- ▶ PoE: Now the network supplies power!
- ▶ \$9+ Billion annually
- ▶ Often a catalyst for network upgrade
- ▶ QoS, Availability, Managed network elements







Select the Port Speed You Need

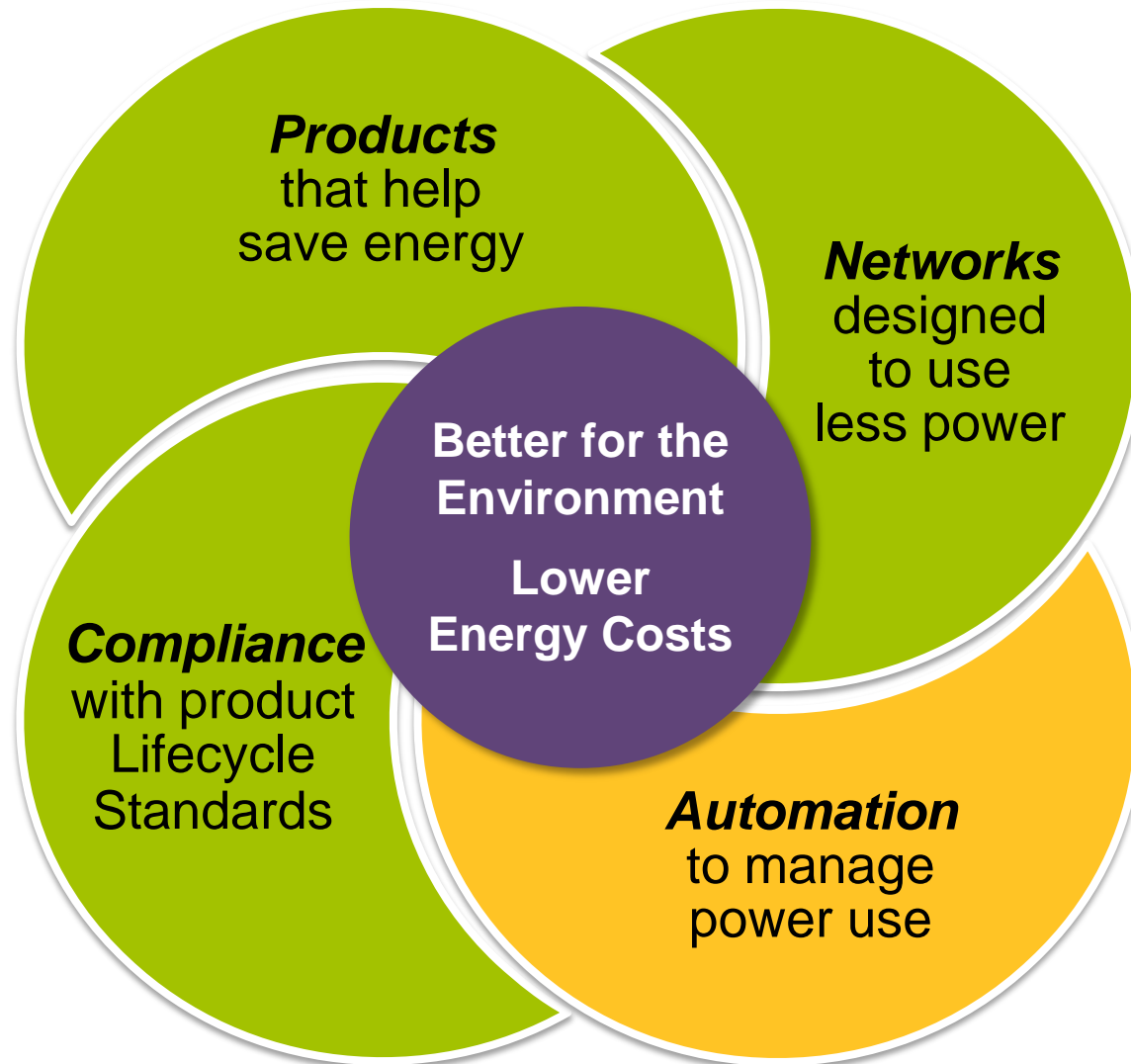
- ▶ **10/100M is sufficient for IP Telephony, uses less energy than 1G**
- ▶ **1G where needed for bandwidth intensive applications**

Use 2 Tier Network Architecture Instead of 3 Tier Where Possible

- ▶ **High density switches enable eliminating layers**
- ▶ **Many mid-Enterprise networks moving to 2-tier instead of 3-tier**

Consolidate the Data Center

- ▶ **Distributed server farms on the same campus can increase network bandwidth and equipment needs**
- ▶ **Virtualization enables you to fully utilize each server**



Intelligently Optimize Power to IP Phones

Preparation

Operation



Administrator

1 Create enterprise edge policies

2 Deploy Automated Power Savings modules and policies to switches



3

Event: Time triggered event - at 5:00 PM at end of specified day shift

4

Response: Trigger the application of the profiles to power off the IP handsets on specified edge ports.

Result: Power savings for phones, switch ports, and air conditioning. Reduction of energy costs and of carbon emissions.

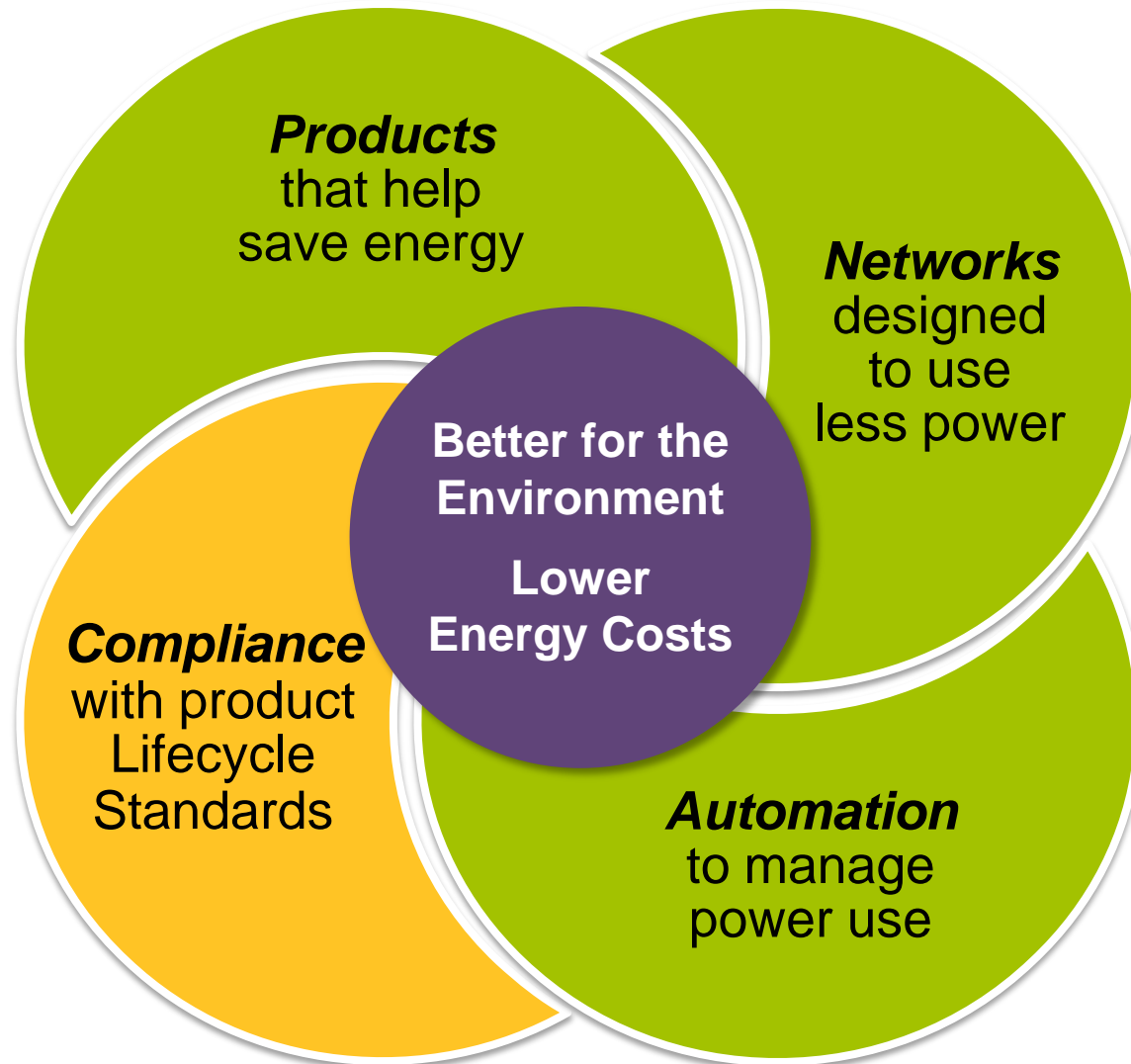
Similar automation to power on before next shift.

**200 person office
9 - 5, Monday - Friday
for most workers
Yet, desk phones
are powered 7x24**



GO GREEN Solution

- ▶ **Identify 150 non-critical desk phones**
- ▶ **Universal Port: power down at 5:00pm each evening, restart at 9:00am the next morning in this example**
- ▶ **Power savings over the weekend**
- ▶ **Immediate **75% electricity savings** – on PoE power**
- ▶ **On/Off Times can be set to your preferences**





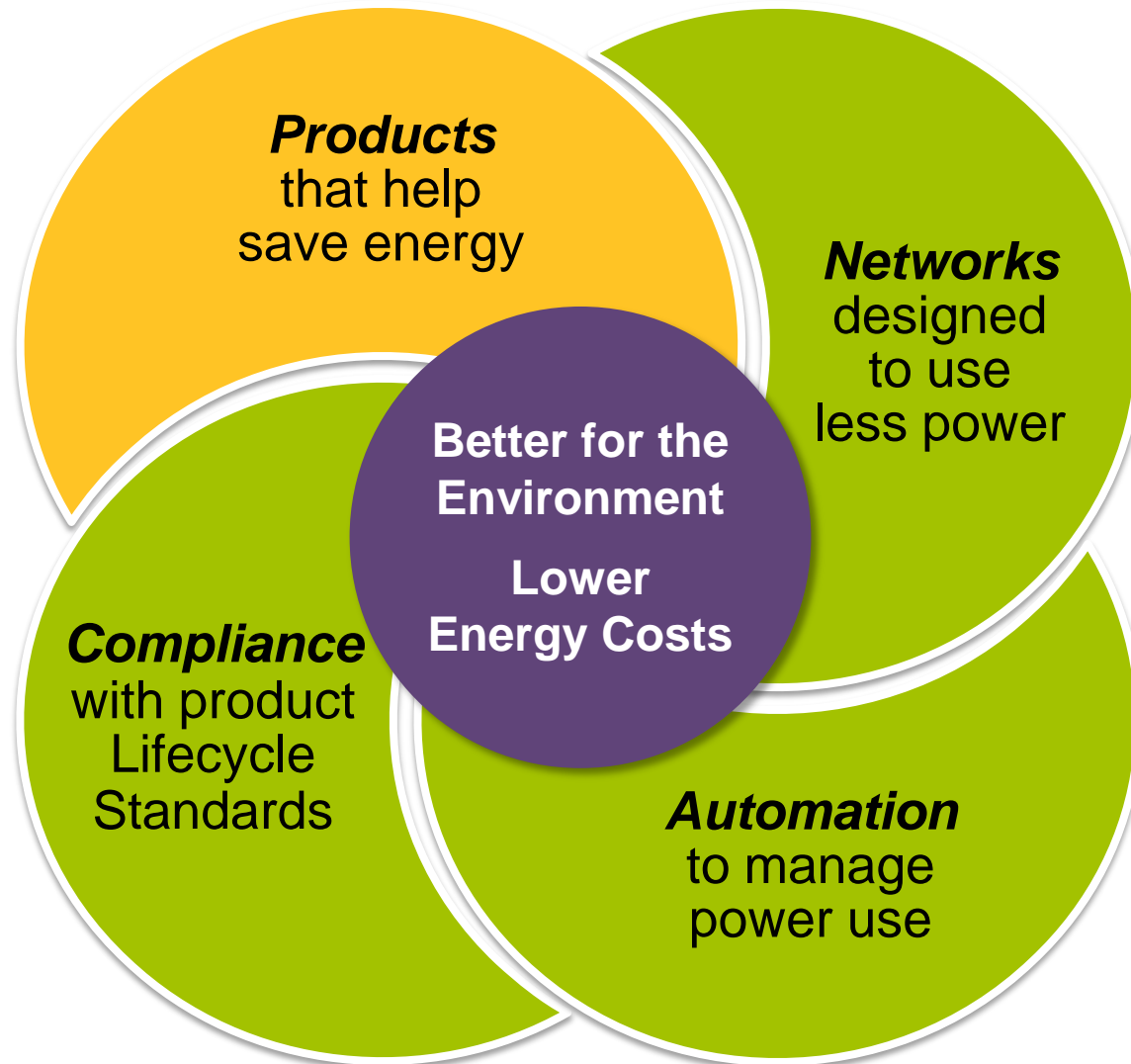
RoHS

- ▶ Restriction of Hazardous Substances
- ▶ Limits amounts of six hazardous materials
- ▶ Compliant with directives for China and EU

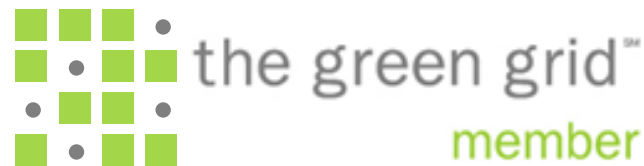


WEEE

- ▶ Waste Electrical and Electronic Equipment
- ▶ Provides methods for recycling or reuse at retirement
- ▶ Compliant with directives for EU



Extreme Networks is committed to advancing energy efficiency as a member of The Green Grid.



About *The Green Grid*

- ▶ *The Green Grid's* mission is to develop and promote energy efficiency for data centers and business computing ecosystem
- ▶ You can find more information on *The Green Grid* at <http://www.thegreengrid.org>



▶ ExtremeXOS®

Universal Port Framework

- ▶ Switch Port automation profiles
 - ▶ Time-based triggers can power down non-essential devices at pre-defined times
 - ▶ Can work with any PoE IP endpoint: phones, wireless APs
 - ▶ Universal port manager: simplifies centralizes management
- ## ▶ PoE capabilities enable efficient use in Ethernet-based networks
- ▶ Standard based protocols such as LLDP
 - ▶ IP phone power requirements discovered with more granularity than PoE class

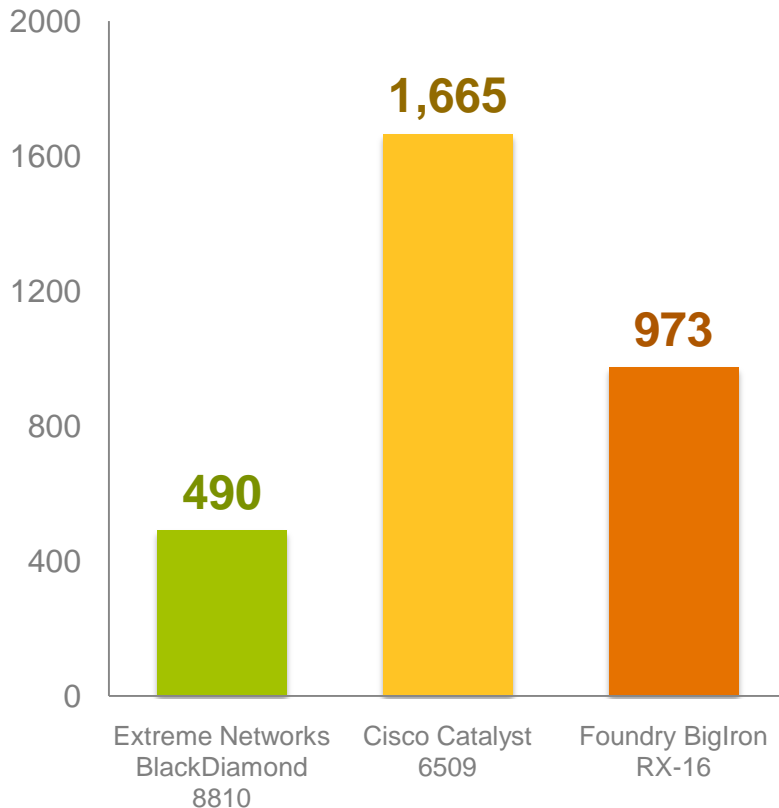


Products Use Less Energy



Average Power Consumption in Watts

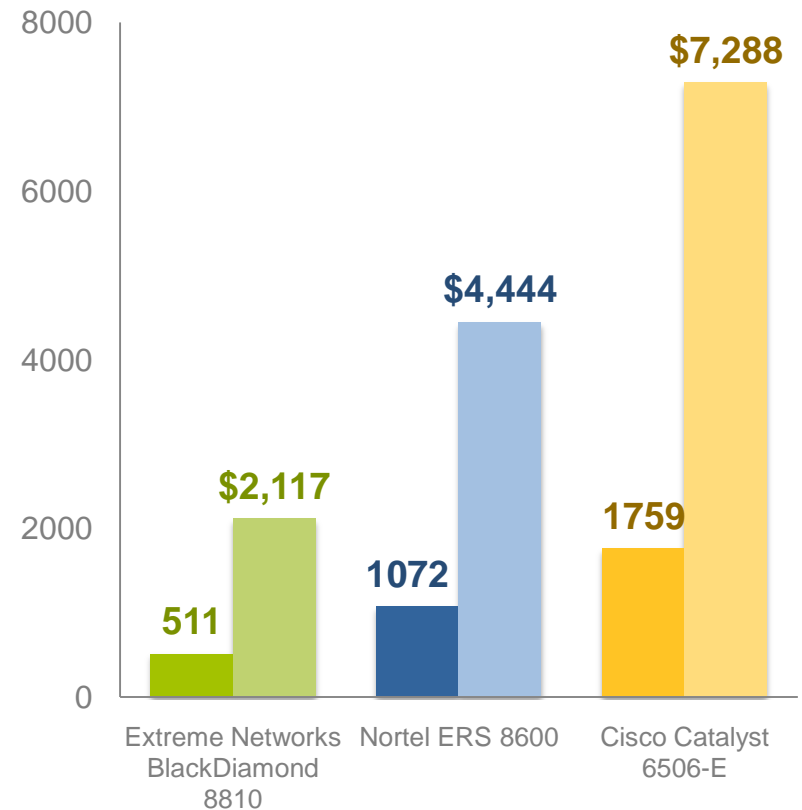
BlackDiamond uses 3.4x less power on average than Catalyst 6509 and 2x less power than BigIron Rx-16



Source: The Tolly Group, January 2008

Average Power Consumption of Core Switches

Average Watts consumed, and Projected 5-year energy costs in US Dollars



Based on information in : The Tolly Group, July 2008, No 208298

Simple Actions

and

Smart Methods

for running the IT infrastructure
repeated many times over

make a **BIG** difference.

Solutions that are better for the environment and reduce your energy expenditure.

- ▶ Design your network for less power use
- ▶ Automation capabilities reduce power allocated and consumed by attached devices
- ▶ RoHS and WEEE compliance
- ▶ Choose products for energy efficiency
- ▶ Savings are multi-faceted, including associated 2x cost of ownership

Better for the Environment
Lower Energy Costs



BE EXTREME



- ▶ This presentation contains forward-looking statements that involve risks and uncertainties, including statements regarding our expectations as to products, trends and our performance. There can be no assurances that any forward-looking statements will be achieved, and actual results could differ materially from forecasts and estimates. For factors that may affect our business and financial results please refer to our filings with the Securities and Exchange Commission, including, without limitation, under the captions: “Management’s Discussion and Analysis of Financial Condition and Results of Operations,” and “Risk Factors,” which is on file with the Securities and Exchange Commission (<http://www.sec.gov>). We undertake no obligation to update the forward-looking information in this release.



Thank You