

# energy 2020

## Powering Cable's Success



# What is Energy 2020?



## Cable's Plan for Energy Management

Energy 2020 is our industry's next generation plan for creating, organizing and delivering solutions throughout the energy field.

Our plan is to unify the power of the Cable MSO community and its technology suppliers to deliver an overarching energy ecosystem that addresses solutions with technological and operations innovation.

Through Energy 2020 we will accelerate our collective efforts to drive results faster, keep suppliers R&D-focused, enhance our business and benefit to our customers.

## Leverage Technical Innovation to Enhance the Industry's Future for the Next Decade and Beyond...



# Mission



**To envision and enable what energy will look like in cable in the year 2020. Targeting maximum customer uptime and enabling capacity growth via successful organizational, customer and environmental energy solutions.**

## Program Goals:

- Reduce Power Consumption by 20% on a Unit Basis
- Energy Cost Reduction by 25% on a Unit Basis
- Reduce Grid Dependency by 10%
- Optimize Technical Facilities & Datacenters Footprint by 20%

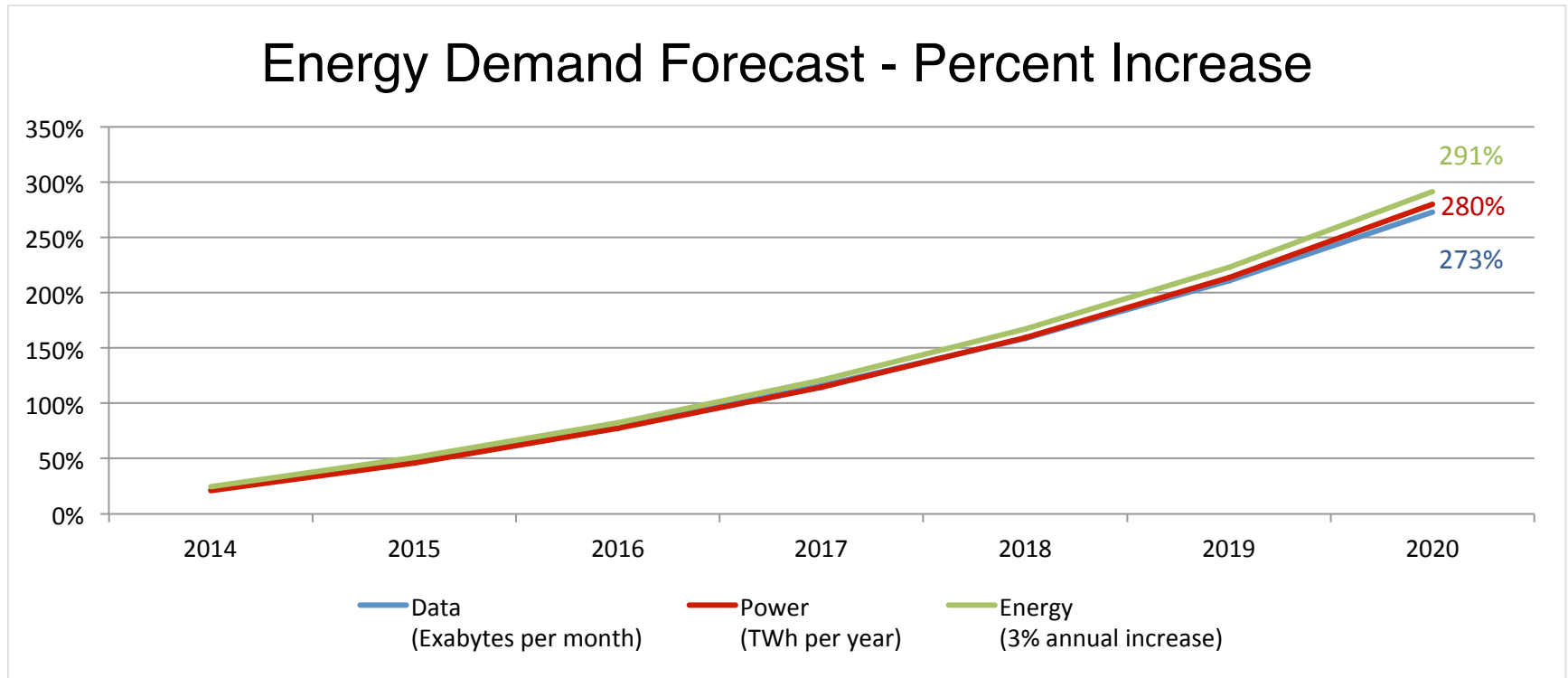
## Scope:

*“From “Cloud to Ground”*

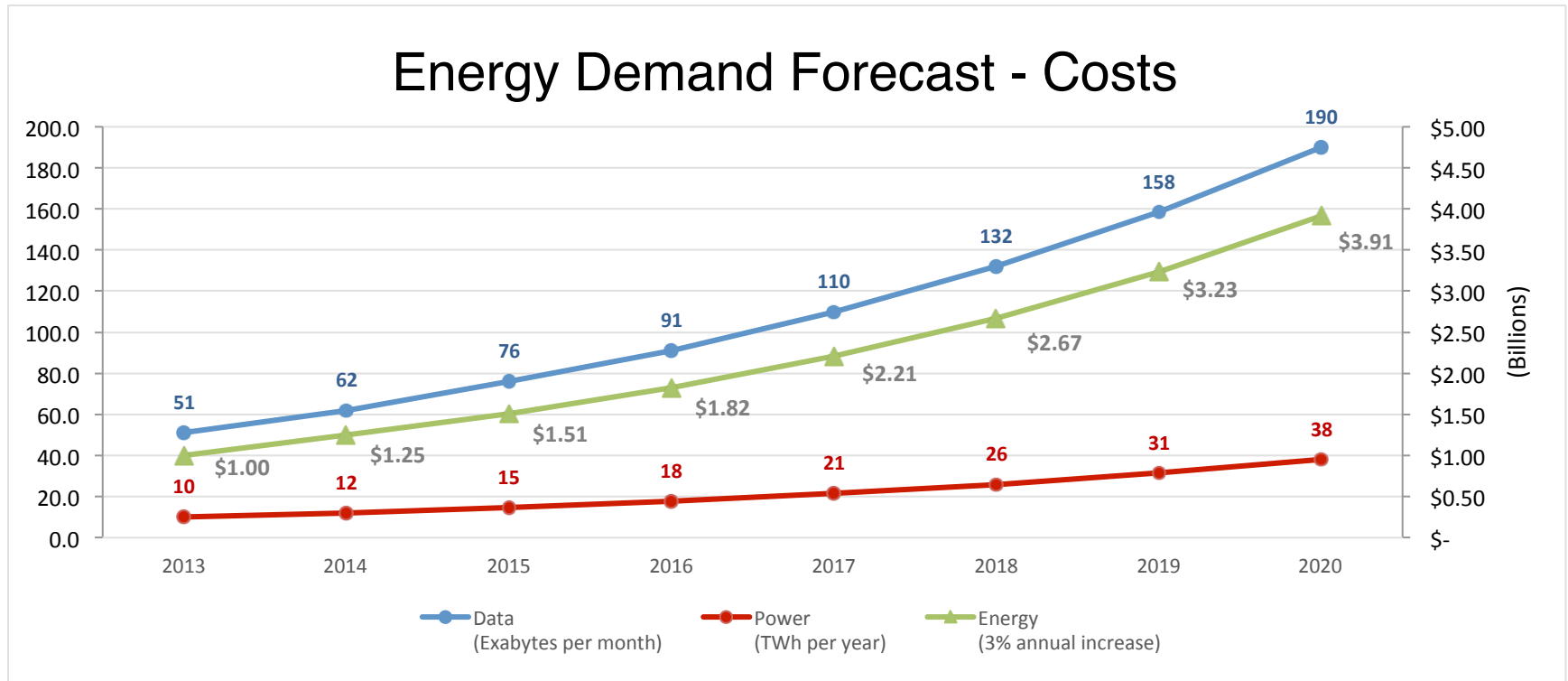
*“Side of the Home or Business to the CORE”*



# Why Energy Management?



# Why Energy Management?



# Why Energy 2020?



## “Cost Avoidance”

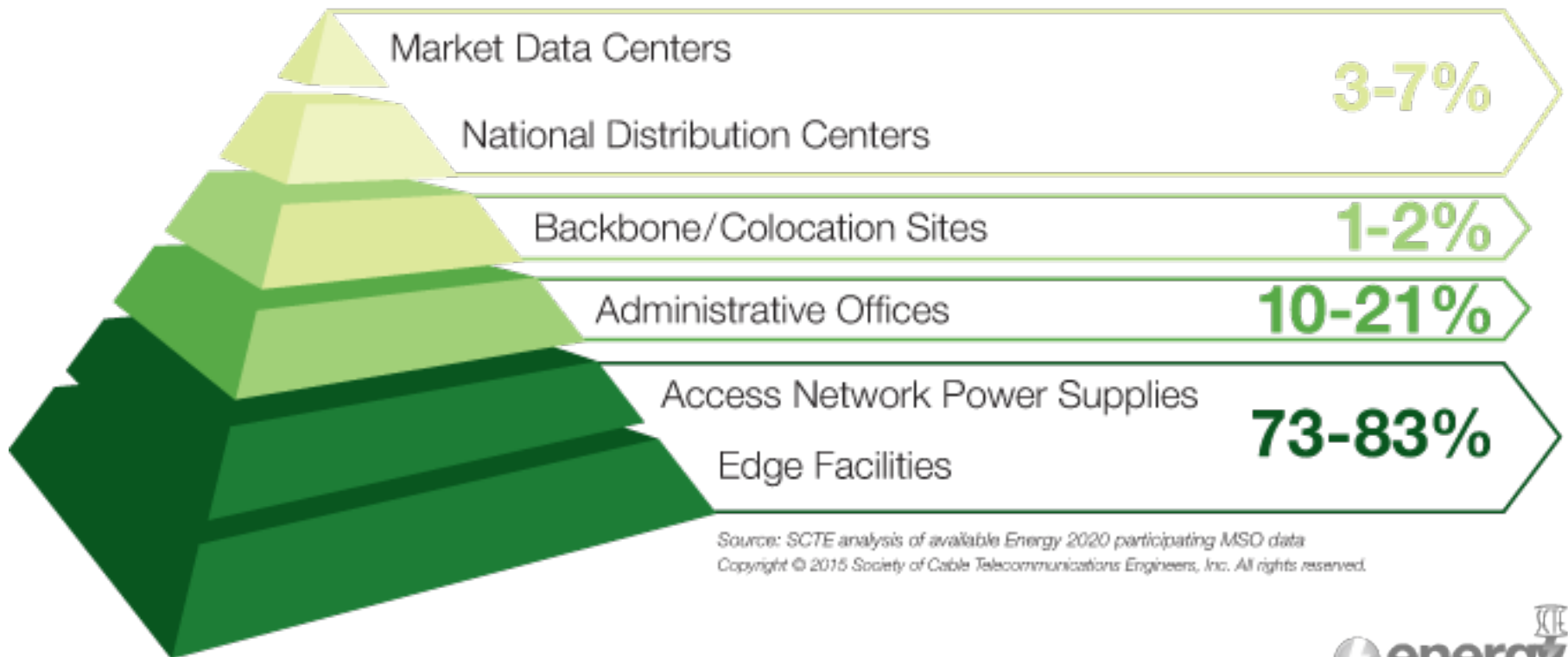
Operating at the current state, the cable industry's energy costs are expected to quadruple to **\$4 billion per year by 2020.**

**The Challenge:** Can cable reduce that increase by \$1 billion...  
...while increasing capacity by 10X and maintaining feature and performance parity?



# Industry Power

## CABLE OPERATOR POWER CONSUMPTION PYRAMID



Source: SCTE analysis of available Energy 2020 participating MSO data  
Copyright © 2015 Society of Cable Telecommunications Engineers, Inc. All rights reserved.

# How Do We Get There?



## Participate in Energy 2020

Committee Co-Chairs



**Balan Nair**  
Executive Vice President  
and Chief Technology Officer  
Liberty Global



**John Schanz**  
Executive Vice President  
and Chief Network Officer  
Comcast Cable





# Initiatives & Working Groups

Each initiative is producing standards & operational practices.

ENERGY  
METRICS, DATA  
COLLECTION,  
& REPORTING



ACCESS  
NETWORK  
EFFICIENCY



ALTERNATE  
ENERGY



ENERGY IN  
OPERATIONS



FACILITY  
CLASSIFICATION



ENERGY  
EFFICIENCY  
IN FACILITIES



DENSITY AND  
CONSOLIDATION



FLEET  
OPTIMIZATION



FACILITY  
CLIMATE  
TECHNOLOGY  
OPTIMIZATION



[www.scte.org/energy2020](http://www.scte.org/energy2020)



# Powering Cable's Success

## Tactical: *What can we accomplish today?*

- Energy reduction, improved efficiency in critical facilities, equipment and outside plant
- Share and establish best practices and tactics
- Incorporate the use of standards, such as ANSI/SCTE 186 Standard (Cable's version of NEBS)

## Strategic: *What can we plan for tomorrow? Future energy considerations?*

Focus on *simultaneous* improvements in next next-gen equipment solving for:

- Higher performance
- Greater capacity
- Optimal density
- AND lower unit-energy consumption

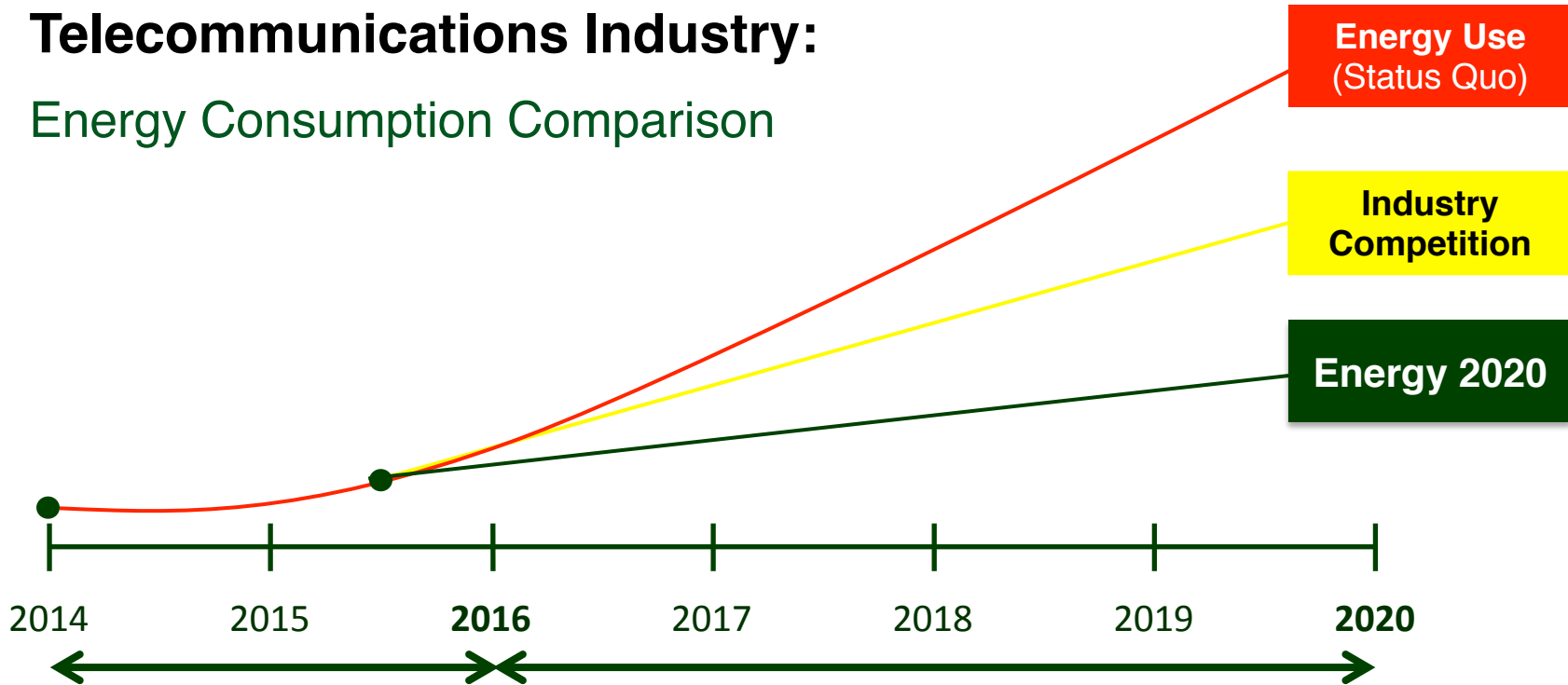
## Measurements for Energy Consumption & Feature Density (i.e., terabytes per watt)

### ACHIEVE BY:

- Define specific targets and goals for energy initiatives
- Tech partners supporting MSOs: Intel, ARRIS, Cisco, CommScope, Alpha, Coppervale, WES, Quest Controls, Universal Electric Corp, Emerson Network Power, etc.
- Area of future thinking and innovation
- Drive capacity/performance energy-unit standards

# Development & Deployment

## Telecommunications Industry: Energy Consumption Comparison



Proof of Concept  
Specification Finalized  
Reference Implementation  
Product Requirement Integration

Test, Deploy, Scale & Optimize



# Implementation Process

## OPERATOR BENEFITS

Operator Initial Tactical Implementations

Operators Include Energy Specs in Purchase Agreements

\$\$\$ Cost Avoidance

**SCTE Training**  
Enables Energy 2020  
Deployment & Scale

Operational Tactical Solutions

Operationalize Strategic Development

Short term

Long term

2015

2016

2017

2018

2019

2020

## OUTPUT OF INITIATIVES →

Operational Practices

Phase 1

Tactical

Operational Practices to Scale

SCTE Standards

Rev 1.0

Rev 2.0

Rev 3.0

Vendor Prototypes / Proof of Concept

Trials

Deploy Alpha / Beta

Roll outs Alpha / Beta

Deploy to Scale

Deploy and Scale

Revisions / New Releases

# SCTE Standards

## Energy Management Subcommittee (EMS)

### **Energy Standards and Operational Practices**

The SCTE Standards Program is developing standards and operational practices in several key areas to improve the application of environmentally friendly and sustainable procedures and products, to create solutions that lower overall costs and increase overall performance.

These documents are consensus developed and SCTE Engineering Committee approved SCTE standards. Many of these standards have been approved by the American National Standards Institute (ANSI) and are so designated.

### **Get Involved:**

- Download Energy Standards and Operational Practices
  - Visit [www.scte.org/energy2020](http://www.scte.org/energy2020) or [www.scte.org/standards](http://www.scte.org/standards)
- Join the Program
  - Visit [www.scte.org/standards/join](http://www.scte.org/standards/join)

# energy 2020

## Powering Cable's Success

[www.scte.org/energy2020](http://www.scte.org/energy2020)

