

ENERGY MANAGEMENT.
SERVE. SOLVE.
SAVE.

Essential Knowledge for Cable Professionals™



TAKE CHARGE OF ENERGY CHARGES

Steering Into Cable's Energy Future Takes All Hands on Deck

As the demand continues to rise for new-and-improved broadband products and services, so rises the cost of delivering those products and services.

Having enough power when and where it is needed is pivotal to the success of any technically driven company. Cable is no exception. Expense management is always top of mind for competing resources, and our industry has managed those expenses well.

A multi-year campaign developed by SCTE•ISBE, Energy 2020® is the industry's collective, orchestrated response to the need for even more efficient management so that cable telecommunications can compete and capitalize on its growth opportunities.

Right on Cue, SCTE•ISBE Energy Standards to the Rescue

The deepening shadow that expensive energy threatens to cast requires a strategic, bright-minded response, and the Society of Cable Telecommunications Engineers (SCTE), along with its global arm, the International Society of Broadband Experts (ISBE), provides a proven platform for lighting the way: the standards-generating Energy Management Subcommittee (EMS).

Rising costs are giving rise to new markets for sustainable and energy-efficient cable products and services. Through standards, operational best practices, and ongoing thought leadership, SCTE•ISBE helps the industry create innovative, environmentally friendly solutions.

"We're in a growth business—including energy—and we need to be smart about it. People want more and more of our services, and to provide it, it means more and more energy will be consumed. We need smart growth, and we need to do it together."

Tony Werner, President, Technology & Product, Comcast, and Co-Chairman, Energy 2020®

The SCTE•ISBE Standards team has already produced several solutions toward achieving the Energy 2020 program's goals.

:: The overarching energy management system framework in SCTE 234 enables operators and vendors alike to drive positive energy change in a proven, systematic way.

:: Critical facility climate optimization in SCTE 219 addresses one of the largest power consumers in the cable ecosystem.

The delivery of industry-proven approaches addressing the need for energy optimization is within reach. Join the team and help produce even more beneficial solutions that will lead the industry.

Energy 2020: A Galvanizing Force

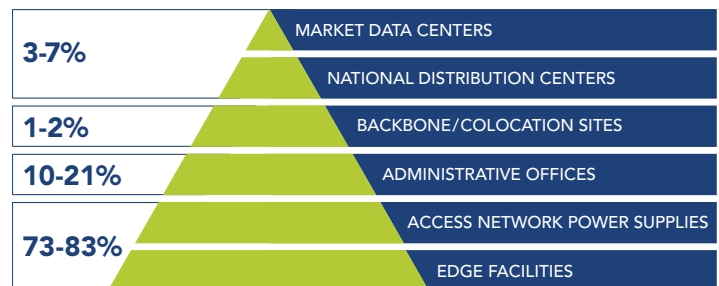
Part of the award-winning SCTE•ISBE Standards Program, EMS nurtures relationships that bring to bear profitability through interoperability in a thriving ecosystem of industry leaders and subject-matter experts. Powering cable's success, EMS supports Energy 2020.

Energy 2020 equips service providers with technical standards, operational best practices, and innovative solutions that drive network growth, availability, and reliability. Service providers leverage the standards to drive efficiency and reduce dependency on the electric grid.

Please see the program's goals at www.scte.org/energy2020.

Cable Operator Power Consumption Pyramid

Hubs and headends, as well as the access network power supplies powering the active equipment on the HFC network, account for most of cable's energy consumption.



Cable's Power Footprint

Source: SCTE analysis of available Energy 2020 participating MSO data

Outstanding in Standards

Companies that belong to the SCTE•ISBE Standards Program are aligned with industry experts and are able to contribute their own expertise. The program comprises more than 140 organizations including all the top service providers and more than 1,100 subject-matter experts. Its diverse membership also includes content providers, cable equipment manufacturers, software application providers, and other industry organizations and agencies.

COLLABORATE TO CONTROL COSTS

Big Buy-in

The high-profile nature of its leadership attests to the fact that Energy 2020 is no peripheral concern. Tony Werner, president of technology and product at Comcast, and Balan Nair, executive vice president and CTO of Liberty Global, serve as co-chairs of Energy 2020. EMS's chair is Simpson Cumba, vice president, data center infrastructure and services, Comcast Cable Corp.

One of a Kind

Since 1995, SCTE•ISBE has hosted the only American National Standards Institute (ANSI)-accredited standards program for the cable telecommunications industry. ANSI ensures all stakeholders can set standards.

“Liberty Global is proud to participate in the SCTE•ISBE Energy 2020 initiative to help the industry achieve the goals set by the program. If widely adopted, the standards developed through this initiative could have a positive impact on the industry’s energy efficiency and costs. The targets set by this program—whether the optimization of technical facilities and data centers or the reduction of power consumption, energy costs, and grid dependency—are truly ‘win-win,’ both in terms of bottom-line benefits to the industry and tackling carbon emissions and global climate change. I invite all our cable partners to join us on our Energy 2020 journey and help us uncover further opportunities for our industry.”

Sam Khola, Senior Manager of Sustainability, Liberty Global

Room at the Table

The SCTE•ISBE Standards Program is open to any organization. Take your seat and become a change agent!

Zoom in on EMS

EMS is responsible for reducing power consumption and costs, increasing operating efficiency, and defining how cable measures its energy use.

Benefits of EMS standards include:

- :: Speeding up the introduction of innovative solutions to market and their adoption and deployment
- :: Lowering costs by eliminating redundancy and minimizing errors
- :: Simplifying how to understand and compare competing products
- :: Enabling companies to comply and get in front of regulations

Numerous EMS Working Groups develop standards and operational practices. The full list is at www.scte.org/standards. Here are a few:

Energy Metrics, Data Collection & Reporting

This area defines environmental requirements for equipment in cable facilities. The focus is in areas such as air flow and quality. The working group is also defining metrics for measuring energy consumption and feature density in cable facilities. The measurement criteria and performance parameters are being defined in terms of energy and service density (e.g., watts per QAM or throughput per cubic measurement).

Access Network Efficiency

With cable’s energy footprint largely residing in the outside plant, this group defines the standards and operational practices impacting the network architectures, efficient power supplies, nodes, and amplifiers to reduce energy consumption of the network closest to subscribers.

Facility Climate Technology Optimization

Climate management at technical facilities, especially HVAC units, accounts for approximately 30 percent of energy consumed at facilities. This working group optimizes the management of climate within the thousands of critical facilities.

Adaptive Power System Interface Specification (APSIS™)

The APSIS™ Working Group defines a standard for end-to-end energy management in broadband telecommunications networks.

The Scope of APSIS: Excerpt from ANSI/SCTE 216 2015

Today’s cable systems include broadband telecommunications infrastructure, including high-speed data services, digital telephony and other applications, and multi-channel video program distribution systems composed of highly specialized television distribution technology. This document specifies software interfaces to cable systems to enable a broad set of energy monitoring and management applications. Interfaces may be defined at the level of individual devices, collections of devices including an entire facility, and networks spanning multiple facilities. Applications that influence service delivery in order to attenuate energy consumption are called adaptive power applications. The set of device and system level interfaces that support such applications are Adaptive Power System Interfaces.

“To minimize the impacts of new IP products and services while increasing profitability, MSOs need to reduce data center energy costs.”

EMS Chairman Simpson Cumba, Comcast Cable Corporation

Be Energy Engaged

Do your part to power cable's success! Bring your expertise to EMS. Promote profitability through interoperability. Collaborate to construct energy standards to which promising technologies will comply. This comprehensive, cohesive endeavor will enable advanced technologies to flourish—to fulfill their potential—ensuring a prosperous future.

Visit www.scte.org/standards for dues details and to apply online. Join today!