Improving Sustainability On College Campuses

In addition to efficient lighting, heating, cooling and air exchange improvements, college campuses are instituting best practices when it comes to internet accessibility using strategies that reduce both energy and environmental impacts.

Streaming Content is Energy Intensive

For an individual to stream video content, it has to travel through a complex network – i.e. cables, routers, data centres etc. – that runs on vast sums of electricity. This electricity in turn generates carbon dioxide – which can leave a devastating impact on the environment.

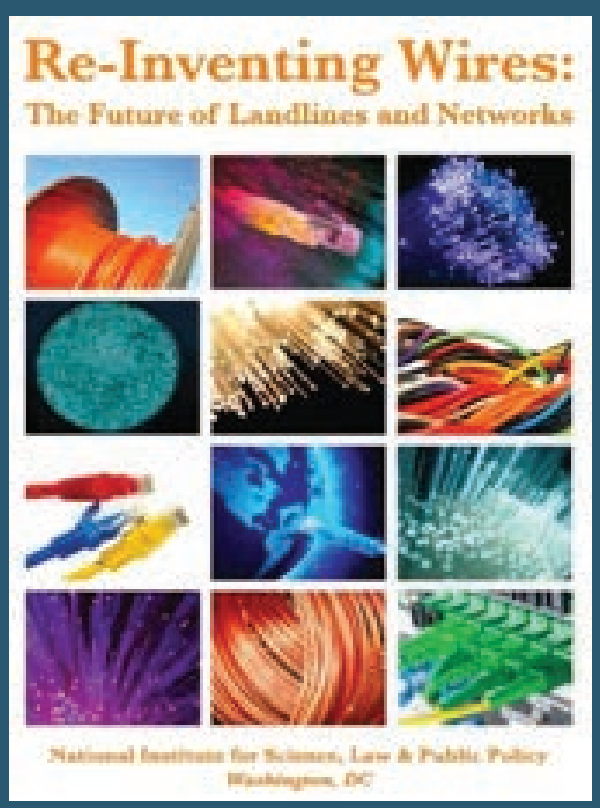
The advent of zoom and hybrid classes and video consumption by young adults overall has unintended implications for energy consumption.

A recent analysis showed that if 64 million people stream Season 3 of Stranger Things the energy use is equivalent to driving 420, 977,778 miles and emitting 189,440,000 KG of Co2

...but it can be done more energy efficiently…

For instance, TV shows, movies or educational content from the internet can be downloaded when you're connected on a wired connection (the fastest way) or via wi-fi, and watched later without using any cellular data or internet connection.

The report: "*Re-Inventing Wires: The Future of Landlines and Networks*," reveals:



"Internet energy consumption is growing at an unsustainable rate, with the biggest culprits being data centers and (most significantly) wireless access networks.

The main energy culprit is wireless video. A wired connection (copper, DSL, cable, fiber) is the most energy efficient method to access the network. ***Access through WiFi increases the energy use***.

However, if wireless access is made through a cellular network tower, energy use soars. Wireless traffic through 3G uses 15 times more energy than WiFi, while 4G consumes 23 times more…."

Colleges Campuses should rely on Fiber to the Premises (FTTP) and can take advantage of new cabling standards such as Single-Pair-Ethernet with Power-Over-Ethernet (SPE/POE or PoDL) that allow portables (phones and tablets) to operate in a wired mode and charge their battery at the same time.

Automated Solutions

Some College facilities use more energy than others but can take advantage of ***automated technology*** to reduce energy consumption. For example, ***utilizing appliance timers*** and automated ***power strips*** for all appliances can reduce energy use during off peak times and cut down on phantom energy use overnight in all campus spaces. There are also ***patented techniques*** that can reduce energy use and environmental contaminants from wireless access appliances.