

ARUBA AT A GLANCE

ARUBA GREEN AP MODE

AI-powered energy savings with automated control

INTRODUCTION

Today's mobile and application technologies can do amazing things to help us work more efficiently and make our lives simpler. But these devices and apps consume energy – and in today's competitive business climate, energy costs impact the bottom line. Aruba Green AP mode enables organizations to reduce power consumption and operating costs without affecting the end user experience.

Technology does amazing things – but it comes at a cost

In the decade prior to The Great Recession, electricity demand increased by 18%. And in the decade prior to that, demand jumped more than 25%. Prior to the 2006 recession, the U.S. Energy Information Administration projected the demand would increase by 20% by 2017. Technology, Mobility and IoT all contribute to these increases – and that has had a direct impact on the bottom line for today's businesses.

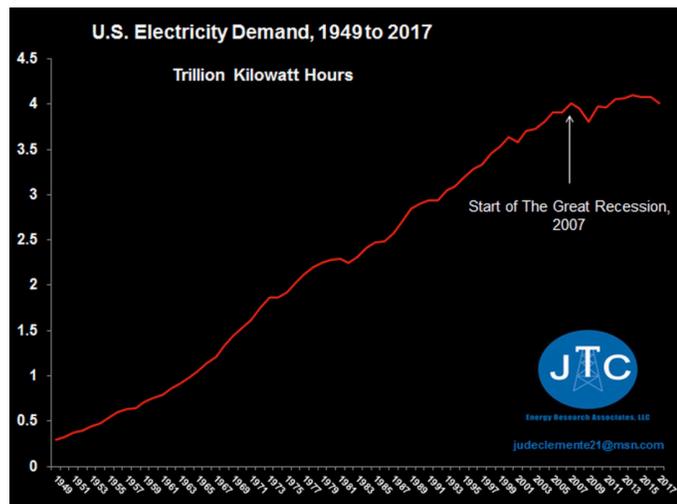
To enable the growing use of mobile technology, wireless local networks (WLANs) are being deployed at a rapid pace all around the world, which often contain a large number of idle wireless access points (APs). This is creating additional demand for electricity as the expectation is for technology to work at all times.

Technology to the rescue

This increasing demand to keep things running means that organizations need to actively look for ways to conserve energy and reduce operational costs. Easy fixes like shutting off the lights when employees leave the office and turning off computer monitors can help, but technology makes it easier. Sensors can detect when no one is around and automatically turn off lights. And computer monitors can shut themselves off when not being used. But more can be done.

WHAT IS ARUBA GREEN AP?

To enable users to be as productive as possible, Wi-Fi access points must be running so that wireless devices can establish connections. But, like lights in the office and computer monitors, these devices are only needed when users are present. Using AI-powered technology, Aruba APs are able to transition into "sleep mode" in areas where the demand for connectivity stops – reducing electricity demands, saving money and adhering to a green environmental footprint.



Source: Forbes, "Why U.S. Electricity Demand Will Increase"



Aruba APs are able to transition to "sleep mode" – reducing electricity demands and saving money



Green AP mode can result in power savings of more than 70%

How Green AP mode works

Aruba access points work seamlessly with Aruba NetInsight to automatically power down when connectivity demand ceases, and power up when demand returns. NetInsight uses predictive analytics and machine learning to identify usage patterns. After a brief learning period, NetInsight can predict when demand stops and when it starts.

When demand stops, NetInsight selectively instructs those access points that are idle to enter “deep sleep mode” which reduces electricity usage. As connectivity demands return, NetInsight instructs the access points to return to full power so they can begin serving user devices.

The powering down of access points might be a concern as business leaders look to avoid downtime and lost user productivity, but Aruba Green AP has this covered in 3 ways:

1. The NetInsight algorithm makes sure there is always a nearby AP that is active for providing telemetry information and to avoid coverage blind spots.
2. Access Points placed in deep sleep mode are always able to receive “wake on LAN” packets at which point the sensor will power up and begin providing service.
3. In environments such as healthcare facilities where Wi-Fi access is critical, Green AP mode can be disabled.

Savings estimates

Each Green AP-enabled access point can cut electricity usage from approximately 21 watts at full PoE power to just 6 watts in sleep mode – resulting in a savings of more than seventy percent. For small offices with just a few access points, this may not seem like much of a savings. But when it comes to energy savings, every bit helps. And when energy savings come automatically and without user impact, it’s a no-brainer.

For larger organizations such as malls, conference centers or major educational institutions with tens of thousands of access points, the aggregate savings can be pretty significant.

SUMMARY

Technology will continue to increasingly enhance our personal and professional lives, and frustrate those that need to provide it. As we adopt and use more technology, we need to constantly look for ways to be more efficient with our energy consumption. It’s a given that technology must consume electricity – but now, it can also be used to help conserve it.

The use of artificial intelligence and machine learning with Aruba NetInsight works seamlessly with Aruba access points to intelligently and automatically place access points into sleep mode when connectivity demands stop, and then wake them when demand for service returns. With Green AP mode, organizations can reduce electricity usage up to 70% – savings that can be linked directly to an organizations’ bottom line.