

Moving away from an “always on” culture: a new approach to energy management

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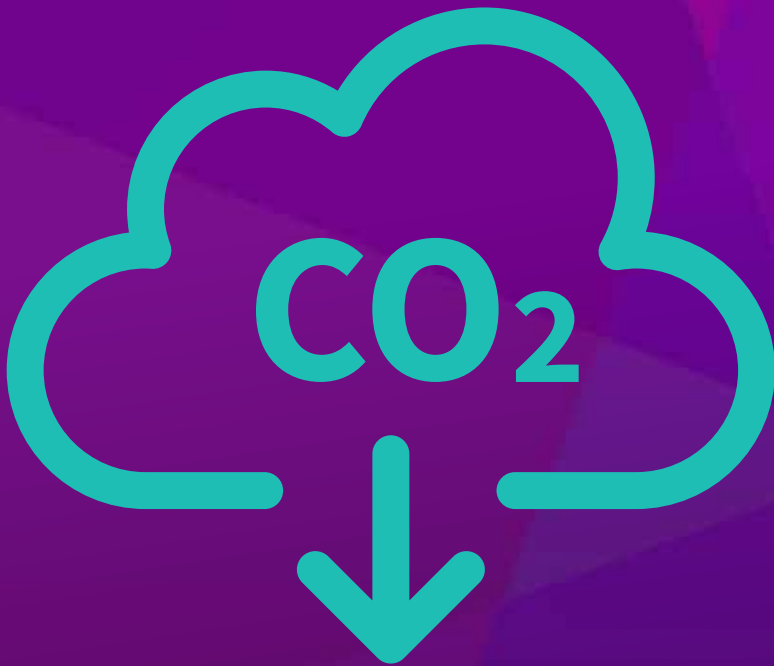
Chief Technologist - Innovation





WISERWATTS

Optimising your network services doesn't have to impact your business operations. Maintain a fully functional network and retain full control, while powering down the network when not required.



Doing things differently: how WiserWatts from CAE Labs is decarbonising IT

The energy used by data centres alone makes up 1% of global carbon emissions¹, while tens of millions of Cisco devices are online 24/7, when they don't really need to be.

So how do we develop a more energy-conscious way of working. As a technology organisation with a focus on innovation and sustainability, the innovators at CAE Labs were motivated to find a solution.

WiserWatts, the intelligent energy saving solution from CAE Labs, works by turning off network services whenever it is not needed for business operations.

¹[International Energy Agency: Data Centres and Data Transmission Networks](#)

But the network needs to be on 24/7...

If you come from a traditional IT networking background like I do, you might understandably be sceptical about this type of energy-saving strategy. Networks are designed to stay on continuously, so how can services and functionality possibly be maintained if you are powering down every night?

Here at CAE Labs that's exactly what we've been enabling organisations to do, optimising their energy usage and making significant cost savings. In this whitepaper, we address the valid concerns that IT professionals commonly have, about moving away from an "always on" culture. We'll explain with real-life examples how WiserWatts has enabled customers to drastically reduce their energy usage, save money and maintain a fully operational service.



Case Study: Wrexham Council

**Simon Billington, ICT and Infrastructure Manager,
Wrexham County Borough Council**

We have a service level agreement with 70 schools in Wrexham, looking after their IT infrastructure including network, telecoms and devices.

One of the roles I have in education is to look at the estate and see how we can start to move towards NetZero within our schools. The work we've done around WiserWatts, being able to set power policies on our switches and turn off over a thousand wireless access points overnight is a game changer.

We did an initial proof of concept with a handful of schools before rolling it out. We now shut our network off at 8.30pm at night and it comes back on at 7.30am in the morning. There is no impact on teaching and learning; the network just comes on. Even though we told all our schools I don't think they have noticed. But the savings made are phenomenal.

- > 52% reduction in (Wi-Fi) carbon emission waste and energy costs
- > £2,030 saved per month
- > 1.25 tonnes of carbon emissions saved each month

[Read more on this customer success story:
A Partnership for the Future](#)

How it works in practice

WiserWatts uses policy-driven power management to eliminate energy waste on the IP network.

The onboarding process is frictionless by design. It takes an organisation less than 30 seconds to activate WiserWatts and start saving energy.

- > When you sign up for WiserWatts, you add two CAE Labs email addresses to your Cisco Meraki Dashboard, to invite us to add your organisation to the service. We onboard you onto WiserWatts and Network Intelligence, our infrastructure monitoring and energy reporting dashboard.
- > The same day, we'll email you with a link to set up your new power policy in WiserWatts, which will be applicable straight away to start saving that evening.
- > The following day, you will receive your first Network Intelligence dashboard, which shows what (PoE) power you've consumed over the last 30 days and provides a great baseline to work from.
- > You can make adjustments at any time, with the granularity to implement as many different power policies as you need².

Reporting the impact

Ongoing analysis of your energy saving journey allows you to measure the impact it has, in both the short term and month-on-month. Monthly reports with clear and simple graphics will demonstrate the cost savings and carbon emission reduction you have made, for greater strategic insights that support others across the business, such as those responsible for the organisation's ESG strategy or the Head of Sustainability.

Getting started with your power policy

Your power policy specifies the days and times when you want to turn off your PoE devices, and when they come back on. Using your Cisco Meraki Dashboard platform, you have the flexibility to set the policy at a network level, at a switch level or a port level, covering thousands of locations and devices.

How you apply the power policy within your organisation is up to you, but we recommend not running straight into applying a blanket power policy across the business. Starting with a Proof of Value allows you to try out the power policy and approach to decarbonisation before moving forward with plans to expand and scale up.

Which architectures can WiserWatts be used with?

Currently, the WiserWatts solution is available for use with Cisco Catalyst Switches in Managed-Mode, Cisco Meraki Switches (MS) and Wireless Access Points (MR/CW) on Cisco Networking Cloud (Meraki). This solution can be used with any device that utilises PoE up to 90 Watts (UPOE+).

²A maximum of up to five power policies per network is supported on the Cisco Meraki platform.



Is powering off network services going to impact business operations?

No, powering off network services using WiserWatts will not impact your business operations when they are not needed and everything will continue to function as normal when powered back on each morning.

However, this is providing that a good level of due diligence and planning has been completed before activating across the business, identifying which parts of the network and devices are not needed at certain times. Key to the initial scoping exercise is to identify connectivity requirements for critical systems that require always-on connectivity, such as:

- > BMS solutions
- > Alarm systems
- > CCTV
- > Door Access Control
- > Cisco Meraki MT Environmental Sensors
- > Any other applications/services that are deemed essential for 24/7 operation

It's good to know that you'll always stay in control, and it's always possible to make changes to your power policies quickly and when needed. WiserWatts provides granular control of individually connected PoE devices that can be powered off and on.

From experience, CAE recommends not running straight into applying a blanket power policy across the business. Instead, we suggest starting with a small Proof of Value before moving forward with plans to expand and scale up.

We don't want to be bombarded by false positive alerts from networking devices going offline that create tickets/incidents in our ITSM platform. Will this be an issue?

No, this won't be a problem. WiserWatts automatically enables a feature called "mute notification" on each network and configuration template in use so that IT Teams and Service Desks do not receive alerts as part of the daily power cycling procedure.

Currently this capability is available for Cisco Meraki Wireless (MR/CW) only; however, CAE Labs has a solution that can condition and suppress other notifications from the Cisco Meraki platform if needed.

What if we need to update and patch the firmware on our networking equipment or connecting devices?

Through the WiserWatts platform you can rapidly and temporarily disable the powering off schedule so that you have a maintenance window to upgrade the firmware of devices as and when needed.

Will hardware longevity be impacted?

WiserWatts has been powering off and on thousands of Wireless Access Points each day for the past 2+ years with no impact.

This is a topic that CAE has been working on with Cisco Meraki since 2021. In the event of a potential hardware failure, regardless of the cause, the standard warranty and RMA process would be initiated.

When the process for warranty and [RMA is followed](#), and the Cisco Meraki Technical Support Team has attempted to troubleshoot the issue you called in for, you will be warranty-compliant, and a replacement will be shipped.

[Read more: Frequently Asked Questions About WiserWatts](#)



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Doing it different, for a better future

At CAE Labs, we challenge the status quo, disrupting the de facto ways of working that have become normalised over the decades. The innovators in our CAE Labs practice think differently, creating new processes and breaking down barriers in technology.

WiserWatts, the brainchild of CAE Labs, represents just such a mind shift, eliminating energy waste and converting that into cost savings and reduced carbon emissions. It's a revolutionary new approach to sustainable networking.

And it doesn't end there. We look forward to a future in which this energy-saving process happens by default, right from the start. Many of our customers are now deploying WiserWatts in new areas of the business where their power policy is already applied before any energy is consumed: decarbonising at the point of commissioning the network, rather than applying the savings retrospectively.

Meanwhile, at CAE we're constantly rethinking and evolving our solution offering, aiming to provide greater efficiency for WiserWatts users. We're invested in developing new ways for customers like you to be able to eliminate even more energy waste.

What Next?

The innovators at CAE Labs are working on many more use cases and ways to save on OpEx run costs and carbon emissions, such as the infinite opportunity of powering off any technology within a business with the Smart Power Controllers from Cisco Meraki, devices such as:

- > Cisco Meraki MS Switches at the Access Layer
- > Interactive Whiteboards
- > Digital Signage
- > ICT Suites
- > Multifunction Printers
- > Projectors
- > Really anything that connects to a standard kettle lead (IEC C13)

Cisco Sustainability Accreditations

Our partnership with Cisco has achieved multiple distinguished awards including: -

Global



**Winner
3rd Place**

Cisco Global Partner
Innovation Challenge 2023



**Winner
3rd Place**

Cisco Global Digital
Sustainability Challenge 2022



**2021
Finalists**

Cisco Global Partner
Innovation Challenge 2021

Regional

Cisco EMEA Sustainability Partner of the Year 2023



Country

Cisco UK&I
Innovation
Partner of
the Year 2023



Cisco UK&I
Sustainability
Partner of the
Year 2023



**Winner
3rd Place**

Cisco UK&I Sustainability
Challenge 2023



**Winner
1st Place**

Cisco Fast Future
Innovation Awards 2023

Industry

CRN Sustainability in Tech Awards 2024:

Judge Commended: Best Sustainable Customer Project of the Year
(Finalist: Sustainability Champion - Reseller & Green Shoots Award)



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SUSTAINABILITY
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"Sustainability cannot be advanced by one person or company alone. It requires passionate people working together and being the change they want to see. I am proud to collaborate with CAE on driving sustainability in the industry. They are pioneers who leverage their capabilities and innovative spirit to create positive impact together with us. Their expertise, the tools they provide and how they integrate with our platforms make it simple for organizations to achieve sustainable outcomes today, such as energy savings and reducing travel requirements."

Christian Zachriat, Global Sustainability Lead, Cisco Meraki

Make a real difference to your carbon consumption and save significantly on your energy costs, all while maintaining full functionality across the business.

Book in a call with our dedicated specialists and we'll work with you to move away from an "always on" culture and start eliminating power waste in your organisation.

Book your call today

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