

# The facility manager's guide to the energy crisis

How indoor air quality monitoring can help you save energy and money.



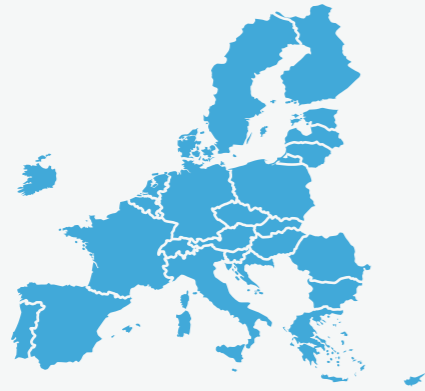
Since 2021, businesses and households around the world—most notably in the EU and US—have been living under the possibility of an energy crisis. Now, with energy shortages and staggering price rises coming into play, a cold and dark winter is looking even more likely.

With this in mind, our attitudes toward energy consumption and waste have to be a little different.

As a facility manager, one of the easiest, most important, yet least recognized ways to save energy is to reassess your indoor air quality and HVAC systems.

Here's a quick overview of why this matters.





## EU:

Buildings consume **40%** of Europe's energy<sup>1</sup>, and approximately **75%** of them are not energy efficient<sup>2</sup>.



## US:

**30%** of the energy used in buildings is wasted. Moreover, **30-40%** of a commercial building's energy use comes from heating and cooling alone<sup>3</sup>.



## UK:

Thousands of office buildings across the UK are losing **£60 million** in wasted energy every year. That's enough to power more than 100,000 homes<sup>4</sup>.



## AUSTRALIA:

HVAC and lighting can account for up to **64%** of a typical office building's energy consumption<sup>5</sup>.

<sup>1</sup> | [ec.europa.eu/energy/topics/energy-efficiency/energy-efficient-buildings/energy-performance-buildings-directive\\_en](https://ec.europa.eu/energy/topics/energy-efficiency/energy-efficient-buildings/energy-performance-buildings-directive_en) <sup>2</sup> | [skanska.pl/4a58d8/siteassets/oferta/biura/raporty-i-standardy/raport-zuzycia-energii-w-budynkach-biurowych/energy-consumption-in-office-buildings-report.pdf](https://skanska.pl/4a58d8/siteassets/oferta/biura/raporty-i-standardy/raport-zuzycia-energii-w-budynkach-biurowych/energy-consumption-in-office-buildings-report.pdf) <sup>3</sup> | [trueoccupancy.com/blog/how-buildings-waste-energy](https://trueoccupancy.com/blog/how-buildings-waste-energy) <sup>4</sup> | [twinview.com/insights/uk-office-buildings-are-wasting-60m-of-energy-every-year](https://twinview.com/insights/uk-office-buildings-are-wasting-60m-of-energy-every-year) <sup>5</sup> | [researchgate.net/publication/317622121\\_The\\_New\\_NABERS\\_Indoor\\_Environment\\_tool\\_-\\_the\\_Next\\_Frontier\\_for\\_Australian\\_Buildings](https://researchgate.net/publication/317622121_The_New_NABERS_Indoor_Environment_tool_-_the_Next_Frontier_for_Australian_Buildings)



# How are governments softening the impact of the energy crisis on businesses?

In the US and EU, there are government initiatives designed to mitigate the impact of the crisis. However, the vast majority of these measures are aimed at households, not businesses.

Nevertheless, there is a substantial energy-saving opportunity for companies that can soften the impact of the crisis on households.

What's more, countries like Italy, France, and Germany have proposed legislation that should benefit organizations with buildings and facilities.

# France



Since February 2022, France has reduced the electricity tax from €22.50 per megawatt hour to €1 for households and 50 cents for businesses. This measure is set to last until January 2023<sup>6</sup>.



In July 2022, the government announced that it would tackle the energy crisis by fully nationalizing Electricité de France (EDF) and acquiring the remaining 16% share for €9.7 billion<sup>7</sup>.



French lawmakers have also approved a relief package of around €24 billion for households and businesses<sup>8</sup>.

<sup>6</sup> | [latribune.fr/entreprises-finance/industrie/energie-environnement/la-taxe-sur-l-electricite-reduite-au-minimum-903013.html](https://latribune.fr/entreprises-finance/industrie/energie-environnement/la-taxe-sur-l-electricite-reduite-au-minimum-903013.html) <sup>7</sup> | [theguardian.com/business/2022/jul/19/france-to-pay-nearly-10bn-to-fully-nationalise-edf](https://theguardian.com/business/2022/jul/19/france-to-pay-nearly-10bn-to-fully-nationalise-edf) <sup>8</sup> | [france24.com/en/france/20220804-french-mps-approve-20-billion-euro-package-to-help-with-soaring-inflation](https://france24.com/en/france/20220804-french-mps-approve-20-billion-euro-package-to-help-with-soaring-inflation)

# Germany



In response to having the highest energy prices in the EU<sup>9</sup>, Germany has introduced a €5 billion aid package to support large, energy-intensive companies across industrial sectors. In September 2022, this was extended to all small-to-medium-sized firms<sup>10</sup>.



The government also has plans to help with energy efficiency. In early 2022, a new subsidy program was proposed to increase the energy efficiency standard for new buildings to KfW55 by 2023<sup>11</sup>.



Robert Habeck, the economy minister, stated that the government also intends to earmark up to €14 billion<sup>12</sup> per year in subsidies for renovations to make existing buildings more energy efficient<sup>13</sup>.

<sup>9</sup> | [ec.europa.eu/eurostat/statistics-explained/index.php?title=Electricity\\_price\\_statistics](https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Electricity_price_statistics) <sup>10</sup> | [theguardian.com/world/2022/sep/08/germany-to-extend-energy-subsidies-to-smaller-firms-amid-closure-fears](https://theguardian.com/world/2022/sep/08/germany-to-extend-energy-subsidies-to-smaller-firms-amid-closure-fears) <sup>11</sup> | [bloomberg.com/news/articles/2022-03-24/germany-to-cut-fuel-tax-to-help-ease-burden-of-energy-prices](https://bloomberg.com/news/articles/2022-03-24/germany-to-cut-fuel-tax-to-help-ease-burden-of-energy-prices) <sup>12</sup> | [reuters.com/business/sustainable-business/germany-earmarks-up-14-bln-make-buildings-more-energy-efficient-2022-07-26/](https://reuters.com/business/sustainable-business/germany-earmarks-up-14-bln-make-buildings-more-energy-efficient-2022-07-26/) <sup>13</sup> | [vg.no/nyheter/utenriks/i/z7R7J9/derfor-sliter-hele-europa-med-skyhoeeye-stroempriser](https://vg.no/nyheter/utenriks/i/z7R7J9/derfor-sliter-hele-europa-med-skyhoeeye-stroempriser)

# Italy



In May 2022, Prime Minister Mario Draghi approved a €14 billion aid package to help families and businesses as well as to expedite the deployment of renewable energy and regasification plants<sup>14</sup>.

<sup>14</sup> | [corriere.it/economia/aziende/cards/bonus-sociale-retroattivo-taglio-accise-fino-all-8-luglio-200-euro-redditi-bassi-cosa-c-decreto-aiuti/superbonus-110percento-le-villette-valido-fino-30-settembre.shtml](https://www.corriere.it/economia/aziende/cards/bonus-sociale-retroattivo-taglio-accise-fino-all-8-luglio-200-euro-redditi-bassi-cosa-c-decreto-aiuti/superbonus-110percento-le-villette-valido-fino-30-settembre.shtml)



# Nordic countries



The Swedish government approved a new package of measures in March 2022 to tackle rising electricity prices. Until October 2022, taxes on diesel and petrol will be reduced to the lowest level permitted under EU regulations<sup>15</sup>.



In April, Norway's electricity support subsidy program for households and firms was extended to March 2023<sup>16</sup>.



Two months later, the Danish Energy Agency (DEA) launched a national energy-saving campaign urging everyone to save gas and electricity<sup>17</sup>. Finland is expected to follow suit this winter<sup>18</sup>.

<sup>15</sup> | [government.se/press-releases/2022/03/government-presents-package-of-measures-to-address-rising-fuel-and-electricity-prices-as-a-result-of-the-invasion-of-ukraine/](https://www.government.se/press-releases/2022/03/government-presents-package-of-measures-to-address-rising-fuel-and-electricity-prices-as-a-result-of-the-invasion-of-ukraine/) <sup>16</sup> | [thelocal.com/20220310/norwegian-government-to-extend-energy-bill-subsidy-scheme-until-next-year/](https://thelocal.com/20220310/norwegian-government-to-extend-energy-bill-subsidy-scheme-until-next-year/) <sup>17</sup> | [spglobal.com/commodityinsights/en/market-insights/latest-news/electric-power/062822-denmark-launches-energy-saving-campaign-european-gas-supply-under-pressure](https://spglobal.com/commodityinsights/en/market-insights/latest-news/electric-power/062822-denmark-launches-energy-saving-campaign-european-gas-supply-under-pressure) <sup>18</sup> | [iltalehti.fi/kotimaa/a/87a7ddca-d341-4b95-8a79-bdb7b6870c6b](https://iltalehti.fi/kotimaa/a/87a7ddca-d341-4b95-8a79-bdb7b6870c6b)



# United States



In the state of Virginia, Congressman Don Beyer introduced the Airborne Act in May 2022<sup>19</sup>. This legislation aims to help businesses reduce HVAC and energy costs by offering tax credits to building owners who conduct IAQ assessments<sup>20</sup>.

<sup>19</sup> | [beyer.house.gov/news/documentsingle.aspx?DocumentID=5520](https://beyer.house.gov/news/documentsingle.aspx?DocumentID=5520) <sup>20</sup> | [newsweek.com/proposed-tax-credits-could-improve-iaq-save-energy-1728889](https://newsweek.com/proposed-tax-credits-could-improve-iaq-save-energy-1728889)



# What role should businesses play during the energy crisis?

Governments around the world, especially in the EU, are looking to adopt a demand-reduction strategy (alongside energy diversification, rationing, and boosting gas storage)<sup>21</sup>.

This means that a key focus will be to encourage households and businesses to avoid unnecessary energy use.

Some experts even speculate that the rationing of electricity may become a necessary measure this winter, which could lead to the possibility of selling and reallocating excess energy that businesses don't use to households that need it.

There have also been predictions that schools and commercial offices across Europe will be closed during the colder months.

If this becomes a reality, businesses will need to play a critical role in making sure that there is enough spare energy for vulnerable households.

A key focus will be to encourage households and businesses to avoid unnecessary energy use.

<sup>21</sup> | [economist.com/europe/2022/07/11/europe-is-preparing-for-russian-gas-to-be-cut-off-this-winter](https://www.economist.com/europe/2022/07/11/europe-is-preparing-for-russian-gas-to-be-cut-off-this-winter)

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# How can Airthings for Business help companies cut energy costs?

As a facility manager, you can prepare for the energy crisis by finding intelligent ways to monitor and control your energy usage. The same principle also applies to office managers and building owners. **After all, the cheapest energy is the one we don't use.**

According to a study conducted by multinational construction firm Skanska, tenants are, on average, responsible for 14% to 65% of an office building's total electricity consumption. However, these figures can easily be reduced. Energy waste is common in most commercial buildings because preset timers or manual controls are often used to manage HVAC systems.

This makes them energy-inefficient and expensive to operate. And because factors like changing timetables, flexible working, and real-time fluctuations are not taken into account, energy is almost always being wasted.

So how can you solve this problem without sacrificing the health and wellbeing of your buildings' occupants?

**Tenants are, on average, responsible for 14% to 65% of an office building's total electricity consumption.**

Previously, it was difficult to have good indoor air quality and an energy-efficient HVAC system at the same time. Now, with smart IAQ monitors from Airthings for Business, you can benefit from both with ease.

Our Airthings for Business solution works by providing live indoor air quality and occupancy data, which can be used to automatically optimize your HVAC system in real time.



On average, Airthings for Business customer saves up to **20%** on energy costs.

# Airthings for Business: our solution in action



# Proptech Bergen

When a 4000m<sup>2</sup> commercial building in Norway was turned into **Proptech Bergen**, most of the workspace had been unoccupied for five years. Much of the property's technical equipment was old, outdated, or broken. But the property's conversion into a modern office community didn't begin with expensive refurbishment or laying miles of cable.

Instead, the owners of Proptech Bergen installed Airthings for Business monitors in every room to understand how the property's existing HVAC system could be improved. This allowed them to cut energy costs by 20% just by dropping nighttime and weekend temperatures by 4° degrees, saving them from having to spend an additional €18,000 on HVAC specialist visits.



**CUT ENERGY COSTS BY 20%**

by dropping nighttime and weekend temperatures by 4° degrees

# East Porter School Corporation

Headquartered in Indiana, USA, East Porter School Corporation serves schools in three local townships.

When Craig Kenworthy, the facilities director, installed Airthings for Business monitors at Morgan Middle-High School and Morgan Elementary School, he was able to identify faulty dampers that were causing elevated CO2 levels. This saved East Porter School Corporation 210 hours of manual work.

Just as importantly, the organization was also able to save \$23,250 in energy costs.



THE ORGANIZATION SAVED

# \$23,250

in energy costs

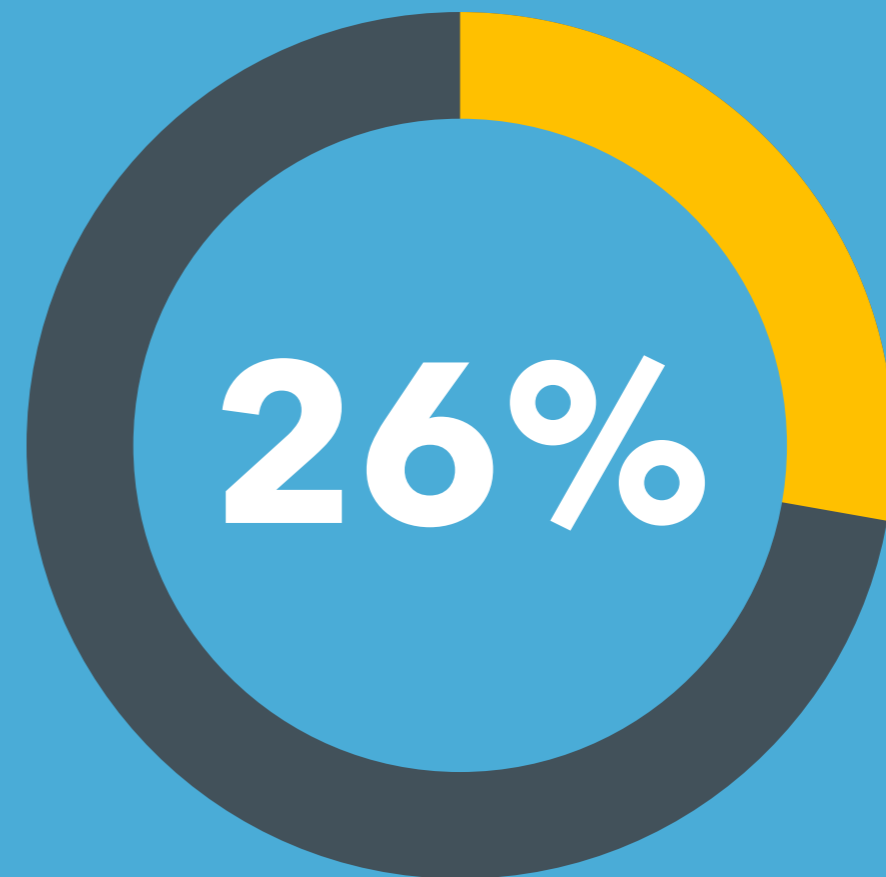


# Toma

Toma, one of the largest facility management companies in Norway and Denmark, had one simple goal: to save energy without sacrificing the wellbeing and comfort of their buildings' occupants.

With the help of Airthings for Business monitors, the company's stakeholders realized that too much energy was being used on weekends. This influenced their decision to turn off the heating during these periods, enabling them to cut their energy usage by 26%.

Toma was also able to prove that their buildings consistently recorded healthy indoor carbon dioxide levels. This allowed them to effectively ensure the safety of all occupants and visitors.

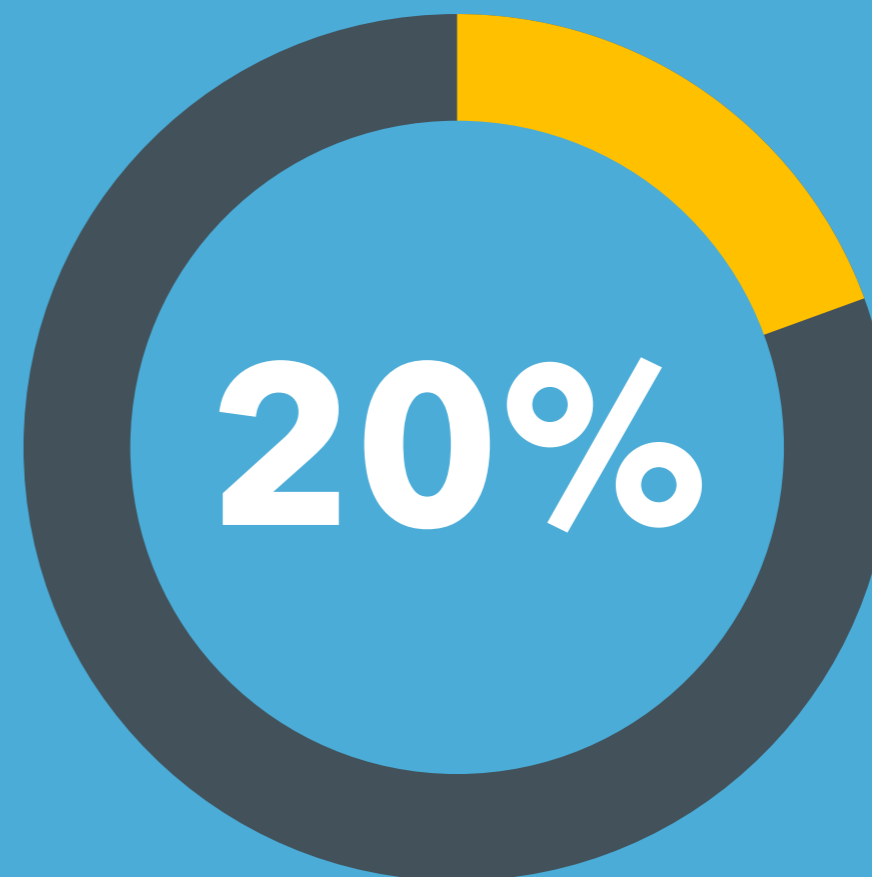


**CUT ENERGY USAGE BY 26%**  
by turning the heating off on weekends

# Frydenbø

**Frydenbø Group**, an industry leader in Norwegian real estate, owns over 110,000 sq/m2 of commercial space. Because of the sheer breadth of its portfolio, excellent indoor air quality was a top priority as it affected the energy efficiency of its properties in the long term.

Thanks to real-time data from Airthings monitors, the company's top decision-makers noticed that a significant part of their energy bill went to heating and cooling air that was leaking out of their buildings. After they took steps to fix this problem, they were able to reduce their energy consumption by 20%.



**CUT ENERGY USAGE BY 20%**

by fixing their heating and cooling system

# Safeguard your company from the energy crisis with Airthings for Business



Every building is different, so there is no one-size-fits-all solution to the dilemma.

However, with **Airthings for Business**, facility managers can cut energy costs, improve bottom lines, and shield vulnerable households from soaring prices.



# Improve energy efficiency in any building

[Start now](#)