



# ESOS Phase 2

## ESOS moving into Phase 2: A chance to recap and prepare

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# Summary

In 2012 the UK Government established ESOS, the 'Energy Savings Opportunity Scheme', to implement the EU Energy Efficiency Directive. This mandatory scheme requires large organisations to audit their energy use and identify cost-effective energy saving measures every four years.

The ESOS Phase 2 deadline is 5th December 2019 and organisations are being urged to start their ESOS Phase 2 journey now, regardless of whether they took part in Phase 1 or if they're new to the scheme – much of the data required for Phase 2 will start to accrue from 1st January 2018.

ESOS qualifying organisations should be planning for their Phase 2 audits now. Alternatively, organisations can seek ISO 50001 compliance and certification. However, this route to ESOS compliance will also require early planning, as it often takes over 12 months to implement a best-practice energy management system and achieve certification.





# What can ESOS do for me?

ESOS is not just a legal requirement, it can bring reductions in energy usage, cost, and carbon footprint which will help to save you money. ESOS enables organisations to meet and surpass best-practice compliance and energy efficiency goals. Savings from ESOS can be reinvested to self-fund business projects that would be otherwise unachievable.

Gaining a deeper insight into a organisation's energy usage through comprehensive metering and data visualisation services can make your energy audits less of a headache and help you to clearly identify where those money saving opportunities lie.

## Preparing for the deadline

The regulations require qualifying organisations (with some public bodies being exempt) to take three important steps before the compliance date of 5 December 2019:

- 1 Measure their total energy consumption for a 12 month period that must fall between 1st Jan 2018 – 30th Nov 2019
- 2 Conduct audits to identify cost-effective energy efficiency opportunities; and
- 3 Report compliance to their national scheme administrator – the Environment Agency in England, SEPA in Scotland, NIEA in Northern Ireland and NRW in Wales.

Unless a company's total energy consumption is covered by ISO 50001, routes to compliance must cover 90% of an organisation's total energy consumption and need sign-off from a qualified Lead Assessor who is a member of a government approved professional body. Fines for non-compliance are administered on a case by case basis, but can include an immediate £50,000 fine or £500 per day for up to 80 workings days.



# Energy Data Collection



The energy data you will need to record will fall into several categories including; grid electricity, network gas, energy from renewables, use of heat along with transport and other combustible fuel types. Significant core utilities, such as electricity and gas, are metered through AMR (Automated Meter Reading) meters and data loggers. IMServ is a key provider of energy data collection and metering services, collecting and processing over 25% of all UK grid electricity data every day, as well as metering and sub-metering in gas, water and renewables.

Peter Leggett, Carbon & Energy Consultant at IMServ recalls:

“From the outset the intent was that an organisation would create base line consumption, challenge itself and reflect on its energy reductions. Thereby, each four year ESOS Phase should reflect ‘improvement being realised’. Ownership of the process at Director level was paramount to add weight to energy management activities and to challenge in event of inaction.”



# Best routes to compliance

As we begin 2018, now is the time for organisations to review what they achieved during the last phase of ESOS, determine if they are still a required participant and then sharpen the pencil ready for Phase 2.

**The key dates for phase 2 are:**

## **Qualification**

State of business on 31st December 2018

## **Compliance Period**

December 2015 – December 2019

(complete energy audits within the cycle for submission)

## **Reference Data**

A 12 month block, which must include data at 31st December 2018.

It is important to begin collating your reference data now, in order that you can move forward with the full audits in good time. Putting this off now may lead to difficulties in hitting deadlines and some may find it difficult to find an assessment auditor in good time, resulting in a late delivery and risk of penalties.

At the end of ESOS Phase 1 many submissions were late; partly due to a shortage of auditors, but predominantly by lack of participant activity in the early stages. Compliance extensions were provided as the process was in its infancy, but it is unlikely that the Environment Agency will afford participants the same leniency in Phase 2.

Peter continues “Whilst there is no formal requirement to have converted the saving opportunities identified into true savings, each participant should reconcile the value they could, or have, brought to their own organisation. The Government sees energy efficiency as a win-win. In simple terms, ESOS should be the stepping stone to organisations using less, reducing energy bills, and reducing emissions.”

It is expected that Phase 2 audits will highlight significant gaps between those organisations who simply took ESOS as a tick-box exercise, from those who have enacted observations and reduced energy use. Although the final submission is not needed until December 2019, there are preparations to make and to take in early 2018.



# ESOS Phase 2 participation

It is important to understand if your business qualifies for ESOS as you must notify the Environment Agency, as failure to do so may result in penalties.

If your organisation, at the qualification date of 31st December 2018:

- 1 Employs 250 or more people, OR
- 2 You have a turnover in excess of £38.9M AND an annual balance sheet total in excess of £33.5M

Then you qualify for ESOS and must comply with the regulations.

Group undertakings may incorporate the whole within a single participant or require each large organisation to report its own energy opportunities.

## Understanding the process

It's imperative that you review your processes for gathering energy data:

- a) Are you getting maximum benefit from your AMR metering of core utility data?  
Can you improve the presentation of that data?
- b) Have you re-engaged with Directors for internal endorsement of process and sign off?

You need to appoint a Lead Assessor in order to:

- a) Meet, review and discuss Phase 1 submissions – were savings converted?
- b) Review your current audit data to see if it is sufficient for compliance purposes?

In order to make the most of ESOS, organisations should see the process as part of continuous improvement, with the core aim being the reduction of energy use and energy cost and the reduction of UK carbon emissions.



# Business Solution

IMServ has long been central to UK electricity measurement and management activity. The company helps organisations make intelligent use of their energy via Half Hourly and Non Half Hourly data collection technology and specialist AMR meter, sub-meter and data logger installations.

IMServ recommends the following 7 steps for ESOS participation and accreditation:



1 First things first, appoint a lead assessor. This can be an employee or external party, provided they are listed as a member of an 'approved professional body'; accredited bodies are formally announced through the BEIS web site.



2 Carry out measurement and data analysis to enable your organisation to account for its energy impacts in either energy kWh or monetary terms. This will need to be verified through evidence based records back to a primary source (e.g. metering, stock or fleet fuel records).



3 Keep a record of building energy information for electricity and gas. This can either be done through automated metering or if your organisation is a participant of the CRCEES (Carbon Reduction Commitment Energy Efficiency Scheme) you may already have data gathering activity in place.



4 Once data collection is completed, the ESOS audit assessment should focus on those activities or assets that consume 90% of the energy consumption; often referred to as the 'significant energy'.



5 The audit should consider building energy in terms of base and peak load to identify areas or times of potential waste. From this, common savings opportunities in buildings are likely to be achieved by changes to outputs such as heating, ventilation, and lighting.



6 Organisations must identify where energy is being used, for example refrigeration or machinery. In addition, fleet records may also offer indications on driver fuel performance, route planning and maintenance.



7 The audit report needs to record the opportunity benefit for energy savings in terms of 'Life Cycle Cost Analysis' rather than simply payback period. By considering the overall long term benefits of energy efficiency to your business and the overall climate, energy savings are just asking to be made.



# Conclusion

The ESOS legislation itself cannot force the installation of energy saving equipment or define how an organisation may use, waste or save consumption. It's all about implementing a portfolio review and identifying where the energy saving opportunities are with the ambition that such greater insight will lead to organisations making energy savings. In a recent newsletter (June 2017), the Environment Agency (EA) urged organisations affected by ESOS Phase 2 to start the process sooner rather than later. The EA states "there is no reason why you shouldn't start doing the energy assessments now".




## Key reading

[www.gov.uk/government/publications/comply-with-the-energy-savings-opportunity-scheme-esos](http://www.gov.uk/government/publications/comply-with-the-energy-savings-opportunity-scheme-esos)

<https://www.carbontrust.com/news/2017/06/esos-phase-2-has-arrived/>

<https://www.edie.net/news/6/ESOS-Phase-2-begins-after-Environment-Agency-issues-fines-for-non-compliance/>

**For help getting your ESOS data in place to get your organisation ready for the 2019 deadline , please get in touch:**

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# IMServ

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