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Think Energy,
Let's Save It Together



Who We Are



ANDREW GARDNER

MANAGING DIRECTOR

Andrew studied engineering at university before embarking on a successful career within the energy sector. Andrew is a registered Low Carbon Consultant, Low Carbon Energy Assessor and ESOS Lead Assessor, winning awards in 2009, 2010 and 2012 as the low carbon consultant of the year.

Being a member of the Institute of Directors and a Licentiate of CIBSE with over twenty years' experience in the industry, he is considered an expert on CHP and climate change taxation.

An interview with Andrew Gardner - www.2ea.co.uk/CCL-Interview

 07876 196 921

 andrew.gardner@2ea.co.uk



SEBASTIAN GRAY

COMPANY DIRECTOR

Sebastian is a CIBSE registered Low Carbon Consultant, Low Carbon Energy Assessor, ESOS Leader Assessor and Energy Management System Specialist. He has also obtained qualifications in Prince2 Project Management and training from BSI in implementing ISO 50001.

Being a member of the Institute of Directors and a Licentiate of CIBSE. Sebastian has been featured in the CIBSE Journal for his knowledge of auditing within the energy management field. He also delivered seminars around ISO 50001 and ESOS at the Facilities Show at the ExCel Centre in London.

 07921 568 439

 sebastian.gray@2ea.co.uk

Services We Offer



CCL/CHPQA
Management Service



ISO 50001
Implementation & Management



Energy Saving Opportunity
Scheme (ESOS)



Display Energy
Certificates (DEC)



CHP Health Check Up



Heat Meter Verification (CHP)

A multi-sector analysis of the cost difference of 2017/2018 CCL Rates vs. 2019/2020 CCL Rates

Climate Change Levy (CCL) has been around since 2001. The Carbon Reduction Commitment (CRC) has been around, on a mandatory level, since 2007. However, the government announced in 2016 that it was abolishing the CRC.

With this loss of revenue, the government decided to increase the rates of CCL every year up to 2019. Compared to previous years, 2019 will see the largest increase in CCL to date, affecting every business that does not have an exemption, CHP scheme or self-generation.

This, in effect, is an increase of around 53% - 56% for most sectors on the cost of their CCL from 2017/2018 to 2019/2020. In short, the cost of commercial energy bills will increase significantly.

Looking at seven key sectors; hotels, supermarkets, leisure centres, hospitals, offices, schools and GP

practices and using actual energy consumption figures from these seven areas, we have analysed and outlined the cost difference between paying CCL in 2017/2018 and 2019/2020.

The overall trend across these sectors is that there is an average increase in CCL costs, per site, for 2019/2020 of 56%. This means that commercial energy bills will increase by 4% purely on CCL costs.

This does not consider the potential likelihood of energy prices increasing and or changes in energy demand. Although we have assumed that energy use will remain roughly the same in 2019/2020 as it was in 2017/2018.

The CCL rates for 2020, 2021 and 2022 will be announced in the 2018 autumn budget.

A full copy of our paper can be found at: www.2ea.co.uk/ccl-paper

Taxable Commodity	Rate from 1st April 2017	Rate from 1st April 2018	Rate from 1st April 2019
Electricity (£/kWh)	£0.00568	£0.00583	£0.00847
Gas (£/kWh)	£0.00198	£0.00203	£0.00339
LPG (£/kg)	£0.01272	£0.01304	£0.02175

Sector	Total CCL Payable (2017/2018)	Total CCL Payable (2019/2020)	Difference	Percentage Increase
Hotels	£32,510.36	£52,268.43	£19,758.07	61%
Supermarkets	£23,410.54	£35,324.32	£11,913.78	51%
Leisure Centres	£8,559.07	£13,499.74	£4,940.67	58%
Hospitals	£79,762.89	£122,013.06	£42,250.18	53%
Office Blocks	£3,196.88	£4,975.64	£1,778.75	56%
Schools	£2,336.05	£3,720.86	£1,384.81	59%
GP Practices	£424.33	£656.27	£231.94	55%

What Exemptions or Reliefs Apply to CCL?

Some exemptions or reliefs apply to CCL, including:

- **CHP Schemes**
- **Climate Change Agreements (CCA)**

CHP Schemes:

By installing and operating a CHP unit, a business can apply for CCL relief on the gas used by the CHP unit by being registered with the Department of Business, Energy & Industrial Strategy (BEIS) CHP Quality Assurance (CHPQA) Programme.

Climate Change Levy (CCL) is an energy tax to encourage business users to become more energy efficient, and to reduce their carbon dioxide emissions. CCL is applied at the time of supply and is charged only on the energy used. CCL applies to electricity, gas, liquid petroleum and solid fuels. However, exemptions for employing Combined Heat and Power (CHP) may be applicable.

What is Combined Heat and Power?

Combined Heat and Power, also known as cogeneration or CHP, is an extremely efficient process that harnesses the heat that is produced when energy is generated. By generating heat and power together, carbon emissions can be reduced by up to 30% by replacing heat that would otherwise be normally supplied by boilers.

For the majority of businesses, using CHP is one of the best ways to improve energy-efficiency and reduce energy costs, with existing users generally saving around 20% on their energy bills.

CHP schemes that are fully or partially certified as "Good Quality CHP" under the Combined Heat and Power Quality Assurance (CHPQA) programme and have obtained a Secretary of State (CHP) Exemption Certificate are exempt from the rates of CCL on the fuel they utilise.



PACKAGE 1: STANDARD PACKAGE

- Data correlation for annual submission (assumes copies of the site gas bills and CHP meter readings will be forwarded to 2EA on a monthly basis).
- Completion of the annual online CHPQA submission (assumes log-on details are provided to 2EA).
- Completion of annual HMRC documentation, inclusive of forms PP10 and PP11 for site.
- An annual reconciliation report for HMRC for site will be provided.
- 2EA will provide a monthly CHP operations report detailing CHP performance and CCL savings to the client.
- 2EA will provide consultancy services to client with regards to CCL issues.

PACKAGE 2: PREMIUM PACKAGE

- Data correlation for annual submission (assumes copies of the site gas and electricity bills, along with CHP meter readings, will be forwarded to 2EA on a monthly basis).
- Completion of the annual online CHPQA submission (assumes log-on details are provided to 2EA).
- Completion of annual HMRC documentation, inclusive of forms PP10 and PP11 for site.
- An annual reconciliation report for HMRC for site will be provided.
- A monthly CHP Savings Report, detailing CHP performance, site gas consumption, site gas cost and actual CHP savings, inclusive of climate change levy will be provided.
- An annual carbon report detailing site CO2 emissions and savings will be provided.
- An annual Primary Energy Savings Report in accordance with EU-CHP Directive 2004/8/EC will be provided.
- 2EA will provide consultancy services to client with regards to CCL issues.

ISO 50001 is an internationally recognised standard for Energy Management. It is recognised as the standard practice framework for managing your energy performance and addressing your energy costs, while also helping you to reduce your environmental impact and meet emissions reduction targets.

The ISO/FDIS 50001:2018 edition was released May 2018 and we have summarised the main points and changes that organisations currently running, implementing or looking to implement ISO 50001 should be aware of.

It should be noted that with regards to ESOS, the ESOS legislation outlines the use of ISO 50001:2011 as a route to compliance for ESOS. Government and the Environment Agency have been and are aware of the change to ISO 50001:2018. However, no further proposals for these issues have been raised.

Please note that this is the final draft and not the final standard. We have included some of the main changes compared to the previous edition:

1. Adoption of ISO's requirements for management system standards, including a high level structure, identical core text, and common terms and definitions, to ensure a high level of compatibility with other management system standards;

The introduction of the High Level Structure (HLS), similar to other ISOs such as 14001 and 9001 was the main focus of the new revision.

A new form of conformance or self declaration is added by seeking confirmation from third parties such as customers.

Within this revised version, they have clarified 'verbal forms'

"shall" indicates a requirement;

"should" indicates a recommendation;

"can" indicates a possibility or a capability;

"may" indicates a permission.

2. Supporting integration with strategic management processes;

Throughout the Leadership & Commitment of revised ISO. There is emphasis on ensuring that, throughout the process, things such as policy and objectives are compatible with the strategic direction of the organisation.

3. Change to the Plan - Do - Check - Act Cycle

The PDCA cycle is a pillar stone of ISO. With this new version we can see this has been updated and given a new look.

4. Stronger emphasis on the role of top management;

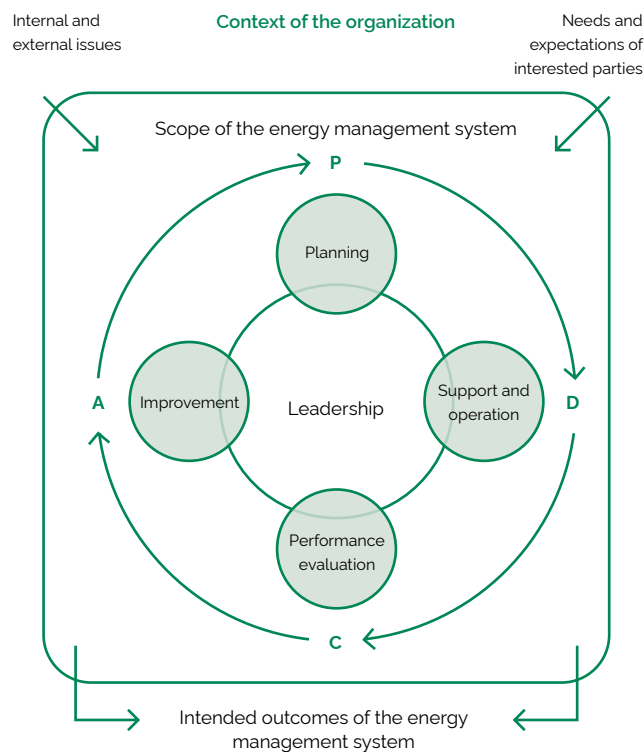
Within this new revision, they have emphasised the importance of cultural change. Something that was not mentioned in the previous version. Cultural and even behavioural change has started to take more of a front seat role within the development of energy management.

Many of the past 'Top Management' sections have been replaced with 'Leadership'

Within 3.1.2 top management. Further notes have been added.

For example:

Note 2 to entry: If the scope of the management system (3.2.1) covers only part of an organization, then top management refers to those who direct and control that part of the organization.



Summary

There are many changes within the newly revised version and they cannot all be included here but this revised version lays the foundations to a better understanding of what is needed in implementing ISO 50001:2018.

ISO 50001 is there to help you better manage your energy use. However, it is effectively a change management system that relies on senior people within the organisation taking a prominent and positive role in supporting and implementing this management system for the better of the organisation and their energy management.

ISO 50001 is an internationally recognised standard for Energy Management. It is recognised as the standard practice framework for managing your energy performance and addressing your energy costs, while also helping you to reduce your environmental impact and meet emissions reduction targets.

Successful implementation depends on commitment from all levels and functions of the organisation, especially from top management. For organisations looking to become certified, we ensure your EnMS meets the standards requirements and arrange an accredited body to assess your EnMS.

STAGE 1: GAP ANALYSIS

Before you commit to an ISO 50001 implementation project we can review your existing energy management initiatives and systems, comparing them with ISO 50001 and identify areas that require action. This gap analysis will help you to understand the steps your organisation needs to take in order to achieve certification.

Our gap analysis report will also help you to determine the workload and time scale for implementing an EnMS that will achieve ISO 50001 certification by:

- Reviewing your current management practice and energy profile - including existing operations, plant & systems, energy management procedures, capability and resources.
- Outlining the requirements for ISO 50001 and confirming your organisation's potential scope of implementation and boundaries.
- Identifying level of conformance (including any deficiencies) in relation to the standard.
- Providing an improvement plan to prepare for formal assessment.
- Identifying the implementation project critical path and where you may need targeted specialist help.

STAGE 2: ENERGY MAPPING

This stage provides the opportunity to assess, quantify and benchmark your significant energy consumptions across your site(s) and a comprehensive and appropriate baseline against which to measure energy performance. This is not only a key part of the ISO 50001 requirements, it is the fundamental starting point from which all your organisation's most meaningful savings will spring.

STAGE 3: ENMS IMPLEMENTATION

In this stage of the process we work with your team to undertake systematic and comprehensive energy planning. This could mean:

- Devising appropriate objectives, targets and a supporting action plan.
- Designing and checking processes and documentation that meet ISO 50001 requirements.
- Providing additional technical support where required based on the gap analysis.
- Ensuring data management is accurate, appropriate and meaningful.

STAGE 4: PRE-CERTIFICATION AUDIT

For organisations looking to obtain ISO 50001 certification, a pre-certification audit will be carried out by our in-house BSI-trained ISO 50001 Lead Auditor. This is to ensure your EnMS meets ISO 50001 standard or to identify further action needed to become compliant.

Our analysis and report will identify any areas of non-conformity and provide a corrective action plan to make you ready for a formal assessment by a certified body.

Please note that you must be able to demonstrate that your EnMS has been fully operative for a minimum of three months and has been subject to internal auditing in order to generate enough records to provide certifiers with evidence of conformance. This essential 'live operation' of the system is built into the implementation project timeline generated by our Stage One Gap Analysis Report.

As part of our service we undertake energy assessment to ensure the EnMS that has been implemented works to the standards requirements.

STAGE 5: POST-CERTIFICATION

Post-certification we offer on-going support to your team. This could take any one of several forms, ranging from technical support for individual energy projects, through data handling and management to legal compliance issues. We can also conduct regular auditing and provide support for top level management reviews to maintain the effectiveness of your EnMS and conformity to ISO 50001.

ESOS Phase 2 — Advice from ESOS Lead Assessors

Unlike Phase 1, participants of ESOS have had plenty of time to get prepared for Phase 2.

As you are no doubt aware, ESOS requires participants to review their energy consumption within three (3) specific areas:

1. Industrial Processes
2. Transport
3. Buildings

As we approach the start of Year 4 in Phase 2 of ESOS, the guidance requires that energy consumption data covers the specific date of the 31st December 2018.

We would, therefore, recommend that the period 1st April 2018 to 31st March 2019 is utilised for your ESOS reporting. Please note that if you are not already recording transport mileage; you should make provision to do so for the above period.

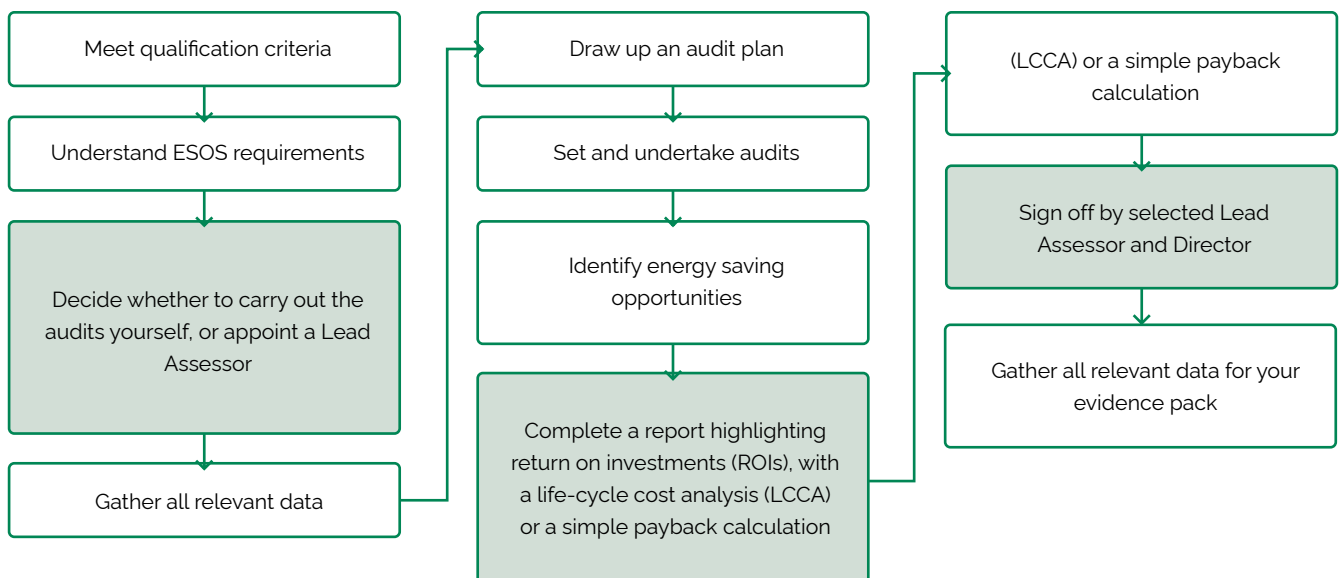
Participants must also conduct audits to identify cost-effective energy saving opportunities and report compliance to the scheme's administrator by the 5th December 2019.

Taking action now to ensure that this data is recorded and correlated correctly will make your reporting in 2019 far easier for all concerned.

Compliance Phase	Qualification Date	Compliance Period	Compliance Date
1	31st December 2014	From 17th July 2014 to 5th December 2015	5th December 2015
2	31st December 2018	From 6th December 2015 to 5th December 2019	5th December 2019
3	31st December 2022	From 6th December 2019 to 5th December 2023	5th December 2023
4	31st December 2026	From 6th December 2023 to 5th December 2027	5th December 2027

Our advice is not to delay the process any longer. Despite the legal requirement to comply with ESOS, the compliance process will provide a comprehensive overview of your organisation's energy consumption, highlighting energy saving opportunities which could benefit your business greatly. Therefore, the sooner you comply, the sooner you can start saving money for your business.

We understand that this process can be overwhelming so we have put together this simplified guide on the steps that are required to complete ESOS and help you reach compliance by the 5th of December.



The Energy Savings Opportunity Scheme (ESOS) is a mandatory energy assessment and energy saving identification scheme for large undertakings (and their corporate groups).

The scheme is applicable throughout the UK and applies to any undertaking which carries out business activity and matches with any of the following criteria:

1. It has 250 or more staff.
2. It has less than 250 staff but has an annual turnover exceeding €50m and a balance sheet exceeding €43m.
3. It is part of a corporate group which includes a large undertaking (as defined by (1) or (2), above).

We are currently in Phase 2 Year 3. The guidance requires that energy consumption data covers the specific date of the 31st December 2018. We recommend that the period 1st April 2018 to 31st March 2019 is utilised for your ESOS reporting.

We have two CIBSE registered UK ESOS Lead Assessors and we offer three main ESOS management packages to help you meet the requirements of the Energy Savings Opportunity Scheme.

PACKAGE 1: ESOS MANAGEMENT

- Data correlation of ESOS applicable energy consumptions, transport mileage and invoices to determine total energy consumption/expenditure.
- Identify areas of significant energy use and provide advice on de-minimis limits.
- Provide Organisational Chart identifying total energy use, areas of energy use, such as buildings, transport and industrial processes.
- Review the ESOS compliant assessment routes to cover areas of significant energy use.
- Act as Lead Assessor and undertake ESOS Audits or advise on compliant alternatives.
- Identify energy saving opportunities and present audit recommendations.
- Provide report for the presentation of ESOS Assessment findings.
- Compilation of data required for an ESOS Evidence Pack; including but not limited to:
- Details of the undertakings making up participant and identification of the responsible undertaking.

- Details of named personnel required to be registered as part of ESOS.
- Details of the Lead Assessor.
- List of identified areas of significant energy consumption.
- Details of compliance route to cover areas of significant energy consumption.
- Details of audit methodology.
- Correlation of correspondence with the relevant authority.
- Determination of Exclusions and Onward Supplies as defined in the ESOS Guidance.
- Certificate of Audit Compliance.
- Consultancy services to client with regards to ESOS issues.

PACKAGE 2: ESOS ENERGY REPORTING

- Data correlation of ESOS applicable energy consumptions, transport mileage and invoices to determine total energy consumption/expenditure.
- Identify areas of significant energy use and provide an Organisational Chart identifying areas of significant energy use, such as buildings, transport and industrial processes.
- Review the ESOS compliant assessment routes and suggest audit process to cover areas of significant energy use.

PACKAGE 3: ESOS EVIDENCE AUDIT

- Review of participants' ESOS applicable energy consumptions, transport mileage and invoices used to determine total energy consumption/expenditure.
- Review of participants' areas of significant energy use and de-minimis limits.
- Review of participants' assessment routes covering areas of significant energy use.
- Review of participants' ESOS Audits or compliant alternatives.
- Review of participants' ESOS Evidence Pack.
- Provision of a Certificate of Audit Compliance.

Streamlined Energy and Carbon Reporting (SECR)

The energy reporting sector for the United Kingdom is still in its infancy compared to other sectors. With the important issues of rising energy costs and climate change, the government understands that the industry needs to be improved while maintaining business as usual.

With the removal of the Carbon Reduction Commitment in 2019, the government is seeking to implement a new and improved reporting system.

The Department for Business, Energy and Industrial Strategy (BEIS) is currently in the planning stage of the new Streamlined Energy and Carbon Reporting scheme.

This will improve the way in which businesses report their energy use, and provide businesses with the information needed to identify how they can reduce energy bills. Further information is available on page 12 of this brochure.

MEES/EPC/DEC

The Minimum Energy Efficiency Standard, Energy Performance Certificates and Display Energy Certificates are all covered within this section of the article because they all play a crucial role in the sector.

The legislation behind Display Energy Certificates will not change. This went to a Parliamentary committee in 2016, and the outcome was that they will stay in place for public buildings above 250 sqm.

It is worth noting that private sector organisations can use DEC's as long as their type of building is covered by the system software and many continue to do so year on year.

The Minimum Energy Efficiency Standard is a new standard coming into force in 2018. It aims, through the use of Energy Performance Certificates (EPCs), to prevent landlords renting out properties that fall below a certain rating on an EPC.

Landlords of non-domestic private rented properties, including public sector landlords, are not eligible to rent, or renew, existing tenancies, if their properties fall below an EPC band rating of F or G. This came into force on 1st April 2018.

For landlords of domestic private rented properties, the building must have an EPC rating of E or better.

For landlords, this means that to rent their properties, they need to undertake an EPC audit. This audit must produce a band rating of E or better.

Smart Meters

Smart Meters within the commercial sector have been around for some time. However, smart meters for domestic properties have been slowly making their way into British households. Currently the market is on Smart Metering Equipment Technical Specification: version (SMETS1).

The issues that have arisen with these meters are that each supplier has their own smart meter connected to a mobile network. When a customer wants to switch energy provider, these smart meters then become obsolete, and a new smart meter must be fitted.

The second issue is that meters have on multiple occasions either billed too much or too little and in some cases have found that LED lighting on dimmable settings confuse these SMETS1 smart meters. From this, SMETS2 will be coming into force in 2018 or 2019, meaning the programme for this new set of smart meters is on track.

Capacity Market

Participants of the 2018 Capacity Market were able to bid for contracts in auctions held four years prior to the delivery date, meaning successful contracts for the 1st October 2018 took place back in December 2014. Some additional auctions will be held a year prior to delivery, with the aim to capture capacity from demand-side responders, while also allowing secondary trading of capacity obligations secured the first time around.

Auctions will follow the 'descending clock' format, starting with offers of £75/MWh and reducing until the minimum price is reached; at which point the capacity offered by bidders is equal to the generation required.

The Department for Business, Energy and Industrial Strategy (BEIS) announced late last year that the derating of battery projects would be cut by 80% in upcoming auctions. For short-duration battery projects, this could become unprofitable.

The department said its review of the auction rules was prompted by "(a) emerging evidence that market signals were driving the deployment of limited duration batteries that could generate continuously for a maximum of 30-60 minutes, and (b) initial analysis from National Grid that suggested that the duration of stress events may frequently exceed this."

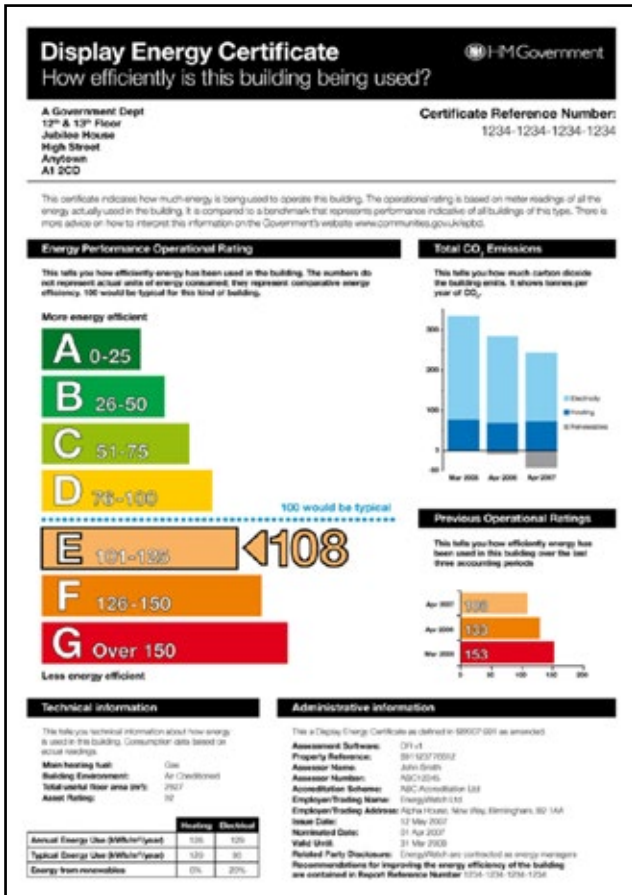
"This raised concerns regarding the potential for storage to be over-rewarded in the Capacity Market relative to its ability to contribute capacity during longer stress events, which in turn could lead to a reduction in security of supply."

You can find the full article at:

<https://www.2ea.co.uk/energy-in-2018>

Display Energy Certificates

SERVICE

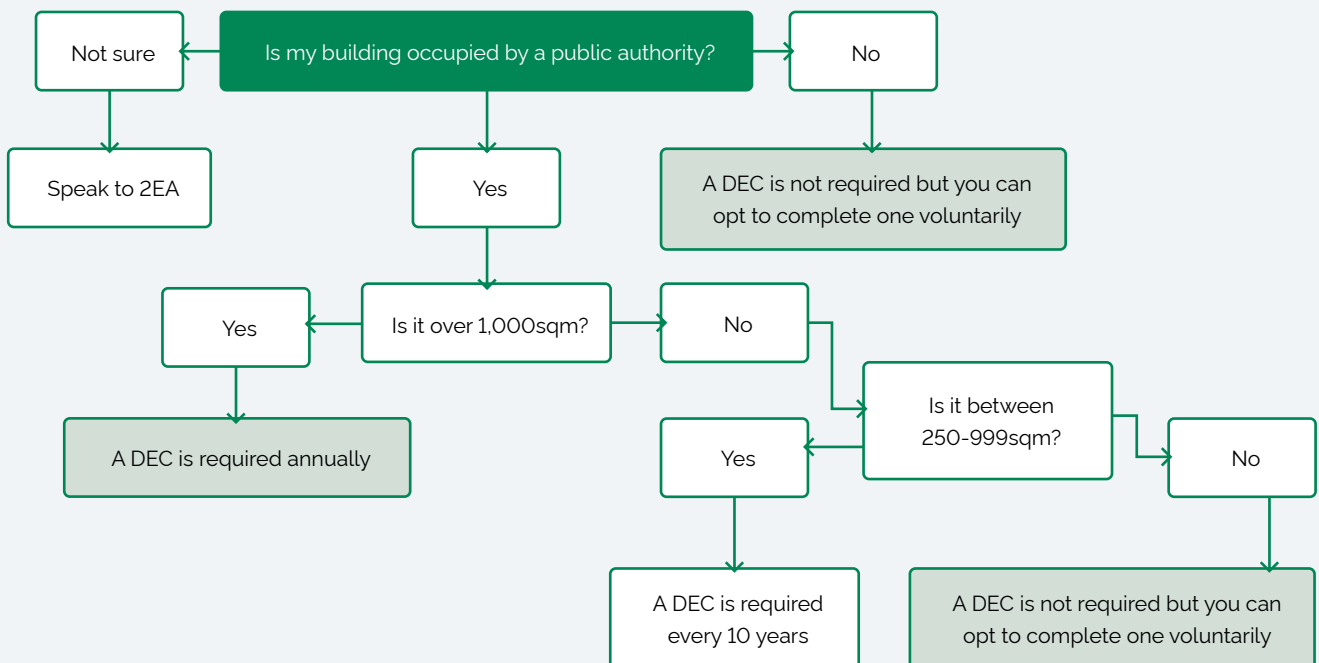


A Display Energy Certificate is a mandatory requirement in the public sector.

The Display Energy Certificate (DEC) provides an up to date snapshot and rating of how well a particular building is performing, based upon actual energy consumption. This rating is reassessed each year and as part of our service we provide an on-site audit that identifies where further energy savings can be made.

Our package includes:

- Data correlation for the building for DEC submission
- Carry out DEC Audit Survey of assessment building
- Completion of all documentation for DEC submission
- A DEC Certificate
- An Advisory Report, where appropriate
- A DEC Audit Report specific to site, highlighting energy saving measures
- Lodging of the certificate with the appropriate regulatory body
- Consultancy services to client with regards to DEC issues



What is classed as a public authority?

- Leisure Centres & Gyms
- GP Practices
- Hospitals
- Museums
- Schools
- Council Buildings

When we look at the energy legislation landscape for the UK, we can see its history is not that old. In the last ten to twenty years, we have seen some of the most important legislation come into force and will soon see some of it abolished.

A consultation in March 2016 set out the road to abolishing the Carbon Reduction Commitment (CRC) and it is currently in its last phase, ending in 2019. With this, the rates of Climate Change Levy are set to rise significantly come April 2019.

Alongside this, there was significant support for mandatory reporting to be continued. Because of this, the government also announced a consultation on a simplified reporting framework for introduction in April 2019.

The Department for Business, Energy & Industrial Strategy (BEIS) launched a public consultation, 'Reforming the business energy efficiency tax landscape', in 2015 and published the results in 2016. Since then they have continued to work with industry in furthering the development of this framework. BEIS gave presentations at various events including EMEX and in November 2017, it held a Streamlined Energy & Carbon Reporting (SECR) launch event. From there it held further events at its head office. The consultation closed on 4th January 2018.

In July 2018, they released their proposal response for introducing a Streamlined Energy & Carbon Reporting or SECR for short. They found with CRC ending, CCL rates increasing and SECR being introduced, there is a net societal benefit of £698 million.

The first question everyone will want to know is; does this apply to my organisation?

SECR will apply to all quoted companies and large incorporated unquoted companies with at least 250 staff or an annual turnover greater than £36m, and an annual balance sheet total greater than £18m. This has been chosen based on the responses from the consultation and is taken from the Companies Act 2006. This will be via voluntary electronic reporting but may be changed in the future.

Limited Liability Partnerships (LLPs) are required to include SECR information in their annual reports.

SECR will be delivered through annual reports. However, UK subsidiaries that qualify for SECR will not be required to report where they are covered by a parent group report but they can report voluntarily if they wish. Subsidiaries with parent companies outside the UK will also have to report.

SECR will be applied throughout the UK. This falls in line with other reporting mechanisms currently in place. This also makes it easier to manage across the board and gives a universal framework for everyone to work within.

SECR will have exemptions. If a company falls within the scope of SECR, but is a low energy user, it will not have to disclose their SECR information if they can confirm they used 40,000kWh or less in the last 12 month period.

Quoted companies already disclose Scope 1 & 2 GHG Emissions and an intensity metric in their annual reports and should, where practical, report on global energy use.

Unquoted companies will be required, where practical, to report their UK energy use and associated Scope 1 & 2 GHG Emissions as well as an intensity metric. Energy use within the scope, as a minimum, should include electricity, gas and transport with transport defined as road, rail, air and shipping.

SECR will require companies within the scope to provide commentary on energy efficiency actions taken in the financial year.

In summary, this truly puts energy on the boardroom table. Many companies think it is a fixed cost, but it is not. This will change the way companies think about energy.

CHP Health Check Up

SERVICE

It is essential to carry out regular checks on any CHP units that are in place to ensure they are working efficiently and providing maximum return on investment.

2EA Consulting will attend site and assess the operational performance of your CHP unit; checks include but are not limited to:

- Comparison of unit specification to actual performance
- Calculation of CHP electrical efficiency
- Calculation of CHP heat efficiency
- Determination of excess heat 'dumping'
- Calculation of average hourly electrical output
- Calculation of CHPQA Quality Index
- Check heat meter temperature probes/flow meter correctly positioned
- Check CHP fuel meter is pressure & temperature compensated
- Check CHP meters within calibration periods
- Detail and record CHP metering
- Provide report detailing observations and recommendations



CHP Heat Meter Verification

What you need to know?

ARTICLE

Heat meter verification is the process or procedure by which the correct operation of the heat meter installation is confirmed within a Combined Heat & Power Unit or CHP as it is commonly known.

Who carries out CHP Heat Meter Verification?

A trained engineer will visit a client's CHP site and verify that the heat metering equipment is installed correctly and is accurately recording heat used by the site.

How has heat meter verification developed since its initial launch?

Initially, heat meters fitted to small CHP installations could be fitted with a pulse card in the integrator to simulate water flow – called fixed flow metering. Some installations were fitted with actual flow meters which could either be mechanical turbine or electronic types. Electronic types include ultrasonic or measurement by fluid oscillation principles.

The introduction of actual flow meters has required an increased understanding of water flows and pipe-work installations.

How does heat meter verification work?

The general principle behind heat meter verification ensures that water flow and temperature signals fed to the integrator accurately represent actual flows and temperatures. This is achieved by the use of calibrated instrumentation backed up by reference calculation. The integrator is also checked for correct interpretation of the signals.

The process is not intrusive and does not interrupt operation of the site.

What are the benefits of undertaking heat meter verification?

Correct meter operation is essential to ensure that site heat usage is recorded accurately. This will maximise the financial benefit to the CHP operator. The CHPQA programme requires each meter to be checked on a two yearly basis.

Advice or guidance for anyone looking to complete heat meter verification?

Heat meter verification is a procedure carried out by an independent party, properly equipped with calibrated measuring equipment. A good all round knowledge of CHP, boilers and associated pipework is essential to carry out this work successfully. The use of an independent party is particularly important in order to satisfy BEIS/CHPQA that a site is accurately recording heat usage.

Heat Meter Verification

SERVICE

Heat Meter Verification (CHP)

To maintain registration under the CHPQA Programme, CHP heat meters need to be calibrated every two (2) years. As stated by the guidance: "All meters that are used for self-assessment that are not independently calibrated by others (such as gas or electricity supply companies) should be regularly calibrated or validated in accordance with a calibration schedule.

For heat meters that are supplied as a package comprising a flow meter, a pair of temperature sensors and a calculator (BS EN 1434-1:2007) recalibration is required in accordance with the manufacturer's specification; calibration of secondary components such as transducers, transmitters and computations should occur every 2 years".



Our Service includes:

- Attend site and carry out non-invasive heat meter verification procedure, checking:
 - Accuracy of the flow meter
 - Accuracy of the temperature probes
 - Accuracy of the calculator
- Identification of faults and recommendations for improvements
- Issue of Heat Meter Verification Certificate



2EA Consulting Limited

58 Guernsey Close
Crawley
West Sussex
RH11 9QS

e: info@2ea.co.uk
t: 01293 521 350

www.2ea.co.uk

