

National Energy Foundation

Services for Local Authorities



National Energy Foundation

Our objectives

We are an independent, national charity based in Milton Keynes, and have been at the forefront of improving the use of energy in buildings since 1988. We aim to give people, organisations and government the knowledge, support and inspiration they need to understand and improve the use of energy in buildings.

We do this through

- Delivering practical projects – using our experience and technical expertise.
- Inspiring action – providing building owners and occupiers with the encouragement, advice and real-life examples to achieve better performing buildings.
- Advancing knowledge - supporting collaboration to drive forward the frontiers of knowledge, innovation and practice.
- Identifying and addressing market failures using evidence, analysis and ideas.

Our experience

Our staff have many years' experience of working with local authority partners, having undertaken numerous successful projects that have delivered improved buildings and quality of life for residents, such as:

- The Big Green Boiler scheme.
- Solar Savers.
- Better Housing, Better Health.
- Cocoon Your Home.
- Affordable Warmth Networks.
- Bucks Big Heat.

We can help you to:

- Realise sustainability targets.
- Create well-being in your communities.
- Improve occupant comfort/health.
- Cut costs.
- Build capacity.
- Save energy.
- Engage stakeholders.
- Tackle fuel poverty.
- Reduce carbon emissions.
- Innovate to maximise impact.

Our services

This booklet provides you with an outline of our services relevant to local authorities. However, we recognise that the issues faced by no two local authorities are the same and we enjoy working together to help you solve your unique challenges. We welcome the opportunity to discuss your specific needs so please contact our Director of Households and Communities, Gabby Mallett: gabby.mallett@nef.org.uk or 01908 354536.

improving the use of energy in buildings

Our recent clients include



Our delivery team



Gabby Mallett BSc MA

Director of Households and Communities

Gabby is a highly experienced project manager within domestic retrofit. She currently directs the award-winning SuperHomes and YouGen projects, runs a number of European projects and represents the Foundation at the Community Energy Practitioners' Forum and The Retrofit Academy. Gabby manages our Household and Communities team, which has responsibility for our communities, health and housing, fuel poverty and solid wall insulation work, particularly relating to existing domestic buildings.



Malcolm Hanna BSc

Technical Director

Malcolm is a carbon management specialist with over 20 years' experience. With particular experience in existing buildings, he has developed more than 30 organisational carbon management programmes working across the private and public sectors, including Building Regulations (Part L) and supporting the Innovate UK Building Performance Evaluation Programme.



Cliff Willson BEng MSc

Senior Energy Specialist

Cliff is an electrical engineer with extensive experience in the theoretical and practical application of low energy solutions. He provides dispute resolution and expert witness services to clients as well as training and development. He is an MCS auditor, and an assessor for both Independent Reports on Metering Arrangements and Display Energy Certificates.



Luke Smith BSc MPhil

Principal Energy Specialist

Luke is an architectural technologist focussing on low carbon domestic and non-domestic buildings, including option appraisal, energy modelling, technical specification and building performance evaluation. He is a qualified Domestic Energy Assessor, BREEAM AP and experienced in compliance, design tools and software.



Adam Tilford BSc MArchSc ICIOB
Senior Energy Specialist

Adam specialises in low-energy and sustainable construction. Before joining the Foundation, Adam led Passivhaus work at BRE and delivered a number of training courses including *Certified European Passivhaus Designer*. He has experience of building performance evaluation including monitoring, on-completion testing and surveying of both new and refurbishment projects. Adam is a qualified Passive House consultant and certifier



Alexandra Steeland BSc
Senior Project Officer

Alex has a range of experience in project management, evaluation, research and report writing. She manages our Better Housing, Better Health referral scheme and our Energy Envoys volunteering opportunity for Duke of Edinburgh's Award participants. She has also taken a leading role in our progression towards ISO 9001 certification. Alex has developed guidance on community energy projects, particularly in terms of community engagement, and conducted industry engagement activities for the Energy Efficiency Partnership for Buildings.



Matt Neal
Affordable Warmth Project Officer

Matt is a Project Officer in our Households and Communities team, with specific responsibility for our Affordable Warmth Networks. He works closely with local authorities and community groups to identify and help vulnerable residents. Matt is a fuel poverty expert, has excellent communication skills and specialises in client outreach, marketing and event management. He is currently studying part-time for a degree in Environmental Science with the Open University.



Chloe Lloyd MA
Project Officer

Chloe joined our Households and Communities team in 2015, and she works on the Better Housing Better Health project. Prior to joining the Foundation, she completed an MA in Regional and Environmental Policy and conducted pilot research for Severn Wye Energy Agency on a new community development project. Chloe's specialisms are in the areas of fuel poverty, sustainability and community development, and she also provides experience in project development, qualitative research and community engagement.

Our services

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TACKLING FUEL POVERTY

Running Affordable Warmth Networks and providing fuel poverty training

We run highly successful Affordable Warmth Networks and can tailor training for your needs to benefit vulnerable and hard-to-reach groups

Affordable Warmth Networks (AWNs) are **advice services** leading to measurable improvements targeted at domestic energy consumers who require **over-the-phone or in-person support** in order to access the resources and funding they need.

Residents vulnerable to adverse health impacts and hard-to-reach households are the primary intended beneficiaries of these services, which are advertised through local social and healthcare providers, local authorities, community and faith groups and by various energy providers and professionals.

The major parts of an AWN are:

- **A phone advisory service**
 - This gives direct advice on options for improving the energy efficiency measures in residents' homes. Operators have extensive knowledge of options available. The service gives your local authority an easy-to-use, knowledge-based service to benefit your community.
- **Outreach activity**
 - The AWNs deliver a variety of outreach activity aimed to engage with residents who would be potentially vulnerable to fuel poverty. We deliver talks to groups, drop-in sessions and attend flu clinics and health and wellbeing fairs.
 - We provide a range of marketing material to promote the AWN and raise awareness of fuel poverty.
- **Fuel poverty training**
 - Specified fuel poverty training is provided to service providers within your local authority area. Training sessions are tailored to the particular aspects that are of most use to you.
 - Training sessions aim to raise awareness of the issues surrounding fuel poverty and provide the service providers with the tools and knowledge needed to assist residents in fuel poverty most effectively.



To discuss your needs or get a quote, please contact:

Gabby Mallett
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TACKLING FUEL POVERTY

Delivering retrofit schemes efficiently with dependable data (ECO III)

We are driving innovation in dependable data and helping to build more complete housing stock databases, including resident information as well as upgrade potential

Whilst Energy Performance Certificates (EPCs) are often relied upon in helping to target and shortlist properties, **housing associations, landlords and local authorities rarely possess complete and dependable data** relating to all of the properties and householders in their area.

We have undertaken numerous projects to date with various local authorities and social housing providers, each **blending datasets** from EPCs, Xoserve, ONS, Ordnance Survey, Experian and others, enabling local authority clients to access and validate stock data; assess policy models and costs; and identify practical implementation routes. This service can be applied to a local authority area generally, or social housing stock specifically.

Our experience is that **integrated databases enable more efficient spend of central and local government funding**, an ability to better target and deliver other privately-funded schemes and empower 'local authority declarations'.

SPOTLIGHT: Suffolk County Council

Creation of a database with exiting new applications:

- User interface that allows all data to be searched, filtered and reported upon at all geographical levels – output area, LSOA, ward, local authority, town, postcode.
- The ability to search and review in isolation the non-address level data such as LSOA and Output Area level statistics.

The database offers Suffolk comprehensive insight into all housing in the region. In addition to prioritising energy efficiency and carbon emission reduction programmes, it:

- Informs the application for funding to support investment in energy efficiency measures (such as ECO III LA-Flex).
- Identifies vulnerable and fuel poor households, and the energy efficiency measures that will benefit them.
- Supports the work of the council's Housing and Public Health teams to deliver plans and programmes that aim to reduce the health effects associated with cold and poor quality housing.
- Improves housing-related dialogue and activity in conjunction with other key stakeholders in the region, including other local councils, landlords and social housing providers.
- Improves the targeting of other services and behaviour change campaigns related to housing and residents, including recycling and composting, planning and building control, housing regulation enforcement and also welfare and mobility.

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 01908 256930

TRAINING AND ENGAGEMENT

Community and stakeholder engagement

Using our long track record, we can work with you to engage with communities and other stakeholders to ensure successful engagement

We understand the **challenges involved in achieving engagement**. This is often an intangible aspect of **effective project management**, but poor interaction with beneficiaries and other stakeholders is amongst the most often cited reasons that projects do not realise their full potential. Stakeholders include:

- Central government or other local authorities.
- Groups or teams within your own local authority.
- Public institutions, including schools and hospitals.
- Individuals/households.
- Housing associations.
- Local Enterprise Partnerships.
- Community groups.
- Local or national businesses.
- Charities or not-for-profits.

We can **support you in engaging these groups individually or collectively** through a range of means, which could include:

- **Writing engagement strategies** for interacting with different energy users.
- **Supporting grants** – initial scoping and bid support through to complete management.
- **Advising** you on strategic approaches and eventually **putting together consortia** for working on projects.
- **Providing training and advice** to staff and the general public, including demonstrating equipment to enable people to visualise energy waste and excess use.
- **Designing public information** and marketing materials.
- **Delivering events** on issues related to energy efficiency and micro-generation renewables.
- **Creating pilots and examples** of projects that can be displayed to the public



To discuss your needs or get a quote, please contact:

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TRAINING AND ENGAGEMENT

Training staff and the community

Our expert facilitators can help you create the energy and commitment needed for successful outcomes whether it's a one-hour meeting for six people or a day-long workshop for 60

Through training, we aim to:

- Make resource efficiency a **fundamental principle of working**
- Embed the opportunities of **carbon management** and avoiding wastage into staff thinking
- Raise **awareness of environmental issues**, and the likely effect on different service areas
- Provide hands-on, practical workshops that encourage **empowerment and ownership**, as well as provide **real knowledge** about government initiatives
- Show year-on-year how improving energy efficiency can reduce cost, improve health and comfort and enable available funds to be devoted to frontline services

Our courses can:

- **Be tailored** to suit your aims and objectives
- **Help achieve accreditation** (for example ISO 9001 / 14001), or roll-out a new initiative
- Help with your **statutory obligations and responsibilities**
- **Come to you**: training is delivered at your office, saving staff time and expenditure

ENERGY AWARENESS TRAINING gives your staff or a local community group the skills needed to interact with the energy challenges that they are facing. We cover the basics of energy generation and use as well as the measures that can be taken to improve energy performance. Participants frequently go on to deliver energy awareness campaigns on the back of these sessions.

CARBON CHAMPIONS TRAINING is a session designed towards creating real change in the way that organisations control their use of carbon. This is achieved by encouraging staff and the community to see themselves as potential change agents in their local environment and, where they can, to work in networks to deliver outcomes.

USING THERMAL IMAGING is an interactive and engaging session that shows participants how to use the equipment needed to undertake an initial thermographic assessment of a domestic building.

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TRAINING AND ENGAGEMENT

Using demonstrator projects to achieve behaviour change

We can support the delivery of demonstrator projects for exhibiting the benefits of energy efficiency measures to domestic energy consumers

We have a great deal of experience in delivering behaviour change. We favour demonstrative examples, particularly using **open homes**.

We can manage the **retrofit of a number of properties** to demonstrate the methods and approaches available to achieve higher energy efficiency in existing properties. These act as opportunities for new potential adopters to visualise, test and discuss the changes that retrofit involves. We have worked with a number of local authorities to design events where residents welcome others into their homes to **experience the benefits** of a retrofitted home.

We can:

- **Scope the types of retrofit** most relevant to your area, dependent on existing buildings
- **Find and support funding bids** and **grant management** functions during the project
- **Isolate potential homes** to be retrofitted and contact homeowners to discuss options
- **Coordinate retrofits** and support homeowners through the process, including with **mentoring and training**
- **Market and publicise** the opportunity to come and visit an open home, including **providing a booking system** for coordinating visits
- **Run Green Open Home** events to show off numerous homes in succession

Spotlight: SuperHomes

In 2007, the Foundation was commissioned to develop **SuperHomes**, which provides support to homeowners who have renovated their homes to an assessed **carbon saving of at least 60%**. We aim to create a network of 500 local, publicly accessible SuperHomes by 2020.

- Over **50,000 people** have already visited a SuperHome
- 98% of visitors are **pleased they came**
- 96% of visitors say that **'touch and feel' visits** are a good way of learning

In 2009, the project won the highly-prestigious Ashden Award for sustainability, presented by HRH Prince Charles. We have now expanded the network to **over 200 SuperHomes**.



To discuss your needs or get a quote, please contact:

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MEETING REGULATORY REQUIREMENTS

HECA reporting and delivery

Our Home Energy Conservation Act (HECA) strategy and reporting service can support you to take action and satisfy your reporting needs

We are currently supporting the delivery of projects that build evidence of action of energy efficiency improvements and fuel poverty alleviation for the next reporting round to meet the submission deadline of 31st March 2017. Our reporting service consists of the following three stages:

Stage 1: Data analysis

We will obtain, analyse and interpret data relating to buildings, insulation, energy consumption and socio-economic factors. Based on our analysis, we will produce an interpretive report, which includes GIS maps: a valuable tool to inform area-based approaches to home energy improvement, target fuel poverty projects and identify funding opportunities. *This report will form the submission required for the latest round of HECA reporting.*

Stage 2: Review and update strategy

We provide a gap analysis of existing strategies and policies from the local authority and its key partners, and will review progress from the last report against proposed measures, ambitions and priorities, time frames and partnerships. This forms the basis of the HECA Further Report. It might also include a review of wider best practice in order to help identify opportunities for innovation.

Optional extra: Stakeholder workshop

Prior to preparing a draft strategy we can facilitate a workshop involving key personnel from the council and its stakeholder organisations, in order to detail key priorities and preferred approaches, using data from previous reports wherever we can.

Stage 3: Report preparation

By combining the stages above, we are able to produce a new, updated report/action plan. This is fully compliant with the 'Guidance to English energy conservation authorities issues pursuant to the Home Energy Conservation Act 1995' published in January 2017.

Benefits:

- **Expert input** into your HECA report.
- **Aligns** with and **supports** other activity – for example, can support area-based approaches to provide maximum benefit.
- A modular service to suit your **individual requirements**.

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MEETING REGULATORY REQUIREMENTS

Greenhouse gas (GHG) and carbon reporting

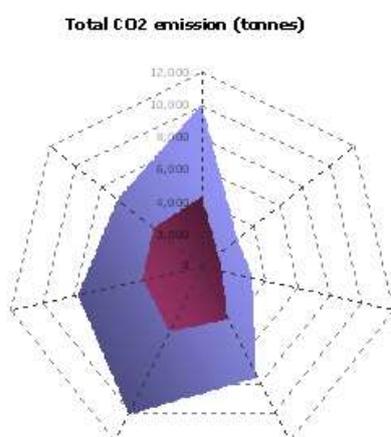
We can help you to fulfil your official requirement to report on emissions from your operational activities

Since the 2011 agreement between DECC and the Local Government Association, **local authorities must issue reports** by the end of July each year for greenhouse gas emissions data relating to the previous financial year.

- This methodology has a **prescribed method for the calculation of emissions** whilst giving some flexibility regarding the aspects of operations covered and the report format.
- Reports must factor all relevant GHG emissions to a CO₂ equivalent. Whilst the suggested report format is simple, the **underlying analysis of data** is more complex as the main greenhouse gases must be expressed as carbon equivalent.
- The report is **posted on the council website** and also sent to BEIS along with some **additional data** to qualify the information in the report.

We can provide a **service to compile energy use and emissions data** and prepare the report as required under the current GHG monitoring arrangements. We recommend contacting us as early as possible in the reporting year to allow plenty of time for revision and finishing.

- 1) We will provide instruction and templates for collation of the data.
- 2) You then supply us with annual consumption data.
- 3) We reset the data in to the required format and analyse it to highlight any abnormalities; in total this represents a draft report, which we deliver to you.
- 4) Together we finalise the report in good time for completion by the deadline.



This service can:

- **Identify, implement and monitor** the effects of existing actions taken towards achieving carbon reduction objectives.
- Allow for **further operational improvements** and **lower costs** for your authority.

To discuss your needs or get a quote, please contact:

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DELIVERING LOW-ENERGY BUILDINGS

Structuring and delivering retrofit projects to improve energy, comfort and health

Our highly experienced team will work with you to put together projects which deliver funding and outcomes towards improving energy use at scale

Projects and funds to **improve energy efficiency** of existing buildings come from a wide variety of government and non-government sources. Local authorities are often well-placed to engage these and are commonly entitled and able to receive more support than they expect – and **we can help you to identify such projects and funding opportunities**, including linking new build and retrofit.

We are specialists in creating **area-based cross-tenure programmes**, in which we:

- Draw a line around a specific geographical area.
- Work with multiple stakeholders such as registered providers.
- Make use of specialist tools and techniques to help solve challenges such as take-up across diverse building owners and occupiers, implementation costs and technical challenges.

We also offer **exemplar projects** to demonstrate building retrofit schemes and encourage behaviour change. This includes our award-winning SuperHomes project (see page 13).

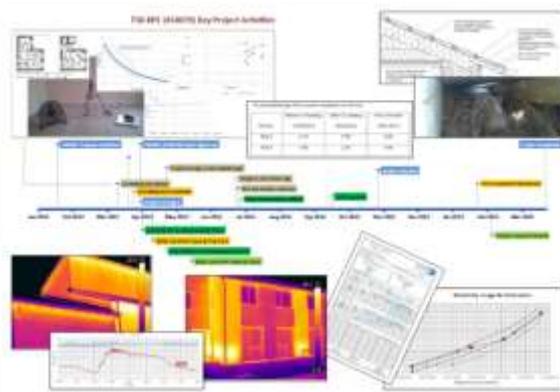
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| ➤ Funding sources, supporting bids and grant management. | ➤ Project objectives, structuring, management. | ➤ Stock and demographic profiling. |
| ➤ Technical options appraisal. | ➤ Advice and training. | ➤ Stock surveys. |
| ➤ Staff and stakeholder engagement. | ➤ Pre- and post-performance monitoring and evaluation | ➤ Production of EPCs and GDARs. |
| ➤ Strategic impact assessments. | ➤ Procurement strategies. | ➤ Marketing/event support. |

Spotlight: Milton Keynes Council

We helped Milton Keynes Council win £310,000 of funding from DECC's "Pioneer Places" programme, to boost the uptake of the Green Deal among property owners in Milton Keynes.

We co-ordinated project management, marketing, Green Deal surveys, advice and training to local trades and council planning, building control and housing teams.

The project inspired action by local residents and business owners to improve inefficient properties, thereby reducing energy bills at no upfront cost.



To discuss your needs or get a quote, please contact:

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DELIVERING LOW-ENERGY BUILDINGS

Low-energy new builds: assessment through to delivery oversight and post-completion testing

The complex needs of public building retrofit projects can be effectively managed by our highly experienced team

We specialise in achieving the **development of low-energy new buildings** from initial concept design and specification through to full delivery. No matter how small or large the building, we look forward to working with you to **improve the performance** of your new building stock, and also welcome opportunities to undertake total stock portfolio assessment. Buildings might include:

- Schools.
- Council offices.
- Hospitals.
- Leisure centres.
- Libraries.
- Public buildings.

There are several stages available and we can work with you to design a project that fits your needs, adapting these stages as necessary:

Assessment and options appraisal

- An initial assessment of the concept and design brief for the building.
- Outlining of the options for improving the building's intended specification to achieve higher standards including indicative cost/benefit assessments.

Concept planning, design and specification

- A concept and design will be put together which details the approach to be taken.
- Project specifications are agreed.

Procurement and contractor selection

- We will support you with the process of choosing the necessary materials and personnel for undertaking the project.

Retrofit activity undertaken

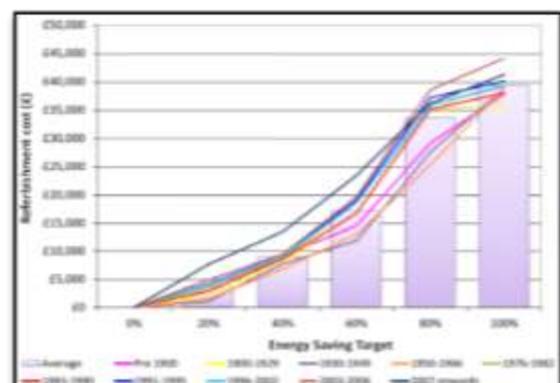
- We will oversee the work being undertaken to ensure quality and performance are achieved.

Maintain contact to ensure performance is met

- Produce user-friendly occupant guidance and, where appropriate, training for use.
- Post-completion monitoring and evaluation to ensure performance is realised.

To discuss your needs or get a quote, please contact:

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DELIVERING LOW-ENERGY BUILDINGS

Feasibility and performance studies for new build or retrofit projects and building-related renewables

When planning projects, a comprehensive approach to the available energy opportunities is required. We provide all the expertise needed, in-house

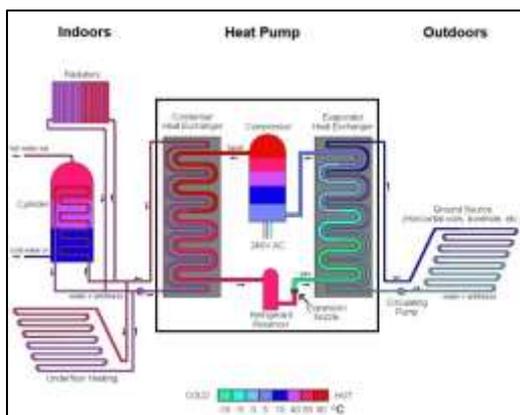
Feasibility and performance studies provide an **analysis** either of a **whole building development** or focussed in on a **specific detailed aspect** of it. It would typically concern understanding the **environmental, social and financial feasibility or performance** during and after construction and might include:

- **Pre-assessment reports, advice and guidance** for planning application submissions and design development.
- **Review of project compliance** – SAP and iSBEM compliance modelling.
- **Identification and review** of relevant planning requirements and targets.
- **Design stage pre-assessments** leading to BREEAM or CSH interim certificates.
- **Support in the delivery of projects** under other widely recognised environmental assessment standards such as LEED, HQE, Passivhaus and Enerphit.
- **Low and zero-carbon energy options appraisal.**
- Development of the **energy statements for planning.**
- **Energy and compliance modelling.**
- **Financial appraisal** of low-carbon design concepts and renewable technology options.

Working closely with the design team and contractor throughout the development process, we provide environmental assessment support at **all stages of the assessment process** from target setting, pre-assessments and supporting consultancy through to final certification.

Many local authorities work **in collaboration with external organisations**, particularly registered providers, to undertake mutually beneficial feasibility studies. We welcome the opportunity to talk

to you directly – or with others, depending on the needs of your work.



To discuss your needs or get a quote, please contact:

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STRATEGY SUPPORT

Energy and carbon strategies

We bring together an in-depth understanding of the complicated needs required to undertake effective energy and carbon strategies for local authorities

With growing awareness of the **social, economic and environmental impacts** that energy and carbon have at local and global levels, many organisations are looking at options for achieving reductions in the consumption of both - whilst at the same time developing efficient, future-proof energy strategies which meet the challenges of providing clean, cost-effective sustainable supply.

Energy and carbon strategies can work **at all scales and levels of ambition**. We can discuss with you your motives and objectives in putting together a strategy and how to **use it** to benefit the outcomes of your work.

Building a strategy, we will work with you on:

- **Conducting initial scoping** on the motives for the strategy, working to outline the key reasons for making progress and the major stakeholders to be targeted.
- **Defining the objectives and goals** of the strategy. This might include:
 - Researching the current use of energy and emissions of carbon in the region to understand where the starting point is.
 - Convening workshops and discussion groups to allow those who will be affected to discuss their views.
 - Scoping the future trajectories of energy production and use.
- **Preparing** the report through drafts to completion, in constant consultation with you.
- **Helping to plan and undertake** the implementation of the strategy and assistance in procurement of specialists where required.
- **Publishing and marketing** the report and answering technical questions related to it from stakeholders, journalists or others.
- **Monitoring the performance** over time, with periodic review and adjustment.



To discuss your needs or get a quote, please contact:

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STRATEGY SUPPORT

Integrating local authority services to lower overall energy use

We can provide an innovative approach to driving new value from council services by better integrating the work of relevant teams

Councils are under ever-increasing pressure to drive greater value from their existing services, whilst retaining ambitious goals for future socio-economic development in their local area. Overall energy use is a critical component of this: **excessive or poor energy use is associated with a number of health and wellbeing challenges** as well as pressure on individual households' and businesses' financial circumstances.

We are proven leaders in developing innovative approaches to achieving overall energy use reduction across a local region. **We look to improve the integration of these challenges between council objectives**, for example extending the work done by:

- **Emergency funds and actions for relief** of extreme energy stress situations, especially during very cold winter periods, as well as local hospitals and social care workers in supporting those that are vulnerable to energy poverty.
- **Health and wellbeing teams** looking to improve the overall quality of homes for residents' use to avoid low-quality, home-related issues such as damp and mould.
- Councils in partnership with registered providers and others in **providing low-cost affordable housing**, in both the initial cost and running expenses.
- **Sustainability teams** in their attempts to reduce costs and carbon over short and long-term horizons for environmental and economic resilience reasons.

We can deliver a **roadmap for achieving the long-term agenda** which can benefit residents living in your local authority area. From our experience, this is particularly effective when:

- Considering a cross-departmental approach to optimise a major development, expansion or regeneration programme.
- Reviewing/revising services to the public in the light of national government policy such as welfare reform.
- Devising step-change responses to reduction in funding whilst preserving or enhancing services.

To discuss your needs or get a quote, please contact:

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EVALUATING PERFORMANCE

Building energy surveys and audits

We will conduct your survey or audit with a dynamic approach to the particular specifications of your building and project

A building energy survey or audit is a practical step to **identify, quantify and prioritise tangible opportunities to reduce energy use, costs and carbon emissions**. Surveys can also evaluate the **feasibility of renewable energy opportunities** for buildings and sites and provide a **business case for action and investment** on energy efficiency and renewable technology. We can undertake this in a comprehensive manner and structure the findings and results of your assessment as you would like.

Our experienced energy surveyors will:

- **Examine** the energy use on site.
- **Carry out** an audit of consumption.
- **Review** building services and fabric.
- **Review** operational and energy management practices.

Surveys typically identify **energy savings of up to 20%**. Following our inspections, we will write a report which identifies and quantifies the **most cost-effective opportunities**. We also provide a prioritised plan of action and a basis for investment.

In addition, we can provide broader or more in-depth work, such as:

- Extending from a single site to a large portfolio of stock.
- Prioritised options appraisals, with detailed comment.
- Business case development.
- Renewable energy feasibility studies.
- Technical evaluations of building performance.
- TM22 analysis and reporting.
- ESOS support for non-public sector energy users.

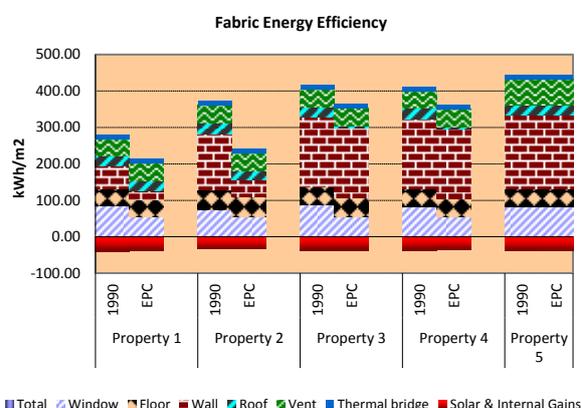
Our approach is in line with guidance from CIBSE and the Carbon Trust.

To discuss your needs or get a quote, please contact

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EVALUATING PERFORMANCE

Monitoring and evaluating building energy performance

As a charitable organisation, we are proud of our ability to provide unbiased, independent advice to inform knowledge on building performance

We understand that those we work with will have many different reasons for wanting to monitor and evaluate the performance of a building.

We conduct assessments **at any stage in a building's life** from design and specification, construction, post-construction and early occupation or later in life, for example prior to refurbishment.

Newly completed buildings typically demonstrate a **performance gap** of at least 2.5 times the energy predicted at design stage – and it is not uncommon to find a gap of up to 7 times the original specification. This huge gap can be **largely eliminated** with the right approach.

We can provide:

- Fan pressurisation testing to the ATTMA Technical Standard, to investigate air leakage and confirm compliance with air tightness standards.
- Infra-red thermal imaging to investigate thermal bridging and air leakage, and confirm compliance with standards.
- In-situ building fabric U-value testing to measure building fabric performance and confirm compliance with standards.
- Monitoring and evaluation, including remote fuel use metering and sub-metering, and wireless monitoring of internal conditions (e.g., temperature, humidity).
- Building user surveys (BUS) and post occupancy evaluation (POE).
- Post construction reviews of new-build and retrofit projects.
- Investigation of energy-related problems, e.g. building services and heat network performance, irregular consumption, condensation and mould growth.

Spotlight: Innovate UK Building Performance Evaluation Programme

We worked closely with Innovate UK to improve understanding of the post-construction, early occupation stage of building performance. The performance of the homes assessed was improved by new high-level fabric insulation and quality installed equipment designed to achieve Code for Sustainable Homes Level 4.

We are establishing a more sustainable and practical approach of new home development, improving design specification, procurement, supply chain engagement, construction oversight, and employee and tenant engagement.



To discuss your needs or get a quote, please contact:

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EVALUATING PERFORMANCE

Major Developments: Assured Performance Process

Checking the detail at every opportunity to ensure that delivery and performance are as expected

Expert, and independent, evaluation of major new developments has shown a very significant performance gap between policy intentions related to energy use and associated issues of overheating risk, and Indoor Air Quality (IAQ), in buildings, and that practically delivered in use. For example, the difference between predicted and actual carbon emissions is around a factor of two.

We offer our Assured Performance Process (APP) to provide development agencies and planners with **much greater certainty that developments will deliver what they promise**. The five stages of APP follow the RIBA Plan of Work:



It is essential that energy is considered at each stage of the process. “Inception and strategy” includes skills and training needs, as well as energy strategy. This is also where the identification of key performance metrics takes place, and early identification of the key risk and mitigation measures required to ensure that targets will be achieved.

The **uniqueness of our approach** is twofold: it places a clear focus on achieving required outcomes, rather than design assessment which is more common; and the identification of a risk and mitigation strategy based around the realised performance of more than 400 new homes.

As well as assuring performance, the process provides a clear means by which development agencies, planners, developers and their supply chains can learn from the experience.

Case Study: East Hampshire District Council, Quebec Park

One of the first pilots of APP has been at Quebec Park, part of the Whitehill & Bordon Development. Key elements of the APP process include:

- Stakeholder engagement to ensure a clear case for energy efficiency across the supply chain.
- Training and skills needs identified.
- Key risks and mitigation measures assessed.
- Energy strategy.
- Outline and detailed design assessment and recommendations.
- Capital cost savings realised through process.
- Realised outcomes being independently monitored.



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Procurement and frameworks

Having worked closely with a number of local authorities for the past 25 years, we are highly attuned to the pressures facing the public sector, and we recognise procurement as a growing constraint with regards to both time and staff resource. We further recognise the increasing benefit of framework agreements not only in cutting through red tape but also in providing an additional level of credibility and verification in the appointment of suppliers.

Below are the services covered by the frameworks that we belong to, which are available to all local authorities. We would welcome the opportunity to discuss the significant financial and convenience benefits that these frameworks have for meeting your needs.

- **NEF top ranking of 5 organisations** on the following framework:
Lot 12 Sustainable and Environmental Developments
- **Covers a range of services, including:**
 - Advisory services in relation to new and existing renewable technologies.
 - Advice on policy.
 - Feasibility studies.
 - Options appraisals for customers to ensure long term environmental, social and economic sustainability.
- **Speed up procurement** - Appoint direct, based on the most economically advantageous offer, or enter a mini-competition within the framework, if you prefer.



- **NEF one of 15 organisations** on the following framework:
Framework for Energy Efficiency and Microgeneration Consultancy
Lot 1 – Energy Efficiency and Microgeneration Consultancy and Energy Management Services
- **Services include:**
 - Energy consultancy.
 - Energy efficiency and micro generation technical advice.
 - Business case development.
 - Feasibility study.
 - Energy audits.
 - Asset/stock analysis.
 - Options appraisal.
 - Financial funding options.
 - Behavioural training; energy project implementation support.
- **Speed up procurement** – Appoint a contractor through a mini-competition within the framework.