

Renewable Energy for Kent

Delivering Opportunities

DRAFT FOR CONSULTATION

v1.0

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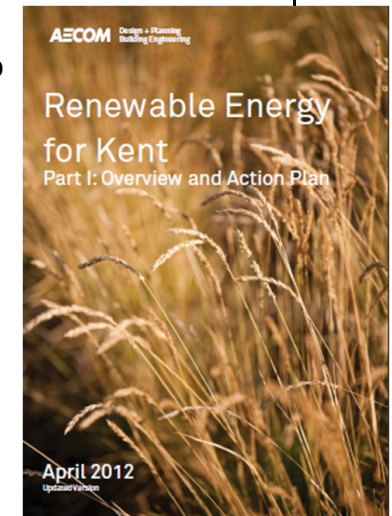
Introduction

Kent partners have already developed significant opportunities in Kent for renewable energy deployment across public, private and voluntary sectors and these should be celebrated. Kent currently produces 640GWh of renewable energy annually and this is set to increase by 39MW (6%) of installed capacity in the near future due to planned installations. It has been estimated that 19,600 people in Kent are currently employed in renewable and low carbon technology related industries, with this sector growing nationally at around 5% per year.

However, to contribute to Kent Forum's commitment to a 34% reduction in carbon emissions on 1990 levels by 2020 and 60% by 2030, it is important to build on these successes and fully realise our potential as a county, the first step being to understand our resources and develop a co-ordinated approach to the deployment of renewable energy. To this end, Kent County Council commissioned AECOM to undertake a renewable energy resource and opportunities study for Kent, highlighting the available resource for the county and the appetite for delivery amongst stakeholders. The study was financed through ClimactRegions, an Interreg IVc project. Further details on this and the full study and recommendations are available on our [webpages](#).

This plan has been developed in response to recommendations made by Kent County Council's Renewable Energy Select Committee and the Kent Environment Strategy and builds on actions identified through stakeholder engagement and AECOM's Renewable Energy Resource and Opportunities Study. It is important to note that renewable energy is just one area of consideration; carbon reductions will also need to come through a range of other measures delivered on a local and national scale, including the improvement of existing buildings, the de-carbonisation of the national electricity grid, and an emphasis on lower carbon transportation. Kent's approach to those activities within our area of influence are addressed in the Kent Environment Strategy, driving our aspiration to be a truly Low Carbon Kent.

In Kent we have an excellent record for partnership working and this document continues that approach. It is co-ordinated delivery which can put Kent at the foreground of renewable energy development and deployment. Through undertaking these actions, Kent can look to achieve a 10% reduction in carbon emissions in the county and unlock the potential for Kent's economy. Generating energy locally can keep money in the Kent economy and resident's pockets, increase energy security and provide new financial and business opportunities.



Governance

This Renewable Energy Action Plan has been developed in response to recommendations from the county council's Renewable Energy Select Committee and is a priority with the Kent Environment Strategy. As such it fits within the current governance structures, ultimately reporting to Kent Forum. The Kent Forum is a high-level strategic group which was formed in 2010 and is made up of the democratic Leaders of Kent. It is chaired by the Leader of Kent County Council, Paul Carter.

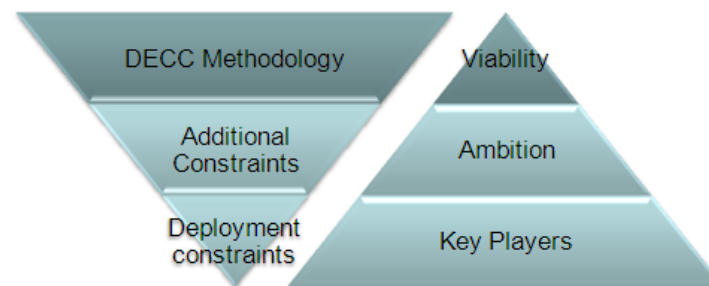
The strategic hierarchy and reporting groups are shown below. Each level has an Elected Member group and an officer group with responsibility for the plan and / or strategy.



Governance

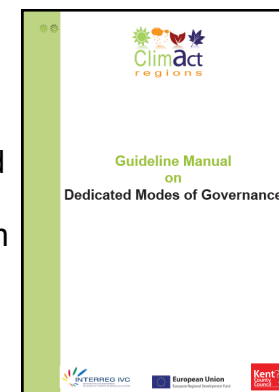
This plan has built on AECOM's renewable energy resource and opportunities study and draws on stakeholder feedback received on the actions identified. The study took a new approach to determining Kent's potential, utilising not only standard DECC methodology for identifying resources, but also identifying the ambition of key stakeholders for delivery.

On completion, the AECOM study was made available online and a short survey developed for further stakeholder input on the proposed actions. This action plan is a culmination of the study recommendations and the stakeholder input received to date.



Aecom's approach to considering renewable energy uptake potential

In addition, the development of governance around the renewable energy action plan has been informed by ClimactRegions, and in particular the manual of best practice produced as part of the project. The manual describes good governance building on case studies from across partner regions. The Kent manual is available on the webpages at www.climactregions.eu



Approach

The plan is divided into a series of 'work packages' each with no more than five actions and to be delivered in the short (1 year), medium (2-3 year) and longer-term (3+):

WP1: Skills and Training

WP2: Leading by Example

WP3: Planning and Development

WP4: Innovation and Business

WP5: Community Energy

WP6: Focus on Wind Energy

WP7: Focus on Bioenergy

These do not address all technologies or opportunities in the county, but are those which we can provide the greatest influence or support. For example, 59% of our current renewable energy in the county is from waste to energy plants (56% from Allington alone). This is already a well-developed area with Kent waste streams utilised and plans and strategies in place to maximise opportunities (BOX 1). Actions are not therefore repeated in this plan. Another highlighted area of potential from stakeholders has been around marine technology for Kent (excluding offshore wind which is addressed in WP6). This is an emerging market with on-going opportunities and so has been incorporated into the *Innovation and Business* work package.

BOX 1: Energy From Waste

The majority (59%) of renewable energy generation in Kent is down to energy from waste installations, 56% of which is from a single plant in Maidstone (Allington). These plants are classified as renewable under the DECC methodology but it is important to note that Kent stakeholders have raised concerns about these assumptions.

Several authorities across the Southeast known as the SE7 are taking a collective approach to managing waste to maximise cost savings. The project will require the authorities to revise their business model and take a more proactive approach towards being a supplier of commodities and fuel for energy production. Kent will continue to work with partners within the SE7 project to maximise the potential for energy from waste and this work will be closely aligned to the Renewable Energy Action Plan.

Allington Energy from Waste (EfW)



Photo Source: Kent County Council



LEAD:

Work Package 1: Skills & Training

Introduction: Kent has the potential to be a national leader in the transition to a low carbon economy¹. We know that Kent and Medway perform very strongly in terms of the primary low carbon and environmental goods and services sector (LCEGS) and it is vital that we make the most of our significant resources and build the levels of skills, training and education to capitalise on diversifying current industries and the creation of new economic opportunities. Kent has several universities and colleges already offering state of the art training and development, ensuring that Kent is well placed to provide access to a skilled local workforce for investors in the sector.

Action	Lead	Due (S/M/L)
ST1: Develop and deliver a skills strategy for low carbon and environmental goods and services addressing both 14-24 year olds and higher education opportunities		Short
ST2: Support and promote the development of renewable energy skills locally through the consortium of engineering colleges including Suscon, Swale Skills Centre and Thanet Skills Centre.		Medium
ST3: Raise awareness of Kent based courses and organisations related to renewable energy deployment locally and nationally		Short
ST4: Develop a programme of placements and apprenticeships allied to renewable energy deployment, linking businesses and communities with students in Kent, building on current projects from DONG, Vattenfall and the Kent Placement Portfolio		Medium
ST5: Develop a county-wide renewable energy expertise network who can provide guidance and support for project development and assessment prioritising training for elected members and planning officers.		Short

LEAD:

Work Package 2: Public Sector Leading by Example

Introduction: The public sector is already delivering opportunities through their own properties. Micro-generation installations on public buildings and in schools have been popular across the county (further details are available on the [website](#)). This work package looks to increase deployment, share learning and develop consistent standards for the public sector estate, which will be increasingly important as we move towards zero carbon standards in new public sector buildings by 2018. The energy hierarchy needs to be considered, prioritising energy efficiency prior to renewable energy deployment. Measures to reduce energy use will be incorporated into these activities, such as the development of standards, and are further detailed in the Kent Environment Strategy.

Action	Lead	Due (S/M/L)
PS1: Develop standards for all public sector buildings to include opportunities for renewable energy deployment as appropriate		Short
PS2: Assess the potential for renewable energy installations across public and school properties and implement technology where a sound financial business case exists.		Medium / Long
PS3: Identify and develop as appropriate simple finance and delivery models for the public sector, business and communities and enable easy access to support and guidance for development of renewable energy. This could include the establishment of a public sector ESCo and a co-ordinated funding pot for Kent.		Medium
PS4: Communicate and share best practice across the public sector		Short

LEAD:

Work Package 3: Planning and Development

Introduction: Research and stakeholder feedback has made it clear that the development and setting of clear and supportive planning policies can help developer confidence in the delivery of renewable energy. To meet the Government target of zero carbon homes by 2016, renewable energy will need to be part of the mix and local leadership is particularly important in light of the new National Planning Policy Framework, which places more responsibility at the local level to initiate and drive delivery. A core principle in the framework is the encouragement of the use of renewable resources (for example by the development of renewable energy).

Action	Lead	Due (S/M/L)
PD1: Identify deliverable local Allowable Solutions to attract developers and give confidence in costs associated with meeting zero carbon developments.		Short
PD2: Develop consistent effective and informed planning policies and guidance for Kent for integration into local plans, incorporating micro and large scale generation as appropriate.		Short
PD3: Building on Kent's resources and opportunities, conduct options appraisals and feasibility studies to decide which strategic projects are worth investing in (e.g., District Heating) and share energy opportunities with developers		Medium

LEAD:

Work Package 4: Business and Innovation

Introduction: Renewable energy deployment and research on new technologies, materials and energy storage can provide significant opportunities for the Kent economy, many of which are already being realised. New technologies are being researched, developed and tested all the time and by providing an environment of innovation through support networks, hubs and seed-corn funding to those with the greatest potential, businesses can grow in confidence in investing in Kent.

Action	Lead	Due (S/M/L)
BU1: Provide support for evolving renewable energy start-ups, including business advice and mentoring, networking opportunities and promotion		Short
BU2: Develop Knowledge Networks, fostering links between private, academic and public sector and developing research and innovation.		Medium
BU3: Support and promote local innovation hubs, building and diversifying activity already in place for offshore wind energy		Medium
BU4: Review emerging opportunities in marine technology in Kent e.g., marine macro-algae processing.		Medium
BU5: Provide competitive small grants to new or diversifying businesses with clear potential in renewable and low carbon energy.		Medium

LEAD:

Work Package 5: Community Energy

Introduction: Across Kent there are significant opportunities for communities to lead in the development of local energy solutions and generate on-going income for their areas. Technology at a local level will be highly site specific, building on the resources available. Some communities may develop hydropower, whereas rural off-gas areas may look to biomass solutions. This work package will look to support communities in identifying technology most appropriate for their areas and how they might deploy it.

Action	Lead	Due (S/M/L)
CE1: Disseminate renewable energy delivery models and case studies including real experiences for communities		Short
CE2: Develop community champion scheme, providing training and development as appropriate		Medium
CE3: Raise awareness of promising areas for community energy schemes and support local engagement groups to develop projects as appropriate		Medium
CE4: Identify and develop funding opportunities for feasibility studies for local energy schemes		Short
CE5: Provide guidance on funding sources and promote support and guidance in the development of applications		Short

Focus on Technologies

The actions so far have looked across renewable energy technologies, building skills and developing leadership, our approach, supply chains and markets.

The renewable energy resource and opportunities study has provided us with the information to enable us to focus in on those technologies which are likely to have the biggest potential for Kent, through economic development and carbon savings. The next two work packages therefore incorporate activity by technology type to maximise these opportunities in Kent.

This is not to say these are the only technologies to be addressed through activities in the plan. Micro generation, such as solar technology, is incorporated throughout the previous work packages and new technologies will be reviewed on a regular basis through *business and innovation* along with the action plan monitoring.

For further information on why these have been chosen, please visit our [webpages](#) for the full resource and opportunities study.

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Work Package 6: Focus on Wind Energy

Introduction: Kent's competitive advantage in the offshore wind sector is well established and recognised with the Government having identified the Thames Estuary as one of the UK's prominent locations for this technology. Economic opportunities for Kent are significant, particularly in relation to building a sector supply chain. Proposals to develop a manufacturing super hub in the Medway are well advanced and Sheerness has been designated a Centre for Offshore Renewable Engineering (CORE) by the Government. Kent could have a key role in supporting the continued growth of offshore wind farms in both the UK and abroad. The potential for commercial and community-scale onshore wind energy can further utilise skills and encourage investment, but in addition can form a source of potential income for communities themselves. If Kent is to deliver on stretching local, national and international targets, onshore wind is an important resource in the County which will need to form a part of the energy mix. However, it is vital that development is sensitively planned and that decisions are collaboratively taken on a case by case basis addressing local concerns and constraints.

Action	Lead	Due (S/M/L)
WE1: Develop local supply chain capabilities for the offshore wind sector through events, networking and delivery of an online business directory– www.kentwindenergy.co.uk		
WE2: Promote and increase investment in the Medway Superhub and Centre for Offshore Renewable Engineering (CORE) at Sheerness, as well as the operations and maintenance hubs at Ramsgate and Whitstable ports.		
WE3: Develop a co-ordinated approach to the planning and deployment of onshore wind energy generation in Kent and develop communications with stakeholders to address concerns and increase understanding of the opportunities across the County.		
WE4: Build on the AECOM study to identify sites with greatest potential for onshore wind, ensuring local designations and concerns are addressed, and the scale of development is appropriate.		
WE5: Engage with local communities to investigate the feasibility of identified onshore sites as part of community energy schemes and where appropriate provide advice and training to support project development.		

LEAD:

Work Package 7: Focus on Bioenergy

Introduction Biomass comes in a number of forms and can be used in a variety of ways to generate energy, from small scale domestic boilers to co-firing in large power stations. In Kent, it is estimated that around 60,000 tonnes of sustainable woodfuel resource could be delivered per annum (42,000 oven dried tonnes at 30% moisture content); this could be sufficient to heat 15,000-30,000 homes. In addition to forestry woodland, opportunities exist in Kent for biomass resource from agricultural arisings, energy crops and waste wood and integration with the Minerals and Waste LDF will be key to ensure on-going supply. All of these will require further interrogation in line with the framework laid out in the [UK Bioenergy Strategy](#).

Action	Lead	Due (S/M/L)
BE1: Unlock Kent's woodland resource through the development of local woodland supply chains and the assessment of waste wood streams in Kent		Medium
BE2: Identify areas for high potential in the sustainable development of energy crops or agricultural arisings to ensure a balanced and co-ordinated supply of on-going biomass		Medium
BE3: Build and refine understanding of issues including air quality, storage and accessibility to inform on-going communication and programme development		Short
BE4: Build demand for biomass in Kent, engaging supermarkets, schools and public sector estate in the first instance and reviewing off-gas housing in the county for potential improvement and switching to renewable fuels such as biomass		Medium
BE5: Identify where significant opportunities arise for anaerobic digestion and identify demand and requirements. Share learning from AD projects, e.g., Hadlow College		Medium

Stakeholders

During development of the AECOM study, stakeholder input has been key through workshops and on-going feedback as the study has progressed. Representatives from the public, private and voluntary sector were represented including:

Ashford Borough Council	Estuary Energy	Kent Fire and Rescue Service	Thanet District Council
Business Support Kent	Finance South East	Kent Science Park	The Bay Trust
Canterbury City Council	Forestry Commission	LASER - Kent County Council	Torry Hill Farm
Daedalus Environmental	Gravesham Borough Council	Locate in Kent	Transition Town Sevenoaks
Deal Environmental Group	Hadlow College	Maidstone Borough Council	Transition Town Tunbridge Wells
Deal Town Council	Institute of Sustainability	Paul Sharpe Associates	Tunbridge Wells Borough Council
Dover District Council	Kent Architecture Centre	Pentland Homes	University of Kent
Elham Environment Group	Kent County Council	Sevenoaks District Council	Vattenfall Wind Power
Enevis	Kent Downs AONB	Swale Borough Council	
Environment Agency	Kent Economic Board	Swale Skills Centre	

References and useful documents

AECOM (2012): [Renewable Energy for Kent Part 1: Overview and Action Plan](#)

AECOM (2012): [Renewable Energy for Kent Part 2: Underpinning the Vision](#)

Kent Forum (2012): [Vision for Kent 2012-2022](#)

Kent County Council (2010): [Bold Steps for Kent](#)

Kent Forum (2011): [Kent Environment Strategy](#)

Regeneris Consulting Ltd (2012). Low Carbon Kent: Developing an evidence base for opportunities in the Low Carbon Economy

Kent Economic Board (2011): [Event report on the Low Carbon Energy Production Business growth Consultation](#)

DECC (2012): [UK Bioenergy Strategy](#)

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This document is available in other formats and can be explained in a range of languages. For details please call Sarah Anderson on 08458 247247, or email climate.change@kent.gov.uk minicom users should call 08458 247905.



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