

## KENT COUNTY COUNCIL

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### SELECT COMMITTEE - ENERGY SECURITY

MINUTES of a meeting of the Select Committee - Energy Security held in Swale 3, Sessions House, County Hall, Maidstone on Friday, 13 November 2015.

PRESENT: Mr J N Wedgbury (Chairman), Mr D L Brazier, Mr B E Clark, Mr A D Crowther, Mr P J Homewood, Mr C P Smith, Mrs C J Waters and Mr M E Whybrow

IN ATTENDANCE: Mr S Baggs (Energy Manager), Mr N Hilkenne (Economic & Spatial Development), Ms C McKenzie (Sustainability and Climate Change Manager), Mr D Price (Kent Graduate Programme – Management Trainee), Mr G Romagnuolo (Policy Overview Research Officer) and Miss T A Grayell (Democratic Services Officer)

### UNRESTRICTED ITEMS

**3. Minutes of the meeting held on 22 October 2015**  
*(Item 1)*

RESOLVED that the minutes of the meeting held on 22 October 2015 be approved as a correct record. There were no matters arising.

**4. Interview with Carolyn McKenzie (Head of Sustainable Business), Neil Hilkenne (Economic & Spatial Development Officer) and Steve Baggs (Energy Manager) (Kent County Council)**  
*(Item 2)*

**Please outline the role and responsibilities of your post.**

- (1). (CM) I lead a team which has three parts to it:
- Working with the County Council's estate, for which the annual energy budget is £26 million;
  - Working with District Councils, Medway Council and voluntary organisations; and
  - Working with and supporting Kent businesses.

(2). The recommendations made by Select Committees which previously looked at similar issues have mostly now been put into practice and are embedded. The Climate Change Select Committee in 2006 led to a change in the organisation of the Directorate, and the Renewable Energy Select Committee in 2010 led to the County Council taking up the opportunities which exist for renewable energy.

### PRESENTATION – 'A STRATEGIC VIEW'

(3). Setting the context and the scale of the challenge, we can use the Growth and Infrastructure Framework to identify future needs. By 2031, Kent will need 158,000 new homes, housing 300,000 new residents, with the resulting increase in demand

for jobs, and all this growth will require energy. We know that much investment will be needed but the scale and nature of the investment needs to be identified.

(4). The Kent Environment Strategy set out the strategic context of, and framework for, the way in which the County Council works with its partners. This Strategy belongs to the whole of the county of Kent, not to the County Council. The Strategy was last reviewed in 2010 so is being reviewed again now, with the aim of minimising the negative impact of the County's energy use and managing demand in the public and business sectors, while securing the maximum benefit for jobs and growth. The Strategy is cross-cutting, covering the environment, health and the economy. Since the Strategy was last reviewed in 2010, there has been a reduction in resources and a change in focus towards more evidence-based services geared to outcomes, involving evaluation and monitoring.

(5). In terms of energy security and total consumption of energy in the County (industry & commercial, domestic and transport), Kent uses the equivalent of 35GWh per annum, and is a net importer of energy. Only 12% of the energy it generates itself comes from renewable sources.

**Why is there such a big difference between onshore and offshore wind-generated energy?**

(6). (NH) There is currently only one onshore wind farm, on Romney Marsh comprising 26 turbines, and two turbines on the Isle of Sheppey, whereas there are three major offshore projects; the London Array (175 turbines), Thanet Offshore (100 turbines) and at Kentish Flats, recently extended (45 turbines). Offshore wind is a stronger resource and therefore more potent in terms of its energy generation potential.

(7). (CM) We also use photovoltaic panels to seek to reduce the difference between the amount of energy imported and that which Kent generates itself. Kent's new approach has three themes: i) identifying gaps in energy production, using evidence, and building resources and funding to address these, the challenge being to decide how we can do this; ii) interacting with the environment, and iii) looking at future possibilities. Via these three themes we identified 10 priorities, of which, there are three main ones:

- Priority 6: demand management, led by the public sector setting an example of good practice on its estate, eg photovoltaic panels on Invicta House.
- Priority 8: Local Plans.
- Priority 10: Opportunities for Jobs and Growth.

(8). I hope this Select Committee will focus on the Environment Strategy action plan. The role of the strategic authority is to take a strategic approach:-

- to link strategies, eg for health and travel, and feasibility studies, eg for biomass,
- to build capacity; and
- to lobby and influence, including taking an active role in attracting investment.

In terms of headlines and achievements, the County Council has been pro-active in investing in renewable energy in its estate. For example, past investment in installing photovoltaic panels is now generating income.

**The topic of energy security does not seem to address emergency planning, the risk of power failure and the response which would be required if this were to happen. For example, when I worked in Silicon Valley in California, there were regular power blackouts. The authorities had to have plans in place to keep vital services like hospitals supplied with emergency power so they could continue to function. The state had to resort to buying energy on the stock market, which was very expensive, and this had much political and economic impact. How can we safeguard ourselves from something similar happening in the UK?**

(9). (CM) The Kent Environment Strategy (KES) and the Renewable Energy Action Plan (REAP) would be built into the risk assessment framework, and the County Council would lobby Government to address the issues which it sees as being the most important. We would need to identify on what issues to lobby them. Changes in tariffs would have an impact on businesses and how the County Council would work with communities. The local response to changes would depend on what changes were made.

(10). (NH) This is a national and a local issue. The spare energy margins are very narrow and we could get near to a situation in which blackouts could be possible. Central Government has created a capacity market, with a range of measures, one of which is the building of standby back-up plant. Other measures being enacted include new interconnectors with Europe, allowing the UK to import and export energy.

**Might this trade arrangement perhaps include countries which may not be willing to supply the UK with power in the event of us needing to ask for it?**

(11). (SB) The market price of energy is determined by demand and supply, and the capacity market would seek to address this imbalance through proposed new energy supply investment, estimated at £110m. Investment would be needed over the next 15-20 years in order to upgrade generating equipment. The Government is using Contracts for Difference to encourage low-carbon energy generation. If supply does not meet demand then generation has to be brought on line or imported from abroad. This may mean an above-market price will be paid for spare generating capacity. Recently, prices of between £400 and £2500 a megawatt were being offered, even though the market price is around £45 a megawatt.

**Diesel generators do not seem to be an appropriate or efficient thing to use in the long term.**

(12). (NH) They would only be used to top-up other sources when demand exceeds capacity, and only in the short-term; they wouldn't be used all the time.

**Is there a set limit to the number of occasions in a year when you could use them?**

(13). (NH) Their use would be very limited. It is also worth mentioning the value of renewable energy technology installed in domestic and commercial buildings. Users installing their own generators reduce the risk of being without power in the event of a blackout.

**It's important to take account of the context of a blackout. There may be a political element to it, with someone possibly withholding energy.**

**Looking at the table of energy types, if all six types - landfill and sewage gas, energy from waste, solar photovoltaic, onshore and offshore wind - were to be used, what percentage of the county's energy needs could be covered?**

(14). (SB) Approximately 12%, but we are seeking to increase this to 15% by 2020.

**All the electricity Kent generates will go into the national grid, so it would be difficult to measure what percentage contribution Kent makes, and if we are 'doing our bit'.**

(15). (SB) Sometimes we produce more and sometimes less, but the average is that Kent generates 12% of its needs.

**The Select Committee should look at resilience. I was inspired by Naomi Klein's book and there has been some interesting work in Islington. We need to build resilience close to where the energy is created.**

**How can the Select Committee add value? How far are we able to activate existing plans, eg the Renewable Energy Action Plan (REAP)?**

(16). (CM) This is a good question! Much work has been done on the REAP, and some actions already delivered. I would like to integrate this, the KES and the CMAP and seek the Select Committee's input into them. Pockets of good practice have been identified but what is needed is a more consistent approach, within the limited resources which are available.

(17). (SB) I work with schools and communities and know that there are 40 – 50 solar installations in Kent's schools, and about 6 in the County Council's estate, eg Invicta House in Maidstone. That installation cost £70,000 but has paid for itself in 5 years and now generates savings and income of about £12,000 per annum. A similar installation at Worrall House at Kings Hill could add £30,000 of savings and income annually. The Sustainable Sheppey project has identified a strong interest in developing renewable energy on the island, especially amongst community organisations and village and community halls.

(18). (CM) Something which we have seen in the REAP is that skills and training are areas of weakness. Part of this is the need to take training to local businesses. There are some good examples of people doing this, eg Thanet Technical College, in engineering and offshore energy, and Swale Skills Centre, which steers people to take up engineering first and then specialise in renewable energy. In the public sector, a good period within which to show a payback on investment is 3 – 5 years, but energy measures may often take longer to payback than this, making them undesirable to some, and it may sometimes take longer. What is needed is vision to press ahead with planning future development. We could seek links with district councils. In terms of links with business and innovation, much work has gone into supporting industry, and work on developing community energy and wind energy. In the latter, there has been a national policy change and there are now new rules governing onshore projects. The Secretary of State has interfered in projects, including going against recommendations made by the Planning Inspectorate. The Select Committee could be sent the mid-term review data once it is available.

**What do you consider the most viable energy measures and methods of generation for Kent to be, so as to best ensure energy security?**

(19). (CM) It is difficult to give a simple reply to this, but I could provide a written reply.

**Perhaps these could be answered in writing, and model answers could be put together once the Select Committee has interviewed other witnesses?**

(20). (CM) It would be helpful to have answers earlier, as the Committee could base subsequent questions to other witnesses on a false premise. Kent has limited contexts within which to influence energy usage and energy security – eg electricity generation is part of a national picture; if we generate surplus electricity, this will not help our energy security in the face of a failure of other types of power, eg nuclear. What we generate locally will not affect or influence the national context.

**How are landfill gas and sewage gas used to generate energy? They could be used locally to run a plant and heat a farmer's own home, for instance, but could they make an appreciable contribution if used commercially?**

(21). (SB) Landfill and sewage gas has been developed in Kent and has been used for electricity generation. There are some cases of bio-methane being pumped back in to the national gas grid and this might be a future development. A study is being undertaken into the possibility of setting up a district heating network for Maidstone: 'District Heating for Maidstone', using gas CHP. The study will explore different fuel sources apart from gas. Having diversity of energy sources is important in case one source should fail.

**Energy security is a huge topic to cover, and affects many areas of society. Do hospitals have their own back-up generators?**

(22). (SB) Yes, they have their own CHP systems. They also tend to have back up diesel generators, although many of them are being replaced.

**Romney Marsh has a wind farm of 26 turbines, and local action groups are seeking to protect the area from having any more. However, 90% of local residents support the building of a new nuclear power station.**

**What can the County Council do with its own estate? We could take the lead and set an example to partners and businesses of good renewable energy use. People need to understand that fossils fuels are a finite resource. I remember the power cuts of the 1970s; we are spoilt now with the supply of power that we have. We MUST invest in renewable energy, there is no question!**

**Kent is in a vulnerable position in terms of its gas supply as it has to import so much, and we could lose that supply.**

(23). (NH) Kent imports 30% of its gas from Norway, 48% from the North Sea, 8% from the Netherlands and 13% from Qatar.

**What is your view of shale gas and fracking? I think the Select Committee should not be frightened by the politics surrounding fracking; we need to talk about it.**

(24). (NH) A Member briefing paper on shale gas and fracking has been prepared. The Research Officer (DP) has a copy of it and will circulate this to the Select Committee. (CM) My colleague Adam Morris prepared the briefing paper. Perhaps he could attend the Select Committee at a later date to talk about it? Shale gas is one of what are called 'unconventional gases' – others are coal gas and synthetic gas, produced from underground coal seams. There is a map in the briefing paper which shows where in Kent each of these types can be found. There is also a planning briefing paper on the subject.

**Is it possible to measure how much of each type of gas there is?**

(25). (CM) There is no information yet about likely resource levels. Most of the interest in fracking has so far been in the north of England. The cost of extraction of shale gas is a key point; fracking is the main method of extraction.

**The Select Committee must take account of the viability of developing the use of unconventional gases.**

**One issue about renewable energy sources is the reliability of production. For example, what would happen with solar panels on school buildings after dark, when they cannot use the sun to generate power?**

(26). (SB) This is an issue to be considered, and we are looking into the feasibility of using battery storage, to store power from the day for use after dark, in the same way in which a domestic property would store power in the day for use in the evenings, when people return home and want to use electricity. Being able to store energy will help manage those peaks in demand. Much work has been done on this, eg in the USA and Canada. Diversity of supply is also important in managing demand, rather than relying on one technology.

**Landfill sites still burn off methane gas. How can they be encouraged to stop doing this? Could this gas be directed to the national grid?**

(27). (NH) Much landfill gas is already used to generate electricity. The feasibility of using the gas for heat is affected by the location of the site. The cost to connect into the national gas grid is often uneconomic. It is easier to send locally-produced electricity to the national grid. (CM) There is only one landfill site at which gas could be used to export to the national gas grid.

**Near the Allington site near Maidstone, there are proposals to build 2,000 new homes. Could these homes perhaps use the power generated at the Allington incinerator? How much could placing development near a generator contribute to the power to run it?**

(28). (SB) A feasibility study called 'Heat Maidstone' is looking into this. Usually, it is easier for a new development to connect to a heat network when being built rather than trying to retrofit later.

**There is also some commercial development by the Borough Council in the same area, located between Maidstone Hospital and the incinerator.**

(29). (SB) This could also be looked at in the feasibility study. (NH) The Allington site has been looked at before in terms of its potential to heat residential and commercial developments in the locality but at the time it was not considered economical. We need to keep challenging this as the economics of energy supply are changing. It is also possible that Maidstone Hospital could benefit from energy generated by the Allington incinerator. (SB) It might be feasible to have energy 'hubs' near hospitals and residential developments, which could use locally-generated energy, as this has been done elsewhere.

**How about the use of renewable energy for transport? Most goods are still transported by road, using fossil fuels.**

(30). (NH) Transport is a different issue, which people often try to avoid! Use of biofuels is increasing, and they can be mixed with petrol and diesel; currently only at a rate of 5%, but this proportion is set to increase. However, one issue which will arise as use of biofuels is increased is a potential conflict between food security and energy security, ie growing fuel crops instead of food crops. Hybrid and electric vehicles are increasing in popularity and availability. (CM) The Select Committee could recommend that the next version of the Local Transport Plan look at energy security issues in terms of transport. (SB) A scheme run by Sheppey prisons collected waste oil which was used locally in taxis and buses. I could send the Select Committee some information about this.

**There is also a fleet of dual-fuel buses operating in Maidstone.**

**In terms of the use of solar panels in new developments, the County Council's Planning Applications Committee does not recommend, as part of planning permissions, that renewable energy sources be used in new homes. Why is this? We could specify that all new homes be built with solar heating. The cost of building this in could be covered in the cost of buying the home, but there is nothing set up to allow us to require this. Retro-fitting is OK but this would be piecemeal; it is easier to build in this sort of feature at the start. Could we press for this to be a statutory requirement?**

(31). (CM) I agree! We could work with Planning to seek to achieve this. However, all District Councils apply different planning conditions so we would need to negotiate with each of them. (NH) Local Plans are at different stages of preparation at any one time, so it is difficult to bring them all up to date with new policy. However, most Local Plans contain something about using renewable energy. The Government produced a Code for Sustainable Homes, which included requirements for energy performance in new buildings, but this has since been discontinued. In addition, the Government's expectation that new buildings would be zero-carbon, beginning with housing from 2016, has also been dropped. The process for uplifting the performance of buildings now relies wholly on the ongoing revision of the Building Regulations. Effectively the Government is removing regulations and requirements as part of unburdening developers and getting as many houses built as quickly and cheaply as possible.

**This is a very short-sighted approach – I think Kent should lobby the Minister to have this issue addressed. It's not a new concept; we looked at this in the Renewable Energy Select Committee in 2010. We should not allow people to pull the rug from under us.**

(32). (NH) Developers knew about the previous requirements and had built them into their costings and timings for development, so were ready to act, but now they aren't required to put them into practice. This is regrettable as higher standards drive innovation and mainstreaming, which brings down costs for developers and consumers.

**Requirements for sustainable drainage have been imposed upon developers, are achievable and have proved to be good value for money; we should seek to make the same arrangement for energy performance measures.**

**This would add a cost for the developer at the outset but would give a home better value in the long run.**

**The Government could dictate the type of houses which should be built, as building regulations are quite loose.**

**To have solar panels on a new home would give householders a head start on living sustainably. Everyone would welcome the chance to save on their household bills.**

(33). (CM) We are seeking to put together a document which sets out minimum standards to help address this, and we need the Select Committee to support us in this and provide ideas of what the content of the document should be. What is needed is a balance between ambitions and the viability of those ambitions.

**Could we develop a Kent 'kite mark', to establish a Kent quality standard and denote which developers meet that standard?**

(34). (CM) This is a good idea but all districts have their own planning authorities with different ways of doing things; the County Council is not the planning authority for housing.

**Would the Select Committee like to have some examples of what other local authorities in the UK are doing to address these issues?**

(35). (CM/SB/NH) We could suggest a list of authorities to approach. Lewes and Bristol have both done much work on this; the Select Committee could perhaps visit Lewes.

**Thank you for giving your time to attend today to help the Select Committee with its information gathering.**