KENT COUNTY COUNCIL

SELECT COMMITTEE - ENERGY SECURITY

MINUTES of a meeting of the Select Committee - Energy Security held in the Bewl Room, Sessions House, County Hall Maidstone on Tuesday, 15 December 2015.

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

IN ATTENDANCE: Mr G Romagnuolo (Policy Overview Research Officer), Ms D Fitch (Democratic Services Manager (Council)), Miss T A Grayell (Democratic Services Officer), Mrs A Taylor (Scrutiny Research Officer) and Mr D Price (Kent Graduate Programme – Management Trainee)

UNRESTRICTED ITEMS

13. Interview with Jeremy Martin (Southend-on-Sea Borough Council)
(Item 1)

Please outline your role and its responsibilities

(1) I have recently gained a new part to my role, and am now the Energy and Sustainability Manager at Southend-on-Sea Borough Council. The Sustainability part was added in mid-November.

How difficult was it to set up what you have at Southend?

(2) It was not too difficult, having taken only 8 months from the research stage to going live, but it took a lot of effort. We looked at the options for addressing energy bills for residents and looked at what other local authorities – for instance, in London, Nottingham and Bristol – were doing to address the same issue.

(3) With OVO, we saw an opportunity to set up a community energy scheme, and a chance to partner with them without limiting our future options. Partnering with them also offered the opportunity to start work quickly and for no financial outlay – always a good thing! We needed to understand the issues involved in partnering, and design our marketing. There were costs - but no benefits - in making the new partnership a separate company, so we didn't do that. Part of our procurement process was to research if any other local authorities were offering something similar.

(4) Southend-on-Sea Borough Council has no purchase financial transaction with OVO; we never purchase anything from them, so the arrangement has no procurement risk to us, yet gives us an opportunity to earn money. OVO sells energy direct to residents under the banner of Southend Energy.

(5) It was difficult to take a proposal like this to Council just before election time in May, but it went through unchallenged, having previously been considered by the Cabinet and the Place Scrutiny Committee. There was discussion of issues such as

the fact that energy prices were falling at the time, the suitability of OVO as a partner and whether or not Southend Energy would prove to be the cheapest energy supplier for local people. Final approval was given by the Council in March but we could not go live until after the elections, so we had just two weeks to organise the launch before going live on 28 May.

(6) It is important to understand how the energy market works for consumers. There are 6 - 8 energy companies selling energy below cost price at any one time, with which Southend Energy has to compete. The Competition and Markets Authority Report from summer 2015 (David Price has a copy) points out that only 1 in 10 domestic customers shops around for the best energy price and that 9 in10 people are being overcharged, at a national cost of £1billion per annum. The efforts of regulator Ofgem have not been successful in addressing this, and the situation has not changed in the last 3 - 4 years. This just relates to the domestic energy market; the situation for small business users is worse. Generally, people can only benefit from shopping around if they do it every year. Ofgem requires that, at the end of a fixed-term contract, for example a 12-month contract, customers may renew with the same supplier (who should give them written notice that they may do so) or switch to a new supplier; however, if they do not, they must be placed on a standard variable rate, which is usually very expensive, but from which there is a 28-day escape clause. 90% of customers are on the expensive standard rate and are hence paying more that they should be.

(7) I cannot comment on people's individual contract arrangements, but it is wise to be aware of who is the energy supplier behind popular packages which are promoted to the public – e.g. customers buying energy from Sainsbury's will actual have it supplied by British Gas. Ofgem requires all suppliers to tell customers if there is a cheaper tariff they could be using, depending on their usage. However, there is no such obligation upon a supplier to tell their customers that they can switch to another supplier. When deciding whether or not to change suppliers, customers should look at the service they have received, e.g. how the supplier dealt with any problems. Achieving a good national 'switching habit' also depends on customers having the discipline to review their arrangements on a regular basis. OVO writes to customers several times at the end of their 12-month contract to ensure that those who want to switch have notice to do so and are able to make arrangements.

It seems that younger householders are keener to move around and get a good deal, but as people get older, shopping around to get the best deal becomes a chore.

Younger people are perhaps less nervous of switching, particularly online. Perhaps there is an educational issue around raising awareness and building confidence.

(8) Yes, we found an educational issue when we undertook our public consultation. The people who attended the focus groups that we used were all aware that they could save by switching. However, many said they were also frightened of things going wrong if they switched, and worried what might happen as a result, so they had taken no action. Many people expected us to offer them a contract with Southend Energy on the spot, at the focus group meeting, and of course we couldn't do that. There was much trust in the Council to research the issue properly and do what was right for local residents. We have found that the vast majority of our

customers are over 60, which seems to bear out the point made previously about older people being less keen to make changes.

Your Environmental Strategy document is very comprehensive, covering low energy, low carbon and high sustainability, and you say that you have good Council engagement in it. In Kent we find it hard to engage people in this sort of issue; it is difficult to change people's behaviour.

(9) Thank you for your compliments on the Strategy. We have much ambition to move forward.

How did you address investments in the capital programme, eg in solar energy?

(10) Our aim is to achieve savings via our Environmental Strategy, even if such savings take a long time to be realised. For example, we have a 20-year project to improve energy efficiency at all Southend's schools, including replacing the windows. Such schemes deliver good savings as we manage the projects using our own staff and engineers.

How difficult was it to get the public onside?

(11) We engaged most of the public via Southend Energy, and made much effort during the launch period to capture as many customers as possible. The market is very complicated, and it is very difficult for the public to get a good deal, so we aimed to identify what customers needed to help them engage effectively. We launched our brand – 'Southend Energy' – and as a logo we used Southend pier, which is iconic and recognisable as being unique to Southend. We emphasised fairness and a long-term commitment to securing 'fairer prices for local people'. We held our launch at the pier and had BBC TV and local press present, and there has been much press coverage since. We market Southend Energy via existing community bodies such as Citizens' Advice Bureaux and Residents' Groups, bodies whom the public already knows and trusts. We did this marketing for the first 6 months and gathered 2,000 customers, a 3% share of the market, which is worth £500,000 to the local economy. We have a recognisable brand and an established partner platform on which we can build further in the future.

What is your working relationship with OVO? Have you been able to set any guarantee with them about future costs?

(12) We chose them knowing there was no guarantee of future prices. The market identifies pricing but we cap their profit level. As there was no guarantee of future prices, when we were choosing a partner we looked at other aspects such as their past price performance, behaviour and customer care record, etc. OVO were consistently among the lowest-priced suppliers and consistently among those with the highest public service scores. They have subsequently won a 'Which?' award, and are popular with subscribers. Some suppliers are cheaper than them but this depends on a number of factors, including a customer's combination of needs, e.g. the time and pattern of their energy usage; what is the cheapest supplier for one user will not be so for another user. To allow comparisons of usage, Ofgem identified a 'standard user', but it is still very difficult to generalise as any one customer's usage will vary from day to day.

(13) Southend Energy has a low standing charge but a slightly higher unit charge. In Southend, we know there are many flats and smaller houses, which have a generally lower energy usage than houses, so this makes Southend Energy the cheapest option for them. We know that 8 out of 10 people save on their bills by using Southend Energy. However, we always give them the option to switch to another user if they wish to.

I see schemes which offer to install solar panels on customers' roofs at no cost to the customer. Surely there is some catch with this?

(14) This is a scheme which has been around for years, wherein the customer basically leases their roof to the solar panel company, usually for a period of 20 – 25 years. In such an arrangement, the panel installation company would keep the feed-in tariff, i.e. the tariff that is paid to the host for generating electricity through solar and for selling their excess generated electricity to the national grid, and the customer benefits from having free electricity. This way of working was based upon the feed-in tariff the Government had offered for years, which made such arrangements attractive. However, in January 2016, the Government will make a major cut to the feed-in tariff, reducing the financial benefit available to those taking part in such a scheme. If considering such a scheme, a customer would have to look at the long-term effects of having panels, e.g. if they wished to sell the property in the 25-year period, might the presence of panels make the property harder to sell, and what scope is there for a customer to buy themselves out of the scheme before the end of the 25 years? The basic premise of such schemes is OK but there are good and bad schemes around. Southend Energy is looking to see if we can offer a similar scheme, in which the customer is able to access reduced-rate rather than free electricity. This scheme will also need to change in January 2016 when the Government changes the feed-in tariff.

Does being a small Council mean you were constrained by economies of scale, and what would you or could you have done if you were a larger authority?

(15) In terms of the size of an authority, what is possible depends on what you are trying to buy. If you are investing in solar power, there is no benefit in being any bigger than we are as you would still procure each job one at a time. Larger scale in buying solar panels may bring a 5-10% savings benefit but this takes a long time to negotiate and may require a cash investment up front. We currently have two live projects, which are the largest solar project in Southend, involving two buildings, and an energy efficiency update programme in Southend schools, which involves LED lighting, more efficient boilers, etc, and aims to deliver savings of 15 – 20%. Every teacher will be able to control the temperature of their own classroom, and if windows are opened, radiators turn off automatically, turning back on again once the windows are closed.

How appropriate is MBT as a waste disposal method? How cost effective is it to use for this purpose?

(16) Waste disposal is covered by an Essex-wide strategy. There are two facilities which deal with all the county's waste. Southend can access an anaerobic digestion plant, but this is not owned by the Council; all Southend's waste is dealt with at Basildon. Anaerobic digestion plants can be established and run on a small scale at an economical rate. It is usually possible to run an anaerobic digestion plant and sell

the energy to cover the costs, and the Council would be avoiding paying landfill costs so would save elsewhere.

In terms of your Environmental Strategy, do you have any recommendations that Kent could follow? What future projects could Kent undertake?

(17) We have several future projects - street lighting, mini district heating systems to heat small public buildings, ie libraries and museums, and the schools scheme to complete. We have three solar power schemes and we would like to do a 'rent a roof' scheme. We aim to create our own best practice as well as learn from others, and Kent could do the same.

How does Southend-on-Sea Borough Council ensure that it gets the best deal for public money?

(18) The Council buys everything via its own commercial services department. Southend Energy is not a suitable source from which the Council could purchase energy.

I think the way in which your Council operates is very interesting, and the Council is very lucky to have someone like you in that post! I would like the Select Committee to look at some of your work in more detail to see what Kent could copy.

(19) Thank you! I don't know the county of Kent very well, but it is much larger than the area Southend-on-Sea Borough Council has to deal with and its size must bring a different set of challenges to those faced by my Council. For instance, Southend-on-Sea Borough Council has very little land (only 16 square miles) that it could use to generate income. All our waste disposal is contracted out so we cannot use that to generate income. However, we aimed to reduce residents' energy bills quickly, and that is an area in which Kent could do something similar. Setting up an energy licence (i.e. by buying a bond) is expensive but there is much precedent for this among local authorities. My officer team is funded by a loan repaid from the projects that we undertake so there is no cost to the Council Tax payer. I could arrange for Southend-on-Sea Borough Council colleagues to talk to Kent in more detail about the options available.

Have you identified or quantified the training, apprenticeship and employment opportunities in the 'green tech' industry which arise from the work you are undertaking? Has it been difficult to find the craftsmen you need?

(20) Some of the businesses participating in 'rent a roof' schemes, eg a local bank, have made a point of employing local apprentices and ex-service personnel but will not be able to continue to do this once the feed-in tariff is cut in January 2016. The intention is to invest in local people working locally but in a market driven by subsidies there is much churn, for example the solar companies change over time. Businesses currently involved are looking ahead at what might be possible after January.

Might the outcome of the Paris conference change their minds?

(20) I am unable to comment on this.

There are lots of further questions that we'd like to ask you. Perhaps the Research Officers could send these to you and you would supply written answers to them?

(21) Yes, I'd be very happy to do that.

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

14. Matthew Morris (Kent Downs AONB - Biofuels)

(Item 2)

(1) The Chairman welcomed Matthew Morris who worked for Kent Downs AONB Unit as their wood fuel development manager.

(2) Mr Morris explained that Kent Downs AONB was a part of KCC but is governed by its own advisory committee and is responsible for raising almost all of its income (mainly from EU funding sources). He had been employed by Kent Downs AONB in 2011 to implement a European Interreg project, this was initially a two year project but two additional years had been added. His current contract is due to expire at the end of March 2016. These projects related to activity in the forestry sector and the enhanced production, and use of wood fuels and renewable heat technologies such as biomass boilers. He also advised on other forms of energy and their use in protected landscapes such as the Kent Downs AONB.

Q – What scope is there to increase the use of woodland for fuel?

(3) Mr Morris replied that only half of woodland in Kent was managed therefore the rate that this could increase was significant. The AONB Unit has, with the Forestry Commission, estimated the maximum sustainable annual yield from woodland in Kent (approximately 144,000 m^3 per annum). In energy terms this is around 246,000 MWh – equivalent to around 25M litres of oil. The main drivers of woodland management in Kent at the moment are fire wood and fencing. Other drivers include sport, recreation and conservation. Use of timber from Kent's woodland is currently nowhere near as high as it had been historically when the mining and paper making industries were still present. Therefore there was a lot of untapped potential.

Q – Is wood for fuel sourced Kent or outside of the area?

(4) Mr Morris explained that he provided advice to owners of woodland on how to bring their woodlands into management. He confirmed that wood chip was the most local of the biomass fuels (often less than 10miles from source to boiler). However, KCC's procurement processes do not always allow for local suppliers to be used. Moreover, KCC has not done enough to take advantage of local woodfuel supplies by adopting suitable biomass boiler technologies.

Q – What about wood pellets?

(5) Mr Morris confirmed that this was the most viable/refined wood fuel. There are several manufactures in the UK, two of which are close to Kent. There are currently no large-scale pellet manufacturers in Kent (although this may change). Although it was possible to import wood pellets, he advocated the use of indigenous softwood for pellets, much of which comes from the Forestry Commission estate.

Q – Kent has a lot of woodland that is no longer managed, is there enough viability for organisations to manage woodland? Is there a big enough market for commercial operations?

(6) Yes the energy content of wood fuels is high and it ca help displace the use of oil and lpg and heating fuels. . Wood fuel is valuable to heat users. However an acre of farmland is worth £8 – 12K to the timber processor (for firewood or fencing) but only a few hundred for woodland owner (hence the financial motivation to owners who are not biomass boiler owners and who are not interested in wood fuels is often very marginal).

(7) In response to a question on the turn around for a wood crop, Mr Morris stated that sweet chestnut (common in Kent) coppice took 10 – 15 years to mature into a viable crop (depending on end use); If unmanaged woodlands are brought back into 'rotation' and managed sustainably then the habitat often improves and becomes more productive. This fast-growing timber crop is significant in Kent and an excellent source of renewable energy in Kent.

Q – An example of properly managed woodland is Torry Hill. Around Sevenoaks there are large woodlands and pieces of woodland which are all neglected, what is being done about this? Is there someway that you or Kent Downs AONB could help bring more coppiced wood into the market?

(8) Mr Morris explained that there had been a series of initiatives to encourage land owners to manage their woodlands. .This had been successful but a lot more could be done. He also referred to work that has focussed on KCC schools to encourage the use of biomass fuel. In relation to the problem of Energy Security, woodland could do more to assist with this but the key was to create more demand, by promoting this as a local solution and by using the technology more within the school estate (along with other technologies such as solar PV which has only been deployed in around 10% of KCC schools)

Q – Is there an issue re emissions and cacogenics' from wood fuel?

(9) There are of course issues with all forms of combustion. Whilst biomass boilers are very efficient at combustion care needs to be taken to ensure that biomass systems are designed properly. It is important to note that the number of biomass boilers in Kent is very low (c. 200) compared to oil, gas and LPG boilers. In terms of risk Mr Morris urged Members to be more concerned about the effect of emissions from diesel engines than from biomass boilers.

Q – As well as wood pellets there are also pallets imported into the country is it possible to use these for fuel?

(10) Mr Morris confirmed that there was a well developed market in wooden pallets that includes manufacture, repair and recycling. Clean waste wood is another

valuable form of woody biomass and some companies in Kent are looking to convert clean waste wood diverted from landfill into a form of wood fuel. He expressed the personal view that the County could convert more waste to energy, particularly waste food that should be diverted into anaerobic digesters (of which there are only currently two in Kent with one under construction and one in the planning process). The energy from waste (EFW) facility at Aylesford was not designed as an energy facility; it was an incinerator first and foremost.

Q – What is being done to encourage schools to be energy efficient?

(11) There are 640 schools in Kent and the AONB Unit has undertaken extensive work to help those in rural areas (that are off gas network) to explore options for biomass heating. Mr Morris indicated that any new schools, or those undergoing extensive alterations or enlargement, should priories renewable energy technologies to help create better energy security in the KCC school netwok.

Q – At what stage are you brought in by designers of new schools? How can we encourage consideration of the use of biomass at the design stage?

(12) Mr Morris stated that there were a lot of disconnects between property management, design and refurbishment and environmental technologies. He explained that in relation to the Building Schools for the Future programme, a series of biomass boilers were installed in schools – some of which have been successful (NB - for various technical and commercial reasons some biomass boilers in BSF schools have not performed well). Work was done to help educate in relation to the advantages of installing biomass boilers in schools, however, the positive impacts of this technology was tainted by a handful of bad case studies in the South East. The amount of evidence relating to the use of bo mass was thin compared to that for oil, gas and LPG, there was a culture embedded in fossil fuels within KCC.

Q – How important is government subsidy to support bio fuels?

(13) Mr Morris noted that the Renewable Heat Incentive (RHI) is an important part of the business case for renewable heat projects. The RHI was introduced in 2011. The rate of RHI subsidy has since reduced, although it still remains attractive and will be available until 2020 (albeit at a lower rate compared to when it was first introduced). Woodland management, and afforestation, can, however, be a fairly marginal rural enterprise and the differences between the use of land for agriculture and forestry can hamper investment in woodlands. In terms of growing more trees, the EU subsidies for farmland make it unlikely that good agricultural land would turned over to energy crops or new woodland. Anaerobic digestion, on the other hand, makes good use of farm and food waste and can also qualify for the RHI and Feed in Tariff (via tariffs for biogas and electricity production). He mentioned the anaerobic digestion facility at St Nicholas at Wade which used crop residue and the £10m food waste facility in Oxfordshire. He stated anaerobic digestion had an enormous potential to produce a lot of electricity and heat. KCC should do more in this area and joint commissioning with an industry provider would make a lot of sense.

Q – What can be done to raise awareness of the potential to use land in areas such as Romney Marsh as managed woodland?

(14) Mr Morris explained that as the land in that area was grade 1 and 2 agricultural land it was unlikely to be used as manged woodland as its agricultural value would be greater. Although Romney Marsh was not a key area for forestation, he would always recommend that owners managed existing woodland. He advocated the use of local species, trees that were climate matched and species adapted to future management.

Q – Wood fuel is a legacy technology but until subsidy arrangements change or there is support for landowners for the 10-12 years until the trees farmed it is unlikely that there will be any new take up, what potential is there in rotation of crops?

(15) Mr Morris confirmed that the take up of the energy crops scheme had been low and that this scheme no longer existed. In relation to arable and poultry farming there was not a lot of farm waste materials produced in Kent compared to other counties. Kent needs to secure sensible locations for anaerobic digestion that dovetail well with household and commercial waste food collection. The long term waste contracts associated with waste in Kent need to be looked at so that anaerobic digestion opportunities are more fully realised. He considered that this was a good technology. It was important to scale this to take account of the supply chain.

Q – A lot Kent's woodland would benefit from proper management, so it would be a win-win situation, what can be done to encourage landowners to unlock this benefit and does this apply to country parks?

(16) Mr Morris stated that country parks were an exceptional resource and they were broadly doing what he was doing in the AONB. It was important that demand increased in order to encourage increase in supply. In 2011/2 research had been carried out by a consultant on demand in relation to biomass heating for schools in the county. Unfortunately when this went out to procurement we did not get this right, we wanted to recruit an external supplier to develop tailored, variable packages for schools but what happened was procurement for a load of biomass boilers, the scope for the procurement was not correct and one leading supplier did not feel able to respond. The problem with schools that that Kent does not know on a day to day basis which are going to be kept and which are going to become academies. In the period of this business case the subsidy for renewables got worse. In relation to schools work undertaken by Mr Morris indicated that schools could be financially better off from day one with a biomass heating system, although the strength of the business case has undoubtedly weakened since this work was completed.. Suffolk County Council was good at procuring biomass boilers. The public sector generally has got to get to grips with biomass heating, although the golden opportunity has undoubtedly been missed now. A key barrier to this is the fact that public sector energy procurement is 'excellent' – able to secure energy for councils at very low costs. Therefore any attempt to install biomass in the public sector has to battle against the already low cost of conventional energy. One of the issues in relation to procurement the comparison made between biomass and the low cost of oil and electricity.

Q – Schools often have arrangements where they pay a fixed fee for their energy and therefore it doesn't matter to them how much they use, there is no incentive for them to save energy. What is your view of this?

(17) Mr Morris stated that the school's priority was to teach. It was important to get to speak to the head teacher and possibly governors about the long term implications of using renewable energy.

Q – There is view amongst some officers that there is no point in investing in renewable energy for schools as they will just become an academy and the long term savings will be lost to the County Council. What is your view of this?

(18) Mr Morris stated that he did not see this as a rational strategy. One of the solutions would be for the County Council to create an investment vehicle and invest in these technologies itself. In cases where the school had become an academy, then perhaps the Council would need to set itself up as a business, and approach the academy as such. There was a need to produce a positive business case bearing in mind that the horizon for financial benefit would be over 20 years as the payback for renewable energy technologies takes longer than more conventional systems.

Q – The Government are saying that all schools will be academies by 2020 and therefore it is not just the view of property officers, this is something that KCC has no control of and must be mindful of, what is your view?

(19) Mr Morris stated that aside from who owned the school building, there was still the need to reduce the demand for energy and for example putting solar panels on school roofs was a means of doing this. The point is that school buildings are used intensively over many decades and as such they often represent excellent opportunities for energy efficiency and renewable energy technologies.

Q - In relation to waste to energy is there scope for communities to benefit from this?

(20) Mr Morris explained that the main product of waste to energy was electricity which tended to go to the national grid (with income going to the operator). However another possibility was for the heat generated to be used for nearby homes – although this rarely happens as the UK is not that good at distributed heating. New waste to energy facilities could provide some form of community benefit, particularly where nearby residents and businesses are adversely impacted by the development.

Q – Regarding energy security, what percentage could renewable energy such as anaerobic digestion and biomass contribute to the energy needed in Kent?

(21) Mr Morris explained that renewable electricity from wind turbines contributed 11% of the nation's power needs in 2015. Overall, renewable energy accounted for 31% of the share of total electricity generation. In theory renewables could deliver in excess of 100% of our electricity needs. However, on an hour-by-hour basis this will vary according to weather conditions and the time of day.

Q – One of the academic witnesses that we have said stated that it would be possible to supply 100% of Kent's energy from renewable sources, you are saying nationally it currently 15% what should we be aiming to achieve?

(22) KCC has to look at its own estate and see what opportunities there are for sustainable energy. Schools represent a huge opportunity regarding energy security

but the difficulty is novation. The culture of the County Council needs to take a step change and understand the opportunities.

Q – How can we overcome public perception in relation to anaerobic digesters and waste to energy facilities being established in their areas?

(23) Mr Morris suggested that developers could be asked to contribute a minimum of 10%-20% of energy needs from renewables as well as making buildings more energy efficient. Opportunities were presented by school refurbishments and extensions, also use could be made of solar thermal, and Biomass was the only alternative to oil in gas free areas. In relation to public perception – there is some evidence from the introduction of wind turbines and solar farms that if communities can see an identifiable benefit to their community then they are more accepting.

Q –I went on a forestry commission visit to Austria 5 years ago to look at a biomass facility, they are a long way ahead of us regarding renewable energy, is there anyway of promoting a national strategy which supports this concept of local generation of energy even if that energy is fed into the national grid rather than used by the community?

(24) Mr Morris stated that he had spoken to a number of organisations, there was a lack of rural policy in Kent and there needs to be a link between energy security and support from locally based organisations such as the Kent Association of Parish Councils and the Council for the Protection of Rural England to draw this together. KCC could provide the lead on this to make the connection between rural communities and their potential to contribute to energy security. KCC could establish an investment vehicle and buy into these projects.

Q - There was a need for KCC to look at what can be done in relation to schools and renewable energy particularly where there is a KCC school and an academy on a shared site, would this provide a greater potential for the schools to invest in renewable energy?

(25) Mr Morris stated that there was a need for a consistent legal view on the legal status of the buildings and the land in this type of situation. Mr Morris confirmed that 40 schools had solar pv roof panels out of 640 schools in Kent, this was a good start but there was still a lot of work to be done to encourage more schools to embrace renewable energy.

(26) The Chairman thanked Mr Morris for attending and answering questions from Members

15. Joseph Grice (London Borough of Islington)

(Item 3)

(1) The Chairman welcomed Mr Joseph Grice who was the Energy Capital Projects Manager at London Borough of Islington. Mr Grice gave Members a brief introduction and explained that his background was in engineering, his current role at Islington Council was to oversee capital projects developed by the wider Energy Services Team.

(2) Mr Grice explained that the Government's Heat Network Delivery Unit (HNDU) had funding available for feasibility projects – London Borough of Islington had been successful in obtaining funding for the London Underground schemes in other areas.

(3) London Borough of Islington used a Combined Heat and Power (CHP) network which converted gas generating power and heat as a by-product. The heat was recovered and used to heat council and private homes, leisure centres and private buildings, and the heat network was 75-80% efficient due to the heat recovery which would ordinarily be wasted. The network was producing power which was sold back to the national grid for a profit. The heat which was recovered was sold onto residents at a cheaper rate because it was subsidised through the money received from the national grid. Islington had used the CHP network since 2012, it was considered a forward thinking authority and the focus of the project was on helping poorer residents.

Q. How could this system work in Kent?

(4) Mr Grice explained that the system worked best in areas of high heat density, town centres for example. Mr Grice offered to provide examples of other authorities doing similar schemes. Where Industrial buildings were producing heat the waste heat could be harnessed and used productively circulating it to housing estates or hospitals for example.

Q. How was the scheme financially viable?

(5) Mr Grice explained that Members had been guaranteed a minimum 10% reduction in the cost of the heating to residents. The exact figures could be provided to Members if requested.

(6) Mr Grice was asked to discuss with Members the scheme using excess heat from the London Underground. The underground system had an ambient temperature of 18-30degrees, this waste heat would be converted to useful heat in a heat pump and would be boosted and put back into the network. IT was confirmed that any London Borough with an area above the London Underground could harness the heat as a power source. There was an added benefit in the cooled water bring produced as a by-product of the power production, which was then used to help to cool the underground system, it was a reciprocal process.

(7) Members commented on the size differences between Kent and Islington, Kent having approx. 1.8million population and Islington 300,000.

Q. Had Islington investigated any other fuels to generate heat or was the Council satisfied with the current system?

(8) Mr Grice explained that the Council would love to look at alternative heat generating systems such as biomass and biofuels, however space was difficult in central London, the CHP network was reliant on gas supply but the scheme had provided resilience for households in the case of boilers breaking down heating could still be provided through the CHP network.

Q. What challenges had been encountered when setting up the CHP system?

(9) It was necessary to detail how much heat and power would be used, ideally the power would be sold on for a profit. Planning permission was problematic, this was a flagship project and as mentioned previously Members were guaranteed a minimum return on the scheme. This was not a 'spend to save' project; it was to alleviate fuel poverty. Liaising with London Underground provided its own logistical challenges. The initial feasibility study showed the size of the substantial contracts needed to complete the work on the underground, there was initially a lack of response from potential contractors. This project was funded through Council Capital and an EU grant.

Q. How much power did the generator produce?

(10) The generator produced 2MW power (2000KW) and similar levels of heat. It also had a thermal store, the generator was not allowed to run overnight and therefore the thermal store was filled and discharges overnight. The grid paid for energy to be produced at key times throughout the day so there was a financial benefit to the Council.

(11) Funding was available for other innovative projects, a possibility for London Borough of Islington was to use the Regents' Canal with a water source heat pump, this was not currently financially viable but if it could be proved to be innovative it could be pursued.

(12) Members briefly discussed the use of tidal power as this was the main alternative source in Kent. Mr Grice confirmed that the London Mayor had some water source heat pumps in the Thames which was also tidal.

Q. How did the Council engage with the local communities?

(13) There were challenges when the network was being expanded but the Council worked with the community to demonstrate the benefits and how the scheme would be successful. Small projects using Solar PV had been used in Islington as invest to save measures; these had been installed on a waste transfer centre with a payback of 6-7years return on investment.

Q. How could energy security be promoted across Kent?

(14) Fuel poverty advice and guidance on energy efficiency, health issues with damp etc. was issued to residents in Islington. All North London Boroughs exported their waste to incinerators so unfortunately the boroughs didn't see the benefits locally. The Heat Network Delivery Unit provided support and funding for local authorities to realise projects such as the London Underground project. Ms McKenzie (KCC's Head of Sustainable Business and Communities) was also present at the hearing and confirmed that KCC had realised some funding for projects from the Heat Network Delivery Unit.

(15) Members thanked Mr Grice for attending the hearing and explaining the schemes used in London Borough of Islington and for answering Members' questions.