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Electricity Market Reform Project
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Dear DECC EMR Project Team,

DECC Consultation on Electricity Market Reforms – response of the Nuclear Free Local Authorities

I am providing a submission to the UK Government's proposed electricity market reforms on behalf of the UK and Ireland Nuclear Free Local Authorities (NFLA).

1. Introduction

Before submitting the response, the NFLA would like to note its concerns about the profusion of detailed consultations on various aspects of nuclear energy policy at the same time. In the same week that this consultation is due in, there are also two complicated radioactive waste / new nuclear build consultations to respond too, as well as a consultation on waste substitution policy at Dounreay. This creates a feeling of 'consultation fatigue' and it is difficult for organisations such as the NFLA to respond in detail to each and every one in the manner that it would like. I hope DECC officials can take this point seriously on board. As such therefore, this response is generic in nature and points out a number of concerns the NFLA have with the consultation.

The NFLA agrees with DECC that there is a need for reform of the electricity market, but is concerned about the motives for this reform and the clear benefits the reforms will provide for a new nuclear build programme. The NFLA suspects that the reforms are providing an opportunity for a significant and sizeable public subsidy to nuclear utility companies, who have been seeking such support from the Government for some time.

2. The need for reforms

The NFLA accepts the need for wide-ranging reform of the electricity market to encourage low-carbon alternatives over the next two decades and beyond. The NFLA also agrees with DECC that the ultimate aim has to be to provide the supply of reliable, low carbon and affordable electricity (1).

The Secretary of State for Energy and Climate Change believes these proposals will add a further £160 a year to electricity bills by 2030. (2) What is not clear from the Government's projections is whether the planned shift to electric heating by 2030 has been taken into account. (3) The comparison website Energy helpline.com, estimates that gas and electricity prices will almost double over the next decade from the present annual average of £1,150. (4) NFLA does not believe the Government's proposals contain enough information to tackle the extra fuel poverty these increases will cause.

The stark nature of the changes required, as argued by DECC, suggest the need to replace 25% of existing capacity by 2020. DECC also notes the long-standing pledge to be producing 30% of UK energy production from renewables, compared to just 7% today (5). The NFLA accepts the difficulties for the Government in achieving this challenging target, but believes, with the required political and industry will, this target can be met and even surpassed.

The NFLA is fully aware of the need for radical change in energy production, and has been advocating such changes for much of its 30 year history. It has a long held energy policy of combining a much more concerted local authority led energy efficiency programme, with decentralised microgeneration being given much more prominence and a mature and sensible mix of renewable energy including onshore and offshore wind, CHP, marine, tidal, biomass and solar power. Such a mix will deal with issues of weather intermittency as has been demonstrated by other European countries. The NFLA has reiterated this view in a large number of past consultations to the UK Government over the last decade.

Substantial financing of the Government's proposals would be required, and the NFLA notes that OFGEM has calculated that £200 billion needs to be spent on generation, electricity networks and gas infrastructure. £110 billion of this alone is required in new generation alone, double the rate of the last decade (6). However, as Damian Carrington of 'The Guardian' has correctly pointed out, a good proportion of the £110 billion is replacing the 25% of current capacity that will have to be retired in the next decade and would be financed anyway (7). The balance is for the additional cost of low-carbon plants, though the NFLA would argue that these will get cheaper as more are built with new grid connections. The NFLA is concerned that the use of such huge numbers by the Government is seeking to push forward with the necessity for new nuclear, when renewable alternatives can be, and are, more cost effective.

A considerable amount of the potential investment in renewable energy could also bring a potential jobs bonanza and, as the Government and energy companies 'Offshore Valuation Report' noted, by using just 29% of the UK's offshore resource, the offshore renewables industry could allow the UK to become a net exporter of electricity by 2050, creating 145,000 jobs and £62bn of annual revenues in the process for the UK economy. This does not take into account other jobs that could be created through export opportunities (8). The NFLA believes the consultation should take more notice of this report when considering electricity market reform.

The NFLA notes the four key reform proposals of the consultation –

- Carbon price support
- Feed-in tariffs
- Capacity payments
- Emissions performance standard.

The NFLA will seek to briefly look at each one in turn and provide its comments for DECC's consideration.

3. Carbon price and windfall tax

The NFLA supports the findings of a study undertaken by the World Wildlife Fund and Greenpeace who estimate that the Government's proposals to introduce a carbon floor price under the Electricity Market Reforms could end up benefiting existing nuclear generators by as much as £3.43 billion between 2013 and 2026 (9).

The carbon floor price, being introduced as part of the reforms, will effectively tax those utility companies with coal and gas-fired power plants in order to benefit 'low carbon' generators. Though this is welcomed for renewable companies, the NFLA can clearly see the benefits for nuclear generators who would greatly benefit from increased electricity prices. Using the Treasury figures, a carbon floor price reaching £40t/CO2 in 2020 (one of 3 options put forward in the carbon price support consultation) could result in windfall profits of £3.43bn over the 2013-2026 period. This is based on the average number of hours that the UK's existing nuclear power stations are expected to operate at for the remainder of their operational life (10).

The NFLA does support the suggested alternative proposal made by WWF and Greenpeace that the UK government consider the introduction of a windfall tax on existing nuclear generators alongside the carbon floor price mechanism. This would be used to support energy efficiency and emerging renewable technologies through the Green Investment Bank. The NFLA requests that the Government carefully consider this useful suggestion.

4. Feed-in tariffs

As the Renewable Energy Association has pointed out (11), feed-in tariffs have been used very successfully in over 40 countries, in particular Germany and Spain. Such tariffs have halved the costs of solar electricity in Germany in less than 10 years. Tariffs also help to democratise energy, attracting investment from local communities, the public sector and the farming community. The NFLA welcomed their introduction in the UK, but shared concerns that the tariff levels were being set too low and not at a consistent level across all renewable energy technologies.

The NFLA believes the Tariff Scheme should be seen by the Government as of real economic benefit, as well as a financial cost, in providing a boost to a growing and potentially job-intensive renewable energy industry, allowing the UK to be at the forefront of new and exciting technologies.

The NFLA is therefore highly concerned that the Secretary of State has recently announced to bring forward an immediate review of feed-in tariffs to 2011, rather than in 2012 (12). The commencement of the feed-in tariffs scheme has greatly benefited the solar power sector in the UK, which the NFLA very much welcomes. As the independent website on Feed-in tariffs has noted, this premature review has already severely knocked investor confidence in this embryonic sector, potentially costing as much as 18,000 jobs at a time when such jobs are desperately required (13).

The reason given in the Ministerial statement and in the accompanying media release was that the tariffs were being used to promote large-scale solar PV schemes. The regulatory impact assessment had a specific tariff band for solar PV of between 100kW and 5 MW and the 2008 Energy Act also defined everything up to 5MW as small-scale. DECC are now classing systems above 50kW (just 1% of the statutory definition) as large-scale (14).

The NFLA believes the Government should be expanding feed-in tariffs as quickly as possible, not suggesting a major reduction in the scheme. The country may be in the middle of a recession, but there is plenty of evidence that such tariffs create jobs, increase renewable energy production, and are popular with the public whilst more than paying for themselves. Furthermore, the NFLA is concerned of the message this review sends out to the renewable energy industry compared to the potential support for nuclear generators mentioned above in supporting the carbon price – where is the level playing field?

The NFLA also notes, and supports, the creation of the 'Save our Solar' coalition of some 60 companies and trade associations which are challenging the need for the Government's review. As the Coalition notes, solar power generates over 40 GW in Germany, 26 GW in Italy and more than 5GW in Spain. Even in nuclear friendly France, the French Government announced last week that it was trebling solar capacity under its own feed-in tariff scheme to 1.5 GW, with a target by 2020 of 5.4 GW. The feed-in tariff scheme is the main way the nascent solar industry could start moving forward in the UK, and it is disappointing that the Government seems to be moving away from this popular scheme (15).

5. Capacity payments

As part of the reforms, the Government has suggested additional capacity payments to assist low carbon generators. Again, if these payments are to assist the renewable energy sector, the NFLA would support them. However, it is again concerned these are being introduced to assist support for the nuclear new build industry.

As the Energy Fair group have commented, any such scheme must take account of the fact that nuclear power is not a zero-carbon source of electricity. It should also take account of the fact that nuclear power is inflexible and cannot be switched on or off quickly, and its output cannot be varied quickly - it is not well-suited to be a backup source of power (16).

The NFLA support additional comments made by the independent 'Energy Fair' group. They have suggested a number of innovative low carbon sources of electricity which should be provided with capacity payments, such as enhanced geothermal systems (which could provide as much as 10% of UK electricity use if promoted adequately), hydropower and electricity stores (such as the Dinorwig pumped storage power station in North Wales). Capacity payments should also be made available to facilities that can cut their demands when there is a shortfall in electricity supplies, for example:

- Cold stores that can forego demand for a time.
- Factories that are willing to allow supplies to be cut off until supplies can be restored.
- Any other user of electricity that is willing to have their supplies capped until supplies are restored (17).

Given as well that there are established interconnectors between Britain and Northern Ireland and Britain and the Republic of Ireland, and others are being established (such as with the Netherlands), there should also be moves to use capacity movements to develop energy links with out European partners. A European 'super-grid' energy network provides the opportunity to benefit from areas of Europe which are likely to predominate in different types of renewable energy – solar in Spain, hydro-electric power in northern Europe and so forth. The NFLA encourages the Government to develop capacity payments to support such developments in developing this wider network.

The NFLA is aware that the Energy Fair group has tabled a complaint in to the European Commission raisings its concern that capacity payments and other elements of the market reforms could be classed as a subsidy for new nuclear build, and in effect state aid (18). The NFLA will monitor the Commission's response with interest.

The level of central control in the market through the use of mechanisms like capacity payments has been a matter of much debate within the Parliamentary Energy and Climate Change Committee and in the public comments of a number of utility companies. The NFLA notes that the Carbon Capture and Storage Association has welcomed the capacity

payments system to allow such facilities to develop, whilst the National Grid have said they would prefer a more market-led system as exist today. The Chief Executive of Scottish and Southern Energy backed the present liberalised market whilst the Chief Executive of EDF preferred a more centralised system to ensure greater long-term certainty (19).

The NFLA wish to put forward its own policy of a more decentralised energy market moving away from a top-heavy centralised and inefficient network. This is then closely linked in with a plethora of complimentary renewable energy modes of production taking up, over time, the closure of the fossil fuel operating systems; and innovative ways to deal with the demand side of the energy dilemma (real, properly funded and imaginative projects led by Councils and other community organisations) provides a democratisation of energy use and a more environmentally sensitive use of scarce resources. If capacity payments are to be developed, they should be used to promote this type of energy production and deal with as much the demand side of energy as well as supply side problems.

6. Emissions performance standards

The NFLA supports the use of emissions performance standards as a way of encouraging more low carbon production at the expense of fossil fuel technology. The NFLA supports the views of the Parliamentary Energy and Climate Change Committee that such a standard will promote renewable energy investment and the potential for carbon capture and storage.

However, it is important to put the levels of the emissions at a lower level than is being suggested in the reforms. Both WWF and Greenpeace have suggested a level of 350 grams CO2/KwH to ensure that only the lowest emitting fossil fuel power stations are constructed and to give the renewable sector the biggest incentive to develop (20). This is significantly lower than the Government's suggested figure in the consultation of 600 grams CO2/KwH, the current UK industry average of 550 grams CO2/KwH and the Prime Minister's pre-election promise of the level of a modern gas-fired power station, which is around 400 CO2/KwH (21).

Recommending an emissions performance standard in the suggested reforms that is actually **higher** than the current industry average does not promote confidence to the NFLA that radical change is being pursued in this area by the Government. The NFLA believes at the very least the Government should be putting a standard forward in line with the Prime Minister's pre-election policy, and a more radical figure would send the right signals that the Government seeks the significant reductions in CO2 emissions that are required to mitigate the effects of climate change.

7. Other relevant issues

The NFLA has a number of other important issues it wishes to raise about this consultation with DECC in the areas of financial subsidies, decentralised energy, fuel poverty and the potentially negative impact on renewables by a rapid expansion for nuclear power.

8. Financial subsidies to nuclear

The NFLA is interested to note that much of the UK media has interpreted the electricity market reforms as providing a financial subsidy to new nuclear build. For example, years of lobbying by the nuclear industry have finally paid off, according to *The Daily Telegraph*, as the UK Government has finally agreed to subsidise nuclear power. (22)

The NFLA notes that the Government continues to insist its plans do not amount to a subsidy for nuclear power on the grounds that all low carbon energy will get a subsidy, but if all low-carbon energy is given a public subsidy it clearly follows that nuclear power has also had a subsidy, as that is how it is being defined. The *Financial Times* has called these arguments "Derren Brown-style mind tricks" (23)

Whichever way you look at these proposals, in the NFLA's view it is likely that new nuclear build will be the great beneficiary of these reforms and operators of existing nuclear sites are likely to get a considerable windfall too as prices for their electricity jumps. And, in the NFLA's view, you cannot have winners without having losers. The losers appear to be both consumers, who will bear the costs and probably the renewable energy sector. (24)

The NFLA also remains concerned that the development of potential direct or indirect subsidies of nuclear power goes against the Government's coalition agreement and the policy of the previous government (now the current official Opposition). The NFLA requests that the Government clarify how these reforms are not providing subsidy to nuclear power in all but name.

9. Decentralised energy system

As a local authority organisation, the NFLA has argued for many years that a decentralised energy (DE) system is a more efficient, responsive and effective way of distributing energy to local communities. The NFLA is disappointed that the suggested reforms have little mention of moving to this form of energy generation.

The benefits of a DE system are that it produces heat as well as electricity at or near the point of consumption. It would include high efficiency co-generation or combined heat and power (CHP); on-site renewable energy systems and energy recycling systems. CHP plants are much more efficient than centralised plants because the heat produced is processed within industry or distributed around building through a district heating system. The development and the availability of district heating systems would allow in the future for the CHP plant to be converted from using fossil fuels to run on renewable sources of energy like geothermal energy, biomass or solar PV.

A study by the World Alliance for Decentralised Energy suggested that using a DE model could reduce delivered costs by 15% compared to a centralised generation model, a 27% saving to capital costs, an 8% higher rate of CO2 emission reductions and a 6.1% reduction in fossil fuel use compared to centralisation. The NFLA encourages the Government to make a through assessment of a DE system – the system being developed in Denmark being an excellent case study – before huge resources are committed on perpetuating large parts of the current centralised network (25).

10. Fuel poverty

A continuing concern of the NFLA is the high levels of fuel poverty in the UK. The NFLA is concerned these reforms do not seek to address these concerns. The recent announcement by DECC that the £345 million 'Warm Front' scheme has run out of money and will not take any new applications until April 2012 was announced shortly after this consultation was initiated (26). The NFLA strongly criticises the lack of financing of this worthwhile project and remains concerned that the electricity market reforms will increase fuel poverty, rather than decrease it, as fuel bills to the consumer rocket up over the next 20 years.

The NFLA notes the comments made by the BBC's Economics Correspondent Robert Peston, who reports that the Treasury's own figures show the poorest will be hit hardest by the reforms. For example the 20% poorest households in the country will be forced to allocate between 0.04% and 0.3% extra of total spending to electricity in 2020 - a fraction of the impact on the 10% richest in the country, for whom the squeeze in spending resources will be between 0.01% and about 0.07%. Obviously not massive sums - but for poor people, every extra piece of additional finance can be crippling. (27) The NFLA also notes that vulnerable people are already suffering at current energy prices - going without food in order to keep the heating during the recent bitter winter while fuel bills rise and temperatures plummet. Citizens Advice Scotland, for example, warned before Christmas 2011 that more people risk being dragged into fuel poverty as they struggle to cope with the "double whammy" of excessively cold weather and unusually high fuel charges. (28)

The Government says its "Green Deal" is a key element of its policy to improve household energy efficiency. It says it is "*committed to putting in place the necessary steps to ensure that the benefits of the Green Deal can reach every household, even the poorest and those in the hardest to treat homes*". (29) But the jury is still out on whether the Green Deal will deliver the promised energy efficiency savings to households on low incomes.

The NFLA notes that Andrew Warren, Director of the Association for the Conservation of Energy, is sceptical about this. Over the last decade installation of the most cost-effective energy saving items: loft and cavity wall insulation, has been heavily subsidised, yet many people still have to take up these measures. The Green Deal, on the other hand, expects people to pay the full unsubsidised rate, plus interest. (30)

Part of the problem is that for some of the more expensive measures, such as solid wall insulation, savings might not be enough to pay back the loan, especially if householders are taking some of the savings in the form of extra heat. And disappointed customers might not be very happy when they realise how much interest they are paying to fund this "government" policy. (31) And the fuel poor tend to live in older properties with solid walls. (32)

In Germany, a similar scheme called the CO2 Building Rehabilitation Programme was launched in 2001 - largely financed by EU-approved government subsidies. To date, €6.4bn has been allocated via this scheme and it has been widely welcomed. (33)

The NFLA view is that the proposed electricity market reforms and the Green Deal do not include anything that will move the UK forward to a low carbon economy at the speed required. Proposals for long-term contracts for low-carbon energy and carbon floor prices are just sticking plasters on the current market design rather than changing the energy market to deliver a new type of energy system. Instead, the NFLA believes there is a real need for regulated obligations on the scale of the transition from town gas to natural gas to transform our buildings. Tendering for street-by-street or area-by-area contracts to make homes energy efficient is cost effective, but crucially creates a mechanism for new companies to enter the market. (34)

11. Impact on Renewables

Under these proposals the current system of support for renewable electricity will be phased out. The "renewables obligation" will be replaced by a mechanism to support all forms of low-carbon generation, which will for the first time set minimum price levels for big renewable energy projects. The winding down is likely to unsettle investors. Under the current scheme, renewable energy providers are awarded certificates for the power they generate, which are then bought by electricity utilities to fulfill their obligation to produce a

certain proportion of energy from renewable sources. The NFLA believes this system has been working, so why interfere with it?

The Renewables Obligation currently gives good incentives to offshore wind and (with the help of the Scottish Government), to wave and tidal stream power. The Government's 'low carbon mechanism' which will fund nuclear power stations alongside renewables, means the major electricity companies may divert funds from renewables into nuclear power. There is only a certain amount of investment capital available, so renewable energy will be in competition with nuclear power for subsidies from electricity consumers. The Government will have to give all sorts of guarantees to nuclear to make it work, so funds could well be diverted from renewable projects. The Government needs to ensure that these proposals do not damage Round 3 offshore wind projects causing them to be scrapped along with any hope of funding wave and tidal stream projects.

The NFLA feels it is therefore a retrograde step to phase out the Renewables Obligation.

If you have any queries with the content of this consultation submission, please contact the NFLA Secretary using the details at the top of this letter.

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