

A response to the European Commission's Green Paper 'A 2030 framework for climate and energy policies'. COM(2013)169 final, Brussels, 27.3.2013

Dr D.C.Pike on the 2nd July, 2013

Foreword.

This response is submitted on behalf of Summerleaze Ltd (SLZ), a family-owned SME in the UK that has made substantial investments in the recovery and supply of energy from renewable sources (RES) since the mid-1980s and has participated in attempts to improve policies and technologies for 30 years.

In the 1980s SLZ was a founder-member of the Association of Independent Electricity Producers, which became the Association of Electricity Producers (AEP) after the privatisation of the UK's electricity industry in 1990. Unfortunately, the AEP has recently become unduly dominated by the six large energy-utilities that have increasingly been given preference by the UK Government, and thus SLZ has resigned from AEP.

SLZ was also a founder-member of the Renewable Energy Association; unfortunately, SLZ was advised of REA's draft response to COM(2013)169 – hereinafter we shall call it '169' - only on the 25th June, with a request for comments on the 28th June. As the Commission will surely realise, SMEs have less resource than large companies to respond to consultations on policy and thus should be given more, not less, consideration than large companies by our Government and trade-bodies.

SLZ have therefore requested me, on their behalf, to communicate with the Commission directly (I am an independent consulting engineer based in Wales, and SLZ is a long-term client). I therefore request the Commission to accept this submission although it is incomplete.

Before addressing the questions on Pages 13 and 14 of 169, I offer comments on some of the preliminary parts of that document.

1. INTRODUCTION.

SLZ is particularly pleased to see that the Commission's approach includes the following principles:

'This framework for 2030 must be sufficiently ambitious to ensure that the EU is on track to meet longer term climate objectives. But it must also reflect a number of important changes that have taken place since the original framework was agreed in 2008/9:

- *the consequences of the on-going economic crisis;*
- *the budgetary problems of Member States [MS] and businesses who have difficulty mobilising funds for long term investments;*
- *developments on EU and global energy markets, including in relation to renewables, unconventional gas and oil, and nuclear;*
- *concerns of households about the affordability of energy and of businesses with respect to competitiveness;*
- *and the varying levels of commitment and ambition of international partners in reducing GHG emissions.*

The 2030 framework must draw on the lessons from the current framework: what has worked, what has not worked and what can be improved.' [emphasis added in red type].

One of the things that clearly hasn't worked in the UK is the Commission's evident intention to remove barriers to trade by simplifying administration. Here we refer to Article 13 of the Renewable Energy Directive (2009/28/EC), which begins: '*1. MS shall ensure that any national rules concerning the authorisation, certification and licensing procedures that are applied to plants and associated transmission and distribution network infrastructures for the production of electricity, heating or cooling from renewable energy sources, and to the process of transformation of biomass into biofuels or other energy products, are proportionate and necessary.*'

At this very moment, we are working on a case in which an unduly restrictive limit has been inserted in a British pre-Standard (PAS 110 – the specification for digestates from biogas plants) in which we have cited the above requirement that authorisations procedures shall be '*proportionate and necessary*', but the UK Environment Agency is being very slow to accept that edict.

The UK Government has very frequently changed the rules for eligibility for financial support for producers of RES; that in itself deters investors. Furthermore, the UK Government also pursues a general policy, while claiming it to be essential to conform with the European State-Aid Rules, of giving more support *per* kWh to those technologies that offer less value for money, and limiting the quantum of total support available to the most commercial technologies, i.e. those that offer Best Value at Current Prices (BVCP). Success is thus punished and failure rewarded. The growth of biomass-heat (the BVCP source of RES and, next after energy-efficiency, the BVCP route to decarbonisation) is being particularly damaged by this kind of excessively interventionist state-control of the market.

We wish to emphasise that we understand the need to give some support for some of the technologies that are not yet BVCP but seem to have potential, in the research, demonstration and development (RD&D) phases, but the current balance, as it is being enforced in the UK is wrong. Arbitrary limits are being placed on the BVCP technologies while funds are being diverted to more costly and more risky options.

For example, by various means the UK Government, following lobbying from the large electricity companies, is currently giving favour to heat-pumps by increasing their tariffs because they have been much less popular to date than biomass-fired heating systems. Of course, we do not oppose the use of heat-pumps, but point out that, although both technologies use electricity that is very far from being adequately decarbonised, pellet-boilers use much less power than heat-pumps. Also, the reports on performance that are available have suggested that installations including heat-pumps are less efficient than is claimed by some lobbyists who have successfully convinced the UK Government that heating buildings with electricity is a good idea. Thus we suggest that all heat-meter installations should include a separate electricity meter (which is not an expensive item) so that owners of buildings can assess performance. Heat-pumps certainly open a new market for the large electricity-producers, but we doubt that it is the best solution for all customers.

In the second paragraph of Clause 6 of Article 13 of 2009/28/EC we find: *‘In the case of biomass, MS shall promote conversion technologies that achieve a conversion efficiency of at least 85 % for residential and commercial applications and at least 70 % for industrial applications’*. Clause 6 evidently applies to the heating of buildings only, and it is unfortunate that 2009/28/EC did not extend a more general preference for efficient systems as wasteful systems are, in some cases, receiving too much support.

For example, the UK Government is currently encouraging large electricity companies to produce electricity in former coal-burning stations by burning inefficiently (at conversion-efficiencies of the order of 35 per cent or less) huge quantities of wood, much of it to be imported from North America, while strangling the growth of small- and medium-scale wood-fired heating systems that return conversion-efficiencies of around 90 per cent (see below). An obvious step towards the prevention of a tendency to waste valuable resources like this would be to avoid having separate targets for RES-electricity and RES-heat.

If efficient heating-systems using high-grade wood-fuels were given, without limitation, the support they deserve on the basis of their BVCP and reduction of environmental impacts, then the use of oil and liquefied petroleum gases for heating of buildings, which is common in the areas of the UK that are not connected to the gas-grid, would soon be reduced.

The main fuel for heating buildings in the UK, however, is gas, and the consequential releases of CO₂ are highly significant. Carbon-capture and –storage (CCS) is not going to be applicable in this sector. The prospect of large new supplies of gas associated with fracking have held international gas-prices down but, if sensible levels of carbon-tax were applied to the use of fossil fuels, the use of high-grade wood-fuels for heating buildings could expand to replace gas. The gas supplanted by wood in this way could then be used in highly efficient power stations, where CCL might be applied. But as things now stand, the UK faces a short-term future of under-investment in any kind of power station; this has recently been underlined by a warning from our regulator Ofgem and our national-grid company of the risks of power-shortages.

For these reasons, we would like to see new guidance as soon as possible from the Commission to MS urging them to promote energy-delivery systems that offer higher efficiency (and thus of decarbonisation) and BVCP, and to do so without imposing high levels of intrusive bureaucracy.

Such guidance should also advocate (a) the compulsory metering of RES-heat produced and supplied, and of the electricity used in the case of heat-pumps, and (b) publication of a running summary of the performance of each installation that receives support from public funds, either by

grant or by tariffs, so that that performance can be publicly viewed and assessed against BVCP. That, more than anything, will provide a sensible basis upon which future purchasers of RES systems can base their decisions of which system to buy.

In the UK there is a paradox between (a) the widespread assumption that combined heat and power (CHP) systems are to be admired, and (b) despite that, there are relatively few such systems in operation. This seems to be related to a lack of appreciation that CHP is usually most successful when it is heat-led rather than electricity-led. That is clearly understood in Scandinavia, where there are numerous examples of commercially attractive heat-loads at flows and temperature that favour medium-scale CHP. The UK's warmer winters, however, and the high cost of breaking streets to insert pipe-networks, do not encourage investment in district-heating (DH).

Incidentally, the numbers given above on conversion-efficiency do not take account of the significant losses of heat that can be associated with heat-distribution networks; those losses sometimes seem to be overlooked by enthusiasts for DH.

Notwithstanding those remarks, there are some circumstances in which CHP could be developed successfully if the UK Government introduced administrative measures aligned with the relevant European Directive, 2004/8/EC. But, instead, it has allowed the introduction of the highly complex and unnecessarily intrusive CHP Quality Assurance Scheme, which goes far beyond the requirements of that Directive.

Here is an extract from a recent consultation-paper* from the Department of Energy and Climate Change (DECC): '86. *Where possible, we hope to support CHP over electricity generation only and we are aware that the CHPQA requirements may be onerous for smaller users. Introducing these additional requirements may prevent some users from installing CHP systems over simple electricity generation.* 87. *However, CHPQA standards ensure that CHP systems are of good quality and we want to ensure that efficient energy production is incentivised. We would therefore consider introducing a CHPQA requirement for biogas CHP installations to ensure that we do not incentivise inefficient systems.*'

Note: * see Page 29 of 'Renewable Heat Incentive: expanding the non-domestic scheme'.

Once again, one sees here a bias against small projects (and hence against SMEs). There is also a major inconsistency between DECC's gold-plating here of the requirements of a European Directive in the name of pursuing efficiency while, as noted above, promoting the wasteful use of wood for low-efficiency electricity-only power-generation schemes (some of very large scale) while depressing the advance of small- and medium-scale heating projects using high-grade wood-fuels.

As we have requested above, we would therefore like to see as soon as possible new guidance from the Commission; in addition to other advice it should point out to MS that restrictive gold-plating of the relevant Directives is counter-productive because it destroys confidence among investors and can prevent the rapid growth of the technologies that offer BVCP.

2. THE CURRENT EU POLICY FRAMEWORK AND WHAT HAS BEEN ACHIEVED.

We refer here to the second paragraph of Section 2.1 of 169: 'The ETS delivers a uniform carbon price for large industrial installations, the power sector and in the aviation sector. It covers more than 10.000 installations and nearly 50% of all EU GHG emissions. This uniform price ensures that climate goals are met cost-effectively and that business across the EU has a level playing field. The carbon price is now part of EU businesses' operational and investment decisions and has contributed to substantial emissions reductions. But it has not succeeded in being a

major driver towards long term low carbon investments. Despite the fact that the ETS emission cap decreases to around -21% by 2020 compared to 2005 and continues to decrease after 2020, in principle giving a legal guarantee that major low carbon investments will be needed, the current large surplus of allowances, caused in part by the economic crisis, prevents this from being reflected in the carbon price.

The low carbon price is not providing investors with sufficient incentive to invest and increases the risk of "carbon lock-in". Some MS States are concerned with this evolution and have taken, or are considering taking national measures, such as taxes for carbon intensive fuels in ETS sectors. There is an increasing risk of policy fragmentation threatening the Single Market, with national and sectoral policies undermining the role of the ETS and level playing field it was meant to create. The Carbon Market Report assesses in more detail the functioning of the ETS'.

While SLZ was a member of AEP (which is a member of Eurelectric) the company consistently argued against the ETS and in favour of a system of internalising externalities (the social costs of avoiding irreparable damage by the use of fossil fuels to the environment, etc.) through a more thorough carbon-pricing mechanism than the ETS that would (a) cover all emitters, (b) effectively exclude gaming, and (c) not hand out free allocations of credits. In the UK, the prime beneficiaries of the ETS have been the vertically-integrated, large electricity companies, which were issued with large amounts of free allowances and yet were permitted to pass on extra charges to their customers.

The UK's progress with RES has been slow and patchy. We note that, in contrast, Sweden - the MS having the highest level of achievement with RES and carbon-reduction and with the highest level of ambition in those respects - has used taxes on carbon and energy to drive their markets in the right direction.

Thus we believe that the EU, instead of trying to find ways to reinforce the ETS should give serious thought to adopting a better system. When it became clear to SLZ that the ETS would inevitably fail, the company pressed AEP to consider taxes as a fall-back device in anticipation of that failure, but resistance from the large companies prevented even a debate of the topic. Yet such an approach would (a) be the most obvious way of make the polluters pay, and (b) allow an overwhelming simplification of the rules in the UK that encumber the deployment of RES, and frighten off investors. It would also provide the EU with a much more effective political tool.

We now refer to part of the second paragraph of Section 2.2 of 169: *Another important challenge is to ensure over time that renewable energy sources become more cost-efficient so as to limit the use of support schemes only to those technologies and areas that still need it. Such schemes should be designed to avoid overcompensation, improve cost efficiency, encourage high GHG reduction, strengthen innovation, ensure sustainable use of raw materials, be adaptable to cost developments to avoid subsidy dependence, be consistent across Member States and, in particular with regard to biofuels, ensure WTO compatibility'.*

We urge the Commission to reconsider its version of cost-efficiency, and at least to investigate moving away from an approach to financial support for RES that resembles a welfare scheme for poorer and otherwise disadvantaged members of society that have to be administered in detail by organs of the State (which adds to costs and causes other disadvantages).

That flawed basic approach has led to the practice in the UK, referred to above, 'of giving more support per kWh to those technologies that offer less value for money, and limiting the quantum of total support available to the most commercial technologies. Success is thus punished and failure rewarded'. The best two approaches to support for RES in descending order of effectiveness and ease of application are:

- (a) The improved carbon-pricing mechanism outlined above, applied at a sufficient level to make investments in RES attractive options. There is room for discussion about how the revenues should best be employed (see below).
- (b) An overall target (TWh) in each MS for RES-electricity, RES-heat and RES-transport taken together, with a much simplified and enduring system of financial support that favours BVCP technologies. A separate budget should be allocated to RD&D of emerging technologies (see below).

Objections to the second option are sometimes heard on the basis of accusations of ‘*windfall*’ profits for technologies that do not ‘*need*’ support, but the counter-argument that we make about paying such excessive amounts of support to unsuccessful technologies that BVCP technology is squeezed out of the market should also be weighed carefully. Also, it must be remembered that support from public funds cannot be fitted precisely to each individual project without excessive interventions by public bodies, so necessarily some projects will be more profitable than others.

Over the past 150 years, profit-making small businesses have provided much of the UK’s employment and innovation; they also pay substantial amounts of taxes. In this context, the Commission might care to examine the damaging effects on small businesses of micro-management of RES by the UK Government, of which we shall here cite two examples.

The first example concerns the initial Feed-in Tariffs (FiT) that were set at a high level (c. 50 €-cents) for photovoltaic electricity (PVE), following high-cost models in Germany and Spain, both of which have more recently been at least diluted. The high tariff encouraged many investors and installers into the field, and the unintended consequence was a much faster take-off than the UK Government had expected. The limited budget that the Government had allocated was soon threatened, and the FiT for PVE was throttled back harshly, but too hastily. The Government was challenged in the Courts and was forced to slow down its changes but, even so, businesses went to the wall and investors withdrew with burnt fingers.

As it happened, the cost of PVE equipment was falling quite rapidly (and we note that the Commission is now imposing an anti-dumping import-duty on Chinese PVE equipment). Nevertheless, that kind of change in the market cannot be predicted accurately by public servants, nor indeed by the market. Much greater care should be taken in providing high tariffs for emerging technologies.

A second example worthy of examination by the Commission is the so-called ‘*degression*’ mechanism being deployed by DECC in relation to the Renewable Heat Incentive (RHI). In addition to the banding of tariffs so that, as mentioned above, DECC plans that heat from heat-pumps shall receive higher tariffs*, the Government has allocated targets of capacity for sub-sectors of technology, both for electricity and separately for heat, using different rules. Furthermore, DECC has selected ‘*trajectories*’ for rates of increase of capacity, and intends to use degression to cut back support for a technology if its level of deployment exceeds the pace decreed by DECC. This policy is about to hit biomass-heating, so we shall see a couple of forces acting against the interests of companies in that sub-sector: (a) higher tariffs offered to its (heretofore unpopular) rival technology, heat-pumps, plus (b) an artificial clamp on the rate of progress of biomass-heat by the reduction of tariffs because the technology has been doing well.

Note: *see DECC’s consultation-paper: *RHI Non Domestic Scheme Early Tariff Review*, May, 2013

This degree of micro-management, without any consideration of the effects on small businesses, is driving investment away from RES because investors are asking (as we hear Cypriots are asking after their government's appropriations of a percentage of the funds of some private depositors in banks) *'if the Government can change the rules like this, what on Earth will they do next?'*

Next we refer to Section 2.3 of 169, which addresses energy-efficiency. SLZ is a strong supporter of measures to reduce specific consumption of energy, but we argue that inadequate attention being paid to the facts that (a) with some exceptions, the lives of buildings in the UK are generally long, and thus (b) the great bulk of those buildings cannot be brought up to modern standards without major reconstruction, the cost of which would be untenable. To continue to heat those buildings with oil or gas will saddle the UK with an intractable level of emissions of CO₂ in that sector. To change to heat-pumps in a large number of buildings will greatly increase the demand for electricity at a time when there is doubt about the industry's ability to meet existing peak loads. There are also doubts about the efficiency of heating-systems in traditional buildings retrofitted with heat-pumps, and concerns about the consequent default use of direct electrical back-up heating.

As to Section 2.4 of 169, which is headed '***Security of supply and affordability of energy in the internal energy market***' we see a focus on topics that have little relevance for us. The second paragraph of Section 2.4 states that '*Other EU measures, such as the European Strategic Energy Technology [SET] plan are in place to encourage a technological shift through development and demonstration projects for new and innovative technologies: e.g. second generation biofuels, smart grids, smart cities and intelligent networks, electricity storage and electro-mobility, carbon capture and storage technologies and next generation nuclear and renewable heating and cooling.*'

As it seems unlikely that any of those development and demonstration projects will make a significant impact on markets within the next six and a half years, it is somewhat confusing to read at the website of SETIS that: '*For 2020, the SET-Plan provides a framework to accelerate the development and deployment of cost-effective low carbon technologies. With such comprehensive strategies, the EU is on track to reach its 20-20-20 goals of a 20% reduction of CO₂ emissions, a 20% share of energy from low-carbon energy sources and 20% reduction in the use of primary energy by improving energy efficiency by 2020.*'

We therefore urge the Commission, in the context of **near-term** affordability of energy, to remind MS not to prejudice the growth of those BVCP RES technologies that can deliver **now** carbon-savings at least cost and are not limited by, for example, resources or public opposition (as are wind-farms).

BVCP projects cannot hope to compete with fossil-fuel technologies that are not forced to pay for their environmental damage, nor with more expensive RES technologies that, nevertheless, are allocated excessive support from public funds.

3. KEY ISSUES FOR THIS CONSULTATION.

Before we give consideration to how the Commission's objectives for 2030 can be achieved, we must respond to what is wanted. We can presume that, according to the first of the four bullet-points on Page 3 of 169, the Commission is seeking a reduction in emissions of GHG to be reduced by at least 40 per cent from the baseline year of 1990, and we can concur with that objective, provided that it can be sustained, taking account of the fragility of the European economy. The European approach to dealing with climate-change surely must now be very strongly constrained by the need to obtain much better value for money as soon as possible.

ETS should be replaced with more effective carbon-pricing for the period 2020 to 2030; emissions of carbon should be priced on the basis of the cost of internalising externalities. Each MS could choose its mechanisms for implementing that principle, and the Commission could regulate those choices.

The third bullet-point on Page 3 of 169 suggests a share of 30 per cent of the internal energy market for RES and we note the text in the first paragraph of Section 3.1 of 169: *'Should the targets be at EU, national or sectoral level and be legally binding? There are diverging views on the need for targets and types of targets. While experience with the current framework shows that targets provide political momentum, a long term vision for investment, and a benchmark for measuring progress, some stakeholders argue that the existing targets and policies to reach them are not necessarily coherent or cost efficient, or that they do not take competitiveness and the economic viability and maturity of technologies sufficiently into account. The 2030 framework should recognise the evolution of technology over time and promote research and 'innovation'.*

If our preferred method of internalising externalities were adopted, these questions would not have to be faced; nevertheless we have to acknowledge that there will be substantial support for the retention of targets from special-interest groups that see such targets as a means of securing a place in the market other than by simply offering good value and quality.

If an approach based on targets is to be retained beyond 2020 then we would prefer only overall targets for the RES. Whatever else transpires, MS should be encouraged to give preferential support to BVCP technologies within the whole pool of options associated with RES-electricity, - heat and – transport. Governments are not good at picking winners, the free market is a much superior mechanism. Selection by the criterion of BVCP would, of course, happen automatically if a credible carbon-pricing mechanism were implemented.

Arguments, on the basis of supposed industrial policy, for siphoning high levels of support to technologies that are currently expensive but are said to be likely to become less expensive should be examined very carefully for special pleading on the basis of little credible evidence. As we have argued above, a separate budget should be reserved for RD&D. To do otherwise, as happens in the UK today, is forcing RES in a direction away from developing a competitive spirit. Public support for RES is draining away, and investors are developing cold feet because of the continual changing of rules by the Government, and especially because of the culture of penalising the most successful developers.

4. QUESTIONS.

Because of the very limited time that we have had in which to prepare this response, we have not yet considered all of the questions that are posed in Section 4 of 169. We have therefore focussed

on those questions that seem to us to be the most important. We might submit further comments on the other questions later (they are marked LLL, below).

4.1. General

Which lessons from the 2020 framework and the present state of the EU energy system are most important when designing policies for 2030?

The main lessons are (a) ETS has failed and should be replaced with a better system of carbon-pricing; (b) MS should be encouraged to separate two streams of financial support for RES so as to obtain best value; and (c) all end-uses of RES (electricity, heat and transport) should be given the same value on the basis of €/kWh or carbon-reduction.

4.2. Targets

Which targets for 2030 would be most effective in driving the objectives of climate and energy policy? At what level should they apply (EU, MS or sectoral), and to what extent should they be legally binding?

We would prefer a better system of carbon-pricing to be put in place, which would reduce the need for targets. We cannot see how targets for GHG-only, at either European or national level, could work without such proper carbon-pricing to internalise all relevant externalities, which should offer no free allocations and cover all sectors.

We also foresee that an EU-only target for RES could invite widespread passing of the parcel. Some countries (such as Sweden) have a clear commitment to very strong progress with RES, but other MS now have different priorities because of their large debts, for example, and could be tempted to step away from their commitments to RES if they were offered an escape-route.

If national targets, including targets for RES, are to be deployed again by the EU as a main weapon against climate-change, we can reasonably assume that they will also again be used as a basis for allocation of financial support to RES. In that context, we strongly urge that a mechanism be inserted to ensure that the BVCP technologies be given preference to more expensive and poorly developed technologies, and regardless of whether they are applicable to electricity, heat or transport. Indeed, the bulk of public funds allocated to RES should be directed to BVCP technologies and projects, and a separate, significant but carefully controlled stream of funds should be used to support RD&D.

Thus we oppose the concept of sectoral targets by end-use because of the inevitable splitting of funds into many separate pockets in an attempt to placate lobbyists in favour of particular technologies that offer ‘*jam tomorrow*’. Our experience in the UK is that our Government, even when it starts with a resolve to have a simple system of support for RES without complex bureaucracy (which was the case when the Renewables Obligation was first brought in), soon allows the system to degrade into a flood of changes, consultations and further changes, which have generated into such a muddle of rules that very few people actually have a firm grasp on every aspect.

Have there been inconsistencies in the current 2020 targets and if so how can the coherence of potential 2030 targets be better ensured?

LLL

Are targets for sub-sectors such as transport, agriculture, industry appropriate and, if so, which ones? For example, is a renewables target necessary for transport, given the targets for CO2 reductions for passenger cars and light commercial vehicles?

No, as explained above, we believe that this would be a counter-productive step, increasing bureaucracy and interfering with the market more than is necessary, thus scaring away investment.

How can targets reflect better the economic viability and the changing degree of maturity of technologies in the 2030 framework?

It may be tempting for policy-planners to envisage a perfectly controlled system that detects every change in the market and then adjusts targets and tariffs, but long experience shows that this does not work efficiently in practice, especially if it is operated by the state. It is therefore misleading to speak of ‘*the economic viability and the changing degree of maturity of technologies*’, each project within each ‘*technology*’ differs significantly for a thousand uncontrollable reasons. Every hill shows a different wind-speed at any given moment; every part of every roof receives continuously varying amounts of light; each biomass power station depends on supplies of biomass that have to travel various distances, etc., and to those sources of variety arising at the various sites must be added the differences in the cost and efficiency of the various options for equipment.

Targets therefore must be set, to the largest degree possible, so that they are blind to technology – enough is already known for the EU to extrapolate the 2020 targets for RES to 2030 by adding a column to the table in Annex 1 of the RES Directive with the heading of ‘*Target for share of energy from renewable sources in gross final consumption of energy, 2030*’.

How should progress be assessed for other aspects of EU energy policy, such as security of supply, which may not be captured by the headline targets?

There is a strong correlation between the growth of RES and the diminution of the EU’s reliance on (largely imported) fossil fuels, so there is no need to do more than to continue to collect data from MS on national outputs of RES, the remaining lives of existing conventional stations, and plans for replacing them.

4.3. Instruments

Are changes necessary to other policy instruments and how they interact with one another, including between the EU and national levels?

Unfortunately, although we would like the UK to be an exemplar of good practice it is not so (for the reasons that we have explained above), and thus we hope to see guidance from the EU to MS that will push Governments to adopt less bureaucratic and unstable systems of financial support for RES and to recognise the essential need to support efficient BVCP systems, without sub-sectoral targets. Unless that is done, investment for RES will dry up in the very period when our Government is bending over backwards to encourage the nuclear industry.

How should specific measures at the EU and national level best be defined to optimise cost-efficiency of meeting climate and energy objectives?

The main suggestions that we have made above are to (a) avoid separate sub-sectoral targets (in particular, the division between heat and electricity must be removed); and (b) provide/encourage two separate funding-streams, one for BVCP projects and the other for RD&D. Please do **not** encourage the setting of targets for very expensive emerging technologies; instead fund them on a project-by-project basis until their costs come down to an acceptable level (the meaning of 'acceptable' here remains to be defined). And please do **not** encourage (as is happening in the UK) sub-sectoral targets that allow BVCP biomass-heat to be driven out by more favour being given to less efficient large wood-fired, electricity-only power stations.

How can fragmentation of the internal energy market best be avoided particularly in relation to the need to encourage and mobilise investment?

We have suggested, above, the replacement of the ETS with a better carbon-pricing device. The next best option 'to encourage and mobilise investment' will be to take every opportunity to promote simplicity, and to avoid the turbulence and uncertainty associate with regime-change.

The Commission should also publish a report on the estimated levels of subsidies paid to producers of electricity from fossil and nuclear fuels historically, at present and projected for the future.

Which measures could be envisaged to make further energy savings most cost-effectively?

LLL

How can EU research and innovation policies best support the achievement of the 2030 framework?

We have proposed, above, the decoupling of financial support for BVCP RES projects from spending on RD&D. That pocket of funds allocated to RD&D should be used to support individual projects entailing emerging technologies. At each stage, the results should be carefully considered to check if sufficient progress has been made before moving to the next stage. When, in this way, their costs (€/MW and /MWh) come down to a commercially interesting level, they will become eligible for the funds available for BVCP. We request the Commission to look back at the emphasis that it gave to gasification/pyrolysis of wood twenty years ago in the hope of driving greater efficiency; that programme did not lead anywhere, which illustrates very well the need for a careful progression within a separate budget.

The Commission, in its own R&D programmes, should find space for studies of the quality and efficiency of RES-heat installations.

4.4. Competitiveness and security of supply

Which elements of the framework for climate and energy policies could be strengthened to better promote job creation, growth and competitiveness?

Not enough attention has been paid to the much greater potential for job-creation (and thus for wealth-spreading) of high-grade biomass-heating of buildings than most other RES technologies, such as offshore wind-farms.

What evidence is there for carbon leakage under the current framework and can this be quantified? How could this problem be addressed in the 2030 framework?

LLL

What are the specific drivers in observed trends in energy costs and to what extent can the EU influence them?

The global energy market is highly politicised and, as a consortium of large net importing countries, the EU usually can wield influence only indirectly.

How should uncertainty about efforts and the level of commitments that other developed countries and economically important developing nations will make in the on-going international negotiations be taken into account?

We assume that this question alludes to commitments to decarbonisation (and perhaps to RES) but, even if concern about climate-change did not exist, or could be justifiably overridden, it would be necessary to build an effective stock of RES stations to promote energy-security.

How to increase regulatory certainty for business while building in flexibility to adapt to changing circumstances (e.g. progress in international climate negotiations and changes in energy markets)?

The six large electricity companies in the UK have lobbied the Government to provide them with very low-risk supply-agreements and thus arrangements have been put in hand by DECC for 'Electricity Market Reform' a central plank of which will be 'contracts for differences' (CFD) based on 'strike prices' to be set by DECC. Some companies are demanding certainty of returns on capital before they will start to build the extra power stations that the UK now needs, and the Government has announced this week that EDF Energy's proposed Hinkley Point C nuclear-power plant is eligible for a multi-billion-pound loan-guarantee.

CFD offers insulation against the variations of the market-price of electricity; it is expected that new RES-electricity projects exporting more than 5 MW_e will be offered CFDs.

It is important, for reasons set out above, that this mechanism will not be used to support inefficient conversion-technologies, such as large-scale electricity-generation without beneficial heat-recovery to the detriment of highly efficient biomass heating.

The most damaging aspects of restraints on investment caused by lack of regulatory certainty are (a) complexity, (b) frequent alterations to rules and (c) delays. Anything that can be done to reduce these threats will be welcomed by RES companies.

How can the EU increase the innovation capacity of manufacturing industry? Is there a role for the revenues from the auctioning of allowances?

If the EU could remove the barriers to trade that have been summarised in this response then that will encourage not only the actors in the biomass-energy industry but also those other actors in the European manufacturing industry that supply equipment for forestry, wood-processing and energy-conversion, etc. Many manufacturers of our acquaintance are ready and able to innovate, but they will not invest in a market that is constrained by irrational acts by Government.

The revenues from the auctioning of allowances should be recycled to the two streams of funding outlined above: (a) maximising outputs from BVCP projects, and (b) funding RD&D.

How can the EU best exploit the development of indigenous conventional and unconventional energy sources within the EU to contribute to reduced energy prices and import dependency?

Conventional energy-sources based on fossil fuels require CCS, which has not yet been securely demonstrated. No new nuclear stations have been commissioned in the UK for nearly 20 years. The Scottish Government has excluded the possibility of new nuclear stations in Scotland. The UK Government is keen to see up to eight new nuclear stations built in England and Wales, but negotiations about contracts (see above) have not yet been concluded. It is difficult to see what more the EU could do to assist with those issues.

How can the EU best improve security of energy supply internally by ensuring the full and effective functioning of the internal energy market (e.g. through the development of necessary interconnections), and externally by diversifying energy supply routes?

We have experienced difficulties at more than one site when we have been seeking, at reasonable cost, access to the electricity grid at the scale that suits our businesses. This has come about in one case from the rapid build-up of wind-farms that need to be supplied with access for their peak-loads, which arise for only a small portion of the year. In contrast, power generated from biogas or solid biofuels (e.g. wood) is reliably despatchable except in times of shutdown.

4.5. Capacity and distributional aspects

How should the new framework ensure an equitable distribution of effort among MS? What concrete steps can be taken to reflect their different abilities to implement climate and energy measures?

Presumably the apportionments already allocated in Annex 1 of EC2009/238 can be extrapolated, unless there is firm evidence and argument to warrant agreed variations?

What mechanisms can be envisaged to promote cooperation and a fair effort sharing between MS whilst seeking the most cost-effective delivery of new climate and energy objectives?

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Are new financing instruments or arrangements required to support the new 2030 framework?

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