



Green Paper 'A 2030 framework for climate and energy policies' - response

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Introduction

SSE is a leading energy company, operating mainly in the United Kingdom (UK) and Ireland. It is involved in the generation, transmission, distribution and supply of electricity and the storage, distribution and supply of gas.

SSE welcomes the opportunity to respond to the Commission's Green Paper 'A 2030 framework for climate and energy policies'. SSE agrees with the Commission there should be clarity on a 2030 Climate and Energy Framework as soon as possible, mainly because investors need long term policy certainty, enabling them to make the required investments in low carbon technologies such as renewable energy. As the present framework ends in 2020, which is only 6 1/2 years away, SSE urges EU policymakers and politicians to aim for the rapid development of such a 2030 framework.

SSE believes the main objectives of a 2030 Energy and Climate Framework are:

- Sustainability and Decarbonisation
- Energy security
- Competitiveness and Affordability

These objectives can only be met if long-term stability and investor certainty is provided. In order to do so SSE believes a 2030 Energy and Climate Framework should be centred on binding and flexible targets for renewable energy, carbon reduction and energy efficiency. As part of the framework a strong EU ETS and effective national support schemes for renewable energy will be required to reach these targets. All targets need to be designed in a flexible way, taking into account affordability, technological developments and competitiveness.

In this way, a 2030 Climate and Energy Framework continues to build the foundation for a strong and resilient energy system that delivers green growth, security of supply and affordable energy.

General

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

The binding renewables target has facilitated the rapid deployment of renewable energy in the EU by providing (long term) certainty to investors. Part of this success surely is its binding character; which focuses Member States' efforts on pursuing those targets. As

such, SSE believes a 2030 renewables target should be a cornerstone of any 2030 Climate and Energy Framework.

The 2020 carbon reduction target has been valuable as well, but its main driver, the EU ETS, has been at best a partial success. Whereas the current low carbon price reflects the low cost of reaching the 20% carbon reduction following the economic downturn, it does not incentivise the low carbon investments required for the long-term transition to a low carbon energy system. To achieve this, significant reform to the ETS is urgently needed. SSE is actively engaged in research on how to improve the current structural design of the ETS, and has produced a discussion note on the issue which we have included in annex to this submission. SSE believes that without reform to deliver a more stable and relevant carbon price, the ETS risks fading into insignificance and being replaced by diverse national taxes, such as the UK carbon floor price. Notwithstanding, Member States need to be able to respond to particular national circumstances in their energy system. Flexibility is needed for Member States to do so.

The energy efficiency target has yet to prove itself with the Energy Efficiency Directive only recently coming into force, and the European Commission due to review its non-binding target in 2014. Given that energy efficiency is the most cost effective method of carbon reduction, and has significant additional benefits in terms of job creation and cost savings to consumers, SSE believes that it should play a more significant role in the EU energy and climate policy than it has to date. It should however be stressed that energy efficiency is not the sole responsibility of the energy sector, but a societal responsibility that needs to be incentivised beyond the energy sector.

SSE is aware of arguments that the current 2020 targets undermine each other. The ill-functioning ETS is however mostly a consequence of the economic crisis, the over-allocation of emission allowances and the number of international credits in the system. SSE agrees with the analysis that also the renewable energy and energy efficiency targets have been a small contributing factor to the low carbon price in the ETS. However SSE does not believe that this argument should result in the abandonment of the three main pillars of the current package. There are strong reasons for maintaining renewable energy and energy efficiency targets relating to their important role in maintaining and generating jobs and growth in the EU. The 'undermining effect' of these targets can be remedied through reform of the ETS. For example, the model that SSE describes in the ETS discussion paper (annex 1) would reduce the impact of additional renewable energy and energy efficiency policies on the carbon price, and result in a suite of mutually reinforcing incentives for low-carbon investment across the three pillars.

In light of the above, SSE believes it is only logical to continue the 2020 framework with a new set of binding and flexible targets combined with structural reform of the ETS.

Targets

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

Any set of targets needs to be designed flexibly and take affordability, technological developments and competitiveness into account. The new set of targets must be in line with the overall objective of 80-95% carbon reduction in 2050 in order to create a smooth pathway, with a fully decarbonised electricity sector and limited demand growth through energy efficiency.

A 2030 target for renewable energy will stabilise the market and continue the achievements of the existing 2020 targets. It will also ensure that the supply chain does not suffer from start-stop development and that transmission and distribution capacity is delivered in line with generation capacity. Furthermore it will signal to investors that renewable energy is considered a long-term priority for the EU, as highlighted in the European Commission's 2050 Energy Roadmap. A 2030 target allows less mature technologies, such as offshore wind, to continue to advance its significant potential to reduce emissions after 2030. It should be noted that a renewable energy target does not necessarily mean a continuation of support mechanisms for all renewable technologies. Investments made possible by well-designed support mechanisms help drive down costs – both capital expenditure and the cost of capital - will enable on-going reduction, and ultimately remove the need for specific support. For example, onshore wind energy is currently one of the cheaper renewable technologies. If the right framework for 2030 is set, the success of onshore wind in bringing down costs will be replicated offshore. Such developments should be incentivised and reflected in any flexible targets. Furthermore, renewable energy policy is not only about decarbonisation: it also promotes energy security, green growth and jobs, industrial and technology leadership in technologies in which Europe excels and reduces import dependency.

An ambitious and binding carbon reduction target should be set for 2030. The ETS needs to be the main policy driver to achieve this. For this reason, gradually more sectors should be covered by the ETS, making it economy-wide. Given the importance of the ETS as a key tool to drive emissions reductions in the long-term, the 2030 carbon reduction target needs to rely on a structurally sound ETS.

A 2030 binding energy efficiency target will allow the EU to continue to unlock the cost-effective energy efficiency potential which has historically been blocked by non-economic barriers and cannot be unlocked by carbon pricing only.

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

As noted above, the potential dampening effects of the renewable energy and energy efficiency target on the carbon price is an inconsistency which could be rectified by introducing a reformed ETS which responds to fluctuations in demand for carbon allowances (which could be caused by a wide range of factors). Reform in this area should be a priority for the European Commission.

SSE also believes that the current package was imbalanced by the status of the energy efficiency element as a non-binding target. Given that energy efficiency measures are frequently the cheapest way of reducing carbon emissions, it would be logical to include a binding energy efficiency target. This would reduce the total cost of decarbonisation, while bringing important benefits in terms of jobs, growth and security of supply.

4. 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?

Given the importance of transport and heating in the overall carbon intensity of the energy sector, sectoral targets could be part of a 2030 Climate & Energy Framework. SSE believes electrification is a key element of decarbonising these sectors. Unfortunately, the current sectoral targets for transport and heating have yet to cause a large-scale

electrification of these sectors. Electrification targets for transport and heating must therefore be considered.

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

SSE believes that there should be a renewable energy target that would encompass all technologies and an economy-wide carbon reduction target. National targets are the best way to ensure a continued development of a sustainable energy economy throughout the EU. There should not be technology targets for various sources of renewable energy. However, technology maturity must be a key criterion to define the level of support for a technology. Translating the targets into adequate support schemes can best be left to national governments so to reflect national and geographic circumstances. Relatively old technologies like nuclear would not need any support, but relatively less commercially mature technologies would still be supported beyond 2030. Other technologies, like wave and tidal, still need considerable R&D efforts before they can make a more significant contribution to renewable energy and decarbonisation targets. It should be noted, that whilst specific renewable energy policies may have an additional short-term cost, long-term technology specific support is the best way to reduce costs.

6. 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?

Security of supply is first and foremost a matter of national concern. Different Member States have different security values; hence they will naturally have different views on the measures needed to maintain adequate security of supply. While regional and EU level assessments of generation adequacy (eg those carried out by ENTSO-E) will take on greater importance as the market becomes more integrated, the national role in setting security of supply standards means progress must first and foremost be assessed at a national level.

SSE supports the move towards the completion of the internal energy market; however the establishment of cross-border day ahead, intra-day and balancing markets will not be sufficient nor come in time to avoid capacity shortfalls in all Member States. With the vision of a fully interconnected and resilient European energy system not yet materialised, national governments need to take action to address immediate security of supply issues. It is in this light that current discussions about capacity remuneration mechanisms need to be viewed.

SSE believes some form of capacity mechanism will be needed in the Great Britain market to rebalance the risk-reward relationship for generation by increasing the certainty associated with capacity value. Overall the bilateral energy market does not reward generation reliability. Due to the social nature of electricity reliability there is no clear signal to generators to provide this reliability. The Great Britain situation is particularly urgent and pressing in the short term due to unprecedented levels of plant closure. These issues cannot be resolved at the required pace with interconnection or more renewable generation. The unattractive returns for new conventional plant and the increasing risk facing investment in gas generation are also preventing the investment in new firm capacity required to maintain security of supply.

As such, Member State level capacity mechanisms will be essential to providing generation adequacy in particular markets where generation adequacy is endangered. Guidance on the design of capacity mechanisms can help to achieve European market integration and prevent trade distortion whilst enabling national governments to respond to particular national circumstances.

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

Renewable energy targets and the ETS should be mutually supportive if designed correctly: reducing greenhouse gases is complex and challenging and requires more than one tool. Betting on one policy instrument is a risky strategy. Even more so if this tool still needs to be proven as an effective and efficient instrument for driving investments. It is not apparent how an ETS-only approach for 2030 could drive investments in a sufficiently wide range of renewable energy technologies or facilitate sufficient levels of investments in infrastructure and the wider electricity system in order to decarbonise the power sector by 2050.

As an investor, SSE does not believe the ETS is providing a stable investment signal yet. After improvements it will take time to prove the stability of the ETS before investment decisions can confidently be based on it. In the meantime, a binding and flexible renewable energy target can provide this certainty.

A framework with more targeted support reduces cost and policy risk and thereby enables more cost-effective decarbonisation. For biomass, stable and long-term strict sustainability criteria are essential for biomass to provide a real contribution to decarbonisation.

An energy efficiency target should allow flexibility for Member States to adopt the most appropriate and cost-effective measures. These measures could include improved building regulations (e.g. Zero Carbon Homes in the UK), retrofitting existing building stock, industrial process optimisation, electricity demand reduction and increased use of CHP.

The targets for renewable energy, carbon reduction and efficiency should be set at a coordinated level and aligned, as was the case for the 2020 targets, in order to work in a coherent and concerted way; underpinning and mutually supportive of each other.

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

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

The finalisation of the internal energy market can be supported via the development of network codes and continued and increased investments in infrastructure. Furthermore, non-binding guidance on issues like renewable energy support schemes and capacity mechanisms is an effective way to gradually move various national systems in the same direction without preventing national governments from responding to urgent market failures as is for example intended via the capacity mechanism in the UK, or market designs which integrate capacity mechanism without distorting cross border trade, such as the Irish SEM.

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

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

Any promising technology should in itself be eligible for R&D funding. However, the further developed a technology becomes, criteria around the potential effects on emission reduction, competitiveness and security of supply are important to differentiate and promote those technologies that are close to commercialisation.

There is a need to strike the right balance between early stage research and demonstration activities for technologies and systems that are closer to market, which probably requires a shift towards the latter. Demonstration projects provide essential know-how and a bridge from early stage research to commercialisation, but are generally more expensive. Importantly, accelerating the commercialisation of close-to-market technologies could have a more immediate impact on contributing to 2030 targets.

There is a need to consider technologies end to end. There is no point in funding early stage R&D or demonstration projects if the policy framework then hinders the commercialisation of the research. Research and innovation policy therefore needs to be considered as part of the whole energy policy framework to ensure a coherent approach.

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

One of the most successful elements of the current Climate & Energy Package is the renewable energy target and its effect on creating an industry. As such the binding renewables target is as much climate policy as it is industry policy. A continued focus on renewable energy, through a 2030 binding renewable energy target, will translate into strengthening and expanding this industry. This is good for green jobs and as a way out of the current economic crisis. The same counts for binding energy efficiency measures. The above is further strengthened by an ambitious carbon reduction target.

Energy storage, and specifically pumped hydro storage, should be incentivised by any 2030 Climate and Energy Framework. Currently, no adequate market models exist that reward the system benefits of pumped hydro storage.

13. 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?

Carbon leakage is perceived to be a greater threat than it actually is. It is only a risk with respect to mobile and international industries. Decisions of companies to leave the EU are based on more factors than energy costs. As such, an exemption from climate related costs could prove only to postpone their exit from the EU, whereas it would have an immediate negative effect on the ETS. The best solution against the potential effects of carbon leakage is the agreement of a global deal on climate change in 2015.

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

15. 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?

The EU should be willing to move the intended carbon reduction target for 2030 in the event of an international agreement on carbon reduction. Also, the ETS should be promoted internationally in order to gradually link different carbon markets.

16. 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)?

On the one hand targets provide certainty for investors with the highest risk being decreasing this target. As such, one element of flexibility could be to agree on milestones or frequent reviews that can only lead to an increased level of ambition based on affordability, technological developments and competitiveness. Another element of flexibility might be needed in the ETS to prevent the current situation from happening again. SSE together with Rothchild have developed a automated reserve mechanism that enables the ETS to respond to actual market changes while isolating it from the political risk associated with the current proposed interventions (see Annex 1).

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

18. 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?

19. 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?

Efforts to improve the internal energy market will contribute to ensuring security of supply, particularly once balancing markets are sufficiently integrated to deliver cross-border flexibility. However, SSE believes these improvements will not be sufficient to address generation adequacy and will not be in time to avoid capacity shortfalls in all Member States.

Interconnectors should not be viewed as a panacea as they do not on their own contribute to generation adequacy – they are simply a conduit. Increased interconnection will assist in improving cross-border trade within the internal energy market, but given their long lead times and capital intensive nature they cannot deliver this in the short-term for weakly interconnected Member States such as the UK and Ireland.

Capacity and distributional aspects

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



National targets ensure the continued development of a renewable energy sector throughout the European regions. It prevents a run on the lowest-cost solutions in one specific region, compromising public support for decarbonisation and undermining investments in a broad array of technologies. An improved cooperation mechanism is thereby needed and provides a certain level of flexibility that prevents certain Member States from being faced with considerably higher costs of decarbonisation than others and that would enable cross-border trade and the gradual integration of European energy markets.

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

The gradual incorporation of non-ETS sectors into the ETS can extend the benefits of achieving decarbonisation in an economically efficient way across the economy and society.

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

With an improved ETS and flexibility for Member States to design the most adequate support policies targets for 2030 could be met. An important element is to maintain R&D funding for new and innovative technologies.

Annex 1: A Stability Mechanism for the ETS

1. The Issue

The fundamental issue faced by the EU-ETS is the absolute fixed nature of the cap. Unlike almost any other market, the volume supplied responds neither to changes in price nor demand.

The effect of this is exacerbated by demand behaviour. An emissions credit has no intrinsic value to consumers in its own right; and so at many price levels, price is not the primary driver for demand. For example very low EUA prices do not stimulate extra demand in the way they would for most goods. By contrast other influences such as economic activity, renewable energy incentives, energy efficiency legislation (which are difficult to predict “ex-ante” when the cap is set) have a profound effect on demand at all price levels.

In economics terms, the ETS has a vertical “*supply curve*”, and a near-vertical (but unpredictable) “*demand curve*”. With this dynamic, prices are inherently unstable; and ultimately it is highly likely that either:

- Allocations are higher than underlying demand, regardless of price; and so prices sink to very low nominal levels (“option value” only).
- Allocations are lower than underlying demand – potentially sending the market to distress levels once sensible short-run abatement opportunities are exhausted.

In the event the former has occurred in Phase 2, with around 900mtes of over-allocation, and EUA prices currently around €3.00/te. As a result:

- No “signal” is offered by the market to abate carbon dioxide emissions.
- The relative insignificance of emissions prices, relative to the high value of fossil fuels – and renewable subsidies - means it is not a central driver to investment decisions.
- The validity and future of the whole ETS scheme is questioned.
- Governments will not raise the revenue anticipated from ETS auctions.
- Uneven additional carbon tax regimes appear increasingly likely to proliferate.

2. “Ad hoc” interventions and beyond

On 3 July, it is expected that the Commission will re-introduce the concept of back-loading to answer the most immediate issue of over-supply. We hope that the Commission secures an agreement on back-loading – that will represent a real message that volumes have to respond to circumstances; it is to be welcomed. However, we also suggest that multiple “back-loadings” introduced (twice) to respond to circumstance is not a perfect solution long term:

- It doesn’t give a clear signal to the market
- It implies political “interference” which is never perfect in any market

So we wish to propose an **outline** of what the Commission might choose to do on a permanent basis, with **the design of Phase 4 mechanism** specifically in mind. These ideas are market-driven but have regard to the perceived *real politik* of these debates.

3. Adjusting auction volumes in response to over-allocation

The simplest measurable and objective evidence of over-allocation is surplus supply of EUAs in the registries. We suggest that any mechanism to modulate supply in the event of over-allocation should involve reducing forthcoming auction volumes to reflect the over-allocation measured this way.

In essence, the idea would be that if there were too many allowances in circulation (on the register) one would **withhold allowances** from the auction, placing them instead into a new “**surplus reserve**”. In certain circumstances, if scarcity were re-established, there should also be a facility to release allowances in the surplus reserve to the market. This poses three essential questions:

- How do you withhold them?
- How do you return them?
- Who does this and how do you establish the rules?

Withholding allowances

It is possible to envisage a range of precise methods to adjust auction volumes in response to evidence of over-supply on the registry. For example:

- Registry observations could be made annually, after the surrender date – or another date.
- The target registry balance could be larger or smaller (too small means not enough base for liquidity, too large means too heavy a balance sheet onus on the market)
- The target registry balance could be an absolute figure, or a proportion of annual demand.
- There could be a tolerance threshold on the target balance (e.g. +/-10% etc.), or not, before adjustments begins.
- Adjustments could be staged immediately, or over a period to avoid “sudden jolts”.

Return of allowances to the market

In some senses the more important question is how and under what circumstances the surplus reserve is released to the market. Again several methods are possible, which might include one or more of the following elements.

- Observations of falling registry balances could be used as evidence of underlying demand recovery; and auction volumes could be increased accordingly (i.e. analogous to the way they were withheld in the first place). Economically this has some weakness: as supply may on occasion be increased in a falling market, and the stabilising impact of the auction reductions may be diluted or negated.
- Surplus reserve volumes could be auctioned with a simple reserve (floor) price set at a level at which the ETS is no longer “dysfunctional” (i.e. the demand curve is not near-vertical). The issue here is that this level is subjective, and would have to be determined ex-ante.
- Surplus reserve volumes could be auctioned with a reserve (floor) price set at a relative price level. For example if the floor price was set at the average market price over the previous two years, then the surplus reserve would be available to the market as long as price recovery was already underway. Alternatively the floor could be the average market price in the last year in which there were no auction reductions. In some ways, this appeals most from an economic standpoint as it ensures that supply rises when price is rising (like a normal market).
- Surplus reserve volumes could be permanently set-aside after a pre-determined “shelf life”. i.e. if the over-hang appears structural and permanent, and price or demand recovery has not occurred.

Who and How

The rules for withholding and returning allowances could be strictly mathematical and mechanistic; or they could involve subjective judgements and discretionary latitude from a mandated authority.

Likewise the “surplus reserve” could be held and released by a central body acting on behalf of member states; or it could be held and released in parallel parts by member states.

However volume is withheld and released, we believe that it will offer an improvement on the existing inflexible ETS. We also prefer a well designed and clearly defined mechanism over discretionary intervention, as this should add to market confidence, and hence price stability.

4. Potential for an absolute cap and floor

Withholding and returning auction volumes in response to over-allocation evidence does not preclude setting an absolute minimum and maximum price for the scheme: a “cap” and a “floor”.

- A floor could be implemented simply by stipulating a minimum price at auction (with unsold allowances added to the reserve, perhaps).
- A cap could be implemented by unrestricted sales of additional allowances at the cap price; with proceeds used to fund more expensive abatement schemes (CCS) and perhaps CDM purchases.

Under the current Directive, the Commission has an undefined mandate to intervene in the event of extreme high prices, but not extreme low prices. So the current ETS has no floor, and an undefined or subjective cap.

We recognise that price management schemes have proved unpopular in consultation, but still believe that adding a clearly defined cap and a floor – even if they are set at extreme high and low levels respectively – would provide additional benefit by avoiding dysfunctional market behaviour at either extreme. To put it another way: they would improve the shape of the “*supply curve*”, and add to stability.

5. Economic benefits of a more stable and robust mechanism and price

A well designed emissions market should be more efficient, targeted, and effective than local taxes and incentives. The main benefit of a stronger and more inherently stable EUA price is that it would provide a more reliable signal for investments, which applies evenly across the EU. Investments such as those in renewable energy infrastructure are exactly what the EU economy needs at present.

Conversely the costs to industry are not excessive (€10/te is equivalent to €4.30 per barrel of oil); and where competitiveness against imported products is comprised the issue can be addressed in other ways (free EUA allocations, levy on imports etc).

6. Next Steps

We present these ideas for discussion purposes. They are informed by discussing with various environmental academics and by a parallel debate within IETA, but they are our own considered thoughts. They do not represent a formal proposition; if of merit, we would be very happy to participate in a debate to refresh and refine them.



However, the debate progresses it is essential that the EU-ETS, the world's flagship trading mechanism, demonstrates an ability to address the cliff-edge nature of its supply and, therefore, the volatility of its pricing. Progress towards a more visibly robust Phase 4 mechanism should on its own stabilise Phase 3 market prices – regardless of whether ad hoc measures of back-loading and set-aside are successfully implemented – and so the sooner it is made the better.