

Summary

EU Member States are at loggerheads over the need for a 2030 renewable energy target. A binding Decarbonisation Obligation or Emissions Performance Standard can achieve the same aims of reducing carbon emissions and supporting investor confidence in the renewable energy industry, whilst allowing the flexibility in technology some countries want in meeting their commitments to decarbonise the electricity-generating sector.

Introduction

The key to achieving long term deep cuts in emissions is through a rapid decarbonisation of electricity production, enabling electrification of transport and the creation of hydrogen and synthetic hydrocarbons to assist in the decarbonisation of other sectors.

About Sandbag

Sandbag is a UK based not-for-profit organisation campaigning for environmentally and economically effective climate policies, with a focus on the EU Emissions Trading System (ETS).

Our campaigns are supported by in-house research that monitors the environmental robustness of the ETS, the distribution of allowances, and how key sectors, installations and companies in the scheme are affected.

For more information visit our website at www.sandbag.org.uk or email us at

Greater regulation of power sector emissions is necessary to compensate for the low price of carbon, which is currently insufficient to incentivise fuel switching, let alone new investment.

The extent of the surplus in allowances and low ambition greenhouse gas (GHG) targets means the price is likely to remain low for the remainder of the decade and much of the next (see Sandbag's report *Drifting Toward Disaster: The EU ETS adrift in Europe's climate efforts*).¹ This risks locking in high carbon infrastructure as during this period electricity companies are forced to make decisions to replace or refurbish plant constrained under the Industrial Emissions Directive².

Difficulties on agreeing a renewable target

The EU's previous energy and climate strategy mandated a 2020 renewables percentage in electricity, heat and transport markets. It is now debating setting a new target for 2030.

The problem is renewable fuels and technologies may not be the correct long or short term solution for all three energy markets. Certainly in heat and transport the use of renewables is proving hard to scale up for many countries, and there is also ongoing debate about environmental and social issues surrounding the biofuels directive.³ To achieve an all-energy target therefore, the electricity sector is often given a far higher percentage target. Though high percentages are possible the implications in terms of cost, system balancing and wider environmental sustainability could be high for some. Some countries will therefore prefer to meet their GHG targets with contributions from CHP, gas, nuclear and carbon capture & storage (CCS).

¹ *Drifting Toward Disaster: The EU ETS adrift in Europe's climate efforts*(2013)

http://www.sandbag.org.uk/site_media/pdfs/reports/Drifting_Towards_Disaster.pdf Sandbag

² New tighter air quality standards under the IED start in 2016. Over the 200GW of existing coal stations in Europe at present around half are current non-compliant with the standards.

³ Proposal for a Directive amending Directive 98/70/EC relating to the quality of petrol and diesel fuels and amending Directive 2009/28/EC on the promotion of the use of energy from renewable sources (2012)

http://ec.europa.eu/energy/renewables/biofuels/doc/biofuels/com_2012_0595_en.pdf European Commission

A decarbonisation target for Europe

It is also arguably not the role of the EU to enforce technology choices on member states whose circumstance differ so greatly, whereas the setting of standards is a much better fit with EU competencies. It currently appears likely that the case for a mandatory renewables target will be lost because Member States do not want to be constrained by the EU in their energy choices. The UK government, for example, has come out strongly against a renewables target.

The compromise position being discussed is a non-binding indicative target of less than 30% in 2030. This will provide no certainty to the renewables industry and does nothing to ensure the power sector is rapidly decarbonised.

The Decarbonisation Target

A mandatory decarbonisation target on the power sector is a much more certain outcome for investors in renewables and other technologies. Member States could then create an even higher degree of certainty for renewables with their own technology specific policies.

A decarbonisation target can be expressed in two ways:

- Emissions Performance Standard
 - A maximum CO₂g/kwh limit for electricity generated
- Decarbonisation Obligation
 - A percentage target for the volume of 'zero' carbon technology generated

and could be set at the level of either Member States, generating entities or suppliers of electricity.

For example, generating entities (either individual plant or companies) could be mandated to meet an aggregate maximum CO₂ level per year - a carbon budget implemented as an Emissions Performance Standard. This is similar to regulations being pursued in the US by the Environmental Protection Agency under the Clean Air Act.⁴

Alternatively a technology-neutral market in low carbon electricity could be created by mandating energy suppliers (as opposed to energy generators) to reduce the carbon intensity of the supplied electricity. This option has the benefit of a pre-established infrastructure for European electricity suppliers to calculate and declare their carbon intensity on an annual basis, created under the Internal Market in Electricity Directive 2003/54/EC.⁵ A new regulation could be introduced requiring suppliers to steadily improve their annual carbon intensity such that they reach at a common standard sometime in the future. The baseline data and certification mechanisms to inform the design and implementation of such a policy already exist.

The table below details the relative carbon intensity of electricity suppliers in the UK in 2013. This information must be collated and published by all Member States and could form the basis of a new obligation.

⁴ Clean Air Act Section 111 <http://www2.epa.gov/carbon-pollution-standards/what-epa-doing#developing> USEPA, 2013

⁵ 'Fuel mix disclosure', Directive [2009/72/EC](#), "concerning common rules for the internal market in electricity", aka the electricity component of the Third Electricity Package.

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Fuel Mix Disclosure Data								
supplier	coal	natural gas	nuclear	renew-able	other	CO ₂	nuclear waste*	disclosure year
ScottishPower	59.0	25.6	1.3	12.9	1.2	0.640	0.00010	2013
e.on	52.2	30.7	4.7	8.4	4.0	0.619	0.00040	2013
First:Utility	52.3	30.7	4.7	8.3	4.0	0.619	0.00040	2013
SSE	54.0	28.0	1.0	15.0	2.0	0.613	0.00011	2013
OVO Energy	43.4	25.5	3.9	23.9	3.3	0.514	0.00040	2013
npower/RWE	33.6	51.0	0.4	14.0	1.0	0.512	0.00004	2013
UK Average	38.4	27.7	20.6	11.3	2.0	0.470	0.00190	2013
Utilita	31.1	34.9	29.2	0.8	4.0	0.424	0.00300	2009
British Gas	26.0	34.0	28.0	10.0	2.0	0.379	0.00260	2013
Ecotricity	18.5	10.9	1.7	67.5	1.4	0.219	0.00014	2013
LoCO2 Energy	0.0	54.0	0.0	46.0	0.0	0.213	0.00000	2013
Green Energy UK	0.0	79.0	0.0	21.0	0.0	0.190	0.00000	2013
Co-operative Energy	0.0	40.4	0.0	54.3	5.3	0.177	0.00000	2013
EDF Energy	17.0	0.0	73.7	8.3	1.0	0.161	0.00660	2013
Good Energy	0.0	0.0	0.0	100.0	0.0	0.000	0.00000	2013

CO₂ emissions are in kg/kWh; nuclear waste relates to high-level waste in g/kWh.

Conclusion and recommendations

Simply copying the elements of the 2008 package in 2014 is not the best way forward, as it is insufficiently flexible for Member States and does not take into account cost-concerns and other potential social & environmental impacts of a renewables-only decarbonisation strategy.

To avoid this, the EU should announce now that it intends to consult on the introduction of a new policy to decarbonise the electricity sector, using an approach similar in character to the vehicle emissions standards that have proved highly successful to date.

A binding decarbonisation target guarantees progress towards the EU's climate goals at a time when the ETS is failing to deliver, would stop millions of Euros being wasted in upgrades to existing coal plants, and would create a market for the full range of lower carbon alternatives.

We recommend that, by the March council, EU leaders should agree to set a 2030 power-supply decarbonisation commitment, in place of a renewable energy target. This would be a compromise more acceptable across Member States and provide a stronger guarantee of the decarbonisation of the electricity market, than would a single emissions target combined with an indicative-only renewable energy target.