Developing the Future

The U.S. proposal to the OECD Working Party on Export Credits and Credit Guarantees[1]
Why does EPPSA not support it?

On the 3rd of March 2014, the US submitted a proposal to the OECD Working Party on Export Credits and Credit Guarantees. In it, they proposed to prohibit export support for power plants emitting 700g or more of CO_2/kWh. This implies that all support should be for power plants in conjunction with Carbon Capture and Storage or for technological efficiency that is not yet achievable.
Whilst EPPSA strongly support the aim of reducing carbon emissions we are concerned that the current proposal could have the unintended effect of an **increase in CO_2 emissions** encouraged by the **roll-out of sub-standard technologies**. A further consequence could be to damage the innovative European energy equipment sector, which would slow the development of new more efficient technologies as well as threatening **jobs in Europe**.

The Role of Coal
The EU is, as explained in the proposal's context, dedicated to reduce its Greenhouse Gas (GHG) emissions by 20% in 2020 and, as proposed by the European Commission, by 40% in 2030 to arrive to the already agreed upon non-binding 80-95% reduction by 2050. And it sees Renewable Energy Sources (RES) as one of the main ways to get there. EPPSA has already stated that its support for at least 40% reduction of greenhouse gases should be accompanied with technological development[2] and the resulting dissemination of Best Available Technologies.

However, although most of the world has already installed RES power, many of the countries which have fossil fuel sources, or access to the very liquid market of LNG or coal, will, in the short to medium term, continue to build and use fossil plants for baseload. It is also expected that, in the medium to long term, fossil-based power will be necessary worldwide to balance RES in the same way as it is already being done in Europe.

This conclusion is supported by the US EIA International Energy Outlook 2013, which states that, although the share of electricity produced worldwide from coal will go down from 40% to 36%, the total electricity production – most of it in non-OECD countries – will

[1] U.S. proposal to the OECD Working Party on Export Credits and Credit Guarantees: ECA SUPPORT FOR HIGH CARBON INTENSIVE POWER PLANTS, dd. 03.03.2014
[2] EPPSA Press Release: http://www.eppsa.eu/news-events/items/eppsa-supports-40-co2-reduction-by-2030-with-technological-development.html, dd. 21.01.2014
[3] Energy Technology Perspectives 2014

double by 2040 (amounting to an 80% rise in absolute terms of the electricity produced by coal worldwide). It is estimated that, in the next 5 years alone, 275 GW of new coal powered plants will be ordered in the Asia-Pacific region. This is an important point, as an IEA report[3] states that 60% of all newly built coal powered plants over the last decade are subcritical, i.e. have been built using the least efficient of commercially available technologies, thus emitting more CO_2.
EPPSA firmly believes that supporting the U.S. proposal will inadvertently create an imbalance of energy resources as we reduce security of supply by – de facto – excluding a specific fuel source.

Power Plants will be built
As coal will remain a major source for electricity generation worldwide, we can assume that power plants will, in the foreseeable future, be built, repaired or retrofitted.
The question then is: how do we ensure that the most efficient technologies will be deployed to avoid high carbon lock in?

Constraining EU companies from exporting current state-of-the-art technology could open the market to non-OECD suppliers, who often have sub-EU-standard technologies with lower efficiency and higher environmental impact. Those companies offering the most efficient technology could, in practice, be excluded from global markets for coal powered plants, thereby effectively distorting competition among technology suppliers.
The unintended consequence of the European Investment Bank's decision not to support power plants technologies that would produce more than 550gr/CO_2 KWh is well known: China is currently granting very good financing, low interest rates and a substantial grace period in Africa and even in the Balkan area to produce plants that exceed these limits – so the exclusion of European companies is to no good effect..

Eliminating financial support to new coal fired projects, whether in the form of export credits or direct financing, will not prevent the development of new projects. It will just increase the risk that the choice will be sub-BAT, leading to plants with lower efficiency and higher emissions.
The difference between the average and the best available coal-fired technology – adopting the highest steam pressures and temperatures within the range of the best reference solutions available according to the rated power selected for each specific plant – in terms of CO_2 emissions is around 100 Kg/MWh.
With the EIA projection of coal based electricity production at 15,000 TWh, the difference between "average" and "best" is around 1,500,000,000 tonnes/year of CO_2 emissions, or about **4% of today's global CO_2 emissions**.

The improvement of plant efficiency due to the applicable BAT corresponds to significant savings in coal consumption – potentially up to about 10% – with associated evident benefits in terms of plant operational costs and reduction of pollutant emissions. An example of this is the study currently being undertaken by EPPSA on the retrofitting/replacement of thermal power plants in the EU. By replacing 22GW of old generation in the past 15 years, the EU will save €30,2bn in fuel costs and 1,28bn tonnes CO_2 until 2030, or about **25% of the total CO_2 emissions of the EU27' 2010**.

By funding new coal technologies, we can prevent less emission-conscious countries from building cheaper, dirtier and more inefficient facilities. A good example of such improvement funding is Japan, which has invested $19.7bn in coal power projects abroad between 2007 and 2013. Export Credit Agency financial support and related criteria can and should be used to favor low emission/high efficiency/flexible plants following the same logic currently under discussion in Europe about the "capacity factor".

EPPSA believes that removing the export support of state-of-the-art technologies developed in the EU will lead to the building of sub-standard power plants, using non-OECD technologies. This entails the financing and building of power plants with technologies inferior to the ones currently available.

Proposition

The sensible way forward would be to link the discussion on Export Credits and Credit Guarantees to a specific standard which ensures that new coal powered plants are built with the most efficient equipment and to minimise CO_2 emissions. This standard should be defined in terms of **steam parameter inputs**, rather than efficiency or emission outcomes, as the latter are affected by a combination of several local conditions, such as there are:

a) Climate and geography: turbines operate less efficiently at the higher water cooling temperatures typically found in Asia;
b) Fuel quality: wet lignite from e.g. Indonesia is at least 2-3 ppts less efficient than dry lignite;
c) Variable load factors: a baseload plant is more efficient than a peaker/flexible plant;
d) Variable plant sizes: smaller plants are less efficient than larger ones.

In conclusion

Whilst supporting the overall aims of the proposal, EPPSA has strong concerns that there will be unintended and unfortunate consequences if implemented in its current state.

We invite the members of the Working Party on Export Credit and Credit Guarantees to carefully assess these different issues before excluding credit support to efficient and flexible thermal power plants.

Yours faithfully,

Pr. Dr. Emmanouil Kakaras, EPPSA President

Disclaimer:

This position paper was elaborated by EPPSA and reflects a consolidated view of its Members. It does not necessarily represent the exact views of any specific member company.

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The European Power Plant Suppliers Association (EPPSA) is the voice, at European level, of companies supplying power plants, components and services. EPPSA members, located throughout Europe, represent a leading sector of technology with more than 100 000 employees.

EPPSA actively promotes awareness of the importance of flexible and efficient, state-of-the-art thermal power generation and its crucial contribution to ensuring a clean, secure, and affordable energy supply.

EPPSA believes increased investment in Research, Development and Demonstration is a key factor in driving EU competitiveness as well as ensuring an affordable low emission power supply.

Virtually all thermal power plants in the EU are built by members of EPPSA or equipped with their components, and provide more than 50% of Europe's electricity. EPPSA members provide the most advanced thermal power technologies in the world.

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