

Brussels, 16th of October 2014

Dear Heads of State and Government of the European Union,

On the 23rd and 24th of October, the European Council will meet with the aim to agree on a 2030 Energy and Climate Policy Framework and Energy Security Strategy for Europe. In this context, we, the undersigned members of the European Power Plant Suppliers Association (EPPSA), wish to convey our common message to you.

EPPSA believes that a balanced energy mix is not only fundamental to achieve a progressively decarbonised energy system and economy but also to guarantee Europe's energy security of supply. All resources and instruments should be available to realise this common approach.

EPPSA member companies represent more than 100,000 employees in their Energy Sector.

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

In 2012, 48.3%¹ of the overall electricity needs in Europe depended on thermal power generation. Focusing on energy efficiency at all levels is key to attain the objectives set by the Union in a cost-effective manner.

Because we acknowledge the need for a resource-efficient and low carbon growth economy, EPPSA has commissioned a study on the requirements and results of energy efficiency improvements in thermal power generation. It is the preliminary results of this study that we now wish to share with you.

Potential of energy efficiency improvements in electricity generation

Decarbonisation, especially through retrofits and upgrades of thermal power plants to improve efficiency, has increased our energy security at a low cost and will continue to do so.

The EPPSA study has shown that, by replacing 22 GW (out of 495GW) of old generation capacity in the past 15 years, more than 38 million tonnes of coal are being saved every year which represents roughly 1/3 of the previous consumption of these plants. Furthermore, roughly €29.1 billion in fuel costs will have been saved by 2030 which is more than the required investment cost for these replacements.

Calculations also show that the reduction in coal burnt has reduced CO₂ emissions by 57.4 million tonnes per year, equivalent to the combined GHG emissions in the energy industries of Sweden, Ireland, Croatia, Cyprus, Latvia, Lithuania, Luxembourg, Malta, Slovenia and Slovakia (57.2 million) in 2012.

It is estimated that the retrofitted and upgraded plants have secured at least 23,000 jobs. Retrofitting is therefore is technically feasible and makes economic sense, providing low cost emissions reductions.

¹ Not counting waste and non RES: Gross Electricity Generation by Fuel – page 90, EU energy in figures, Statistical pocketbook, 2014 – European Commission.

Taking into account that both investment and operational costs for retrofitted projects/plants until 2030 are more than offset by the savings in fuel and CO₂ allowances, our study shows that the resulting CO₂ avoidance results in a positive ROI. However, it is not possible to take advantage of these low cost CO₂ reductions due to the many uncertainties in the future energy system/market regarding both the regulatory framework and the required operating hours. Planning security is needed in order to make these final investment decisions.

According to the European Commission (see the Energy Roadmap 2050), fossil fuels will continue to account for up to a third of Europe's power generation energy mix in 2050. Given that we will continue to rely on thermal power generation in the foreseeable future to guarantee the security of supply while the participation of intermittent energy sources increases, improved power plant efficiency through the implementation of best available techniques must be enforced, enabling us to cope with the energy and climate challenges of today and tomorrow. Efficient and flexible thermal power plants together with renewable energy sources will improve EU's energy independence and guarantee the security of supply while helping us reach the climate objectives in an affordable manner and contributing to EU's economic growth and competitiveness.

We ask you, Heads of state and government of the EU Member States, to consider the untapped potential of increasing the energy efficiency in electricity generation when concluding the objectives of the 2030 Framework for climate and energy policies.

Global discussion

To meet electricity demand, countries which have fossil fuel resources, or access to the very liquid market of LNG or coal, will, in the short to medium term, continue to build and use thermal power generation for base-load purposes. It is also expected that, in the medium to long term, thermal power generation will be needed worldwide to balance RES.

This conclusion is supported by the US EIA², 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 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, utilities in the Asia-Pacific region will order 275 GW of new coal powered plants. This is an important point, as an IEA report³ states that 60% of all coal power plant newly built over the last decade use the least efficient of commercially available technologies, rather than the best available, thus emitting much more CO₂.

With the EIA projection of coal based electricity production at 15,000 TWh, even the difference between “average” and “best” is around 1,500,000,000 tonnes/year of CO₂ emissions, or **about 4% of today's global CO₂ emissions**. One can only imagine the consequences of using the least efficient technologies...

The unintended consequence of the European Investment Bank's decision not to support power plants technologies that produce more than 550gr/CO₂ KWh is well known: China is currently providing low interest and a substantial grace period in Africa and the Balkan area to build a plant

² Energy Information Agency: International Energy Outlook 2013

³ International Energy Agency: Energy Technology Perspectives 2014

that exceeds these limits and emit even more than European state-of-the-art technology – penalising the European companies without actually benefitting the environment.

Only through increased Research, Development & Demonstration in more environmentally friendly technologies will we be able maintain Europe's Technological Excellence. Improved flexible, efficient and clean fossil fuel power plant have an important place in preserving scarce natural resources and reducing CO₂ emissions.

Adequate funding, a stable regulatory framework and public acceptance need to be combined with enhanced Research and Innovation efforts in order to maintain Europe's leading technology competence in a future knowledge-based economy. European centres of R&D excellence will contribute to creating skills and jobs and exporting efficient cutting-edge European Technology to countries who need thermal power for back up or who cannot make full use of RES.

EPPSA finally recalls some of the core principles agreed to by our Ministers of Energy on the 5th and 6th of May 2014, in Rome:

- **Enhancing energy efficiency in demand and supply**, and demand response management.
- Promoting deployment of **clean and sustainable energy technologies** and continued investment in research and innovation.

Having this in mind, EPPSA urges you, at the European Council on the 23rd and 24th October 2014, to agree to a robust 2030 energy and climate policy framework and energy security strategy, which recognises the value of energy efficiency and carbon capture and storage in electricity generation.

Kind regards,
Prof. Emmanouil Kakaras
President of EPPSA



E. MANIATIS

Circulation :

European Council: President Van Rompuy, Members of his Cabinet,

Council of the EU: Coreper I, Permanent Representations (Climate, Energy, Environment Attachés)

European Commission: President Barroso and Juncker, Commissioners Hedegaard, Oettinger, Potocnik, Nelli Feroci, Katainen, Geoghegan-Quinn and their Heads of Cabinet & Members of Cabinet in charge of Climate, Energy or Environment of all other Commissioners

Director Generals: Delbeke (DG CLIMA), Ristori (DG ENER), Calleja Crespo (DG ENTR), Falkenberg (DG ENV), Smits (DG RTD), Buti (DG ECFIN) and appropriate contacts in those DGs

European Parliament: : President, Vice-Presidents, ITRE, ENVI Committees

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.



Contact person:

Nicolas Kraus | Policy Officer | EPPSA | n.kraus@eppsa.eu | + 32 2 7432986

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.