

The Use of Electricity in Heating and Cooling Could Facilitate the Penetration of Renewables and Lower Carbon Emissions in Europe

Brussels, September 29th, 2015: Following the European Commission's Heating & Cooling Strategy Consultation Forum, held in Brussels on September 9th, the European Copper Institute (ECI) is convinced that very significant opportunities exist, within the heating & cooling sector, to save energy, to increase the use of renewable-based technologies, thus reducing the dependency on imported fuels, and to better connect the EU's electricity and thermal energy markets.



Buildings are a key domain to foster improved linkages between the heating & cooling and electricity markets

The combination of renewable heating & cooling technologies, along with the increased use of electricity as the primary energy source, will help increase the penetration of renewables, improve overall energy efficiency, lower carbon emissions and save significant investment costs in renewables integration. Adding in other renewable technologies, such as solar water heating and solar air-conditioning, will significantly enhance these positive effects. However, crucial to all these uses is the promotion of efficient electro-thermal technologies.

Buildings represent the biggest market for heating & cooling

As long as the market conditions for participation are clearly set by regulators, ECI believes that reaching an optimal balance between various technological options should be left to market forces. However, two key conditions need to be met to enhance the participation of electricity in the heating & cooling market:

1. Economic evaluations should be based on the principle of life-cycle costing;
2. Primary energy factors should be correctly calculated and regularly revised, taking into account all EU policy objectives.

Buildings provide the biggest opportunity to link the heating & cooling and electricity markets. ECI sees three main ways to achieve this:

- Foster the adoption of appropriate electricity-based heating & cooling applications such as heat pumps;
- Implement renewable heating and cooling options for low temperature heating applications;
- Exploit the potential for more sophisticated, electrically powered control, sensor and feedback systems to inform, manage and optimise heating & cooling systems.

Industry decarbonisation through electrification

ECI does not see any technical limitations to substitute fossil fuels within industry, with the exception of those technologies where they are needed for chemical reactions. Moreover, the adoption of electro-thermal processes, powered through renewable electricity, has a high potential to decarbonise industrial heating, while also increasing its productivity and efficiency.

ECI recommends the European Commission and Member States establish a competence network, across academia and industries, in order to facilitate rapid feasibility assessments and to progress the development of innovative electro-thermal process technologies. A progressive switch towards these could be promoted in the context of increasing the penetration of renewables in the electricity generation mix.

However, achieving this paradigm shift will require the development of innovative business models and regulatory enhancements to unlock the full Demand Side Management potential that exists across industry.

[Click here](#) to download the paper.

About the European Copper Institute:

ECI, founded in 1996, represents the copper industry in Europe. ECI is also part of the Copper Alliance™, an international network of trade associations funded by the copper industry, whose common mission is to defend and grow markets for copper, based on its superior technical performance and contributions to a higher quality of life.

Read more about us on copperalliance.eu.

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