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COGEN Europe Annual Conference & Gala Awards Dinner

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Conclusions of COGEN Europe's Annual Conference 2022

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Many thanks to COGEN Europe for inviting me to participate in this Conference, in this final session of conclusions and closing. It is really an honour to be here. This marks the end of this year's Annual Conference. It was great seeing so many of you in person, after a long break, and to engage in lively debate around the panel discussions and during the networking sessions.

We have heard from many high-level speakers, CEOs, politicians, and the European Commission. We thank them for their valuable contributions and insights. We welcome the high-level support for the cogeneration sector at political level. This reflects the sector's commitment to excellence, innovation and decarbonization, as well as to the customer.

But we still miss a clear roadmap to deliver this potential as part of EU and national policy frameworks. To highlight this gap in the policy debate, we have presented to the European Commission our call for higher ambition on efficient power and heat production through cogeneration. COGEN Europe's open letter has been signed by 46 CEOs and industry leaders representing the entire energy value chain.

We are also pleased that Mr Cristian Buşoi, the Chair of the European Parliament's ITRE Committee, has welcomed our initiative and assured us of his support. COGEN Europe will continue promoting the letter and bringing it forward to the highest levels of the political discussions.

We are very grateful to all of the speakers and panelists for their contributions, as well as the Conference sponsors for their generous support. Many thanks also to our audience for your active participation and inputs!

I'd like to start with a vision of the role cogeneration can play in a decarbonized economy.

First, we must remember that we come from a historical situation in which fossil fuels have predominated as an energy source and the operation of the system has been relatively simple. As we all know, in this situation, cogeneration is the most efficient way to use this fuel and the EU has a quite significant capacity, although we should have installed much more than we currently have.

Second, cogeneration, also known as CHP, has not had to deal, in most cases, with the regulation or balancing of the system. It has operated by maximizing its production according to thermal demand, delivering reliable, efficient and economic energies and that's it.

But we already know the situation is changing:

- The deployment of renewables is growing, and the goal is that, in a few years from now, we will only use these energy sources
- But renewables are not always available, so for this to be possible, some technologies will have to directly contribute to the technical sustainability of the system.

Will cogeneration be able to take over this task? Its future is directly linked to this ability:

- If we think that cogeneration will operate in the future as it does today, and that the change will consist only of using a green fuel that comes from renewable sources, we are wrong.
- If we think that cogeneration will be able to run outside the needs of the electricity system, depending solely on demand for heat, then we are completely wrong.

We all know that green fuels will be used for transport and high-temperature heat, and also for providing both grid regulation and a back-up power supply that can be called upon at times of high demand. After all, there is no point in transforming excess electricity into a green fuel like hydrogen if we then use this fuel to generate energy when it's not needed, leading to even more surplus energy.

Therefore, here we have a first conclusion: cogeneration must contribute to ensuring a match between supply and demand. That is, it must be absolutely, instantaneously, flexible.

But, in this case, how do we decouple electricity production from thermal demand? A second conclusion is coming: we need energy storage systems.

But not electrical storage, because if there were sufficient and efficient electrical storage systems, we could use them directly to store excess energy from intermittent renewable sources like PV and wind. Therefore we need to look at thermal storage systems such as hot water, superheated water, molten salts, rocks, etc.

And this reasoning is driving to a point where the operation of cogeneration will not be decided by anyone other than the system operator, who will have to tell us, minute by minute, the load we have to deliver.

Then comes a third conclusion: cogeneration must be part of an energy system that fully integrates all electricity, heat and green fuels production, by combining, with the help of complex and intelligent digital systems: (a) Renewable energy sources, both reliable and intermittent; (b) Hydrogen production and storage; (c) Green fuels synthesis and storage; (d) Cogeneration, District Heating & Cooling (DHC), heat pumps and heat storage; (e) Bio-energy; (f) Conventional power plants, and (g) CO₂ capture – for synthetic fuels production.

In short: there will be cogeneration only if it is fully integrated into the system, with all the consequences that this implies in terms of technology (new fuels, storage capacity, matching of supply and demand) as well as financially (huge investments are needed).

Cogeneration must start to be prepared for all these challenges, and in part it is being done:

- We have seen how various technologies are developing equipment that can work with hydrogen
- There are real examples of cogeneration providing a flexible back-up at times of peak demand when electricity from renewables is insufficient
- We are beginning to develop technologies that enable energy storage by means of heat accumulation at high temperatures

But we also heard from the European Commission they are very clear that the road to decarbonisation is the main priority, that there is a will to accelerate this transition and that their vision of cogeneration is as a transitional technology.

And those words are dangerous when used by politicians, who see cogeneration as something inevitably temporary, that won't be required in the future. Words do matter. Hans van Steen from DG Energy was very clear: we will soon have to change the fuel we are using now. But if we only focus on this, it will not be enough. We need to be integrated into the electricity system, and this means we have to decouple CHP from heat demand. And, in addition, we have to do it with relatively modest investments, which allow us to compete with other technologies that might be less efficient but with lower investment costs. Not an easy task!

Fortunately, we have also seen that this awareness of the need to integrate all the elements of the energy system is already present in some of the projects and CHP operators. But we also need the European Commission to see these projects as being fundamental and necessary pieces for building a solid, reliable and efficient energy system.

Our role, as COGEN Europe, is to share this message and make it understandable. We all know it, and, in addition, we must fight against a series of prejudices that have triumphed because of their simplicity, such as the following: that electrification is equivalent to decarbonization; that renewable sources are cheaper than fossil fuels; that the energy transition will allow for cheaper, more reliable and local energy ... dangerous messages, because not all of them are true!

This is one of the objectives of the open letter that was delivered yesterday to the European Commission's Executive Vice President, Frans Timmermans, and the Energy Commissioner, Kadri Simson, explaining the role of efficient power and heat production to ensure affordable, secure and clean energy for all Europeans.

As we may expect, the amount of funding required to deliver this transition is exceptionally high and also dependent on political decisions that often fail to take account of which technologies are actually available. Moreover, this change, this transition, is so radical that the major energy operators perceive a risk of losing their dominant role in the face of distributed and integrated energy solutions. These large energy operators, with a capacity of influence far superior to that of the cogeneration sector, are not going to make it easy for us either, I'm afraid.

In conclusion, we have a great challenge before us: that cogeneration continues to play a key role in a decarbonized economy, and this challenge, not only must we undertake it to continue to exist as a sector, we have to do it because we know that it is the most appropriate way to have a solid, reliable and efficient energy system that allows the entire European economy to compete with the rest of the world in favourable conditions and fully respectful of the environment, providing an example that can be replicated by other countries.

Thank you very much. COGEN Europe's Annual Conference is coming back next year, when we will also be celebrating our 30-year anniversary! We hope to see many of you again, hopefully in better circumstances.