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Maroš Šefčovič
Vice-President of the European Commission
Rue de la Loi 200, 1040 Brussels, Belgium

Subject: *ene.field project calls for higher recognition of fuel cell micro-CHP benefits in the European Climate and Energy Framework*

Brussels, 21st October 2016

Dear Mr Vice President,

on behalf of the ene.field project partners, I am writing to you to **highlight the key contribution of innovative fuel cell micro-CHP energy solutions to realising the Energy Union vision. The state-of-the-art fuel cell micro-CHPs are ready to enter homes, as the industry is investing heavily in developing the market for these promising products.** The recently launched EU funded PACE project builds on the momentum and experience of ene.field. It represents a step up in ambition, as it aims to install more than 2,500 fuel cell micro-CHP units across Europe between 2016 and 2021.

Fuel cell micro-CHP energy solutions harness the superior efficiency of the chemical conversion of fuel to simultaneously produce heat and electricity**. This turns small energy consumers into active contributors to Europe's energy transition.** The EU fuel cell industry and the research community have worked closely with policy makers at EU level and in some Member States so that fuel cell micro-CHPs have reached technological maturity and mass commercialisation is within close reach. **The ene.field and PACE projects are setting the foundation for the large scale uptake of these innovative products after 2020.**

Fuel cell micro-CHPs are now moving from a research concept and into our homes. The ene.field consortium supports the vision of a European Energy and Climate Framework and **insists that forthcoming EU legislation is designed to fully harness fuel cell micro-CHP benefits.** Of key importance to ene.field partners is that legislative proposals linked to the Energy Union are designed to address administrative and regulatory barriers. We must ensure a stable and favourable policy framework at EU and national levels (notably with regard to market uptake funding). **The European Union and the Member States should work jointly to create a favourable policy environment for fuel cell micro-CHP uptake, considering the sector's contribution in terms of jobs and growth, security of supply and GHG emission reductions.** For more detailed information please see the Annex to this letter.

The ene.field consortium is prepared to support the Commission in their efforts to deliver on the Energy Union and would be happy to meet you in person to give you a first-hand account of the ene.field project achievements and discuss upcoming milestones.

Yours sincerely,

Roberto Francia
Managing Director, COGEN Europe and coordinator of ene.field and PACE

cc: Mr. Miguel Arias Cañete; Mr. Dominique Ristori; Ms. Marie Donnelly; Ms. Magdalena Andrea Strachinescu Olteanu; Mr. Paul Hodson; Mr. Philippe Vannson; Mr. Bart Biebuyck.

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Annex: Fuel cell micro-CHP technologies state of play & Policy recommendations

Fuel Cell micro-CHPs key features:

- Fuel **cell micro-CHPs are controllable**, as they can generate low carbon heat and power when and where it is needed.
- The roll-out of micro-CHP in households and small businesses gives consumers the **opportunity to become active participants in the low carbon energy market**.
- On-site electricity production and self-consumption can help support the grid, **ensuring security of supply and integrating intermittent generation of electricity from renewables**. For example, a **fuel cell micro-CHP unit can efficiently generate electricity during peak heat demand periods**, thus supplying the necessary power that heat pumps demand while reducing the need for grid reinforcements[1].
- Fuel cell micro-CHP remains a viable and reliable **solution to decarbonise the heating sector in the future**, thanks to its versatility and integration capabilities. This high efficiency technology is ready to run on carbon-neutral biogas, green hydrogen and to be combined with power-to-gas technologies.

Fuel Cell micro-CHPs contribution towards the decarbonisation of the building sector:

- Reaching **total efficiencies of over 90% and electrical efficiencies of up to 60%**, fuel cell micro-CHPs represent one of the next generation solutions for the replacement of condensing-gas boilers in much of the built environment and a viable alternative for new buildings. Recent estimates, based on the technical performance of an average fuel cell micro-CHP unit, show that installing **a fuel cell micro-CHP in an existing family home will reduce primary energy consumption by at least 24%**[2].
- Those primary energy savings translate into important CO_2 emission and air quality savings. **A fuel cell micro-CHP will reduce CO_2 emissions by 33% already today**, while related emissions of pollutants such as **NO_x and SO_x could be virtually eliminated**[3].

Key policy recommendations:

- An **integrated approach to the energy systems**, addressing energy efficiency and CO_2 emissions across heating and cooling, electricity production, transmission and distribution, as well as transport, with an aim to minimise rebound effects/losses between different energy sources and uses;
- **National level climate and energy strategies should fully RECOGNISE and REWARD the energy savings and emissions reductions potentials of fuel cell micro-CHP**, removing regulatory and administrative barriers preventing these technologies from entering consumers' homes (e.g. cumbersome grid connection requirements, excessive red tape to access to various funding schemes);
- Making sure that the **treatment of self-consumed electricity is differentiated and proportional according to each technology's impact on the grid**. Controllable technologies like fuel cell micro-CHP can help support the grids by producing electricity at critical times of low RES production and electricity peak demand. Therefore, a one-size-fits-all treatment of self-consumption, applying grid tariffs disproportionally to grid use and only based on connection capacity will stifle the growth of fuel cell micro-CHP;
- **Removing administrative barriers relating to grid connection and access to various funding schemes.**

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[1] Both ene.field and PACE projects will estimate the reduced operational grid costs and avoided or delayed grid capacity investments associated with the higher penetration of fuel cell micro-CHP technologies.

[2] A fuel cell micro-CHP consumes overall 24% less primary energy when compared to a condensing boiler and electricity from a conventional power plant. Given that around 80% of Europe's individual heating systems consist of non-condensing boilers, more substantial savings should be expected as the old inefficient boiler stock is being replaced. Roland Berger, March 2015: Advancing Europe's Energy Systems: Stationary Fuel Cells in Distributed Generation, page 26.

[3] Based on Roland Berger Study. Detailed benchmarking on CO_2 and NO_x on page 29

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About ene.field and PACE

ene.field and now PACE are the largest European demonstration projects of the latest smart energy solution for private homes, micro-CHP. ene.field and PACE will see over 3,500 households across Europe able to experience the benefits of this new energy solution. The projects use modern fuel cell technology to produce heat and electricity in households and empower them in their electricity and heat choices and bring together partners including European manufacturers, utilities, and research institutes making the products available across 11 European countries.

The ene.field project has received funding from the European Union's Seventh Framework Programme (FP7/2007-2013) for the Fuel Cells and Hydrogen Joint Technology (FCH-JU) under grant agreement n° 303462.

For more information, visit www.enefield.eu or contact Mr Janos Vajda via projects@enefield.eu

ene.field project partners:

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EU funding body:

FCH FUEL CELLS AND HYDROGEN JOINT UNDERTAKING