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Heat sector in the "Energy Transition" : Our position on public consultation on the Renewable Energy Directive"

2009/28/EC

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EFIEES

Our view

- ARPEE is the Romanian representative inside EFIEES
- EFIEES gathers professional organizations from twelve EU Member States representing the interests of energy-efficiency service companies.
- Some of these organizations also represent, in their respective countries, operators of District Heating and Cooling networks.
- Our views in the public consultation on the Renewable Energy Directive, follow on directly from and complement those expressed in public consultations on Energy Efficiency Directive and the Energy Performance of Buildings Directive.

Main ideas

- Energy efficiency as a prerequisite for energy transition ;
- No offset between energy production and energy consumption of buildings ;
- Need for distinct approach and rules for electricity and for heat, with priority to give to heat ;
- Need for promotion of DH and deletion of the obstacles/distortions they are subject to ;
- Need for planning of heat capacities at national level,
- Need for market-based projects.

Energy efficiency actions as a precondition

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- ARPEE recalls that **energy efficiency** actions, enabling a reduction in energy demand in general, and heat in particular, are **a key component of "decarbonization"** of the economy, and a precondition for the successful transition to renewables. Otherwise the costs are not affordable for a given installation and even more so for the whole economy.

- These energy efficiency **actions must cover the whole energy chain**: generation, transmission, distribution and use by final consumers.

- They must be **measured in primary energy**, because it is the only way to objectively compare the different solutions available.

Heat as a priority in the energy transition

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- In the public's mind, as in that of the European and national legislator's, **heat is often ignored** as a major area of energy transition, while it represents **more than 40% of EU energy needs.**
- Despite the local nature of heat markets, in order to promote renewable heat and the recovery of waste heat resulting e.g. from industrial processes such as waste incineration as well to **promote the District Heating Networks**, specific Europe-wide measures, different from those in place in the electricity sector, are necessary.
- As a matter of priority, **public funds should be allocated to investments in energy transition allowing permanent production of energy** (which is generally the case for heat), whereas until now a majority of schemes prioritize investments in intermittent production (which is generally the case for electricity).

To affirm the principles of the market for renewable energy policies and projects

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- All projects must be in line with the market and follow the approach of cost-effectiveness to optimize the allocation of public and private resources, to give visibility to the investment and not create or aggravate imbalances or economic rents. In general, if the support systems can evolve over time, the retroactive measures should be outlawed.

- The production of renewable heat and recovery of waste heat are being discriminated against, while schemes promoting them should, on the contrary, be developed according to a cost-benefit analysis and in compliance with the rules of the market. A strong carbon price signal is one of the most effective incentives to encourage projects based on renewable and recovered energy.

No compensation between production and consumption of buildings

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- It is essential **not to distort the assessment of the energy consumption of a building by authorizing offsetting poor energy performance with *in situ* renewable energy production**. The buildings must be considered complete systems (envelope + energy and water systems + user behavior) that must consume less of primary energy.

- **Production of renewable energy *in situ*,** often of electricity, will be welcome but **cannot replace or compensate for poor energy efficiency of the building, particularly in terms of heating**.

- **Financial resources are also allocated to investments and measures for energy efficiency, not only to actual fuel switching measures.**

Combine "renewable energy" technologies and high-yield "fossil fuels"

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- The solutions and projects based on renewable energy sources do not always maximise returns and investments.
- A successful energy transition, across the EU or a country, is not to move to 100% renewable energy in all sectors, not even in the energy sector alone and this is also valid on the scale of a project (building, neighbourhood, industrial processes, etc.).
- EU rules should allow and encourage flexibility necessary for each project.

District Heating Networks - essential vehicle for renewable energy for heat/heating

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- **District Heating Networks** (DHN) are already the **main vehicle** for energy transition. Their potential to further increase the share of renewable energy, as well as heat recovery, is considerable. They even offer the ability to store, in the thermal form, a part of the renewable electricity produced during periods of lower consumption.
- **Contribution of DHN to reducing GHG emissions and atmospheric pollutants justifies the promotion of their development**: heating needs will not disappear by 2050 despite the development of energy efficiency actions, particularly in the existing building stock.
- **Demand for cooling is increasing**. For these reasons, one should develop planning, by strengthening implementation of Article 14 of the Energy Efficiency Directive, as well as mapping needs and capacities (Stratego project).

District Heating Networks - essential vehicle for renewable energy for heat/heating

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- To promote the development of DHN, it is necessary to **eliminate all discriminations** related to environmental obligations that lead to market distortions. This is particularly the case of the **EU ETS mechanism, which penalizes all installations above 20 MW**, including those that use cogeneration, for the benefit of individual heating or cooling solutions almost always emitting CO2 but ... not being subject to the EU ETS.
- Finally, **European funds** should be made more available to help municipalities and other regional stakeholders, to boost their efforts through integrated plans for development of DHN. In addition, state aid rules should be relaxed in the context of historically low fossil energy prices.

A territorial approach

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- Policies promoting renewable energy undeniably have a local component, since the resources and supplies are mostly local, regarding heat production: biomass, geothermal, solar thermal, heat recovery.

- Needs and capacity planning, programming of investments, the connection of buildings to existing networks, integration of renewable generation solutions nearby, must occur at the level of the neighbourhood, city or the most appropriate geographic area, across the entire energy chain.

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An EU Heat and Cooling Strategy

16th February 2016

EUROPEAN
COMMISSION

An EU Heat and Cooling Strategy

- One year ago , ARPEE launched a position paper on “Romania need a Strategy for Heat”

- Two days ago, on 16th February , The European Commission has just published "An EU Strategy on Heating and Cooling" as a part of its sustainable energy security package.

- Here are some extracts of this document regarding :
  - District Heating
  - Cogeneration of heat and power

An EU Heat and Cooling Strategy

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District heating and cooling

- District heating provides 9% of the EU's heating. In 2012 the main fuel was gas (40%), followed by coal (29%) and biomass (16%).

- **District heating can integrate renewable electricity (through heat pumps), geothermal and solar thermal energy, waste heat and municipal waste.** It can offer **flexibility to the energy system by cheaply storing thermal energy,** for instance in hot water tanks or underground.

- District heating has long traditions in Member States with cold winters. In some countries, **district heating is seen as an attractive option for companies and consumers and as a means of improving energy efficiency and renewables deployment**.

An EU Heat and Cooling Strategy

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District heating and cooling

- District heating has long traditions in Member States with cold winters. In some countries, **district heating is seen as an attractive option for companies and consumers and as a means of improving energy efficiency and renewables deployment**.

- Elsewhere, though, **old systems have shrunk due to lack of investment or unfavorable price regulation, low performance and negative consumer perceptions**.

- Some Member States are making **efforts to modernize and expand old systems** – others, where the technology is hardly known, are building new ones.

- **District heating and cooling can also contribute to air quality objectives**, especially if it substitutes or avoids solid fuel domestic heating.

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Cogeneration of heat and power (CHP)

- **CHP can produce significant energy and CO2 savings compared with separate generation of heat and power**. It is used in industry and the services sector to save money and ensure a stable and reliable heat and electricity supply.
- **Combination with thermal storage increases the efficiency of CHP** as heat production can be stored rather than curtailed if not needed at that moment.
- **Many CHP technologies are capable of using renewable energy (geothermal, biogas), alternative fuels (e.g. hydrogen) and waste heat.** Tri-generation should also be exploited to use the heat production for cooling in summer.
- The economic potential of cogeneration is not being exploited. The sector faces barriers such as the complex need to comply with both electricity and heat supply regulations.

ARPEE's conclusion

We hope this EU Strategy for Heat and Cooling will be transposed and adapted into the new Romanian Energy Strategy and will provides a framework for:

- integrating efficient heating and cooling into Romanian energy policy by focusing action on stopping the energy leakage from buildings,
- maximizing the efficiency and sustainability of District heating systems,
- supporting efficiency in industry and
- supporting the benefits of integrating heating plants into the electricity system through high efficiency cogeneration

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This presentation will be soon available on our website

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