EUROPEAN FEDERATION
OF INTELLIGENT ENERGY EFFICIENCY SERVICES

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Key principles for a low-carbon, efficient and integrated EU energy system

EFIEES is looking forward the future "Energy Union Package" and its legislative proposals for reviewing the Energy Efficiency (EED), Energy Performance of Buildings (EPBD) and Renewable Energy (RED) Directives. By making the following recommendations, EFIEES' main messages are in line with its support to the EU Strategy for Heating and Cooling[1]. The latter shows the awareness from the EU legislator for a need to address **heat** in a dedicated way, distinctly from electricity.

- **Energy Efficiency first**" principle is key to a successful Energy Union Package. It is a prerequisite for energy transition towards renewable energy sources, as well as basis for the reduction of CO2 emissions.
- **Cost effectiveness** must be one of the guiding elements for prioritising actions, with projects based on a market approach, and integrated in an "**energy efficient territory**".
- A **strong price signal for carbon** is more than ever the necessary incentive for ETS-subject industry, as well as for the entire economy, to intensify efforts for decarbonisation.
- **Renewable** as well as **recovered heat** must be promoted
- **Obstacles and discriminations against energy efficient solutions** must be deleted
- Accesss to **EU funds** must be facilitated for energy efficient projects

An integrated approach

Energy efficiency actions, enabling a reduction in energy demand and heat in particular, as the latter represents 45% of EU final energy demand, are a key component of decarbonisation of EU economy and a precondition for a successful and affordable transition to renewable energy sources. These actions must be developed throughout **the entire energy chain**: generation, transmission, distribution and final use, and therefore measured on the basis of **primary energy** to objectively compare different solutions.

The Primary Energy Factor to reflect the real efficiency of electricity, also produced from RES

Various EU policies require the use of PEF, and various values are in use for electricity, depending upon the national energy mix. Defining a single PEF for electricity, based on the average value at the EU level is acceptable for comparing the energy performance of products, however it is absolutely not relevant for the PEFs applicable to buildings. Buildings should use a PEF related to the geographic area where they are located, including the seasonal components of the national energy mix. ***A unique PEF for buildings would lead to wrong results and will not steer decision-makers towards the optimal solutions in terms of***

[1] 22 February, 2016

EFIEES – European Federation for Intelligent Energy Efficiency Services - Rue Philippe le Bon n° 15 - B 1000 Brussels
Tel (32) 2 230 65 50 – Fax (32) 230 65 50 - www.efiees.eu

energy efficiency[2].As for electricity produced from RES, the PEF value should reflect the current and real efficiency of RES electricity.

EU-wide measures for a decarbonised energy system

- In order to increase visibility of investments in energy efficiency measures for economic actors, **a binding target of 1.5% in Art.7 of the EED must be retained for the period after 2020**, as in fact it corresponds to an increase in annual output of this measure with the "easiest" actions being done first.

- **A strong carbon price applicable to the entire economy** is one of the most effective incentives to encourage projects based on **renewable or recovered energy**. Currently only installations above 20 MW are subject to the EU ETS, whereas other installations, mostly less CO2-efficient and representing the most important part of the heat/heating sector, are not covered by the EU ETS. Non-ETS sectors should be covered by the EU ETS or by an equivalent mechanism incentivising low-carbon heating systems.

- **Local authorities should be encouraged to make an assessment of their potential by mapping local heating and cooling demand and supply including available renewable energy sources and excess heat**[3].

- **Incentives for improving and expanding District Heating and Cooling networks (DHC) and for building new ones** in areas with a substantial density should be created. DHC is already the main vehicle for energy transition and offers ability to store, in a thermal form, a part of renewable electricity produced during periods of lower consumption. **Specific EU funding programmes should be set to replace inefficient heating systems in households with efficient technologies.**

Buildings as a part of an "energy-efficient territory"

- There is a need for an "**energy-efficient territory**" approach, rather than one based on a given building or use. Otherwise adverse systemic effects occur: promotion of all-electric heat pumps, no access to heating systems using biomass for isolated buildings. **Planning** at adequate level (city, region) should take into account heating, cooling and electricity needs in an integrated and coherent way. The analysis at the level of neighborhood must incorporate contributions of renewable energy, local recovery of heat, and DHC. An energy-efficient territory approach should encompass industry, highlighting the **role of industrial processes for recovered heat**. It should cover, as well, all different networks allowing thermal storage of electricity, and, more generally, all buildings: residential (with a view to energy poverty issues), public, industrial, with a perspective of a circular economy where recovered heat and positive systemic effects must be promoted.

- **Public sector must strongly lead by example. Art. 5 of the EED is currently too narrow,** targeting only buildings owned by central government. It should be modified and cover a much wider scope, with a wider range of actions but only renovation. **The energy efficiency target for public buildings should be expressed as a yearly percentage of energy efficiency or savings in all publicly owned and occupied buildings and cover any energy efficiency actions**, such as (staged) deep renovation, actions on the energy systems, from new heating/cooling systems to daily operation, maintenance and users' behavior. Member

[2] To know more: see EFIEES position paper of 21 June 2016

[3] This exercise can be supported by using already available tools such as the Pan-European Thermal Atlas, which has been developed within STRATEGO project co-funded by the EU.

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States should have flexibility for choosing their own combination of actions on the basis of cost-effectiveness, return on investment, etc.

- **The assessment of energy consumption of a building should not be biased by compensating with the on-site energy production, which may hide poor energy performance of buildings.**

- **A definition of "a nearly zero-energy building" should be done at district level and requirements for new buildings in the EPBD should include a possibility of supplying renewable heat produced in DHC systems and cogenerations.**

Tackling EU and national barriers detrimental to efficient heating and cooling

The following regulatory and non-regulatory barriers to efficient heating and cooling should be evaluated and addressed:

- **Discrimination against installations with a capacity above 20 MW which are subject to the EU ETS,** despite greater energy efficiency and lower emissions than other solutions with a capacity below 20 MW that are not subject to the EU ETS. The EU ETS should be expanded to all energy consumptions.

- **Energy poverty: subsidies to fossil energies should be deleted, and replaced by funding energy efficiency investments.**

- **The regulation of heat tariffs in some Member States** based on the principle of "cost +" , with a price cap, does not incentivise cost optimisation and investments in (more) efficient heating/DHC systems. **Appropriate regulation of heat prices would lead to competitive and transparent environment creating favourable conditions for market-based implementation of improvements in heating and cooling, such as an increased use of biomass.**

- **Interpretations of accounting rules on public debt and deficit for energy efficiency investments under Energy Performance Contracting recently confirmed by EUROSTAT**[4], according to which investments, despite being delivered and financed wholly or in part by private sector partners, require capital budget to cover their cost and as a result are recorded as being on balance sheet and counted towards public sector debt.

- **Split incentives between tenants and owners which is the most frequent barrier to energy efficiency identified by Member States in their latest National Energy Efficiency Action Plans**[5].

EFIEES represents private companies ensuring an overall management of energy demand to end-user (Energy Efficiency Service Companies, EESCs). These companies provide operational maintenance and management of equipment of their industrial, tertiary and residential customers (collective or individual), public and private, particularly sports facilities, schools, and hospitals as well as District Heating Networks.

[4] Eurostat guidance note from 7 August 2015

[5] "Putting energy efficiency first - addressing the barriers to energy efficiency . Analysis of the National Energy Efficiency Action Plans in the context of Article 19 of EU Energy Efficiency Directive", The Coalition for Energy Savings, September 2015

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