European Association of Electrical Contractors

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# AIE comments on the proposal for a revised energy performance of buildings Directive (EPBD)

# and

# on the revised energy efficiency Directive (EED)

The AIE warmly welcomes the Commission's initiative to integrate the "energy efficiency first" principle as a key element in the legislation to achieve the Energy Union.

The AIE is very pleased to see that our recommendations to tackle the potential in existing buildings as well as the active role of a building and its life-long operation phase have been taken into account! We define **Active Energy Efficiency** as lasting changes in the life-long building operation phase through measurement, monitoring and control of energy usage through integrated solutions (not just included in the equipment separately). It improves comfort in residential and commercial buildings and the efficiency of industrial processes.

**Today's electrical and electro technical installations, active control systems and technical installations enable simultaneously high functionality (enabled by digitalization) and cost-effective energy production, energy saving and load levelling** (PV, storage, metering, control systems, technical integrations, end-user information systems etc).

Through effective and individual measurement and monitoring of the real energy usage by type of energy, end-user benefits need to be emphasized and will stimulate them to actively participate in the energy market. Electrical contractors are the front runners who enable the end-user to take up this active role in the energy market, advise and help them choose the active measures that have a reasonable pay-back time.

We strongly believe that Member States should have more political faith in a common EU Energy policy and take the necessary steps accordingly at national level to implement and achieve the targets set.

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***SUBSTANTIVE COMMENTS OF AIE ON:***

# The Energy Performance of Buildings Directive

- **Definition of technical building system**

In Article 2, point 3 is replaced by the following: *'3. 'technical building system' means technical equipment for space heating, space cooling, ventilation, domestic hot water, built-in lighting, building automation and control, on-site electricity generation, on-site infrastructure for electro-mobility, or a combination of such systems, including those using energy from renewable sources, of a building or building unit;'*

**The AIE welcomes most positively the widening of the definition of 'technical building systems'** that now covers all systems (built-in lighting, building automation and control, on-site electricity generation, infrastructure for electro-mobility included) and hence recognizes the **active energy efficiency and role of a building (see supra).**

Building automation and control are recognized as a key tool to improve the energy performance of buildings.

**The AIE Comments:**

We suggest however to change the wording 'infrastructure for electro-mobility' into **'infrastructure for electric vehicles'** as to avoid confusion about the word 'mobility'.

- **Long term renovation strategy**

An Article 2a 'Long-term renovation strategy', to be submitted in accordance with the integrated national energy and climate plans is inserted:

(a) the first paragraph consists of Article 4 of the Directive 2012/27/EU on energy efficiency, other than its last subparagraph;

(b) the following paragraphs 2 and 3 are inserted:

*'2. In their long-term renovation strategy referred to in paragraph 1, Member States shall set out a roadmap with clear milestones and measures to deliver on the long-term 2050 goal to decarbonise their national building stock, with specific milestones for 2030. In addition, the long-term renovation strategy shall contribute to the alleviation of energy poverty.*

**AIE Comments:**

The AIE fully agrees that a long-term strategy is indeed a key element in policy making as stakeholders/investors need a clear and stable path in order to adapt and/or to invest. However, there is no deadline for the roadmap to be introduced by Member States other than the milestones

to be reached in 2030. **This roadmap should take into account the existing NEEAPs of Member States which needs to be assessed every 3 years under the EED.**

**There is an urgent need to act fast; as building renovation is approximately 1%/year we would need 100 years to renovate today's building stock.**

- **Financing energy efficiency operations**

*3. To guide investment decisions as referred to in point (d) in paragraph 1, Member States shall introduce mechanisms for: (a) the aggregation of projects, to make it easier for investors to fund the renovations referred to in points (b) and (c) in paragraph 1; (b) de-risking energy efficiency operations for investors and the private sector; and (c) the use of public funding to leverage additional private-sector investment or address specific market failures.';*

**AIE comments:**

The proposal sets out mechanisms for the aggregation and de-risking of energy efficiency operations, and to better use public funding in order to levy private-sector investments. **The AIE welcomes the introduction of these mechanisms but highlights the need to have more clarity and to better define the scope and content.**

A suggestion might be to have an EU public informative resource base.

- **Recharging points in non-residential buildings**

Article 8 is amended as follows:

(b) paragraph 2 is replaced by the following: *'2. Member States shall ensure that in all new non-residential buildings and in all existing non-residential buildings undergoing major renovation with more than ten parking spaces, at least one of every ten is equipped with a recharging point within the meaning of Directive 2014/94/EU on the deployment of alternative fuels infrastructure, which is capable of starting and stopping charging in reaction to price signals. This requirement shall apply to all non-residential buildings, with more than ten parking spaces, as of 1 January 2025. Member States may decide not to set or apply the requirements referred to in the previous subparagraph to buildings owned and occupied by small and medium-sized enterprises as defined in Title I of the Annex to Commission Recommendation 2003/361/EC of 6 May 2003.*

**AIE comments:**

- The goal to have 10% of parking spaces equipped with recharging points in all new buildings and existing buildings undergoing major renovations is a very important and ambitious first step for a large-scale development of electric vehicles (EV) that the AIE warmly welcomes. In the first place the AIE draws the attention that there might be a difference in interpretation

between **parking space and parking place**. We understood that the Commission meant single parking places!

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- Moreover, in order to avoid delay in investments in new buildings or major renovation, we recommend that for very big parking places (shopping malls, hospitals, …), the **obligation be capped to a certain number of parking places or to the pre-cabling** until the EV market reaches a mass development level at national level.

- Important investment-wise, is what kind of charging points are meant in the proposal as the **difference between fast charging and slow charging** is huge and will thus have a considerable impact on the initial investment for the building owner and on the grid infrastructure.

- Therefore, minimum requirements of the charging points need to be defined.

- Secondly, the AIE also welcomes the fact that these recharging points have to be capable of **starting and stopping in reaction to an energy management system such as price signals.** This tool will be key in managing the interactions between large numbers of EVs charging at the same time and the capacity of the grid.

- We believe that the **time-scale** of 2025 is a little too far away. We would suggest to set the obligation for new built non-residential buildings **as from 2020 and for existing building undergoing major renovation no later than 2025.**

- **Recharging points in residential buildings**

*3. Member States shall ensure that newly built residential buildings and those undergoing major renovations, with more than ten parking spaces, include the pre-cabling to enable the installation of recharging points for electric vehicles for every parking space.*

*4. …*

**AIE comments:**

- **The AIE very much welcomes a future looking view of the Commission and strongly supports the obligation to include the pre-cabling that will enable the installation of a recharge infrastructure** in all new residential buildings and those undergoing major renovation. Installing cables when constructing the building or when renovating it makes the operation much cheaper for the end-consumer while recharging points in those big residential building will always be needed.

- However, to be in-line with paragraph 2, we would suggest **including the same time-scale (see supra).**

- The AIE doesn't see the use or reason of the requirement to have at least 10 parking spaces for residential buildings and **suggests to delete 'more than ten'….**

- Equally here, we wonder what **kind of charging points** are meant in the proposal as fast charging versus slow charging have huge consequences on the initial investment and on the grid infrastructure (see supra). **The AIE draws the attention that fast charging in residential buildings is not appropriate nor in the interest of the building owners.**

- However, **minimum requirements of the charging points** need therefore to be defined.

➢ **The AIE also proposes to include under this article or under article 14 a new paragraph on safety checks.**

In the existing building stock, electrical installations and systems are often outdated and not suited to implement all new technologies, in particular in the residential buildings (see the FEEDS report). Moreover, in a renovation project the electrical system is often not the first thing that is being looked at. But the backbone to implement smart technology, to roll-out electric vehicles, RES and the Internet of Things in a safe way would be to first verify the compliance and conformity of the existing electrical system.

**A paragraph on the prior inspection of the existing electrical systems in residential buildings should be added when renovating.**

- **Energy performance assessment**

*5. Member States shall ensure that, when a technical building system is installed, replaced or upgraded, the overall energy performance of the complete altered system is assessed, documented it and passed on to the building owner, so that it remains available for the verification of compliance with the minimum requirements set pursuant to paragraph 1 and the issue of energy performance certificates. Member States shall ensure that this information is included in the national energy performance certificate database referred to in Article 18(3)*

**AIE comments:**

The AIE supports the article but believes this article should not become a barrier for new investment if third party assessment is requested. Therefor it should be implemented in such a way that no additional burden or costs occur but rather using existing voluntary or mandatory competence schemes recognized by the national installation trade associations.

*6. The Commission is empowered to adopt delegated acts in accordance with Article 23 supplementing this Directive with a definition of 'smartness indicator' and with the conditions under*

*which the 'smartness indicator' would be provided as additional information to prospective new tenants or buyers.*

**AIE comments:**

The AIE warmly welcomes the idea to 'brand' a building as smart. We believe this indicator should however be connected to the energy consumption. Within the AIE the Energy task force is exploring how to define this indicator and we would be delighted to help the Commission in this task.

- **Inspections and building automation**

Article 14 is amended as follows: (a) paragraph 1 is replaced by the following:

*'1. Member States shall lay down the necessary measures to establish a regular inspection of the accessible parts of systems used for heating buildings, such as the heat generator, control system and circulation pump(s) for non-residential buildings with total primary energy use of over 250MWh and for residential buildings with a centralised technical building system of a cumulated effective rated output of over 100 kW. That inspection shall include an assessment of the boiler efficiency and the boiler sizing compared with the heating requirements of the building. The assessment of the boiler sizing does not have to be repeated as long as no changes were made to the heating system or as regards the heating requirements of the building in the meantime.'*

**AIE comments:**

The AIE strongly supports the development of Building Automation and Controls systems that offer new services for the buildings and bring important energy savings with a very short payback time. However, to avoid misinterpretation about what kind of BACs are mentioned, the AIE believes the mentioned BACs should control at least 50% of the energy consumption of the building.

**As mentioned supra, the AIE also proposes to include under article 14 a new paragraph on safety checks.**

In the existing building stock, electrical installations and systems are often outdated and not suited to implement all new technologies, in particular in the residential buildings (see the FEEDS report). Indeed, the backbone to implement smart technology, to roll-out electric vehicles, RES and the Internet of Things in a safe way would be to first verify the compliance and conformity of the existing electrical system.
**Therefore, a paragraph on the prior inspection of the existing electrical systems in residential buildings should be added when renovating.**

## SUBSTANTIVE COMMENTS OF AIE ON:

### The Energy Efficiency Directive

**Article 1**

Article 1 sets a 30% energy efficiency binding target by 2030.

**The AIE welcomes this improvement compared to the current non-binding 27% target but – in line with the European Parliament – still asks for a 40% binding target**.

The EU 2050 goals (CO2 emission cuts from 80% to 95% below 1990 levels) will only be achieved by actively calling up the important sources of energy savings, starting today.

Energy efficiency has become "the world's first fuel" according to the International Energy Agency (*Inaugural Energy Efficiency Market Report, AIE, October 2013*), highlighting that energy efficiency investments and their contribution to the supply of energy is just as important as it is by other rooted energy sources. Improving energy consumption is essential for the EU policy framework as it has a very important energy savings potential.

Energy performance has a major potential of jobs creations and growth in Europe and is able to boost competitiveness. Energy efficiency is also the path to reduce the European energy balance (hydrocarbons imports reached €545.9 billion in 2012 only) and improve our independence and self-sufficiency. To put aside the need to increase energy efficiency means channeling investments out of Europe.

**Energy efficiency is an essential factor to adapt to rising energy costs on the long term. It cannot become just a tool used for a feeble strategy, but should instead remain a decisive target for our future.**

**Article 7**

- **Energy savings target**

The article 7 does not set new energy savings goals but extends the current 1.5% energy saving goal beyond 2020.

**The AIE regrets the lack of ambition this target reflects and calls for regular and progressive increases of the target with clear milestones and a clear path** so that stakeholders have time to adapt.

- **Renewable energies excluded from the calculation**

The AIE believes we should distinguish:

- The **electricity generated and used in the building** and seen as part of the buildings energy consumption.
- **Electricity generated in the building but sold to the grid** which is not part of the buildings energy consumption.

- Therefore, **we recommend that because electricity generated by RES technologies and used locally in the building (self-consumption)** is contributing to lowering the need for grid energy supply, it **should be included in the energy savings calculations.**

- For this purpose, **local energy storage technologies are equally key in facilitating self-consumption and should therefore be supported.**

- **However, energy generated in buildings further to the installation of renewable energy technologies but fed back into the grid are excluded from the calculation of energy savings.** Indeed, the 1.5% energy savings target responds to an energy efficiency need.

**Article 9 a**

- **Metering**

The article makes it mandatory to install individual meters (or heat costs allocators) for heating and cooling for buildings with a central source. After 2020 these systems should be remotely readable devices.

**The AIE strongly supports this obligation as consumer awareness is key in conducting an energy efficiency project.**

**Article 10 a**

- **Service providers**

The article provides that when the consumption information is available it has to be made available to an energy service provider designated by the final customer.

**The AIE strongly supports this obligation as it is a key issue for its members. This is an issue of fair competition and a level-playing field for all actors.**

However, the "historical consumption" could be made more specific so as to avoid potential misinterpretations.

**Annex IV**

- **Primary Energy Conversion Factor (PEF) value**

The PEF for electricity value will be lowered from 2.5% to 2.0%. This is yet a good step forward however, the AIE has always called for a lower PEF. In its works on the revision of PEF which started in 2014, the AIE has been engaged with the European Commission. :

- **The AIE strongly believes that a PEF lower than 2.0 would enhance the consumer to make better-informed decisions and better reflect the EU long term climate objectives and be in line with its ambitions.**

- **The AIE warmly recommends a regular revision of the PEF to reflect the fast-moving electricity generation environment.**

***The AIE represents the Electrical Contracting Industry in Europe which comprises about 350,000 enterprises, of all sizes but including a very high proportion of SMEs and micro businesses. The work of these enterprises installing electrical, electro technical and electronic systems includes a whole range of activities****, for example:*

- *power generation*
- *home and office networks*
- *information technology and telecommunication systems*
- *fire and security systems*
- *central management processing*
- *integration of renewable energy sources (heat pumps, photovoltaic systems etc. )*
- *indoor and outdoor lighting*
- *access control*
- *automation and active control systems*
- *integrated energy management, monitoring and metering systems.*

***Beyond delivering these activities, competent electrical engineering entrepreneurs provide customer tailored advice and service/ project design/ system installation and integration, maintenance and services.***

***Their potential role in advising as well as providing, installing and maintaining energy efficient solutions can play a significant part in the achievement of the European energy efficiency targets. These companies employ about 1 million electro technical operatives qualified to the full industry-recognised level in the States concerned. Their expertise in all the fundamental electrical and electronic disciplines equips them to perform the site work required to bring the energy efficiency of the Union's built environment up to target!***