



The 'Fit for 55' Package delivering the European Green Deal

smartEn Analysis and Policy Recommendations for improvement

Smart Energy Europe
Rue d'Arlon 63-67,
BE-1040 Brussels

+32 (0) 2 58 88 992
info@smarten.eu
www.smarten.eu

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INTRODUCTION

smartEn, the European business association integrating the consumer-driven solutions of the clean energy transition, welcomes the proposals for the [‘Fit for 55’ package to deliver the European Green Deal](#), adopted by the Commission on 14 July 2021 to show its commitment to accelerate climate action by making the energy system cleaner.

Among the different dossiers in the package, relevant legislations for smartEn are:

- [Amendment to the Renewable Energy Directive](#)
- [Proposal for a Directive on Energy Efficiency \(recast\)](#)
- [Revision of the Directive on the deployment of alternative fuels infrastructure \(proposal for a Regulation\)](#)
- [Revision of the Energy Tax Directive](#)
- [Revision of the EU Emission Trading system](#)

In general terms, our overall assessment can be summarised as follows:

While stressing the importance of flexible and renewable based electrification in road transport, a much more timid approach has been chosen by the Commission for buildings and industry.

The legislative proposals should therefore be strengthened during the negotiation process in order to encourage all end-use sectors – buildings, industries and transport - to consume clean electricity produced on site and also from the grid in a flexible and time-dependant way thanks to the smart management of all decentralised energy resources and the activation of their demand-side flexibility (DSF) potential.

To this end, it is key to fine-tune some good provisions that look beyond optimising efficiency at the individual level by fostering the contribution of all end-users to the energy system. Key is to promote business models providing system benefits and not just individual optimisation, energy independence and grid isolation. Only a policy framework geared towards carbon and system efficiency will be successful in achieving the increased EU 2030 climate and energy targets in the most cost-effective way, while involving all consumers, leaving no one behind.

The present document outlines the content of key provisions for smartEn and sets out targeted recommendations to inspire the positions that the European Parliament and Council need to shape on these legislative proposals.

smartEn policy recommendations follow a colour code (‘traffic-light’) approach: **SUPPORT**, **IMPROVE**, **OPPOSE** to facilitate the consultation of our assessment.

RENEWABLE ENERGY DIRECTIVE

Overall assessment

The Commission is setting policy measures to increase efforts in renewable energy. However, it does not necessarily encourage clean electrification, in particular of buildings, industry and H&C. This leads to vague/absent provisions on their flexible integration with the electricity system, notably in art. 15a (buildings), 22a (industry) and 23 (H&C).

This should be strengthened with minimum mandatory requirements for the flexible consumption and storage of renewable electricity both produced on-site and from the grid at least for industry and H&C, if the flexible capability of buildings is going to be addressed in the forthcoming revision of the Energy Performance of Buildings Directive (December 2021).

When specifically addressing system integration of renewable electricity (art. 20a), the Commission is making valuable proposals that would support the development of demand-side flexibility business models, including a sort of real-time locational marginal carbon/green intensity information by System Operators, the requirement to share battery data also with third parties and provisions to support smart charging in non-publicly accessible normal chargers to complement rules in the new Alternative Fuels Infrastructure Regulation.

Article 2 - definitions

- (14l): ‘smart charging’ is defined as a recharging operation in which the intensity of electricity delivered to the battery is adjusted in real-time, based on information received through electronic communication.
- (14n): ‘bidirectional charging’ means smart charging where the direction of electric charge may be reversed, so that electric charge flows from the battery to the recharging point it is connected to.

SUPPORT these two definitions covering both V1X and V2X and which are also reflected in AFIR (art 2(9) and art. 2(59)). Alignment between RED and AFIR should be maintained during the negotiation phase.

Article 3 – Binding overall Union target for 2030

- §1: The share of energy from renewable sources in the Union’s gross final consumption of energy in 2030 should be at least 40%.

SUPPORT this increased level of ambition. IMPROVE this article by:

- Explicitly recognising the contribution of a dynamic, time-dependent consumption of direct electrification of end-use sectors in achieving the RES target on the basis of recital 33. This should be accompanied by stronger requirements for the promotion of smart clean electrification of buildings in article 15a, in industries in article 22a and in H&C in article 23, similar to those foreseen for transport in this proposal.
 - Supporting the increased renewable target with binding minimum national targets for demand-side flexibility of at least 10% of peak demand by 2030 to support the efficient penetration of renewables in the power system. A roadmap with milestones should be set by national governments to clarify how to achieve the 2030 target starting from a minimum reduction of 5% of peak demand through demand-side flexibility in 2025.
- § 4a: Member States shall establish a framework which may include support schemes and facilitate the uptake of renewable power purchase agreements (PPAs) to a level consistent with their national contribution to reach the 2030 RES target.
 - § 4a: When designing that framework, Member States shall take into account the additional renewable electricity required to meet demand in the transport, industry, building and heating and cooling sectors.

IMPROVE this provision by ensuring that demand of RES-electricity in end-use sectors is met in a time dependent manner supporting system efficiency.

Article 15a – Mainstreaming renewable energy in buildings

- § 1: EU indicative target of at least 49% share of energy from renewables in the buildings sector in the EU’s final energy consumption in 2030.

- § 1: Member States to set an indicative target for the share of renewables in final energy consumption in their building sector in 2030 consistent with the EU target.

IMPROVE this article (and the respective recital 11) by setting a specific sub-target for both primary and final energy consumption of renewable electricity in buildings (both electricity produced on-site and from the grid), as part of this indicative national target.

- § 2: Member States to introduce measure in their buildings' regulation, code and support schemes, to increase the share of RES-electricity in the building stock. This includes measures to increase RES self-consumption, renewable energy communities and local energy storage, in combination with energy efficiency improvements.

This specific requirement complements the general target described above to accelerate electrification of buildings. However, the wording is pretty vague and it should be IMPROVED by requiring also measures to stimulate the smart management of all decentralised energy resources in buildings according to the energy efficiency first principle and in reaction to external signals in a dynamic and time-dependent way to increase the flexible electrification of buildings. This should be further complemented in the revised EPBD to activate and valorise the demand-side flexibility potential of buildings, in particular through mandatory minimum requirements for smart and flexible buildings.

- § 2: To achieve the indicate target of 49%, Member States shall require the use of minimum levels of energy from RES in buildings.

IMPROVE this provision by including minimum levels for RES-electricity consumed in buildings, both from on-site generation and from the grid.

- § 3: Member States shall promote the use of renewable H&C systems and equipment through appropriate measures/tools, including energy labels, Energy Performance Certificates.

IMPROVE this provision by explicitly requiring the deployment of RES-based smart electrified H&C systems and equipment as well as the smart management of all decentralised resources in buildings through Building Energy Management Systems (BEMS) since this represents an important flexibility resources to support a cost-effective energy system.

Article 19 – Guarantees of origin (GOs)

SIGNIFICANTLY IMPROVE the GOs framework by:

- Opening it to smaller RES producers by introducing a standardised procedure for small installations in kWh compared to the current standard size of 1MWh; simplifying registration process and reducing registration fees for small installations (<50kW); and allowing the pooling of small installations to receive a GO.
- Extending the current framework to real-time GOs where the supply of renewable electricity can be matched with flexible demand on at least an hourly basis and with the aim to reach 15 minute intervals. This would increase information to electricity consumers on the source of their energy and incentivise demand-side flexibility by allowing variable RES-electricity to be consumed when available, in a flexible way and at the right time. This can further support a cost-efficient penetration of RES in all end-use sectors.
- Allowing storage, including V2G, to be issued real-time GOs when feeding RES-electricity to the grid or the building it is connected to.

Article 20a – Facilitating system integration of renewable electricity

- § 1: TSO/DSO are required to make digitally available to third parties information on the share of RES-electricity and the GHG content of the electricity supplied in each bidding zone and which can be read via electronic communication devices (e.g. smart metering, EV recharging points, H&C system and BEMS).
- § 1: This information should be as accurate and as close to real time as possible, in time intervals of no more than one hour, with forecasting available.

SUPPORT this provision which has the potential to support demand-side flexibility business models by promoting a sort of real-time locational marginal carbon/green intensity information by System Operators. This could favour

the use of renewable electricity and incentivise the absorption of RES generation in real-time, notably from real-time Guarantees of Origin (GOs). This could also support the calculation of the carbon footprint of an asset. The Energy Performance Certificates measuring the actual carbon footprint of a building (CO₂/m²) that the revised EPBD should put in place, should be based on the actual GHG content shared by System Operators.

IMPROVE this provision by:

- Clarifying the source of the data shared by System Operators to also include DSO own data on decentralised RES-E production from self-production within their grid (e.g. solar rooftop, storage) as this contributes to provide accurate data on the share of RES-electricity and the GHG content of the electricity supplied in each bidding zone.
- Specifying that the information shall be shared in an interoperable manner. TSOs and DSOs should be requested to establish necessary coordination to harmonise their data format and align their datasets.
- Recital 17: V2G to be made available when supporting further penetration of RES by EVs. Requirements for charging infrastructure should be kept updated to cater for future needs, to avoid negative lock-in effects.
- Recital 20: smart charging functionalities need to be ensured when electric vehicles typically park for extended periods of time as they are highly relevant to energy system integration. § 2: Manufacturers of domestic and industrial batteries shall enable non-discriminatory and at no cost real-time access to basic battery management system information, including battery capacity, state of health¹, state of charge² and power set point to third parties.
- § 2: Same obligation for vehicle manufacturers to make available, in real-time, in vehicle data related to the battery state of health, battery state of charge, battery power setpoint, battery capacity, as well as the location of electric vehicles.

WELCOME this provision which supports flexible services from aggregation of distributed storage assets to be developed in a competitive manner. IMPROVE this provision by:

- Replacing the 'no-cost' requirement with a 'free of charge' requirement to the owners or users of the batteries and third parties, as specified in recital 16
- Clarifying that access to these data should be 'read-only'. Third parties should not be able to modify the parameters of these data to avoid security hazards.
- Ensuring that data sharing obligations cover data that are relevant and needed for providing energy services. The relevant data parameters should be based on harmonised prequalification requirements, defined for instance by means of flexibility service APIs to facilitate the participation of decentralised energy resources, such as storage assets, to electricity markets both directly or through aggregation.
- Introducing a 'grand-fathering clause' avoiding costly and disproportionate retrofits of battery energy storage systems which are not able today to share this data (e.g. most building PV-storage in Germany).
- § 3: Complements AFIR (focused on public charger) by requiring Member States to ensure that non-publicly accessible normal power recharging points can support smart charging functionalities (V1X) and, where appropriate based on assessment by the regulatory authority, bidirectional charging functionalities (V2X).

SUPPORT this two-step approach but STRENGTHEN it by introducing support mechanisms for V2G when foreseen as an additional functionality contributing to system efficiency, in particular in residential home charging, for instance through subsidies or rebate payment. The forthcoming revision of the Energy performance of buildings Directive should also be aligned with these recommendations.

IMPROVE this provision by making sure regulatory authorities consult all relevant stakeholders, including operators of recharging points and solution providers, to ensure a fair assessment.

¹ Currently defined in the [proposal for a Regulation concerning batteries and waste batteries](#) as a measure of the general condition of a rechargeable battery and its ability to deliver the specified performance compared with its initial condition.

² Currently defined in the [proposal for a Regulation concerning batteries and waste batteries](#) as the available capacity in a battery expressed as a percentage of rated capacity

- § 4: Member States to develop regulatory frameworks that do not discriminate against flexibility provisions from batteries and EVs, both directly and through aggregation.

COMPLEMENT this provision by integrating elements from recital 18 setting principles for a consumer-centric and prosumer-based energy system in particular on consumer rights, protection of personal data, using their subscription at multiple recharging points as well as information on how EV users will be remunerated for the flexibility provided to the system and how this will affect the use of their vehicle and the state of health of their battery. Open standards should be contemplated in these regulatory frameworks to support data access from consumers and third parties acting on their behalf.

COMPLEMENT this provision by enabling prosumers who have already opted for dynamic tariffs to have symmetrical dynamic tariffs when exporting electricity to the grid. This will foster V2X in the residential sector.

IMPROVE this provision which reinforces the requirements under the Electricity Directive, by expanding it to all decentralised energy resources connected to the system and providing flexibility, notably the ones below 1MW, and not only limited to EVs and batteries. This will also ensure that the overall article 20a is fostering system integration of all end-use sectors, beyond the transport sector. In this light, the intended purpose of this article should be REVISED to stress the requirements for the clean electrification and system integration of buildings (art. 15a), industry (art. 22a) and H&C in particular heat pumps (art. 23).

Article 22a – Mainstreaming renewable energy in industry

- § 1: New RES target for the industry sector: Indicative average minimum annual increase of 1.1 percentage point by 2030 of the share of RES in industrial final energy consumption.

IMPROVE this provision as it lacks incentives for clean electrification in industry despite the recognition in recital 21 on the potential of electrification in industry, in particular where heating and cooling demand is low-temperature: ADD a target that Member States should set for the smart and clean electrification of industry. This should be achieved in a flexible way by activating DSF in industrial processes where significant potential lies.

Article 23 - Mainstreaming renewable energy in heating and cooling

- § 1: Binding RES target for the H&C sector: annual 1.1 percentage point increase in the share of RES at Member State level (calculated for the periods 2021 to 2025 and 2026 to 2030, starting from 2020 level).

IMPROVE this provision as it lacks incentives for clean electrification in H&C despite the significant flexibility potential of this sector: ADD as part of the supporting measures listed in paragraph 4 to achieve the RES target for H&C, a target that Member States should set for the smart and clean electrification of H&C. This should be achieved in a flexible way by activating the significant DSF potential of H&C.

Article 24 – District Heating and Cooling

- §8: Electricity DSO to assess at least every four years and in cooperation with the operators of DH&C systems, the potential of DH&C to provide flexibility services and whether the use would be more resource- and cost-efficient than alternative solutions.
- §8: TSO and DSO to take into account the result of this assessment in grid planning, grid investments and infrastructure development.
- §8: Member States to facilitate coordination between TSO-DSO and DH&C operators to ensure flexibility services provided by DH&C can participate in electricity markets.

SUPPORT this provision that allows DH&C to contribute to system integration. IMPROVE it by adding in § 8 that for any planning, investment and infrastructure development decisions, including of DH&C networks, priority should be given to non-wire alternatives. Periodicity of assessment should be aligned with article 32 of Electricity Directive on Distribution network development plans (at least every 2 years).

Article 25 – Greenhouse gas intensity reduction in the transport sector from the use of renewable energy

- §2: Member States to establish credit mechanism allowing fuel suppliers in their territory to exchange credits for supplying RES to the transport sector: operators of public charging points that supply RES-electricity to EVs to receive credits which can be sold to fuel suppliers for fulfilling their obligations.

IMPROVE the provision by expanding credits also to operators of private charging infrastructure beyond public ones as a further support to electromobility and revenue stream for e-mobility service providers and ensure that this credit mechanism valorise flexibility, using 24/7 calculation, linked with the real-time data sharing obligations for TSO/DSO under article 20a.

ENERGY EFFICIENCY DIRECTIVE

Overall assessment

Although not fully compliant with its own Energy System Integration Strategy, the Commission has timidly started to embrace a system efficiency perspective resulting from the activation of demand-side flexibility.

System Operators are identified as responsible players for the correct implementation of the EE1st principle at system level to avoid stranded assets: the procurement of flex services to increase system efficiency should be specified in legal provisions, building on the good Recital 100, both in the context of the Energy Efficiency Obligation Schemes (art. 9) and in the dedicated article on Energy transportation, transmission and distribution (art. 25).

To unleash the demand-side flexibility potential of industry, it is important to ensure that Energy Management Systems required to be deployed in large enterprises also integrate them with the energy system and react on the basis of external signals.

The innovative idea to define through Delegated Acts national, voluntary "data centre sustainability indicators" has the potential to promote the prosumer business model of data centres, notably in light of the efficiency and renewable-based element of such indicators.

Article 2 – Definition

- § 6&7: 'Energy savings' and 'energy efficiency' definition are unchanged: still static metrics.
- §14: 'energy management system' means a set of elements to achieve the energy efficiency objective, including monitoring actual energy consumption, action take to increase energy efficiency and measurement progress.

These definitions do not consider time-dependent and dynamic energy improvements in reaction to external signals and continue to view energy efficiency as a static metric. They should be REVISED by:

- *Taking into account in §6&7 savings and efficiency improvements resulting from dynamic and flexible usage patterns in reaction to external signals received at a specific time. This would valorise energy savings obtained during peak-demand by shifting consumption, and recognise their contribution to system efficiency in particular in terms of reliability as well as avoided costs and greenhouse gas emissions.*
- *Adding in §14 the role of energy management system connected with the system as key assets to achieve system efficiency through the activation of demand-side flexibility.*

Article 3 – Energy efficiency first principle

- Recitals 12: The Energy efficiency first principle should be applied taking primarily the system efficiency approach into consideration.
- Recital 14: The Energy efficiency first principle applies in all relevant policy, planning and major investment decision (i.e. large-scale investments with a value of more than €50 million or €75 million for transport infrastructure project) and should take into account the potential of DSF (demand-response, storage and smart solutions) for system efficiency.
- Recital 100: Member States and NRA should ensure System Operators apply the Energy efficiency first principle by valorising non-wire alternatives such as demand-side solutions.
- § 1: Energy efficiency solutions to be taken into account in the planning, policy and major investments decisions related to the energy systems and non-energy sectors that have an impact on energy consumption and energy efficiency (e.g. end-use sectors).
- § 2: application of the Energy efficiency first principle to be verified when policy, planning and investment decisions are subject to approval and monitoring requirements.
- §3: When CBA methodologies are defined, Member States shall ensure proper assessment of wider benefits of energy efficiency solutions from the societal perspective.

IMPROVE this article on the basis of the good wording used in recital 12 & 14 by:

- Adding 'demand-side flexibility solutions, demand-response, energy storage and smart solutions enabling a time-dependent and flexible consumption' alongside 'energy efficiency solutions' to be taken into account in the planning and CBA methodologies to valorise their contribution to increase system efficiency.
- Specifying that the CBA methodologies should primarily take into consideration the system efficiency approach alongside the societal perspective, as this will help increase both the efficiency of individual end-use sectors and of the whole energy system.
- **DELETING the limitation to apply the Energy Efficiency First principle to major investment decisions. This provision undermines the whole energy system approach (also in recital 14).**

Article 4 – Energy efficiency targets

- § 1: New, higher binding target set at EU level which corresponds to a reduction of 36% for final and 39% for primary energy consumption respectively when compared to the 2007 Reference Scenario projections for 2030.

WELCOME this increased level of ambition in line with the European Climate Target Plan.

Article 8 – Energy savings obligations

- § 1: From 2024, annual energy savings obligation increased to 1.5% for all Member States (currently 0.8%) with specific requirement for energy poverty.
- §8(c) Introduction of sunset clause removing as of 1 January 2024 the possibility for Member States to include in the calculation of the savings obligations, the savings achieved in the energy distribution and transmission sectors.
- §8(f) Introduction of a sunset clause removing as of 1 January 2024 the possibility for Member States to exclude from the calculation of the savings obligations 30% of the RES-based energy generated on or in buildings for own use.

SUPPORT the increased level of ambition of annual energy savings obligation but IMPROVE §8 by allowing Member States to count towards the amount of required energy savings, time-dependant and dynamic savings (including shifting) obtained during peak time through the activation of demand-side flexibility in reaction to external signals. This will support carbon and system efficiency.

REMOVE the sunset clause of §8(c) which would remove the ability of Member States to include in the energy savings obligation calculations savings achieved by increasing the efficiency of their electricity networks as this appears in contradiction with the application of the Energy Efficiency First principle.

REMOVE the sunset clause of §8(f) as it disincentivises the uptake of renewable energy installation in buildings, limiting clean electrification of buildings and energy system efficiency supported by clean and flexible buildings. This also undermines consistency with the Renewable Energy Directive (art. 15a on mainstreaming renewables in buildings).

Article 9 – Energy efficiency obligation schemes

- § 2: TSO may be among the designated obligated parties for implementing the energy savings obligations (beyond DSO, suppliers).
- Recital 49: Obligated parties could achieve energy savings obligations by promoting measures that lead to energy savings and financial savings on energy bills, such as the installation of insulation and heating measures.
- Recital 54: Measures and technologies available to obligated parties to achieve their obligations include sustainable technologies in efficient DH&C systems, efficient DHC infrastructure, energy audits and energy management systems.

WELCOME the addition of TSO as possible designated parties and STRENGTHEN requirements for system operators to apply the Energy efficiency first principle by accounting in the ESOS system savings that could be achieved from the procurement of non-wire alternatives (building on the good wording in recital 100).

IMPROVE this article (and the respective recitals 49 & 54) by allowing obligated parties to count energy savings resulting from the activation of the demand-side flexibility potential of electrified end-users. More specifically, ESOS should valorise savings resulting from the flexible consumption of all end-use sectors in reaction to price signals (implicit flexibility) and in response to market incentives directly or indirectly through aggregators (explicit flexibility).

Article 11 – Energy management system and energy audits

- § 1: Obligation to implement an energy management system for the largest energy using companies (average annual consumption higher than 100TJ of energy over the previous 3 years).

ACCOMPANY this article with an IMPROVED definition of ‘energy management systems’ under article 2. Key is to ensure that dynamic energy efficiency improvements in reaction to external signals are considered and that Energy management systems are interoperable with the grid.

Article 21 - Information and awareness raising

- § 1: Information on available energy efficiency improvement measures, actions and financial and legal framework should be transparent and widely disseminated to all relevant market actors, including final customers.
- § 2: Member States to take appropriate measures to promote and facilitate an efficient use of energy by final customers and final users.
- § 2(i): These measures can include the creation of one-stop shops providing technical, administrative and financial advice and assistance on energy efficiency, building renovation and the take-up of renewable energy in buildings.

IMPROVE this provision (and the respective recital 72) by adding the promotion and facilitation of a ‘flexible’ energy use alongside an ‘efficient use of energy’. This should include the promotion and facilitation of prosumer business models and smart solutions providing demand-side flexibility in reaction to external signals.

Article 25 – Energy transformation, transmission and distribution

- § 1: NRA to apply the Energy Efficiency first principle regarding their decisions on the operations of electricity infrastructure, including their decisions on network tariffs.
- §2: TSO/DSO shall not invest in stranded assets and NRA should provide methodologies and guidance on how to assess alternatives in the CBA and verify the implementation of the Energy efficiency principle by TSO/DSO when projects are submitted.
- TSO/DSO shall assess energy efficiency improvement measures for their existing systems and improve energy efficiency in infrastructure design and operation.
- §3: Member States to set incentive-based regulation to encourage TSO/DSO to develop innovative solutions to improve the energy efficiency of existing systems.
- §4: NRA to assess the progress achieved in energy efficiency improvements regarding the operation of infrastructure in their annual report

SUPPORT this good article that identifies System Operators as key players for implementing the Energy efficiency first principle at system level to avoid stranded assets while clarifying the role of the NRA in ensuring correct implementation.

IMPROVE this article replicating the good wording from recital 100 by specifying the procurement of flexibility services to increase system efficiency as part of the energy efficiency improvement measures needed to apply the Energy efficiency first principle. Demand-side flexibility should be identified as an intrinsic part of the assessment of network planning and operation and be valorised as a viable alternative in the CBA. The demand-side flexibility potential of prosumers (including RES self-consumption) and efficiency gains associated with it should be properly modelled in the relevant methodologies. The CBA should also rely on transparent TSO and DSO data for the procurement of flexibility.

Article 27 – Energy services

- §4: Public bodies are encouraged to use energy performance contracting for renovation of large buildings. For renovation of large non-residential buildings (above 1000m²), they shall assess the feasibility of using energy performance contracting.
- Member States may encourage public bodies to combine energy performance contracting with expanded energy services including demand response and storage.

STRENGTHEN the obligation for Member States to encourage public bodies to combine energy performance contracting with demand response and storage ('shall' instead of 'may').

Article 31 – Delegated acts (Data centre sustainability indicators)

- §3: Commission is empowered to adopt delegated acts to establish a common Union scheme for rating the sustainability of data centres in the EU.
- §4: The scheme shall define minimum thresholds for significant energy consumption and establish data centre sustainability indicators.

SUPPORT this scheme for rating the sustainability of data centres in the EU by establishing Data centre sustainability indicators (DCSIs) which have the potential to promote prosumer business model for data centres.

IMPROVE this provision replicating elements from recital 67 by setting out in the legal text the four basic dimensions of a data centre that the DCSIs will measure, in particular: 1) how efficiently it uses energy from the grid and generated on-site and 2) how much of that energy comes from renewable sources.

REGULATION ON THE DEPLOYMENT OF ALTERNATIVE FUELS INFRASTRUCTURE (AFIR)

Overall assessment

Although the Commission contemplates the use of various alternative fuels, with AFIR the Commission recognises the specific contribution of electricity in the transport sector and notably of smart charging to enable EVs to contribute to the flexibility of the energy system and to the further absorption of renewable electricity. This is a significant step in acknowledging the contribution of electrified end-use sectors to support a renewable-based and efficient energy system. Such approach to the transport sector is also well reflected in the Renewables Directive and constitutes a major improvement compared to the lack of such a similar vision for buildings, industry and H&C in the Renewables Directive.

However, some timid and confusing provisions are foreseen in AFIR: art. 5.7&8 might lead to a binding requirement for all publicly accessible normal power chargers to be digitally-connected and smart capable, but this is not reflected in the national requirement to set targets and national policy frameworks, as it is just left to progress reports. The development of V2X is left to an assessment by System Operators, which might limit its uptake.

Article 2

- (9) ‘bidirectional recharging’ means a smart recharging operation where the direction of the electricity flow may be reversed, allowing that electricity flows from the battery to the recharging point it is connected to.
- (59) ‘smart recharging’ means a recharging operation in which the intensity of electricity delivered to the battery is adjusted in real-time, based on information received through electronic communication.

SUPPORT these two definitions covering both V1X and V2X and which are also reflected in the Renewables Directive (art 2(14l) and art. 2(14n)). Alignment between RED and AFIR should be maintained during the negotiation phase.

- (14): ‘digitally-connected recharging point’ means a recharging point that can send and receive information in real time, communicate bi-directionally with the electricity grid and the electric vehicle, and that can be remotely monitored and controlled, including to start and stop the recharging session and to measure electricity flows;

IMPROVE this definition by clarifying its scope/purpose (i.e. data communication), avoiding overlaps with the definitions of smart charging and bidirectional charging and by adding bi-directional communication with the building energy management system.

- (31): ‘normal power recharging point’ means a recharging point that allows for a transfer of electricity to an electric vehicle with a power output less than or equal to 22 kW
- (38): ‘publicly accessible’ alternative fuels infrastructure, means an alternative fuels infrastructure which is located at a site or premise that is open to the general public, irrespective of whether the alternative fuels infrastructure is located on public or on private property, whether limitations or conditions apply in terms of access to the site or premise and irrespective of the applicable use conditions of the alternative fuels infrastructure. This can include *inter alia* public parkings or parkings of supermarkets, or points located on a private property accessible to the general public or a certain group of users, for example clients.

SUPPORT this definition which limits the scope of AFIR to publicly accessible infrastructures and lets the revised Renewables Directive to set provisions for non-publicly accessible ones.

Article 3 - Targets for electric recharging infrastructure dedicated to light-duty vehicles

- Member States should set mandatory minimum targets which should combine:
 - National fleet based targets (to ensure that vehicle uptake in each Member State is matched with the deployment of sufficient publicly accessible recharging infrastructure), with
 - Distance-based targets (max 60km) for the trans-European network for transport (TEN-T) to ensure full coverage of electric recharging points along the Union’s main road networks
- Recital 10 indicates that National fleet based targets should be established on the basis of the total number of registered EVs in that Member State following a common methodology. The Common methodology

accounts for technological developments such as the increased driving range of EVs or the increasing market penetration of fast-charging points which can recharge a greater number of vehicles per recharging point than at a normal recharging point.

COMPLEMENT this article and recital to also consider the contribution of smart charging/bidirectional charging in the methodology when setting mandatory minimum targets, in particular for publicly accessible long-parking duration of light-duty vehicles.

Article 4 – Targets for electric recharging infrastructure dedicated to heavy-duty vehicles

- Mandatory minimum distance-based targets for the TEN-T network, also focusing on fast charging.

COMPLEMENT this article to also consider the contribution of smart charging/bidirectional charging in the methodology when setting mandatory minimum targets, in particular for publicly accessible long-parking duration of heavy-duty vehicles in the TEN-T network.

Article 5 – Recharging infrastructure

- Recital 20: Member States should encourage the use of smart metering system for the recharging of electric vehicles at publicly accessible recharging stations, where technically feasible and economically reasonable.
- §7: operators of recharging points shall ensure that all publicly accessible recharging points operated by them are digitally connected recharging points.
- §8: operators of recharging points shall ensure that all publicly accessible normal power recharging points operated by them, where vehicles are typically parked for a longer period, are capable of smart recharging.

CLARIFY that these provisions apply as a general mandatory obligation, whose development should be contemplated in the mandatory minimum targets set in articles 3 & 4.

IMPROVE these provisions, which might appear contradictory, by ensuring that publicly normal power recharging points are both smart capable and digitally connected. The latter should allow for future introduction of bidirectional charges functionalities.

CLARIFY that these provisions do not necessary require deploying smart metering systems for each (smart) recharging point, notably by DELETING recital 20.

Article 13 – National policy frameworks

- §1: By 1 January 2024, Member States shall submit to the Commission a draft national policy framework on market development for alternative fuels and deployment of infrastructure. It shall contain *inter alia*:
 - a) Assessment of the current state and future development,
 - b&c) National targets and objectives and policies and measures to achieved them. However, it does not cover those set in article 5.
 - d) measures to encourage and facilitate the deployment of recharging stations for light-duty and heavy-duty vehicles at private locations that are not accessible to the public
 - i) measures necessary to ensure that the deployment and operation of recharging points, including the geographical distribution of bidirectional charging points, contribute to the flexibility of the energy system and to the penetration of renewable electricity into the electric system.

IMPROVE point b&c as they should cover also the obligation set in art. 5 for smart charging.

- §7: Commission assesses the draft national policy frameworks and may issue recommendation to the Member States.
- §8: Member States to duly take into account these recommendations.
- §9: By 1 January 2025, Member States notify to the Commission their final national policy framework.

Article 14 – Reporting

- §1: Member States to submit a progress report on the implementation of their national policy frameworks starting from 1 January 2027, and every 2 years after that.

IMPROVE this provision by ensuring that the deployment of smart /bidirectional charging is included in the reporting. This should be specified also in Annex I listing the elements to be included in the reporting.

- §3: NRAs to assess how the deployment of recharging points – covering both private and public – can provide flexibility to the system and support RES penetration.

MOVE this provisions to article 13.1.i, as this national assessment and identified measures should be part of the national policy frameworks setting specific requirements to support the deployment of V1X/V2X, rather than the reporting from 2027.

- §3: Member States – if necessary – to take measures for the deployment of additional recharging points and include them in their progress report. The assessment and measures shall be taken into account by system operators in their network development plans.

IMPROVE by ensuring that any additional investment in charging infrastructure follows the rules set in the Electricity Directive (i.e. market test first).

- §4: NRA - with input from TSO/DSO - shall assess the potential of bidirectional charging to the penetration of RES-electricity in the system.
- §4: On the basis of this assessment, Member States can take measures included in the progress report, to adjust the availability and geographical distribution of bidirectional recharging points, in both public and private areas.

IMPROVE this provision by requirement that NRA's assessment does not solely rely on TSO/DSO's input but also foresees the involvement of all relevant stakeholders including operators of recharging points and solution providers to ensure a fair assessment. Member States measures should be included in the national policy frameworks rather than in the progress report in 2027.

- §5: Commission sets out templates for the national policy framework and progress reports.

IMPROVE by making these templates binding for Member States to use.

Article 16 – Progress tracking

- Member States shall report annually to the Commission the total aggregated recharging power output, the number of publicly accessible recharging points and the number of registered battery electric and plug-in hybrid vehicles.

IMPROVE by including the number of V1G and V2X capable chargers.

Article 18 – Data provisions

- §2: Operators/owners of publicly accessible recharging points shall make available data through the National Access point at no cost on static data (e.g. location, identification, type of current....) and dynamic data (operational status, availability...).

IMPROVE by adding data on V1G and V2X capabilities as part of the static data listed in §2(b)

Article 19 – Common technical specifications

§7: the Commission shall be empowered to adopt delegated acts to set common technical specifications to enable full technical interoperability of the recharging and refuelling infrastructure in terms of physical connections and communication exchange for the areas listed in Annex II and which includes notably vehicle-to-grid communication.

WELCOME this article as an opportunity to accelerate the development of supporting protocol to V2G for normal power chargers and to translate the currently developed ISO 15118-20 into an EN standard through a Delegated Act. IMPROVE Annex II by explicitly referring to V2G technical specifications.

ENERGY TAX DIRECTIVE

Overall assessment

The new energy taxation system proposed by the Commission, applicable from 2023, considers electricity among the least taxed energy sources in view of fostering its use (i.e. 0,15 EUR/Gigajoule as for Advanced sustainable bioliquids, biogas and Renewable fuels of non-biological origin). In addition, tax exemptions and reductions for energy from renewable sources, including electricity, may be applied by Member States.

To support active customers owning an energy storage facility, art. 22.4 seems to eliminate double taxation as it allows Member States to consider electricity storage facilities and transformers of electricity as redistributors when they supply electricity. This specific provision should be strengthened to make it mandatory, with a clear reference to the support of prosumers business models to avoid misinterpretations.

Article 16

- § 1(a) and (b): Member States may apply exemption or reductions in the level of taxation to fuels from renewable resources and to electricity of solar, wind, wave, tidal or geothermal origin.

SUPPORT this provision which promotes renewable-based electrification. STRENGTHEN it by making it mandatory ('shall' instead of 'may').

- § 1(b): Member States may also refund to the producer some or all of the amount of tax paid by the consumer on electricity produced from renewable energy.

IMPROVE this provision by making sure that this also applies to prosumers, including energy communities, Power-Purchase Agreement supplying prosumers, who generate renewable electricity and who would either consume it or sell it to the grid.

Article 22

- §4: Tax applicable to electricity is chargeable at the time of supply by the distributor and redistributor. Electricity storage facilities and transformers of electricity may be considered as redistributors when they supply electricity.

IMPROVE this article by making explicit the prohibition of double taxation of electricity storage, including from Electric Vehicles, with a clear reference to the support to prosumer business models and active customers owning an energy storage facility.

Article 31

- From 2023 and every 5 years, the Commission shall submit a report on the application of the Directive examining the levels of taxation, the impact of innovation and technologies development, in particular the use of electricity in transport and the justification for the exemptions, reductions and differentiations and taking into account environmental objectives and the functioning of the internal market.

IMPROVE this article by 1) adding 'the use of electricity in buildings and industry' in the areas of examination by the Commission and 2) linking this reporting exercise to articles 5 and 29 which empower the Commission to adopt delegated acts to amend the minimum levels of taxation. The report should inform potential Delegated acts.

Annex I – Table D

- Electricity has the lowest minimum level of taxation set at 0.15€/Gigajoule) from 1 January 2023 (compared to the current level of 0.5€/MWh for business use and 1€/MWh for non-business use. This is the same as for Advanced sustainable bioliquids, biogas and Renewable fuels of non-biological origin).

EU ETS REVISION – A NEW SCHEME FOR BUILDINGS AND ROAD TRANSPORT

Overall assessment

With the separate Emission Trading Scheme (ETS) for buildings and road transport proposed by the Commission and starting from 1 January 2025, the obligation will be on fuel suppliers and not end-users. However, impacts on consumers should be carefully assessed and adequately addressed through the proposed [Social Climate Fund](#).

A carbon price is an important element that can incentivise fuel switch to cleaner solutions and in particular clean electricity. However, since the obligation is on fuel suppliers, it might not incentivise decarbonisation at decentralised level through distributed energy resources. Besides, a carbon price will not systematically drive consumers to adopt cleaner solutions. In fact, it risks penalising those consumers unable to do so, in particular those on lower-incomes and more at risk of energy/mobility poverty.

Other measures are therefore required to decarbonise road transport and buildings and to provide sufficient access to clean energy alternatives in these sectors. To that end, priority should be given to the revisions of RED, EED, EPBD and AFIR as the best instruments to achieve this objective. Otherwise, there is a risk that these revisions would be shadowed by the negotiation on the new ETS and social compensation scheme, thus reducing their level of ambition.

New chapter IVa on Emissions trading system for buildings and road transport

Article 30a - Scope

- Regulated entities are upstream in the supply chain carrying activities related to the release for consumption of fuels which are used for combustion in the sectors of buildings and road transport.

Article 30b – Greenhouse gas emission permits

- §1: Regulated entities shall hold greenhouse gas emission permits from 1 January 2025 to carry out their activities covered under the ETS for buildings and road transport.
- §2: Application by regulated entities to obtain such permit should specify the type of fuels they release for consumption and which are used for combustion in the buildings and road transport, indicating the end-use.
- §3: Permit is issued if the regulated entity is capable of monitoring and reporting emissions linked to the fuels released for consumption.

Article 30c – Total quantity of allowances

- §1: The total quantity of allowances should be established for the first time in 2026, following a trajectory starting in 2024 from the value of the 2024 emissions limits (1 109 304 000 CO₂t). The linear reduction factor should be set at 5,15 % from 2024.
- §2: From 2028, the total quantity of allowances should be set on the basis of the average reported emissions for the years 2024, 2025 and 2026, and should decrease by a linear reduction factor set at 5,43 % linear reduction factor.

Article 30d - Auctioning of allowances

- §1: The allowances for the new emissions trading will be auctioned starting from 2026 (no free allocation is provided), unless they are placed in the Market Stability Reserve.
- §2: In order to ensure a smooth start of emissions trading in the new sectors, a certain amount of allowances (30%) will be front-loaded in 2026.

SUPPORT the sequenced approach with first greenhouse gas emission permit in 2025 and then auctioning of allowances starting from 2026. IMPROVE it by introducing requirements that auctioning should only start once EU funding (in particular Social Climate Fund) and Member States social compensation and measures are in place to ensure a socially fair introduction of this new ETS for buildings and road transport, in line with recital 44.

- §2: A Market Stability Reserve with an initial endowment of 600 million allowances will operate from 2026.
- §3: 150 million allowances issued under the new emissions trading system for road transport and buildings will be made available to the Innovation Fund to stimulate the green transition.
- §5: Member States shall use their revenues generated from the auctioning of allowances for measures such as decarbonisation of H&C of buildings, energy efficiency in buildings, including the integration of renewable energies, the acceleration of zero-emission vehicles or the deployment of fully interoperable recharging infrastructure.

IMPROVE requirements on the use of revenues by Member States by giving priority to measures supporting V2X and flexible buildings. Generated revenues should contribute to the flexible consumption of clean electricity by these sectors so that they can support RES integration as well as carbon and system efficiency, in line with the Energy System Integration strategy.

Article 30f – Monitoring, reporting, verification of emissions and accreditation

- §2: Regulated entities shall report their emissions corresponding to the quantities of fuels released for consumption.
- §4: Regulated entities shall identify and document reliably and accurately per type of fuel, the precise volumes of fuels released for consumption as well as the final use of the fuels.

Article 30h – Measures in the event of excessive price increase

- §1&2: Mitigation measures are established in order to address the potential risk of excessive price volatility, which might be particularly high at the start of emissions trading in the new sectors:
 - Commission can release 50 million allowances from the Market Stability Reserve if for more than 3 consecutive months, the average price of allowance in the auctions is more than twice the average price of allowance during the 6 preceding consecutive months.
 - Commission can release 150 million allowances from the Market Stability Reserve if for more than 3 consecutive months, the average price of allowance in the auctions is three times more than the average price of allowance during the 6 preceding consecutive months.

Article 30i – Review

- The Commission will monitor the application of the rules of the new emissions trading and, if necessary, it will propose a review by 1 January 2028. By 31 October 2031, the Commission should assess the feasibility of merging the scheme for buildings and road transport with the existing EU ETS.

Amendment to Decision 2015/1814 concerning the establishment and operation of a market stability reserve

Article 1a

- To address the risk of an imbalance between supply and demand, a Market Stability Reserve will also operate for the new emissions trading for road transport and buildings, with allowance intakes and releases based on the thresholds for the surplus and shortages of allowances in that market:
 - If allowances in circulation > 440 million, 100 million allowances shall be placed in the market stability reserve.
 - If allowances in circulation < 210 million, 100 million allowances shall be released from the market stability reserve.

Article 10d – Modernisation Fund

- §2: At least 80 % of the financial resources from the Modernisation Fund shall be used to support investments including the improvement of demand-side energy efficiency, including in transport, buildings and of energy storage as well as the modernisation of energy networks.

IMPROVE this article by making clear reference to demand-side flexibility to support efficiency improvement including as system level as well as the deployment of renewable energy in the 10 lower-income EU Member States supported by the Modernisation Fund.

About smartEn - Smart Energy Europe

smartEn is the European business association integrating the consumer-driven solutions of the clean energy transition. We create opportunities for every company, building and car to support an increasingly renewable energy system. Our membership consists of the following companies:



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