



smartEn
Smart Energy Europe

Policy recommendations on The Renewable Energy and Energy Efficiency Directives trilogue negotiations

smartEn comparative analysis of the positions of the 3
European institutions

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

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

November 2022

Introduction

The current document aims to provide a comparative analysis on the co-legislators positions for the Renewable Energy (RED) and Energy Efficiency (EED) Directives, giving recommendations for the trilogue negotiations¹.

To guide policymakers during the negotiations, smartEn adopted **policy recommendations** based on **three principles** and classified in provisions to **SUPPORT**, **IMPROVE**, **OPPOSE** for the following key, selected articles:

RENEWABLE ENERGY DIRECTIVE	ENERGY EFFICIENCY DIRECTIVE
<ul style="list-style-type: none"> ○ Art. 2 (Definitions) ○ Art. 3 (Binding overall Union target for 2030) ○ Art. 15a (Mainstreaming renewable energy in buildings) ○ Art. 18 (Information and Training) ○ Art. 19 (Guarantees of origin for energy from renewable sources) ○ Art. 20 (Access to and operation of the grids) ○ Art. 20a (Facilitating system integration of renewable electricity) ○ Art. 22a (Mainstreaming renewable energy in industry) ○ Art. 23 (Mainstreaming renewable energy in heating and cooling) ○ Art. 24 (District heating and cooling) ○ Art. 25 (Greenhouse gas intensity reduction in the transport sector from the use of renewable energy) 	<ul style="list-style-type: none"> ● Scope, definitions and targets <ul style="list-style-type: none"> ○ Art. 2 (Definitions) ○ Art. 3 (Energy Efficiency First Principle) ○ Art. 4 (Energy Efficiency Targets) ● Efficiency in Energy Use <ul style="list-style-type: none"> ○ Art. 8 (Energy Saving Obligations) ○ Art. 9 (Energy Efficiency Obligations Schemes) ○ Art. 11 (Energy Management Systems and energy audits) ○ Art. 11a (Data centres) ● Consumer information and empowerment <ul style="list-style-type: none"> ○ Art. 21a (Partnerships for energy efficiency) ● Efficiency in energy supply <ul style="list-style-type: none"> ○ Art. 23 (Heating & Cooling Assessment and Planning) ○ Art. 25 (Energy transformation, transmission and distribution)

RED and EED are central pieces of legislation to achieve Europe’s energy and climate objectives in a cost-effective way by delivering the needed radical transformation in the way we produce, consume and distribute energy. They represent a major opportunity to support an **efficient, secure and fully decarbonised energy system with active consumers at its core**.

These files should help overcome barriers to the **uptake of cost-effective and innovative solutions and to the activation of demand-side flexibility** from all consumers. This will ensure buildings, transport and industries can reduce and shift electricity consumption in a time-dependent way to increase the penetration of renewable electricity (generated on-site and/or distributed through the network) in all end-use sectors while shielding citizens and business from volatile energy prices and reducing the EU energy dependency towards gas imports.

For the first time, DNV quantified for smartEn the benefits of a full activation of consumers’ flexibility in the EU in 2030² both for the energy system and consumers themselves:

- 37.5 million tonnes can be saved annually in GHG emissions
- €11.1 - €29.1 bn can be saved annually in distribution grid investments
- €71 bn would be saved annually by consumers directly
- 15.5 TWh (61%) would be the avoided renewable curtailment
- €2.7 bn would be saved annually in avoided peak generation capacity

¹ This document builds on smartEn previous [position](#) and [amendments suggestions](#) on the Commission’s proposals.

² https://smarten.eu/wp-content/uploads/2022/09/SmartEN-DSF-benefits-2030-Report_DIGITAL.pdf

THREE KEY PRINCIPLES TO GUIDE SMARTEN POLICY RECOMMENDATIONS

The following principles inspire smartEn recommendations in view of the finalisation of the EED and RED revisions:

1. PRIORITISE THE DIRECT, SMART ELECTRIFICATION OF ALL END-USE SECTORS

smartEn supports prioritising **direct and clean electrification** of end-use sectors to replace fossil fuels in buildings, heating and cooling, transport and industry. This is also a key pillar of the REPowerEU Plan to reduce the EU's dependency on fossil fuels.

smartEn recognises the improvement made notably in the European Parliament's position towards the **smart and flexible electrification** of all end-use sectors, beyond transport, to support the **flexible consumption, trade and storage** of renewable electricity. This is key to achieve the penetration of more variable renewable electricity in a cost-effective way.

The use of **innovative technologies** and **smart decentralised energy resources** such as smart and electrified heating and cooling system, building energy management systems capable of interacting with the grid or smart and bidirectional charging should be promoted. This will ensure that end-use sectors become grid-integrated, active players contributing to improve the efficiency of the whole energy system.

2. INCENTIVISE AND ENABLE ALL END-USE SECTORS TO ACTIVATE THEIR DEMAND-SIDE FLEXIBILITY

smartEn acknowledges the progress made to the Commission's proposal to incentivise and enable demand-side flexibility activation in all end-use sectors.

In particular, the introduction by the European Parliament of an **indicative target to reduce peak electricity demand by 5% at national level** in art. 3 RED provides the necessary signal to support the cost-effective penetration of variable renewable electricity thanks to active consumers. This will ensure that demand-side flexibility is contemplated as a lasting solution towards an efficient, affordable, resilient and sustainable energy system, beyond an emergency intervention to address high energy prices³.

Expanding the scope in art. 8 & 9 EED of **Energy Savings Obligations Schemes to count dynamic savings** achieved through the flexible consumption of electricity would provide an additional incentive to activate demand-side flexibility.

Barriers to the participation of all decentralised energy resources in electricity markets, notably the ones below 1MW, should be removed as reinforced by the European Parliament in art. 20a RED.

Improvements should be made to art. 19 RED to support more granular (in time and size) and **real-time Guarantees of Origin** as 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.

smartEn believes that the availability and **access to energy data** is crucial for a consumer-centric and smart energy system. Both the Parliament and the Council support the Commission's proposal in art 20a RED for system operators to make available to third parties data on the share of RES-electricity and the greenhouse gas content of electricity in their network. This is very welcomed as it supports demand-side flexibility business models by promoting real-time locational marginal carbon/green intensity signals. Such data should be made interoperable as specified by the Parliament.

³ [Council Regulation 2022/1854 on an emergency intervention to address high energy prices](#)

Member States should also ensure that consumers and third parties have ‘read-only’ **access to data associated with their own decentralised energy resources** to allow prosumer business models and the provision of flexibility services from all decentralised energy resources.

3. IMPLEMENT THE ENERGY EFFICIENCY FIRST PRINCIPLE AT SYSTEM-LEVEL AND STIMULATE THE CONTRIBUTION OF DEMAND-SIDE FLEXIBILITY TOWARDS AN EFFICIENT ENERGY SYSTEM

smartEn support the application of **the Energy Efficiency First Principle at system level** as recognised by the Commission recommendations for implementing this principle⁴. This requires looking at the impacts and benefits individual assets and consumers can have on the whole energy system.

The EU framework should therefore set a clear **definition of Energy System Efficiency** that recognises the **contribution of system-integrated consumers**, including at community level, in making the energy system more efficient. It should also **introduce metrics to track progress** towards a more efficient system with consumers onboard.

Demand-side flexibility shall therefore be recognised as part of the energy efficiency solutions that can improve the efficiency of the whole energy system, whenever they represent a cost-effective decarbonisation pathway. In this sense, smartEn welcomes progress made by the European Parliament in art. 3 EED.

Improvements are however necessary to art. 3 EED to ensure that the application of the Energy Efficiency First principle is not limited to major investment and planning decisions, but is applied to all EU, national and local policy, **planning and investment projects regardless of the size of investments**.

System operators are rightfully identified as responsible players for the correct implementation of the Energy Efficiency First principle at system level. To do so, the **procurement of flexibility services by system operators** should be specified in art. 25 EED as an alternative to grid expansion.

RED and EED are only a part of the big puzzle. The reduction of 55% of EU’s greenhouse gas emissions by 2030 will require **the contribution of all-end use sectors**. It is therefore necessary to ensure consistency with other sector-specific legislation such as the Energy Performance of Buildings Directive (EPBD) and the Alternative Fuels Infrastructure Regulation (AFIR) for which the interinstitutional negotiations will take place at a later stage. It is only with a comprehensive package that the EU will achieve a consumer-centric, resilient and efficient energy system.

⁴ <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32021H1749&from=EN>

RENEWABLE ENERGY DIRECTIVE

Article 2: definitions

- **SUPPORT** the definition of ‘smart charging’ (14l) from the European Parliament as it provides more detail on the smart charging process as a response to dynamic price signals or an optimisation of power flow.
- **OPPOSE** the definition of ‘smart charging’ (14l) from the Council, as it risks to water down the real-time adjustment of the smart charging operation
- **IMPROVE** the definition of ‘system efficiency’ (44bb) introduced by the European Parliament

The introduction of a system efficiency definition by the Parliament is an encouraging step towards the system integration of end-use sectors and the recognition of demand-side flexibility in achieving it. However, the proposed definition would benefit from being improved with the following wording (to be aligned in the Energy Efficiency Directive)⁵:

“Energy System Efficiency” means an energy system that relies on efficient and flexible consumers that maximise the use of clean, available digital and decentralised energy resources to achieve climate neutrality in the most secure and cost-effective way. Improvements in decarbonisation, affordability and resilience shall be used as metrics to measure progress toward energy system efficiency”

Article 3: Binding overall Union target for 2030

The achievement of the renewable energy target needs to be done in the most cost-effective way, by supporting the system integration of all end-use sectors. Hence, the integration of variable renewable electricity in all end-use sectors should be achieved through an efficient and flexible demand otherwise system costs for the clean energy transition will increase.

Member States should set a national target to reduce their peak electricity demand by 5%. It would ensure that the additional renewable electrification necessary for a cost-effective achievement of the energy transition does not create stress and congestion on the electricity network, thanks to the activation of demand-side flexibility from all consumers. This will further accelerate the penetration of renewable electricity by reducing the need for renewable curtailment or unnecessary grid reinforcement, reduce the need for fossil-based generation capacity during peak times to ensure security of supply, enhancing Europe’s energy - independence while helping consumers in reducing their energy bills.

The 5% national peak electricity demand reduction obligation offers a major opportunity to:

- *stimulate Member States in implementing key provisions for demand-side flexibility;*
 - *Ensure that demand-side flexibility is acknowledged as a lasting solution for the cost-effective and secure energy transition and not limited to an emergency solution.*
- **SUPPORT** the introduction of an indicative peak demand reduction target of 5% by 2030 by the European Parliament in §1 which should be achieved through the activation of demand-side flexibility in all end-use sectors. Co-legislators are invited to eventually consider an increase in the ambition of the target as the 5% obligation is currently contemplated in the Emergency Electricity Market Interventions. For example, Ireland aims to reduce peak electricity demand between 20 and 30% in 2030⁶.

⁵ For more information on the need to define energy system efficiency and how to track progress towards a more efficient system, please see smartEn paper [‘Energy System Efficiency: How to maximise the contribution of consumers to cost-effectively accelerate the clean energy transition’](#).

⁶ Ireland ESB Networks “Beat the Peak” initiatives - <https://www.cru.ie/wp-content/uploads/2022/08/CRU202281a-ESBN-Recommendation-Paper-NNLC-Demand-Reduction-Schemes-1.pdf>

- **SUPPORT** §1 from the European Parliament to specify the implementation of this target, including intermediate milestones, in the NECPs as well as the possibility for the Commission to take complementary measures.
- **OPPOSE** the introduction of a technology-specific target for storage technologies by the European Parliament in §1 as it would overlap with the peak demand reduction target, which is technology neutral by definition. Storage technologies are flexible assets that would support peak demand reductions along with other decentralised energy resources, including smart demand management devices. The peak demand reduction target is technology inclusive and would valorise the flexibility services that can be provided by some assets, including energy storage facilities. By storing variable renewables in times of abundance and discharging it in times of scarcity, storage technologies would help penetrate variable renewables in all end-use sectors, avoiding peaks in demand and systemic congestions. In addition, a technology-specific storage target might not consider the contribution of EV's batteries and require unnecessary investments in (large) energy storage facilities.
- **SUPPORT** §4a from the European Parliament as it supports the flexible consumption, trade and storage of renewable electricity in end-use sectors (transport, industry, building and heating and cooling sectors) to help with the cost-effective penetration of renewables.

Article 15a: Mainstreaming renewable energy in buildings

The sectorial target for renewables in buildings should include requirements to accelerate the smart and clean electrification of buildings to support the flexible, time-dependent consumption of renewable electricity both produced on-site and from the grid. This will contribute to the cost-effective integration of variable renewable electricity in buildings as well as to the achievement of the peak electricity demand reduction target. This will also support the integration of buildings in the energy system, while contributing to energy system efficiency and resiliency.

- **SUPPORT** §1 from the European Parliament that confirms the sectorial target for buildings of 49% renewable energy by 2030 which can cover renewable electricity coming from self-consumption, communities or nearby from the grid
- **SUPPORT** §2 from the European Parliament which complements the Commission's proposal to introduce measures in buildings' regulations and codes to increase the share of RES-electricity in the building stock by explicitly referring to measures to increase renewable electricity from self-consumption, communities and local renewable energy sharing, as well as measures to support decentralised energy resources such as storage, smart and bidirectional charging and demand-response.
- **SUPPORT** §4 from the European Parliament requiring Member States to promote smart technologies such as smart and electrified H&C system, the smart management of decentralised energy resources in buildings through Building Energy Management Systems capable of interacting with the grid.
- **IMPROVE** this article by seeking consistency with the approach of article 22a to include support measures in accordance with article 3(4a) in order to ensure that the flexible consumption, trade and storage of renewable electricity in the building sector is supported.

Article 18: Information and training

The roll-out of smart decentralised assets may sometimes prove difficult due to a lack of skills and training or a multiplication of actors needed. For example, a smart thermostat can require up to three technicians: a heating engineer, an electrician and an IT specialist which can greatly increase the costs and limit access to these innovative technologies for consumers. Embedded trainings and schemes for digital smart technicians would therefore be key to properly deploy the required flexible technologies.

- **SUPPORT** §3 and §4 from the European Parliament that certification schemes or equivalent national qualification schemes are available for installers and designers of all forms of renewable heating and cooling systems in buildings, industry and agriculture, and for installers of other renewable energy technologies, storage and demand-response technologies, including charging stations.'

Article 19: Guarantees of Origin (GOs)

24/7 GOs are key in certifying the renewable energy being produced and shared in the energy system. However, the current system does not give an accurate signal to consumers who lack visibility on the source of their energy when they are actually consuming it. Hence, GOs should have a more granular timeframe where consumers would be able to match in close to real-time their electricity consumption with the renewable electricity being produced. This would provide the necessary signal for consumers to activate their demand-side flexibility to ensure that variable RES-electricity is consumed when available, in a flexible way.

- **SUPPORT** in §2 from the European Parliament the opening of GOs to smaller producers of renewable energy, with simplified registration process and the possibility to pool small installations together.
- **SUPPORT** in §2 from the European Parliament the possibility to issue fractions of GOs of 1 MWh standardised size.
- **IMPROVE** §7(a) of the European Parliament which refines the time granularity of GOs, with the objective of achieving one hour by explicitly allowing supply of renewable electricity to be matched with flexible demand.
- **IMPROVE** in general the facilitation of GOs transfer between different registries across the EU: removing barriers to GOs exchangeability and promoting harmonisation across EU.

Article 20: Access to and operation of the grid

Demand-side flexibility technologies should be promoted and enabled to support the efficient operation of the energy system.

- **SUPPORT** §3 from the European Parliament that includes demand response systems as part of the technologies to be combined with the development of district heating and cooling
- **SUPPORT** §3a from the European Parliament that supports the integration of variable renewable electricity into the grid while ensuring its stability but **IMPROVE** it by integrating in the legal provision the wording from the related recital (14a) that specifies that solutions are to be found in storage or demand-side management.

Article 20a: Facilitating system integration of renewable electricity

To achieve cost-effectively the necessary decarbonisation of the energy system, all end-use sectors need to consume clean energy in a flexible way. For this to happen, incentives need to be set from different angles.

Data sharing is central to ensure that consumers – either directly or through aggregators - are empowered to make informed choices. It should include access to interoperable data from system operators on the carbon content and renewable share of the electricity going through their grid, as well as to data relevant for flexibility purposes generated by smart devices.

- **SUPPORT** the Commission's proposal on §1 requiring both TSO and DSO to make available information on the share of renewable electricity and the greenhouse gas emissions content of electricity and **SUPPORT** §1 from the Council specifying that this information shall be made available in time intervals equal to the market settlement frequency but of no more than one hour.
- **OPPOSE** §1 from the Council which limit the access to DSO data to 'when appropriate' without clarifying what it entails, how and by whom it should be determined. This creates a risk of unnecessary limitation and it should at least be **IMPROVED** by indicating 'if technically available' complemented by the obligation for Member States to ensure that DSO have access to the needed data that they will have to share as suggested in §1 from the European Parliament.
- **SUPPORT** §1 from the European Parliament which requires DSOs, if technically available, to share anonymised and aggregated data on demand response potential, renewable energy coming from energy communities and self-consumption

- **SUPPORT** §1a from the European Parliament which requires the data to be made interoperable based on harmonised data formats and standardised data sets
- **SUPPORT** §2 from the European Parliament which ensures access battery and vehicle-related data as 'read-only'.
- **SUPPORT** §2 from the European Parliament which extends the requirement to share with consumers and third parties acting on their behalf data from batteries and EVs also to manufacturers of smart devices relevant for demand-response but **IMPROVE** by clarifying that such data access is 'read-only'.

Non-publicly accessible normal power recharging points should support smart charging functionalities – complementing the AFIR's focus on publicly accessible chargers - and allow for the support to bidirectional functionalities when contributing to system efficiency.

- **SUPPORT** §3 from the Council which supports the mandate of smart charging for new and replaced non-publicly accessible charging points, and links the deployment of bidirectional charging mandate to article 14 (3) and (4) of AFIR which requires a detailed assessment of bidirectional charging and its contribution to the system provided that all relevant stakeholders are involved in the process.

Barriers to the participation of decentralised energy resources to electricity markets shall be removed, including for small-scale smart resources, to contribute to the flexibility of the system.

- **SUPPORT** §4 from the European Parliament which ensures that the national regulatory frameworks support the participation of all decentralised energy resources connected to the system and providing flexibility, notably the ones below 1MW. This is a more inclusive formulation compared to the Commission's proposal which was limited to EVs and batteries, e.g. residential buildings and small commercial buildings can also provide flexibility services. Along this line, **IMPROVE** §4 from the Council which specifies that EVs and batteries should be supported in participating in the electricity markets notably for the provision of flexibility and balancing services, by ensuring the participation of all decentralised energy resources **both** directly and through aggregation.

Article 22a: Mainstreaming renewable energy in industry

As of now, the industrial sector is the most important contributor of demand-side flexibility. Already for 2023, it has been calculated that industrial curtailment would lead to a reduction of 6,9 GW, representing 28,3 TWh of gas reduction.⁷

Still, many industries rely on fossil fuels while they could be electrified. RED thus should incentivise electrification in this sector when it constitutes a cost-effective option. By activating their flexibility in reaction to price signals or providing it on electricity markets, industries would lower their energy costs, particularly during peak times.

- **SUPPORT** §1 from the European Parliament which ensures that renewable-based electrification is prioritized when more cost-effective, in line with the EE1st principle and **SUPPORT** Council recital 21 to prioritise electrification for instance for low temperature industrial heat.
- **SUPPORT** §1. from the European Parliament which requires Member States to establish a regulatory framework with the possibility to include support measures for industry in accordance with Article 3(4a) The link with article 3(4a) ensures that their flexible consumption, trade and storage of renewable electricity is supported.

Article 23: Mainstreaming renewable energy in heating and cooling

A smart and electrified heating sector can improve system efficiency while benefitting consumers once its significant demand-side flexibility potential is activated. This article should therefore support the flexible and clean electrification of heating and cooling systems.

⁷ [DNV study – DSF potential contribution to 2023 and 2025 gas reduction](#)

- **SUPPORT** §1 from the Council that counts renewable electricity driving heat pumps to be counted towards the achievement of the heating & cooling target thus creating an incentive towards direct and renewable-based electrification of heating and cooling.
- **IMPROVE** this article by seeking consistency with the Parliament's approach of article 22a to include support measures in accordance with article 3(4a) in order to ensure that the flexible consumption, trade and storage of renewable electricity in the heating and cooling sector is supported.

Article 24: District heating and cooling

District H&C systems should be properly incentivised to participate to system integration and provide flexibility to the system. Hence, the demand-side flexibility potential of DHC should be valorised.

- **SUPPORT** recital (26a) from the Council which stresses the role of district H&C systems to balance the grid. Hence, **SUPPORT** §4 which allows Member States to count renewable electricity used for district H&C by means of heat pumps in the sectorial target therefore supporting the electrification of district H&C systems.
- **SUPPORT** §8 from the Commission proposal to assess the potential of DHC to provide flexibility services and to require TSO and DSO to take into account these results in their network investment plan and investment. **IMPROVE** it by aligning the periodicity of assessment with article 32 of the Electricity Directive on Distribution network development plans (at least every 2 years).
- **SUPPORT** §8 from the European Parliament that specifies that flexibility services provided by DHC can participate in electricity markets on a non-discriminatory basis.

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

Credit schemes for supplying renewable energy to the transport sector are a useful tool for the transformation of the transport sector. They should be provided to operators of both private and public charging infrastructure to support electromobility and additional revenue stream for all e-mobility service providers while guaranteeing a level playing field for all charging solutions.

SUPPORT §2 from the European Parliament to extend the scope of the credit mechanism to enable private charging stations to receive such credits when supplying renewable electricity to EVs including light and heavy-duty vehicles

ENERGY EFFICIENCY DIRECTIVE

Article 2: Definitions

The introduction of a system efficiency definition by the Parliament is an encouraging step towards the application of the Energy Efficiency First principle at system level. However, the definition proposed by the European Parliament does not recognise the contribution of system-integrated and active consumers in making the energy system more efficient.

- **IMPROVE** the definition of ‘system efficiency’ introduced by the European Parliament with the following wording (to be aligned with the Renewable Energy Directive)⁸:

“Energy System Efficiency” means an energy system that relies on efficient and flexible consumers that maximise the use of clean, available digital and decentralised energy resources to achieve climate neutrality in the most secure and cost-effective way. Improvements in decarbonisation, affordability and resilience shall be used as metrics to measure progress toward energy system efficiency”

Article 3: Energy Efficiency Principle

The implementation of the Energy Efficiency First Principle is key to guide energy investment and planning decisions to avoid stranded assets and aim for system efficiency. Among efficient solutions, demand-side flexibility should be contemplated as it provides benefits for the entire energy system, as clarified in the Commission recommendations for implementing the Energy Efficiency First principle⁹.

- **SUPPORT** §1 from the European Parliament that clearly include demand-side flexibility as part of the energy efficient solutions in conformity with the EE1st principle
- **IMPROVE** §1 from the European Parliament that keeps the application of the EE1st principle to major investment decisions, thus creating a barrier for small-scale assets and decentralised energy resources to be considered. In this line, inspiration should be taken from the good recital (13a) which states that the principle should be applied at lower level, including at asset level.
- **OPPOSE** §1 from the Council which considerably waters down the significance of the EE1st application with higher thresholds for investment decisions
- **SUPPORT** §1(b) from the European Parliament which clarifies that the principle should be applied to non-energy sectors such as buildings, transport or ICT
- **OPPOSE** §2 from the Council that reduces the verification of the application of the principle to an assessment done every two years and not at the approval stage of an investment and planning decision
- **SUPPORT** §2a from the European Parliament which requires Member States to take into account the Commission’s guidelines (EU) 2021/1749 on the EE1st principle
- **SUPPORT** §3(c) from the European Parliament which requires Member States to include in their National Energy and Climate Plans a list of actions to remove regulatory and non regulatory barriers to the EE1st Principle and to demand-side solutions.

Article 4: Energy Efficiency targets

- **OPPOSE** §2 from the Council which only considers final energy use, eliminating the incentive to switch to more energy efficient energy sources while weakening a system efficiency perspective.

Article 8: Energy Savings Obligations and article 9: Energy Efficiency Obligation Schemes

These two articles are key to mandate energy savings at national level. To achieve such target, dynamic energy savings resulting from the activation of consumers’ flexibility should be accounted for. In fact, energy savings can result from both reductions in consumption due to energy efficiency measures and time-dependent adjustments

⁸ For more information on the need to define energy system efficiency and how to track progress towards a more efficient system, please see smartEn paper [‘Energy System Efficiency: How to maximise the contribution of consumers to cost-effectively accelerate the clean energy transition’](#).

⁹ <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32021H1749&from=EN>

in consumption in reaction to external signals. For example, the temperature in a building could vary between 21 and 19 degrees without negatively impacting the comfort and well-being of occupants, but (automatically) turning on and off the HVAC system in reaction to external signals would save both energy and costs (without necessarily a rebound effect). This flexible adaptation in consumption could be based on price signals or incentives, including when more renewable energy is available in the system – hence reducing also the carbon footprint of end-use sectors.

- **OPPOSE** art. 8 §1 from the Council which reduce the ambition of the energy savings obligation by only gradually phasing in the increase of the annual final energy consumption objective.
- **IMPROVE** art 9 by expanding the scope of the Energy Savings Obligations Schemes beyond savings resulting from static energy efficiency measures to include and account for dynamic savings achieved thanks to demand-side flexibility. This should build on recital (54) from the European Parliament which indicates that Member States and obligated parties should be able to achieve energy savings by promoting smart technologies, smart buildings, EVs, industries or Energy Management System. This article should also build on the good recital 100 of the Commission’s proposal which ensures that System Operators apply the Energy efficiency first principle by valorising non-wire alternatives such as demand-side solutions.
- **SUPPORT** art. 9 §2 from the European Parliament which includes DSOs as part of the obligated parties, but **CLARIFY** the duplication between DSO and energy distributors

Article 11: Energy Management Systems and energy audits

Energy Management Systems (EMS) are crucial in empowering end-users to monitor their energy use and unleash their demand-side flexibility. EMS are the intelligent heart of a building, enabling to have a holistic overview and management of the energy use from different behind the meter assets. Such technologies are particularly relevant for large non-residential buildings which consume significant amount of energy. To be able to activate demand-side flexibility from different behind-the-meter assets, EMS should be interoperable with the grid, meaning capable to react to external signals.

- **CLARIFY** in §1 that EMS shall be interoperable with the grid, supported by an **IMPROVED** definition of ‘Energy Management System’ to ensure the achievement of dynamic energy efficiency improvements in response to the needs of the energy system.
- **OPPOSE** §1(a) from the European Parliament which postpones to 2024 the obligation for Member States to implement an Energy Management System for enterprises with an annual energy consumption higher than 100TJ thus reducing the level of ambition for the activation of demand-side flexibility from these enterprises but **SUPPORT** §1(b) from the European Parliament which sets a new target for companies with an energy consumption of >70 TJ to implement one from 2027

Article 11a (NEW): Data centres

Data centres are energy intensive industries that can play an active part in the clean energy transition by unleashing their demand-side flexibility and/or becoming prosumers. The theoretical potential for demand response from data centres in Europe could constitute 40 to 80% of the installed power by 2030, as showed in a [smartEn report](#) published in 2021.

- **SUPPORT** the introduction by the European Parliament of this new article which focuses on the energy performance of data centres.
- **SUPPORT** §3 from the European Parliament which requires the Commission to adopt guidelines on the monitoring and the publication of the energy performance of data centres to guide Member States in collecting data on data centres’ energy performance.
- **SUPPORT** the related recital (66) which specifies that this guideline should involve all relevant stakeholders in defining the relevant metrics and stresses the need for Member States to collect data relevant for the demand-side flexibility of data centres. This has the potential to promote business model for data centres supporting their participation in the energy system through the provisions of

flexibility services as well as the operation of System Operators as they would know the flexible capacity they could procure from data centres.

Article 23: Heating & Cooling Assessment and Planning

A smart and electrified heating sector can improve system efficiency while benefitting consumers once its demand-side flexibility potential is activated. For instance, households can save up to 25% of their heating costs between 2025 and 2040 thanks to smart heating capable to interact with the energy system.¹⁰

- **SUPPORT** §2 from the Council which ensures the participation of relevant stakeholders in the preparation of the H&C plans as this is an opportunity to contemplate and valorise the DSF potential of H&C.
- **SUPPORT** §3 from the European Parliament which requires Member States to take into account system efficiency, power system adequacy and resiliency, and the energy efficiency first principle in their Cost-Benefit Analysis for the H&C assessment required as part of their national energy and climate plans

Article 25: Energy transformation, transmission & distribution

This article must ensure that demand-side flexibility solutions are considered as viable alternative to improve the operation of their networks on all voltage levels in line with recital 100 introduced in the Commission's proposal. It means that demand-side solutions, on top of being clearly recognised as part of the EE1st principle, should be duly considered in the System Operators' assessment. In the same line, incentives detrimental to demand response should be removed.

- **SUPPORT** §2 from the European Parliament which explicitly recognises demand-side flexibility as a central part of the assessment of network planning and operation to be conducted by System Operators.
- **SUPPORT** §2 from the Council which links the application of the EE1st principle to the network development plans, which needs to take into account of the procurement of flexibility as an alternative to grid expansion. But **OPPOSE** the part of the paragraph which reiterates that the EE1st principle needs to apply to **major** investment decisions for network planning and development.
- **SUPPORT** §2 from the Commission stressing that system operators should not invest in stranded assets and as a bare minimum ensure that investments are geared towards future-proof assets as proposed by the European Parliament.
- **SUPPORT** §2 from the Commission requiring NRA to provide methodologies and guidance on how to assess alternatives in the CBA conducted by system operators and **OPPOSE** §2 from the Council where such methodologies are directly drawn by system operators.
- **SUPPORT** §3 from the Council and the European Parliament to encourage system operators to optimise their networks and to develop innovative solutions to improve the efficiency of both their existing and **future** systems as specified by the European Parliament.
- **SUPPORT** §3 from the European Parliament, to encourage the deployment of smart grids
- **SUPPORT** §4 from the European Parliament which requires NRA to include recommendations to system operators to implement cost-effective alternatives to reduce peak load. This provides an additional incentive for the procurement of flexibility services by system operators.
- **SUPPORT** §7 from the European Parliament that mandates National Regulatory Authorities to remove incentives that are detrimental to demand response, and **SUPPORT** the requirement for Member States to ensure that tariffs allow consumer participation to support system efficiency. This will support the uptake of dynamic network tariff.

¹⁰ BEUC study, [‘Goodbye gas: why your next boiler should be a heat pump’](#), 2021

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:



The positions expressed in this document represent the views of smartEn as an association, but not necessarily the opinion of each specific smartEn member.

For further information about smartEn, please visit www.smarten.eu