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REPORT

CEER Handbook for National Energy Regulators

How to assess retail market functioning

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Handbook for National Energy Regulators

How to Assess Retail Market Functioning

Customer and Retail Markets Working Group

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Information page

Abstract

The first "CEER Handbook for National Energy Regulators – How to assess retail market functioning", published in 2017 (C16-SC-52-03), was developed as a practical guide for NRAs in the process of evaluating the performance of their national retail energy markets. By providing a clear description and purpose of each metric as well as information on how to quantify the metric and the source of data, the handbook has facilitated NRAs' assessment of their retail energy markets.

CEER acknowledges the fact that the Handbook for National Energy Regulators and its metrics are dynamic by nature since markets and legislation evolve, as do national circumstances. CEER will look into reviewing the metrics periodically and proposing updates or changes to definitions when necessary.

This document (C25-RMR-173-05) presents a first Review of the metrics in CEER's 2017 Handbook for National Energy Regulators in the light of the implementation of the Clean Energy for All Europeans Package (CEP), the Electricity Market Reform (EMD) and the Gas Decarbonisation Package. In particular, in the present document CEER has adjusted and complemented the metrics that constitute the Handbook taking into consideration the latest European energy legislation related to retail markets and consumer protection.

The present CEER Handbook is meant to be a comprehensive monitoring guidance for NRAs to consider when assessing and developing their own national retail energy markets. The metrics describe how NRAs can self-assess the functioning of their national retail energy markets.

With this Public Consultation document, CEER is looking for feedback on the proposed key properties and metrics to strengthen the completeness of the Handbook. The questions are focused on relevance, sufficiency, and clarity of the key properties and metrics.

Target audience

European Commission, energy suppliers, traders, gas/electricity customers, gas/electricity industry, consumer representative groups, network operators, Member States, academics and other interested parties.

Keywords

Third Energy Package, EMD, consumer rights, consumer protection & empowerment, reliability, simplicity, supplier switching, vulnerable consumers, CEP, CEER-BEUC 2030 Vision, consumer surveys, Gas decarbonisation package

Related documents

CEER Documents

- CEER Report “Use of prudential regulation mechanisms to promote effective supplier risk management in the energy sector”, 12 November 2024, Ref: C24-MRM-171-03
- CEER Guidelines of Good Practice for Trustworthy Information on Green Offers and Consumer Protection Against Misleading Marketing (“Greenwashing”), 6 September 2023, Ref: C23-CEM-153-01
- CEER Guidelines of Good Practice on Future-proof Comparison Tools in the Energy Sector, 04 August 2022, Ref: C22-CEM-147-03
- CEER-BEUC 2030 Vision for Energy Customers – October 2020
- ACER/CEER Market Monitoring Reports
- CEER Discussion Paper on scoping of flexible response, 3 May 2016, Ref. C16-FTF-08-04
- CEER Benchmarking report on removing barriers to entry for energy suppliers in EU retail energy markets, 1 April 2016, Ref. C15-RMF-70-03
- CEER Position Paper on well-functioning retail energy markets, 16 October 2015, Ref. C15-SC-36-03
- CEER Advice on Customer Data Management for Better Retail Market Functioning, 19 March 2015, Ref. C14-RMF-68-03
- Public Consultation on comparison tools, 8 November 2016, Ref. C16-CEM-95-03
- CEER Position paper on Renewable Energy Self-Generation, Ref. C16-SDE-55-03
- Energy Regulation: A Bridge to 2025, Conclusions Paper – September 2014
- 2020 Vision for Europe’s Energy Customers – November 2012
- CEER Review of Current and Future Data Management Models (C16-RMF-89-03)

NRA Self-Assessments

- CEER Roadmap to 2025 Well-Functioning Retail Energy Markets: 2022 Self-Assessment Status Report, 30 August 2023, Reference: C22-RMR-26-04
- CEER Roadmap to 2025 Well-Functioning Retail Energy Markets 2020 Self-Assessment Status Report, 23 February 2022, Reference: C21-RMR-26-04-01
- CEER Roadmap to 2025 Well-Functioning Retail Energy Markets 2018 Self-Assessment Status Report, 30 October 2019, Ref: C18-RMR-01-03

External Documents

- Commission Notice on the definition of relevant market for the purposes of Community competition law (C/2024/1645)
- Guidelines on the assessment of horizontal mergers under the Council Regulation on the control of concentrations between undertakings (2004/C 31/03)
- Directive (EU) 2024/1711 of the European Parliament and of the Council of 13 June 2024 amending Directives (EU) 2018/2001 and (EU) 2019/944 as regards improving the Union’s electricity market design (Text with EEA relevance)
- Directive (EU) 2019/944 of the European Parliament and of the Council of 5 June 2019 on common rules for the internal market for electricity and amending Directive 2012/27/EU (recast) (Text with EEA relevance)

- Directive (EU) 2024/1788 of the European Parliament and of the Council of 13 June 2024 on common rules for the internal markets for renewable gas, natural gas and hydrogen, amending Directive (EU) 2023/1791 and repealing Directive 2009/73/EC (recast) (Text with EEA relevance)
- Directive (EU) 2019/692 of the European Parliament and of the Council of 17 April 2019 amending Directive 2009/73/EC concerning common rules for the internal market in natural gas (Text with EEA relevance.)

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1 Introduction

The CEER Handbook on assessing the functioning of retail markets is the culmination of energy regulators' collective thinking on delivering for energy consumers, within the context of European energy market liberalisation and decarbonisation. CEER has long placed energy consumers at the centre of its policy considerations. CEER's 2020 Vision for the European Union's consumers[1] defined in detail the approach of placing customers first: by providing a reliable supply at an affordable price, through simple to use services and in a way that protects consumer interests and empowers them to participate in the market. The CEER-BEUC 2030 Vision for Energy Consumers deepens this reflection[2].

In 2015, CEER published its Position Paper on well-functioning retail markets[3] which outlined the key characteristics of well-functioning retail energy markets. The Position Paper builds on the Bridge to 2025[4] and the CEER- BEUC 2020 Vision. In addition, the paper addressed and complemented the issues raised by the European Commission's Retail Communication "Delivering a New Deal for Energy Consumers"[5].

In 2016, European energy regulators undertook to develop a forward-looking framework for evaluating the performance of retail energy markets and to prepare a roadmap to 2025 well- functioning retail markets. The development of this roadmap aimed at competitive, reliable and innovative retail markets as part of our pledge to realise the 2020 Vision, a commitment also expressed in ACER's Bridge to 2025.

We thus sought to establish common criteria to assess the functioning of our retail energy markets as a first step in developing a roadmap for securing competitive, reliable, and innovative retail energy markets to the benefit of consumers by 2025. The Position Paper introduced a framework to evaluate the functioning of a retail energy market, whilst taking into account the current stage of market development.

In 2017, CEER published its Handbook[6], comprising the metrics introduced by the Position Paper and their respective definitions. The handbook was accompanied by pilot evaluations[7] performed by several NRAs, as an example of how to use the metrics. Between 2019 and 2023, CEER published further examples on how to use the Handbook in the Self-Assessment Status Reports[8].

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[1] https://www.ceer.eu/publication/a-2020-vision-for-europes-energy-customers/

[2] https://www.ceer.eu/wp-content/uploads/2024/04/CEER_BEUC_2030_VisionForEnergyConsumers_LetsASPIRE.pdf

[3] https://www.ceer.eu/publication/ceer-position-paper-on-well-functioning-retail-energy-markets/

[4] https://extranet.acer.europa.eu/Events/Presentation-of-ACERs-Conclusions-Paper-Energy-Regulation-A-Bridge- to-2025/default.aspx

[5] https://eur-lex.europa.eu/legal-content/en/TXT/?uri=CELEX%3A52015DC0339

[6] https://www.ceer.eu/wp-content/uploads/2024/04/CEER-2017-Handbook-for-National-Energy-Regulators-How- to-assess-retail-market-functioning.pdf

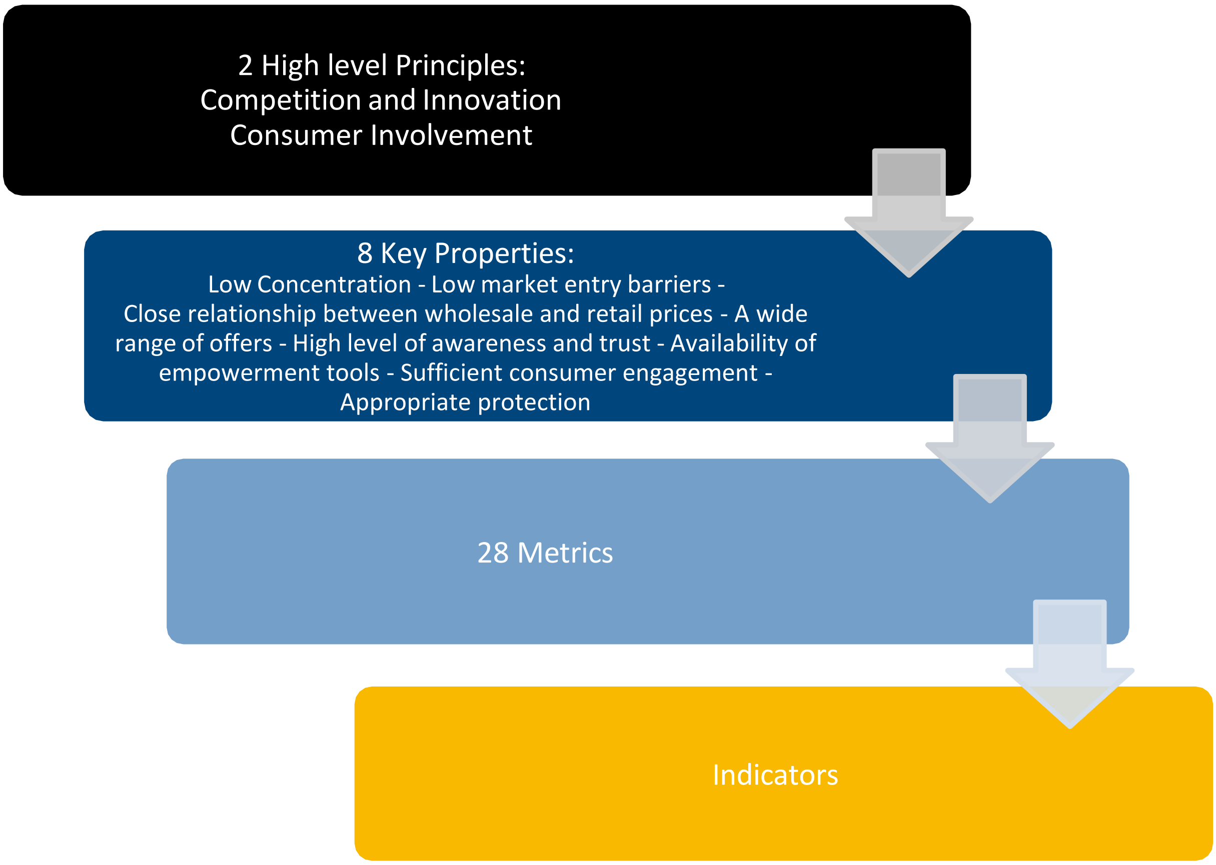
[7] https://www.ceer.eu/wp-content/uploads/2024/04/C16-SC-52-04-All-Pilots_final.pdf

[8] https://www.ceer.eu/publication/roadmap-to-2025-well-functioning-retail-energy-markets/

The present document is a first revision of the CEER Handbook that intends to update the metrics in line with the European legislation on energy retail markets that has entered into force in the period 2017-2024. The structure of the revised Handbook matches the outline of the Position Paper. In addition to the triple-layered framework (high level principles, key-properties and metrics), it adds quantification indicators to better define the underlying metrics.

The present CEER Handbook is meant to provide comprehensive monitoring guidance for NRAs to consider when assessing and developing their own national retail energy markets. The metrics describe how NRAs can self-assess the functioning of their national retail energy markets. The rationale behind the chosen metrics is been discussed in the Position Paper.

Figure 1: High level Principles, Key Properties, Metrics and Indicators



In scope of this Handbook are metrics on how to assess provisions in the electricity and gas European legislation related to consumer protection[9].

[9] Annexes 4-6 summarise the provisions of consumer protection from the electricity and gas European legislation.

1.1 By whom and how should this handbook be used?

The main objective of this handbook is to offer clarity and further explanation of the metrics that NRAs can use to self-assess the functioning of their national retail energy markets. The definitions of the metrics are therefore practical in nature and offer a certain degree of flexibility. Each definition contains a methodology to guide NRAs through the process and, where possible, a step-by-step approach is included. By following this approach, NRAs should be able to assess each metric and adapt it to make it more relevant in its national context.

It should be noted that CEER did not pursue an academic approach when defining the metrics. The definitions are harmonised and workable definitions. The feasibility to use them in practice was highly sought after. Where relevant, we used, and built upon, existing definitions. The definitions of the metrics concerning consumer protection and empowerment are, where applicable, directly linked to the monitoring of the implementation of consumer rights.

Finally, when assessing the retail energy market, the metrics should not be considered individually, but rather in conjunction with each other, while also taking into account the specificities of every Member State (MS) and the development of the retail market. While the outcome of the metrics may pinpoint to a particular problem in the market, further research into the issue may be necessary to fully understand the situation.

1.2 How the Handbook has been used so far?

On a voluntary basis, NRAs have performed self-assessments of their energy retail markets and provided pilots on how at national level they quantify and analyse specific metrics. The self-assessment reports are available on CEER website[10].

1.3 Structure of the Metrics

When defining the metrics, we used a template containing three elements: description, purpose, and quantification indicators.

The **description** explains what the metric is about. Often, a given metric is related to a provision or a set of provisions in European legislation protecting energy consumers and the functioning of energy retail markets. In addition, in order to assess the functioning of retail energy markets, NRAs are encouraged to seek the opinion of energy consumers, by checking what consumers think of the national retail energy market. For this reason, although the launch of consumer surveys may not necessarily be provided for explicitly as an NRA task in legislation, some metrics of the Handbook relate to possible consumer surveys that NRAs could conduct in order to gather feedback from consumers.

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[10] https://www.ceer.eu/publication/roadmap-to-2025-well-functioning-retail-energy-markets/

The **purpose** describes how an NRA should use the metric and recommends a methodology to build it.

The **indicators** provide instructions on how to calculate the metric with the prescribed unit of measure.

The first handbook published in 2017 provided the source of data, the frequency, the unit of measure and the data completeness as additional separate elements of the metric template. However, these four elements have been removed in the present revision of the metric template as the source of data usually comes from the NRA's own statistical data gathering from regulated distribution or transport system operators and from energy suppliers and other energy entities, such as aggregators, energy communities and energy sharing groups established in the Member State.

Generally, monitoring frequency should be at least annual, as NRAs prepare an annual report on the performance of their national energy markets for the European Commission, which are also published on the CEER website[11]. Only metrics whose data may come from consumer surveys could be assessed with a different frequency; we suggest every three to five years.

Where the source of data comes from consumer surveys, NRAs may either conduct energy consumer surveys or access energy consumer survey data from other existing national authorities or other databases, such as the Ombudsman, Consumer organisations, ADR (Alternative Dispute Resolution) bodies. The unit of measure is specified directly in the quantification indicators.

Finally, data completeness should be less of an issue then back in 2017 as the energy system is getting smarter and more digitally driven.

1.4 Relevant Market

Retail markets for energy differ significantly between MSs. Each MS has its own local/national circumstances that have to be taken into consideration when assessing the functioning of energy retail markets. It is the NRA's responsibility to evaluate and define the relevant market for each metric. Regional initiatives are welcomed. The definition of a relevant market in this handbook is derived from the concept in competition law. The European Commission has provided a definition in a Commission Notice on the definition of relevant market (97/C 372/03).

A relevant market could be defined either by geographical properties (e.g. DSO areas or national borders) and/or by product or consumer categories (e.g. household consumers, small business), as well as markets with/without smart meters. In the definition of the first metric on calculating the Herfindahl-Hirschman Index (HHI), we offer a step-by-step approach to define the relevant market, based on the Commission Notice and the common approach by national competition authorities.

[11] Market Monitoring & National Reports: https://www.ceer.eu/publications/market-monitoring-report/

1.5 New Energy Market Design and Gas Decarbonisation Package

The present revision of the CEER Handbook follows a thorough examination of the implications of the new provisions on retail energy markets and especially energy consumer protection that have come into force in European legislation since the first CEER Handbook was published in 2017. This revision undertakes an update of the 25 metrics, accordingly, now 28 metrics in the Revised Handbook.

The focus of the present Handbook is on provisions in European legislation related to the protection of energy consumers and the well-functioning of energy retail markets. Therefore, European energy legislation within the scope of the present Handbook includes:

Electricity:

- Directive (EU) 2024/1711 of the European Parliament and of the Council of 13 June 2024 amending Directives (EU) 2018/2001 and (EU) 2019/944 as regards improving the Union's electricity market design (Text with EEA relevance) => EMD [Electricity Market Design]
- Directive (EU) 2019/944 of the European Parliament and of the Council of 5 June 2019 on common rules for the internal market for electricity and amending Directive 2012/27/EU (recast) (Text with EEA relevance.) => CEP [Clean Energy for All Europeans Package]

Gas:

- Directive (EU) 2024/1788 of the European Parliament and of the Council of 13 June 2024 on common rules for the internal markets for renewable gas, natural gas and hydrogen, amending Directive (EU) 2023/1791 and repealing Directive 2009/73/EC (recast) (Text with EEA relevance)
- Directive (EU) 2019/692 of the European Parliament and of the Council of 17 April 2019 amending Directive 2009/73/EC concerning common rules for the internal market in natural gas (Text with EEA relevance.)

1.6 Public consultation of External Stakeholders

A Public Consultation[1] on the Revised Handbook took place from 2 April to 7 May 2025 , during which CEER gathered feedback on the proposed key properties and metrics to strengthen the completeness of the Handbook. The Public Consultation questions were focused on relevance, sufficiency, and clarity of the key properties and metrics. The present version of the Revised Handbook takes into account relevant suggestions received by the respondents of the public consultation.

[1] https://www.ceer.eu/news/ceer-launches-public-consultation-on-the-handbook-for-national-energy-regulators-on-retail-markets/

2 Application of the Handbook

NRAs are invited to use this handbook to self-assess their national retail energy market. The self-assessments may have a regional focus to examine the scope of the potential for retail market integration at regional level (e.g. NordREG). To fully grasp the development of the market over time we advise to repeat the assessment within a reasonable timeframe. Such assessment can be an integral part of the NRAs' national reporting conducted on an annual basis[12]. NRAs themselves are best equipped to evaluate the most appropriate timeframe for re-evaluating specific metrics.

CEER acknowledges the fact that the handbook and its metrics are dynamic by nature. Legislation evolves, as well as national circumstances. This means that CEER will have to review the metrics periodically and update or change metrics and/or definitions when necessary.

3 Harmonised Definitions of Metrics

As outlined above, for each of the 8 key properties for well-functioning retail markets, CEER has identified a number of key metrics to analyse the state of play. To assist in this assessment, the Handbook also identifies specific quantification indicators for applying these metrics. Table 1 below provides an overview of the overall system.

Table 1: Overview of CEER Handbook for assessing retail energy market functioning

Key Property	Metric
I: Low Concentration within a relevant market	M1: Herfindahl-Hirschman Index (HHI), concentration ratio (CR) and number of active suppliers
II: Low market entry barriers	M2: Regulatory and legal requirements for market access
	M3:Time needed and cost of accessing well-functioning wholesale markets and licencing/balancing regimes
	M4: Types of DSOs in the market and their role
	M5: Percentage of consumers with public intervention in price setting
	M6: Number of common standards for consumer data & for DSO-supplier contracts or the existence of a national data hub
	M7: Availability of smart metering
III: Close relationship between wholesale markets and retail prices	M8: Correlation between wholesale and retail energy prices
	M9: Mark-up between wholesale and retail energy prices
IV: A range of offers, including demand response	M10: Availability of a variety of products, pricing and billing options
	M11: Availability of value-added services for implicit demand response and self-generation
	M12: Availability of information on the origin of the energy supplied and NRA role in fuel mix disclosure

12 https://www.ceer.eu/national-report/national-reports-2024/

	M13: Availability of explicit demand response offers
V: High level of awareness and trust	M14: Percentage of consumers knowing they can switch supplier
	M15: Percentage of consumers who know that DSOs are responsible for continuity of supply and metering
	M16: Percentage of consumers trusting the energy market
VI: Availability of empowerment tools	M17: Percentage of consumers having access to at least one independent and verified comparison tool and to online customer services
	M18: Percentage of consumers having access to online historical consumption information
	M19: Percentage of consumers having access to a standardised supplier switching process (and its duration)
VII: Sufficient consumer engagement	M20: Supplier switching rate and percentage of inactive consumers
	M21: Percentage of prosumers, energy communities and sharing groups
VIII: Appropriate protection	M22: Time between notification to pay and disconnection for non-payment and percentage of disconnections due to non-payment
	M23: Minimum standards for key information in advertising and bills
	M24: Protection of energy poor and vulnerable customers
	M25: Alternative dispute resolution, complaint handling and NRA role in protection of energy consumer rights
	M26: Supplier of last resort
	M27: Market resilience and supplier stability
	M28: Cybersecurity and data protection

Key property I: Low Concentration within a relevant market

Market concentration is commonly used as a proxy or indicator of market power. With low market concentration, the ability of any market player to exploit market power to the detriment of consumers is reduced. Consumers benefit from more intense competition when they can obtain in the market lower prices, more innovation and improved customer service.

Metric 1: Herfindahl-Hirschman Index (HHI), concentration ratio (CR) and number of active suppliers

Metric 1	**Herfindahl-Hirschman Index and concentration ratio (CR) and number of active suppliers in the market**
Description	Market concentration can be measured in different ways, i.e., by using different indicators. The most commonly used are Herfindahl-Hirschman Index (HHI), the concentration ratio (CR) and the number of suppliers. The first two indicators are based on market shares. The HHI is a market share measure that assigns weight to all suppliers in the market although it gives more weight to suppliers that have high market shares. The CR indicates whether an industry is comprised of a limited number of large suppliers or many small suppliers. The third measure treats all suppliers as if they were the same size – it is a simple sum of all suppliers in the market. The HHI is seen as a more comprehensive indicator because it considers all companies on the market and is the most widely used measure of market concentration. The CR and the number of active suppliers are also a widespread indicators of market concentration. Their popularity stems from their simplicity in terms of calculation as well as in terms of user friendliness.
Purpose	In general, a high number of suppliers and low market concentration are seen as one of the indicators of a competitive market structure. Based the European Commission's Guidelines on the assessment of horizontal mergers under the Council Regulation on the control of concentrations between undertakings (2004/C 31/03), a HHI level above 2000 signifies a highly concentrated market.
Indicators	To accurately evaluate the degree of concentration, the NRA could use the following step-by-step approach, which is in line with that used by the Directorate-General for Competition (DG COMP) and national competition authorities:

1. Define the relevant product markets (i.e. assess the degree of demand and supply substitution of different products):
   The retail supply of both gas and electricity can be divided into several categories of final customers, with different product preferences and needs: (i) households, (ii) small industrial and commercial customers (SMEs), (iii) large industrial customers and (iv) very large/energy intensive customers. We advise to, as a minimum, distinguish between household and non-household customer segments and, preferably between households, SMEs and other customer segments. In some Member States, the supply of energy at regulated prices (or supply covered by a designated supplier of last resort) and the supply of energy at free prices (or the supply to customers with different metering arrangements e.g. prepayment meters, time of use and smart meters) can be considered as relevant product markets. The market for some categories of vulnerable household customers or the market for households on social tariffs can also be considered as relevant markets. For electricity, industrial/commercial customers are often connected to high and medium voltage grids. It may, however, be considered that supply to large industrial consumers forms part of the wholesale market, not retail market, depending on whether industrial consumers buy energy to consume or to resell. Households and smaller industrial/commercial customers are most often connected to the lower voltage grids.

   For gas, product markets can be defined on the basis of criteria such as the customers' volume of consumed gas, off-take patterns (e.g. usage of gas for electricity generation) or whether they are connected to the transmission network. Finally, the possibility of a combined retail gas and electricity market for domestic customers can be considered, as some suppliers offer a single contract covering both the supply of gas and electricity (dual fuel contract) to domestic customers.

2. Define the relevant geographic markets (i.e., identify the geographic boundaries of the area where suppliers compete against each other):
   The retail supply of electricity to large industrial and commercial customers can been considered to be national, provided that these markets are fully liberalised and if the conditions for competition are found to be uniform throughout the relevant territory. The retail supply of electricity to household and smaller industrial and commercial customers is generally national in scope. However, if, for example, many local energy companies (vertically-integrated DSO/supplier) exclusively serve their historical zones and no other suppliers are present, regional areas can be considered as relevant markets. For gas, retail supply markets are generally national in scope, but can also be local.

3. Calculate the HHI for every relevant market according to the

quantification as suggested below.

The resulting relevant markets should also be considered for the completion of the other metrics contained in this handbook.

The HHI is calculated as the sum of the squares of the market shares of all suppliers in the market. It ranges between 0, for an infinite number of small suppliers, and 10,000, for one supplier with a 100% market share. A HHI above 2000 signifies a highly concentrated market. HHI can be calculated for:

- Household segment based on metering points
- Non-household segment based on volume

The CR is calculated as the sum of the percentages of the market share of a number of the largest companies in the industry/market concerned:

- CR3 - market share of three largest companies in the market
- CR4 - market share of four largest companies in the market
- CR8 - market share of eight largest companies in the market

Both indicators, HHI and CR, are based on market shares that can be calculated on the basis of consumed volumes and number of customers or meter point.

The number of suppliers indicator is a simple sum of all active suppliers in the market (i.e., suppliers actively offering contracts to customers and having at least one customer; not suppliers that have a licence but are not yet operating in the market). Self-consumers should also be excluded.

In addition, NRAs should interpret the findings of the values of the above measures in the light of other indicators related to market power, such as:

- Identification of the 3 largest suppliers (names of the suppliers and their market shares):
  - in the entire retail market by volume
  - in the non-household segment by volume
  - in the household segment by metering points
- Number of suppliers in the household segment with market shares:
  - < 1% by metering point
  - between 1% and 5% by metering point
  - > 5% by metering points
- Number of suppliers in the non-household segment with market shares:
  - < 1% by volume
  - between 1% and 5% by volume
  - > 5% by volume

Key property II: Low market entry barriers

In order to achieve a well-functioning retail energy market, new suppliers must be able to enter the market and compete on a level playing field with existing suppliers. The threat of a new entry can create competitive pressures, forcing existing suppliers to adapt their strategies. New entrants can also bring in new and innovative ways of operating.

Therefore, in order to facilitate competition and innovation, barriers to market entry and growth for new market actors (i.e. suppliers and third parties) as well as barriers for innovation (including demand response) need to be as low as possible.

Metric 2: Regulatory and legal requirements for market access

Metric 2	**Regulatory and legal requirements for market access**
Description	Regulatory and legal barriers are barriers arising as the result of legal or regulatory requirements (or administrative practices) by NRA and government and/or other policy makers. They may result from regulation, involving for example special permits (license) to operate. Some measures may be created to protect public such as health and safety, environmental requirements but result in the creation of entry barrier. These barriers often stem from complex regulations, financial resilience requirements for suppliers, and a lack of tailored products and services. Regulatory barriers in retail energy markets can hinder competition, innovation, and consumer choice. Addressing these barriers is crucial for a more dynamic and competitive market, while also ensuring consumer protection.
Purpose	As potential new market entrants usually have initially small market shares and the potential return involves higher risks, high cost for compliance with regulatory requirements in the retail energy market could prevent market entries. Access to market data and information is of high importance for entering a new market. Especially for small suppliers, it is important that the required data be easily available and be inexpensive. Usually, the new entrants do not have required local market knowledge. Purchasing the data/information might put new entrants under financial pressure and is a disadvantage over already existing market players.

Indicators	• Time and cost to enter the retail market • Are there any remarkable entry costs which can prevent market entry? • What is the number of regulatory changes per year? • What is the average time to implement new obligations? • What is the average compliance cost for suppliers? • Licensing regime (in terms of timings, requirements) • Are there any problems associated with access to relevant data for new entrants? • Are there any regulations that restrict access to flexibility market? • Are there any problems associated with access to relevant information (e.g. offers and prices) for customers? • What are the costs and issues associated with exiting retail energy markets? • Are suppliers' minimum capital requirements extensive for new entrants? • Are the supplier risk management rules and hedging requirements (as defined in Metric Nr 27) appropriate in terms of the cost of entry for new suppliers? And are they perceived as barriers for existing suppliers?

Metric 3: Time needed and cost of accessing well-functioning wholesale markets and licencing/balancing regimes

Metric 3	**Time needed and cost of accessing well-functioning wholesale markets and licencing / balancing regimes**
Description	Fair access to energy procurement on the wholesale market and to licencing and balancing regimes is a key pre-requisite for any supplier considering entry into the retail market. A supplier is always responsible for acquiring contracts regarding energy procurement and balance responsibilities. This can be achieved in different ways. In this respect, the NRA should verify whether there are procedures for new suppliers to satisfy such responsibilities.
Purpose	To ensure a level playing field for market entry, and thus enable competition, a common denominator is needed for market rules, such as equal and non-discriminatory access for all suppliers within the relevant market. Firstly, the aim is to establish whether such procedures are available to all parties interested in becoming, or acting, as a supplier on the market. Secondly, to establish that such procedures, and in particular their length and costs, are equal and non-discriminatory for all suppliers on the market, or suppliers wanting to access the market.

Indicators	The metric focusses on the time and costs associated with administrative and financial rules to access wholesale markets and licensing/balancing regimes. It does not include IT investment and staff resource costs incurred by individual suppliers. Regarding the first issue, the main sources would include NRAs' knowledge of regulatory and legal entry processes, as well as the information made available by regulated companies and balancing and settlement agencies. For the second aspect, market participants may be best placed to offer (via surveys/discussions/questionnaires) a more qualitative assessment of balancing, licensing and other access costs, based on their actual experience of market entry. In order to quantify this metric, we suggest that the NRA addresses the following three sets of questions (distinguishing between national and regional levels): Wholesale energy procurement: • Are there procedures to access a national or regional wholesale market? • How long does it take to gain access to energy procurement in a national or regional wholesale market? • What is the cost of accessing national or regional wholesale market? • Are there illiquid wholesale markets that can prevent entry into retail energy markets? • Are there any problems associated with access to relevant wholesale market data for entrants, which can prevent market entry? Supplier and aggregator license: • Are market participants required to have a license/registration to act in a national or regional market? • Can a license/registration of a supplier be suspended/revoked? • Are hedging requirements in place for suppliers? [13] • Are other prudential regulation mechanisms in place other than supplier hedging requirements? • How long does it take to obtain a licence to act in a national or regional market? • What is the cost of acquiring a licence to act in a national or regional market? • Are there any other problems/difficulties for suppliers to access the wholesale market? Balancing responsibility: • Is it possible for market participants to become a balance responsible party (BRP) in a national or regional market? • How long does it take to become a BRP in a national or regional market?

	• What is the cost of obtaining balancing responsibility in a national or regional market (e.g. bank guarantees)? • Are there any other barriers to entry into retail energy market caused by balancing or required assets? Possible units of measure: Regarding the existence of the relevant procedures: Yes/No and qualitative explanation Regarding time: Number of months (legal requirements and/or as observed in practice if data is available) Regarding costs: Consider the levels applied in relation to the different types of procedures/licensing

[13] For the assessment of the supplier portfolios' risks and hedging requirements the reader is invited to read the CEER report "Use of prudential regulation mechanisms to promote effective supplier risk management in the energy sector", 12 November 2024, Ref: C24-MRM-171-03

Metric 4: Types of DSOs in the market and their role

Metric 4	Types of DSOs in the market and their role
Description	As energy networks are regulated monopolies, distribution system operators (DSOs) have exclusive access to all customers within their network area. Suppliers bundled with these DSOs have an indirect access to such information. Unbundling is the separation of energy supply and generation from the operation of transmission and distribution networks. If a single company operates a network and generates or sells energy at the same time, it may have an incentive to obstruct competitors' access to infrastructure. This prevents fair competition in the market and can lead to higher prices for consumers. The current market rules on unbundling were adopted as part of the Third Energy Package and were further enhanced by the CEP. The legislation requires legal, functional and accounting separation of DSOs and suppliers within a vertically integrated utility, although it also specifies exemptions for smaller DSOs. This metric focusses on the existence of bundled and exempted DSOs and their role as neutral market facilitator. Other aspects of the 3rd Package and CEP requirements for unbundling and other DSO roles are not included. More specifically, the unbundling requirements include: • Legal unbundling: A separate legal entity is established for network activities. • Functional unbundling: The DSO's internal structure is reorganised giving separate units responsibility for network and competitive activities. • Accounting unbundling: The DSO keeps separate accounts for its activities. • Full ownership unbundling: The DSO is independent from other activities not related to distribution, at least in terms of its legal form, organisation and decision making. Although the CEP did not significantly change the legal framework for unbundling, it added some specifications:

	• Data management: DSOs that manage data must take steps to prevent discriminatory access to customer data by eligible parties. • Storage facilities: DSOs can own, develop, manage, or operate storage facilities and recharging points for electric vehicles. In addition, as set out in the CEP, the role of the DSO is to act as a neutral market facilitator in a number of ways, including: • Procuring energy: DSOs can use market-based procedures to procure energy for their systems, while ensuring that the process is transparent and non-discriminatory. • Procuring services: DSOs can use market-based procedures to procure non-frequency ancillary services for their systems, while ensuring that the process is transparent and non-discriminatory. • Collaborating with TSOs: DSOs can work with TSOs to ensure that market participants connected to their grid can participate in retail, wholesale, and balancing markets. • Creating a transparent marketplace: DSOs can create a transparent marketplace that allows flexibility providers to trade flexibility services.
Purpose	For new suppliers entering the market, non-discriminatory rules and equivalent treatment are essential. Bundled DSOs and suppliers acting jointly towards customers might prevent new actors from entering a market. Therefore, there must be a sufficient level of unbundling between suppliers and associated DSOs in order to create a level playing field in retail energy markets. This is essential for all competitive actors to compete on the same terms. The existence of bundled DSOs does not immediately presuppose a problem; nevertheless, it might be a sign to look into the matter further. Through this metric, the NRA can monitor the situation and evaluate whether the results reveal a problem or whether the market works well despite the existence of customers connected to bundled DSOs. As a neutral market facilitator, the DSO should aim to procure flexibility services from distributed generation and demand response, and energy storage. They should also support energy communities by facilitating the transfer of energy between participants.
Indicators	In order to quantify this metric, we suggest that the NRA addresses four main questions: • What type of unbundling is in place, as per requirements of the Third Energy Package and CEP? o Legal unbundling

	- Functional unbundling - Accounting separation - Ownership Unbundling • Is there a sufficient level of unbundling between suppliers and associated DSOs in order to create a level playing field in retail energy markets? • Are different brands (including different logos) in place? • Are there DSOs with bundled suppliers that are exempted from the legal requirements in the Third Energy Package? • What is the minimum standard for being exempted? • How many customers are connected to exempted DSOs? Compare this figure to the total number of customers in the MS. • How many active[14] rival suppliers operate in the exempted DSO areas? Compare this figure to the total number of active suppliers in the MS. • Are DSOs acting as neutral market facilitators in your country? Possible units of measure: Regarding unbundling: yes/no and qualitative explanation. Regarding exempted DSOs and their customers: number and % of total amount of customers in the MS.

Metric 5: Percentage of consumers with public intervention in price setting

Metric 5	**Percentage of consumers with public intervention in price setting**
Description	Article 5 of the Electricity Directive (Market-based supply prices) and Article 4 of the Gas Directive set out that suppliers are free to determine the price at which they supply electricity (and gas) to customers and that MSs shall take appropriate actions to ensure effective competition between suppliers. In particular, the articles aim to ensure effective competition to the benefit of consumers, while ensuring protection for energy poor and vulnerable household customers. It contains the framework for exceptional, time-limited implementation of regulated prices, which may be allowed in specific circumstances, such as periods of significantly higher energy prices, such as when an emergency situation is declared by the Council. To maintain incentives for an efficient market, any public intervention in price setting should remain temporary and include a well-defined roadmap for their gradual removal.

[14] Definition from the CEER database.

By definition, public intervention in price setting means that a price is subject to regulation by a public authority, as opposed to an end-user price set exclusively by the interaction of supply and demand. Public intervention in price setting can take different forms, such as pure price regulation, the setting or approval of prices, price caps, or various elements of these. Regulation can be set ex-ante (price is defined by the responsible authority on underlying information on the market, before market participants conclude contracts based on these prices) or ex-post (price is checked and possibly amended/changed by responsible authority after contracts have been concluded by market participants). The administrative intervention can also be social, when a regulated price is set for specific consumer groups, e.g. vulnerable customers (social tariffs). Another relevant distinction concerns the application of permanent vs. temporary interventions, with a clear end date.

Regulated energy prices may distort competition in the market and might prevent new suppliers to enter a market, particularly if prices are set at non-competitive levels.

The articles stipulate that regulated prices should be cost-reflective, at a level where effective price competition can occur. In this regard, MSs should take into account the following:

- The regulated price setting methodology should be fully auditable.
- For the calculation process, the authority implementing the regulated prices should have access to the necessary information on the cost structure of the industry;
- The regulated price needs to be able to cover reasonably incurred costs of suppliers and to be assessed on the basis of objective economic criteria, including regulated or administrative costs;
- Identifying the appropriate reference price for supplier costs when procuring electricity is particularly difficult during a period of high and volatile prices. However, it is important that even if regulated prices are below what is needed to cover wholesale market costs during a specific short-term period, they must be cost-reflective, taking into account a duly justified longer period. This could be based, for example, on the normal forward procurement of energy by suppliers in the relevant MS.

Furthermore, public interventions in the price setting for the supply of electricity or gas should:

- pursue a general economic interest and not go beyond what is necessary to achieve that general economic interest; 14.6.2019 L 158/143 Official Journal of the European Union;
- be clearly defined, transparent, non-discriminatory, and verifiable.
- guarantee equal access for Union electricity undertakings to customers;

	• be limited in time and proportionate as regards their beneficiaries, and does not result in additional costs for market participants in a discriminatory way.
Purpose	The purpose is to measure the impact of price regulation in the market, with the ultimate goal of abolishing the regulated energy prices in order to remove the barrier to entry for new suppliers and to create a level playing field between competing energy suppliers.
Indicators	In order to quantify this metric, we suggest that NRAs address these main questions in conjunction with Metric 24: • Is there public intervention in the price setting for household and/or non-household customers? • What are the main reasons for public intervention in price setting? • Which type(s) of household consumers benefit(s) from this/these public intervention(s) in price setting? • Is there any types of intervention in price setting for energy poor or vulnerable consumers? • What is the proportion of customers with regulated energy prices on each type of regulated price and each relevant market (by number of customers for household (HH) market and consumption volume for non-household (NHH) market)? • What is the proportion of customers on social tariffs? If there are different types of social tariffs, aimed at different categories of vulnerable customers, please indicate the proportion of customers on each tariff type. • Is there a plan to remove this / these intervention(s) in the price setting and is there a well- defined roadmap for their gradual removal? Possible units of measure: Regarding the existence of price regulation: Yes/no and qualitative explanation of what regulation exists. Regarding customers: Proportion of customers and their consumption relative to the total number of customers and consumption in each considered relevant market.

Metric 6: Number of common standards for consumer data and for DSO-supplier contract and existence of a national data hub

Metric 6	**Number of common standards for consumer data & for DSO-supplier contracts and existence of a national data hub**

Description	Efficient, safe and secure data exchange between stakeholders is vital to ensure a well-functioning retail market and the possibility for new suppliers to enter into a market. All suppliers, both existing and new, and other third parties (authorised by the customer), need to be able to access relevant customer meter data on equal and non-discriminatory terms. In a supplier centric model, there is a need for data exchange agreements between DSOs and relevant suppliers. This might become a burden and even a barrier for small actors on a market. Where available and feasible, the existence of a data hub is an option to ensure access to information on equal and non-discriminatory terms, including the implementation of a common standard. A data hub simplifies the market structure further, as suppliers communicate only with a centralised hub rather than with several DSOs. The roll out of smart meters may also facilitate access to information on equal and non-discriminatory terms. Where DSOs are involved in data management, the compliance programmes referred to in Article 35(1), (2) or (3) of the General Data Protection Regulation (GDPR)[15] include specific measures in order to prevent discriminatory access to data from eligible parties. Where DSOs are not subject to Article 35(1), (2) or (3), of the GDPR MSs must take all necessary measures to ensure that vertically integrated undertakings do not have privileged access to data for the conduct of their supply activities.
Purpose	The purpose of this metric is to monitor the possibility of accessing information easily for suppliers, aggregators and other third parties on the retail market. The lack of access to consumer data is a barrier for new market actors.
Indicators	In order to quantify this metric, the NRA should examine whether there are processes in place regarding access to customer data for authorised suppliers or third parties. It is important to show MS implementation of data management procedures and if there is a functioning data hub. More specifically, in order to quantify this indicator NRAs should consider the following questions: • Is there a procedure containing common standards regarding the accessibility of data for suppliers and third parties? What kind of

[15] Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation)

	data is covered by the procedure (in particular, is historic consumption information, defined in metric 18, included)? • In countries with a supplier-centric model, is there a procedure for contracts between DSO and supplier? • Is there a national data hub? What are its main features (e.g. who runs it and to what extent does it rely on explicit customer consent for data sharing with third parties)? • Who are the designated competent authorities responsible for data management? • Do the designated competent authorities specify the rules on access to the final customer's data by eligible parties in accordance with Article 35 of the GDPR and the applicable Union legal framework? • Is the processing of personal data carried out in accordance with Regulation (EU) 2016/679?

Metric 7: Availability of smart metering

Metric 7	**Availability of smart metering**
Description	The availability of smart metering equipment and systems which allow frequent meter readings (e.g., 15 minutes, half-hourly, hourly) is a pre-requisite for consumers to be able to choose implicit demand response and flexibility schemes. Smart meters can facilitate market development, regardless of the purpose for which they were installed (and often they are installed due to a general legal obligation). Smart meters may also enable explicit demand response services through a dedicated standard interface, either as mandatory equipment or as an option. In addition, Electricity Directive 2019/994 entitles final customers with a smart meter installed to conclude a dynamic electricity price contract with at least one supplier in the market and with every supplier that has more than 200 000 final customers. A dynamic electricity price contract means an electricity supply contract between a supplier and a final customer that reflects the price variation in the spot markets, including in the day-ahead and intraday markets, at intervals at least equal to the market settlement frequency. Such dynamic contracts open up the possibility of different types of commercial offers by suppliers, also contributing to competition in the market.

Purpose	The purpose of this metric is to determine if customers have the possibility to be active on the market through demand response or flexibility schemes. If the customer cannot access smart meter readings then this might distort competition on the retail market for new suppliers, aggregators and third parties with innovative contracts, as well as restrict market choice for customers. Lack of smart metering, such as hourly readings, hinders innovation and development on the market as a whole.
Indicators	We suggest that NRAs answer the following questions: • Are smart meters available? For all consumer segments? • What type of smart metering is available, e.g. 15 minute, half-hourly, hourly metering, day/night metering? And are there meters for which the timeframe is linked to the market settlement period? Consider both electricity and gas meters. • How many smart meters of each type are in place? What is their number relative to the total number of metering points? • Is there an additional fee to install these meters in each relevant market? How much does it cost? • In case of (partial) smart meter roll out: What information do suppliers provide their final household consumers on the opportunities, costs and risks of dynamic electricity price contracts, if they offer such contracts? • What is the share of final household consumers with smart meters among total households (metering points) as of 31 December of a given calendar year? • Has a smart metering cost benefit assessment been undertaken? • Was the assessment positive? • If negative, do consumers have the ability to access a smart meter independently? • Do smart meters meet the functionalities outlined in Article 20 of Directive 2019/944? • What is the associated cost of installation of a smart meter (per meter) as outlined in Article 21 of Directive 2019/944?

Key property III: Close relationship between wholesale markets and retail prices

Well-functioning retail energy markets are dependent on well-functioning wholesale energy markets. Organised and transparent wholesale markets set the market value of energy as a commodity, thereby providing the foundation for the prices that consumers pay in retail energy markets. These metrics concern only the energy component of the total retail energy price.

We suggest that metrics 8 and 9 be accompanied by a breakdown of the cost components of the total retail energy price, showing the shares that the energy component, network tariff, taxes and other components (e.g. capacity component, RES-charge) constitute of the total price that consumers pay. This is important to place metrics 8 and 9 in perspective. In addition, it is essential to clarify the right consumption profile, because it affects the breakdown of the total retail energy price.

Metric 8: Correlation between wholesale and retail energy prices

Metric 8	**Correlation between wholesale and retail energy prices**
Description	Well-functioning retail energy markets depend on well-functioning wholesale energy markets. Organised and transparent wholesale markets determine the price of energy as a commodity. The relationship between the retail price and the wholesale price is important, as it reveals what consumers are paying for their energy relative to the underlying wholesale market price. This metric concerns only the energy component of the total retail price, which is separate from network tariffs, taxes and surcharges.
Purpose	Close correlation between wholesale and retail prices can ensure that consumers receive correct price signals from wholesale markets. Price signals may function as an incentive for demand response. Consumers may receive price signals from wholesale markets through the energy component of the retail price, if the pricing of this component follows variations in the wholesale price. This depends largely on the price structure of the contract the consumer has agreed with the supplier Price structures may vary from quarter hourly pricing set against wholesale markets at one end, to fixed prices at the other. The ability of suppliers to offer contracts with a close correlation to wholesale markets depends on their ability to access and procure energy in a well-functioning wholesale market. This analysis therefore presumes that wholesale markets are well-functioning, organised and transparent.
Indicators	Given that consumers can choose different pricing options with different degrees of correlation, e.g. hourly wholesale pricing, standard variable pricing or fixed pricing, this analysis should use aggregate price *per contract type* for comparison with wholesale markets. Both flexible and fixed price contracts should correlate with wholesale markets at the time of offering, reflecting the inherent price-risk structure of the contracts, to different extents. For example, with a wholesale-based contract, the customer carries the risk of the price variation, whereas, with a fixed-price contract, the supplier could carry the risk of the price variation.

	Retail and wholesale price data should be monthly average data, for a minimum of three consecutive years. If the data is weighted, the method of weighting must be clearly specified. Only the energy component of the retail price can be used for comparison against wholesale price data. The data should be placed in a time series graph. The energy component should be separated from bundled products. Monthly average retail price data for each contract type should either be prices effectively paid (e.g. what suppliers actually billed consumers) or prices on contract offers (e.g. what is listed in a comparison tool), weighted at consumption values that are representative for each country. For example, the ACER/CEER Retail Market Monitoring Report (MMR) uses 5,000 kWh/yr for electricity and 15,000 kWh/yr for gas. In the absence of retail price details by contract type, the methodology used by the ACER/CEER MMR may be used[16]. Wholesale prices should be quantified as the monthly average hub/exchange prices, where available. A specific national quantification of the wholesale price may be added to transparent market data. The source and type of all price data used for the analysis, and any method of quantification used, must be clearly specified.

Metric 9: Mark-up between wholesale and retail energy prices

Metric 9	**Mark-up between wholesale and retail energy prices**
Description	Beyond the correlation between the wholesale and retail prices, the mark-up between these two values can also provide insights on what consumers are paying for their energy relative to the underlying wholesale market price. Mark-ups are not directly comparable to suppliers' final profits. Suppliers have to pay operational costs and taxes out of this margin. Mark-ups represent the gross margin, while the actual or net margin will depend significantly on operating costs and consumption levels. However, the evolution of mark-ups may serve as an indication of the level of retail competition and the "responsiveness" of the retail to wholesale prices over time.

[16] https://www.acer.europa.eu/Official_documents/Acts_of_the_Agency/Publication/ACER_Market_Monitoring_Report_2015.pdf - Annex 6

Purpose	The mark-up between wholesale and retail prices reveals whether consumers are paying a fair price for energy relative to the underlying wholesale price. The responsiveness of the mark-up relative to rising or falling wholesale prices is essential for this analysis. The level of the mark-up will depend on the price structure of the contract the consumer has agreed with the supplier. Price structures may vary from quarter hourly pricing set against wholesale markets at one end, to fixed prices at the other. This analysis presumes that wholesale markets are well functioning, organised and transparent. By analysing the mark-up based on different contract types, e.g. wholesale-based or fixed pricing, the analysis reveals which contract types are the most beneficial for consumers. Different contract types should have different levels of mark-up to wholesale markets, reflecting the differences in the inherent price-risk structure of the contract type. For example, with a wholesale-based contract the customer carries the risk of the price variation whereas with a fixed-price contract the supplier could carry the risk of the price variation. It is important to clarify that the purpose of this indicator is not to calculate exact supplier margins, as actual costs depend on a variety of factors — most notably, the supplier's procurement strategy. These strategies can vary significantly across suppliers and countries, and are often not publicly disclosed in detail. Therefore, this indicator should not be used in isolation to assess the performance or competitiveness of the retail market. Instead, it should serve as a tool to observe trends over time and to identify potential anomalies, such as inconsistent correlations between wholesale and retail prices. In such cases, the indicator can act as a starting point for deeper analysis, helping regulators and analysts to investigate whether observed mark-ups are justified by cost structures or if they may signal inefficiencies or barriers to competition.

Indicators	To enhance the robustness of the analysis, two reference price benchmarks should be used: • A spot market reference price, to be used primarily for evaluating dynamic (wholesale-based) contracts, where the retail price is expected to closely follow short-term market fluctuations. • A forward price basket (e.g. a weighted average of monthly, quarterly, and yearly futures), to serve as a benchmark for fixed-price contracts, which reflect suppliers' hedging strategies and longer-term procurement costs. • Where contract types cannot be clearly distinguished, both benchmarks should be presented in parallel to provide a range of plausible mark-up interpretations and to track the evolution of retail pricing relative to different procurement strategies. Retail and wholesale price data should be monthly average data, for a minimum of three consecutive years. If the data is weighted, the method of weighting must be clearly specified. Only the energy component of the retail price can be used for comparison against wholesale price data. The mark-up is quantified as the monthly difference between the retail price and the wholesale price, expressed in eurocent/kWh. The data should be placed in a time series graph. The energy component should be separated from bundled products. Monthly average retail price data for each contract type should be either prices effectively paid (e.g. what suppliers actually billed consumers) or prices on contract offers (e.g. what is listed in a comparison tool), weighted at consumption values that are representative for each country. For example, the ACER/CEER MMR uses 5,000 kWh/yr for electricity and 15,000 kWh/yr for gas. In the absence of retail price details by contract type, the methodology used by the ACER/CEER MMR may be used. Wholesale prices should be quantified as the monthly average hub/exchange prices, where available. A nationally specified quantification of the wholesale price may be added *in addition* to transparent market data. The source and type of all price data used for the analysis, and any method of quantification used, must be clearly specified.

Key property IV: A range of offers, including demand response

A well-functioning market is characterised by innovation and the range of products and services offered to consumers. In general, the ability of suppliers to offer a significant number of commercial options - coupled with the consumer's ability to compare the offers and take informed decisions - is a sign of healthy competition and innovation.

Demand response can be defined as the capacity to change electricity usage by end-use customers (including residential) from their normal or current consumption patterns in response to market signals, such as time-variable electricity prices or incentive payments, or in response to acceptance of the consumer's bid, alone or through aggregation, to sell demand reduction/increase at a price in electricity markets or for internal portfolio optimisation.

The valuation of demand response can be done explicitly or implicitly: explicit demand response is sold as a product on a market and therefore requires a specific control (ex-ante and/or ex-post). Implicit demand response does not need such a process since it is not sold to anyone and remains only for the benefit of the final consumer and the corresponding supplier or the Balance Responsible Party (BRP)[17] as an optimisation of its sourcing costs or imbalances (e.g. via a payment organised between the independent flexibility service provider and the supplier).

Metric 10: Availability of a variety of products, pricing and billing options

Metric 10	**Availability of a variety of products, pricing and billing options**
Description	This metric describes two ways of differentiating an offer (pricing and billing) in retail energy markets. Suppliers may offer different products based on the way in which they are priced or billed. The consumer bill contains key information and may consist of information about the energy component price, the network tariff and taxes paid. All pricing and billing options should refer to viable options, i.e. it should be possible for the consumer to utilise the options proposed by the retailer.
Purpose	Various options for pricing and billing can present innovation in the market and create benefits for the customer.

[17] The sharing of benefits between customer and supplier/BRP can differ depending on the arrangements between these parties.

	Examples of various pricing options may be fixed pricing, variable pricing, or wholesale-based pricing. Wholesale pricing may be near real-time (based on time-of-use metering), or monthly (based on an arithmetic mean, or load profile adjusted to the day-ahead price for the previous month, where time-of-use metering is not available). With wholesale pricing, the supplier earns its margin through an add-on per kWh or a monthly fee. Consumers should have the option to choose to be exposed to time-varying electricity prices, which reflect the value and cost of electricity and transportation at the moment of consumption. Equipped with this information, consumers can make conscious choices – or automate the decision – to use less electricity at times of high prices and thereby reduce their energy bill. Variations in billing options are manifold, falling essentially under two broad categories: advance payments or ex post payments based on meter readings. Billing based on a meter reading allows consumers to receive accurate information on the cost of their actual consumption. Considered in tandem with the presence of smart meters, accurate billing is a powerful tool for consumers to manage their consumption and energy costs on a regular (monthly) basis. Accurate (and frequent) billing should be the norm for consumers with time variable pricing, as this ensures that consumers are billed for the actual energy consumed during the billing period. Advance payments may be a barrier to consumer energy literacy, as well as to engagement in demand response, unless a correct settlement takes place after each consumption period. Opportunities for a variety of pricing and billing options should enable new suppliers with innovative ideas on pricing and billing to enter a market. If such opportunities are severely restricted, this might distort competition.
Indicators	This metric aims to capture the variety of pricing and billing options available to customers in a relevant market. It does not require a detailed monitoring of the offers at each supplier, although this could provide a useful piece of complementary information to understand the pricing and product strategies followed by different suppliers. Another relevant piece of complementary information could be the number of customers on each pricing and billing option. A precondition for a variety of offers in the market is the possibility for suppliers to set prices. Thus, a first question to pose when quantifying this metric is whether all suppliers are free to determine the price at which they sell electricity to their consumers in line with Article 5 of Directive 2019/944 and Article 4 of Gas Directive 2024/1788 (see metric 5)? In order to quantify this metric, NRAs should address the following questions:

Offers and pricing options:

- Are there a variety of pricing options (offers) available to consumers?

- If yes, indicate the number of offers available to:
  - household consumers
  - non-household consumers

- Indicate whether the following products are available for households/non-households, and their uptake (%):
  - Market based fixed price, fixed term contracts
  - Market based dynamic price contracts as defined in Directive 944
  - Market based variable based on average monthly spot price
  - Regulated fixed price contracts
  - Regulated variable contracts
  - Other types of dynamic electricity price contracts available

- In the case of variable prices set, and announced, ahead of time (ex-ante), what is the frequency for their revision (4-12 times/yr; more than 12times/yr)?
  Example: Price is changed every month and announced before the start of the month.

- In the case of wholesale-based prices announced ex-post plus fee and/or mark-up announced ex-ante, how is the price settled (based on monthly, daily/weekly or hourly average)?
  Example: The wholesale price changes every month and is announced after the month has ended, when the supplier knows what it paid on average during the previous month.

- In the case of fixed prices stipulated in the contract ahead of time, what is the duration of the set price (3-11 months, 1-3 years, 4 years or longer)?
  Example: Price and fee for the following 12 months are announced in the offer before the customer signs the agreement.

- In the case of mixed prices based on both fixed and variable components, on what basis is the mix applied (variable/fixed price; pricing variation between seasons…)?
  Example: 50% of consumption is billed according to a fixed rate (winter) and 50% according to a variable price (summer) component.

- Other products that do not fit the descriptions above may also exist, such as market based variable open-end contracts or others. These should also be examined.

Dynamic electricity price contracts:

- How many suppliers offer dynamic electricity price contracts that reflect the price variation at the spot markets at intervals at least equal to the market settlement frequency?

- Does your NRA monitor and publish an annual report detailing the main developments regarding dynamic electricity price contracts, as outlined in Article 11 of Directive 2019/944?

- Are final household consumers informed about the opportunities, costs and risks of dynamic electricity price contracts?
- Do consumers on dynamic price contract receive information regarding peak pricing and low price periods?

Aggregation:

- Are aggregators recognised as market players?
- Can consumers purchase aggregation services?
- Where the consumer can purchase aggregation services, can such contracts take place without the permission of the supplier?
- If so, consider the type of aggregators (also independent from retailers). This means that they do not have to contract or negotiate with the retailer in order to provide DR services to a consumer or to sell into the energy markets.
- Are end-user residential aggregators and customers enabled to participate in the markets?
    - If so, how? If no, which are the main barriers to overcome?
- Are all products available for online signing?

Billing options:

- Which billing options are available to consumers?
    - Direct debit
    - Bank transfer
    - SEPA[18]
    - Credit card
    - Cash

[18] The Single Euro Payments Area (SEPA) aims to create a true European Single Market for retail payments in euro, and makes all electronic payments in the euro area as easy as cash payments. SEPA enables fast and secure transfers between bank accounts anywhere in the euro area. With SEPA a household customer can use their home bank account to pay bills in any Eurozone country. Shopping abroad, a household customer can use their own bank debit card to make a payment in euro, as they would in their home country.

	◦ Pre-payment ◦ Other (specify) • Are bills available online?

Metric 11: Availability of value-added services for implicit demand response and self-generation

Metric 11	**Availability of value-added services for implicit demand response and self-generation**
Description	This metric relates to the availability of contracts containing price mechanisms, and/or added services that allow consumers to reduce their load or shift it from peak to off-peak periods, as well as to self-generate electricity. Availability of market infrastructure, e.g. smart meters, and procedures enabling consumers to receive the correct price settlement are essential to make implicit demand response and self-generation an established and viable option for consumers. Similarly, participation in demand response and flexibility services depends on the availability of programable household appliances and equipment.
Purpose	The availability of demand response offers and flexibility services can indicate an innovative, competitive and diversified market. It can offer consumers the opportunity to lower energy costs by adapting to time varying prices that reflect price formation on well-functioning wholesale markets, e.g. settlement against hourly prices. For customers, it is essential to receive clear information regarding the conditions when a contract is bundled e.g. with energy-efficiency services, products, maintenance services or other add-ons such as value-added services. A second purpose of this metric is to determine if customers have the possibility to self-generate their electricity and also to feed the surplus into the system. Fair access to market mechanisms and systems through which prosumers can feed energy into the energy networks are essential. It is, however, crucial that the contract terms for the market arrangements, mentioned above, do not disadvantage the customer or limit customer benefits.
Indicators	In order to quantify this metric, NRAs should address the following questions regarding contracts that facilitate flexibility: Contract types:

- Are the following products available for households/non-households?
    - Fixed price, fixed term contracts with the same price during all hours
    - Fixed price, fixed term contracts with Time-of-Use pricing (e.g. peak and off-peak prices)
    - Variable contracts based on average monthly spot price with the same price during all hours
    - Variable contracts based on average monthly spot price with Time-of-Use pricing
    - Dynamic price contracts that reflect the price variation in the wholesale markets at hourly intervals
    - Dynamic price contracts as defined in Directive 944
    - Critical peak pricing (CPP)
    - Peak time rebate (PTR)
    - Other type of contracts
- What is the uptake in percentage of each type of contract for households/non-households?

- What kind of value-added services or products that contribute to demand flexibility are available for customers?

    - AI-Driven Energy Management Systems: Automatically optimize energy use based on real-time prices and user habits.
    - Dynamic Tariff Optimization: Adjust appliance usage to take advantage of lower electricity prices throughout the day.
    - Virtual Energy Assistants: Provide personalized tips and insights to help users reduce consumption and costs.
    - Smart Solar and Battery Management: Maximize self-consumption and savings by intelligently controlling when to store or use solar energy.
    - Intelligent electric vehicle Charging: Schedule electric vehicle charging during off-peak hours to minimize costs.
    - Personalized Energy Alerts: Notify users of high-price periods or unusual consumption patterns to encourage timely action.
    - Gamified Energy Saving Platforms: Engage users with challenges and rewards for reducing energy use during peak times.
    - Other.
- How many consumers have adopted the indicated value-added services?
  (Examples of automatically controlled or supplied with demand response switch)
    - Hot water heaters
    - Storage – batteries
    - Smart thermostat
    - Gas heater
    - Air conditioning
    - Washing machines

	• Refrigerators • Electric vehicle chargers • Maintenance services • Heat pumps • Other • What is the percentage of customers with more than one electricity supply contract at the same time under a single connection point for their premises (for households/non-households)? • What is the number/share of heat pumps installed in households and other consumer segments? • What is the number/share of electric vehicles and the number of public electric vehicles charging stations? Conditions for self-generation and whether the surplus from self-generation can be fed into the system: • How many consumers participate in implicit DR through a contract? • How many customers have contracts, which include feed in from electricity, and/or gas from self-generation? • Are there appliances with demand response switches or other connections available on the electricity and gas market?

Metric 12: Availability of information on the origin of the energy supplied and NRA role in fuel mix disclosure

Metric 12	**Availability of information on the origin of the energy supplied and NRA role in fuel mix disclosure**
Description	This metric measures the availability of information on the source and origin of the electricity and/or gas supplied by the supplier to the end customer. The supply contracts and electricity and gas bills, and other billing information, should specify the source(s) of energy certified by Guarantees of Origin (GOs) as defined by Art.19 of the Renewables Directive (Directive EU 2018/2001 of 11 December 2018). Therefore, when monitoring green products (electricity or gas) available in the market, NRAs should verify whether corresponding guarantees of origin from renewable sources have indeed been cancelled a. for a given green product (according to the product name mentioned on the GO), b. for a given supplier (as beneficiary of the GO) and c. for a given consumption period. The purpose of GOs is to prove the origin of the energy supplied to consumers. As far as the Electricity Directive (Directive EU 2019/944 of 5 June 2019, Annex I, Point 5) and the Das Directive (Directive EU 2024/1788 of 13 June 2024, Annex I, Point 5) oblige suppliers to inform their end-customers on the origin of the energy supplied, GOs will be used for that purpose. CEER's Guidelines of Good Practice on Trustworthy Green Offers and

	Consumer Protection Against Misleading Marketing Practices provide details of NRAs' role in the energy disclosure exercise[2]. Each Member State appointed a competent national authority responsible for energy disclosure, i.e. for verifying the information that is being provided to energy consumers on the origin of the energy supplied to them. In some Member States it is the NRA who has been appointed as competent national authority for energy disclosure and thus is responsible for verifying the correctness of the supplier mix and product mix published on the suppliers' websites and comparison tool website and communicated to end customers in the supply contract and with the supplier bill and other billing information. In other Member States it is another public administration body than the NRA that has been appointed as competent national authority for energy disclosure. Each Member State appointed also an issuing body for guarantees of origin. Annex 2 of CEER's Guidelines of Good Practice on Trustworthy Green Offers and Consumer Protection Against Misleading Marketing Practices lists national issuing bodies and bodies responsible for energy disclosure.
Purpose	The purpose of this metric is to assess whether information on the origin of the energy supplied via commercialised electricity and gas products is available for consumers and has been verified before its disclosure. The availability of such reliable information allows to monitor the engagement of energy suppliers in the transition towards supplying increasing volumes of energy produced from renewable sources and measures consumer choice for renewable energy products. NRAs among their tasks have to monitor suppliers' compliance with Art.18 of the Electricity Directive (Directive EU 2019/944 of 5 June 2019) and in particular its point 6. which says that "Member States shall ensure that bills and billing information fulfil the minimum requirements set out in Annex I". The same provision exists in the Gas Directive (Directive EU 2024/1788 of 13 June 2024), namely Art. 16(1) on bills and billing information. Thus, in cases where the NRAs is not competent authority for disclosure, it needs to liaise with the disclosure authority to check the correctness of the fuel mix information provided in suppliers bills and other billing information. If a given product (electricity or gas) is commercialised as being 100% green, it means that the total supplied volume to all end customers having subscribed to that product must be certified with the same volume of cancelled GOs from renewable sources. Respectively, if a given electricity or gas product is commercialised as being for instance 80% green, then the supplier of that product needs to cancel a volume of GOs corresponding to 80% of the total supplied volume of electricity or gas commercialised under the same product name. Finally, the GO allows to carry additional sustainability characteristics of the energy supplied, for instance some GOs contain also information on sustainability labels related to the production plants. This enables consumers to make their green product choice based not only on the origin

[2] https://www.ceer.eu/publication/guidelines-of-good-practice-on-trustworthy-green-offers-and-consumer-protection-against-misleading-marketing-practices/

	of energy (country of production) and source (renewable or not, if renewable, whether from hydro, wind, solar, biomass or biogas) but also on particular sustainability criteria defined by given labels associated with the GOs.
Indicators	• • Questions: Who calculates the supplier mix and product mixes? If suppliers calculate their own supplier mix and product mixes, is there a public authority verifying such claims? • How does the NRA ensure that statements made by suppliers on the origin and source of supplied volumes are trustworthy? • What is the timetable in place to inform consumers about disclosure figures (supplier mix, product mix, national mix, etc.) and their environmental impact in terms of CO2 emissions resulting from fossil fuels and radioactive waste resulting from the nuclear source? • Where can consumers check disclosure figures? E.g. on the comparison tool (CT)? On the NRA website? Is there a disclosure report being published? • Apart from electricity disclosure, and gas disclosure, what, if any, are the differences in the disclosure system for heating and cooling? • In case the NRA is not the national competent disclosure authority, is there a cooperation agreement in place between the two bodies to check whether supplier mixes and product mixes communicated to consumers are correct? • Do you check volumes supplied per product against volumes of cancelled GOs in your national registry of GOs? • What is the share of certified (with GOs) national consumption (total volumes supplied) over total national consumption? • In your countries are GOs issued and cancelled with particular sustainability labels? If yes, which ones?

Metric 13: Availability of explicit demand response offers

Metric 13	**Availability of explicit demand response offers**
Description	This metric monitors the availability of products that provide explicit demand side flexibility in the market. In explicit demand response, the “freed-up/shifted” electricity is traded in electricity markets or used for other purposes. Consumers receive specific remuneration to change their consumption upon request (using more or using less), e.g. triggered by activation of balancing energy, differences in electricity prices or a constraint on the network.

<table>
<tr><td>Purpose</td><td>The purpose of the metric is to assess if there are explicit demand response opportunities available and for which customers. In particular, it aims at identifying what, if any, market arrangements exist, allowing customers to free up or shift electricity usage and trade it in a market place. Moreover, it is of particular interest to monitor the flexibility capacity that is available on the market through these products.</td></tr>
<tr><td>Indicators</td><td>In order to quantify this metric, NRAs should address the following questions:

Are explicit demand response opportunities available in each relevant market?
How much capacity/volume is available through the use of explicit demand response contracts on an annual basis? Use a metric based on capacity for market mechanisms linked to availability (balancing and ancillary services, and system adequacy mechanisms) and a metric based on volume for flexibility sold into the market annually for the wholesale market and some reserves market where energy is traded.

Questions on national framework:

Do aggregators exist and are they recognised? How many?
Who are the established aggregators? E.g. Already existing suppliers, independent energy enterprises, etc…
Are aggregators independent from energy suppliers? This means that they do not have to contract or negotiate with the energy supplier in order to provide demand response services to a consumer or to sell into the energy markets.
Number of meters that can be accessed by aggregators
Volume of capacity offered by aggregators
Volume of capacity awarded to aggregators in the balancing market
Volume of energy actively shifted through demand response programs.
What kinds of explicit demand response offers are available for final household and non-household customers?
Do TSOs and DSOs offer (aggregated) residential end-users access to the wholesale, balancing and ancillary electricity markets? (Over and above any dynamic pricing programmes)
Are end-user residential aggregators and customers enabled to participate in the markets?
If no, what are the main barriers to overcome?
Percentage of consumers (household and non-household) actively participating in demand response programs.
Share of consumers enrolled in aggregation services for demand response.
The average time it takes consumers to enrol in and participate in demand response programmes.
</td></tr>
</table>

Key property V: High level of awareness and trust

In well-functioning retail markets, consumers are aware of the most relevant features for engaging in markets; and they trust the market.

Metric 14: Percentage of consumers knowing they can switch supplier

Metric 14	Percentage of consumers knowing they can switch supplier
Description	A precondition for consumer participation in retail energy markets is awareness and knowledge about the possibility to make an active and informed choice. This includes choosing another supplier, choosing another contract with their current supplier, or deliberately staying with their current supplier. This metric focusses on switching supplier. Recent studies show that even in liberalised markets a significant share of household consumers is insufficiently aware of the possibility to switch supplier and thus reaping key benefits of market liberalisation (cheaper energy, increasing competition, etc.). While market liberalisation brings a number of rights for consumers, switching supplier can be seen as crucial.
Purpose	The metric is used to measure the awareness of consumers about a key consumer right and how this awareness varies over time. Widespread awareness of this right facilitates market participation, which is key to well-functioning retail energy markets.
Indicators	A precondition for switching supplier is that the free choice of supplier is in place. Thus, the first question to pose for the quantification of this metric is whether consumers have a free choice of supplier in the market in line with Article 5 of Electricity Directive 2019/944 and Article 4 of Gas Directive 2024/1788 (see metric 5)? This indicator should be the result of a survey based on a representative sample of the consumer population in terms of gender, age, location, socio-economic category. The targeted interlocutor is the person in the household in charge of electricity and gas bills payment. There should be different panels for gas and electricity. The survey questions should cover the following dimensions: factors determining the choice of supplier, the possibility to choose a supplier, etc. Following consultation with national experts in this field (e.g. consumer survey companies), the questions could read as follows, although NRAs are welcome to use questions that would lead to similar results:

	"In your opinion: 1. The choice of an [electricity / gas] supplier is determined by the geographic area where you live? o Yes o No [*correct answer*] o No opinion 2. Every household can choose its electricity supplier? o Yes [*correct answer*] o No o No opinion 3. Can you quote the name of 3 [electricity / gas] suppliers? o 3 (*or more correct answer)* o 2 (*correct answer)* o 1 (*or less correct answer)* o Mention companies that are not electricity / gas suppliers (e.g. DSO, TSO, etc.)" Further questions: • What is the incentive for switching supplier? • What are the reasons for customers not switching (to the lowest price supplier)?

Metric 15: Percentage of consumers who know that DSOs are responsible for continuity of supply and metering

Metric 15	**Percentage of consumers who know that DSOs are responsible for the continuity of supply and, where applicable, metering**
Description	A precondition for consumer participation in retail energy markets is awareness and knowledge about the possibility make an active and informed choice. It also involves some basic knowledge about how the market works. This metric focusses on awareness of the role of the DSO. In particular, as regards the responsibility of DSOs for continuity of supply, as well as the awareness that switching to another supplier has no impact on continuity of supply. Such a concern is often expressed by consumers as one of the main reasons for not switching supplier.
Purpose	The metric seeks to measure consumers' understanding of the principles of retail market functioning. This could help NRAs to raise consumers' awareness and therefore increase consumer confidence in the market.

Indicators	This indicator should be the result of a survey based on a representative sample of the consumer population in terms of gender, age, location, socio-economic category. The targeted interlocutor is the person in the household in charge of electricity and gas bills payment. There should be different panels for gas and electricity. Survey questions should cover the following dimensions: consumer concerns regarding the impact of supplier switching on: changing a meter, power interruptions, the entity responsible for meter readings, etc. After consultation with national experts in this field (e.g. consumer survey companies), the questions could read as follows, although NRAs are welcome to use questions that would lead to similar results: “In your opinion, 1. If you switch to another supplier, must you change your meter? o Yes o No o No opinion 2. If you switch to another supplier, do you believe that you will experience more power cuts?? o Yes o No o No opinion 3. If you switch to another supplier, do you believe that your new supplier will be in charge of meter reading? o Yes o No o No opinion 4. Can you quote the name of the company that operates [power lines / gas pipes] to your home? o Correct answer [depends on interviewee location] o Incorrect answer o No opinion”

Metric 16: Percentage of consumers trusting the energy market

Metric 16	**Percentage of consumers trusting the energy market**
Description	This metric measures the level of trust in the market and in individual suppliers. It is important for consumers to be confident that they will be treated fairly and can trust the information that suppliers provide them. A bad experience with one supplier can undermine consumers' confidence in the energy market as a whole, causing them to disengage in the long term. And, because energy is an essential service, consumers should be able to expect to receive fair treatment from their own and other suppliers.
Purpose	The metric is used to measure consumer trust in the energy markets. A high level of consumer confidence in the market allows for a more active participation. However, trust is a complex concept and when assessing the situation, NRAs must be careful to attain an accurate picture of the situation. In addition to the outcome of this metric, more background information, including the results from the other metrics, is necessary to fully understand the situation.
Indicators	This indicator should be the result of a survey based on a representative sample of the consumer population in terms of gender, age, location, socio-economic category. The targeted interlocutor is the person in the household in charge of electricity and gas bills payment. NRAs may rely on existing national consumer surveys or on the European Commission's Consumer Conditions Scoreboard. There should be different panels for gas and electricity. Survey questions should cover the following dimensions: consumer evaluation of competition, consequence of competition in terms of service quality and price development, etc. NRAs are welcome to define questions that best fit their national context after consultation with survey experts.

Key property VI: Availability of empowerment tools

The aim of consumer empowerment is to enable consumers to engage effectively with the market. Tools to facilitate this engagement should be in place and should be easily accessible to customers.

Metric 17: Percentage of consumers having access to at least one independent and verified comparison tool and to online customer services

<table>
<tr><td>Metric 17</td><td>Percentage of consumers having access to at least one independent and verified comparison tool and to online customer services</td></tr>
<tr><td>Description</td><td>The European Commission’s Digital Agenda proposes to better exploit the potential of Information and Communication Technology (ICT). The availability of different user-friendly channels through which a customer can interact with market actors is a sign of innovation in the retail market and a further facilitator of competition. Comparison tools are a useful way of enabling consumers to explore the various suppliers and offers on the market. They can serve as a portal for consumer information and engagement.

An independent and verified comparison tool (CT) is a powerful empowerment tool to make comparisons easier for consumers. A CT is a tool, generally a webpage, which lists all the offers available to the consumer and where they can evaluate the potential benefits of switching. Such a tool can be considered:
- <u>Independent:</u> as long as it is free from any commercial bias.
- <u>Verified:</u> if the check made by the NRA, or another competent authority, shows that the tool is correct, accurate and exhaustive.
o Exhaustiveness: all prices and products available for all customers should be shown as a first step. If not possible, the CT should clearly state this before showing results. After the initial search, the option to filter results should be offered to the customer.
o Correctness and accuracy: price information used in the comparison should be updated as often as necessary to correctly reflect prices available on the market.
Further details are available in CEER’s Guidelines of Good Practice on Future-proof Comparison Tools in the Energy Sector[20].</td></tr>
<tr><td>Purpose</td><td>This metric is used to measure whether the consumer has the possibility to identify the best offers available on the market. The easier it is for the consumer to estimate available savings, the more informed their decision will be to either switch to a better offer or stay with their current deal.
The purpose of this metric is to monitor innovation related to the use of ICT. If customers can interact with market actors in executing key contractual processes such as comparing different offers, signing up to an offer and receiving a bill online, as well as getting online customer service (i.e. the ‘customer journey’), this can be seen as a sign of innovation and progress in the market. The focus should be on identifying whether suppliers provide these options and whether these options are available to</td></tr>
</table>

[20] https://www.ceer.eu/publication/guidelines-of-good-practice-on-future-proof-comparison-tools-in-the-energy- sector/

<table>
<tr><td></td><td>all categories of consumers (there may be some that, for geographical or technical issues, may not have access to these online offers).</td></tr>
<tr><td>Indicators</td><td>The percentage of consumers is calculated on the basis of the number of consumers that have access to an independent and verified comparison tool, relative to the total amount of consumers. This CT has been identified as an independent and verified tool by the NRA.

This metric should be calculated separately for gas and electricity.

“Having access to a CT” requires that consumers can actually find at least one alternative offer from an alternative supplier for their connection point, assuming that they can access the internet. (The intention is not to measure the possibility for consumers to access the internet.)

Questions on the comparison tool:

In order to quantify this metric, the NRA should consider the following questions. These questions are linked to the ‘customer journey’.
Are offers comparable online and/or through digital applications for all customers? If not, why and for what proportion of customers is this not the case.
Which of the criteria listed in Article 14 of the Electricity Directive do(es) the public comparison tool(s) meet?
independent from market participants
equal treatment of energy undertakings in search results
clear disclosure of owners
information about how the tool is financed
clear, objective criteria on which comparisons are based are disclosed
plain and unambiguous language
accurate and up-to-date information
time of last update
accessible for persons with disabilities
procedures to report incorrect information
require as little personal information for comparison as possible</td></tr>
</table>

	○ comparisons of offers for dynamic electricity price contracts as in Article 5 of the Directive ○ coverage of the entire market • Do consumers have the ability to compare dynamic price contracts (as defined in Article 11 of the Electricity Directive) via a CT? • Does the CT provide the date of the last update? • How is the CT accessible to persons with disabilities? • How does the CT report to the NRA incorrect information on published offers? • Is the CT being publicly or privately operated? • Can CT operators apply for a trust mark? • How many trust marks have been issued? • Do the CTs that have received a trust mark meet the criteria regarding comparison tools as set out in the Electricity Directive? • Do CTs cover electricity and gas separately? • What is the number of dual energy offers compared to the total number of electricity/gas offers available in the CP? • How many unique users did the CT have in a year? <u>Availability of online services:</u> • Can contracts be signed online through the CT or other website (such as supplier websites) for all customers? If not, why and for what proportion of customers is this not the case. • Is management of energy contracts (supplier and product switching or addition of specific options in the current contract) online and/or through digital applications available to all customers? • Are bills available online? • Is customer service available through online channels • Can complaints be filed through the supplier website? • Are online services accessible to persons with disabilities? Questions on digital divide: • Are online offers available to elderly customers? • Are online offers available to customers without Internet access?

Metric 18: Percentage of consumers having access to online historical consumption information

Metric 18	**Percentage of consumers having access to online historical consumption information**

Description	EU legislation foresees that consumers should have access to their historical consumption data. This information can be provided online, facilitating consumers' rapid consultation, as needed.
Purpose	This metric is used to measure the possibility for consumers to access their consumption data through online tools. Having access to accurate historical consumption data enables consumers to compare alternative offers available in the market and make informed choices. It is also important for a consumer to get insight into their historical consumption in relation to the impact on the bill. This may, in turn, help towards a more responsible use of energy. Online access seems the most convenient way to access consumption data when required, especially in the case of a large amount of data (such as hourly billing).

Indicators	Data available to the consumer must go back at least 3 years, if such data is available to the concerned supplier or DSO (if the customer is in the supplier / DSO portfolio for less than 3 years, the data available must cover the whole period starting from the entry of the customer in the portfolio).
	
	The percentage of customers with this access should be broken down into four categories depending on the level of detail provided:
	- annual data;
	- monthly data;
	- daily data;
	- all the data required by the current supplier in order to proceed to billing: consumption on each billing period (annual, monthly, peak / off-peak, hourly,…).
	
	Questions:
	
	• Who is responsible for providing historical data?
	    o the current supplier
	    o the DSO
	    o both supplier and DS?
	    o Other
	
	• In case of supplier change, can the new supplier access historical consumption data with or without explicit consent by the concerned client?
	
	• Is the consumer required to explicitly mandate suppliers and any other service providers in order to receive historical data on their behalf from the DSO?

	• In markets with smart meters, can consumers receive historical consumption data through their smart meters? For instance, are there interfaces available to consumers to check historical consumption information?
	• What are the means to access historical consumption data online?
	  ○ Through energy data platform (consumer access)
	  ○ Other: supplier website, DSO website
	  ○ Interface with smart meter to online application
	• How far in the past historical consumption data can be accessed?
	• Can consumers access consumption data online easily?
	
	The metric should be calculated separately for gas and electricity.

Metric 19: Availability of a standardised supplier switching process and its duration

Metric 19	**Availability of a standardised supplier switching process and its duration**
Description	This metric measures the availability of a standardised and regulated process for switching energy suppliers, along with the average time it takes to complete the switch. It reflects the ease, transparency, and efficiency of supplier switching in the energy market.
Purpose	This metric is used to measure the availability of a standardised supplier switching process for consumers. An easy to use and quick switching process can spur further consumer engagement. This metric will inform NRAs on the need for measures to improve the existing switching process. In this regard, Article 12 of Directive 2019/944 allows a maximum time of three weeks to switch, from the date of the request. By no later than 2026, the technical process of switching[3] shall take no longer than 24 hours on any working day.

[3] The technical process steps follow the annex included in the draft Commission Implementing Regulation on interoperability requirements and on non-discriminatory and transparent procedures for access to data required for customer switching, available at: https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/13937-Access-to-data-for-switching-electricity-supplier-requirements_en

Indicators	In order to quantify this metric, NRAs should first of all verify the implementation of the switching process with the DSOs. NRAs should also calculate the average time between: - the date of the switching request made by the supplier, with all required data provided; and - the date when the actual transfer of the client is completed. Questions: o What is the legal maximum number of working days to execute a switch? o How many working days on average does the switching process take? o How many days, on average, does the technical process of switching take? The overall technical process for switching electricity suppliers — that is, the registration of a new supplier at a metering point with the market operator, in accordance with Article 12(1) of Directive (EU) 2019/944 — includes all procedural steps from the request to switch by the new supplier to the notification of accounting point characteristics to entitled parties by the metering point administrator. The time required to resolve any legitimate disputes that prevent the transfer according to national regulations and the time required for a technical intervention, if needed at the customer's premises, should not be included in the calculation.

Key property VII: Sufficient consumer engagement

A well-functioning market is one in which a number of consumers engage with the market.

Metric 20: Supplier switching rate and percentage of inactive consumers

Metric 20	**Supplier switching rate and percentage of inactive consumers**
Description	The switching rate indicates at which rate consumers switch or engage with energy suppliers or the wider market, measured on a yearly basis. The switching rate alone may be a crude measure of supplier engagement. In this metric, the definition of switching is extended to also include another measure of consumer engagement, namely the renegotiation of contracts (internal switching). Inactive consumers are defined here as consumers who have neither switched supplier/product nor actively searched for better deals. As a proxy, consumers considered as inactive are contracted on a default contract and have not made a choice of supplier in the market. The definition of default contract depends on the national context. What constitutes a default contract should be clearly specified when undertaking the assessment.
Purpose	This metric is used to measure the active engagement of consumers in the energy retail market. The supplier switching rate is one of these metrics. It is directly linked with the level of competition, since the switching rate affects the market share of competing companies and thus puts competitive pressure on energy suppliers. Supplier switching, or the threat thereof, can stimulate companies to offer better products and services. Supplier switching must be observed over time, as only a long-term perspective can contribute to a better understanding of what triggers supplier switching and how a competitive market reacts to this. In addition to this, renegotiated contracts could be measured. Consumers who actively decide to renegotiate their contracts with their current supplier also put competitive pressure on their energy supplier. The metric is also used to measure the lack of consumer involvement in the market. Inactive consumers represent the share of consumers that do not actively participate in liberalised market processes. Inactive consumers may lack the opportunity to participate in liberalised market processes altogether, depending on the national context. This metric can help inform NRAs' policies aimed at improving the level of consumer engagement and stimulating competitive pressure on suppliers.

Indicators	For completeness, NRAs should quantify customers switching to a new supplier and the renegotiation of contracts with the existing supplier. A switch occurs when a consumer moves from one energy supplier to a competing energy supplier. Switches are measured separately for household and non-household consumers. The definition of switching should follow the methodology established for data collection in the CEER database, feeding into ACER/CEER MMR. The number of renegotiated contracts with existing suppliers (internal switching) should exclude automatic roll-overs and changes that do not affect to economic conditions of the contract, such as modifications to contracted power, payment method or account management. In order to quantify this metric, NRAs should consider the following questions: ○ Annual switching rate in the entire retail market by number of meter points ○ Annual switching rate of household customers by number of meter points ○ Annual switching rate of all customers (i.e. in the entire retail market) based on volumes ○ Annual switching rate away from regulated prices to the competitive market by metering point for household customers

- Annual switching rate from the competitive market contracts to regulated contracts by metering points for household customers
- Annual switching rate of non-household customers by volume
- Involuntary switching rate of household customers due to market exit by number of meter points
- Are the involuntary switches included in the annual switching rate of all customers (entire retail market by number of meter points)?
- Annual internal switching rate of household customers by number of meter points
- Annual internal switching rate of non-household customers based on volumes
- What is the percentage of household consumers that have not switched supplier in the last three years by number of meter points?
- What is the percentage of non-household consumers that have not switched supplier in the last three years by number of meter points
- Number of consumers who have not switched supplier for the last 3 years and are contracted on a default contract
- Number of consumers who have never switched (based on survey data)
- Number of consumers who have not actively searched for better deals within the last 3 years (based on survey data)

- Percentage of consumers with incumbent supplier(s)
- Number of household customers with dominant supplier
- Question for a consumer survey: What are the perceived incentives for switching supplier?

Possible units of measure:

For the switching rate: Percentage of meter points, supplier customer accounts, and/or consumption volume that switched supplier in a given year relative to the average number of meter points/customer accounts or total consumption volume in the relevant market.

For the number of renegotiations: Percentage of number of renegotiations relative to the total number of supplier meter points /customer account (if the data is gathered from suppliers) or consumers (if the data is gathered through a consumer survey).

Percentage: Number of inactive consumers relative to the total number of supplier meter points/customer accounts. Percentage: Number of consumers who have never switched relative to number of consumers.

Percentage: Number of consumers who have not actively searched for better deals relative to number of consumers.

What constitutes a default contract should be clearly specified when undertaking the assessment. Inactive consumers are measured separately for gas and electricity. Inactive consumers are measured separately for household and business consumers.

Metric 21: Percentage of prosumers, energy communities and sharing groups

Metric 21	Percentage of prosumers, energy communities and sharing groups
Description	Self-generation of energy allows consumers to become active "prosumers". The Electricity Directive provisions in relation to the present metric are found in Articles 15, 15a and 16. Being able to produce and consume energy, by using different available technologies (e.g. roof solar photovoltaic panels, batteries), allows the consumer to engage actively in the market. Prosumers are consumers who produce energy on-site, behind a metering point capable of registering at least their hourly generation and consumption, making production data available[21]. Small generation plants connected at distribution level, for which there is not on-site production, are not typically classified as prosumers. The percentage of consumers engaging in distribution-level schemes could nonetheless be relevant to measure, e.g. community initiatives. Equally, this applies to consumers living in multi-dwelling buildings that may have come together to invest in generation capacity.
Purpose	This metric is used to measure the percentage of "prosumers" engaged with the market for self-consumed energy and related services. It indicates the percentage of consumers that participate actively in the energy transition, by producing energy on-site. This could include prosumers living in multi-dwelling buildings that have a metering scheme that differs from the traditional definition of prosumers as being behind one metering point. As a separate indicator, the level of consumers engaged in distribution-level schemes in the local community could be measured. Where the latter is measured, this must be clearly specified.
Indicators	The percentage of prosumers is calculated as the share of consumers that are registered and defined as prosumers on the national level. The method of registration and definition may be subject to national specificities; however, if a definition of prosumers also includes generation beyond a consumer's metering point this must be clearly specified. Questions: • What is the share of prosumers engaged in schemes in multi-dwelling buildings either as a separate measure, or if specified, as part of the general definition of prosumer? • What is the share of prosumers engaged in local schemes at distribution level?

[21] CEER Position Paper on Renewable Energy Self-Generation, September 2016.

	• Are consumers permitted to sell electricity to the market? • Percentage of household/non-household consumers generating their own electricity/number of prosumers (consumers with renewable production) • How many energy sharing groups are registered in the country? • How many energy communities are in the country? • How many consumers are members of Energy communities? • If consumers are currently not permitted to sell excess electricity produced, when will prosumers be permitted to sell excess energy? • What are the incentives for being “prosumer”? • Are there subsidies? Or discounts on taxes, levies and network tariffs? Are these discounts unfairly impacting other consumers, who are then forced to cover the resulting deficit? • What is the total volume of electricity injected into the grid by photovoltaic owners? What share does it represent over total volumes injected? • Number of households with solar PV installed • Percentage of prosumers using battery storage to optimize self-consumption and grid participation • Can smart meters account for the energy injected to the grid by household and non-household prosumers? • How is the total energy generated by prosumers registered? • What is the total energy generated/injected to the grid by household consumers/prosumers in your country in TWh? • What is the total energy generated/injected to the grid by non-household consumers/prosumers in your country in TWh? • Share of demand covered by self-generation for household/non-household consumers.

Key property VIII: Appropriate protection

In well-functioning retail energy markets, consumers enjoy an appropriate level of protection and there are specific measures to protect those defined as vulnerable customers.

In addition, the experience from the recent energy crisis in 2021/22, when in some MSs many suppliers exited the market due to financial reasons and/or to a lack of (or poorly defined) hedging strategies, demonstrated the need to ensure the reliability of suppliers and the coverage of bankruptcy risk, and to mitigate the consequences of such events on consumers.

A financially resilient retail energy market will benefit consumers by ensuring a better balance of risks between supply licensees and consumers and, in doing so, reduce the likelihood and cost of widespread failures. A resilient, profitable, investable market is also essential for the sustainable competition we want to see, where energy retailers have incentives to innovate in the pursuit of net zero and receive a reasonable profit as they drive up consumer service standards.

Metric 22: Time between notification to pay and disconnection for non-payment and percentage of disconnections due to non-payment

Metric 22	**Time between notification to pay and disconnection for non-payment and percentage of disconnections due to non-payment**
Description	In selected circumstances, disconnection of consumers by DSOs or suppliers can occur as a result of non-payment of energy bills. Rules are in place to manage this process and its duration. In some situations, disconnections may be prohibited. The time period between the notice to pay/notice of disconnection after missing payments and the disconnection of the customer can be monitored. For the protection of energy poor and vulnerable customers refer to Metric 24.
Purpose	This metric should be used to assess the level of protection against disconnections due to non-payment. In selected cases, suppliers and/or DSOs can disconnect consumers from electricity and gas networks. Specific consumer protection legislation foresees a number of provisions to mitigate disconnecting household consumers in cases of non-payment of bills. However, if those consumers continue to fail to pay their bills, suppliers and DSOs can disconnect them. Most MSs have implemented a procedure for disconnections, which foresees a certain period between non-payment and disconnection, in order to settle due amounts. This metric should be assessed in conjunction with the number of disconnections due to non-payment. If prepayment meters are widely distributed and used as a tool to manage debt, the proportion of new prepayment meters installed for debt (and especially if they are accompanied by a Court order) should be monitored alongside the number of disconnections for non-payment.

Indicators	This metric can be applied at two levels: from a legal view, in terms of the procedure and deadlines established by law; and from a practical view, in terms of the average number of working days observed in practice. For the practical indicator, it should include only households that do not make any payments toward the unpaid amounts (consumption in the past). It should also be assumed that the delivery of mail, notifications or similar warnings is instantaneous to make it possible to speak about an "absolute minimum" length of this duration. If the regulated company (DSO) does not know the exact reason for a disconnection, the total amount of disconnections by the DSO by request of the supplier, can be assessed as a proxy. To quantify this metric, NRAs should use the following step-by-step approach: 1. Determine the number of disconnected households due to non-payment for electricity and gas separately during a given year; 2. Determine the share of disconnections by dividing the number of disconnections by the total amount of household and non-household metering points for electricity and gas separately during the same year. Questions: • What is the number of working days between the notice of disconnection after missing payments and the disconnection of the customer for both electricity and gas?

	• Are household consumers given information on alternatives to disconnection (e.g. prepayment systems, energy audits, alternative payment plans, debt management advice) sufficiently in advance before a planned disconnection? • How many working days in advance must final household consumers be given a last/final warning about imminent disconnection in case of non-payment by law? • By law, how many working days (minimum) does it take from the first notification/reminder to pay an energy bill to disconnection in case of non-payment? • What is the share of prepayment meters installed in a given calendar year (in % of final household consumer metering points)? • What measures are in place to fully protect vulnerable customers and customers affected by energy poverty from electricity/gas disconnections? • Disconnection rate for vulnerable consumers: The number and percentage of vulnerable consumers who have been disconnected from electricity/gas due to non-payment. If applicable, determine also the number of new prepayment meters installed for debt, using the same reference year as that used for disconnections. Possible units of measure: Number of working days, or days. Percentage of total electricity and/or gas disconnections in a given year, and if available: number and percentage of prepayment meters installed for debt.

Metric 23: Minimum standards for key information in advertising and bills

Metric 23	Minimum standards for key information in advertising and bills
Description	Consumers need to be provided with the means of assessing the offers against each other in a transparent and clear manner. The proportion of suppliers using minimum standards for key information in advertising and bills, ideally identified separately and based on Annex 1 of the Electricity and Gas Directives, can serve as an indicator of suppliers' compliance with this provision.
Purpose	The purpose of this metric is twofold. It monitors the existence in the MS of minimum information standards, as well as the proportion of suppliers complying with them. This is a complex area and when assessing the situation, NRAs must be careful to attain an accurate picture of the situation. In addition to the outcome of this metric, more background information is necessary to fully understand the situation.
Indicators	At this point, there is no one-size-fits-all approach to assess this metric. Rules for key information in advertising and bills are defined in legislation and/or regulation.

- How many active suppliers out of the total number of active suppliers have implemented the minimum standards for key information:
    - in advertising?
    - in bills?
    - in precontractual information?

CEER encourages NRAs to explore the approach that is most suitable to the national circumstances.

Questions:

<u>Bills & contracts:</u>

- Do household consumer bills meet the criteria as set out in the Electricity and Gas Directives?

- What information on actual consumption must final household consumers find on or in their bills?
    - Current actual prices of electricity/gas
    - Information on the supplier fuel mix, including the environmental impact in terms of CO2 emissions and for nuclear electricity radioactive waste
        - Supplier fuel mix at the level of the supplier if the supplier is active in several MS
        - Supplier fuel mix at national level
    - Information on the product fuel mix, including the environmental impact in terms of CO_2 emissions and for nuclear electricity radioactive waste
    - Comparisons of consumers' current electricity/gas current consumption with consumption for the same period in the previous year in graphic form
    - Contact information for consumer organisations, energy agencies, or similar bodies
    - Website addresses, from which information may be obtained on available energy efficiency improvement measures, comparative end-user profiles, and objective technical specifications for energy-using equipment
    - Comparisons with an average normalized or benchmarked final consumer in the same user category

- What other, general information must final household consumers find on or with their energy bills?
    - Price to pay
    - The breakdown of price
    - Consumption for the billing period
    - Due date of payment
    - Reminder about cancellation terms and/or dates
    - Whether consumption is based on actual reading or estimation

	○ Contact details of the supplier, including a consumer support hotline and email ○ Tariff name (i.e. product name) ○ Duration of the contract/end date ○ Consumer's switching code or unique identification code for their supply point ○ Information on and benefits of switching supplier ○ A link or reference to where CTs can be found ○ Information on their rights as regards the means of dispute settlement available to them in the event of a dispute ○ Contact details of the dispute settlement body • How frequently do most final household consumers receive an energy bill from their supplier? ○ Monthly ○ Bimonthly ○ Quarterly ○ Each semester ○ Annually ○ Other (please explain) • What is the summary of key contractual conditions provided to consumers before signing the supply contract? And is it published? On the NRA website? On the supplier websites for each commercialised product? • Clarity of billing and tariff information: Percentage of consumers find their bills and contract terms easy to understand. <u>Advertising</u> • Which measures are in place against unfair commercial practices? • Can the NRA sanction?

Metric 24: Protection of energy poor and vulnerable customers

Metric 24	**Protection of energy poor and vulnerable customers**
Description	Addressing the specific needs and protection of energy poor and vulnerable customers, is one of the priorities of Europe's energy legislation. The latest revisions of legislation include various measures to protect customers at risk of over-indebtedness, low income consumers, older people and people with disabilities (especially those who have no access to the internet), etc. Article 28 of the Electricity Directive and Article 26 of the Gas Directive mandate Member States to take appropriate measures to protect customers and ensure the adequate safeguards to protect vulnerable customers and customers affected by energy poverty.

In this context, each Member State must define the concept of vulnerable customers, basing it on factors such as income level, share of energy expenditure relative to disposable income, home energy efficiency, critical dependence on electrical equipment for health reasons, and age.

The articles also state that Member States should ensure that rights and obligations linked to vulnerable customers are applied. In particular, they shall take measures to protect customers in remote areas. They should ensure high levels of consumer protection, particularly with respect to transparency regarding contractual terms and conditions, general information and dispute settlement mechanisms. The Directives also foresee protection from disconnection for these groups of consumers.

In the context of the rules on market-based prices (see metric 5), the Directives state that Member States should ensure the protection of energy poor and vulnerable household customers by social policy or by other means than public interventions in the price setting for the supply of electricity. By way of derogation, Member States may apply public interventions in the price setting for the supply of electricity to energy poor or vulnerable household customers.

In addition, the Social Climate Fund Regulation (EU) 2023/955, Article 2(10) specifies that vulnerable households include those in energy poverty, or, within the context of the social climate fund, households significantly affected by the price impacts of including greenhouse gas emissions from buildings.

Meanwhile, the Energy Efficiency Directive (EU) 2023/1791, Article 2(1) defines energy poverty as “a household’s lack of access to essential energy services, where such services provide basic levels and decent standards of living and health, including adequate heating, hot water, cooling, lighting, and energy to power appliances, in the relevant national context, existing national social policy and other relevant national policies, caused by a combination of factors, including at least non-affordability, insufficient disposable income, high energy expenditure and poor energy efficiency of homes”.

Finally, Article 15a of Directive (EU) 2024/1711 has added some additional provisions regarding energy poor and vulnerable customers:

- Member States shall take appropriate and non-discriminatory measures to ensure that vulnerable customers and customers affected by energy poverty can access energy sharing schemes. Those measures may include financial support measures or production allocation quota.
- Member States shall ensure that energy sharing projects owned by public authorities make the shared electricity accessible to vulnerable or energy poor customers or citizens. When doing so, Member States shall do their utmost to promote that the amount of

	that accessible energy is at least 10 % on average of the energy shared.
Purpose	As the energy markets are going through the transition to a more sustainable energy system, addressing the needs of vulnerable and fuel poor consumers becomes increasingly crucial. These customers often face higher energy costs relative to their income, making them more susceptible to energy poverty and require additional protection. The purpose of this metric is to assess how the provisions on energy poverty and vulnerable customers, listed in the description, are being implemented and monitored at national level.

Indicators	Possible questions to pose when quantifying this metric:
	
	• Is there a definition of vulnerable consumers?
	• What percentage of consumer fall under the defined category "vulnerable consumers"?
	• Is there a definition of energy poverty among household consumers?
	• What percentage of consumers fall under the defined category of "energy poverty"?
	• What is the share (%) of household consumers in energy poverty in a given calendar year?
	• How is the protection of energy poor and vulnerable household customers ensured?
	• Percentage of income spent on energy by vulnerable/energy poor consumers.
	• Are vulnerable/energy poor consumers free to choose their energy supplier, or are their options limited if they wish to receive assistance?
	• Number and percentage of household customers in receipt of social policy measures in line with Article 5.2 of the Electricity and 4.2 of the Gas Directive
	• Effectiveness of social policy measures: The proportion of vulnerable or energy-poor consumers who actually receive the social policy benefit (coverage rate).
	• Does the NRA have a role regarding energy poverty?
	• Which of the following stakeholders has lead responsibility for combating energy poverty?
	  ○ National government
	  ○ Subnational government (State, region, local levels)
	  ○ NRA
	  ○ Energy companies (including suppliers, DSOs, others)
	  ○ ADR, Ombudsman, and similar
	  ○ NGOs
	  ○ Other: please explain
	• Consumer awareness of support measures: This indicator should be the result of a survey based on a representative sample of vulnerable/energy poor consumers. Suggested questions include:
	  ○ Have you heard of vulnerable or energy-poor consumers support mechanism?

	- Do you know whether you are eligible to apply for it? - Have you received any information about this support program in the past 12 months? - Where did you learn about it? (e.g., supplier, government, NGOs, media, internet, friends or family, other). - Do you know how to apply for it? • Ease of Access to Assistance: Evaluate how easy it is for vulnerable consumers to apply for and maintain access to social policy measures. Key evaluation criteria may include: - Number of Administrative Steps: How many actions are required from the applicant (e.g., downloading forms, document submission, follow-up)? - Documentation Requirements: Type and amount of documents needed (ID, family certificate, income proof, etc.). - Available Channels: Whether the application can be submitted online, by phone, or in person. - Processing Time: Average time from application to resolution. - Error/Rejection Rate: Frequency of rejections due to missing or incorrect information. - Renewal Process: Whether renewals are automatic or require repeating the full process. - Digital Accessibility: Compliance with accessibility standards and availability in multiple formats/languages. - User Support: Availability of assistance through guides, hotlines, or in-person support.

Metric 25: Alternative dispute resolution, complaint handling and NRA role in protection of energy consumer rights

Metric 25	**Alternative dispute resolution, complaint handling and NRA role in protection of energy consumer rights**

Description	Meaningful and trustworthy handling of customer complaints is not only a necessary tool for customer protection but also an instrument for improving market performance. The number and nature of customer complaints are among most important indicators of customers' satisfaction and serve also to screen retail markets from a customer perspective. Moreover, alternative dispute resolution schemes may represent an efficient, fast and low-cost tool to solve disputes involving consumers and suppliers. The Electricity and Gas Directives lay down requirements for alternative dispute resolution and complaints handling, establishing the consumer's right to access an independent mechanism, as well as the obligation for market agents to participate in the process.
Purpose	The purpose of this metric is to assess the implemented rules on alternative dispute resolution in the retail energy markets with reference to disputes between a supplier/network operator and a customer.
Indicators	Questions: • Do consumers have access to a single point of contact in line with the Electricity and Gas Directives? • Who is responsible for dealing with final household and non-household consumer complaints? • How are final household and non-household customers informed about the contact details of a complaint service? • What is the average response time for consumer complaints? • What is the resolution success rate for complaints?Do consumers have access to an Alternative Dispute Resolution (ADR) body in line with the Directives? If not, what mechanisms are in place? • Who is responsible for ADR? • What is the legal maximum processing time to settle disputes? • How many disputes were settled by ADR in a given calendar year for household and non-household customers? • Is there complaints management at the supplier? Do suppliers inform the NRA about the nature of the complaints received? • Does the NRA monitor complaints by household customers? • If the NRA monitors complaints by household customers, what sources of information does the NRA use? Examples: complaints received by the NRA, ADR, Ombudsman, suppliers, DSOs, or other entities. • If the NRA monitors complaints, what was the number of complaints by household and non-household customers in the electricity and gas markets for each of the following categories in a given calendar year? Distinguish between household and non-household customer complaints, separate electricity from gas complaints and, if

possible, distinguish between complaints addressed to suppliers and complaints addressed to DSOs:
    - Connection to the grid
    - Metering
    - Quality of supply
    - Unfair commercial practices
    - Contracts and sales
    - Activation
    - Disconnection due to late payment or non-payment
    - Invoicing/billing and debt collection
    - Price/ tariff
    - Redress
    - Supplier change/ switching
    - Consumer services
    - Microproduction/ prosuming
    - Other: please specify
- Is the NRA responsible for enforcement of the application of energy consumer rights provisions derived from the Electricity and Gas Directives?
- Is the NRA responsible for enforcement of general consumer rights provisions (e.g. Unfair Commercial Practices Directive, Consumer Rights Directive), as regards the energy sector?
- Can the NRA issue fines/sanctions to suppliers as regards their non-compliance with energy consumer rights provisions?
- Can the NRA issue fines/sanctions to suppliers for their non-compliance with general consumer rights provisions, as regards the energy sector?
- Has the NRA issued fines/sanctions to suppliers for their non-compliance with general consumer rights provisions, as regards the energy sector?
- Does the NRA make use of data regarding consumer complaints to launch investigations/audits of suppliers, with a view to imposing fines/sanctions, where a situation of non-compliance is verified?
- What percentage of the fines/sanctions issued in a given calendar year originated from information obtained as a result of consumer complaints?
- Has the NRA made use of information from consumer complaints to review or revise its regulatory codes?
- Does the NRA monitor supplier quality of service?

Metric 26: Supplier of last resort

<table>
<tr><th>Metric 26f</th><th>Supplier of last resort</th></tr>
<tr><td>Description</td><td>The Electricity and Gas Directives require Member States to appoint a supplier of last resort (SOLR) in order to ensure the provision of universal service to all household and continuity of supply (for example in the case of supplier failure). This universal service is defined as the right to be supplied with electricity of a specified quality within their territory at competitive, easily and clearly comparable, transparent and non-discriminatory prices.

The supplier of last resort, as defined in the Directives, is a supplier who is designated to take over the supply of electricity or gas to customers of a supplier which has ceased to operate.

The existence of this safeguard can help to instil confidence in consumers as regards the functioning of energy markets.</td></tr>
<tr><td>Purpose</td><td>This metric is used to monitor the status of the supplier of last resort regime to enable NRAs to assess its implementation, functioning and effectiveness.</td></tr>
<tr><td>Indicators</td><td>Questions:
Do household and non-household consumers have access to a SOLR?
What is the share of final household and non-household consumers supplied by the SOLR(s) in a given calendar year?
What is the average length of time a consumer stays with the SOLR after discontinuation of service?
What is the maximum length of the supply of last resort foreseen in national law?
What are the functions of the SOLR(s) for final household consumers?
A safeguard for the failure of suppliers and/or DSOs
To protect inactive consumers
To protect consumers with payment difficulties
To offer price subject to public intervention
To provide universal service
There is no supplier of last resort
How often was the SOLR invoked?
What was the average price per kWh paid by consumers to the SOLR?
Is the procedure used to appoint a SOLR fair, transparent and non-discriminatory?
What is the role of the NRA in the SOLR appointment?
Assigns the SOLR based on a (random) selection process
Oversees the selection/appointment process
None</td></tr>
</table>

Metric 27: Market resilience and supplier stability

Metric 27	Market resilience and supplier stability
Description	During the recent energy crisis in 2021/22, in some MSs several suppliers exited the market due to financial reasons and/or to a lack of (or poorly defined) hedging strategies. This situation highlighted the need for reliable supplier mechanisms to mitigate bankruptcy risks and protect consumers from potential negative impacts. This experience demonstrated the need to assess the reliability of suppliers and the coverage of bankruptcy risk, and to mitigate the consequences of such events on consumers.
Purpose	A financially resilient retail energy market will benefit consumers by ensuring a better balance of risks between supply licensees and consumers and, in doing so, reduce the likelihood and cost of widespread failures. A resilient, profitable, investable market is also essential for the sustainable competition we want to see, where energy retailers have incentives to innovate in the pursuit of net zero and receive a reasonable profit as they drive up consumer service standards. Article 18a introduces measures to ensure that electricity suppliers are resilient to wholesale market price fluctuations by managing their supply and hedging strategies effectively. The goal of this Article is to avoid ‘hit and run’ strategies and to protect consumers from risky sourcing practices.
Indicators	Recent events have shown that NRAs needs to have a more comprehensive understanding of the financial position of individual suppliers and the wider retail market to protect consumers effectively. • Suppliers’ exit rate - Number of suppliers’ exits due to bankruptcies per year. • Hedging requirements - Through hedging, suppliers reduce their own (and consequently their customers’) exposure to wholesale market volatility. Short-term trends in the wholesale electricity market take time to translate into changes to customers’ bills. Producers and suppliers generally take a long-term perspective (1-2.5 years) rather than a short term (monthly – quarterly) perspective when setting consumer prices. Do suppliers employ this type of hedging strategy to increase certainty and help mitigate exposure to adverse price movements in the future? • How hedging requirements and supplier management rules take into account suppliers’ actual offering? Are the requirements and rules different according to different suppliers’ portfolios? • Financial obligations – Are suppliers able to maintain sufficient minimum capital and provide financial guarantees? Do they report to the NRA on their financial performance, risk management, and compliance with regulations? • What are the thresholds for applying hedging requirements and supplier risk management rules? For instance, based on number of customers? Other criteria? • Risk assessment measures - Risk assessment in the retail energy market involves identifying, analyzing, and mitigating potential risks to ensure the stability and reliability of energy supply to consumers. Key measures include financial stress testing, strengthening

	governance and accountability, and improving customer protection mechanisms. ◦ Financial stress tests: Are suppliers robust to a range of scenarios, such as price volatility, differing levels of customer bad debt and significant acquisitions or loss of customers, for example testing supplier's resilience to a cold winter, price decline and/or customer switching? ◦ Management Control Frameworks: Do suppliers have a robust management control framework to ensure they can deliver on their commercial strategies and manage risks effectively. ◦ Customer credit balances: Are there sufficient rules in place to ensure proper use of customer credit balances? • Market Concentration Risk Index - Measures the impact of dominant suppliers on market resilience. ◦ What is the extent to which a few companies dominate the market, potentially leading to reduced competition and higher prices? The Herfindahl-Hirschman Index (HHI) is a common tool used to calculate this index. Please refer to Metric 1 above for details.

Metric 28: Cybersecurity and data protection

Metric 28	**Cybersecurity and data protection**
Description	With the roll-out of smart-meters the submission to the DSOs of consumption and injection data on a 15-min time-frame for electricity and 30-min time-frame for gas have enlarged the volume of digital energy data that energy companies (system operators, suppliers but also aggregators or any other company providing energy services to consumers) have to deal with and can access to as well. The digitalisation of the energy sector requires a robust framework to protect such large volumes of digital energy data, which contains also personal information, from leaks and unlawful use. This metric aims to gather all aspects related to the digitalisation of the energy sector that NRAs have to monitor in their mission of protection of energy consumers and well-functioning of energy retail markets.
Purpose	NRAs can use this metric in the context of approval of contract templates that DSOs, suppliers and if applicable other energy services companies sign with final consumers. Some NRAs among their missions also monitor the deployment of a national energy data platform and its procedures and processes, including those related to cybersecurity and data protection. The monitoring of cybersecurity and protection of energy data is not necessarily a NRA task, depending on national legislation it can be a task fully assigned to or shared with other public administration authorities. New legislation, new offers, digital services and innovations in energy markets add another layer to an already complex energy market environment for consumers. Therefore, it is suggested that NRAs should ensure that energy consumers data are protected. It is paramount to ensure that the existing EU legal framework on personal data protection, privacy and

	cybersecurity – i.e., the GDPR, the ePrivacy directive, the Cyber Resilience Act and the NIS2 Directive – remain fully applicable and are not compromised.
Indicators	The terms "information security" and "cybersecurity" are often confused, but they have different meanings: - Information security protects all types of information, whether digital, physical, or verbal, against unauthorized access, modification, or destruction; the GDPR is part of information security. - Cybersecurity focuses specifically on digital systems and networks and protects them against cyber threats such as hacking, malware, and data breaches. Therefore, a distinction must be made between data protection (what am I protecting?) and cybersecurity (how am I protecting it?). Concerning data protection: All EU businesses are required to comply with the GDPR and process personal data responsibly. This means that personal data may only be collected, only if necessary for the performance of the service provided by the business, and processed with the customer's prior consent. If personal data (including data generated by the business itself based on previously obtained information) is no longer necessary to provide the relevant service, it must be deleted as soon as possible. Concerning cybersecurity: The NIS 2 Directive is a formidable weapon that provides for significant sanctions in the event of non-compliance. Legal references: **Data protection** • GDPR (https://eur-lex.europa.eu/eli/reg/2016/679/oj/eng) • ePrivacy Directive (https://eur-lex.europa.eu/eli/dir/2002/58/oj/eng) • EU Data Act (https://eur-lex.europa.eu/eli/reg/2023/2854/oj/eng) • Digital Fairness Act (under preparation; https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/14622-Digital-Fairness-Act_en) **Cybersecurity** • NIS2 Directive (https://eur-lex.europa.eu/eli/dir/2022/2555/oj/eng) • Cybersecurity Act (https://eur-lex.europa.eu/eli/reg/2019/881/oj/eng) • Cyber Resilience Act (https://eur-lex.europa.eu/eli/reg/2024/2847/oj/eng) • Cyber Solidarity Act (https://eur-lex.europa.eu/eli/reg/2025/38/oj/eng) • NCCS (https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=OJ:L_202401366) **Digital services** • Digital Services Act (https://eur-lex.europa.eu/eli/reg/2022/2065/oj/eng) **Artificial intelligence**

- AI Act (https://eur-lex.europa.eu/eli/reg/2024/1689/oj/eng)

Questions:

- Is the monitoring of cybersecurity and protection of energy data in your country a NRA task, or is it fully assigned to or shared with other public administration authorities?
- Do you have data privacy standards applying to energy companies?
- Are suppliers legally required to obtain consumers' consent before signing the contract regarding the collection and use of personal data during the performance of the contract (e.g., data from metering points)? If not required by law, do suppliers obtain consumers' consent for the collection/use of personal data? If so, how?
- Which risks have you identified in digital energy services available in your market?
- Do you have a cybersecurity preparedness plan related to the energy sector?

Annex 1 – List of abbreviations

Term	Definition
ACER	Agency for the Cooperation of Energy Regulators
BEUC	Bureau Européen des Unions de Consommateurs (European Consumer Organisation)
CEER	Council of European Energy Regulators
CEP	Clean Energy for All Europeans Package
CT	Comparison Tool
DR	Demand Response
DSO	Distribution System Operator
EMD	Electricity Market Design
GDPR	General Data Protection Regulation
GGP	Guidelines of Good Practice
HH	Household
HHI	Herfindahl-Hirschman Index
ICT	Information and Communication Technology
MS	Member States
NRAs	National Regulatory Authorities
NHH	Non-household
SME	Small and Medium-sized Enterprise
SOLR	Supplier Of Last Resort
TSO	Transmission System Operator

Annex 2 – Glossary of Terms

Consumer: In this document, the term “consumer” and also end-customer is used in a broad sense, including: household consumers, prosumers, small and medium-sized enterprises and not-for-profit organisations and large businesses.

National/Regional Data Hub: A collection of data from multiple sources organised for distribution, sharing, and often subsetting and sharing. The national/regional data hub might be owned/operated by one stakeholder, or a combination of stakeholders, and facilitates the storage and exchange of customer meter data. It may or may not be organised as a registered company.

Price: The price is the energy related component of the total cost, excluding the network tariff, taxes and levies.

Prosumer: A consumer who is equipped with self-generation and/or batteries (i.e. producer + consumer = prosumer).

Suppliers: An entity with a contractual agreement with end-customers relating to the supply of electricity, gas or a value-added service or product.

Regulated companies: Transmission system operators (TSO) and distribution system operators (DSO) are network companies in the electricity and gas sector, which are under the supervision of National Regulatory Authorities (NRAs). Where relevant, i.e. where they exist and are organised as registered companies, national/regional data hubs may be considered as regulated companies.

Relevant market: A relevant market could be defined either by geographical properties (e.g. DSO areas or national borders) and/or product categories or consumer segments (e.g. household consumers, small businesses).

Supplier Centric Model: The customer relationship is primarily with the supplier rather than the supplier and the DSO.

Annex 3 – Comparison of metrics between the 2017 Handbook and the 2025 Handbook

Metric Nr	Description 2017 Handbook	Metric Nr	Description 2025 Handbook
Key property I: Low Concentration within a relevant market			
1	Herfindahl-Hirschman Index	1	Herfindahl-Hirschman Index, concentration ratio (CR) and number of active suppliers
Key property II: Low market entry barriers			
		2	Regulatory and legal requirements for market access
2	Time needed and cost of accessing well-functioning wholesale markets and licencing/balancing regimes	3	Time needed and cost of accessing well-functioning wholesale markets and licencing/balancing regimes
3	Percentage of consumers connected to “bundled” DSOs	4	~~Percentage of consumers connected to “bundled” DSOs and the role of DSOs~~ Types of DSOs in the market and their role
4	Percentage of consumers with regulated energy prices	5	Percentage of consumers with public intervention in price setting ~~regulated energy prices~~
5	Number of common standards for consumer data and for DSO-supplier contract or existence of data hub	6	Number of common standards for consumer data and for DSO-supplier contract or existence of data hub
6	Availability of time-of-use metering and – where applicable – additional fee paid by the consumer to be able to have time-of-use prices vs. traditional metering	7	Availability of ~~time-of-use metering~~ smart metering
Key property III: Close relationship between wholesale markets and retail prices			
7	Correlation between wholesale and retail energy prices	8	Correlation between wholesale and retail energy prices
8	Mark-up between wholesale and retail energy prices	9	Mark-up between wholesale and retail energy prices
Key property IV: A range of offers, including demand response			
9	Availability of a variety of pricing and billing options	10	Availability of a variety of products, pricing and billing options
10	Availability of value-added services for implicit demand response and self-generation	11	Availability of value-added services for implicit demand response and self-generation

11	Availability of online offers	12	Availability of information on ~~contracts guaranteeing~~ the origin of the energy supplied and NRA role in fuel mix disclosure
12	Availability of contracts guaranteeing the origin of energy	13	Availability of explicit demand response offers
13	Availability of explicit demand response offers		
Key property V: High level of awareness and trust			
14	Percentage of consumers knowing they can switch supplier	14	Percentage of consumers knowing they can switch supplier
15	Percentage of consumers who know that DSOs are responsible for the continuity of supply and, where applicable, of metering	15	Percentage of consumers who know that DSOs are responsible for the continuity of supply and~~, where applicable, of~~ metering
16	Percentage of consumers trusting the energy market	16	Percentage of consumers trusting the energy market
Key property VI: Availability of empowerment tools			
17	Percentage of consumers having access to at least one independent and verified PCT	17	Percentage of consumers having access to at least one independent and verified ~~CT~~ comparison tool and to online customer services
18	Percentage of consumers having access to online historical consumption info	18	Percentage of consumers having access to online historical consumption information
19	Percentage of consumers having access to standardised supplier switching process (and its duration)	19	Availability of a ~~Percentage of consumers having access to~~ standardised supplier switching process ~~(~~and its duration~~)~~
Key property VII: Sufficient consumer engagement			
20	Supplier switching rate	20	Supplier switching rate and percentage of inactive consumers
21	Percentage of inactive consumers	21	Percentage of prosumers, energy communities and sharing groups
22	Percentage of prosumers		
Key property VIII: Appropriate protection			

23	Time between notification to pay and disconnection for non-payment	22	Time between notification to pay and disconnection for non-payment and percentage of disconnections due to non-payment
24	Percentage of disconnections due to non-payment	23	~~Percentage of suppliers using m~~ Minimum standards for key information in advertising and bills
25	Percentage of suppliers using minimum standards for key info in advertising and bills	24	Protection of energy poor and vulnerable customers
		25	Alternative dispute resolution, complaint handling and NRA role in protection of energy consumer rights
		26	Supplier of last resort
		27	Market resilience and supplier stability
		28	Cybersecurity and data protection

Annex 4 – Consumer rights laid down in Directive (EU) 2019/944

Consumer rights laid down in Directive (EU) 2019/944	
SUBJECT MATTER AND SCOPE	
Art. 1(2)	This Directive establishes consumer protection provisions.
DEFINITIONS	
Art. 2(1)	« **customer** » means a wholesale or final customer of electricity
Art. 2(2)	« **wholesale customer** » means a natural or legal person who purchases electricity for the purpose of resale inside or outside the system where that person is established;
Art. 2(3)	« **final customer** » means a customer who purchases electricity for own use;
Art. 2(4)	« **household customer** » means a customer who purchases electricity for the customer's own household consumption, excluding commercial or professional activities;
Art. 2(5)	« **non-household customer** » means s a natural or legal person who purchases electricity that is not for own household use, including producers, industrial customers, small and medium-sized enterprises, businesses and wholesale customers;
Art. 2(8)	« **active customer** » means a final customer, or a group of jointly acting final customers, who consumes or stores electricity generated within its premises located within confined boundaries or, where permitted by a Member State, within other premises, or who sells self-generated electricity or participates in flexibility or energy efficiency schemes, provided that those activities do not constitute its primary commercial or professional activity;
Art. 2(11)	« **citizen energy community** » means a legal entity that: (a) is based on voluntary and open participation and is effectively controlled by members or shareholders that are natural persons, local authorities, including municipalities, or small enterprises; (b) has for its primary purpose to provide environmental, economic or social community benefits to its members or shareholders or to the local areas where it operates rather than to generate financial profits; and (c) may engage in generation, including from renewable sources, distribution, supply, consumption, aggregation, energy storage, energy efficiency services or charging services for electric vehicles or provide other energy services to its members or shareholders;
Art. 2(12)	« **supply** » means the sale, including the resale, of electricity to customers;
Art. 2(15)	« **'dynamic electricity price contract** » means an electricity supply contract between a supplier and a final customer that reflects the price variation in the spot markets, including in the day-ahead and intraday markets, at intervals at least equal to the market settlement frequency;

Art. 2(16)	« **'contract termination fee** » means a charge or penalty imposed on customers by suppliers or market participants engaged in aggregation, for terminating an electricity supply or service contract;
Art. 2(17)	« **'switching-related fee** » means a charge or penalty for changing suppliers or market participants engaged in aggregation, including contract termination fees, that is directly or indirectly imposed on customers by suppliers, market participants engaged in aggregation or system operators;
Art. 2(21)	« **'billing information** » means the information provided on a final customer's bill, apart from a request for payment;
COMPETITIVE, CUSTOMER-CENTRED, FLEXIBLE AND NON-DISCRIMINATORY ELECTRICITY MARKETS	
Art. 3(1)	Member States shall ensure that their national law does not unduly hamper cross-border trade in electricity, consumer participation, including through demand response, investments into, in particular, variable and flexible energy generation, energy storage, or the deployment of electromobility or new interconnectors between Member States, and shall ensure that electricity prices reflect actual demand and supply.
FREE CHOICE OF SUPPLIER	
Art. 4	Member States shall ensure that all customers are free to purchase electricity from the supplier of their choice and shall ensure that all customers are free to have more than one electricity supply contract at the same time, provided that the required connection and metering points are established.
MARKET-BASED SUPPLY PRICES	
Art. 5	1. Suppliers shall be free to determine the price at which they supply electricity to customers. Member States shall take appropriate actions to ensure effective competition between suppliers. 2. Member States shall ensure the protection of energy poor and vulnerable household customers by social policy or by other means than public interventions in the price setting for the supply of electricity. 3. Member States may apply public interventions in the price setting for the supply of electricity to energy poor or vulnerable household customers. 4. Public interventions in the price setting for the supply of electricity shall: (a) pursue a general economic interest and not go beyond what is necessary to achieve that general economic interest (b) be clearly defined, transparent, non-discriminatory and verifiable;

	(c) guarantee equal access for Union electricity undertakings to customers; (d) be limited in time and proportionate as regards their beneficiaries; € not result in additional costs for market participants in a discriminatory way.
THIRD-PARTY ACCESS	
Art. 6	1. Member States shall ensure the implementation of a system of third- party access to the transmission and distribution systems based on published tariffs, applicable to all customers and applied objectively and without discrimination between system users. Member States shall ensure that those tariffs, or the methodologies underlying their calculation, are approved in accordance with Article 59 prior to their entry into force and that those tariffs, and the methodologies — where only methodologies are approved — are published prior to their entry into force.
BASIC CONTRACTUAL RIGHTS	
Art. 10	1. Member States shall ensure that all final customers are entitled to have their electricity provided by a supplier, subject to the supplier's agreement, regardless of the Member State in which the supplier is registered, provided that the supplier follows the applicable trading and balancing rules. In that regard, Member States shall take all measures necessary to ensure that administrative procedures do not discriminate against suppliers already registered in another Member State. 3. Final customers shall have the right to a contract with their supplier that specifies: (a) the identity and address of the supplier; (b) the services provided, the service quality levels offered, as well as the time for the initial connection; (c) the types of maintenance service offered; (d) the means by which up-to-date information on all applicable tariffs, maintenance charges and bundled products or services may be obtained; (e) the duration of the contract, the conditions for renewal and termination of the contract and services, including products or services that are bundled with those services, and whether terminating the contract without charge is permitted; (f) any compensation and the refund arrangements which apply if contracted service quality levels are not met, including inaccurate or delayed billing;

	(g) the method of initiating an out-of-court dispute settlement procedure in accordance with Article 26; (h) information relating to consumer rights, including information on complaint handling and all of the information referred to in this paragraph, that is clearly communicated on the bill or the electricity undertaking's web site. Conditions shall be fair and well known in advance. In any case, this information shall be provided prior to the conclusion or confirmation of the contract. Where contracts are concluded through intermediaries, the information relating to the matters set out in this paragraph shall also be provided prior to the conclusion of the contract. Final customers shall be provided with a summary of the key contractual conditions in a prominent manner and in concise and simple language. 4. Final customers shall be given adequate notice of any intention to modify contractual conditions and shall be informed about their right to terminate the contract when the notice is given. Suppliers shall notify their final customers, in a transparent and comprehensible manner, directly of any adjustment in the supply price and of the reasons and preconditions for the adjustment and its scope, at an appropriate time no later than two weeks, or no later than one month in the case of household customers, before the adjustment comes into effect. Member States shall ensure that final customers are free to terminate contracts if they do not accept the new contractual conditions or adjustments in the supply price notified to them by their supplier. 5. Suppliers shall provide final customers with transparent information on applicable prices and tariffs and on standard terms and conditions, in respect of access to and use of electricity services. 6. Suppliers shall offer final customers a wide choice of payment methods. Such payment methods shall not unduly discriminate between customers. Any difference in charges related to payment methods or prepayment systems shall be objective, non-discriminatory and proportionate and shall not exceed the direct costs borne by the payee for the use of a specific payment method or a prepayment system, in line with Article 62 of Directive (EU) 2015/2366 of the European Parliament and of the Council (22). 7. Pursuant to paragraph 6, household customers who have access to prepayment systems shall not be placed at a disadvantage by the prepayment systems.

	8. Suppliers shall offer final customers fair and transparent general terms and conditions, which shall be provided in plain and unambiguous language and shall not include non-contractual barriers to the exercise of customers' rights, such as excessive contractual documentation. Customers shall be protected against unfair or misleading selling methods. 9. Final customers shall have the right to a good standard of service and complaint handling by their suppliers. Suppliers shall handle complaints in a simple, fair and prompt manner. 10. When accessing universal service under the provisions adopted by Member States pursuant to Article 27, final customers shall be informed about their rights regarding universal service. 11. Suppliers shall provide household customers with adequate information on alternative measures to disconnection sufficiently in advance of any planned disconnection. Such alternative measures may refer to sources of support to avoid disconnection, prepayment systems, energy audits, energy consultancy services, alternative payment plans, debt management advice or disconnection moratoria and not constitute an extra cost to the customers facing disconnection 12. Suppliers shall provide final customers with a final closure account after any switch of supplier no later than six weeks after such a switch has taken place.
ENTITLEMENT TO A DYNAMIC ELECTRICITY PRICE CONTRACT	
Art. 11	1. Member States shall ensure that the national regulatory framework enables suppliers to offer dynamic electricity price contracts. Member States shall ensure that final customers who have a smart meter installed can request to conclude a dynamic electricity price contract with at least one supplier and with every supplier that has more than 200 000 final customers. 2. Member States shall ensure that final customers are fully informed by the suppliers of the opportunities, costs and risks of such dynamic electricity price contracts, and shall ensure that suppliers are required to provide information to the final customers accordingly, including with regard to the need to have an adequate electricity meter installed. Regulatory authorities shall monitor the market developments and assess the risks that the new products and services may entail and deal with abusive practices. 3. Suppliers shall obtain each final customer's consent before that customer is switched to a dynamic electricity price contract.
RIGHT TO SWITCH AND RULES ON SWITCHING-RELATED FEES	

Art. 12	1. Switching supplier or market participant engaged in aggregation shall be carried out within the shortest possible time. Member States shall ensure that a customer wishing to switch suppliers or market participants engaged in aggregation, while respecting contractual conditions, is entitled to such a switch within a maximum of three weeks from the date of the request. By no later than 2026, the technical process of switching supplier shall take no longer than 24 hours and shall be possible on any working day. 2. Member States shall ensure that at least household customers and small enterprises are not charged any switching related fees. 3. By way of derogation from paragraph 2, Member States may permit suppliers or market participants engaged in aggregation to charge customers contract termination fees where those customers voluntarily terminate fixed-term, fixed-price electricity supply contracts before their maturity, provided that such fees are part of a contract that the customer has voluntarily entered into and that such fees are clearly communicated to the customer before the contract is entered into. Such fees shall be proportionate and shall not exceed the direct economic loss to the supplier or the market participant engaged in aggregation resulting from the customer's termination of the contract, including the costs of any bundled investments or services that have already been provided to the customer as part of the contract. The burden of proving the direct economic loss shall be on the supplier or market participant engaged in aggregation, and the permissibility of contract termination fees shall be monitored by the regulatory authority, or by an other competent national authority. 4. Member States shall ensure that the right to switch supplier or market participants engaged in aggregation is granted to customers in a non- discriminatory manner as regards cost, effort and time. 5. Household customers shall be entitled to participate in collective switching schemes. Member States shall remove all regulatory or administrative barriers for collective switching, while providing a framework that ensures the utmost consumer protection to avoid any abusive practices.
AGGREGATION CONTRACT	
Art. 13	1. Member States shall ensure that all customers are free to purchase and sell electricity services, including aggregation, other than supply, independently from their electricity supply contract and from an electricity undertaking of their choice.

	2. Member States shall ensure that, where a final customer wishes to conclude an aggregation contract, the final customer is entitled to do so without the consent of the final customer's electricity undertakings. Member States shall ensure that market participants engaged in aggregation fully inform customers of the terms and conditions of the contracts that they offer to them. 3. Member States shall ensure that final customers are entitled to receive all relevant demand response data or data on supplied and sold electricity free of charge at least once every billing period if requested by the customer. 4. Member States shall ensure that the rights referred to in paragraphs 2 and 3 are granted to final customers in a non-discriminatory manner as regards cost, effort or time. In particular, Member States shall ensure that customers are not subject to discriminatory technical and administrative requirements, procedures or charges by their supplier on the basis of whether they have a contract with a market participant engaged in aggregation.
COMPARISON TOOLS	
Art. 14	1. Member States shall ensure that at least household customers, and microenterprises with an expected yearly consumption of below 100 000 kWh, have access, free of charge, to at least one tool comparing the offers of suppliers, including offers for dynamic electricity price contracts. Customers shall be informed of the availability of such tools in or together with their bills or by other means. The tools shall meet at least the following requirements: (a) they shall be independent from market participants and ensure that electricity undertakings are given equal treatment in search results; (b) they shall clearly disclose their owners and the natural or legal person operating and controlling the tools, as well as information on how the tools are financed; (c) they shall set out clear and objective criteria on which the comparison is to be based, including services, and disclose them; (d) they shall use plain and unambiguous language; (e) they shall provide accurate and up-to-date information and state the time of the last update; (f) they shall be accessible to persons with disabilities, by being perceivable, operable, understandable and robust; (g) they shall provide an effective procedure for reporting incorrect information on published offers; and (h) they shall perform comparisons, while limiting the personal data requested to that strictly necessary for the comparison.

	Member States shall ensure that at least one tool covers the entire market. Where multiple tools cover the market, those tools shall include, as complete as practicable, a range of electricity offers covering a significant part of the market and, where those tools do not completely cover the market, a clear statement to that effect, before displaying results. 2. The tools referred to in paragraph 1 may be operated by any entity, including private companies and public authorities or bodies. 3. Member States shall appoint a competent authority to be responsible for issuing trust marks for comparison tools that meet the requirements set out in paragraph 1, and for ensuring that comparison tools bearing a trust mark continue to meet the requirements set out in paragraph 1. That authority shall be independent of any market participants and comparison tool operators. 4. Member States may require comparison tools referred to in paragraph 1 to include comparative criteria relating to the nature of the services offered by the suppliers. 5. Any tool comparing the offers of market participants shall be eligible to apply for a trust mark in accordance with this Article on a voluntary and non-discriminatory basis. 6. By way of derogation from paragraphs 3 and 5, Member States may choose not to provide for the issuance of trust marks to comparison tools if a public authority or body provides a comparison tool that meets the requirements set out in paragraph 1.
ACTIVE CUSTOMERS	
Art. 15	1. Member States shall ensure that final customers are entitled to act as active customers without being subject to disproportionate or discriminatory technical requirements, administrative requirements, procedures and charges, and to network charges that are not cost- reflective. 2. Member States shall ensure that active customers are: (a) entitled to operate either directly or through aggregation; (b) entitled to sell self-generated electricity, including through power purchase agreements; (c) entitled to participate in flexibility schemes and energy efficiency schemes; (d) entitled to delegate to a third party the management of the installations required for their activities, including installation, operation, data handling and maintenance, without that third party being considered to be an active customer;

	(e) subject to cost-reflective, transparent and non-discriminatory network charges that account separately for the electricity fed into the grid and the electricity consumed from the grid, in accordance with Article 59(9) of this Directive and Article 18 of Regulation (EU) 2019/943, ensuring that they contribute in an adequate and balanced way to the overall cost sharing of the system; (f) financially responsible for the imbalances they cause in the electricity system; to that extent they shall be balance responsible parties or shall delegate their balancing responsibility in accordance with Article 5 of Regulation (EU) 2019/943. 3. Member States may have different provisions applicable to individual and jointly-acting active customers in their national law, provided that all rights and obligations under this Article apply to all active customers. Any difference in the treatment of jointly-acting active customers shall be proportionate and duly justified. 4. Member States that have existing schemes that do not account separately for the electricity fed into the grid and the electricity consumed from the grid, shall not grant new rights under such schemes after 31 December 2023. In any event, customers subject to existing schemes shall have the possibility at any time to opt for a new scheme that accounts separately for the electricity fed into the grid and the electricity consumed from the grid as the basis for calculating network charges. 5. Member States shall ensure that active customers that own an energy storage facility: (a) have the right to a grid connection within a reasonable time after the request, provided that all necessary conditions, such as balancing responsibility and adequate metering, are fulfilled; (b) are not subject to any double charges, including network charges, for stored electricity remaining within their premises or when providing flexibility services to system operators; (c) are not subject to disproportionate licensing requirements or fees; (d) are allowed to provide several services simultaneously, if technically feasible.
BILLS AND BILLING INFORMATION	
Art. 18	1. Member States shall ensure that bills and billing information are accurate, easy to understand, clear, concise, user friendly and presented in a manner that facilitates comparison by final customers. On request, final customers shall receive a clear and understandable explanation of how their bill was derived, especially where bills are not based on actual consumption.

	2. Member States shall ensure that final customers receive all their bills and billing information free of charge. 3. Member States shall ensure that final customers are offered the option of electronic bills and billing information and are offered flexible arrangements for the actual payment of the bills. 4. If the contract provides for a future change of the product or price, or a discount, this shall be indicated on the bill together with the date on which the change takes place. 5. Member States shall consult consumer organisations when they consider changes to the requirements for the content of bills. 6. Member States shall ensure that bills and billing information fulfil the minimum requirements set out in Annex I.
SMART METERING SYSTEMS	
Art. 19	1. In order to promote energy efficiency and to empower final customers, Member States or, where a Member State has so provided, the regulatory authority shall strongly recommend that electricity undertakings and other market participants optimise the use of electricity, inter alia, by providing energy management services, developing innovative pricing formulas, and introducing smart metering systems that are interoperable, in particular with consumer energy management systems and with smart grids, in accordance with the applicable Union data protection rules. 2. Member States shall ensure the deployment in their territories of smart metering systems that assist the active participation of customers in the electricity market. 3. Member States that proceed with the deployment of smart metering systems shall adopt and publish the minimum functional and technical requirements for the smart metering systems to be deployed in their territories. Member States shall ensure the interoperability of those smart metering systems, as well as their ability to provide output for consumer energy management systems. In that respect, Member States shall have due regard to the use of the relevant available standards, including those enabling interoperability, to best practices and to the importance of the development of smart grids and the development of the internal market for electricity.

	4. Member States that proceed with the deployment of smart metering systems shall ensure that final customers contribute to the associated costs of the deployment in a transparent and non-discriminatory manner, while taking into account the long-term benefits to the whole value chain. Member States or, where a Member State has so provided, the designated competent authorities, shall regularly monitor such deployment in their territories to track the delivery of benefits to consumers.
SMART METERING SYSTEMS	
Art. 19	- Member States shall ensure the deployment of smart metering systems that can accurately measure consumption and provide information on actual time of use, and that are able to transmit and receive data for information, monitoring and control purposes using a form of electronic communication - Such obligation to deploy shall be subject to a cost-benefit assessment at least for household customers
FUNCTIONALITIES OF SMART METERING SYSTEMS	
Art. 20	Member States shall deploy smart metering systems in accordance with European standards and meet the following requirements: (a) the smart metering systems shall accurately measure actual electricity consumption and shall be capable of providing to final customers information on actual time of use. Validated historical consumption data shall be made easily and securely available and visualised to final customers on request and at no additional cost. Non- validated near real-time consumption data shall also be made easily and securely available to final customers at no additional cost, through a standardised interface or through remote access, in order to support automated energy efficiency programmes, demand response and other services; (b) the security of the smart metering systems and data communication shall comply with relevant Union security rules, having due regard of the best available techniques for ensuring the highest level of cybersecurity protection while bearing in mind the costs and the principle of proportionality; (c) the privacy of final customers and the protection of their data shall comply with relevant Union data protection and privacy rules; (d) meter operators shall ensure that the meters of active customers who feed electricity into the grid can account for electricity fed into the grid from the active customers' premises;

	(e) if final customers request it, data on the electricity they fed into the grid and their electricity consumption data shall be made available to them, in accordance with the implementing acts adopted pursuant to Article 24, through a standardised communication interface or through remote access, or to a third party acting on their behalf, in an easily understandable format allowing them to compare offers on a like-for-like basis; (f) appropriate advice and information shall be given to final customers prior to or at the time of installation of smart meters, in particular concerning their full potential with regard to the management of meter reading and the monitoring of energy consumption, and concerning the collection and processing of personal data in accordance with the applicable Union data protection rules; (g) smart metering systems shall enable final customers to be metered and settled at the same time resolution as the imbalance settlement period in the national market. For the purposes of point (e) of the first subparagraph, it shall be possible for final customers to retrieve their metering data or transmit them to another party at no additional cost and in accordance with their right to data portability under Union data protection rules
ENTITLEMENT TO A SMART METER	
Art. 21	1. Where smart metering systems are not deployed, Member States shall ensure that every final customer is entitled on request, while bearing the associated costs, to have installed or, where applicable, to have upgraded, under fair, reasonable and cost-effective conditions, a smart meter that: - (a) is equipped, where technically feasible, with the functionalities referred to in Article 20, or with a minimum set of functionalities to be defined and published by Member States at national level in accordance with Annex II; - (b) is interoperable and able to deliver the desired connectivity of the metering infrastructure with consumer energy management systems in near real-time. 2. In the context of a customer request for a smart meter pursuant to paragraph 1, Member States or, where a Member State has so provided, the designated competent authorities shall: (a) ensure that the offer to the final customer requesting the installation of a smart meter explicitly states and clearly describes: (i) the functions and interoperability that can be supported by the smart meter and the services that are feasible as well as the benefits that can be realistically attained by having that smart meter at that moment in time; (ii) any associated costs to be borne by the final customer;

	(b) ensure that it is installed within a reasonable time, no later than four months after the customer's request; (c) regularly, and at least every two years, review and make publicly available the associated costs, and trace the evolution of those costs as a result of technology developments and potential metering system upgrades.
CONVENTIONAL METERS	
Art. 22	1. Where final customers do not have smart meters, Member States shall ensure that final customers are provided with individual conventional meters that accurately measure their actual consumption. 2. Member States shall ensure that final customers are able to easily read their conventional meters, either directly or indirectly through an online interface or through another appropriate interface.
DATA MANAGEMENT	
Art. 23	1. When laying down the rules regarding the management and exchange of data, Member States or, where a Member State has so provided, the designated competent authorities shall specify the rules on the access to data of the final customer by eligible parties in accordance with this Article and the applicable Union legal framework. For the purpose of this Directive, data shall be understood to include metering and consumption data as well as data required for customer switching, demand response and other services. 2. Member States shall organise the management of data in order to ensure efficient and secure data access and exchange, as well as data protection and data security. Independently of the data management model applied in each Member State, the parties responsible for data management shall provide access to the data of the final customer to any eligible party, in accordance with paragraph 1. Eligible parties shall have the requested data at their disposal in a non-discriminatory manner and simultaneously. Access to data shall be easy and the relevant procedures for obtaining access to data shall be made publicly available. 3. The rules on access to data and data storage for the purpose of this Directive shall comply with the relevant Union law. The processing of personal data within the framework of this Directive shall be carried out in accordance with Regulation (EU) 2016/679.

	4. Member States or, where a Member State has so provided, the designated competent authorities, shall authorise and certify or, where applicable, supervise the parties responsible for the data management, in order to ensure that they comply with the requirements of this Directive. Without prejudice to the tasks of the data protection officers under Regulation (EU) 2016/679, Member States may decide to require that parties responsible for the data management appoint compliance officers who are to be responsible for monitoring the implementation of measures taken by those parties to ensure non-discriminatory access to data and compliance with the requirements of this Directive. Member States may appoint compliance officers or bodies referred to in point (d) of Article 35(2) of this Directive to fulfil the obligations under this paragraph. 5. No additional costs shall be charged to final customers for access to their data or for a request to make their data available. Member States shall be responsible for setting the relevant charges for access to data by eligible parties. Member States or, where a Member State has so provided, the designated competent authorities shall ensure that any charges imposed by regulated entities that provide data services are reasonable and duly justified.
SINGLE POINT OF CONTACT	
Art. 25	Member States shall ensure the provision of single points of contact, to provide customers with all necessary information concerning their rights, the applicable law and dispute settlement mechanisms available to them in the event of a dispute. Such single points of contact may be part of general consumer information points.
OUT-OF-COURT DISPUTE SETTLEMENT	
Art. 26	1. Member States shall ensure that final customers have access to simple, fair, transparent, independent, effective and efficient out-of- court mechanisms for the settlement of disputes concerning rights and obligations established under this Directive, through an independent mechanism such as an energy ombudsman or a consumer body, or through a regulatory authority. Where the final customer is a consumer within the meaning of Directive 2013/11/EU of the European Parliament and of the Council (23), such out-of-court dispute settlement mechanisms shall comply with the quality requirements of Directive 2013/11/EU and shall provide, where warranted, for systems of reimbursement and compensation.

	2. Where necessary, Member States shall ensure that alternative dispute resolution entities cooperate to provide simple, fair, transparent, independent, effective and efficient out-of-court dispute settlement mechanisms for any dispute that arises from products or services that are tied to, or bundled with, any product or service falling under the scope of this Directive. 3. The participation of electricity undertakings in out-of-court dispute settlement mechanisms for household customers shall be mandatory unless the Member State demonstrates to the Commission that other mechanisms are equally effective.
UNIVERSAL SERVICE	
Art. 27	1. Member States shall ensure that all household customers, and, where Member States deem it to be appropriate, small enterprises, enjoy universal service, namely the right to be supplied with electricity of a specified quality within their territory at competitive, easily and clearly comparable, transparent and non-discriminatory prices. To ensure the provision of universal service, Member States may appoint a supplier of last resort. Member States shall impose on distribution system operators an obligation to connect customers to their network under terms, conditions and tariffs set in accordance with the procedure laid down in Article 59(7). This Directive does not prevent Member States from strengthening the market position of the household customers and small and medium-sized non-household customers by promoting the possibilities for the voluntary aggregation of representation for that class of customers. 2. Paragraph 1 shall be implemented in a transparent and non- discriminatory way, and shall not impede the free choice of supplier provided for in Article 4.
VULNERABLE CUSTOMERS	
Art. 28	1. Member States shall take appropriate measures to protect customers and shall ensure, in particular, that there are adequate safeguards to protect vulnerable customers. In this context, each Member State shall define the concept of vulnerable customers which may refer to energy poverty and, inter alia, to the prohibition of disconnection of electricity to such customers in critical times. The concept of vulnerable customers may include income levels, the share of energy expenditure of disposable income, the energy efficiency of homes, critical dependence on electrical equipment for health reasons, age or other criteria. Member States shall ensure that rights and obligations linked to vulnerable customers are applied. In particular, they shall take measures to protect customers in remote areas. They shall ensure high levels of consumer protection, particularly with respect to transparency regarding contractual terms and conditions, general information and dispute settlement mechanisms.

	2. Member States shall take appropriate measures, such as providing benefits by means of their social security systems to ensure the necessary supply to vulnerable customers, or providing for support for energy efficiency improvements, to address energy poverty where identified pursuant to point (d) of Article 3(3) of Regulation (EU) 2018/1999, including in the broader context of poverty. Such measures shall not impede the effective opening of the market set out in Article 4 or market functioning and shall be notified to the Commission, where relevant, in accordance with Article 9(4). Such notifications may also include measures taken within the general social security system.
ENERGY POVERTY	
Art. 29	When assessing the number of households in energy poverty pursuant to point (d) of Article 3(3) of Regulation (EU) 2018/1999, Member States shall establish and publish a set of criteria, which may include low income, high expenditure of disposable income on energy and poor energy efficiency. The Commission shall provide guidance on the definition of 'significant number of households in energy poverty' in this context and in the context of Article 5(5), starting from the premise that any proportion of households in energy poverty can be considered to be significant.
TASKS OF DISTRIBUTION SYSTEM OPERATORS	
Art. 31	The distribution system operator shall not discriminate between system users or classes of system users, particularly in favour of its related undertakings. The distribution system operator shall provide system users with the information they need for efficient access to, including use of, the system.
GENERAL OBJECTIVES OF THE REGULATORY AUTHORITY	
Art. 58 g)	The regulatory authority shall ensure high levels of consumer protection in close cooperation with relevant consumer protection authorities and consultation with relevant consumer bodies
Art. 58 h)	The regulatory authority shall help to achieve high standards of public service in electricity supply, contributing to the protection of vulnerable customers and contributing to the compatibility of necessary data exchange processes for customer switching
DUTIES AND POWERS OF THE REGULATORY AUTHORITY	
Art. 59(1) t)	- The regulatory authority shall ensure non-discriminatory access to customer consumption data, the provision, for optional use, of an easily understandable harmonised format at national level for consumption data,
Art. 59(1) u)	- The regulatory authority shall help to ensure the implementation of rules relating to the roles and responsibilities of transmission

	system operators, distribution system operators, suppliers, customers and other market participants pursuant to Regulation (EU) 2019/943
ANNEX I – MINIMUM REQUIREMENTS FOR BILLING AND BILLING INFORMATION	
MINIMUM INFORMATION TO BE CONTAINED ON THE BILL AND IN THE BILLING INFORMATION	
Art. 1.1	Minimum information to be contained on the bill and in the billing information. The following key information shall be prominently displayed to final customers in their bills, distinctly separate from other parts of the bill: (a) the price to be paid and a breakdown of the price where possible, together with a clear statement that all energy sources may also benefit from incentives that were not financed through the levies indicated in the breakdown of the price; (b) the date on which payment is due.
Art. 1.2	- Bills and billing information shall convey information to the final customers on : ✓ their consumption for the billing period ✓ the name and contact details of their supplier (email address, hotline) ✓ the tariff name ✓ the end date of the contract, if applicable ✓ the availability and benefits of switching ✓ the unique identification code for the final customer's supply point ✓ the out-of-court dispute settlement and contact details ✓ the single point of contact ✓ a link or reference to where comparison tools can be found
Art. 1.3	Where bills are based on actual consumption or remote reading by the operator, the following information shall be made available to final customers in, with or signposted to within their bills and periodic settlement bills: (a) comparisons of the final customer's current electricity consumption with the final customer's consumption for the same period in the previous year in graphic form; (b) contact information for consumer organisations, energy agencies or similar bodies, including website addresses, from which information may be obtained on available energy efficiency improvement measures for energy-using equipment; (c) comparisons with an average normalised or benchmarked final customer in the same user category.
FREQUENCY OF BILLING AND THE PROVISION OF BILLING INFORMATION	

Art. 2	(a) billing on the basis of actual consumption shall take place at least once a year; (b) where the final customer does not have a meter that allows remote reading by the operator, or where the final customer has actively chosen to disable remote reading in accordance with national law, accurate billing information based on actual consumption shall be made available to the final customer at least every six months, or once every three months, if requested or where the final customer has opted to receive electronic billing; c) where the final customer does not have a meter that allows remote reading by the operator, or where the final customer has actively chosen to disable remote reading in accordance with national law, the obligations in points (a) and (b) may be fulfilled by means of a system of regular self-reading by the final customer, whereby the final customer communicates readings from the meter to the operator; billing or billing information may be based on estimated consumption or a flat rate only where the final customer has not provided a meter reading for a given billing interval; (d) where the final customer has a meter that allows remote reading by the operator, accurate billing information based on actual consumption shall be provided at least every month; such information may also be made available via the internet, and shall be updated as frequently as allowed by the measurement devices and systems used.
BREAKDOWN OF THE FINAL CUSTOMER'S PRICE	
Art. 3	The customer's price is the sum of the following three components: the energy and supply component, the network component (transmission and distribution) and the component comprising taxes, levies, fees and charges.
ACCESS TO COMPLEMENTARY INFORMATION ON HISTORICAL CONSUMPTION	
Art. 4	Member States shall require that, to the extent that complementary information on historical consumption is available, such information is made available, at the request of the final customer, to the supplier or service provider designated by the final customer. Where the final customer has a meter that allows remote reading by the operator installed, the final customer shall have easy access to complementary information on historical consumption allowing detailed self-checks. Complementary information on historical consumption shall include: (a) cumulative data for at least the three previous years or the period since the start of the electricity supply contract, if that period is shorter. The data shall correspond to the intervals for which frequent billing information has been produced; and

	(b) detailed data according to the time of use for any day, week, month and year, which is made available to the final customer without undue delay via the internet or the meter interface, covering the period of at least the previous 24 months or the period since the start of the electricity supply contract, if that period is shorter.
DISCLOSURE OF ENERGY SOURCES	
Art. 5	Suppliers shall specify in bills the contribution of each energy source to the electricity purchased by the final customer in accordance with the electricity supply contract (product level disclosure). The following information shall be made available to final customers in, with, or signposted to within their bills and billing information: (a) the contribution of each energy source to the overall energy mix of the supplier (at national level, namely in the Member State in which the electricity supply contract has been concluded, as well as at the level of the supplier if the supplier is active in several Member States) over the preceding year in a comprehensible and clearly comparable manner; (b) information on the environmental impact, in at least terms of CO2 emissions and the radioactive waste resulting from the electricity produced by the overall energy mix of the supplier over the preceding year. As regards point (a) of the second subparagraph, with respect to electricity obtained via an electricity exchange or imported from an undertaking situated outside the Union, aggregate figures provided by the exchange or the undertaking in question over the preceding year may be used. For the disclosure of electricity from high efficiency cogeneration, guarantees of origin issued under Article 14(10) of Directive 2012/27/EU may be used. The disclosure of electricity from renewable sources shall be done by using guarantees of origin, except in the cases referred to in points (a) and (b) of Article 19(8) of Directive (EU) 2018/2001. The regulatory authority or another competent national authority shall take the necessary steps to ensure that the information provided by suppliers to final customers pursuant to this point is reliable and is provided at a national level in a clearly comparable manner.

Annex 5 – Consumer rights laid down in Directive (EU) 2024/1711

Consumer rights laid down in Directive (EU) 2024/1711[22]	
Art. 2(8)	«**active customer**» means a final customer, or a group of jointly acting final customers, who consumes or stores electricity generated within its premises located within confined boundaries or self-generated or shared electricity within other premises, or who sells self-generated electricity or participates in flexibility or energy efficiency schemes, provided that those activities do not constitute its primary commercial or professional activity
Art. 2 (10a)	« **energy sharing** » means the self-consumption by active customers of renewable energy either: a) generated or stored offsite or on sites between them by a facility they own, lease or rent in whole or in part; or b) the right to which has been transferred to them by another active customer for a price or free of charge
Art. 2 (15)	« **fixed-term, fixed-price electricity supply contract** » means an electricity supply contract between a supplier and a final customer that guarantees that the contractual terms and conditions, including the price, remain unchanged for the duration of the contract, while it may, within a fixed price, include a flexible element with for example peak and off-peak price variations, and where changes in the resulting bill can only result from elements that are not determined by suppliers, such as taxes and levies;’
Art. 2(24a)	« **supplier of last resort** » means a supplier who is designated to take over the supply of electricity to customers of a supplier which has ceased to operate
Art. 2(24b)	« **energy poverty** » means energy poverty as defined in Article 2, point (52), of Directive (EU) 2023/1791 of the European Parliament and of the Council;
Art. 2(24c)	« **flexible connection agreement** » means a set of agreed conditions for connecting electrical capacity to the grid that includes conditions to limit and control the electricity injection to and withdrawal from the transmission network or distribution network;
Art. 4	**Free choice of supplier** - Member States shall ensure that all customers are free to purchase electricity from suppliers of their choice. - Member States shall ensure that all customers are free to have more than one electricity supply contract or energy sharing agreement at the same time, and that, for that purpose, customers are entitled to have more than one metering and billing point covered by the single connection point for their premises. Where technically feasible, smart metering systems deployed in accordance with Article 19 may be used

[22] See recitals 2, 5, 12, 17, 19 to 24, 26, 30 to 36, 38 to 47, 49 to 52, 54 to 58, 122, 146 and 151

	to allow customers to have more than one electricity supply contract or more than one energy sharing agreement at the same time.';
Art. 6a	**Flexible connection agreements** 1. The regulatory authority shall develop a framework for transmission system operators and distribution system operators to offer the possibility of establishing flexible connection agreements in areas where there is limited or no network capacity availability for new connections as published in accordance with Article 31(3) and Article 50(4a), first subparagraph of Regulation (EU) 2019/943. That framework shall ensure that: a) as a general rule, flexible connections do not delay the network reinforcements in the identified areas; b)) a conversion from flexible to firm connection agreements once the network is developed is ensured on the basis of established criteria; and c) for areas where the regulatory authority deems network development not to be the most efficient solution, enable, where relevant, flexible connection agreements as a permanent solution, including for energy storage. - 2. That flexible connection agreements specify at least the following: a) the maximum firm injection and withdrawal of electricity from and to the grid, as well as the additional flexible injection and withdrawal capacity that can be connected and differentiated by time blocks throughout the year; b) the network charges applicable to both the firm and flexible injection and withdrawal capacities; c) the agreed duration of the flexible connection agreement and the expected date for granting connection to the entire requested firm capacity.
Art. 11	**Entitlement to a fixed-term, fixed-price electricity supply contract and to a dynamic electricity price contract** 1. Member States shall ensure that the national regulatory framework enables suppliers to offer fixed-term, fixed-price electricity supply contracts and dynamic electricity price contracts. Member States shall ensure that final customers who have a smart meter installed can request to conclude a dynamic electricity price contract and that all final customers can request to conclude a fixed- term, fixed-price electricity supply contract with a duration of at least one year, with at least one supplier and with every supplier that has more than 200 000 final customers. Member States may exempt a supplier with more than 200 000 final customers from the obligation to offer fixed-term, fixed-price electricity supply contracts, where: a) the supplier offers only dynamic price contracts; b) the exemption does not have a negative impact on competition; and c) there remains a sufficient choice of fixed-term, fixed-price electricity supply contracts for final customers.

	Member States shall ensure that suppliers do not unilaterally modify the terms and conditions of fixed-term, fixed-price electricity supply contracts and do not terminate such contracts before they reach their maturity. **1a**. Prior to the conclusion or extension of any contract referred to in paragraph 1 of this Article, final customers shall be provided with a **summary of the key contractual terms and conditions** in a prominent manner and in clear and concise language. That summary shall set out the rights referred to in Article 10(3) and (4) and shall include at least the following information: a) the total price and its breakdown; b) an explanation as to whether the price is fixed, variable or dynamic; c) the supplier's email address and the details of a consumer support hotline; and d) where relevant, information on one-time payments, promotions, additional services and discounts. 2. Member States shall ensure that final customers are fully informed by the suppliers of the opportunities, costs and risks of the respective types of electricity supply contracts, and that suppliers are required to provide information to the final customers accordingly, including with regard to the need to have an adequate electricity meter installed.
Art. 15a	**Right to energy sharing** 1. Member States shall ensure that all households, small enterprises and medium-sized enterprises, public bodies and, other categories of final customer have the right to participate in energy sharing as active customers in a non-discriminatory manner, within the same bidding zone or a more limited geographical area, as determined by that Member State. 2. Member States shall ensure that active customers are entitled to share renewable energy between themselves based on private agreements or through a legal entity. Participation in energy sharing shall not constitute the primary commercial or professional activity of active customers engaged in energy sharing. 3. Active customers may appoint a third party as an energy sharing organiser for the purposes of: a) communicating about the energy sharing arrangements with other relevant entities, such as suppliers and network operators, including on aspects related to the applicable tariffs and charges, taxes or levies;. b) providing support for managing and balancing behind-the-meter flexible loads, distributed renewable energy generation and storage facilities that are part of the relevant energy sharing arrangement; c) contracting and billing active customers that participate in energy sharing d) installation and operation, including metering and maintenance, of the renewable energy generation or storage facility.

	The energy sharing organiser or another third party may own or manage a storage or renewable energy generation facility of up to 6 MW, without being considered to be an active customer, except where it is one of the active customers participating in the energy sharing project. The energy sharing organiser shall provide non-discriminatory services and transparent prices, tariffs, and terms of services. With regard to the first subparagraph, point (c), of this paragraph, Articles 10, 12 and 18 shall apply. Member States shall lay down the regulatory framework for the application of this paragraph. 4. Member States shall ensure that active customers participating in energy sharing: a) are entitled to have the shared electricity injected into the grid deducted from their total metered consumption within a time interval no longer than the imbalance settlement period and without prejudice to applicable non-discriminatory taxes, levies and cost-reflective network charges; b) benefit from all consumer rights and obligations as final customers under this Directive; c) are not required to comply with supplier obligations, where renewable energy is shared between households with an installed capacity up to 10,8 kW for single households and up to 50 kW for multi-apartment blocks; d) have access to voluntary template contracts with fair and transparent terms and conditions for energy sharing agreements; e) in the event of a conflict arising from an energy-sharing agreement, have access to out-of-court dispute settlement with other participants in the energy sharing agreement in accordance with Article 26; f) are not subject to unfair and discriminatory treatment by market participants or their balance responsible parties; g) are informed of the possibility of changes in bidding zones in accordance with Article 14 of Regulation (EU) 2019/943 and of the fact that the right to share renewable energy is restricted in accordance with paragraph 1 of this Article; h) notify energy sharing arrangements to the relevant system operators and market participants, including the relevant suppliers either directly or through an energy sharing organiser. Member States may adapt the thresholds referred to in point (c) of the first subparagraph in accordance with the following: a) in the case of single households, the threshold may be increased up to 30 kW; b) in the case of multi-apartment blocks the threshold may be increased up to 100 kW or, in the case of duly justified specific circumstances due to a reduced average size of multi-apartment blocks, decreased to a minimum of 40 kW. 5. Where other categories of final customer participating in energy sharing schemes are larger than small and medium-sized enterprises, the following additional conditions shall apply: a) the size of the installed capacity of the generation facility associated with the energy sharing scheme is to be a maximum of 6 MW;

	b) the energy sharing takes place within a local or limited geographical area, as defined by the Member State concerned. 6. Member States shall ensure that relevant transmission system operators or distribution system operators or other designated bodies: a) monitor, collect, validate and communicate metering data related to the shared electricity with relevant final customers and market participants at least every month, and in accordance with Article 23, and for that purpose, put in place the appropriate IT systems; b) provide a relevant contact point to: (i) register energy sharing arrangements; (ii) make available practical information for energy sharing; (iii) receive information on relevant metering points, changes in location and participation; and (iv) where applicable, validate calculation methods in a clear, transparent and timely manner. 7. Member States shall take appropriate and non-discriminatory measures to ensure that vulnerable customers and customers affected by energy poverty can access energy sharing schemes. Those measures may include financial support measures or production allocation quota. 8. Member States shall ensure that energy sharing projects owned by public authorities make the shared electricity accessible to vulnerable or energy poor customers or citizens. When doing so, Member States shall do their utmost to promote that the amount of that accessible energy is at least 10 % on average of the energy shared. 9. Member States may promote the introduction of plug-in mini-solar systems of up to 800 W capacity in and on buildings. 10. The Commission shall provide guidance to the Member States without increasing the administrative burden in order to facilitate the establishment of a standardised approach with regard to energy sharing and ensure a level playing field for renewable energy communities and citizen energy communities. 11. This Article shall be without prejudice to the right of customers to choose their supplier in accordance with Article 4 and to applicable national rules on the authorisation of suppliers.
Art. 27a	**Supplier of last resort** 1. Where Member States have not already put in place a regime with regard to suppliers of last resort, they shall introduce such a regime to ensure continuity of supply at least for household customers. Suppliers of last resort shall be appointed in a fair, transparent and non-discriminatory procedure. 2. Final customers who are transferred to suppliers of last resort shall continue to benefit from all of their rights as customers as laid down in this Directive. 3. Member States shall ensure that suppliers of last resort communicate their terms and conditions to transferred customers without delay and ensure a seamless continuity of service for those customers for a period needed to find a new supplier, and at least six months. 4. Member States shall ensure that final customers are provided with information and encouragement to switch to a market-based offer.

	5. Member States may require a supplier of last resort to supply electricity to household customers and small enterprises and medium- sized enterprises who do not receive market-based offers. In such cases, the conditions set out in Article 5 shall apply.';
Art. 28a	**Protection from disconnections** 1. Member States shall ensure that vulnerable customers and customers affected by energy poverty are fully protected from electricity disconnections, by taking the appropriate measures, including the prohibition of disconnections or other equivalent actions. Member States shall provide such protection as part of their policy with regard to vulnerable customers. 2. Member States shall ensure that suppliers do not terminate contracts and do not disconnect customers on the grounds on which customers have submitted a complaint in accordance with Article 10(9) or which are subject to an out-of-court dispute settlement mechanism in accordance with Article 26. Such a complaint or the use of such a mechanism shall not affect the parties' contractual rights and obligations. Member States may take appropriate measures to avoid an abuse of process. 3. Member States shall take appropriate measures referred to in paragraph 1 to enable customers to avoid disconnection, which may include: (a) promoting voluntary codes for suppliers and customers on preventing and managing cases of customers in arrears; those arrangements may concern support for customers in managing their energy use and costs, including flagging unusual high energy spikes or use in winter and summer seasons, offering appropriate flexible payment plans, debt advice measures, self-metering readings, and improved communication with customers and support agencies; (b) promoting customers' education and awareness of their rights with regard to debt management; (c) access to finance, vouchers or subsidies to support the payment of bills; (d) encouraging and facilitating the provision of meter readings every three months, or where relevant for shorter billing periods, where a system of regular self-reading by the final customer has been implemented to meet the obligations of points 2(a) and (b) of Annex I in relation to the frequency of billing and the provision of billing information;
Art. 31	2.In any event, the distribution system operator shall not discriminate between system users or classes of system users, including renewable energy communities and citizen energy communities, in particular in favour of its related undertakings.

	3. Distribution system operators shall provide system users with the information they need for efficient access to, and use of, the system. Distribution system operators shall provide in a transparent manner clear information to system users about the status and treatment of their connection requests. They shall provide such information within three months of the submission of the request. Where the requested connection is neither granted nor permanently rejected, distribution system operators shall update that information on a regular basis, at least quarterly. 3a. Distribution system operators shall provide system users the option to request grid connection and submit relevant documents exclusively in digital form.
Art. 66a	**Access to affordable energy during an electricity price crisis** The Council may, acting on a proposal from the Commission, by means of an implementing decision declare a regional or Union-wide electricity price crisis, if the different conditions are met.

Annex 6 – Consumer rights laid down in Directive (EU) 2024/1788

Consumer rights laid down in Directive (EU) 2024/1788 **Related to natural gas and hydrogen sectors**	
Art. 4(3) to (7) NG	Access to affordable prices by temporary public interventions in the price setting for the supply of natural gas to household customers or customers affected by energy poverty or vulnerable household customers
Art. 5 NG	During a natural gas price crisis, access to affordable prices by temporary targeted public interventions in price setting for the supply of natural gas to small and medium-sized enterprises (SMEs), household customers and essential social services
Art. 11 NG H2	Pre-contractual information to final customers
Art. 12 NG H2	Right of customers to switch suppliers and terminate their supply contract at short notice
Art. 13 NG	Protection and information of network users in relation to the phasing-out of natural gas and the disconnection of network
Art. 14 NG	Right to access, free of charge, to comparison tools for natural gas
Art. 15 NG	Right of final customers to act as active customers
Art. 16 NG H2	Right of final customers to receive, free of charge, bills and billing information which are accurate, easy to understand, clear, concise, user-friendly and presented in a manner that facilitates comparison
ANNEX I NG H2	Bills shall convey information to the final customers on their actual consumption and costs, carbon disoxide emissions, share of renewable gas and low-carbon gas and information on alternative dispute resolution
Art. 20 NG	Customers' entitlement to a smart meter for natural gas where smart metering systems are not deployed in the natural gas system
Art. 22 NG H2	Access to data of the final customer by eligible parties No additional costs to be charged to final customers for access to their data or for a request to make their data available
Art. 24 NG H2	Single point of contact to provide customers with all necessary information
Art. 25 NG H2	Right of final customers to out-of-court dispute settlement
Art. 28 NG H2	No termination of supply contracts and no disconnections of customers during a complaint procedure handled by suppliers or an out-of-court dispute settlement

Art. 29 NG H2	Continuity of supply of household customers guaranteed by the supplier of last resort

NG : natural gas
H2 : hydrogen

Annex 7 – About CEER

The Council of European Energy Regulators (CEER) is the voice of Europe's national energy regulators. CEER's members and observers comprise 39 national energy regulatory authorities (NRAs) from across Europe.

CEER is legally established as a not-for-profit association under Belgian law, with a small Secretariat based in Brussels to assist the organisation.

CEER supports its NRA members/observers in their responsibilities, sharing experience and developing regulatory capacity and best practices. It does so by facilitating expert working group meetings, hosting workshops and events, supporting the development and publication of regulatory papers, and through an in-house Training Academy. Through CEER, European NRAs cooperate and develop common position papers, advice and forward-thinking recommendations to improve the electricity and gas markets for the benefit of consumers and businesses.

In terms of policy, CEER actively promotes an investment friendly, harmonised regulatory environment and the consistent application of existing EU legislation. A key objective of CEER is to facilitate the creation of a single, competitive, efficient and sustainable Internal Energy Market in Europe that works in the consumer interest.

Specifically, CEER deals with a range of energy regulatory issues including wholesale and retail markets; consumer issues; distribution networks; smart grids; flexibility; sustainability; and international cooperation.

The work of CEER is structured according to a number of working groups and work streams, composed of staff members of the national energy regulatory authorities, and supported by the CEER Secretariat. This Revision of the Handbook was prepared by the Retail Markets Roadmap Workstream of CEER's Customer and Retail Market Working Group.

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More information is available at www.ceer.eu.

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