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**Council of European
Energy Regulators**



Fostering energy markets, empowering **consumers**.

**CEER Roadmap to 2025 Well-
Functioning Retail Energy Markets
2020 Self-Assessment Status Report**

**Retail Market Roadmap WS
of
Customers and Retail Markets WG**

**Ref: C21-RMR-26-04-01
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INFORMATION PAGE

Abstract

In 2015, the Council of European Energy Regulators (CEER) developed a strategic high-level Position Paper outlining the framework of the key characteristics of well-functioning retail energy markets. In 2016-2017, European energy regulators continued the development of a forward-looking framework for evaluating the performance of retail energy markets and prepared the 2018 Roadmap to 2025 Well-Functioning Retail Energy Markets.

In 2018, CEER guided National Regulatory Authorities (NRAs) through the process of self-assessment according to the metrics identified in the 2015 Position Paper on Well-Functioning Retail Energy Markets, which are also defined in the 2017 Handbook.

In 2019 and 2020, CEER published two self-assessment status reports on the activities of the 2018 Roadmap. This document is an updated third edition of the status report which, together with previous editions, describes the national progress on establishing “competitive, reliable and innovative retail energy markets that benefit consumers by 2025”.

CEER will continue to monitor the progress of retail energy markets and encourage NRAs to identify the challenges in their respective countries to develop potential solutions on how to improve national retail market functioning. CEER believes it is important to regularly monitor these developments.

Target Audience

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

Keywords

3rd Package, Clean Energy Package, consumer rights, consumer protection and empowerment, reliability, retail energy market, simplicity, supplier switching, vulnerable consumers.

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Related Documents

CEER documents

- CEER Roadmap to 2025 Well-Functioning Retail Energy Markets 2019 Self-Assessment Status Report, Ref: C19-RMR-11-04; 12 November 2020
<https://www.ceer.eu/1932>
- CEER Roadmap to 2025 Well-Functioning Retail Energy Markets 2018 Self-Assessment Status Report, Ref: C20-RMR-11-04-01; 30 October 2019
<https://www.ceer.eu/1765>
- Roadmap to 2025 Well-Functioning Retail Energy Markets, Ref: C17-SC-59-04-02; 9 February 2018
<https://www.ceer.eu/1518>
- CEER 2017 Handbook for National Energy Regulators - How to assess retail market functioning, Ref: C16-SC-52-03; 24 January 2017
<https://www.ceer.eu/1256>
- CEER draft Handbook on Harmonised definitions of retail market metrics: Evaluation of Responses, Ref: C16-SC-52-05; 24 January 2017
<https://www.ceer.eu/1256>
- 2017 Handbook for National Energy Regulators: Pilots, Ref: C16-SC-52-04; 24 January 2017
<https://www.ceer.eu/1256>
- CEER Position Paper on well-functioning retail energy markets, Ref. C15-SC-36-03; 16 October 2015
<https://www.ceer.eu/1258>
- A 2020 Vision for Europe's energy customers – Joint Statement CEER/BEUC, 13 November 2012, updated June 2014
<https://www.ceer.eu/1263>
- CEER-BEUC 2030 Vision for Energy Consumers: Let's Aspire!, 13 October 2020
<https://www.ceer.eu/1932>

External documents

- A Bridge to 2025 Conclusions Paper, 19 September 2014, ACER Conclusions Paper attached to Recommendation No 05/2014
http://www.acer.europa.eu/official_documents/acts_of_the_agency/sd052005/supporting%20document%20to%20acer%20recommendation%2005-2014%20-%20%20energy%20regulation%20a%20bridge%20to%202025%20conclusions%20paper.pdf

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EXECUTIVE SUMMARY

In January 2017, the Council of European Energy Regulators (CEER) recommended that all its Member and Observer National Regulatory Authorities (NRAs) self-assess their electricity and gas markets.

The self-assessment is based on the 25 metrics developed in the “*CEER 2017 Handbook for National Energy Regulators*”¹, while the process of performing a self-assessment is described in the “*Roadmap to 2025 Well-Functioning Retail Energy Markets*”². In accordance with these two CEER reference documents, each NRA determines the relevant market in its national context and chooses the methodology for the calculation of individual metrics. Therefore, the data and gap-analyses presented in this report are not comparable across countries and cannot be used for benchmarking.

This is the third status report done by CEER, with the present report based on data from the self-assessment performed in 23 European countries. The main purpose is to share experiences and showcase the progress in establishing well-functioning retail markets in 2025.

The report is based on national data from up until 2020. However, CEER believes that the dramatic increase in electricity and gas wholesale prices in the second half of 2021³, and the national measures taken to mitigate the impact of those increases, will have an impact on how individual countries perform according to the 25 metrics in the 2017 CEER Handbook.

Previous status reports, covering data from 2019 and 2018, have focused on results and gap-analysis for individual metrics. Ideally, NRAs would self-assess their national energy markets by analysing all 25 metrics and identifying how they influence each other. Given that it is difficult to analyse the correlation of 25 metrics, for the self-assessment carried out in 2021 CEER proposed three groups of metrics and asked NRAs to assess how the metrics in each of the three groups relate to each other and what individual countries can do to improve the overall result of the different groups: the first dealing with market concentration and consumer engagement; the second with demand response and innovation; and the third with market concentration and price formation.

The assessment of the **first group** shows that while there are several countries where the number of suppliers is rising and consequently the concentration ratio of suppliers (the Herfindahl–Hirschman Index, HHI) is decreasing, there are also markets with low concentration of suppliers (many actors in the market) where the existence of distribution system operators (DSOs) bundled with a supplier might prevent the new actors from entering the market or increasing their market shares. In many countries, it is also clear that a higher customer awareness and trust would lead to higher customer engagement and switching rates.

¹ CEER 2017 Handbook for National Energy Regulators - How to assess retail market functioning, 24 January 2017, Ref: C16-SC-52-03 <https://www.ceer.eu/1256>

² Roadmap to 2025 Well-Functioning Retail Energy Markets, 9 February 2018, Ref: C17-SC-59-04-02 <https://www.ceer.eu/1518>

³ Further information regarding the price developments in 2021 has been published separately in a note on ACER's website.: <https://www.acer.europa.eu/events-and-engagement/news/europes-high-energy-prices-acer-looks-drivers-outlook-and-policy>

Analysis of the **second group** of metrics, dealing with demand response, shows that some countries with high availability of time-of-use metering also tend to have a high number of prosumers and/or customers engaged in implicit or explicit demand response. However, in some cases, the presence of smart meters might not be enough. There are countries where smart meters and historical consumption data are available but where dynamic price contracts are still a rarity in the market. Therefore, there is no financial incentive for companies to act on that historical data. The same is true for demand-response offers and value-added services for implicit demand response and self-generation – even if smart-meter roll-out is completed, services for demand response are missing.

Finally, regarding the **third group**, there is a complex interaction between competitive pressure, regulated prices and price formation. As noted by some NRAs, some of these metrics can be difficult to improve as the results are based on competition. In countries with regulated prices, improvements are also closely connected to energy policy. This means that efficient price formation is influenced by many aspects of energy policy apart from end-user interventions, such as incentives to sign dynamic contracts, legal framework for entry/exit or liquidity in wholesale markets.

As noted in previous status reports, CEER acknowledges that not all NRAs can legally set national targets for individual metrics with respect to the gap-analysis. However, CEER encourages all NRAs to follow the development of their national retail markets and, where possible, evaluate if and how it is feasible to improve the results of individual metrics. In order to facilitate well-functioning retail markets in all CEER Member States by 2025, more cooperation at the national level is needed among NRAs, consumer authorities, competition authorities, and ministries responsible for energy policy to set national targets for the metrics, agreed among the different national authorities involved in energy markets. Once the national targets are set, it will be possible to make the gap-analysis and to assess how to improve the results of individual metrics to reach the goal of well-functioning retail markets by 2025.

One noteworthy conclusion is that this year few NRAs were able to provide group analysis using all suggested metrics within a group. There are probably several reasons for this. Not all metrics are used by all NRAs, sometimes because certain market dynamics do not yet exist in all countries, such as smart meters and dynamic price contracts. Another reason could be that this type of analysis has not been done before and that it also requires time and resources.

However, CEER believes that ongoing and future changes in the European energy markets, for example, the integration of renewable energy sources into the energy system, may lead to a greater relevance in the future of some of the less-used metrics today. CEER encourages all NRAs to analyse the interdependencies of metrics and their mutual impacts, as well as to perform gap-analyses for groups of metrics, instead of 25 different gap-analyses for the 25 individual metrics.

CEER will report on successive self-assessments, planned to be carried out annually until 2025.

1 Introduction

The Council of European Energy Regulators (CEER) strives for the establishment of well-functioning retail markets and a long-term energy transition for sustainability and climate neutrality.

In 2015, CEER developed a strategic high-level Position Paper⁴ that described the key characteristics of well-functioning energy retail markets and introduced a framework to evaluate the functioning of retail energy markets. In 2017, CEER published a Handbook for National Energy Regulators⁵, which contains 7 key-properties and a total of 25 metrics (see Table 1 below).

KEY PROPERTY	Metric #	HARMONISED DEFINITIONS OF METRICS
Low Concentration within a relevant market	1	Herfindahl-Hirschman Index
Low market entry barriers	2	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 with regulated energy prices
	5	Number of common standards for consumer data & 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
Close relationship between wholesale markets and retail prices	7	Correlation between wholesale and retail energy prices
	8	Mark-up between wholesale and retail energy prices
A range of offers, including demand response	9	Availability of a variety of pricing and billing options
	10	Availability of value added services for implicit demand response and self-generation
	11	Availability of online offers
	12	Availability of contracts guaranteeing the origin of energy
	13	Availability of explicit demand response offers
High level of awareness and trust	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
	16	Percentage of consumers trusting the energy market
Availability of empowerment tools	17	Percentage of consumers having access to at least one independent and verified PCT
	18	Percentage of consumers having access to online historical consumption info
	19	Percentage of consumers having access to standardised supplier switching process (and its duration)
Sufficient consumer engagement	20	Supplier switching rate
	21	Percentage of inactive consumers
	22	Percentage of prosumers
Appropriate protection	23	Time between notification to pay and disconnection for non-payment
	24	Percentage of disconnections due to non-payment
	25	Percentage of suppliers using min standards for key info in advertising and bills

Table 1 - Key properties and metrics in the CEER 2017 Handbook for National Energy Regulators

All 25 metrics in the Handbook are related to each other and each one is important to a well-functioning retail market. They are supposed to be interpreted as a whole.

⁴ CEER Position Paper on well-functioning retail energy Markets, Ref. C15-SC-36-03, <https://www.ceer.eu/1258>

⁵ CEER 2017 Handbook for National Energy Regulators - How to assess retail market functioning, Ref: C16-SC-52-03; 24, <https://www.ceer.eu/1256>

The handbook was followed by a Roadmap⁶ in 2018 that described the process of NRAs' self-assessment of these metrics. For three years, CEER Members have self-assessed their energy retail markets. In 2017, this was done by mapping which of the 25 metrics was used nationally, and in 2018 and 2019 by sharing results of, and gap-analyses for, individual metrics. The collected data was then summarised in 2019 and 2020 in two Status Reports⁷.

1.1 What is a gap-analysis?

In the "Roadmap to 2025 Well-Functioning Retail Energy Markets", CEER describes the concept of gap-analysis in the following way:

For each available metric in the Handbook NRAs set a national objective and analyse the gap between the current situation described by the collected data and the national objective. On a voluntary basis, NRAs are able to present results of self-assessment and gap-analysis. Self-assessment and gap analysis are recommended to be repeated annually.

Based on the result, the NRA in a later stage formulates recommendations and monitors implementation of those recommendations: When an NRA identifies a gap between the national data for a metric and the national objective for that metric, the NRA formulates recommendations on how to reach the national objective. The NRA also monitors the implementation of these recommendations.

One general conclusion of this report is that there are still very few CEER Members that have carried out and shared a gap-analysis for all of the 25 metrics included in the self-assessment procedure. There seems to be various reasons for this. For example, some NRAs report that it is not within their mandate to set national objectives for individual metrics. Another reason could be the fact that not all aspects covered by the 25 metrics are yet a reality in all markets, such as demand response, prosumers and dynamic price contracts.

CEER sought to widen the concept of gap-analysis in 2020 and 2021, from focusing on concrete officially approved figure-based objectives to improvements of individual metric-results, in order to keep the momentum in the progress towards well-functioning retail markets by 2025. Where it is not within the NRA's mandate to set goals, market monitoring may be expanded and dialogue with relevant decision-makers developed.

1.2 Self-assessment of suggested groups of metrics?

CEER believes that it is important to continue the self-assessment of the 25 metrics in the Handbook. CEER also believes that the methodology, as described in the 2018 Roadmap, can be further developed. In 2021 CEER asked NRAs to self-assess groups of metrics and evaluate how these metrics, within these groups, are related to and affect each other.

The ultimate goal of the self-assessment exercise is for each participating NRA to evaluate if their country has a well-functioning retail market, and if not, what actions could be taken to improve the functioning of national markets.

⁶ Roadmap to 2025 Well-Functioning Retail Energy Markets, Ref: C17-SC-59-04-02; 9, <https://www.ceer.eu/1518>

⁷ CEER Roadmap to 2025 Well-Functioning Retail Energy Markets 2018 Self-Assessment Status Report, Ref: C18-RMR-01-03, <https://www.ceer.eu/1518>; Self-Assessment Status Report 2019 for the Roadmap to 2025 Well-Functioning Retail Energy Markets, Ref: C20-RMR-11-04-01, <https://www.ceer.eu/1932>

To support a multifaceted evaluation of market performance metrics by NRAs, this year CEER suggested for NRAs to self-assess their energy retail markets using three groups of metrics containing four to eight metrics each.

The first group includes eight metrics measuring market concentration, customer activity and awareness. The second group includes six metrics with regard to demand response, prosuming and guarantees of origin. The third group focuses on price formation. In chapters 2, 3 and 4, the metrics in each of these three groups are shortly described, followed by NRAs' assessment of how the metrics in each group relate to each other and what can be done to improve the result of a group.

1.3 Principles and methodology when assessing the suggested groups

CEER's 'Position Paper on Well-Functioning Energy Retail Markets' from 2015 establishes a process to develop common criteria to better assess what a well-functioning retail market should look like and to provide a framework for analysing its evolution and performance.

This Position Paper builds on the *2020 Vision for Europe's Energy Customers* from 2012, a vision that was revised in 2020 under the name *CEER-BEUC 2030 Vision for energy consumers*⁸. In this revised vision, the fundamentals and importance of well-functioning retail markets and a just transition towards sustainability and climate neutrality is defined through six timeless and universal principles; affordability, simplicity, protection, inclusiveness, reliability and empowerment (ASPIRE principles).

In the 2015 position paper, the following two principles are established:

- **The first principle** is that competition and innovation are fundamental to well-functioning retail markets. The key properties for competition and innovation relate to the supply side of the market, where a competitive pressure encourages suppliers to offer lower prices and to create innovative products that meet the changing needs of consumers in order to avoid their customers switching to better deals with competitors.
- **The second principle** concerns consumer involvement. For retail markets to function well, consumers must be adequately involved in market activities. Therefore, this principle focuses on consumers' experiences of interacting with the retail market and their ability to navigate within it. Well-functioning markets need to benefit society as a whole, particularly by ensuring that vulnerable consumers are not disadvantaged or overlooked. Therefore, the protection and empowerment of all customers should be an essential pillar of the market.

1.4 Objective and outline of the paper

The main objectives of the present Status Report are to summarise the third round of self-assessments, showcase the progress made in establishing well-functioning retail markets and share experiences between NRAs, as well as other stakeholders.

⁸ Published 2020 <https://www.ceer.eu/1932>

After the introduction, NRAs' assessment of the 3 groups of metrics are presented group by group. After that follows a chapter where the Dutch regulator suggest and assesses its own combination of metrics. The final chapter showcases NRAs' results and thoughts regarding the remaining metrics (the ones not included in any group).

2 Group 1 – Market concentration, consumer engagement and awareness

This chapter deals with the first group of proposed metrics to be assessed together, where CEER explores the relationship between eight metrics from five different key-properties. First, each of the metrics is described, then presented together along with a theoretical description and with a comment regarding the performance shared by NRAs. This is followed by a summary of NRAs' assessment of how the metrics in the group correlate to each other and what can be done to improve the results.

This first group includes the metrics measuring market concentration, customer activity and awareness. They were chosen to be assessed together as, in economic theory, it is expected that one affects the other. In general, the structure of the markets, in terms of how concentrated they are, affects the activity of both suppliers and consumers. Fewer suppliers would mean less choice for consumers and less switching activity. The switching rate is directly linked to the level of market competition, but it also shows the consumer's engagement and awareness of the market rules. To this end, trust is to be added as an important key issue in both market structure and consumer activity. The consumer that trusts the market would be more aware and comfortable in changing suppliers and would play an active role in retail-market functioning.

Drawing from the data collected from NRAs, we observe that in some countries, there is a correlation between the competitive pressure (concentration), the existence of bundled DSOs, consumer engagement and knowledge about the energy market.

KEY PROPERTY	Metric #	HARMONISED DEFINITIONS OF METRICS
Low Concentration within a relevant market	1	Herfindahl-Hirschman Index
Low market entry barriers	2	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 with regulated energy prices
	5	Number of common standards for consumer data & 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
Close relationship between wholesale markets and retail prices	7	Correlation between wholesale and retail energy prices
	8	Mark-up between wholesale and retail energy prices
A range of offers, including demand response	9	Availability of a variety of pricing and billing options
	10	Availability of value added services for implicit demand response and self-generation
	11	Availability of online offers
	12	Availability of contracts guaranteeing the origin of energy
	13	Availability of explicit demand response offers
High level of awareness and trust	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
	16	Percentage of consumers trusting the energy market
Availability of empowerment tools	17	Percentage of consumers having access to at least one independent and verified PCT
	18	Percentage of consumers having access to online historical consumption info
	19	Percentage of consumers having access to standardised supplier switching process (and its duration)
Sufficient consumer engagement	20	Supplier switching rate
	21	Percentage of inactive consumers
	22	Percentage of prosumers
Appropriate protection	23	Time between notification to pay and disconnection for non-payment
	24	Percentage of disconnections due to non-payment
	25	Percentage of suppliers using min standards for key info in advertising and bills

Table 2 - The metrics in group 1 measure the relationship between market concentration, customer activity and customer awareness. It includes 8 metrics from 5 key properties (marked in yellow) in the CEER 2017 Handbook for National Energy Regulators.

2.1 Description of individual metrics

2.1.1 Metric 1: Low concentration within a relevant market

The Herfindahl-Hirschman Index (HHI) measures the degree of concentration in a market. Based on the European Commission’s guidelines, an HHI of above 2,000 signifies a highly concentrated market. In general, a high number of suppliers and low market concentration indicate a competitive market structure. The HHI is calculated as the sum of the squares of the market shares of all firms in the market. It ranges between 0, for an infinite number of small firms, and 10,000, for one firm with a market share of 100%.

As displayed in the ACER-CEER Annual Report on the Results of Monitoring the Internal Electricity and Natural Gas Markets in 2020⁹, in most of the respondent countries, the HHI for the household segment shows a decreasing trend. The HHI ranges between 687 and 10,000 in electricity and between 1,259 and 9,990 in gas.

⁹<https://www.ceer.eu/national-reporting-2020>

2.1.2 Metric 3: Percentage of consumers connected to “bundled” DSOs

Bundled DSOs and suppliers acting mutually to attract consumers might prevent new actors from entering a market, for example by taking advantage of the DSO’s direct access to all customers or the DSO’s often strong local brand. Therefore, a sufficient level of unbundling between suppliers and associated DSOs must be ensured in order to create a level playing field in retail energy markets. However, the existence of bundled DSOs does not immediately presuppose a problem; nevertheless, it is an indicator that calls for deeper analysis. This Self-Assessment Status Report is the first CEER report to analyse this indicator.

Six NRAs¹⁰ have used this metric in their self-assessment, as in many countries there are no bundled DSOs. Depending on the national market circumstances, the circumstances for having bundled DSOs, reported by the six NRAs, is that it is either a result of a derogation from the EU-regulation rules or a result of the common unbundling exemption provision for DSOs with less than 100,000 customers.

2.1.3 Metric 14: Percentage of consumers aware of supplier switching rights

NRAs are responsible for informing consumers about their rights in the energy market. The new provisions put forward by the Clean Energy Package¹¹ enhance consumers’ rights as actors in the energy market. This Self-Assessment Status Report is the first CEER report to analyse this indicator.

One of the pillars of market liberalisation is the free choice of suppliers for all consumer segments. This metric measures the degree of awareness about the consumer right to switch supplier.

In order to identify which aspects of the market design are still unknown to consumers, NRAs need to conduct consumer surveys on the retail energy market. The results enable NRAs to assess the degree of awareness of energy consumers in order to fill the existing gaps with more targeted communication activities.

Thirteen NRAs reported using this metric in their national monitoring duties and the percentage of customers aware of supplier switching possibilities ranges between 82% and 100%, which are quite high and encouraging numbers.

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

Consumer awareness about the distinction of the role of DSOs and the role of suppliers is key for the activation of consumers in the energy market and for enabling consumers to take full advantage of the benefits provided by the Clean Energy Package. Confusion about their respective roles may lead to a reluctance to switch supplier due to unwarranted concerns about continuity of supply and a perceived physical dependence on the low voltage installation and meter with the commercial supply energy. This Self-Assessment Status Report is the first CEER report to analyse this indicator.

¹⁰ E-Control (Austria), CERA (Cyprus), EV (Finland), MEKH (Hungary), NVE-RME (Norway), Ei (Sweden).

¹¹ See https://energy.ec.europa.eu/topics/energy-strategy/clean-energy-all-europeans-package_en

If consumers are to become more active in wholesale energy markets by choosing dynamic products, or are expected to change their consumption patterns by consuming energy when it is cheaper, as well as producing and storing their own renewable electricity through the installation of photovoltaic panels, the use of an electric vehicle and the adoption of in-house storage devices, such as batteries, it is expected that at least the fundamentals of the commensurate energy market design are widely known by them in advance of all these new developments.

Awareness of the DSO's responsibility for continuity of supply and, where applicable, for metering are to be found among such fundamentals of the energy market design.

Only seven NRAs¹² reported using this metric every 3 years. The share of customers that believe that switching to another supplier, must be accompanied by a change of meter is very low in the responding countries, ranging between 3% and 13%.

2.1.1 Metric 16: Percentage of customers that trust the energy market

This metric provides insights on whether consumers believe that they are getting a fair price after market liberalisation and how they perceive the energy sector in comparison to other regulated activities, such as the telecommunications sector or postal services, that also went through similar processes of market liberalisation.

Nine NRAs¹³ in electricity and five in gas reported that they use this metric. Such a metric is usually the result of a survey either done by the NRA or another public body. The data provided by NRAs ranges between 19% to 70% of customers trusting the energy market. For further data on the customer's trust in different markets, please refer to the European Commission's Consumer Market Monitoring Survey¹⁴.

2.1.2 Metric 17: Percentage of consumers having access to at least one independent and verified price comparison tool

This metric is used to measure whether consumers have the possibility to identify the best offers in the market. The easier it is for consumers to estimate and compare different offers and associated savings, the more informed their decision will be to either switch to a better offer or stay with the current deal. An independent and verified price comparison tool (PCT) is a powerful consumer empowerment tool, which allows consumers to make comparisons in an easier manner. A PCT is a tool, generally a web page, which lists all the offers available to the consumer and where they can evaluate the potential benefits of switching.

¹² E-control (Austria), DUR (Denmark), EV (Finland), CRU (Ireland), NVE-RME (Norway), Ei (Sweden), AGEN (Slovenia).

¹³ E-Control (Austria), CREG (Belgium), DUR (Denmark), CRE (France), Ofgem (Great Britain), ACM (The Netherlands), NVE-RME (Norway), EI (Sweden), AGEN (Slovenia) in electricity and E-Control (Austria), CREG (Belgium), CRE (France), Ofgem (Great Britain), ACM (the Netherlands) in gas.

¹⁴ <https://public.tableau.com/views/ConsumerMarketMonitoringSurvey/7?%3AshowVizHome=no>

Eleven NRAs¹⁵ in electricity and six in gas reported using this metric on an annual basis. In these countries, the percentage of customers that have access to PCTs ranges between 90% and 100%.

2.1.3 Metric 20: Switching rates

This metric is used to measure the active engagement of consumers in energy retail markets. It is directly linked to 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 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, renegotiated contracts may be measured. Consumers who actively decide to renegotiate their contracts with their current supplier also put competitive pressure on their energy supplier.

Most of the responding NRAs reported using this metric. In some countries, the switching rates are rising as a result of national objectives setting, such as creating a national data hub or a supplier centric model, or the launch of a PCT. However, some NRAs reported a slight slowdown in switching in 2020 due to the Covid-19 pandemic and the several lockdowns in place. This aspect is further analysed in the “ACER-CEER Annual Report on the Results of Monitoring the Internal Electricity and Natural Gas Markets in 2020 – Energy Retail Markets and Consumer Protection Volume”¹⁶.

2.1.4 Metric 21: Percentage of inactive customers

This metric measures the lack of consumer involvement in the market (inactive consumers) and helps to inform NRAs’ policies aimed at improving the level of consumer engagement and stimulating competitive pressure on suppliers. Inactive consumers are defined here as consumers who have neither switched supplier/product nor actively searched for better deals. The analysis of this metric could require further research by conducting a consumer survey.

Most of the countries reported using this metric in their national market monitoring. The percentage of inactive customers in the household segment ranges between 10% and 99%.

2.2 NRAs’ analysis of metrics in Group 1

As mentioned earlier, CEER supports NRAs in assessing different metrics together or in relation to each other. This section deals with the first group of proposed metrics that can be assessed together and gives a theoretical description, as well as some examples of how metrics can be assessed together.

¹⁵ E-Control (Austria), DUR (Denmark), ECA (Estonia), EV (Finland), Ofgem (Great Britain), MEKH (Hungary), CRU (Ireland), ACM (The Netherlands), NVE-RME (Norway), EI (Sweden) and AGEN (Slovenia) in electricity and E-Control (Austria), Ofgem (Great Britain), HERA (Croatia), CRU (Ireland), ACM (The Netherlands) and AGEN (Slovenia) in gas.

¹⁶ <https://www.acer.europa.eu/electricity/market-monitoring-report>

In a highly concentrated market (metric 1), or a market where the incumbent supplier has few or no equal rivals (metric 3), the competitive pressure will be lower with fewer suppliers competing for customers with better prices or innovative products. There are several countries, like the Netherlands or France whose results show that the number of suppliers is rising and the HHI is decreasing over the past years, contributing to a less concentrated market with a possibility for new entrants to compete, who can offer new, innovative products in line with the market evolution.

Bundled DSOs and suppliers acting jointly to attract consumers might prevent new actors from entering the market. The Swedish NRA (Energy Markets Inspectorate - Ei) believes that the relatively low activity (low interest in changing suppliers or looking for a better deal) among customers who have contracts with local vertically-integrated suppliers is a problem. Here, a stronger focus on “branding unbundling” might decrease the advantages of the vertically integrated¹⁷ supplier.

In markets where consumers are not aware that they can switch supplier (metric 14) or are unaware of energy market liberalisation rules, such as the split of tasks between supplier and distribution system operators (DSOs), with a high percentage of consumers who do not know what the DSOs are responsible for (metrics 15), markets tend to generally be more concentrated, with less active consumers with regard to switching procedures and consumer information issues. Here it is worth mentioning that some customers are aware that they can switch supplier but are not doing so for a variety of reasons. However, the results show that consumer awareness and the right information are the first steps towards taking action and engaging in the market. It is interesting to note how Great Britain is considering customer engagement, which is linked to the customer’s ability and willingness to engage in their choice of energy supplier and associated tariffs. The concept of engagement is seen as a spectrum, with some customers being very engaged, regularly shopping around for the best deal, and others that explore the market but do not change suppliers. A person can be engaged, for example, by being aware of the different available tariff options, while still deciding not to switch. Similarly, a consumer can switch without being fully engaged in the process, perhaps using an automated switching service.

Consumer awareness about the role of DSOs and the role of suppliers is key for consumer engagement in the energy market and for enabling consumers to take advantage of the new provisions put forward by the Clean Energy Package.

The structure of the market, with regard to its concentration level, will affect the activity of customers in terms of how many of them are actively searching for cheaper and better products (metrics 20 and 21). Access to at least one independent and verified price comparison tool makes it easier for customers to search for cheaper and better products (Metric 17), while also making them more informed about market offers and the market as a whole. A few countries, like Croatia and Poland, noted that the existence of a well-developed comparison tool would further incentivise consumers to search and compare offers, thus increasing the likelihood of a higher level of consumer engagement with the market. Therefore, the existence of a reliable and verified comparison tool tends to have a positive impact by increasing switching rates, while reducing the high rate of customer inactivity.

¹⁷ Suppliers within the same company group as a DSO.

The “ACER-CEER Annual Report on the Results of Monitoring the Internal Electricity and Natural Gas Markets in 2020”¹⁸ published data on the switching rates at the national level for both household and non-household markets.

Customer trust in the market (metric 16) can also be analysed in relation to both market structure and customer activity. High concentration can decrease trust. Low trust can decrease activity. Trust could also be connected to knowledge of how the market functions (metrics 14 and 15). In many countries, as shown in the section below, the results show that higher customer awareness and trust lead to higher customer engagement and higher switching rates.

Metric number and name		Number of NRAs using for self-assessment		Number of NRAs completing gap-analysis		Number of NRAs including metric in group analysis	
		Electricity (23 NRAs replied)	Gas (19 NRAs replied)	Electricity (23 NRAs replied)	Gas (19 NRAs replied)	Electricity	Gas
1	Low concentration within a relevant market	21	18	3	3	8	8
3	Percentage of customers connected to “bundled” DSOs	6	6	0	0	1	1
14	Percentage of consumers knowing they can switch supplier	13	5	2	2	5	4
15	Percentage of consumers who know that DSOs are responsible for continuity of supply and, where applicable, of metering	7	2	1	1	2	1
16	Percentage of customers that trust the electricity market	9	5	2	2	4	3
17	Percentage of consumers having access to at least one independent and verified price comparison tool	11	6	1	4	3	2
20	Switching rate	20	16	4	4	6	5
21	Percentage of inactive customers	15	10	2	2	3	2

Table 3 - Metrics used in self-assessment of Group 1 - “Market concentration, customer activity and awareness”

2.2.1 National evaluations of the metrics in Group 1

This section aims to present the overall conclusions drawn by NRAs regarding the metrics in Group 1, also showcasing, when results are available, how they are related to each other, mainly in the household segment, for both electricity and gas markets.

¹⁸ <https://www.ceer.eu/national-reporting-2020>

The data shows that the retail market has become more competitive in the last few years in countries like France, Great Britain and Ireland. The French Energy Ombudsman (Le Médiateur National de l'Énergie) survey shows that the number of customers aware of supplier switching has been increasing over the past years (89% in 2020) and the percentage of households that trust the market is at a good level compared to previous years. The switching rates are at a similar level in 2020 as in 2019, possibly due to the Covid-19 pandemic that caused less mobility, as expected. However, the results show an increasing trend when compared to previous years. This could also be linked to the increase in new entrants in the French retail market with more and more innovative offers (weekend tariff offers, electric car offers, offers including home devices, self-consumption offers, etc).

Similarly, consumer engagement has increased overall in Great Britain, with record high rates of switching leading up to the Covid-19 pandemic – this trend has been driving stronger competition between suppliers, with medium-sized suppliers successfully drawing retaining customers from the larger incumbents. Ireland also notes that there has been an increase in engagement, with customers searching actively for better offers. The British experience is presented in a pilot study below.

In the French case household consumers tend to be quite disengaged. Regulated household tariffs are still very common in the electricity market, even though regulated tariffs are more expensive than most market offers. Approximately 72% of households in 2020 had a regulated tariff and although more customers are choosing market offers (the annual switching rate is 11.5% and increasing), this regulated share is still high. Customers stay in their current contracts due to a myriad of reasons, such as loyalty towards the incumbent supplier, no significant enough gains drawn from switching offers or lack of knowledge of the supplier switching procedures.

In the gas market, however, only 36% of French households in 2020 had regulated tariffs, which shows that the gas market is more open to competition with higher switching rates when compared to electricity. Still, 5% of the territory (1,450,000 household customers in electricity and gas), is dominated by local distribution companies with little choice in terms of alternative suppliers. This low presence of alternative suppliers happens for various reasons, such as differences in brand images, few customers, information systems to be adapted to the specificities of the DSO, and thus it is much more difficult for a competing supplier to develop in these areas. The incumbents in these territories convert their consumers from regulated price contracts to market price contracts, an issue to which the regulator is very attentive. Even if, in the short term, this type of practice could lower consumers' bills if the contracts offer lower tariffs when compared to the regulated tariffs in the long term, they risk locking the market and allow a supplier in a dominant position to fix its prices, without being subjected to any competitive pressure. Therefore, in terms of HHI, the French retail market is still highly concentrated, especially the household segment, although the index has been decreasing slowly over the past few years for all market segments. The HHI in the gas market for the non-household segment is close to the low concentration zone. However, CRE (French NRA) estimates that the HHI is not providing a broad view of the market since it is a simpler tool to measure market concentration. Therefore, it always needs to be analysed along with other indicators.

Similarly, in Ireland, there has been a steady decrease in the HHI in the household and small business segments over time in electricity, and even more significant decreases in the gas market. However, as in France, Ireland states that a high or low HHI is only an indication of market concentration and needs to be viewed in combination with other measures of market conduct and performance. The decline in market share experienced by the dominant electricity and gas suppliers since 2016 in Ireland, has now levelled off and the dominant suppliers in each market continue to hold the largest proportion of the electricity and gas market, respectively.

Portugal also shares this experience of high market concentration, although the HHI has been decreasing over time for all market segments. The number of suppliers has been increasing, contributing to less concentration in the market.

With regard to the Croatian gas market, the HHI is above 2,000 due to the fact that few suppliers still hold most of the market share on the retail market. The stated level of HHI is also reflected in the supplier switching rate, which is still at low levels but increasing for all gas market segments, from 0.4% in 2018 to 4.6% in 2020. Higher increases in the last observed period are due to the introduction of a register of billing metering points that systematically display more accurate data. Still, there is only one comparison tool on the market, which does not cover the entire gas market, only comparing the prices for supply under the public service obligation, which is recognised as a gap.

In the Netherlands, new actors are regularly entering the retail market, which might have a positive effect on the HHI. Most consumers know that they can switch and almost all the Dutch have access to internet and thus to price comparison tools, which boosts the switching rate (19.8% in 2020).

The share of inactive consumers is 23% in the Netherlands which could be related to the low level of trust in the energy market (19% of Dutch consumers have trust in the energy market, as opposed to a relatively large neutral group of 49%¹⁹). If the level of trust were higher, perhaps consumers would be even more prone to switching.

Slovenian household customers have good knowledge about how the market is functioning. 82.3% of the households are aware of supplier switching and 91.8% of them can name their DSO. 61.4% of households have trust in the market and 90% have access to the internet and with it, access to the independent comparison tool. However, the switching rate in Slovenia is below the EU-average and the number of suppliers is stable. One explanation for the relatively low switching rate among customers could be that there are DSOs that are exempt from the strictest unbundling rules. Many of these customers probably have a supply contract with the same DSO (77.2% is the total market share of exempt companies from strict unbundling rules). On the other hand, these customers can choose from a wide range of suppliers, as 14 suppliers (out of 22 suppliers in total in the country) compete in all the areas where exempted DSOs operate.

¹⁹ According to the NRA's own yearly survey "de Energiemonitor".

In Sweden, where the electricity market has a low and decreasing concentration, an increasing number of suppliers compete with low profit margins. Swedish customers have a high knowledge about how the market functioning. Nine out of ten are aware that supplier switching is possible and seven out of ten know what the network company is responsible for. Close to all Swedes (98%) have access to the internet and independent comparison tools, and six out of ten say that they trust their supplier. However, indicators measuring customer activity give a mixed picture. While the switching rates are at 10%, which is above the EU average, there is a large group of inactive customers. One explanation to this relatively low consumer engagement could be that local vertically integrated suppliers have a strong market position. As many as 38% of customers are connected to a DSO exempt from the strictest unbundling rules. Many of these customers probably have a contract with the local supplier in the same company group. These customers can choose from a wide range of suppliers. An important number of suppliers compete in all the areas where vertically integrated suppliers are active, but the vertically integrated suppliers have the biggest market share in many areas where DSOs enjoy exemptions.

Poland has another experience regarding some of the metrics in Group 1. The average concentration of the electricity market negatively correlates with the switching rate. The switching rate is negatively affected by the lack of a comparison tool operated or licensed by the Polish NRA. Certainly, the existence of a reliable price comparison tool would have a positive impact on increasing switching rates while reducing the high rate of customer inactivity.

The overall experience from these countries leads to the conclusion that general economic theory is mainly true in practice. There is a proven link between the metrics in Group 1. The highly concentrated markets leave little space for new entrants to emerge. However, several NRAs raised concerns over the reliability of metric 1. The HHI is a benchmark in economic literature and a relevant indicator for measuring market concentration, but it only provides an aggregated view of market concentration, without providing more detailed information on its monopolistic or oligopolistic nature. A statistical indicator such as HHI must be complemented by qualitative analysis, in particular on the possible causal links between concentration and market power, but most importantly it needs to be seen in conjunction with other metrics. In any case, customer awareness and trust are highly linked to switching rates and the number of inactive customers.

Several NRAs clearly affirmed higher customer awareness and trust in the market would increase national switching rates. Therefore, the higher the level of trust and awareness is, the lower the perceived difficulties to interact with the market and the higher the probability for consumers to be more engaged. The same applies regarding access to an independent and verified PCT: the higher this metric is in terms of accessibility, the higher the incentives for the consumer to search and compare offers and suppliers, and therefore, the higher the probability for more consumer engagement with the market.

Very few of the replying NRAs mentioned the link between a DSO's exemption from the strictest unbundling rules, the level of switching rates and the number of inactive customers. There is no overall conclusion that could be drawn on these metrics' correlation, but the few countries that do monitor this relationship closely, note that a higher level of exemptions for DSOs, leads to decreased consumer switching, as customers stay with their local DSO, which has, in general, a strong market position in its area.

2.2.2 Measures to improve the results of the metrics in Group 1

This section presents a set of possible measures planned to be adopted by NRAs to improve the results of the metrics in Group 1²⁰.

The electricity market in Cyprus is expected to open in August 2022. Therefore, the metrics of Group 1 may not completely apply to Cyprus yet, although improvements are already being envisaged. At the moment, a proposed bill on the regulation of the electricity market, which amends the current laws in force and harmonises with the provisions put forward by Directive 2019/944, is under a vetting process. The proposed bill puts forward several new provisions, such as the implementation of an independent and verified price comparison tool. Moreover, the NRA is working towards setting up the new provisions of the market regulatory framework for a smooth transition to a healthy, fully liberalised, competitive electricity market in Cyprus.

In order to further promote customer engagement in the energy market in Ireland, which could also result in increased competition, the Irish NRA (CRU) ran a Customer Engagement campaign in 2018, encouraging energy customers to “Switch On” to their rights, their savings and to energy safety. CRU had launched another “Switch On” campaign in 2020 to further promote switching, contract renegotiations and customer engagement with energy suppliers.

The Croatian NRA (HERA) finds it necessary to further raise customer awareness about Market offers. The development of gas price comparison tools that cover the whole retail market (public service obligation and market offers), which is in the process of development, will additionally contribute to raise customer awareness about market opportunities and provide a good overview of all possibilities in one place, so that customers are able to find an offer that best fits their personal needs. According to HERA, this progress is likely to influence the HHI as well as the supplier switching rate.

In Lithuania, the NRA (VERT) recently²¹ launched a price comparison tool where retail customers can compare the prices from different suppliers.

In the Netherlands, aggressive telemarketing is likely to be a major reason for low levels of consumer trust in the market. Therefore, ACM (Dutch NRA) reported that currently it is taking action against aggressive telemarketing practices. Moreover, from 1 July 2021, legislation will be adapted to better protect consumers against aggressive telemarketing. Similarly, in 2018, Sweden introduced mandatory written consent for telemarketing.

In Poland, the existence of a reliable comparison tool would improve a number of indicators related to consumer activation. Moreover, the NRA does not conduct consumer awareness research on its own, nor does it have access to such external research focused on the electricity sector. It is therefore difficult to set concrete directions of action to improve consumers’ active participation and awareness of the electricity market.

In order to improve competition, the Portuguese NRA (ERSE) plans to continue implementing rules and monitoring practices on a regular basis. ERSE provides information regularly to all market participants and tries to create a transversal and transparent market. The NRA also plans to conduct a survey to consumers and continue promoting their engagement with regular training sessions.

²⁰ Great Britain’s measures are included in Pilot 1 at the end of this section.

²¹ September 2021

In Sweden, a stronger focus on “branding unbundling” could contribute to decreasing the vertically integrated supplier’s advantages. More customers would compare offers from several suppliers, which would lead to better competition. “Branding unbundling” could lead to fewer suppliers in the market, but not necessarily higher concentration. The number of suppliers would likely decrease, but these would probably be more equal in size.

However, this could affect trust in a negative way. Surveys indicate that local, municipality-owned vertically integrated suppliers have the highest share of satisfied customers. The NRA, Ei, has suggested that the government implement a data hub and a supplier-centric model. A centralised data hub is a strong tool in supporting a dynamic retail market by streamlining, automating, and simplifying data exchange processes between electricity suppliers, DSOs and Balance Responsible Parties (BRPs). The data hub would minimise the risk of preferential treatment of some suppliers over others. It would process large volumes of consumption and other transactional-related data in a robust, transparent, and non-discriminatory way. The implementation of a supplier-centric model would make it easier for customers to understand the electricity market. This way, instead of having two contact points, the customer would only have to contact the supplier, whilst currently the customer must contact the DSO and then usually chooses to get a contract with the supplier in the same company group. The supplier-centric model would most likely increase the switching rate and more suppliers would have a larger customer base. The Swedish NRA also actively promotes the independent comparison tool Elpriskollen²². If more customers continuously compare contracts, switching rates would go up and competition would increase.

In 2021-2022 the Slovenian NRA is carrying out a refreshed survey on the electricity and gas market among households. The survey focuses on customer awareness, satisfaction, and trust. The results show the development of awareness among households. The NRA, Agencija za Energijo (AGEN), is also preparing a renewed independent comparison tool, which will have improved functionalities, which will hopefully promote more usage by consumers and increase market transparency.

²² <https://elpriskollen.se/>

2.2.3 Pilot 1: British group analysis for Group 1 metrics

Quantification & Results

Since 2016, with the launch of the Competition and Market Authority's Energy Market Investigation²³, the British retail market has become more competitive. Consumer engagement has overall increased, and Ofgem (British NRA) has seen record high rates of switching. This trend has been driving stronger competition between suppliers, with medium-sized suppliers drawing benefits and retaining customers from the large incumbent's customer base.

Documents describing the annual consumer engagement survey and the switching reform are available at Ofgem's webpage²⁴.

By engagement, it is meant a customer's ability and willingness to engage in their choice of energy supplier and tariff. Ofgem interprets engagement as a spectrum, with some customers being very engaged, regularly shopping around for the best deal and potentially getting the latest energy saving kit for their homes, and others, not engaging with the market. A person can be engaged, for example by knowing the tariff options available to them but decide not to switch. Similarly, a person can switch without being fully engaged in the process, by using an automated switching service, for example.

A key outcome of interest to Ofgem is that the customer can make an informed choice about their tariff. The main causes for low engagement remain similar over time: most commonly, satisfaction with the service provided by the current supplier. For vulnerable consumers, lower levels of confidence in engaging with the market, perceived hassle, lower levels of trust in the market and heightened concerns about cost increases may be further barriers for engagement.

Metric 1 (Low concentration within a relevant market, HHI): 1055 and 1259 for electricity and gas household markets respectively.

Metric 3 (Percentage of customers connected to "bundled" DSOs): Since DSOs are fully unbundled from suppliers, Great Britain does not use this metric.

Metric 14 (Percentage of consumers knowing they can switch supplier). Almost all consumers (87% in 2018) are aware that they can switch supplier.

Metric 15 (Percentage of consumers who know that DSOs are responsible for continuity of supply and, where applicable, of metering): Since DSOs are fully unbundled from suppliers, Great Britain does use this metric.

Metric 16 (Percentage of customers that trust the electricity/gas market): In 2020, 71% of customers reported to trust or neither trust nor distrust their energy supplier, while 73% of customers were satisfied or very satisfied with their supplier.

Metric 17 (Percentage of consumers having access to at least one independent and verified comparison tool): 60% of consumers who switched in 2020 used an online comparison tool (64% in 2019).

Metric 20 (Switching rate): 20.2% for electricity and 18.3% for gas households.

Metric 21 (Percentage of inactive customers): In 2019, 27% of consumers reported that they had never switched, down from 34% in 2018. In 2020, 51% of electricity

²³ In 2014, Ofgem referred to the Competition and Markets Authority (CMA) for a full market investigation, which was made by 2016, resulting in a series of remedies for the energy retail market in Great Britain.

²⁴ <https://www.ofgem.gov.uk/publications/consumer-survey-2020-update-consumer-engagement-energy>
<https://www.ofgem.gov.uk/energy-policy-and-regulation/policy-and-regulatory-programmes/switching-programme>

However, Ofgem noted continuing concerns with regard to the number of disengaged consumers and how competition would affect these consumers if the current default tariff cap²⁵ were lifted. Just over half of all consumers do not engage with the market, and this significantly limits their ability to protect their own interests. If the default tariff cap were lifted, it is unclear whether engagement levels concerning consumers on default tariffs would be sufficient to constrain the prices that suppliers set for their default tariffs. In addition, lower confidence in comparing and choosing energy deals, and lower levels of trust in the energy market may also deter some consumers from engaging.

Ofgem has identified a mixed picture of consumer experience in the microbusiness segment. On the one hand, engagement levels (like interest in finding a better deal or changing supplier²⁶) are relatively high, with around three in four microbusinesses on a negotiated, fixed-term deal. Microbusinesses are able to negotiate bespoke contracts that suit their needs and obtain competitive prices where they switch to a new supplier or obtain a new deal with their existing provider. Microbusinesses can access a good quality of service from the best performing suppliers and obtain valuable market insight and contracting services from brokers and other third-party intermediaries, who play an important role in the market.

On the other hand, microbusinesses that do not engage with the market face particularly high prices. For those that do engage in the market, many encounter opacity, poor practice and procedural barriers that hamper their customer journey and can lead them to overpay for their energy. As many microbusinesses use brokerage services to engage with the market, the activities of a minority of brokers are causing particular harm in individual cases (e.g. unsolicited calls, misleading practices or other misconduct when selling or marketing). Ofgem believes all these practices also have a broader impact on trust across the market.

Great Britain also reported on the possible measures planned to be adopted by the NRA to improve the results of the metrics in Group 1.

<https://www.ofgem.gov.uk/publications/microbusiness-strategic-review-statutory-consultation-modify-slcs-all-gas-and-electricity-supply-licences>

²⁵ Following Government legislation, in January 2019 Ofgem introduced a price cap, as a temporary measure, to provide price protection to around 11 million customers on expensive default and standard variable energy tariffs. This was due to widespread concern that the market was not working as well as it should for consumers on these tariffs, typically less engaged with the market and the products it offers.

²⁶ Engagement is defined as having switched supplier, changed tariff or compared tariffs with their own or other suppliers.

In Great Britain, the current switching procedures in the market are not working as well as they could. They can cost consumers time and money and deter them from switching in future. As a result, the disengaged household consumers tend to prefer well-known suppliers and perceive switching to be risky, and may welcome further reassurance²⁷ to encourage future engagement. Existing data shows that vulnerable consumers are even less inclined to engage and, therefore, increasing confidence may particularly help vulnerable consumers to engage with the market. Ofgem's work on the "Faster and More Reliable Switching Programme"²⁸ aims to facilitate accurate and timely switching and market engagement by allowing consumers to switch with confidence, quickly and without disruption. The project is currently being developed and is expected to go live in the summer of 2022. The current average switching time for electricity is 16 days while gas averages at 18 days to complete a supplier switch.

With regard to the microbusiness segment, Ofgem's new proposal involves relatively big changes to how microbusinesses can engage with the market, as well as the range of options available to them. To address these issues, Ofgem developed an initial package of proposed policy measures that it consulted on in 2020. In 2021, Ofgem consulted on the finalised package of proposals that covers:

- Provision of principal contractual terms: Strengthening existing rules around the provision of principal contractual terms to ensure consumers receive this key information both pre- and post-contract agreement in all cases;
- Brokerage cost transparency: Clarifying and strengthening existing supply licence obligations to provide information about brokerage costs on contractual documentation;
- Broker dispute resolution²⁹: Introducing a requirement for suppliers to only work with brokers signed up to a qualifying alternative dispute resolution scheme;
- Cooling-off period: Introducing a 14-day cooling-off period for microbusiness contracts;
- Banning notification requirements: banning suppliers from requiring microbusinesses to provide notice of their intent to switch;
- Information and Awareness: working collaboratively with Citizens Advice to create new and updated information so that microbusinesses can access up-to-date guidance and advice alongside communications to help further boost awareness of how the market operates and their rights as consumers.

For both segments, there is a Switching Programme which represents a reliable, quick and efficient switching process, which constitutes a fundamental building block for a well-functioning, competitive market that provides good outcomes for consumers. It helps consumers engage with the market with the confidence supplier switching can be finalised quickly and will not cause disruption to their day-to-day lives. This in turn facilitates greater competition between suppliers to retain these consumers. The Switching Programme is currently in its Design, Build and Test phase and continues to actively work with industry stakeholders to create the central systems and processes necessary to enable a faster and more reliable switching experience. The changes will enable household and non-household customers to switch within two working days while improvements to address data will ensure that there are fewer issues with switches going wrong. By improving the speed and reliability

²⁷ These customers are not likely to have thought about their energy tariff for a long while. They need more than just savings and signposting. They are likely to respond well to a prompt which provides additional support for switching. These customers like it when hassle of needing to search for a new deal and find their consumption data is removed. They like being able to get advice by phone, rather than online. They are happy to discuss their tariff choices with an unfamiliar third party, if they are endorsed by someone they trust (such as Ofgem). Many will not respond to the letter for a while after receiving it and appreciate being reminded. They may revisit it a number of times and discuss with family before deciding to switch tariff. They like the certainty and ease of switching through a trusted third party or their current supplier.

²⁸ <https://www.ofgem.gov.uk/energy-policy-and-regulation/policy-and-regulatory-programmes/switching-programme>

²⁹ The proposed ADR for brokers would allow microbusinesses to raise a complaint to the ADR provider if they cannot resolve a dispute with their broker directly.

of switching, the Programme aims to increase the number of consumers who engage actively in the market and, with a view to driving competition in the market leading to lower bills, better tariffs, products, and services for consumers. The project is expected to be open to the public in the second quarter of 2022.

3 Group 2 – Demand response fundamentals and innovation

In this chapter, CEER explores the relationship between six metrics from five different key-properties. First, each of the metrics is presented together with a comment regarding the performance of the responding NRAs. This is followed by a summary of NRAs' assessments of how the metrics in the group relate to each other and what can be done to improve the results.

These metrics are assessed together mirroring their relation in the market, as it is expected that one metric has an impact on the other metrics. Smart meter roll-out for instance, may allow a higher innovation in offers and further market development. Moreover, attractive services and products on the market could engage more prosumers with market. Having access to historical data plays an important role in making an informed choice, also enabling active participation in demand-response activities.

This group includes the metrics that are least used by NRAs, given varying stages of market development across Europe. The results confirm this reality by highlighting that most of the metrics in this group are linked to processes on the energy market that are still in early stages of development. However, results shared by some NRAs show that there is a correlation between the availability of time-of-use-metering, demand response offers in the market and the number of prosumers in a given market.

KEY PROPERTY	Metric #	HARMONISED DEFINITIONS OF METRICS
Low Concentration within a relevant market	1	Herfindahl-Hirschman Index
Low market entry barriers	2	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 with regulated energy prices
	5	Number of common standards for consumer data & 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
Close relationship between wholesale markets and retail prices	7	Correlation between wholesale and retail energy prices
	8	Mark-up between wholesale and retail energy prices
A range of offers, including demand response	9	Availability of a variety of pricing and billing options
	10	Availability of value added services for implicit demand response and self-generation
	11	Availability of online offers
	12	Availability of contracts guaranteeing the origin of energy
High level of awareness and trust	13	Availability of explicit demand response offers
	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
Availability of empowerment tools	16	Percentage of consumers trusting the energy market
	17	Percentage of consumers having access to at least one independent and verified PCT
	18	Percentage of consumers having access to online historical consumption info
Sufficient consumer engagement	19	Percentage of consumers having access to standardised supplier switching process (and its duration)
	20	Supplier switching rate
	21	Percentage of inactive consumers
Appropriate protection	22	Percentage of prosumers
	23	Time between notification to pay and disconnection for non-payment
	24	Percentage of disconnections due to non-payment
	25	Percentage of suppliers using min standards for key info in advertising and bills

Table 4 – Group 2 measures the relationship between time-of-use-metering, demand response, guarantees of origin and share of prosumers. The group includes 6 metrics from 5 key properties (marked in yellow) in the CEER 2017 Handbook for National Energy Regulators.

3.1 Description of individual metrics

3.1.1 Metric 6: Availability of time-of-use metering and, where applicable, additional fee paid by the consumer to be able to have time-of-use price vs. traditional metering

The purpose of this metric is to determine if customers have the possibility to be active on the market through demand response or flexibility schemes³⁰. If a customer cannot access time-of-use meter readings, retail market competition for new suppliers, aggregators and third parties with innovative contracts could be distorted and market choice restricted. Therefore, a lack of time-of-use-metering hinders both innovation and overall market development.

³⁰ The Electricity Directive states that Member States should ensure that the national regulatory framework enables suppliers to offer dynamic electricity price contracts and that final customers who have a smart meter installed can request a dynamic electricity price contract with at least one supplier, and with every supplier that has more than 200,000 final customers.

NRAs' responses are very divergent in terms of types of time-of-use metering available to consumers, ranging from 15 minutes to seasonal metering. It is plausible to assume that the types of time-of-use metering available in a country affect the types of offers available in the national retail energy market. Given the large diversity of types of time-of-use metering reported by NRAs, consumers' choice for an energy product in the EU varies depending on their country of residence.

3.1.2 Metric 10: Availability of value-added services for implicit demand response and self-generation

This metric corresponds 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 energy. It shows how innovative the national retail energy market is becoming. 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.

Availability of value-added services for implicit demand response and self-generation is still very low across Europe. Overall, NRAs did not have detailed data available for 2020 on value-added services or products that contribute to demand flexibility with precise consumption volumes in MWh (or equivalent units) that were stored through such services or self-generation. However, NRAs³¹ reported the existence of the following services/products: hot water heaters, storage/batteries, smart thermostats, maintenance services, customised information and audits aimed at modifying consumption behaviour.

3.1.3 Metric 12: Availability of contracts guaranteeing the origin of energy

This metric monitors the transposition of Article 19 in the new Renewable Energy Directive³² (Guarantees of origin for energy from renewable sources) that specifies how suppliers can guarantee the origin of energy.

Although the market for guarantees of origin (GOs) exists in all EU Member States, as it was established as an obligation by the first Renewable Directive, several NRAs³³ reported that in general, for the year 2020, they do not verify whether energy volumes sold in the framework of green offers are being backed by corresponding volumes of purchased GOs. Thus, as of 2020, for those NRAs who are not competent authorities for disclosure and/or issuing bodies of GOs, it is not possible to provide energy disclosure statistics on the origin of the energy consumed, such as specific energy sources that consumers chose in a given year with the corresponding volumes consumed.

³¹ CRE (France), ARERA (Italy), NVE-RME (Norway), ERSE (Portugal), EI (Sweden)

³² [Directive \(EU\) 2018/2001 of the European Parliament and of the Council of 11 December 2018 on the promotion of the use of energy from renewable sources](#)

³³ EV (Finland), MEKH (Hungary), ARERA (Italy), NVE-RME (Norway), Poland (URE), CRU (Ireland).

3.1.4 Metric 13: Availability of explicit demand response offers

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 in the network.

Most NRAs reported that for 2020, explicit demand response offers are available only to non-household customers. The Slovenian NRA (AGEN) was the only respondent to quantify how much capacity/volume is available through the use of explicit demand response contracts on an annual basis.

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

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.

As of 2020, all respondent NRAs reported that consumers gained access to historical consumption data and thus, enforcing this particular consumer right is not an issue any more in terms of achieving well-functioning retail energy markets. Such access is 100% online in all countries and often done through the dedicated DSO webpage. Some countries made the access to historical consumption data an obligation for suppliers, such as Latvia, which set it as a mandatory requirement for suppliers when providing billing information.

3.1.6 Metric 22: Percentage of prosumers

This metric is used to measure the percentage of “prosumers” engaged in the market for self-consumed energy and related services out of the total number of customers. In Article 15 of the Electricity Directive, prosumers are regarded as active customers, who are entitled to operate without disproportionate or discriminatory technical requirements, administrative requirements, procedures and charges, and who must be 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.

Some NRAs wait for the roll-out of smart meters to be accomplished in order to quantify the number of prosumers in the country, such as the Irish NRA (CRU), while others base their quantification of metric 22 on the percentage of prosumers with installed photovoltaic installations within households, such as the Croatian NRA (HERA), whereas yet others calculate this metric by dividing the amount of DSO contracts with production by all distribution contracts, such as the Danish NRA (DUR).

Metric number and name		Number of NRAs using for self-assessment		Number of NRAs completing gap-analysis		Number of NRAs including metric in group analysis	
		Electricity (23 NRAs replied)	Gas (19 NRAs replied)	Electricity (23 NRAs replied)	Gas (19 NRAs replied)	Electricity	Gas
6	Availability of time-of-use metering and, where applicable, additional fee paid by the consumer to be able to have time-of-use price vs. traditional metering	16	6	4	1	9	2
10	Availability of value-added services for implicit demand response and self-generation	10	2	1	1	8	0
12	Availability of contracts guaranteeing the origin of energy	12	5	5	1	3	3
13	Availability of explicit demand response offers),	9	2	2	0	2	0
18	Percentage of consumers having online access to historical consumption information	12	5	3	2	5	0
22	Percentage of prosumers	11	1	2	1	6	1

Table 5 – Metrics used in self-assessment of Group 2 – “Demand response fundamentals and innovation”

3.2 NRAs analysis of metrics in Group 2

There is a strong correlation between the availability of time-of-use metering (metric 6) in a country and the number of prosumers (metric 22) or the number of customers engaged in implicit or explicit demand response.

For consumers to become prosumers, to be more active and to reduce or shift load, a range of attractive services or products has to exist in the market, allowing and helping consumers to do so in a cost and time effective manner (metric 10). The same goes for consumers who want to engage in explicit demand response. They are equally dependent on both real-time data and a wide range of offers (metric 13). Before a consumer chooses to become a prosumer or participate in demand-response activities, it is recommended that the consumer has an overview of their own historical consumption data (Metric 18).

Some smart meters indicate the environmental impact of the electricity consumed³⁴. In such a framework, it becomes possible to compare the availability of contracts guaranteeing the origin of energy (Metric 12), whose disclosure statements provide data on the environmental impact of the electricity consumed in terms of CO₂ emissions and radioactive waste values, with current interphases of smart meters that are able to inform consumers on such environmental impacts. For future analysis, Metric 12 could be linked with Metric 17: Percentage of consumers having access to at least one independent and verified comparison tool (CT), as many CTs provide information on fuel mix in terms of product mix or supplier mix.

3.2.1 National conclusion about how the metrics in Group 2 are related to each other and/or affect each other

The Estonian NRA reported that 99.5% of national household consumers currently have access to smart meters. This requirement came into force in 2017. This large-scale roll-out of smart meters was portrayed very positively by national media outlets, which highlighted benefits such as the easy exchange of electricity for selling purposes and increased access to consumption data, including historical data. These positive developments contributed to raising consumer awareness about the electricity market.

Similarly, the Irish regulator (CRU) considers smart meters to be key enablers of innovation and demand response. In Ireland, the national smart meter roll-out is underway and due for completion in 2025. The smart functionality is being delivered in three phases, with smart services having first been implemented in 2021, giving customers access to their historical consumption data. CRU is working to define an enduring policy framework for prosumers and microgeneration in Ireland.

In the Netherlands, the national regulator (ACM) reported a high level of smart meter roll-out. However, dynamic price contracts are still a rarity in the market. Therefore, there is no financial incentive to act on the available historical data. The same is true for demand-response offers and value-added services for implicit demand response and self-generation. These kinds of products only exist to a limited extent. In addition, aggregators only operate on a small scale. Current legislation does not allow aggregators to be active without a supply licence. With regard to prosumers, ACM does not currently possess data on their number. On the other hand, suppliers are obliged to report on guarantees of origin, subject to an annual analysis by ACM. This analysis aims to substantiate 'green electricity' offers. This in turn contributes to building consumer trust in green offers, which might then lead to higher switching rates.

The Polish NRA concluded that the availability of services like time-of-use contract, demand side response and prosumer services heavily depend on the availability of appropriate metering devices and settlement systems. Access to historical consumption data is crucial and necessary to develop offers best tailored to the consumer.

Finally, the Portuguese NRA stated that smart meter roll-out may allow greater innovation in offers, as well as an increase in prosumers and energy communities. In 2020, Portugal put in place a national GO system. Quantification and assessment of metric 12 will thus be possible in the coming years.

³⁴ AT, CY, EE, SI, in ACER/CEER Market Monitoring Report 2019 – Energy Retail and Consumer Protection Volume, Figure 45, page 68,
<https://www.ceer.eu/documents/104400/7065288/2019+Retail+and+Consumer+Protection+-+Volume+3/53f57f31-62b7-8d87-62f4-1d9df49d4acb>

3.2.2 Measures to improve the results of the metrics in Group 2

The Cypriot NRA (CERA) highlighted that active consumers are key to fully integrated markets and increasing the use of renewable energy sources (RES). In order to increase consumer participation, Cyprus has implemented incentive structures such as support schemes. Moreover, a proposed legal act on the regulation of the electricity market, currently under vetting process, harmonises with the provisions of Directive 2019/944 and provides for several new provisions such as active consumers and demand response.

The French NRA (CRE) is currently performing a deeper analysis on contracts with guarantees of origin. According to CRE, more and more customers are subscribing to this type of offers, which have become the primary vector for market development. The NRA is, therefore, exploring the guarantees of origin market and its functioning, to then analyse the development of green offers, monitored by the NRA through PCTs, and adding a new indicator regarding the number of customers that subscribed to a green offer with all its particularities: local production, choice of energy source etc.

The Danish NRA (DUR) found that the current definition of “electricity supplier” does not distinguish between corporate (large-scale) suppliers and private consumers re-selling their electricity, using equipment such as solar panels, thus making the exact estimation of the number of prosumers difficult. Updates on the national legal framework may enable better quantification of the existing number of prosumers.

ACM, the Dutch NRA, concluded that most metrics in this group are indicators linked to processes in the energy market that are still in early stages of development. ACM recognises these developments and is preparing accordingly: the NRA is in contact with the market in order to enable fair and comparable dynamic price contracts. Moreover, it is identifying the (new) barriers that market parties encounter and trying to reduce these as much as possible, mostly through legislative advocacy efforts. Currently, legislation is being prepared to, among other goals, define and enable new market players to enter the market, such as aggregators, as well as empower prosumers.

3.2.3 Pilot 3: Swedish group analysis for Group 2 metrics

How the metrics in group 2 relate to each other

There are several possibilities for Swedish electricity customers to exercise implicit demand response. Customers have access to historical and up-to-date data and customers can gain access to hourly time-of-use metering, as well as hourly contracts. Property owners can buy and install PV panels, even benefitting from a few subsidies.

However, being an active customer involved in implicit demand response requires interest. There are not many available explicit services and the available ones do not offer high saving prospects derived from having an hourly contract or adjusting consumption in ways other than reducing it. This is currently a product market for customers that are early adopters.

Hourly metering and hourly contracts can be obtained without any fees. This provides opportunities for implicit demand response. However, there is still only a very small share of Swedish consumers that have hourly contracts. Smart meters, electric vehicles and photovoltaic (PV) panels may increase the number of hourly contracts and consumers who benefit from implicit demand response.

Moreover, historical data can be useful, although not in all cases. It is largely dependent on the consumer having lived in the same home and on consumption patterns not varying greatly over time. Weather also varies, both between annual seasons and year to year, which affects consumption. Additionally, it may be difficult to draw any conclusions on consumption patterns year prior, especially if some appliances have been replaced with newer models or if a consumer does not remember the reasons behind a given consumption pattern.

The direct environmental incentives for lowering electricity consumption, or changing consumption patterns, can be considered quite low in Sweden. The electricity production is generally fossil-free, and Sweden exports more electricity than it imports. Reduced consumption or increased flexibility stem instead from limited availability in supply (generation capacity or maximum top load is sometimes not enough in some areas) or due to limitations present in the grid. One cause for this problem is that increased electrification requires more electricity and that the increasing share of renewables in production are less predictable than other forms of production.

Capacity and supply affect the electricity prices, which incentivises consumers to adjust their consumption. Most consumers either know their electricity price by the end of the month (if they have a monthly variable contract) or pay the same price, regardless of the supply, if they have a fixed contract. Calculations show that there are often limited financial benefits in changing contracts or controlling consumption since the energy cost for electricity generally relatively inexpensive in Sweden.

Metric 6 (Availability of time-of-use metering): All larger commercial customers have time-of-use metering, household customers can ask for time-of-use metering at no extra cost.

Metric 10 (Value-added services for implicit demand response and self-generation): Yes, available.

Metric 12 (Contracts guaranteeing the origin of energy): Yes, available.

Metric 13 (Explicit demand response offers): Yes, available, but very rare and mainly aimed towards businesses.

Metric 18 (Online access to historical consumption information): Close to 100% of customers on a monthly or annual basis.

Metric 22 (Prosumers): 0.48% of customers.

The low supply prices also affect the incentive to install PV panels. Customers that install PV panels can apply for different subsidies. However, the time required to make it a profitable investment is quite long due to the low electricity prices. Currently, it is mostly businesses or more affluent households that can benefit from the potential that PV panels offer.

Swedish customers are capable of influencing and contributing to a more climate and environmentally friendly production of energy. Customers have access to and can choose electricity contracts that disclose the origin of the energy. The origin of energy is guaranteed via legal framework, namely a regulation stating that suppliers who offer these kinds of contracts must have or buy guarantees of origin. Around 27% of contracts offered in the market constitute contracts guaranteeing energy sourced exclusively, 21% in combination and around 51% with no guarantee of origin. This is only what is offered in the market. Ei lacks information on the number of customers with contracts guaranteeing energy sourced exclusively or in combination.

Ei believes it is important that there is a supply of contracts guaranteeing the origin of energy. These help to facilitate the transition to more sustainable and environmentally friendly energy production. It also makes the customer more aware of how the electricity consumed has been produced. The supplier must present information on the invoice with regard to the environmental impact, in the form of CO₂ emissions and nuclear waste. Via this system, the customer becomes aware of the impact their energy consumption has on the environment.

For customers, a contract with guarantees of origin may result in an interest in hourly price contracts and the need to move their consumption away from peak hours. It may also incentivise the customer to become a micro producer and/or buy an electric car. Therefore, contracts with renewable energy guarantees of origin are important on many levels for environmentally conscious consumers.

Measures to improve the results of the metrics in group 2

Ei is currently holding an initiative called EFFEKT-dialogen (the Effect dialogue) where different actors can discuss, cooperate and find new solutions in the field of flexibility and capacity.

Legislation to facilitate active users and new innovations is important. Hence, Ei has made it its mission to promote flexibility and active users. This has included providing information on hourly contracts and flexibility services on its comparison tool, dialogues with industry as well as suggesting legislation and activities to increase flexibility.

Ei believes that flexibility can be a complement to traditional grid development. Ei has suggested new legislation to create incentives for DSOs to use flexibility to a greater extent in order to complement or replace traditional grid development, when reasonable.

Ei follows the development of national and local flexibility markets, where customers can sell their flexibility. Ei also believes that aggregators can play an important role in helping customers. The NRA follows the development of local flexibility market projects, for example in Stockholm and Uppsala, where customers can sell their flexibility.

Installing a second generation of smart metering systems by 2025 will likely further promote active consumers. Customers will have access to an open interface with metering data, also allowing to share this data with third parties for potential energy services.

One way to promote hourly price contracts is to strive towards a market where most customers have contracts with guarantees of origin. This is the first step towards a more environmentally-friendly energy production. The NRA is encouraging the promotion of more consumer awareness of the benefits of these types of contracts via the comparison tool.

3.2.4 Pilot 2: British group analysis for Group 2 metrics

Quantification & Results

The British NRA (Ofgem) highlighted that consumers differ in their preferences and energy needs: an energy market that is working well for consumers will provide a range of different products to reflect these differences. For example, an increasing number of consumers may prefer green energy tariffs or want to switch to smart tariffs. As set out in Ofgem's decarbonisation programme action plan, it is important that consumers can trust that tariffs marketed as "green" will have a positive environmental impact on the planet, and that the environmental benefits of a particular tariff or supplier are not overstated ("greenwashing"). The NRA expects that smart tariffs will become more common as smart meter roll-out progresses further.

Green offers: The British NRA Ofgem reported that between June 2020 and May 2021, around 60% of the new tariffs launched in the market were labelled as

"green" by suppliers, but these do not necessarily always reflect 100% renewable sources usage. As of April 2021, the proportion of consumers on electric tariffs having 100% renewable sources was 43%, which is more than 10% higher than the levels observed at the end of 2019. The availability of contracts with guarantees of origin are a sign of product differentiation and innovation in the market, as well as an indicator of the degree of consumers' environmental awareness.

Smart meter roll-out: Suppliers are required under their current licence obligations to take all reasonable steps to roll out smart meters to household and designated non-household premises they serve until December 2021, and this includes their microbusiness customers. From 1 January 2022, a four-year framework with annual installation targets for suppliers will be in place. Smart meters should facilitate the competitive process by giving consumers near real-time and historic information on energy use – expressed in pounds and pence – so that consumers are able to better manage their energy consumption, save money and reduce metering issues.

Metric 6 (Availability of time-of-use metering): 24% of electricity customers have peak/off-peak and day/night metering in the electricity market

Metric 10 (Value-added services for implicit demand response and self-generation): Few offers and few consumers.

Metric 12 (Contracts guaranteeing the origin of energy): Yes, 43% of all electricity customers have 'green' or '100% renewable' contracts.

Metric 13 (Explicit demand response offers): The availability of explicit demand response offers in GB is limited to customers that are half-hourly settled (e.g. large industrial customers)

Metric 18 (Online access to historical consumption information): Does not use this metric.

Metric 22 (Prosumers). The share of domestic electricity customers with feed-in-tariffs is 3.1%.

The Department for Business, Energy and Industrial Strategy (BEIS) performed a cost-benefit analysis, which sets out that microbusiness customers should expect to see significant benefits from the smart meter rollout, particularly the £1.5bn released through energy consumption reduction. Ofgem continues to provide regulatory oversight of rollout delivery, ensuring energy suppliers' compliance with their smart meter licence obligations and working to secure the best possible outcomes for consumers. Progress has been impacted by the Covid-19 pandemic and the subsequent social distancing measures over the past year. Installations picked up after Q2 2020 but remained lower year-to-year by 20% (Q3 2020), 16% (Q4 2020) and 23% (Q1 2021).

Market-wide Half-hourly Settlement (MHHS): Ofgem has already introduced reforms to facilitate half-hourly settlement on an elective basis for household consumers. Ofgem's work on market-wide half-hourly aims to ensure that suppliers face the true costs of serving all of their customers, thus incentivising the development of new tariffs and services which reward customers for shifting their consumption to times when electricity is cheaper to generate and transport. This will improve the efficiency, and therefore competitiveness, of domestic electricity supply. It has the potential to significantly reduce costs for households that can shift their consumption to different times of the day, or households whose consumption patterns already align with the times of the day when energy is cheaper. Moreover, Ofgem would expect that the increased range of products – and innovative ways of communicating household energy use by market providers – will help empower consumers to engage with the retail market. It is important that suppliers offering more complex tariff offers provide consumers with sufficient information – via timely, clear and simple messaging – allowing consumers to make an informed choice.

In addition, better quality and more frequent settlement data, combined with greater administrative efficiency, should encourage non-traditional players with disruptive business models to enter the market and compete with existing suppliers. This new entry, together with the exposure to the true costs of serving customers, should also stimulate an innovative response from those already in the market. A faster settlement timetable means suppliers would need less collateral to cover their potential settlement liabilities, which should reduce barriers to new entry. This, combined with improvements in efficiency, will improve the competitiveness of domestic electricity supply. Ofgem's expectation is for industry to implement MHHS by October 2025, by putting in place strong incentives and governance, in order to ensure that implementation happens in a timely and effective manner. Ofgem estimates that the chosen option for MHHS will deliver net benefits to Great Britain's energy consumers in the range of £1,559m-£4,509m over the period between 2021 and 2045.

Currently, the majority of customers in Great Britain are settled on a "non-half-hourly" contract basis, using estimates of when electricity is consumed based on a profile of the average customer, given that most sites do not have meters that can record consumption every half hour. To more fully realise the benefits of smart meter roll-out, Ofgem is seeking to introduce market-wide half-hourly settlement (MHHS). The NRA's analysis, carried out before the onset of the Covid-19 pandemic, indicates that, under the preferred option for implementation, MHHS is expected to deliver £1.61bn to £4.56bn in net benefits to consumers. Reforming the existing electricity settlement process will attribute the costs of supply more accurately across the day, incentivising suppliers to offer new products and services that will help consumers to use electricity at times of day when it is cheaper to generate and transport.

3.2.5 Pilot 2: Slovenian group analysis for the Group 2 metrics

Quantification & Results

The Slovenian completion of smart meter roll out is planned for 2025, further facilitate demand side flexibility. With the implementation of Directive (EU) 2019/944, DSOs will be able to procure flexibility in the currently developing market for flexibility in Slovenia, whereas standardised market products for such flexibility services at DSO level are yet to be defined.

The NRA is also reforming the network charges methodology with an extensive public consultation process, which will foster more customer flexibility. The implementation of the first reformed methodology is planned for the beginning of 2023.

A crucial opportunity for electricity customers in the household segment to exercise implicit demand response is the access to peak (06:00-22:00 on workdays) and off-peak (22:00-06:00 plus weekends and holidays) time-of-use pricing. This way, the electricity supply contract is independent of network charges. Moreover, location-dependent critical peak tariffs for network charges can be applied in the framework of qualified pilot projects.

Some customers have access to historical data and can analyse their consumption behaviour. Homeowners can become prosumers by installing PV panels and potentially receive subsidies for their investment. In the non-household segment, business customers can take advantage of more tailored individual supply contracts, which may include non-publicly disclosed dynamic pricing.

However, explicit flexibility services are not that common yet. This is expected to change with the development of flexibility markets in Slovenia. The TSO (ELES) auctions balancing & reserve market products covering manual frequency restoration reserve (mFRR) and automatic frequency restoration reserve (aFRR) that can also be provided by prequalified aggregated demand response portfolios consisting of various loads, generators and energy storage devices. The direct environmental incentives for lowering electricity consumption, or changing consumption patterns, can be considered quite low in Slovenia.

Depending on the wholesale energy prices, Slovenia generally imports more electricity than it exports, though Slovenia has sufficient generation capacity. Consumers know their electricity price by the start of the month or pay the same price regardless of the supply if they have a fixed contract.

Metric 6 (Availability of time-of-use metering): Yes, available

Metric 10 (Value-added services for implicit demand response and self-generation): Peak/Off-peak time-of-use contracts are standard in Slovenia. Critical peak tariff is applied in the frame of pilot projects for the network charge.

Metric 12 (Contracts guaranteeing the origin of energy): 5-10% of contracts in the market sold by 15-20% of suppliers.

Metric 13 (Explicit demand response offers): The TSO auctions balancing & reserve market products covering manual frequency restoration reserve (mFRR) and automatic frequency restoration reserve (aFRR), which can also be provided by prequalified aggregated demand response portfolios consisting of various loads, generators and energy storage devices.

Metric 18 (Online access to historical consumption information): All households with internet access (90% of all households) have access to annual historical consumption. Approximately 75% of households have online access to historical consumption on an hourly basis.

Metric 22 (Prosumers): 1% of households and 1.1% of non-households.

Calculations show that there are other financial benefits in changing contracts or managing consumption. Supply prices also influence incentives for PV panel installations. Customers that install PV panels can apply for different subsidies. Therefore, customers in Slovenia have the power to contribute to a more climate- and environmentally-friendly production of energy. Some suppliers offer electricity contracts that allow customers to choose their source of energy. Regulation demands that suppliers disclose the source of energy in monthly bills.

4 Group 3 – Concentration and price formation

If retail markets are characterised by economies of scale, the HHI (Metric 1) can be difficult to analyse as a stand-alone metric. Therefore, CEER encourage NRAs to analyse HHI together with the evolution of retail and wholesale prices (Metric 7 and 8) or the existence of regulated prices (Metric 4).

High concentration coupled with sustained large mark-ups and high retail prices that are not reflective of underlying wholesale costs may indicate possible competition issues. However, vigorous competitive pressure could generate high concentration, after efficient suppliers win customers from less efficient competitors that eventually exit the market. This may lead to lower prices which will benefit consumers. Conversely, relatively low concentration may coexist with stable market shares and low competitive pressure (for example due to an oligopoly structure), leading to higher prices over time.

Therefore, in this chapter, CEER explores the relationship between four metrics from three different key-properties. First, drawing from the information provided by NRAs, each of the metrics is presented together with a comment regarding its performance. This is followed by a summary of NRAs' assessment of how the metrics in the group relate to each other and what can be done to improve the results.

KEY PROPERTY	Metric #	HARMONISED DEFINITIONS OF METRICS
Low Concentration within a relevant market	1	Herfindahl-Hirschman Index
Low market entry barriers	2	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 with regulated energy prices
	5	Number of common standards for consumer data & 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
Close relationship between wholesale markets and retail prices	7	Correlation between wholesale and retail energy prices
	8	Mark-up between wholesale and retail energy prices
A range of offers, including demand response	9	Availability of a variety of pricing and billing options
	10	Availability of value added services for implicit demand response and self-generation
	11	Availability of online offers
	12	Availability of contracts guaranteeing the origin of energy
	13	Availability of explicit demand response offers
High level of awareness and trust	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
	16	Percentage of consumers trusting the energy market
Availability of empowerment tools	17	Percentage of consumers having access to at least one independent and verified PCT
	18	Percentage of consumers having access to online historical consumption info
	19	Percentage of consumers having access to standardised supplier switching process (and its duration)
Sufficient consumer engagement	20	Supplier switching rate
	21	Percentage of inactive consumers
	22	Percentage of prosumers
Appropriate protection	23	Time between notification to pay and disconnection for non-payment
	24	Percentage of disconnections due to non-payment
	25	Percentage of suppliers using min standards for key info in advertising and bills

Table 6 - The metrics in Group 3 measure the relationship between market concentration, existence of regulated prices and price formation. The group includes 4 metrics from 3 key properties (marked in yellow) in the CEER 2017 Handbook for National Energy Regulators.

4.1 Description of individual metrics

4.1.1 Metric 1: The Herfindahl-Hirschman Index (HHI)

HHI measures the degree of concentration in a market. It is calculated as the sum of the squares of the market shares of all firms in the market. It ranges between 0, for an infinite number of small firms, and 10,000, for one firm with a 100% market share. Based on guidance from the European Commission, an HHI of above 2,000 signifies a highly concentrated market. In general, a high number of suppliers and low market concentration indicate a competitive market structure. Metric 1 (HHI) is also included in Group 1 and described in more detail in section 2.1.1.

4.1.2 Metric 4: Percentage of consumers with regulated energy prices

The purpose of this metric, in the context of the adoption of the Clean Energy Package, is to measure the impact of price interventions with the ultimate aim of having prices set by the market. This contributes to removing barriers to entry for new suppliers and to creating a level playing field between competing market actors. According to the recast Electricity Directive³⁵, regulated prices are only allowed under certain circumstances for a limited time and under specific rules, and EU Member States shall ensure the protection of energy-poor or vulnerable household customers through social policy or means other than public price interventions for electricity supply³⁶.

The proportion of customers on regulated prices varies considerably between countries ranging from 0 to 100 percent. Approximately 5-20% of customers benefit from social tariffs for vulnerable customers. More information on this topic can be found in the CEER-ACER Annual Report on the Results of Monitoring the Internal Electricity and Natural Gas Markets in 2020³⁷.

4.1.3 Metric 7: Correlation between wholesale and retail market prices

The purpose of this metric is to determine whether consumers receive correct 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. The degree of correlation between wholesale and retail energy prices largely depends on the price structure of the contract the customer has agreed to with the retailer³⁸. However, the ability of suppliers to offer contracts with a close correlation to wholesale markets depends on their ability to access and procure energy. Therefore, this analysis presumes that wholesale markets are well-functioning, organised and transparent.

Although several NRAs use this metric, only a few provided further details, often noting that they have been able to go beyond the analysis already carried out and published in national reports to the European Commission.

³⁵ [Directive \(EU\) 2019/944](#)

³⁶ Pursuant to Articles 28 and 29 of the recast Electricity Directive

³⁷ <https://www.ceer.eu/documents/104400/7244444/211108+Retail+markets+and+consumer+protection+MMR+2020.pdf/5b5cd7af-3b76-3cb5-a387-925a88a7281f>

³⁸ Price structures vary from hourly pricing contracts set against wholesale markets to fixed-price contracts.

4.1.4 Metric 8: Mark-up between wholesale and retail energy prices

The purpose of this metric is to determine whether consumers are paying a fair price for their energy, relative to the underlying wholesale price. The evolution of mark-ups is an indication of the level of competition in retail markets and the “responsiveness” of the retail price to rising or falling wholesale prices over time. The mark-up level will depend on the price structure of the contract that the consumer has agreed to with the retailer. The analysis presumes that wholesale markets are well-functioning, organised and transparent in order to facilitate the responsiveness of retail to wholesale prices to occur.

Only a few NRAs have provided examples of mark-ups and comparisons of mark-ups for different product types.

4.2 NRA’s analysis of metrics in Group 3

If retail electricity and gas markets are characterised by economies of scale, the HHI (Metric 1) can be difficult to analyse as a stand-alone metric. Therefore, CEER encourages NRAs to analyse HHI together with the evolution of prices (Metric 7 and 8) or the existence of regulated prices (Metric 4).

A high amount of competitive pressure could lead to a more concentrated market where efficient suppliers win customers from less efficient competitors that eventually exit the market. In this situation, the HHI would increase (which is negative), but prices, at least in the short timeframe, would decrease (which is positive).

If the competitive pressure is low (due to various reasons, cartels, for example), the HHI can be stable (which if it is low, can be interpreted as positive) together with increasing margins (which is negative).

Metric number and name		Number of NRAs using for self-assessment		Number of NRAs completing gap-analysis		Number of NRAs including metric in group analysis	
		Electricity (23 NRAs replied)	Gas (19 NRAs replied)	Electricity (23 NRAs replied)	Gas (19 NRAs replied)	Electricity	Gas
1	Low concentration within a relevant market	21	18	3	3	8	8
4	Percentage of consumers with regulated energy prices	10	12	2	2	3	3
7	Correlation between wholesale- and retail market prices	10	12	2	2	4	4
8	Mark-up between wholesale and retail energy prices	10	6	2	2	4	4

Table 7 - Metrics used in self-assessment of Group 3 - “Concentration and price formation”

4.2.1 National conclusion about how the metrics in Group 3 are related to each other and/or affect each other

Based on the responses received, there is not a clear picture on how the metrics in Group 3 are related to each other, as only a couple of NRAs that responded to this question were able to provide a deeper analysis, while several NRAs highlighted only the developments on individual metrics.

According to the British NRA, Ofgem, the retail market saw two significant acquisitions in 2020 (i.e. the acquisition of SSE by OVO in January 2020 and Npower by E.ON, started in 2020 and completed in 2021) which increased the relative market shares of large suppliers. While these acquisitions raised market concentration, HHI values in household markets remained at moderate levels (e.g. at the end of 2020, 1055 in electricity and 1259 in gas). The Competition and Markets Authority (CMA) approved these acquisitions in 2019, not having found signs of competition to the benefit of household consumers being hindered. Ofgem continues to closely monitor how consolidation and competition evolves in the market, especially after the exit of many small and medium suppliers due to the current wholesale gas price crisis.

Following the government's legislation on tariff caps for electricity and gas³⁹ in January 2019, Ofgem introduced a price cap to provide price protection to around 11 million customers on expensive default and standard variable energy tariffs⁴⁰. This was due to widespread concern that the market was not working as well as it should for consumers on these tariffs, who are typically less engaged with the market and the products it offers. There was concern that these consumers were being overcharged for their energy supply. In accordance with the licence requirements, the price cap is updated twice a year to ensure the default tariff cap reflects changes in the cost of supplying energy, including wholesale prices. In a well-functioning competitive retail market, it is expected that over time competitive pressures would promote efficiency and limit the scope for excess profits.

The primary aim of the British default tariff cap is to protect consumers on default tariffs from being overcharged and ensure they pay prices that more closely reflect the underlying costs of supplying energy. Ofgem also believes that the price cap provides an additional incentive for suppliers to improve their efficiency. The aggregate EBIT margin has fallen annually since 2016. The falling margins since 2016 may be attributed, in part, to increased competition, while we profitability has also fallen since the introduction of the default tariff cap in 2019. Under the default tariff cap, suppliers are incentivised to become more efficient and can no longer recover any losses or low margins on fixed tariffs through default tariff customers. However, a supplier's overall profitability is affected by their overall efficiency and pricing decisions across the range of products they offer, including fixed tariffs that are outside the scope of the default tariff cap.

In France, the HHI shows that the market is still highly concentrated for the household segment, but the index has been decreasing slowly over the past few years. Regarding the non-household segment, the HHI is in constant decrease, but still in the highly concentrated zone. For the whole market, the HHI was at 4600 in 2017 and at 3500 in 2020. This index provides a simple measure of market concentration, in terms of supplier market shares. Nevertheless, the French Energy Regulator (CRE) highlighted the fact that the HHI does not

³⁹ [The Domestic Gas and Electricity \(Tariff Cap\) Act 2018](#)

⁴⁰ A previously introduced measure to protect vulnerable customers with prepayment meters ('PPM cap') continues to apply in parallel to the default tariff cap, which is also a temporary measure. However, customers can only be protected by one of the caps. In addition to this measure, there are also around 4.4 million electricity and 3.2 million gas customers with PPM cap (approximately 55% of customers with regulated prices).

provide very detailed information on the market's monopolistic or oligopolistic nature and needs to be measured along with other indicators, in terms of market power and supplier behaviour. Although more and more customers are choosing market offers, the presence of regulated tariffs for households is still at a high level (around 72% of the households at the end of 2020), despite regulated tariffs being more expensive than most market offers.

In Ireland, there has been a steady decrease over time in the HHI in the household and small business segments. The HHI for the medium-sized businesses was fairly steady between 2016–2018, decreased in 2019 and remained steady in 2020, while in the large business segment there was a decrease in HHI until 2018 and an increase in 2019. The increase in 2019 is observed due to the increase in the market share of one of the suppliers operating in this segment. The HHI for the large business segment decreased slightly in 2020. This indicates an increased level of competition over time. However, a high or low HHI is only an indication of market concentration and needs to be viewed in combination with other measures of market conduct and performance.

In 2020, Slovenian retail electricity markets for household and non-household consumers had relatively low concentration levels, with HHIs of 1,636 and 1,180 respectively, although still slightly higher than in 2019⁴¹. In addition to the HHI index, the Slovenian NRA also uses other market concentration indicators (mark-ups and the correlation between wholesale and retail prices). Mark-ups between wholesale and retail electricity prices on average in 2020 corresponded to 1.29 eurocent/kWh – which is higher than in 2019. Together with the increased HHI index, this indicates a decreased level of competition. Together with the HHI, the Slovenian NRA also monitors the correlation between wholesale and retail prices. The higher the price correlation is, the better the market functioning. As with mark-ups, external effects can affect the development of the price correlation. One influencing factor is likely to be related to the supplier strategies and to what extent market players are using it for their portfolio management, as well as how their contracts with consumers are formed. The correlation between wholesale and retail prices in the last three years was 0.54. The correlation between wholesale and retail prices in 2020 was -0.06 which is significantly lower than in 2019 (0.81). However, external factors could also influence the price correlation. The fact that correlation was low during 2020 is an indication of retail prices not following the price drops on the wholesale market. There are no customers with regulated energy prices in Slovenia.

The Slovenian retail market for gas in the household segment has a low concentration with an HHI of 1,689. In the non-household segment, concentration is higher with an HHI of 3,110. The HHI in the household segment was 3.2% lower in 2020 when compared to 2019. On the other hand, the HHI in the non-household segment was 2.8% higher in 2020 than in 2019. There are no customers with regulated energy prices in Slovenia.

In Croatia, a high share of households continue to buy gas in the regulated market, as regulation provides a protection framework for end-customers with regard to possible market fluctuations. The low margins are also an indication of the lack of market competition. The gas market deregulation process is ongoing and will result in profound changes during the coming years.

⁴¹ Over the last years, the number of suppliers has remained stable (22 suppliers). In 2020, The HHI in the household segment was 2.1% higher than in year 2019. The HHI for the non-household segment in the same year was 3.9% higher than in year 2019.

In Latvia, not all metrics are used to analyse retail markets, making it difficult to determine how they interact with each other. The same happens in Lithuania where the overall conclusion is that market concentration is decreasing.

Finally, the gas market in Poland for households is nearly completely dominated by one entity, as alternative suppliers find it difficult to offer more attractive prices to end users.

4.2.2 Measures to improve the results of the metrics in Group 3

The Swedish NRA noted that it is difficult for them to influence or improve the results of the metrics in Group 3 since the market is based on competition, and, therefore, prices and mark-ups are set by suppliers. A stronger focus on “branding unbundling” could influence the concentration in the market, if the largest suppliers took market shares from small and medium sized, vertically integrated suppliers.

In Great Britain, Ofgem continues to undertake annual reviews into whether conditions are in place for effective competition in domestic retail markets, namely if it meets the requirements of the Tariff Cap Act. The Tariff Cap Act does not define effective competition, nor is there a generally accepted definition in relevant policy frameworks or academic literature. Therefore, Ofgem developed a definition to assist with the decision-making process in 2019⁴². The framework has four key components: a definition of effective competition and three conditions for effective competition. While the conditions may be satisfied individually to differing degrees, Ofgem will assess whether they have been met overall. The first annual review was published in August 2020⁴³ and the second in August 2021⁴⁴, which concluded that the conditions for effective competition in domestic supply contracts are not yet in place.

In Croatia, deregulation of gas prices has already begun by conducting a public tender for the selection of suppliers, under the public service obligation for the period from 1 April 2021 to 30 September 2024. This process will lead to higher competition and is likely to affect mark-up values, which is certainly a prerequisite for positive changes in the market. HERA plans to continue a constant monitoring of the market and collection of the highest quality, concrete data from gas suppliers and traders, certainly contributing to better monitoring of this group of metrics.

A couple of NRAs pointed out that it is difficult for them to improve the results of the metrics in Group 3 since the market is based on competition. This is the case in Slovenia, where the NRA has a relatively small influence on the results of the metrics in Group 3. Similarly, in the Netherlands the increasing competition in the electricity market is not directly under the NRA’s umbrella. However, the regulator is looking at how to improve the licensing process in order to lessen the entry barriers in the market.

⁴² [Decision – Framework for assessing whether conditions are in place for effective competition in domestic supply contracts](#)

⁴³ [Outcome of review into whether conditions are in place for effective competition in domestic supply contracts](#)

⁴⁴ [Outcome of 2021 review into whether conditions are in place for effective competition in domestic supply contracts](#)

4.3 Pilot 4: Dutch group analysis for Group 3 metrics

Quantification & Results

The HHI for the Dutch electricity market is 1918 (based on data from 31-12-2020). Ideally for the NRA, this number would be lower than 1800. The reason for this value is that there were four large and 57 smaller suppliers at the time of analysis. Currently the Dutch energy regulator, ACM, has received multiple licensing applications. Therefore, ACM expects that more suppliers will join the market and that smaller ones might become larger, and this in turn might lead the index to decrease. The

same is observable in the gas market, where the HHI is 1947 (based on data from 31-12-2020). Ideally for the NRA, this number would be lower than 1800. Similarly, this number is also explained by the existence of 4 large and 57 small gas suppliers. As many new suppliers are currently under licencing process, new suppliers are likely to join the market and incumbent small suppliers might increase their size, which decreases the HHI.

The mark-ups between wholesale and retail electricity prices were 3.94 Eurocent/kWh on average, in 2020 – which is lower than in previous years. This indicates an increased level of competition. A decreasing HHI index also indicates the development of market competition. It is, however, difficult to conclude how the market is developing only taking into account these two indicators. The low mark-ups in 2020 could refer to an anomaly caused by external factors. For 2020, the mark-ups differ more between contract types than previous years – fixed contracts seem to yield lower mark-ups than variable ones.

Another indicator that can be used together with the HHI to get a more dynamic measure of the market competition development is the correlation between wholesale and retail prices. A high price correlation indicates good competition and a well-functioning market, and, hence, the opposite corresponds to a low correlation between wholesale and retail prices. As with mark-ups, external effects can influence the development of the price correlation, such as to what extent market players have chosen to hedge their portfolios, and how their contracts with consumers are designed. For example, if market players do not hedge prices and the wholesale prices increase, and they have a high proportion of fixed-price agreements with consumers, this may precipitate a temporarily lower correlation between wholesale and retail prices – without a decreased level of competition in the market *per se*.

The correlation between wholesale and retail prices was, on average, 0.64 for 2020 (on a scale from 0–1, where 1 is a perfect correlation) – which is low when compared to previous years. This indicates a decreased level of competition. Together with the decreased HHI index, this indicated a contradictory picture of market concentration development. Hence, as was the case for the combined use of the HHI index and mark-ups, it is difficult to conclude how the market develops by looking at the HHI index in combination with the price correlation. However, similarly to mark-ups, external factors could influence the price correlation.

Metric 1 (Low concentration within a relevant market, HHI): 1918 for electricity and 1947 for gas.

Metric 4 (Percentage of consumers with regulated energy prices): 0

Metric 7 (Correlation between wholesale- and retail market prices): In 2020, the correlation was 0.64.

Metric 8 (Mark-up between wholesale and retail energy prices): For electricity, 3.94 Eurocent/kWh on average in 2020.

4.3.1 Pilot 4: Spanish group analysis for Group 3 metrics

Quantification & Results

As of 31 December 2019, the number of customers in the Spanish retail electricity market reached more than 29 million. Out of these customers, 94% are household customers, with a contracted power lower than 10 kW, and 6% corresponds to larger household, SME and industrial customers. In terms of consumption, 47% of the energy was consumed by industrial consumers, 28% by household consumers under 10 kW and 25% by larger household and SME consumers.

From the perspective of the evolution of the level of competition in the retail market,

the combined electricity market share of the three larger suppliers in Spain, Endesa, Iberdrola and Naturgy, barely changed in 2019, remaining at 65%. By consumer groups, these three companies supplied 81% of household consumption (83% in 2018), 55% of SME consumption (60% in 2018) and 58% of industrial consumption (55% in 2018).

Non-vertically integrated suppliers are gradually entering the electricity market, with a share of 30% in 2019 (28% in 2018).

The HHI keeps dropping, especially in the SME group, with a value of 1,300, whereas in the industrial group, it stands around 1,700. The household group is the most concentrated, with an index of 2,500.

Metric 1 (Low concentration within a relevant market, HHI): Household 2537, Non-household 1385

Metric 4 (Percentage of consumers with regulated energy prices): 37.8% in 2020

Metric 7 (Correlation between wholesale and retail market prices): Not available.

Metric 8 (Mark-up between wholesale and retail energy prices): the household segment in the free market has an estimated gross profit of 35-44 €/MWh; the non-household segment has an estimated gross profit coming from small and medium enterprises of 12-21 €/MWh; for industrial customers < 5 €/MWh.

	ENDESA	IBERDROLA	NATURGY	EDP	VIESGO	REPSOL	FENIE	CIDE	AUDAX	OTHERS	HHI
2011	42%	35%	15%	2%	2%	0%	0%	1%	0%	2%	3,237
2012	41%	35%	16%	3%	2%	0%	0%	1%	0%	2%	3,173
2013	41%	34%	16%	3%	2%	0%	0%	1%	0%	3%	3,071
2014	39%	33%	17%	3%	2%	0%	1%	1%	0%	3%	2,943
2015	39%	33%	17%	3%	2%	0%	1%	1%	0%	4%	2,903
2016	38%	32%	17%	3%	2%	0%	1%	1%	0%	5%	2,796
2017	37%	32%	17%	3%	2%	0%	1%	1%	0%	6%	2,694
2018	37%	32%	15%	3%	2%	0%	1%	1%	1%	7%	2,609
2019	36%	32%	13%	4%	0%	3%	1%	1%	1%	9%	2,500

Table 8 - Electricity supply market shares by business group. Household customers

From the perspective of consumer engagement

Over the past four years, the number of points supplied by suppliers on the regulated market has been progressively reduced; going from the almost 13 million registered on 31 December 2015, to the 11 million registered four years later, which has meant a decrease of 15.1% in the number of supplies in this type of market.

	2015 Consumers %	2016 Consumers %	2017 Consumers %	2018 Consumers %	2019 Consumers %
Free market	16.023.886 55.3%	16.884.410 58.0%	17.707.295 60.5%	18.149.356 61.7%	18.566.773 62.8%
Regulated Market	12.940.056 44.7%	12.205.476 42.0%	11.565.048 39.5%	11.261.291 38.3%	10.982.726 37.2%
TOTAL	28.963.942	29.089.886	29.272.343	29.410.647	29.549.499

Table 9 - Evolution of household consumers

The switching rate in the Spanish retail market in 2019 remained at similar levels when compared to 2018 (10.2% in 2019 vs 10.9% in 2018). High switching rates in the SME and industrial groups stand out (24% and 28%, respectively) when compared to the household group (9%).

Year \ switches	Free market to free market	Reference supplier to free market	Return to reference supplier
2015	1,261,460	1,137,276	207,519
2016	1,620,643	896,779	264,048
2017	1,670,809	835,991	244,600
2018	1,610,946	713,253	461,050
2019	1,541,735	638,774	390,309

Table 10 - Switches of household consumers

Smaller household consumers tend to contract time-of-use tariffs. As of 31 December 2019, 34% of consumers with contracted power under 15 kW had time-of-use tariffs, compared to 22% in the previous year. However, in most cases there are no changes in the consumer's consumption pattern, due to the tariff design.

Smart meter roll-out (for consumers with contracted power under 15kW) was completed on 31 December 2018, with 98% of meters having been replaced. On 31 December 2019 this percentage reached 99%.

The introduction of smart meters capable of recording hourly measurements is boosting contracts with dynamic prices and with different prices for certain hours of the day or for certain days of the week. As of 31 December 2019, almost 3 million household consumers had this type of contract, excluding the 11 million consumers under the Voluntary Price for Small Consumers (PVPC). The PVPC was implemented in Spain as the regulated default tariff for small low voltage consumers (lower than 10 kW). The charge related to the energy cost in the PVPC is the hourly price of the wholesale energy markets.

Since 2017, there is increased consumer interest in green products. In 2019, CNMC (Spanish NRA) issued guarantees of origin for 3.8 million consumers, compared to 2.9 million in 2018. It is noteworthy that the rest of consumers also have the opportunity to find green energy or high efficiency generation.

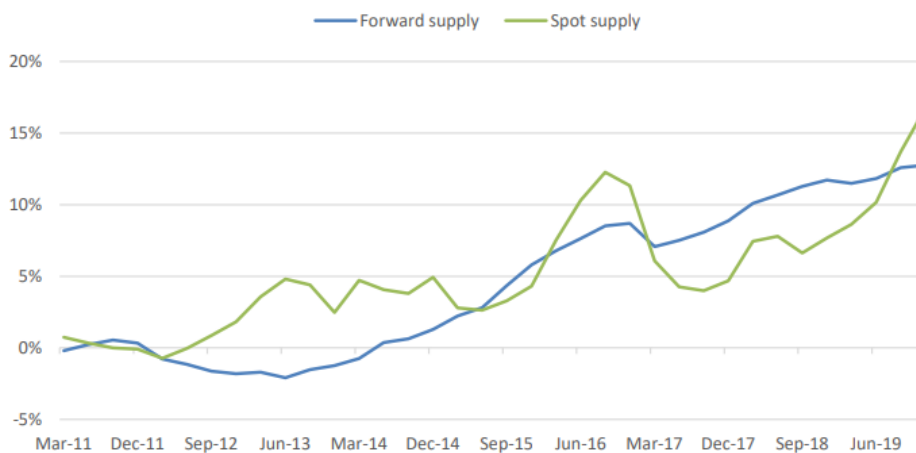
From the perspective of consumer electricity billing

In the spot markets, the wholesale electricity prices saw a drop in 2019. Much of this decline was the result of lower natural gas prices in 2019. On the contrary, prices increased in the forward markets. Therefore, the estimated supplier profits varied significantly according to the reference used (spot/forward prices).

For SMEs, gross margins evolved from almost zero in 2018 to exceeding €20/MWh in 2019, when analysing spot markets. For forward markets, profits remain relatively stable at around €10/MWh – €12/MWh, in line with previous years.

For the industrial group, the estimated profits, considering the cost of supply in the spot market, evolve from being negative in 2018 (€-6/ MWh) to around €5/MWh in 2019. Estimated profits present greater stability (between €-2/MWh and €+2/MWh), when considering the cost of supply in the forward markets.

Regarding household customers, the upwards trend of the estimated gross profits continues, reaching around €40/MWh in 2019 (€20/MWh – €30/MWh in 2018), considering a supply cost in both the spot market and the forward market. Considering the operating costs of around €10/MWh, net profits amount to approximately €30/MWh, that is, around a 15% net margin on sales.



Source: CNMC

Figure 1 - Estimated net supply margin for free suppliers. Household consumers Tariff 2.0A

If the analysis is carried out on the offers published in the CNMC comparison tool, the net margin on sales becomes 6%. This confirms that the offers for new customers are tighter, on average, than the prices applied by suppliers to their portfolio customers.

On average, profits are higher for vertically integrated suppliers in the household segment, whereas profits tend to be similar to non-vertically integrated suppliers for SME and industry.

Relation between metrics in group 3

Switching of consumers from the reference market to the free market occurs with new entrants and to the five large [incumbent] suppliers as well as to non-incumbent suppliers. Therefore, there is a gradual reduction of the HHI, which, according to economic theory, indicates an improvement in the market. The reasons for these variations are partially explained by the variety of offers made by suppliers, such as the existence of dynamic offers or the growing interest of consumers in green products. However, the evolution of the margin obtained by suppliers cannot be sufficiently explained only by the indicators included within Group 3.

How to improve the metrics in group 3

CNMC has been carrying out various actions in the field of consumer protection in an effort to define good practices in this regard. Among them, recommendations have been published in successive reports for both suppliers and consumers. Some of them have been included in the regulation, such as the prohibition of door-to-door sales, which allows for better consumer choices. Others have

resulted in binding decisions, such the obligation for effective compliance with clarity and simplicity of information by vertically integrated groups. With regard to switching, the tariff design was identified as a cause for decreased switching. Therefore, new three hourly energy periods for all consumers with a contracted power under 15 kW, aiming at promoting efficiency and energy savings, is being defined.

Other measures will follow the introduction of new possibilities offered by smart meters, which should be incorporated into the regulation. Furthermore, some restrictions that limit the rights of consumers should be eliminated, as these were introduced by an outdated technology.

In addition, the transposition of Directive (EU) 2019/944 to Spanish regulation must be completed. Some of the aspects pending are the minimum requirements for billing and billing information, independent out-of-court dispute settlement mechanisms for all consumers, conditions on the public intervention in the price setting, or the obligation for suppliers with more than 200,000 consumers to offer dynamic prices. The introduction of the latter obligation should be complemented with measures that guarantee transparency and facilitate comparison, such as the use of a common methodology.

5 Group of metrics suggested by individual NRAs

In the Roadmap questionnaire responded by NRAs (July 2021), CEER asked NRAs to suggest their own groupings of metrics.

In this edition, only the Dutch regulator suggested their own combination of metrics. The group of metrics suggested contains seven metrics from five key-properties (marked in yellow in the table below).

KEY PROPERTY	Metric #	HARMONISED DEFINITIONS OF METRICS
Low Concentration within a relevant market	1	Herfindahl-Hirschman Index
Low market entry barriers	2	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 with regulated energy prices
	5	Number of common standards for consumer data & 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
Close relationship between wholesale markets and retail prices	7	Correlation between wholesale and retail energy prices
	8	Mark-up between wholesale and retail energy prices
A range of offers, including demand response	9	Availability of a variety of pricing and billing options
	10	Availability of value added services for implicit demand response and self-generation
	11	Availability of online offers
	12	Availability of contracts guaranteeing the origin of energy
High level of awareness and trust	13	Availability of explicit demand response offers
	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
Availability of empowerment tools	16	Percentage of consumers trusting the energy market
	17	Percentage of consumers having access to at least one independent and verified PCT
	18	Percentage of consumers having access to online historical consumption info
Sufficient consumer engagement	19	Percentage of consumers having access to standardised supplier switching process (and its duration)
	20	Supplier switching rate
	21	Percentage of inactive consumers
Appropriate protection	22	Percentage of prosumers
	23	Time between notification to pay and disconnection for non-payment
	24	Percentage of disconnections due to non-payment
	25	Percentage of suppliers using min standards for key info in advertising and bills

Table 11 - The Dutch regulator suggested a group that consists of metrics from 5 key properties (marked in yellow) in the CEER 2017 Handbook for National Energy Regulators.

The aggregated analysis of these metrics aims to provide an overview of how a competitive market, new dynamic products, trust and switching rates can influence each other.

The electricity and natural gas markets can become more competitive in the Netherlands. It is expected that the increase in dynamic price contracts and the appearance of new products can make the market more attractive for new suppliers, leading to more competition. This increase in new dynamic products, competitiveness and trust might lead to an intensification in switching and a decrease of inactive consumers. The task of the Dutch regulator in those aspects is to safeguard that these new suppliers are trustworthy, contributing to the trust of consumers in the market.

Although the licensing process aims at safeguarding reliability of new suppliers in market, it also hinders competition as it poses an entry barrier. Therefore, the Dutch regulator is looking into how to improve the licensing process (e.g. providing information in English).

Another noteworthy remark by the Dutch regulator is the increase of digitalisation in the market, since some consumers may feel left out by technological advancements and might not feel accommodated by these various new offers. These consumers should not be forgotten and should be included in the energy transition. Therefore, reducing barriers to entry for new products and new market parties as much as possible must be accompanied by measures to safeguard consumers' interest. Both these elements might contribute to increasing switching rates and a more competitive market.

Many of these metrics are future-oriented and therefore, will be accommodated for in the future. Parts of these initiatives are reserved for lawmakers. The metric on prosumers was not included since there is no data available yet.

6 Assessment of metrics not included in groups 1-3

All 25 metrics in the Handbook are important to evaluate well-functioning retail energy markets. To highlight and encourage the assessment of metrics in relation to each other, in 2021, CEER suggested three groups of metrics. However, there were eight metrics in the Handbook that were excluded from these groups. These metrics (marked in yellow in the table below), are individually analysed in this chapter.

KEY PROPERTY	Metric #	HARMONISED DEFINITIONS OF METRICS
Low Concentration within a relevant market	1	Herfindahl-Hirschman Index
Low market entry barriers	2	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 with regulated energy prices
	5	Number of common standards for consumer data & 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
Close relationship between wholesale markets and retail prices	7	Correlation between wholesale and retail energy prices
	8	Mark-up between wholesale and retail energy prices
A range of offers, including demand response	9	Availability of a variety of pricing and billing options
	10	Availability of value added services for implicit demand response and self-generation
	11	Availability of online offers
	12	Availability of contracts guaranteeing the origin of energy
	13	Availability of explicit demand response offers
High level of awareness and trust	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
	16	Percentage of consumers trusting the energy market
Availability of empowerment tools	17	Percentage of consumers having access to at least one independent and verified PCT
	18	Percentage of consumers having access to online historical consumption info
	19	Percentage of consumers having access to standardised supplier switching process (and its duration)
Sufficient consumer engagement	20	Supplier switching rate
	21	Percentage of inactive consumers
	22	Percentage of prosumers
Appropriate protection	23	Time between notification to pay and disconnection for non-payment
	24	Percentage of disconnections due to non-payment
	25	Percentage of suppliers using min standards for key info in advertising and bills

Table 12 - The following metrics (marked in yellow) were not included in any of the groups assessed by CEER members.

Table 13 below shows how many NRAs used the metrics and how many did a gap-analysis.

Metric number and name		Number of NRAs using for self-assessment		Number of NRAs completing gap-analysis	
		Electricity (23 NRAs replying)	Gas (19 NRAs replying)	Electricity (23 NRAs replying)	Gas (19 NRAs replying)
2	Time needed and cost of accessing well-functioning wholesale markets and licencing/balancing regimes	10	8	0	0
5	Number of common standards for consumer data and for DSO-supplier contract or existence of a national data hub	14	9	0	0
9	Availability of a variety of pricing and billing options	16	12	2	1
11	Availability of online offers	15	12	4	2
19	Percentage of consumers having access to a standardised supplier switching process (and its duration)	15	11	2	2
23	Time between notification to pay and disconnection for non-payment	13	8	0	0
24	Percentage of disconnections due to non-payment	12	10	2	2
25	Percentage of suppliers using min standards for key info in advertising and bills	7	6	0	0

Table 13 - Metrics used in the self-assessment and number of performed gap-analysis.

6.1 Metric 2: Time needed and cost of accessing well-functioning wholesale markets and licencing/balancing regimes

The purpose of this metric is to establish whether such procedures⁴⁵ are available to all parties interested in becoming, or acting, as a supplier in the market and secondly to establish if such procedures (notably their length and costs) are equal and non-discriminatory for all.

The metric has been used by 10⁴⁶ NRAs for electricity and 8⁴⁷ for gas market. In most of these countries, procedures exist to access either a national or regional wholesale market. It can take up to two months to gain access and the cost differs from free of charge up to

⁴⁵ Licensing/balancing regimes

⁴⁶ DUR (Denmark), EV (Finland), RAE (Greece), MEKH (Hungary), CRU (Ireland), PUC (Latvia), ACM (The Netherlands), NVE-RME (Norway), AGEN (Slovenia) and Ei (Sweden).

⁴⁷ CREG (Belgium), HERA (Croatia), RAE (Greece), MEKH (Hungary), CRU (Ireland), PUC (Latvia), ACM (The Netherlands) and CNMC (Spain).

€50,000. Eight⁴⁸ of the ten markets require a supplier licence that can take up to six months to get. In most markets, it is possible for market participants to become a balance responsible party, which takes up to three months.

In some countries where market entry barriers are considered low⁴⁹, or in order to promote higher financial and risk management standards⁵⁰, more robust entry requirements have been put in place. No NRA has done a gap-analysis for this metric.

6.2 Metric 5: Number of common standards for consumer data and for DSO-supplier contracts or existence of a national data hub

The purpose of this metric is to monitor the possibility of accessing information easily for suppliers, aggregators and other third parties in the retail market. The lack of access to consumer data is a barrier for both new national and cross-border actors.

The metric is used by 14⁵¹ NRAs in the electricity market and by nine⁵² in the gas market. In this year's self-assessment, seven NRAs⁵³ reported that there is some sort of national data hub or other centralised data solution in place⁵⁴, most of them run by the TSO or DSO. All metering data and information for settlement purposes are collected in these data hubs. The process of supplier switching can also be handled through these platforms.

According to this year's self-assessment, eight NRAs have answered that there are procedures, either in place or under development, containing common standards regarding the accessibility of data for suppliers and third parties. In seven countries, there is or will be a procedure for contracts between DSO and suppliers, where a supplier-centric model is applicable⁵⁵. An additional number of countries plan or are currently implementing⁵⁶ or revising⁵⁷ data hubs. No NRA has done a gap-analysis regarding metric 5.

⁴⁸ Cyprus, Croatia, Greece, Ireland, Latvia, The Netherlands, Norway and Portugal.

⁴⁹ Great Britain

⁵⁰ Great Britain and Portugal

⁵¹ E-Control (Austria), CREG (Belgium), DUR (Denmark), EV (Finland), CRE (France), Ofgem (Great Britain), RAE (Greece), MEHK (Hungary), VERT (Lithuania), ACM (The Netherlands), NVE-RME (Norway), AGEN (Slovenia), CNMC (Spain) and Ei (Sweden).

⁵² E-Control (Austria), CREG (Belgium), HERA (Croatia), CRE (France), Ofgem (Great Britain), RAE (Greece), MEHK (Hungary), ACM (The Netherlands) and CNMC (Spain).

⁵³ CREG (Belgium), DUR (Denmark), RAE (Greece), PUC (Latvia), ACM (The Netherlands), NVE-RME (Norway) and AGEN (Slovenia).

⁵⁴ In Austria, there are de-centralised data exchange mechanisms in place (e.g. for switching) for electricity and gas, but no data hub in the sense of centrally-stored **consumer data with access opportunities for market participants and third parties**.

⁵⁵ These countries are Austria, Denmark, Great Britain, Latvia, Norway, Slovenia and Spain. In Norway, the NRA is developing a new regulation for the implementation of a supplier centric model, making retailers the main point of contact for consumers.

⁵⁶ Finland and Slovenia.

⁵⁷ Belgium and Great Britain.

6.3 Metric 9: Availability of a variety of pricing and billing options

The purpose of this metric is to determine if household and/or SME customers have access to different pricing options – e.g. fixed pricing, variable pricing or wholesale-based pricing – and billing offers – e.g. advance payments or post-meter reading payments. Various options for pricing and billing can present innovations in the market and create benefits for consumers. Opportunities to practice different pricing and billing schemes should enable new suppliers with innovative ideas on pricing and billing to enter the market. If such opportunities are severely restricted, competition could be distorted.

The majority of NRAs report that a wide variety of pricing and billing options are available to consumers, with 16⁵⁸ of them present in the electricity sector and 12⁵⁹ in the gas sector. Two NRAs⁶⁰ performed a gap analysis and identified no gaps, indicating a satisfactory situation in this regard.

There are still some countries where smart meters are not yet in place, making that the only available billing options advance payments. Full deployment of smart-meters will make more pricing and billing options available.

6.4 Metric 11: Availability of online offers

Online offers are products that provide consumers with, e.g. savings or discounts for managing accounts online, and for subscribing to online billing. As of 2020, almost all NRAs reported that their national energy markets have some sort of online offer⁶¹, while 15⁶² NRAs used this metric in the electricity market and 12 in the gas market⁶³.

In all countries with online offers, customers can manage their energy contracts online and/or through digital applications or through web platforms where suppliers offer an online service called "My page", where customers can manage their energy contracts. The same occurs for bills available online or customer services available online⁶⁴.

⁵⁸ Austria, Belgium, Cyprus, Denmark, Finland, France, Great Britain, Greece, Hungary, Ireland, Latvia, Norway, Poland, Portugal, Slovenia and Spain.

⁵⁹ Austria, Belgium, Bulgaria, France, Great Britain, Greece, Ireland, Latvia, Poland, Portugal, Slovenia and Spain.

⁶⁰ DUR (Denmark), Ofgem (Great Britain).

⁶¹ For a comparison between 2020 of the total number of online offers provided in MS for electricity and natural gas, please refer to Figure 30 on page 47 of the [Monitoring report on the Performance of European retail Markets in 2018](#), Ref: C19-MRM-99-02

⁶² E-Control (Austria), CREG (Belgium), DUR (Denmark), EV (Finland), CRE (France), Ofgem (Great Britain), RAE (Greece), CRU (Ireland), PUC (Latvia), NVE-RME (Norway), URE (Poland), ERSE (Portugal), AGEN (Slovenia), CNMC (Spain) and Ei (Sweden).

⁶³ E-Control (Austria), CREG (Belgium), CRE (France), Ofgem (Great Britain), RAE (Greece), MEHK (Hungary), CRU (Ireland), PUC (Latvia), URE (Poland), ERSE (Portugal), AGEN (Slovenia) and CNMC (Spain).

⁶⁴ In Slovenia, only bigger suppliers provide online access to bills.

Nine⁶⁵ NRAs reported that contracts can be signed online through at least one PCT or otherwise. In some countries, the availability of offers online is a legal requirement. For instance, in Denmark all electricity suppliers are required by law to have all electricity products (offered to customers with an annual consumption up to 100,000 kWh) available online on the supplier's own website and on the comparison tool Elpris.dk.

Four NRAs⁶⁶ have done a gap analysis for the electricity sector and two⁶⁷ for the gas sector. They conclude that online offers are a sign of product differentiation and innovation in the market and an element that facilitates the customer's ability to compare and assess tariffs available in the market. France underlines the importance of comparison tools in the development of the retail market and that these tools reduce misleading practices and increase transparency.

6.5 Metric 19: Percentage of consumers having access to a standardised supplier switching process (and its duration)

This metric is used to measure the availability of a standardised supplier switching process for consumers and informs NRAs on how to improve the existing switching process. No other CEER publication covers this data.

In 2020, 15⁶⁸ NRAs used this metric for the assessment in the electricity market and 12 NRAs⁶⁹ in the gas market. Almost every NRA using this metric has concluded that all consumers have access to a standardised supplier switching process. However, the duration of the switching process is not always measured and varies depending on the type of consumer.

Since in most countries, consumers have access to a standardised supplier switching process, the NRAs believe that the objective of the gap analysis is fulfilled. Only one NRA notes having performed a gap analysis. In this context, Sweden states that there is already a standardised switching process which will be improved even further when a data hub has been created and the supplier centric model is in place⁷⁰.

6.6 Metrics 23 and 24: Time between notification to pay and disconnection for non-payment and percentage of disconnections for non-payment

These two metrics are also covered by "*ACER/CEER Annual Report on the Results of Monitoring the Internal Electricity and Natural Gas Markets in 2020*"⁷¹.

⁶⁵ Austria, Finland, Great Britain, Latvia, Norway, Portugal, Slovenia, Sweden, and Spain for electricity market and Austria, Estonia, Great Britain, Latvia, Lithuania, The Netherlands, Portugal, Slovenia and Spain for the gas market.

⁶⁶ Denmark, France, Great Britain and Ireland.

⁶⁷ Great Britain and Ireland.

⁶⁸ Austria, Belgium, Croatia, Denmark, Finland, France, Great Britain, Hungary, Latvia, Norway, Poland, Portugal, Slovenia, Spain and Sweden.

⁶⁹ Austria, Belgium, Croatia, Estonia, Great Britain, Greece, Hungary, Latvia, Poland, Portugal, Slovenia, and Spain.

⁷⁰ Suggested by the NRA to the government.

⁷¹ <https://www.ceer.eu/national-reporting-2020>

Metric 23 is used to assess the level of protection against disconnections due to non-payment, in conjunction with metric 24 on the number of disconnections for 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 bills⁷². However, if those consumers continue to fail to pay their bills, suppliers and DSOs can disconnect them. Most countries have installed a procedure for disconnections, which foresees a certain period between non-payment and disconnection, to settle due amounts. That is why these two metrics should be assessed in conjunction with the percentage of disconnections due to non-payment.

Thirteen responding NRAs⁷³ in electricity market and eight⁷⁴ in gas market measure the time between notification to pay and the actual disconnection. Twelve⁷⁵ NRAs measure the share of disconnection in electricity markets and ten⁷⁶ in gas markets. In terms of the time between the notification to pay and disconnection, most countries only reported information in terms of the legal point of view. Here the national circumstances lead to very different results, ranging from at least eight days in Slovenia to two months for most consumers in Hungary and Estonia.

In Spain and Portugal, during the Covid-19 pandemic, there was a transitory ban of disconnection due to non-payment that was in place for most part of 2020.

No NRA had conducted a gap-analysis on the time between the notification to pay and the percentage of disconnection. Two NRAs⁷⁷ have done a gap-analysis on the percentage of disconnections.

6.7 Metric 25: Percentage of suppliers using minimum standards for key information in advertising and bills

The purpose of this metric is twofold: firstly, it monitors the existence of minimum information standards in the country and secondly, the proportion of suppliers complying with them⁷⁸. This is a complex issue and NRAs must be careful in their assessment to obtain an accurate picture of the situation. In addition to the analysis of this metric, more background information is necessary to fully understand the situation. The most likely sources will include legislation/license conditions and research conducted by NRAs on how suppliers comply with these standards. Consumer organisations and/or alternative dispute resolution/Ombudsmen could also be a source of information.

⁷² The Electricity Directive (Article 28 (1)) requires Member States to 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.

⁷³ CREG (Belgium), HERA (Croatia), CERA (Cyprus), DUR (Denmark), ECA (Estonia), CRE (France), MEKH (Hungary), PUC (Latvia), NVE-RME (Norway), URE (Poland), AGEN (Slovenia), CNMC (Spain) and Ei (Sweden).

⁷⁴ Belgium, Croatia, France, Hungary, Latvia, Poland, Slovenia, and Spain.

⁷⁵ Austria, Belgium, Cyprus, Denmark, France, Great Britain, Hungary, Ireland, Poland, Slovenia, Spain and Sweden.

⁷⁶ Austria, Belgium, France, Great Britain, Greece, Hungary, Ireland, Poland, Slovenia and Spain.

⁷⁷ Ireland and Great Britain.

⁷⁸ With regard to billing, Annex I of the Electricity Directive contains minimum requirements for billing and billing information.

Seven⁷⁹ NRAs in electricity and six⁸⁰ in the gas market have used this metric in their self-assessment. Usually this is done based on some sort of regulation, such as a code of practice, or minimum standards as determined by law. Exact figures on the share of suppliers using these minimum standards are not always available. In some cases, NRAs conclude that having a set of rules and not having to intervene implies that all suppliers adhere to the rules.

No NRA has performed a gap analysis of this metric.

⁷⁹ Austria, Denmark, Hungary, Ireland, Latvia, Spain and Sweden.

⁸⁰ Austria, Croatia, Hungary, Ireland, Latvia and Spain.

Annex 1 – List of abbreviations

Term	Definition
ADR	Alternative Dispute Resolution
aFRR	Automatic Frequency Restoration Reserve
BEIS	Department for Business, Energy and Industrial Strategy
BRP	Balance Responsible Parties
CEER	Council of European Energy Regulators
DSO	Distribution System Operator
GGP	Guidelines of Good Practice
HHI	Herfindahl-Hirschman Index
mFRR	Manual Frequency Restoration Reserve
MS	Member States
NRAs	National Regulatory Authorities
PCT	Price Comparison Tool
PV	Photo Voltaic
PVPC	Voluntary Price for Small Consumers
RES	Renewable Energy Sources
SME	Small and medium-sized enterprises
TSO	Transmission System Operator

Annex 2 – 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 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.

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More information is available at www.ceer.eu.