



Fostering energy markets, empowering **consumers**.

# **CEER Roadmap to 2025 Well-Functioning Retail Energy Markets 2018 Self-Assessment Status Report**

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

**Ref: C18-RMR-01-03  
30 October 2019**

## 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 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. CEER will continue to monitor the progress of self-assessment and encourage NRAs to identify the challenges in their respective countries and develop potential solutions on how to improve their situation.

This document (C19-RMR-01-03) presents the self-assessment status report on the activities of the 2018 Roadmap, with an ambitious goal of creating “competitive, reliable and innovative retail energy markets that benefit consumers by 2025” of which many steps will need to be taken to achieve such a goal. CEER believes it is important to show progress (or not) and highlight advances on a regular basis. This status report serves this purpose.

### 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

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

If you have any queries relating to this paper, please contact:

CEER Secretariat

Tel. +32 (0)2 788 73 30

Email: [brussels@ceer.eu](mailto:brussels@ceer.eu)

## Related Documents

### CEER Documents

- 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>

### ACER Document

- 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](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)

## Table of Contents

<b>1</b>	<b>INTRODUCTION.....</b>	<b>8</b>
1.1	Background.....	9
1.1.1	What is a gap-analysis? .....	10
1.2	Objective and outline of the paper.....	10
<b>2</b>	<b>KEY PROPERTY I: LOW CONCENTRATION WITHIN A RELEVANT MARKET .....</b>	<b>12</b>
2.1	Metric 1: Low concentration within a relevant market .....	12
2.1.1	Pilot: Luxembourg – Metric 1 .....	13
<b>3</b>	<b>KEY PROPERTY II: LOW MARKET-ENTRY BARRIERS .....</b>	<b>17</b>
3.1	Metric 2: Time needed and cost of accessing well-functioning wholesale markets and licencing/balancing regimes.....	17
3.2	Metric 3: Percentage of consumers connected to “bundled” DSOs .....	18
3.3	Metric 4: Percentage of consumers with regulated energy prices.....	19
3.3.1	Pilot: Denmark – Metric 4 .....	21
3.4	Metric 5: Number of common standards for consumer data and for DSO-supplier contract or existence of a national data hub .....	21
3.5	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.....	23
3.5.1	Pilot: Great Britain – Metric 6.....	24
<b>4</b>	<b>KEY PROPERTY III: A CLOSE RELATIONSHIP BETWEEN WHOLESALE MARKETS AND RETAIL PRICES.....</b>	<b>26</b>
4.1	Metric 7: Correlation between wholesale and retail energy prices .....	26
4.2	Metric 8: Mark-up between wholesale and retail energy prices.....	28
<b>5</b>	<b>KEY PROPERTY IV: A RANGE OF OFFERS, INCLUDING DEMAND RESPONSE....</b>	<b>30</b>
5.1	Metric 9: Availability of a variety of pricing and billing options.....	30
5.1.1	Pilot: France – Metric 9.....	32
5.2	Metric 10: Availability of value added services for implicit demand response and self-generation.....	34
5.3	Metric 11: Availability of online offers .....	35
5.4	Metric 12: Availability of contracts guaranteeing the origin of energy.....	36
5.4.1	Pilot: Luxembourg – Metric 12.....	37
5.5	Metric 13: Availability of explicit demand response offers.....	39
<b>6</b>	<b>KEY PROPERTY V: HIGH LEVEL OF AWARENESS AND TRUST .....</b>	<b>41</b>
	Metric 14: Percentage of consumers knowing they can switch supplier .....	41
6.1.1	Pilot: Ireland – Metric 14.....	42

6.2	Metric 15: Percentage of consumers who know that DSOs are responsible for the continuity of supply and, where applicable, of metering .....	43
6.2.1	Pilot: Sweden – Metric 15 .....	43
6.3	Metric 16: Percentage of consumers trusting the energy market .....	44
6.3.1	Pilot: Great Britain – Metric 16 .....	45
<b>7</b>	<b>KEY PROPERTY VI: THE AVAILABILITY OF EMPOWERMENT TOOLS .....</b>	<b>47</b>
7.1	Metric 17: Percentage of consumers having access to at least one independent and verified PCT .....	47
7.2	Metric 18: Percentage of consumers having access to online historical consumption information .....	48
7.2.1	Pilot: Denmark – Metric 18 .....	48
7.3	Metric 19: Percentage of consumers having access to a standardised supplier switching process (and its duration) .....	49
7.3.1	Pilot: Great Britain – Metric 19 .....	49
<b>8</b>	<b>KEY PROPERTY VII: SUFFICIENT CONSUMER ENGAGEMENT .....</b>	<b>52</b>
8.1	Metric 20: Supplier switching rate .....	52
8.1.1	Pilot: Finland – Metric 20 .....	53
8.2	Metric 21: Percentage of inactive consumers .....	54
8.2.1	Pilot: Ireland – Metric 21 .....	55
8.3	Metric 22: Percentage of prosumers .....	59
<b>9</b>	<b>KEY PROPERTY VIII: APPROPRIATE PROTECTION .....</b>	<b>60</b>
9.1	Metrics 23 and 24: Time between notification to pay and disconnection for non-payment and percentage of disconnections for non-payment .....	60
9.1.1	Pilot: Slovenia – Metric 24 .....	61
9.2	Metric 25: Percentage of suppliers using minimum standards for key information in advertising and bills .....	63
9.2.1	Pilot: Romania – Metric 25 .....	64
<b>10</b>	<b>CONCLUSIONS FROM THE 8 KEY PROPERTIES THAT DEFINE A WELL-FUNCTIONING RETAIL MARKET .....</b>	<b>66</b>
	<b>ANNEX I – LIST OF ABBREVIATIONS .....</b>	<b>69</b>
	<b>ANNEX II – OVERVIEW OF NATIONAL SELF-ASSESSMENT 2018 – ELECTRICITY .....</b>	<b>70</b>
	<b>HAVE YOU USED THIS METRIC IN YOUR SELF-ASSESSMENT? – ELECTRICITY .....</b>	<b>71</b>
	<b>ANNEX III – ABOUT CEER .....</b>	<b>74</b>

## EXECUTIVE SUMMARY

In 2017 and 2018, CEER developed and published a ‘roadmap’ to well-functioning retail markets. The development of this roadmap aimed at competitive, reliable and innovative retail markets and was part of a pledge to realise CEER’s 2020 Vision for the European Union’s consumers.

In January 2017, CEER recommended all Member States’ National Regulatory Authorities (NRAs) to self-assess their electricity and gas

The self-assessment is based on the 25 metrics developed in the *CEER 2017 Handbook for National Energy Regulators*<sup>1</sup> and the process of performing a self-assessment is described in the *Roadmap to 2025 Well-Functioning Retail Energy Markets*<sup>2</sup>. According to 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 information, data and gap-analyses presented in this report are not comparable across countries and cannot be used for benchmarking.

The main objectives of this status report is to summarise the results of the first round of self-assessment performed in 2018 by NRAs and to show the state-of-play in the work towards well-functioning retail markets. This status report also identifies the varying completion levels and speeds of the self- assessment by the NRAs.

It is also worth noting that not all NRAs can legally set national targets for individual metrics with respect to the gap analysis. However, CEER believes that it is in the best interest of 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.

This could start by having a discussion with national policy makers about the goals of well-functioning energy retail markets. If the responsibility for energy retail markets is split between different public bodies, it is important for the public bodies to cooperate, given that a well-functioning retail market is in the interest of all respective parties<sup>3</sup>.

The self-assessment of metrics can help NRAs with their remit of monitoring and market analysis and thus increase knowledge regarding their national markets. For instance, they can assess the metrics from different perspectives, for example by covering other consumer categories or products.

CEER will report on successive NRAs’ self-assessments that are planned to take place annually until 2025 owing to the fact this status-report is the first of its kind and will serve as the basis for future status-reports.

Finally, with the European Commission’s Clean Energy for All Europeans package (CEP) in force and ready to be implemented in all MS, CEER’s conception of a well-functioning retail market is in line with the overall ambitions of the new legislative package. For example, that

---

<sup>1</sup> 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>

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

<sup>3</sup> An enhanced cooperation between NRAs and other public bodies is also in line with the ambitions of the Partnership for the Enforcement of European Rights (PEER), see also: <https://www.ceer.eu/peer>

price signals should reach end-users who, according to the CEP, require access to both smart meters and dynamic price contracts.

## 1 Introduction

This report summarises the first round of self-assessment on the well-functioning of retail energy markets by NRAs in 2018 using the 25 metrics presented in the *CEER 2017 Handbook for National Energy Regulators*<sup>4</sup>.

NRAs have shared information and data on a voluntary basis. A national self-assessment of the retail market for energy is something CEER encourages but is not mandatory.

The text in this report contains a selection of information and data, together with highlights from those NRAs that did a gap analysis in 2018. Where available, these are presented as pilots under each metric. Together with the detailed results in the annexes, this report can be used by NRAs that are still preparing or performing their self-assessment.

CEER welcomes the fact that so many NRAs were willing to share experiences and their knowledge regarding the self-assessment. However, since not all MSs are represented, this status report does not accurately reflect a European wide situation.

All 25 metrics in the *CEER 2017 Handbook for National Energy Regulators* together indicate whether a MS is on its way to have a well-functioning retail energy market in 2025. Therefore, this report should be read as a status report of individual NRAs and is not a European benchmarking exercise. The report contains only factual information and does not attempt analysis or qualification of the information or data.

This report is based on a questionnaire sent to all MS in 2018. Most NRAs<sup>5</sup> have responded to this questionnaire concerning the *Roadmap to 2025 Well-Functioning Retail Energy Markets*<sup>6</sup>. A total of 24 NRAs have completed a self-assessment with gap-analysis on one or more metrics of their electricity markets, out of which three provided an additional self-assessment report<sup>7</sup>. Additionally, 14 NRAs have completed a self-assessment of their gas markets, out of which two have provided a gap-analysis.

According to the instructions provided in the handbook, each NRA should determine the relevant market and customer types (household or commercial customers). Since the majority of NRAs have focused on the situation for household electricity customers, this report focuses on the information and data regarding households and electricity.

A full metrics' overview (containing information on the number of NRAs using a specific metric and whether a gap analysis was performed) gathered by the 2018 CEER questionnaire is included in Annex II. This is a separate document, which also includes all data (calculations and gap-analysis) that individual NRAs permitted to share with CEER. It should be noted that not all data is from the same year.

---

<sup>4</sup> CEER 2017 Handbook for National Energy Regulators - How to assess retail market functioning, 24 January 2017, Ref: C16-SC-52-03

<sup>5</sup> CEER Members who replied to the 2018 questionnaire were NRAs from the following 30 countries: Austria, Belgium, Czech Republic, Croatia, Cyprus, Denmark, Estonia, Finland, France, Georgia, Germany, Great Britain, Greece, Hungary, Ireland, Italy, Kosovo, Latvia, Lithuania, Luxembourg, Macedonia, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovenia, Spain, and Sweden.

<sup>6</sup> Roadmap to 2025 Well-Functioning Retail Energy Markets, 9 February 2018, Ref: C17-SC-59-04-02

<sup>7</sup> CEER received the self-assessment report in 2018 by three NRAs: Austria, Hungary, and Luxembourg.



## 1.1 Background

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**. This Position Paper builds on the ACER Bridge to 2025<sup>8</sup> and the CEER-BEUC 2020 Vision<sup>9</sup>. In addition, the Position Paper addressed and complemented the issues raised by the European Commission's Communication "Delivering a New Deal for Energy Consumers", published in July 2015. In the Position Paper, CEER established common criteria to assess the functioning of our retail markets as a first step in the work to accomplish competitive, reliable, and innovative retail energy markets to the benefit of consumers by 2025. The Position Paper introduced a framework to evaluate the functioning of a retail energy market, whilst considering the current stage of market's development.

As a second step after the Position Paper, CEER developed a **Handbook for National Energy Regulators in 2017**, which contains the metrics introduced by the Position Paper and their respective definitions. CEER developed this handbook as guidance for NRAs to self-assess.



An annex to the Handbook contains pilots performed by several National Regulatory Authorities (NRAs), as an example of how to use the metrics in practice to self-assess their national markets. The process of performing a self-assessment is described in the **Roadmap to 2025 Well-Functioning Retail Energy Markets**.

<sup>8</sup> "Energy Regulation: A Bridge to 2025, Conclusions Paper", ACER, September 2014.  
[http://www.acer.europa.eu/official\\_documents/acts\\_of\\_the\\_agency/sd052005/supporting%20document%20to%20acer%20recommendation%2005-2014%20-%20energy%20regulation%20a%20bridge%20to%202025%20conclusions%20paper.pdf](http://www.acer.europa.eu/official_documents/acts_of_the_agency/sd052005/supporting%20document%20to%20acer%20recommendation%2005-2014%20-%20energy%20regulation%20a%20bridge%20to%202025%20conclusions%20paper.pdf)

<sup>9</sup> 2020 Vision for Europe's energy customers, Ref: C12-SC-09-07, 07-Nov-2012, updated June 2014.  
<https://www.ceer.eu/1263>

In 2018, 24 NRAs have used this handbook to self-assess their national markets with the ultimate goal of fostering a competitive, reliable and innovative markets that benefit customers in each country by 2025.

### 1.1.1 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.*

The highlights of a few gap-analyses are presented in this report to inspire fully-fledged gap-analysis by all NRAs by 2025.

## 1.2 Objective and outline of the paper

The main objectives of this status report are to summarise the first round of self-assessments, show progress in the work for well-functioning retail markets and share experiences between NRAs and other stakeholders.

This report follows the triple-layered framework presented in the Position Paper from 2015 and the Handbook from 2017 and includes 8 chapters that describe one of the 8 key properties critical for a well-functioning retail market. The 8 key properties are:

- **Low concentration within a relevant market** where, in general, a high number of suppliers and a low market concentration are seen as one of the indicators of a competitive market structure.
- **Low market-entry barriers** in order to facilitate market entry and growth for new market actors (i.e. suppliers and third parties) as well as innovation (including demand response).
- **A close relationship between wholesale markets and retail prices** to ensure that consumers receive correct price signals, which is an important incentive for demand response. In addition, the mark-up between wholesale and retail prices reveals whether consumers are paying a fair price.
- **A range of offers, including demand response.** In a well-functioning market retailers' ability to offer a significant number of commercial options is coupled with consumers' ability to compare the offers and take informed decisions.
- **A high level of awareness and trust**, which is an important precondition for consumer participation.

- **The availability of empowerment tools** such as a verified price comparison tool, historical consumption data and a standardised supplier switching process.
- **Sufficient consumer engagement** where switches, renegotiations and prosumers are assessed on a yearly basis. In general, a well-functioning market is one in which a significant number of consumers engage with the market on a regular basis.
- **Appropriate protection:** In well-functioning retail energy markets, consumers enjoy an appropriate level of protection and there are specific measures to protect those defined as vulnerable customers.

Each key-property is measured by several metrics and a selection of the results of are presented in this report together with the gap-analysis CEER has received.

Since it is the first time CEER asked for gap-analysis regarding individual metrics, many NRAs are still considering how to carry it out. Where available, examples are presented as pilots under each metric that vary in both length and detail and could be used as a source of inspiration for other NRAs.

## 2 Key property I: Low concentration within a relevant market

The HHI<sup>10</sup> measures the degree of concentration in a market. Based on guidance from the European Commission<sup>11</sup> an HHI of above 2000 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 100% market share.

Table 1 – Metrics used in the self-assessment of key-property I “Low concentration within a relevant market”

Metric n° and name		Number of NRAs using	Number of NRAs reporting data	Number of NRAs completing gap-analysis
1	Low concentration within a relevant market	24	19	8

### 2.1 Metric 1: Low concentration within a relevant market

Some 24 NRAs have used this metric in their self-assessment. As the markets differ regarding the level of competition the HHI also differs between MS from < 700 to 10,000. A clear pattern of a higher HHI for household consumers than for commercial consumers exists irrespective of how competitive the market is.

Market shares can be calculated from consumed volumes, the number of customers or meter points. The results provided by NRAs show that all these methodologies are used across MS, namely metering points for households and volume for commercial consumers. The definition of household customers also varies. In Denmark, the legal definition of a household electricity consumer is someone who only or mainly purchases electricity for his/her own household consumption. However, the HHI is calculated on the amount of kWh consumed. Household consumers are part of a larger group of consumers which annual consumption is equal or less than 100,000 kWh whereas in Sweden household consumers are those with an installed capacity equal or less than 63A.

In Ireland the Gini coefficient<sup>12</sup> is measured quarterly to complement the HHI. In 2017 the Gini coefficient for electricity household consumers was 0.59 and small businesses, 0.52 for medium businesses and 0.46 for large businesses. While the HHI denotes market concentration in absolute terms, the Gini coefficient is used as a relative measure of industry concentration. The combinatory use of the two indexes (HHI and Gini coefficient) gives a clearer picture of the degree to which different firms have a share of the market and the extent of market share equality (or inequality) relative to a perfectly equal market share distribution.

<sup>10</sup> Herfindahl–Hirschman Index, HHI, is a measure of the size of firms in relation to the industry and an indicator of the amount of competition among them.

<sup>11</sup> Guidelines on the assessment of horizontal mergers under the Council Regulation on the control of concentrations between undertakings (2004/C 31/03)

<sup>12</sup> According to World Bank, Gini index measures the extent to which the distribution of income (or, in some cases, consumption expenditure) among individuals or households within an economy deviates from a perfectly equal distribution. A Lorenz curve plots the cumulative percentages of total income received against the cumulative number of recipients, starting with the poorest individual or household. The Gini index measures the area

8 NRAs have made a gap analysis, for example the Finnish NRA reported an HHI of 695 and set the objective to keep it under 1,000.

Another example of a gap-analysis is from the NRA from Kosovo that has one dominant supplier with a 99% market share and a HHI of 10,000. The NRA here has set a goal to promote competition and lower the HHI by forcing the dominant generator to release around 30% of energy to other suppliers.

The Romanian NRA states that in the case of household customers supplied under a competitive regime, the concentration is high both overall and on each customer type. The highest concentration being for the category of customers with a consumption below 1,000 kWh per year. One conclusion is that switching and the entrance of new suppliers in the household's market needs to be encouraged.

The Swedish NRA concludes that it is not possible for the NRA to set a target for this metric since the NRA cannot influence market shares in a fully competitive market.

## 2.1.1 Pilot: Luxembourg – Metric 1

### Quantification & Results

The Herfindahl-Hirschman Index (HHI) is an indicator that measures market concentration and used to comment on market competitiveness.

No numerical target has been set at a national level concerning the HHI. Nevertheless, the electricity and natural gas laws require the regulator to promote and develop a competitive market for both sectors<sup>13</sup>. In this respect, the regulator (ILR) collects relevant information and conducts its analyses annually.

The historical context of a non-competitive market that after liberalisation resulted in a situation with dominant incumbent players combined with inelastic consumer behaviour cannot be ignored while drawing conclusions.

Various sources of information are available in order to determine and analyse the HHI.

The regulator publishes a list of authorised suppliers<sup>14</sup> and in the key-figures reports<sup>15</sup> lists those active on the retail and household market.

---

between the Lorenz curve and a hypothetical line of absolute equality, expressed as a percentage of the maximum area under the line. Thus a Gini index of 0 represents perfect equality, while an index of 1 implies perfect inequality.

<sup>13</sup> Article 54(1) a) and b) of the Electricity Act, unofficial coordinated version

<https://assets.ilr.lu/energie/Documents/ILRLU-1685561960-150.pdf> and Article 51(4) a) and b) of the Natural Gas Act, unofficial coordinated version <https://assets.ilr.lu/energie/Documents/ILRLU-1685561960-151.pdf>.

<sup>14</sup> ILR List of authorised suppliers : Electricity <https://web.ilr.lu/FR/Professionnels/Electricite/Acteurs/Le-marche-et-les-acteurs/Acteurs/Pages/default.aspx> « Fournisseurs/ Liste actuelle » ; Natural Gas <https://web.ilr.lu/FR/Professionnels/Gaz-naturel/Acteurs/Le-marche-et-les-acteurs/Acteurs/Pages/default.aspx> « Fournisseurs/ Liste actuelle »

<sup>15</sup> ILR Key-figures Reports : Electricity <https://web.ilr.lu/FR/Professionnels/Electricite/Commun/Publications/Rapports-et-etudes/Pages/default.aspx> « Chiffres clés du marché de l'électricité » ; Natural

Annually, network operators are required to provide ILR with statistical data including the quantity of energy consumed in their network together with the number of consumers. These sets of data are broken down for different consumer segments that also show the data per supplier. Such information is available for both the electricity and the natural gas sector.

Given the information available, the HHI analysis could be carried out based on either the number of consumers or the quantity of energy consumed. ILR analysis is based on volumes of energy consumed.

The first table shows the number of licensed and active suppliers for 2017 in both sectors and over different market segments.

Number of suppliers in Luxembourg	Electricity	Natural Gas
	2017	2017
Authorised suppliers	26	14
Active suppliers	14	9
Active suppliers in the retail market	10	8
Active suppliers in the household segment	7	4

The next two tables show HHI results in the natural gas sector, first by consumer segment and second within each of the three natural gas networks.

HHI at group level	Natural Gas	
	2017	# Suppl.*
National level	4 236	7
Household consumers	5 168	3
Non household consumers	4 369	7
Business consumers (< 10 GWh/year)	5 963	6
Business consumers (10-280 GWh/year)	3 953	5
Business consumers (>280 GWh/year)	5 017	2
Electricity producers/cogeneration	6 976	3

\* = active suppliers (at group level)

Household consumers	Natural Gas
HHI per network	2017
Creos	9 759
Dudelange	9 820
Sudgaz	9 964

The following two tables show HHI results in the electricity sector. Here as well first by consumer segment and second within each of the five electricity networks.

HHI at group level	Electricity	
	2017	# Suppl. *
National level	5 194	7
Household consumers	8 418	4
Non household consumers	3 529	7
Business consumers (<2 GWh/year)	8 115	6
Business consumers (>2GWh/year)	4 530	7

\* = active suppliers (at group level)

Household consumers	Electricity
HHI per network	2017
Creos	9 793
Hoffmann Frères	8 444
Sudstrom	9 338
Ville de Diekirch	9 851
Ville d'Ettelbruck	9 793

### Gap-analysis

Despite the lack of a quantified national target in terms of HHI, the regulator notes that in 2017 HHI values at national level were: 4,236 for natural gas and 5,194 for electricity. Those results, which indicate a relatively high market concentration, are not surprising considering the low number of suppliers active in the respective sectors.

For natural gas as well as for electricity, the analysis by consumer segment shows that the market concentration varies in each segment. Within the different networks however, the HHI indicates complete dominance by the incumbent supplier.

As a general conclusion, due to a relatively limited number of active suppliers in the natural gas and electricity sectors, high HHI values are to be expected. Big differences among the different consumer segments as well as among the different networks can be observed.

In the natural gas sector, only four suppliers are active in the household consumer segment with two of those being part of the same group, hence considered as one company for the purpose of HHI calculations, and the fourth supplier having a very small market share in terms of volume (0.58%). This leads to a situation with two of the biggest suppliers holding 56% and 44% respectively of market shares in terms of volume, which explains in part the high market concentration (HHI value of 5,168).

The natural gas sector in Luxembourg is split between three network operators: two larger ones and one small one. By further analysing the HHI factors in the respective networks the results amount to nearly 10,000 in each of the three networks. In fact, in every network the incumbent supplier plays a very dominant role and possesses a near monopoly. In other words, competition is almost inexistent within the respective networks in Luxembourg.

The analysis for the electricity sector shows similar concentrations. In the household segment the market concentration is high with an HHI value of 8,418. As in the natural gas sector, this is due to a small number of suppliers in this segment. Here as well a deeper analysis shows a complete dominance of the incumbent player in the respective networks.

These results clearly show that the natural gas and the electricity sectors are not competitive sectors with regard to numbers of active suppliers. Due to the lack of more detailed information, the regulator can only estimate which factors might explain such results. The following points are worth mentioning.

First, according to national legislation, the liberalisation of the natural gas and electricity markets obliges only one company to perform legal and functional unbundling. In addition, a political choice has allowed consumers who did not sign a new contract to stay with the incumbent player. Here, an opportunity was missed to increase consumers' awareness that it is up to consumers to freely choose a supplier.

Secondly, experience with consumers and switching rates shows that consumer behaviour is rather inelastic. Future investigations should aim to find the causes for such inelasticity (uninformed consumers, relatively cheap energy bills, etc.) to tackle this subject in the future.

Lastly, since the liberalisation, not many new suppliers have appeared and their marketing budgets are rather limited. This is partially due to a small market size that makes it difficult to become profitable, especially against dominant competitors. The multilingual context of the Luxembourgish market seems to be a discouraging factor for potential foreign entrants. In addition, an analysis by the regulator concluded that energy saving requirements imposed by the legislature on suppliers are a barrier for new entrants, especially in the market segments for professional consumers where suppliers have fewer clients.



### 3 Key property II: Low market-entry barriers

To facilitate competition and innovation (including demand response) for new market entrants i.e. suppliers and third parties, barriers need to be as low as possible. Five metrics have been used to measure market-entry barriers.

*Table 2 – Metrics used in the self-assessment of key-property II “Low market-entry barriers”*

Metric n° and name		Number of NRAs using	Number of NRAs reporting data	Number of NRAs completing gap-analysis
2	Time needed and cost of accessing well-functioning wholesale markets and licencing/balancing regimes	10	6	3
3	Percentage of consumers connected to “bundled” DSOs	14	10	3
4	Percentage of consumers with regulated energy prices	21	16	5
5	Number of common standards for consumer data and for DSO-supplier contract or existence of a national data hub	14	10	5
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	14	9	7

#### 3.1 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 procedures 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 10 NRAs. In most of these MS, procedures exist to access either a national or regional wholesale market. It can take up to three months to gain access and the cost differs from nothing up to 50,000 Euro. Six 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 four months.

For this metric three NRAs have completed a gap analysis. For instance, in Ireland, the objective for the NRA is to have a level playing field for new entrants to the market to prevent barriers to competition. Conversely, it is important to strike the right balance to ensure the appropriate protections, safeguards and checks are in place so that all applicants have the capability to become a supplier (to reduce the risk of having to introduce a supplier of last resort). As the NRA is responsible for issuing supplier licences, the NRA constantly reviews the effectiveness of the supplier system to make sure it is fit for purpose. The result of this has been to update the review process and, in some instances, consult and issue a decision to allow derogation for certain conditions<sup>16</sup>. The emergence of new types of suppliers has resulted in greater monitoring of the effectiveness of the licencing process.

The NRA from Luxembourg concludes that since no questionnaire was used to check the implementation of procedures, in practice it was not possible to compare either the time needed or the cost of accessing well-functioning wholesale markets and licencing/balancing regimes across market participants. Therefore, the NRA preconises that a survey or questionnaire sent to potential market participants could shed additional light on this issue.

The Swedish NRA has made a gap-analysis but did not set a target since the NRA cannot influence the time needed to access the market where the procurement is handled by Nasdaq and balancing by eSett<sup>17</sup> and the Swedish TSO.

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

Bundled DSOs and suppliers acting in collusion towards customers might prevent new actors from entering a market. Therefore, there must be a sufficient level of unbundling between suppliers and associated DSOs in order to create a level playing field in retail energy markets. The existence of bundled DSOs<sup>18</sup> does not immediately presuppose a problem; nevertheless, it is a sign to further look into the matter.

14 NRAs have used this metric in their self-assessment. Depending on the national circumstances of the market, the data reported on the percentage of customers connected to bundled DSOs differs from 0 to 100 percent. In most of these markets there are DSOs with bundled suppliers exempt from the legal requirements in the 3<sup>rd</sup> Package.

In 2017 in Denmark, there were 45 DSOs, out of which 37 had less than 100,000 customers and therefore, were considered exempted. This means that 566,947 or 16.9% of the Danish customers (metering points) were connected to exempted DSOs. At the same time, approximately 14 rival suppliers operated in the exempt DSO areas. The total number of electricity suppliers was 49 and the number of rival suppliers operating in the exempt DSO areas compared to the total number of active suppliers in Denmark was approximately 29%.

<sup>16</sup> Such as was the case for CNG for Transport <https://www.cru.ie/wp-content/uploads/2016/07/CER16154-Compressed-Natural-Gas-Decision-Paper.pdf>

<sup>17</sup> eSett is a company providing imbalance settlement services to electricity market participants in Finland, Norway and Sweden. <https://www.esett.com/>

<sup>18</sup> Under the 3<sup>rd</sup> Energy Package, energy networks are subject to unbundling requirements, which generally oblige MS to ensure the separation of vertically integrated energy companies, resulting in the separation of the various stages of energy supply (generation, transmission, distribution, and retail). For more on this, see CEER's June 2019 “Status Review on Implementation of TSO and DSO Unbundling Provisions – Update and Clean Energy Package Outlook”: <https://www.ceer.eu/1740>

In Luxembourg, the NRA reports that 7% of consumers were connected to exempt bundled DSOs and there were 4-5 rival suppliers operating in the exempt DSOs' areas.

Three NRAs have made a gap analysis, for example in Luxembourg. In 2017, the percentage of consumers supplied by rival (or alternative) suppliers in exempt bundled DSOs' networks over the number of consumers connected to the exempt bundled DSOs was 4% in electricity and 0.4% in natural gas.

In Ireland, the markets for electricity have been fully open to competition since 2005. This involved the ring-fencing of certain functions of the DSO such as their power generation business from their customer supply business. The wholesale electricity market (I-SEM) requires all generators with a capacity of 10MW or more to make their output available to the market. Generators above 10MW are prohibited from entering into agreements for supply of their output outside of the I-SEM. The Economic Purchasing Obligation requires the ring-fenced supply business of DSOs to purchase energy from the I-SEM in a manner that is fair and transparent. Additionally, part of the conditions for deregulating the market put across the following requirements: (i) There are at least three suppliers active in the relevant market; and (ii) there is a minimum of two independent suppliers, each of which has at least 10% share of load (GWh) in the relevant market; and (iii) the ring-fenced DSO supply company percentage market share is 50% or less (business sector) and 60% or less (domestic). There is an additional requirement for the domestic market that switching rates must be greater than 10%. These metrics are monitored on a quarterly basis.

The Swedish NRA did a gap-analysis but set no target since they have no influence over the choices a customer makes when choosing a supplier.

### **3.3 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 goal of having price set by the market, which contributes to removing barriers to entry for new suppliers and to creating a level playing field between competing actors<sup>19</sup>.

According to the new Electricity Directive approved in 2019, regulated prices will only be allowed under certain circumstances<sup>20</sup> for a limited time, and under specific rules that will be followed-up by the European Commission between 2022 and 2025. Member States shall also ensure the protection of energy-poor or vulnerable household customers pursuant to Articles 28 and 29 in the Directive by social policy or other means than public interventions in the price setting for the supply of electricity.

<sup>19</sup> The definition of this metric was changed due to the new Electricity Directive and therefore differs from the definition that was given in the CEER 2017 Handbook for National Energy Regulators. The Handbook used the definition of 'regulated prices' instead of 'price interventions.'

<sup>20</sup> Article 5 (3a): Public interventions in the price setting for the supply of electricity shall: (a) pursue a general economic interest and not go beyond what is necessary to achieve that general economic interest; (b) be clearly defined, transparent, non-discriminatory and verifiable; (c) guarantee equal access for Union electricity undertakings to customers; (d) be limited in time and proportionate as regards their beneficiaries; (e) not result in additional costs for market participants in a discriminatory way.

21 NRAs have used this metric, and the percentage of customers on regulated prices varies from 0 to 100 percent<sup>21</sup>. There are social tariffs for vulnerable customers, as well as ex-ante and ex-post regulation. In markets with social tariffs, approximately around 5 to 20 percent of customers have such tariffs.

The Spanish NRA uses “Cost plus methodology” which means that the regulated prices include energy cost (hourly wholesale market) + grid tariffs + commercial margin. To fix the commercial margin, the Spanish NRA asks for the annual accounts of the suppliers of last resort, as well as the accounts of other big suppliers, in order to compare and calculate the cost of the activity. The NRA then proposes a margin that Government approves.

Following a recommendation from the British Competition and Markets Authority, the GB NRA implemented a safeguard tariff on Pre-Payment Meter (PPM) tariffs from April 2017, protecting over 4.5 million households. According to the NRA, the market average price for a dual fuel prepayment customer fell by around £60 initially because of such price protection (based on a typical level of household consumption). In February 2018, the NRA extended protection under the safeguard tariff to over 800,000 additional vulnerable consumers that are in receipt of the Warm Home Discount. The GB NRA estimated at the time that these eligible vulnerable customers would make initial annualised savings of around £110.

Five NRAs have done gap analyses, including the Danish NRA. This example from Denmark is included as a pilot below.

In Finland, the NRA has set the objective of eliminating regulated prices, which has since been achieved.

One of five goals<sup>22</sup> for the NRA in Great Britain is to deliver lower bills for consumers. One way of achieving that has been a price cap or a “vulnerable customer safeguard tariff”, which was aimed at protecting vulnerable consumers with prepayment meters and these who receive Warm Home Discount (WHD). The level of the cap was £1,136 from October 2018 to March 2019. This was an increase of £85 since April 2017, largely due to wholesale price rises and increases in the costs of social and environmental schemes. In the gap-analysis provided to CEER, the NRA in Great Britain state that the price cap for customers with prepayment meters and these on WHD is a temporary measure<sup>23</sup>.

Lastly, the Swedish NRA has also done a gap-analysis, however, no target was set since there are no regulated prices.

---

<sup>21</sup> The questionnaire that was sent out to NRAs still referred to the former definition of ‘regulated prices.’

<sup>22</sup> Through its regulation, the GB NRA Ofgem aims to deliver the following five outcomes for consumers: lower bills, reduced environmental damage, improved reliability, better quality of service and benefit for society as a whole.

<sup>23</sup> The price cap for customers in receipt of WHD was updated twice a year. To ensure that the measure was proportionate and in line with EU legislation, the price cap was a temporary measure and ended on 1 January 2019 when the default tariff cap entered into effect. The default tariff cap is also a temporary measure, which is intended to protect disengaged customers until the right market framework is in place for competition to be effective. The PPM cap still exists, in parallel to the default tariff cap, but customers can only be protected by one of the caps.

### 3.3.1 Pilot: Denmark – Metric 4

Quantification & Results
0% of consumers in Denmark have regulated electricity prices.
Gap-analysis
<p>The national objective of 0% regulated electricity prices has been achieved through legislative changes to the Danish Electricity Supply Act.</p> <p>Following the implementation of the Supplier-centric Model on the 1 April 2016, the licensed default supplier mechanism is no longer in force in Denmark. On the 16 May 2017, the license of the last default suppliers expired. Regulated electricity prices therefore no longer exist.</p> <p><u>Gap analysis methodology:</u></p> <p>The gap analysis methodology applied by Danish NRA DUR in terms of this metric (and the other metrics) is essentially determined/limited by the scope of DUR's competence in relation to the Danish retail market.</p> <p>Under Danish law, the Danish NRA DUR is not the competent authority to determine national retail market objectives and how to reach them.</p> <p>DUR's role in terms of the national retail market is market monitoring and operating the online electricity price comparison tool (PCT) <i>Elpris.dk</i>, i.e. not policy development.</p> <p>Therefore, DUR's gap analysis is based on legislative acts prepared by the Danish Ministry of Energy, Utilities and Climate/the Danish Energy Agency (DEA) and approved by the Danish Parliament.</p>

### 3.4 Metric 5: Number of common standards for consumer data and for DSO-supplier contract 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 14 NRAs. Ten 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 MSs, there is a procedure for contracts between DSO and supplier where a supplier-centric model is applicable<sup>24</sup>.

In Denmark, an electricity supplier concludes an agreement with the specific DSOs where the supplier intends to supply electricity to customers accessing those DSOs' grids. The agreement between the supplier and DSO may be based on the standard agreement prepared by the Danish Energy Association entitled "Agreement between Grid Company and Electricity Supplier on the use of the distribution grid", commonly known as "The Standard Agreement". A component of this standard is that the DSO requires new suppliers to provide adequate security for future payments, until the supplier has submitted to successive annual accounts.

Six NRAs have reported that they have some sort of national data hub or other centralised data solution.

<sup>24</sup> These countries are Croatia, Denmark, Great Britain, Luxembourg, Netherlands, Romania and Spain.

In Austria, two data hubs cover all customer-related procedures, which allows a standardised data exchange. The processes included are continuously developed and enhanced: EnergyLink – a *Wechselplattform* (exchange platform) handles all procedures and data regarding the processes of switching and moving of consumers. Ebutilities (and EDA) – a *Marktinformationsplattform* (market information platform) is responsible for remaining procedures, where standardised data exchange is feasible and meaningful.

In Denmark, a data hub established and operated by the Danish TSO Energinet, handles data communication and business processes between market participants in the Danish electricity market. The purpose of the data hub is to ensure uniform communication methods and standardised processes for market participants in a non-discriminatory, objective and transparent way so as to create relatively low market entry barriers. All metering data and all necessary information for settlement purposes, e.g. electricity taxes and network tariffs, are collected in the data hub. Furthermore, the process of, for example, supplier switching, is handled in the data hub. The detailed requirements, rights and obligations of the relevant market participants in terms of the data hub, and thereby also the functionalities of the data hub, are set in regulations issued by Energinet within the framework of the Danish Electricity Supply Act.

Of the five NRAs which have made a gap analysis, the Danish NRA cites that the Danish TSO Energinet has established and operates a data hub in Denmark pursuant to the Danish Electricity Supply Act. The objective of the existence of a data hub has, therefore, been fulfilled.

In Finland, a national data hub will be implemented in spring 2021.

The NRA from Luxembourg concludes in its gap analysis that data exchange can still be a market barrier, notwithstanding the existence of the single data exchange protocol. New entrants are required to undergo specific developments to participate in the Luxembourgish Market Communication<sup>25</sup>. As of 2017, consumers and third parties still requested data from suppliers and DSOs using paper form, as part of a one-off request. This procedure is not yet standardised across DSOs. Billing data is not yet being sent through the electronic market communication route. The clarity and level of detail of the documentation of the market communication model leaves room for improvement, especially in the gas sector as it is not clear yet what functionalities a potential data hub would or could have.

The Swedish NRA has set a target for Q4 of 2021 when the implementation of a national data hub is due to be completed. This datahub will require a common standard for consumer data.

---

<sup>25</sup> Market communication enables the automated exchange of messages between network operators and suppliers, for example as part of a change of supplier or when reporting metering data. The new procedures standardise and make communication more efficient and thus help to facilitate market development.



### **3.5 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 schemes. 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 as could market choice be restricted. Therefore, a lack of time-of-use-metering hinders both innovation and overall market development.

The Electricity Directive that went into force in July in 2019 states that to promote energy efficiency and empower final customers, MS should recommend that electricity undertakings and other market participants optimise their use of electricity e.g. via the introduction of smart metering systems<sup>26</sup>. The Directive also states that MS 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 to conclude a dynamic electricity price contract with at least one supplier and with every supplier that has more than 200,000 final customers.

14 NRAs have used this metric. Meters for time-of-use metering are available for customers in a majority of these MS. In most of these markets, customers that have time-of-use meters do not pay any additional fee(s).

In Norway, hourly metering will be available from 2019 at no additional fee as the cost will be socialised through network tariffs.

Of the provided examples, it is only customers in the Netherlands who when requesting a time of use meter ahead of the scheduled roll-out that must pay a fee (€72.60). Nonetheless, within the scheduled large-scale roll-out, meters are installed free of charge.

In Sweden, all customers with a fuse >63A should have hourly metering and those with a fuse <63A can request hourly metering at no extra cost provided that they have an hourly-price-contract with a supplier. Hourly and monthly metering is available for customers without any extra cost. Customers who want other options can be charged additional costs by the DSO for the special metering. From 2025, all meters should be able to measure transferred energy every 15 minutes.

Seven NRAs have done a gap analysis, the Danish NRA being one: Here, according to national law, the objective of a 100% roll-out of smart meters with time-of-use metering must be achieved no later than the end of 2020. The analysis from GB is included below as the pilot.

---

<sup>26</sup> Article 19(1), "Smart metering systems", DIRECTIVE (EU) 2019/944 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 5 June 2019 on common rules for the internal market for electricity and amending Directive 2012/27/EU (recast)

### 3.5.1 Pilot: Great Britain – Metric 6

Quantification & Results
<p>Time-of-use metering remains available at no additional fee; smart meter roll-out is ongoing.</p> <p>Ofgem has been carrying out the monitoring of tariff and meter types, including the availability of Time of use (ToU) metering and associated tariffs and their attributes, since 2004. Ofgem collects this data through a mix of sources: a pricing database provided by Energyhelpline (a price comparison website), regular information requests to suppliers (especially to establish the number of customers on the different types of tariffs) and Ofgem's own market intelligence research.</p> <p>Static ToU tariffs, involving differentiated peak/off peak or day/night rates, have been available for a long time to electricity customers in GB with ToU non-smart, meters (around 17% of all meter points in GB have this functionality). Customers with ToU metering are able to choose ToU tariffs and reduce costs by using less electricity at times of higher prices and hence reduce their cost. The most common types are Economy 7 and Economy 10. The cheaper night time rate usually applies from about 1am to 8am for Economy 7 and for an additional period for Economy 10, usually in the evening, but it may vary depending on the geographic location of the consumer.</p> <p>In addition, suppliers are increasingly offering programs for customers looking to proactively manage energy usage which may provide additional long-term savings (e.g. to reduce energy consumption and reduce peak load) and are assisting customers looking to include renewable options in their portfolio. Furthermore, suppliers are increasingly offering service that enable customers to control electric appliances or heating and hot water remotely from mobile, tablet or laptop (e.g. British Gas's 'Hive Active Heating').</p> <p>The development of more dynamic ToU offers for domestic consumers is at an early stage. Recent examples include smart pay-as-you-go tariffs for PPM customers with smart meters, which are often cheaper than their traditional PPM tariffs. However, the combination of smart and half-hourly settlement can provide the right incentive for suppliers to offer dynamic pricing contracts.</p> <p>In order to better understand how such tariffs may impact on consumer bills and what currently available evidence can tell us about consumers' willingness or ability to respond, Ofgem commissioned a report on the Distributional Impacts of Time of Use Tariffs<sup>27</sup>. It is encouraging to note that for all groups except the two most affluent, the report finds that the average consumer would make some saving on their bill after expected behaviour change is taken into account. The report also finds that although there are differences in the expected bill impacts between particular sociodemographic groups, the spread within each group is far larger. As result, it pointed out to the importance of the provision of a clear, accurate information to consumers in order enable them to make informed choices about their energy supply.</p>
Gap-analysis
<p>Ofgem monitors the variety of pricing and billing options available in the market in order to understand the degree of competition and innovation, as well as the easiness of comparability of the different options for consumers. This monitoring approach will evolve after the removal of tariff restriction rules, with more attention likely to be dedicated to new tariff developments, e.g. discounts and new bundles etc.</p> <p>The evolution of this metric over time will allow Ofgem to better understand how smart meter roll-out and settlement reforms can help drive innovation and consumer engagement in the market.</p>

<sup>27</sup> See: [https://www.ofgem.gov.uk/system/files/docs/2017/07/distributional\\_impact\\_of\\_time\\_of\\_use\\_tariffs\\_1.pdf](https://www.ofgem.gov.uk/system/files/docs/2017/07/distributional_impact_of_time_of_use_tariffs_1.pdf)



Significant progress in the development of more dynamic ToU offers for domestic consumers is expected with the roll-out of smart meters (gas and electricity suppliers are required to install smart meters for all domestic and smaller non-domestic consumers by the end of 2020).

The roll-out of smart metering, among other things, has the potential to promote competition by creating new opportunities for innovation in business models, products and services. One such innovation is in the provision of ToU tariffs – energy tariffs with different prices at different times. By creating incentives to shift consumption away from peak periods, ToU tariffs have significant potential to reduce customer bills, enhance security of supply and contribute to sustainable development.

Another critical factor will be the move away from existing settlement rules based on estimated consumption profiles to half-hourly settlement. Half-hourly settlement will expose suppliers to the true cost of their customers' usage and therefore incentivise them to take steps to help their customers to move their consumption to times of the day when electricity is cheaper, including by offering time of use or other types of smart tariffs. This will build on the platform provided by smart metering, to enable a smarter, more flexible energy system that lowers bills, reduces carbon emissions and enhances security of supply.

The specific monitoring dedicated to tariffs that are more dynamic has started only recently and Ofgem will enhance them further as the market for these products develop.

## 4 Key property III: A close relationship between wholesale markets and retail prices

Well-functioning retail energy markets are dependent on well-functioning wholesale energy markets. Organised and transparent wholesale markets determine the price of energy as a commodity and provide the foundation for the prices that consumers pay in the retail energy market. Two metrics are used to assess close relationships between wholesale markets and retail prices that concern only the energy component of the total retail energy price. i.e. separate from network tariffs, taxes and surcharges.

*Table 3 – Metrics used in the self-assessment of key-property III “Close relationship between wholesale markets and retail prices”*

Metric n° and name		Number of NRAs using	Number of NRAs reporting data	Number of NRAs completing gap-analysis
7	Correlation between wholesale and retail energy prices	14	10	4
8	Mark-up between wholesale and retail energy prices	15	11	5

### 4.1 Metric 7: Correlation between wholesale and retail energy prices

The purpose of this metric is to determine whether consumers receive correct signals from wholesale markets. Consumers may receive price signals from wholesale markets through the energy component of the retail price if the pricing of this component follows variations in the wholesale price. The degree of correlation between wholesale and retail energy prices depends largely on the price structure of the contract the consumer has agreed with the retailer. Price structures vary from hourly pricing contracts set against wholesale markets to fixed-price contracts. Thus, the correlation should be assessed against the most appropriate wholesale price reference.

However, the ability of retailers to offer contracts that have a close correlation to wholesale markets depends on their ability to access and procure energy. This analysis, therefore, presumes that wholesale markets are well-functioning, organised and transparent.

Furthermore, based on the national reports received and market analysis, the ACER/CEER - Annual Report on the Results of Monitoring the Internal Electricity and Natural Gas Markets in 2017 – Electricity and Gas Retail Markets Volume<sup>28</sup> publishes annually a comparison of the correlation between the standard retail product commercialised by the incumbent in the capital city to households and the wholesale underlying price in a given MS.

<sup>28</sup> <https://www.ceer.eu/documents/104400/6319351/Market+Monitoring+Report+2017+-+Electricity+and+Gas+Retail+Markets+Volume.pdf/fe02c615-3496-31d6-9927-e767747a5591>

What is unique in the CEER Self-Assessment is the framework of which the current status report is written and that each NRA has the freedom to compare the correlation of all categories of retail products (not only the standard product by the incumbent supplier) and across all categories of customers segments (not only household). However, the current 2018 self-assessment status report reveals that most NRAs had not performed further analysis on the correlation between wholesale and retail energy prices other than that which had already been published.

To be noted is that the methodology employed in the ACER/CEER Market Monitoring Report is the same for all MS (i.e. same average annual household consumption of 3,500 kWh/year in electricity and 11,000 kWh/year in natural gas). Whereas, the results reported in this status-report are those that NRAs calculated according to their own methodology adjusted for their national retail markets, and can therefore diverge from the Market Monitoring Report methodology. The data published in the ACER/CEER Market Monitoring Reports may therefore differ from the data in this status report.

14 NRAs have used this metric. The Danish NRA reports a correlation between the retail price (variable products) and the wholesale price in terms of variable electricity products as 0.97 (2017). This close correlation means that customers receive price signals that correspond with the price on the wholesale market. The NRA has only calculated the correlation for variable products since fixed price products in 2017 constituted only 6% of the sold volume. Furthermore, the NRA believes that the correlation for variable products is a better market indicator than the correlation for fixed price products, since the price on fixed price products is determined in advance and with a duration of more than three months.

In the Netherlands, the NRA found a correlation of 0.8 for fixed-term contracts and 0.36 for variable contracts (2017-2018). While in Sweden, the correlation for fixed-term contracts averaged at 0.93 and that of variable contracts averaged at 0.92 (2014-2017).

In Great Britain, the NRA concluded that short-term fixed prices correlate more with wholesale prices than variable retail prices and the 2017 variable standard prices could have been more cost-reflective.

In Hungary, the NRA noticed that large consumers in 2017 received contracts that were correlated more with wholesale prices than those commercialised to small consumers. This confirms that small consumers conclude fixed contracts which are usually less correlated with wholesale prices.

The Spanish NRA reports that for the Voluntary Price for Small Consumers (VPSC) tariff offered by reference suppliers at the end of 2018, this tariff covered a 42% of the consumers entitled to it. With this type of tariff, the energy component is regulated and is based directly on the hourly spot price. In the natural gas sector, the energy component of the last resource tariff for household consumers is based on oil prices and the NBP (national balancing point) gas market price.

Many NRAs commented to CEER that they were unable to perform a gap analysis as they are not the competent authorities in their MS, since the role of the NRA is not policy development but retail market monitoring and, if applicable, the operation of an online price comparison tool (PCT).

However, four NRAs<sup>29</sup> stated that they have done a gap analysis. In Sweden, the regulator concludes that prices are set by companies on a competitive market and thus correlation between retail and wholesale prices cannot be influenced by the regulator.

## 4.2 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 energy relative to the underlying wholesale price. The evolution of mark-ups serves as an indication of the level of retail competition and the “responsiveness” of the retail price to rising or falling wholesale prices over time. The level of the mark-up will depend on the price structure of the contract that the consumer has agreed to with the retailer. Price structures may vary from hourly pricing set against wholesale markets to standard variable pricing to fixed pricing. This analysis, as well as the one made in the previous metric, presumes that wholesale markets are well-functioning, organised and transparent for the responsiveness of retail to wholesale prices to occur.

15 NRAs have used this metric to reveal which contract types are the most beneficial to consumers. However, one overall conclusion is that few NRAs have provided examples of mark-ups and comparisons of mark-ups for different product types.

Some NRAs report mark-up between wholesale and retail prices as part of their analysis of the relationship between wholesale and household prices in the framework of the national reporting that NRAs submit annually to the European Commission, ACER and CEER. More details on individual analysis performed by specific NRA can be found on CEER website<sup>30</sup>. A comparison of average mark-ups in MSs can be found in the ACER/CEER - Annual Report on the Results of Monitoring the Internal Electricity and Natural Gas Markets in 2017 – Electricity and Gas Retail Markets Volume<sup>31</sup>.

In Denmark for instance, the NRA reported that the average mark-up for variable electricity products was 1.20 Eurocent/kWh in 2017. It has remained rather constant throughout the year but according to the NRA, it is low, meaning that the suppliers' gross profit per kWh is also low. The low average mark-up indicates a well-functioning and competitive retail market, where suppliers have to keep the gross profit low in order to obtain and retain customers. The mark-up is calculated on the basis of weighted energy volume average. The NRA has only calculated the mark-up for variable products, since fixed price products only constitute 6% of the volume sold in the Danish retail market for electricity. As noted above, the NRA believes that the mark-up for variable products constitutes a better market indicator, since the price on fixed price products is determined in advance and with a duration of more than three months.

The GB NRA reported in 2017 that competitive pressure from medium and small suppliers continued and as a result, the six large suppliers lost customers and experienced a loss in their aggregate domestic supply revenues from £23 billion in 2016 to £22 billion in 2017. With intense competition, profit margins and costs are pushed further towards their efficient level. Total domestic supply profits aggregated across the six companies, measured as earnings before interest and tax (EBIT), fell for the first time since 2014, from £1 billion in 2016 to £0.9 billion in 2017. Profit margins do, however, continue to vary across the six large suppliers.

<sup>29</sup> Those from Great Britain, Luxembourg, Romania, and Sweden.

<sup>30</sup> National reports are available on CEER website: [https://www.ceer.eu/eeer\\_publications/national\\_reports](https://www.ceer.eu/eeer_publications/national_reports)

<sup>31</sup> <https://www.ceer.eu/documents/104400/6319351/Market+Monitoring+Report+2017+-+Electricity+and+Gas+Retail+Markets+Volume.pdf/fe02c615-3496-31d6-9927-e767747a5591>

The NRA from Kosovo states that, the supply margin for the last two years was set by the NRA at 3% on top of wholesale energy cost.

In Luxembourg, the NRA concludes for 2017 that regardless what type of electricity contract a household had, the energy price did not respond to the fluctuations of the underlying wholesale price. In the natural gas sector, the energy price that household paid also remained stable throughout the year and only slightly reflected the seasonal price changes of the underlying wholesale prices. On average, the annual estimated supplier's mark-up in €/MWh was much higher in the electricity than in the natural gas market. If however, the annual estimated supplier's mark-up in €/household consumer is computed, the analysis concludes that annual supplier's mark-up 2017 was much higher in the natural gas sector than in the electricity sector. Finally, the NRA concluded that in both electricity and natural gas markets there were only small differences between "variable" and "fixed" offers, in terms of price responsiveness.

In Portugal, a mark-up between wholesale and retail energy prices for household consumers in the period 2015-2017 was 1.381 Eurocent/kWh in natural gas and 12.18 €/MWh in electricity respectively, whereas for industrial natural gas consumers it was 0.093 Eurocent/kWh and 0.235 Eurocent/kWh for industrial electricity consumers.

The Swedish NRA stated that the average mark-up in fixed price contracts for electricity was 1.6 Eurocent/kWh and in variable contracts was 1.3 Eurocent/kWh.

Five NRAs<sup>32</sup> have done a gap analysis. In Luxembourg, the regulator favours better visibility on the allocation of the wholesale supply strategies of suppliers to different retail offers they commercialise in the retail market (prices and volumes of energy bought by suppliers on the spot market, day-ahead, or through long-term contracts and then allocation of those different wholesale contracts to retail offers commercialised to consumers) and on the energy prices of non-household retail offers. The regulator concluded that small and medium-sized enterprises in the natural gas market are the ones paying the most, i.e. where the mark-ups are the highest<sup>33</sup>.

---

<sup>32</sup> Those from Great Britain, Kosovo, Luxembourg, Romania, and Sweden.

<sup>33</sup> Natural gas prices for small and medium-sized enterprises and industries:  
<https://assets.ilr.lu/energie/Documents/ILRLU-1685561960-559.pdf>

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

A well-functioning market is characterised by innovation and the range of products and services offered to consumers. In general, a retailer's ability to offer a significant number of commercial options – coupled with consumers' ability to compare the offers and take informed decisions – is a sign of healthy competition and innovation. Five metrics are used to assess whether the current range of existing offers, including the existence of demand response offers, provide for competitive and innovative retail energy markets.

*Table 4 – Metrics used in the self-assessment of key-property IV “A range of offers, including demand response”*

Metric n° and name		Number of NRAs using	Number of NRAs reporting data	Number of NRAs Completing gap-analysis
9	Availability of a variety of pricing and billing options	21	17	7
10	Availability of value added services for implicit demand response and self-generation	8	4	3
11	Availability of online offers	17	13	5
12	Availability of contracts guaranteeing the origin of energy	16	12	4
13	Availability of explicit demand response offers	6	2	3

### 5.1 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 the possibility to choose 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, in retail energy markets. In fact, retailers may offer differentiated products based solely on the way in which those products are priced or billed. Various options of pricing and billing can present innovations in the market and create benefits for the consumer. Opportunities for a variety of pricing and billing options should enable new suppliers with innovative ideas on pricing and billing to enter a market. If such opportunities are severely restricted, this might distort competition.

The majority of NRAs report that a wide variety of pricing and billing options are available to consumers, with 21 of them having used this metric. However, under the Clean Energy Package, in each MS there should be at least one type of supply contract available to consumers based on dynamic prices when the package is fully implemented 2021. This new type of pricing option is yet to be included in the CEER indicators.

Seven NRAs<sup>34</sup> have done a gap analysis. They all state that no national target has been set, given the variety of pricing and billing options in the market

<sup>34</sup> Those from Denmark, Finland, Great Britain, Luxembourg, Romania, and Sweden.

This indicates that the majority of NRAs does not have statistical data available to allow them to quantify the share of consumers under existing pricing and billing options. Furthermore, some NRAs do not obtain statistical data from business consumers at all, i.e. they obtain statistical data only for the household segment.

Additionally, NRAs report that in some MSs smart meters are not yet in place, meaning that the only available billing options in those countries are advance payments. Full deployment of smart-meters will make more pricing and billing options available. In particular, post-meter reading payments should become a reality in countries where energy bills are still being invoiced as advance payments.

For the year 2017, CEER identified the following pricing options:

Pricing options	
1	Variable (i.e. price paid per unit of electricity or gas used can change at any time);
2	Fixed (i.e. an offer that guarantees that the price paid per unit of electricity or gas used will not change for a given period of time);
3	Mixed (i.e. based on both fixed and variable components);
4	Variable spot based (i.e. variable price based on the wholesale market spot price);
5	Variable wholesale price based (i.e. settled against monthly/weekly average wholesale price);
6	Capped (i.e. guarantees that the price paid per kWh for electricity or gas will not rise beyond a set level for a given period of time, but may go down – usually for this certainty consumers pay a small premium);
7	Indexed variable (i.e. similar to spot-based which is linked to wholesale, but linked for example to standard incumbent offer with guaranteed discount of x% or to RPI);
8	Green (i.e. offers based on renewable generation resources like hydro, solar, wind, biomass etc. for electricity offers and biogas for gas offers);
9	Online (i.e. with savings/discount for managing accounts online, online billing);
10	Social (i.e. offers for vulnerable consumers);
11	With monetary gains (e.g. discount, supermarket vouchers, etc.);
12	With additional services (e.g. energy efficiency, boiler maintenance etc.);
13	Guaranteed origin of energy (any energy source other than green or country-specific). <sup>35</sup>

<sup>35</sup> Guaranteeing the source of energy can relate to: electricity, gas, including hydrogen, heating and cooling. See Article 19 in the revised renewable energy directive, Directive (EU) 2018/2001, part of the CEP. Additionally, preamble 59 of the Directive states “Extending the guarantees of origin system to energy from non-renewable sources should be an option for Member States.”:

<https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32018L2001&from=EN>



For year 2017, CEER identified the following billing options:

Billing options	
1	Direct debit
2	Bank transfer
3	SEPA (Single Euro Payments Area)
4	Credit card
5	Cash
6	Pre-payment

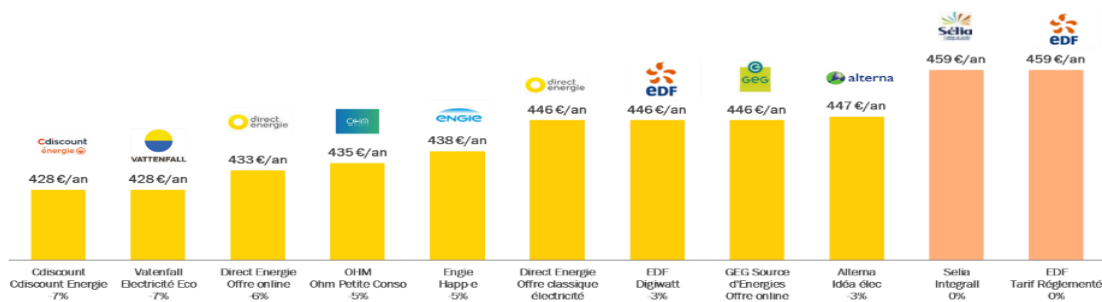
Additionally, CEER will include in the next status report an overview of NRAs receiving statistical data on the household consumer segment only and NRAs receiving statistical data on all consumer segments, including business consumers.

### 5.1.1 Pilot: France – Metric 9

Quantification & Results
<p>In France, the NRA, CRE, monitors and publishes the variety of pricing options in gas and electricity quarterly in the Market Observatory and annually in the Monitoring Report.</p> <p>The main source for the data is the price comparison tool <a href="http://www.energie-info.fr">www.energie-info.fr</a>.</p> <p>CRE does not monitor the variety of billing options (CRE considers that this part of the metric is not relevant for France).</p> <p>CRE monitors different types of pricing options: offers with fixed prices, offers with variable prices, green offers and online offers.</p> <p>More and more innovation in terms of pricing options exists in France (for instance offers for the smart meters only (Weekend offers), offers for electric cars users only, offers with connected objects) but CRE does not monitor these types of offers and pricing options frequently. If needed, data can be found easily, such as on the price comparison tool website.</p> <p>All fixed, variable and green offers are monitored for two types of clients in each energy: baseload (2,400 kWh/year) and peak/off peak (8,500 kWh/year) in electricity and cooking use (750 kWh/year) and heating use (17,000 kWh/year) in gas.</p> <p>CRE has followed since 2017 the quantification of the number of consumers under specific offers: data is available since 2017 from the main suppliers that cover 90% of the market for households and small businesses.</p> <p>For this new indicator, data is received directly from the suppliers who send the data quarterly to CRE.</p>



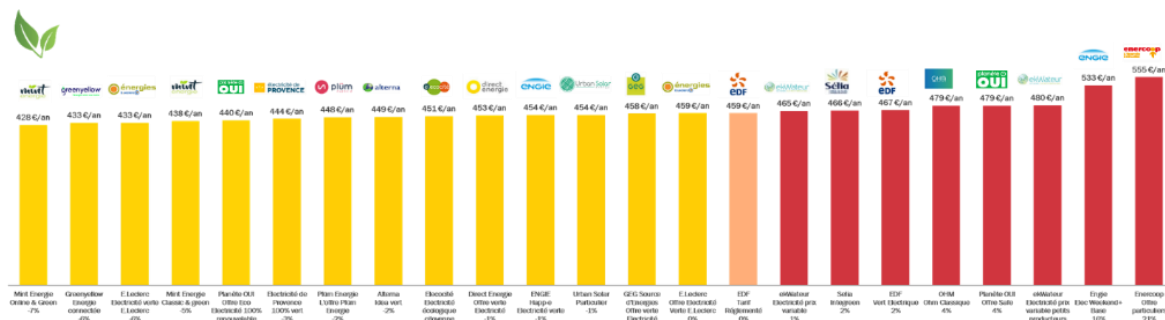
### Comparison of variable price offers in electricity for a “base load” customer



- Offers cheaper than the regulated end-user price
- Offers at the same level as the regulated end-user price
- Offers more expensive than the regulated end-user price

Source: Price comparison tool énergie-info (31 December 2018)

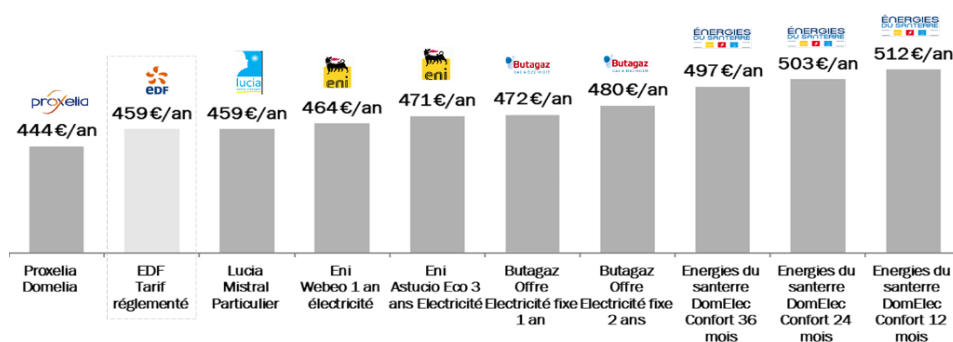
### Comparison of green offers with variable price in electricity for a “base load” customer



- Offers cheaper than the regulated end-user price
- Offers at the same level as the regulated end-user price
- Offers more expensive than the regulated end-user price

Source: Price comparison tool énergie-info (31 December 2018)

### Comparison of offers in electricity with fixed price for a “base load” customer



The level of the regulated end-user price is presented as an indication as it is likely to change at least once a year.

Source: Price comparison tool *énergie-info* (31 December 2018)

The same graphs and data are available for a peak/off peak type of client in electricity.

The same graphs and data are also available for gas for the two types of clients.

### Gap-analysis

CRE does not have the competence to set national objectives. The indicators and data collected for these indicators presented above reflect CRE's wish to have a broad vision of the functioning of electricity and gas retail markets.

The most important issue for the moment is to extend the new indicators (available since 2017) to smaller suppliers in order to get a full picture of the market and to extend the quantification of the metric to include products commercialised by smaller suppliers. This would enable CRE to know the number of customers that subscribed to each specific offer that is available on the market, and not just the number of offers. In that sense, CRE could monitor more precisely the offers and know exactly which offers are attractive and the most subscribed and what are the preferences and the behaviour of the customers.

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

The main purpose of this metric is to determine if consumers can lower their energy costs by adopting time of use/ flexible contracts that reflect price formation in a well-functioning wholesale market, e.g. settlement against hourly prices. The availability of these implicit demand response<sup>36</sup> offers and flexibility services indicate an innovative, competitive and diversified market. For consumers it is essential to receive clear information i.e. accurate terms and conditions regarding bundled contracts e.g. with energy-efficiency services, products, maintenance services or other add-ons such as value-added services.

Its second purpose is to determine if customers can self-generate their electricity and/or feed their surplus back into the system, in other words, whether (or not) there is fair access to market mechanisms and systems.

A few NRAs reported on the availability of value added services that contribute to demand flexibility, however, not many have been able to quantify the precise number of consumers who have participated in implicit demand response through a contract or quantify how many consumers had contracts which included feed-in from electricity and/or gas for self-generation. Also, very few NRAs could report on whether there are appliances in their markets with demand response switches or other connections available on the electricity and gas markets.

<sup>36</sup> Implicit demand response remains only for the benefit of the final consumer and the corresponding retailer or the Balance Responsible Party (BRP) as an optimisation choice in respect to the supplier's sourcing costs or imbalances.

Eight NRAs have used this metric. In Denmark, for example, from 1 December 2017, flex settlement (settlement on hourly basis) became available for customers with smart meters and an annual consumption of up to 100,000 kWh. Some suppliers are beginning to offer electricity contracts/products with flex settlement to customers with an annual consumption up to 100,000 kWh. Time-of-use metering and flex settlement are expected to activate household customers in the retail market in terms of adjustment of consumption, supplier switching etc. Prior to 1 December 2017, only non-household customers with an annual consumption over 100,000 kWh had been hourly settled.

The Hungarian NRA reported that the following time-of-use options exist in every DSO area as value added services or products that contribute to demand flexibility: Two time zone tariff (this tariff has different prices for peak and valley periods); Controlled current tariff; Geo tariff (special tariff set up for the operation of heat pump equipment in which the electricity is suspended for 2 times a day); and tariff for heat pump and renewable energy sources (available only from 15 October to 15 April and in which electricity is available 24 hours/day). In Hungary, there are 1.2 million household customers who participate in implicit DR through one of the above listed contracts. 24% of household customers have controlled current besides their standard tariff. Additionally, for household-size power plants, there is no FIT available for the prosumers. For small-scale household power plants, net metering with annual settlement is the general form of support. There were 22,258 household customers who had self-generation at the end of 2017.

In the Netherlands, the NRA stated that smart thermostats are available to consumers as value added services or products that contribute to demand flexibility.

Whilst in Sweden there are 11,976 micro-producers registered at the national tax authority and 8,600 customers participate in implicit DR through a contract e.g. hourly price contracts. The Swedish NRA is one of 3 NRAs that have done a gap analysis for this metric. The regulator in Sweden added hourly price contracts to its PCT in 2018, and such publication will likely increase the number of consumers with hourly contracts.

### **5.3 Metric 11: Availability of online offers**

The purpose of this metric is to monitor innovation and progress in the retail market.

NRAs report that in their MS, consumers can compare offers online and the number of suppliers proposing an app for their customers wishing to check their consumption patterns and to make energy-efficient choices is slowly growing.

17 NRAs have used this metric. Offers are comparable online and/or through digital applications in a majority of these MS. The signing of contracts online through the PCT or otherwise is not so popular. Management of energy contracts online and/or through digital applications is available in a majority of these MSs, for instance, when suppliers provide to customers a personalised access on their website. However, in Luxembourg, a customer may request online a new supplier to implement a supplier switch in its favour, but such an order is not final – the customer will still receive a new contract to sign by hand and to send back to the new supplier by post. Furthermore, ILR points to the fact that large business customers tend to prefer to compare offers off-line. Given the important volumes supplied to such large business customers, their contracts are negotiated B2B directly with the suppliers.

Five NRAs<sup>37</sup> have done a gap analysis, for example, the Danish NRA. In Denmark, suppliers are by law required 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 PCT Elpris.dk.

The price and other relevant information must be accurate and up-to-date, and DUR continually monitors suppliers' compliance with this requirement. Furthermore, all suppliers offer online signing and management of contracts, as well as online bills. The objective of 100% of online availability regarding electricity products, bills, contract signing and management in terms of all household customers and small and medium sized-enterprises has therefore been reached.

#### **5.4 Metric 12: Availability of contracts guaranteeing the origin of energy**

The purpose of this metric is to assess whether products with a specific origin and source, mostly renewable sources, are available for consumers. The availability of such contracts is a sign of enhanced transparency to consumers on a market.

NRAs report that in a majority of MS, consumers can choose products with a specified origin and source. In 2018, one MS had legislation in place requiring full disclosure, i.e. the guaranteeing of all sources of energy, not only renewables, whereas another MS was in the process of adopting full disclosure whilst another MS allowed for full disclosure on a voluntary basis<sup>38</sup>. The Clean Energy Package reinforces the role of guarantees of origin as tracking mechanism for guaranteeing the origin and source of energy.

The new RES Directive<sup>39</sup> of the Clean Energy Package does not introduce the obligation to adopt full disclosure, even though full disclosure provides enhanced transparency to consumers on the shares of energy consumed according to source. The introduction of full disclosure in the national enabling legislation remains optional<sup>40</sup>.

However, what the new RES Directive does introduce is the concept of guaranteeing renewable hydrogen, besides renewable sources of electricity, gas, heating or cooling.<sup>41</sup>

---

<sup>37</sup> Denmark, Finland, Great Britain, Luxembourg, and Sweden.

<sup>38</sup> Full disclosure is available in Austria (mandatory full disclosure) since 2015. In the Netherlands, full disclosure will enter into force as of 1 January 2020. In Sweden, full disclosure is voluntary. As of July 2018, ILR enabled import and cancellation of guarantees of origin for electricity produced from non-renewable energy sources. This allows suppliers to disclose all energy sources to their clients based on GO cancellations.

<sup>39</sup> 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 (recast)

<sup>40</sup> Article 19.2: Member States may arrange for guarantees of origin to be issued for energy from non-renewable sources. 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 (recast)

<sup>41</sup> Article 19.7(b), 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 (recast).

16 NRAs<sup>42</sup> have used this metric and state that contracts with a specific source guaranteed for each relevant market are available for customers. However, in some MS, only renewable energy sources can be guaranteed. The share of the contracts available in the market guaranteeing the source of energy is very diverse, from 1% in Croatia and 21% in Norway to 51% in Denmark and 69% in Luxembourg.

Given that in many MSs only renewable energy sources (RES) can be guaranteed, many NRAs informed CEER about the share of green offers available in the market, i.e. the share of contracts guaranteeing the RES.

It should be noted that guaranteeing the origin of energy can encompass all energy sources, including fossil and nuclear. Green offers are actually only one type of pricing contract available to consumers and the share of green offers in the market is already quantified in Metric n° 9. Moreover, no quantification was made available to CEER on the share of contracts guaranteeing the origin of energy (i.e. where precisely, the electricity consumed was produced).

Four NRAs<sup>43</sup> have done a gap analysis and the pilot from Luxembourg is presented as an example below.

#### 5.4.1 Pilot: Luxembourg – Metric 12

Quantification & Results
<p>There are different interpretations as to the way of quantifying this metric. One type of quantification could be to count simply the percentage of contracts among all existing commercialised products that guarantee the origin of energy. In such a case, the metric would be 100% fulfilled in electricity as all contracts available in the electricity market in Luxembourg provide clients with a label to inform about the product mix, supplier mix and national mix. On the online price comparison tool<sup>44</sup>, all household offers can be compared not only in terms of price but also in terms of their fuel mix: <a href="http://www.calculix.lu">www.calculix.lu</a>. However, all natural gas offers remain without any specification about their origin and source as there is currently no legal framework for gas disclosure.</p> <p>Alternatively, the metric could be quantified as a percentage of certified origin of energy over all volumes supplied in a given year. According to this quantification, the metric is 69% fulfilled, this means that 69% of supplied volumes to end consumers in Luxembourg in 2017 were certified with supporting documents proving the origin and the source of the electricity supplied, whilst the remaining 31% of supplied volumes in Luxembourg had the residual mix applied by ILR.</p>
Gap-analysis

<sup>42</sup> Austria, Croatia, Czech Republic, Denmark, Finland, France, Great Britain, Hungary, Ireland, Luxembourg, Netherlands, Norway, Portugal, Slovenia, Spain, and Sweden. For Belgium, Wallonia via the regional regulator CwaPE also provided results to CEER, which have not been integrated in this current status report.

<sup>43</sup> Finland, Great Britain, Luxembourg, and Sweden.

<sup>44</sup> As per Recommendation 1 in the “CEER Advice on customer information on sources of electricity”, Ref: C14-CEM-70-08, 4 March 2015.

National legislation enabled the quantification of this metric. Firstly, through the obligation on suppliers to inform end consumers about the energy sources for all electricity products commercialised by means of the annual publication of labels that follow a unique template, and thus to provide disclosure figures to the public. Secondly, via the empowerment of the regulator to check such disclosures. Thirdly, by enabling the regulator to calculate a residual mix to be applied to non-certified volumes and to provide aggregated values for the national mix.

It must be noted that the labelling exercise in Luxembourg is confined to electricity only, i.e. the national law on natural gas does not provide for corresponding provisions as those above mentioned for electricity.

ILR's objective would be that 100% of RES electricity is certified and preferably the remaining non-RES electricity is certified in terms of its source.

The gap between the national objective and the current state provided by the quantification results depends on the type of quantification method chosen.

Here, the regulator addressed several challenges faced when quantifying the metric:

This metric cannot be confined to the simple counting of the percentage of contracts, which guarantee the origin of energy. The metric could include an assessment on how disclosure figures about the origin of the energy consumed in a given country are being published. An important factor when assessing the origin of the energy consumed is the clarity of the information being disclosed. In this regard, some NRAs who are also competent bodies for disclosure encourage a separation between publications related to (a) disclosure statistics and the national labelling system and to (b) production statistics and information on generation mix of a given country.

Publishing labelling data together with production data may create confusion among consumers and even lead to "double perception", i.e. to several clients – in different countries – believing that they have consumed the same MWh of electricity produced from renewable sources.

The national legal framework provides the obligation on suppliers to inform clients in terms of sources of supplied electricity but does not provide an obligation to certify the entirety of supplied volumes with proof about the origin of supplied electricity, i.e. to guarantee for the entirety of the electricity supplied. For this reason, a considerable amount of supplied electricity is still being allocated to fossil fuel sources, nuclear and non-identified sources according to the national residual mix calculations in Luxembourg as well as in other MS. If the implementation of an obligation on suppliers to certify the entirety of supplied electricity would see the light, in addition to the existing – in some MS – obligation in national law to inform final consumers about the fuel mix label, such a certification obligation if applied across Europe would make the calculation of national fuel mixes more precise.

Another challenge in the disclosure exercise, which provides for a full, complete and accurate disclosure guaranteeing the origin of energy in a given country, would be to eliminate all categorisation of energy sources that are "non-identified" and thus unclear. Electricity labels, if they continue to maintain categories that are not precisely defined, such as "non-identified RES" or "non-identified 'other' source" remain vague and leave room for certification avoidance.

In many MS, disclosure obligations exist currently only in the electricity sector. The implementation of the disclosure exercise in the natural gas market could also be beneficial to consumers, as currently certain offers are being marketed in terms of biogas quantities but disclosure authorities are performing no final verification over such statements.

Full disclosure in Europe, which means that not only renewable sources are being guaranteed but all energy sources would be guaranteed, already in application in some MS, would improve [in the Luxembourgish NRA's opinion] the level of transparency for consumers about the origin of their energy. In practice, full disclosure means that suppliers have the obligation to provide the proof to the competent authority for disclosure on all sources and their origins of the electricity (in volumes) they have supplied to consumers.



The CEP provided clarity on the calculation of the national residual mix (RED II) and the supplier's mix.

Further harmonisation of the existing disclosure systems on a European level should make the systems more reliable and efficient. Disclosure authorities could follow the same timetable in terms of deadlines for preparing their national disclosure figures.

For instance, in Luxembourg, suppliers submit their disclosure figures of year X by May 15<sup>th</sup> of year X+1, which are assessed by the regulator, acting as national competent authority for disclosure, and confirmed by July 1<sup>st</sup> of year X+1. At the latest, by September 1<sup>st</sup> of year X+1 consumers need to be informed about such disclosure figures by their suppliers.

At the moment, every MS has its own timetable for the information of disclosure figures to consumers. A harmonisation across EU countries on disclosure timetable would further improve the awareness of consumers about the disclosure process for guaranteeing the origin of energy consumed.

## 5.5 Metric 13: Availability of explicit demand response offers

The purpose of this metric is to assess if there are explicit demand response<sup>45</sup> opportunities available and of which consumers can take advantage, thereby, allowing customers to free up or shift electricity usage and trade it in a market place.

Six NRAs<sup>46</sup> have used this metric. Few NRAs can report on products that provide explicit demand side flexibility in the market. Furthermore, in most of these MS, the NRA is not able to quantify the capacity/volume available using explicit demand response contracts on an annual basis.

The Danish NRA reports that explicit demand response opportunities are currently only available for industrial and other large consumers. However, independent aggregators (i.e. demand response service providers that contract directly with customers in order to pool flexibility and convert it into electricity market services to be used by the TSO, DSO and/or BRP) are currently not recognised as individual market participants in the Danish electricity market, which constitutes a significant market barrier. The data hub manager, Energinet, is in the process of preparing amendments to the data hub regulations for independent aggregators to become individual market participants.

The Spanish NRA states that, in the natural gas sector, explicit demand response opportunities were only available for industries in congested pipelines (in 2017, only applicable in two municipalities). The capacity/volume made available using explicit demand response contracts on an annual basis was 5 GWh/day (< 0.5% daily gas demand) during a maximum of 10 days per year. Whereas in the electricity sector, only large business consumers have explicit demand response opportunities.

<sup>45</sup> In explicit demand response, the "freed-up/shifted" electricity is traded in electricity markets or used for other purposes. Consumers receive specific remuneration to change their consumption upon request (using more or using less), e.g. triggered by activation of balancing energy, differences in electricity prices or a constraint on the network. Given that explicit demand response is sold as a product on a market, it requires a specific control (ex-ante and/or ex-post).

<sup>46</sup> Denmark, Great Britain, Luxembourg, Portugal, Spain, and Sweden.

Three NRAs<sup>47</sup> have done a gap analysis on this metric. One of them is the GB NRA. In Great Britain, the availability of explicit demand response offers is limited to customers that are half-hourly settled and it is not yet available to households. The target here is to make explicit demand response offers available also to households and to quantify the capacity/volume that is made available through the use of explicit demand response contracts on an annual basis.

---

<sup>47</sup> Great Britain, Luxembourg, and Sweden.



## 6 Key property V: High level of awareness and trust

In well-functioning retail markets, there is a high level of awareness so that consumers engage and are able to increasingly trust the market.

*Table 5 – Metrics used in the self-assessment of key-property V “High Level of awareness and trust”*

Metric n° and name		Number of NRAs using	Number of NRAs reporting data	Number of NRAs completing gap-analysis
14	Percentage of consumers knowing they can switch supplier	14	10	3
15	Percentage of consumers who know that DSOs are responsible for the continuity of supply and, where applicable, of metering	7	3	1
16	Percentage of consumers trusting the energy market	11	7	3

### Metric 14: Percentage of consumers knowing they can switch supplier

The purpose of this metric is to measure the awareness of consumers about the key consumer right to freely switch supplier and how this awareness varies over time. Widespread awareness of this right facilitates market participation, which is key to well-functioning retail energy markets.

However, not every NRA is capable, or even allowed, to carry out consumer surveys. Still, 14 NRAs did use this metric and their questions used to quantify it varied. In the Netherlands, consumers were asked to choose from a number of options regarding the following statement: “The choice of a supplier is determined by the place where I live and every household can choose its supplier.” The outcome was that 2% thinks that you cannot choose a supplier freely. 27% thinks it depends on the region where you live regarding which supplier can be chosen. 63% knows that one can choose the supplier of preference and 8% indicated that they do not know this. In other cases, NRAs derive the answer from other questions, such as whether the consumer has been active in terms of switching supplier. Therefore the answers are not comparable.

Three NRAs<sup>48</sup> have stated they have done a gap analysis on this metric and the example of Ireland is included as a pilot below.

<sup>48</sup> Great Britain, Ireland, and Sweden.

### 6.1.1 Pilot: Ireland – Metric 14

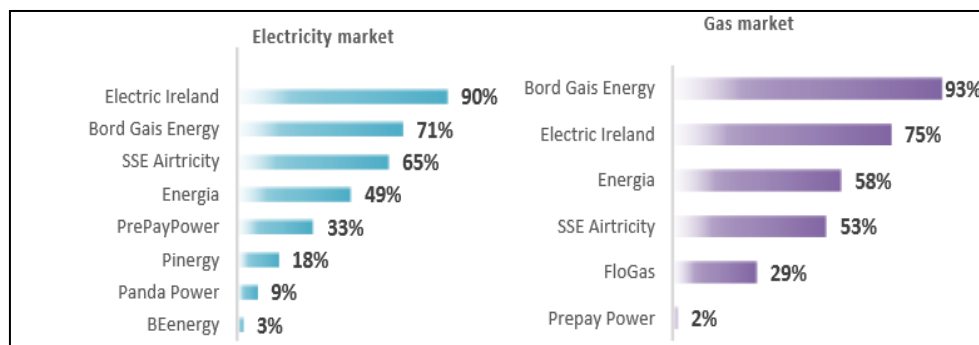
#### Quantification & results

The NRA carries out an annual consumer [survey](#) for residential and SME electricity and gas customers looking at: external switching rates; understanding of energy market offers; triggers and barriers for switching; experience of switching process; switching considerations and future intentions; factors that could increase switching; and impact of different external variables on switching (e.g. accommodation, education, socioeconomic status).

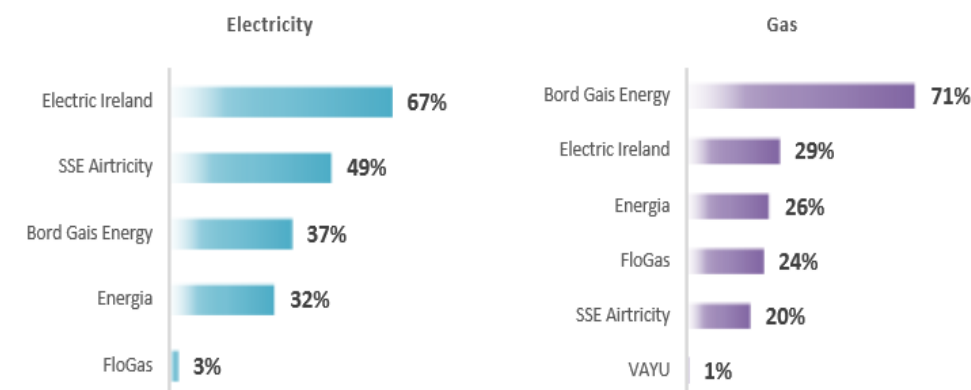
The largest effect in customers switching supplier is that of being approached by a supplier face to face, compared to the effects of being contacted by telephone or email. This would seem to tell us that most customers are not proactively aware of the potential benefits of switching suppliers. Instead, they appear to be reactive to being approached by suppliers. It would appear that this is due to the high propensity of customers to view the amount they spend on these resources as fixed. Consequently, they are unlikely to spend a lot of their time informing themselves about the possible effects of switching suppliers. It is only when customers are challenged to reflect on their consumption, and suppliers make the process convenient, that customers are likely to consider switching.

Awareness of suppliers: the incumbent supplier in the electricity market has the highest spontaneous awareness at 90% amongst electricity suppliers, followed by the second-largest supplier at 71%. Conversely, amongst gas suppliers, the gas incumbent is most prominent at 93%, with awareness of the next-largest supplier at 75%.

Domestic customer results: spontaneous awareness of electricity and gas suppliers



SME customer results: spontaneous awareness of electricity and gas suppliers in SME market



### Gap-analysis

The NRA monitors the result of the consumer survey each year, which is used to inform the development of new policies to ensure that switching levels do not drop. At the end of 2017, annual external switching levels were around 14% in electricity and 18% in gas. At the end of 2018, annual external switching levels were around 14% in electricity and 20% in gas. Switching levels are monitored by the NRA on a monthly basis. This covers the number of domestic and business customers who switch supplier within a month, excluding new registrations (monitored annually) and renegotiations (monitored quarterly).

The NRA wants to reduce the percentage of inactive consumers. To address this, the NRA introduced a requirement for suppliers to provide an annual prompt to customers who have not switched within the last three years. The annual prompt is designed to motivate customers to engage with the energy markets and to make customers aware that they could avail themselves of more competitive energy plans than their current one. The decision on this is outlined in the Review of the Suppliers Handbook Decision Paper. The NRA is monitoring switching rates to see if they increase as a result of this measure.

Additionally, the NRA has taken steps to promote switching. In October 2018, the NRA launched its “#SwitchOn” consumer campaign. The overarching message of the campaign is “With the support of the CRU, you can be switched on to your savings, your rights and to energy safety”. In terms of switching supplier, the objective of the campaign is to communicate directly to consumers, to empower them and drive awareness of the simple steps they can take to switch supplier and the benefits of doing so.

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

This metric is used to measure the understanding of retail market functioning principles of consumers, which helps NRAs to raise consumers’ awareness, thereby increasing their trust in the market.

Seven NRAs have used this metric and the example of Sweden, one of the Nordic countries, is included as a pilot below. It is important to point out that given national circumstances differ between MS such that the DSO is not always responsible for metering, making comparison of outcomes difficult.

### 6.2.1 Pilot: Sweden – Metric 15

#### Quantification & Results

The basis for metric 15 is a customer survey made by The Organisation for the Nordic Energy Regulators (NordREG<sup>49</sup>). It was conducted during 2018, with a total of 6,000 respondents in the Nordic countries with around 1,500 respondents per country.

The questions asked, among many, were those specified in the CEER document “2017 Handbook for National Energy Regulators – How to assess retail market functioning”.

1. If you switch to another supplier, must you change your meter?  
Yes= 6%, No= 75%, No opinion 19%

<sup>49</sup> <https://www.nordicenergyregulators.org/>

2. If you switch to another supplier, do you believe that you will experience more power cuts?  
Yes= 11%, No= 66%, No opinion 22%
3. If you switch to another supplier, do you believe that your new supplier will be in charge of meter reading?  
Yes= 51%, No= 18%, No opinion 31%
4. Can you quote the name of the company that operates (power lines) to your home?  
Yes= 68%, No= 22%, No opinion 10%

### Gap-analysis

In Q1 of 2022, a datahub and a supplier-centric market model will be implemented in Sweden. This will change the way consumers, suppliers and DSOs interact with each other.

With a single point of contact, customers can contact the supplier to get necessary information regarding the supply of electricity and network tariffs. This will, it is hoped, reduce the confusion that customers experience trying to understand the difference between supplier and DSO.

Customers can also turn to the supplier with questions regarding metering. Here the supplier will inform the customer that the DSO is responsible but will contact the DSO and help the customer. The only exception is power-cuts, where the customer still has to contact the DSO due to the contract between DSO and customer.

After the implementation of a supplier-centric market model, the hope is that the results from the survey will improve and that the level of knowledge among consumers about who does what in the electricity market will increase.

An introduction of a supplier-centric model is also in line with ambitions within the NordREG cooperation. Besides the reasons mentioned above, a supplier-centric model also aims to facilitate electricity suppliers to be active in several countries and thus, promote competition overall.

## 6.3 Metric 16: Percentage of consumers trusting the energy market

This metric is used to measure the consumer's trust in energy markets, given that a higher level of trust in the market allows for more active participation. In addition to the outcome of this metric, other background information is needed to fully understand individual situations.

11 NRAs have used this metric to assess consumers' trust. The questions vary across MS making, the outcomes incomparable. For instance, in France, the French ombudsman dedicated to energy (*le Médiateur de l'Energie*, MNE) asked consumers in a survey whether the opening up of gas and electricity markets to competition was a good or a bad thing. A majority (64%) of the consumers answered that it was a good thing.

Three NRAs<sup>50</sup> did a gap analysis with the example from Great Britain (GB) included as the pilot below.<sup>51</sup>

<sup>50</sup> Great Britain, Ireland and Sweden.

<sup>51</sup> [https://www.ofgem.gov.uk/system/files/docs/2018/10/consumer\\_engagement\\_survey\\_2018\\_report\\_0.pdf](https://www.ofgem.gov.uk/system/files/docs/2018/10/consumer_engagement_survey_2018_report_0.pdf)

### 6.3.1 Pilot: Great Britain – Metric 16

#### Quantification & Results

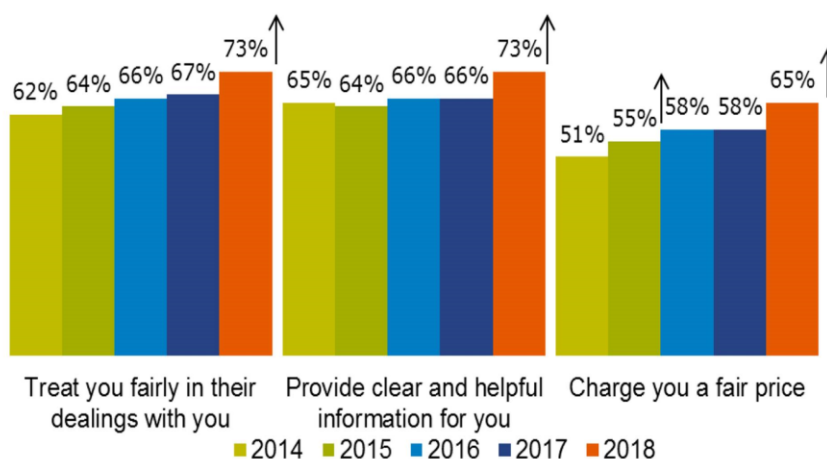
GB NRA Ofgem has monitored energy consumers' trust from the early days of opening the market to competition through annual consumer surveys.

Since 2014, Ofgem has been carrying out an annual domestic consumer engagement survey, which has maintained the same consumer segmentation approach over time. The survey involves face-to-face interviews with 6,000 domestic customers in GB.

As part of this regular annual survey, the GB NRA measures both consumers' trust with their supplier and consumers' confidence in their ability to engage in the market. They currently do not have a metric specifically labelled 'trust with the energy market'.

Trust is typically a complex metric to measure. As shown in Figure 2, in their approach they break this metric at the supplier level into three dimensions: supplier's overall fair treatment of the customer, provision of clear and helpful information and charging a fair price to the customer.

#### Trust in consumers' energy supplier



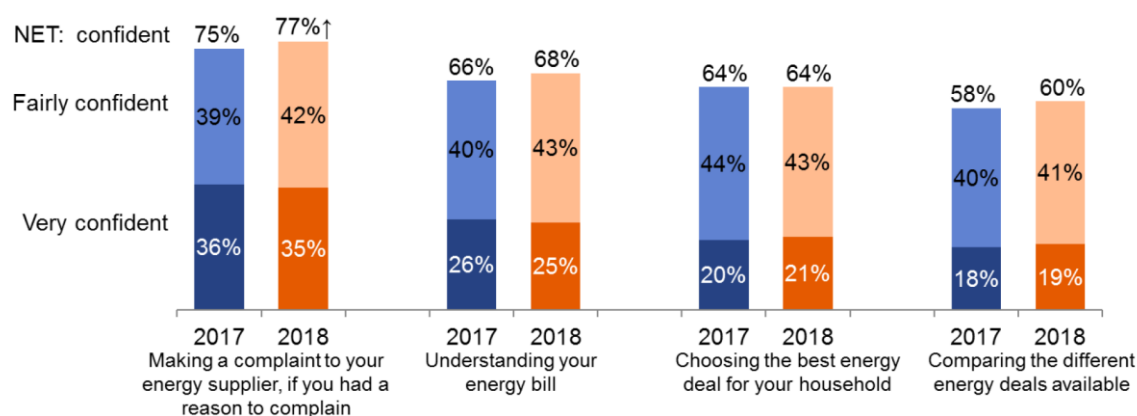
Source: [Ofgem, Consumer engagement survey 2018](#)

Levels of trust in their supplier to treat them fairly and to provide clear and helpful information also rose significantly in 2018. Nearly three in four consumers say they trust their energy provider to treat them fairly, to provide clear and helpful information (both 73%): this continues an upward trend in each of these measures over time.

The biggest increase in levels of trust relates to consumer trust in their supplier to charge them a fair price, with the proportion saying that they trust their supplier increasing from 51% in 2014 to 58% in 2016 and 2017, before rising substantially again to 65% in 2018.

In addition, over the last two years, Ofgem has also started monitoring customer confidence in their ability to engage in the market, which shines some light on other areas of customer experience with the energy market, such as making complaints, understanding the bill, comparing and choosing among different energy deals.

### Confidence in consumer actions



Source: [Ofgem, Consumer engagement survey 2018](#)

### Gap-analysis

In a well-functioning competitive market, one would expect suppliers to compete by offering high service quality and not just put pressure on prices. In a smarter digital market, one would also expect greater opportunities for companies to distinguish themselves and their brand in their customer service. As a result, consumers should become increasingly confident engaging in the market and choosing suppliers that they trust.

Although a small increase in consumers trusting their energy supplier to treat them fairly in their dealings with the supplier has been observed, as well as a small increase in providing consumers clear and helpful information and charging a fair price, levels of confidence and trust in the retail energy markets remain lower than in many other comparable industries (except insurance)<sup>52</sup>.

There is a special sensitivity to how and when questions around trust are asked, given that answers may be greatly affected by that. Hence, whereas these results may be useful to understand a trend within a country, it may be more difficult to use them for cross-country comparisons.

<sup>52</sup> Ofcom's Comparing Service Quality report 2018, and the Institute of Customer Service report 2018, each showed both gas and electricity overall score lower than other industries for service.

## 7 Key property VI: The availability of empowerment tools

The aim of consumer empowerment is to enable consumers to effectively engage with the market. Three metrics are used to measure the availability of empowerment tools.

*Table 6 – Metrics used in the self-assessment of key-property VI “The availability of empowerment tools”*

Metric n° and name		Number of NRAs using	Number of NRAs reporting data	Number of NRAs completing gap-analysis
17	Percentage of consumers having access to at least one independent and verified PCT	17	13	5
18	Percentage of consumers having access to online historical consumption information	9	5	6
19	Percentage of consumers having access to a standardised supplier switching process (and its duration)	15	11	6

### 7.1 Metric 17: Percentage of consumers having access to at least one independent and verified PCT

This metric is used to measure whether consumers can identify the best offer in the market, as the easier consumers can correctly estimate available savings, the more informed their decisions are to either switch to a better offer or stay with their current deal. An independent and verified price comparison tool (PCT) is a powerful empowerment tool to make comparisons easier for consumers<sup>53</sup>.

17 NRAs have used this metric as a part of their self-assessment. The reported data ranges from 0% to 100%, depending on whether a PCT exists at all, whether consumers have access to the internet and whether the PCT is state-owned or privately owned.

Five NRAs<sup>54</sup> also did a gap analysis, e.g. Luxembourg, where observations included the national PCT not having energy products for small businesses. By including these products they assume that the share of consumers accessing the national PCT will increase.

<sup>53</sup> Comparison tools for energy must meet a number of minimum requirements as listed in article 4 of the Electricity Directive of the Clean Energy Package.

<sup>54</sup> Denmark, Great Britain, Ireland, Luxembourg and Sweden.



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

This metric is used to measure whether consumers can access their consumption data through online tools. Having such access to accurate historical consumption data enables consumers to compare alternative offers and make informed choices. Online access in particular seems the most convenient way to access consumption data when required, especially in cases of large amounts of data, e.g. hourly billing<sup>55</sup>.

Nine NRAs use this metric in their assessment. The level of detail of the data is split into annual (most prevalent), monthly, daily and hourly data. The Finnish NRA, for example, reported that all consumers have the availability of annual, monthly, daily and hourly data.

Six NRAs<sup>56</sup> did a gap analysis and an example from the Danish NRA is included as the pilot below.

### 7.2.1 Pilot: Denmark – Metric 18

Quantification & results
Household customers in Denmark can access their data in the DataHub, including historic consumption data, free of charge. They can access their data by using either the NemID <sup>57</sup> log-in function on the supplier's website or on the public website Eloverblik.dk, operated by Energinet.  By the end of 2020, all household customers in Denmark will have access to their online historical consumption data on an hourly basis.
Gap-analysis
DSOs are by law obligated to install smart meters in the homes etc. of all customers in Denmark prior to the end of 2020.  The objective of 100% of household customers having access to online historical consumption data on an hourly basis coincides with the legal obligation of DSOs to install smart meters. Therefore, all household customers will have access to historical hourly consumption data at least by the end of 2020, if not sooner.  <b>Gap analysis methodology:</b>  The gap analysis methodology applied by DUR in terms of this metric (and the other metrics) is essentially determined/limited by the scope of DUR's competence in relation to the Danish retail market.  As the Danish NRA, DUR is not the competent authority to determine national retail market objectives and how to reach them.  DUR's role in terms of the national retail market is market monitoring and operating the online electricity PCT Elpris.dk, i.e. not policy development.  Therefore, DUR's gap analysis is based on legislative acts prepared by the Danish Ministry of Energy, Utilities and Climate/the Danish Energy Agency (DEA) and approved by the Danish Parliament.

<sup>55</sup> According to article 20 (a) of the Electricity Directive, validated historical consumption data must be made easily and securely available and visualised to final customers on request and at no additional cost.

<sup>56</sup> Croatia, Denmark, Finland, Great Britain, Luxembourg and Sweden.

<sup>57</sup> NemID is the common secure log-in solution in Denmark.

### 7.3 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 how/if to improve the existing switching process.

15 NRAs have used this metric in the assessment. Almost every NRA has concluded that all consumers have access to a standardised supplier switching process. The duration of the switching process is not always measured and varies, from 14 days to 21 days, also depending on the type of consumer.

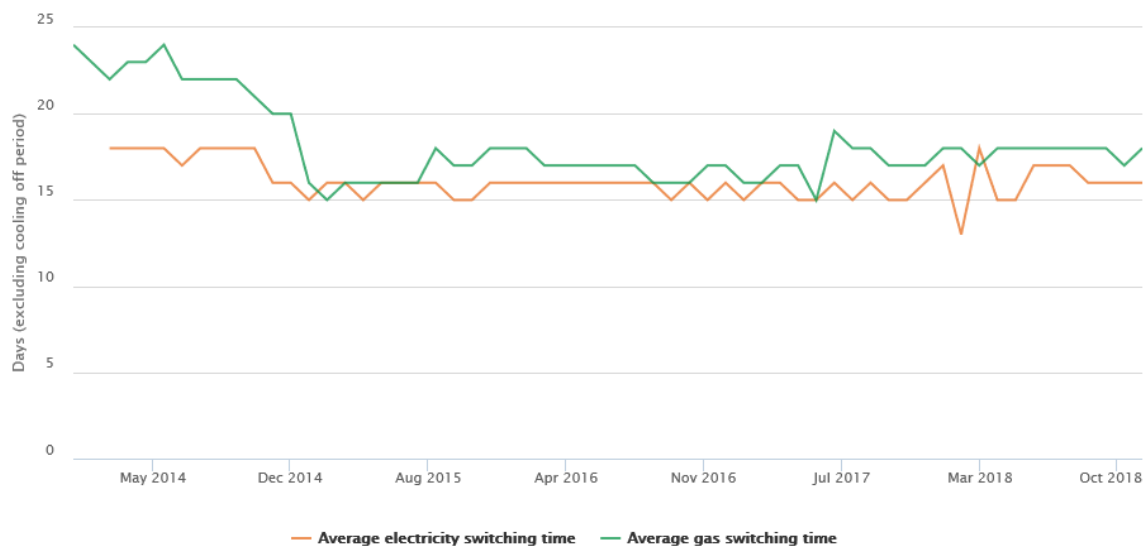
Six NRAs<sup>58</sup> have performed a gap analysis and the example from the GB NRA is included as the pilot below.

#### 7.3.1 Pilot: Great Britain – Metric 19

Quantification & Results
<p>All domestic and business consumers in GB have access to a standardised supplier switching process, for both gas and electricity.</p> <p>The GB NRA's regular monitoring of the switching duration measures the time between a supplier's switching request and the transfer taking place. This data is sourced from network operators at the supplier and industry level. It does not measure the full switching time from when a customer enters into a contract, but rather the time from when the switching request is submitted by the supplier to the system. More specifically, it does not incorporate any time in advance a supplier may take to process the contract or the cooling-off period. In the future, the GB regulator plans to monitor as well the time to complete a switch from when the supplier agrees the sale with the consumer, using information provided by suppliers.</p> <p>In addition to the length of the switching process, Ofgem also considers important to monitor the process' reliability, through metrics such as erroneous transfers, objections sent by the old suppliers to block a switch and delays in sending the final bills after a transfer has been completed.</p> <p>Reliability remains an area of primary concern, due to a significant number of erroneous, delayed and unsuccessful switches. The proportion of erroneous transfers, where consumers are switched to suppliers against their wishes, has stayed broadly stable since 2014, fluctuating around 1%, despite the introduction in that year of new licence obligations to prevent erroneous transfers. The wrong meter point being switched has typically been the main cause, explaining around 90% of cases. Inaccurate customer address data held across the industry remains the single largest reason for erroneous transfers.</p> <p>The figure below shows that average switching times (in calendar days) for domestic gas and electricity consumers remained almost unchanged over the past three years and has fluctuated around 15-16 days for a domestic electricity switch to be completed and 15-19 days for a domestic gas switch.</p> <p>The figure below shows that average switching times (in calendar days) for domestic gas and electricity consumers remained almost unchanged over the past three years and has fluctuated around 15-16 days for a domestic electricity switch to be completed and 15-19 days for a domestic gas switch.</p>

<sup>58</sup> Denmark, Finland, Great Britain, Luxembourg and Sweden.

### Average switching time for domestic consumers in GB



Source: Ofgem analysis of electricity distribution operators (DNOs) and Xoserve (gas) data. Information correct as of: April 2019

The NRA also uses surveys to monitor consumers' perceptions and experience regarding the switching process. A 2018 survey<sup>59</sup> found that the possibility of something going wrong with the switching process is a concern for 12% of consumers who had not switched supplier and for 7% of those who had switched supplier in the previous 12 months, unchanged compared to 2017. New survey questions in 2018 suggest that over four-fifths of switchers say they found the process easy. However, switchers were less likely to feel in control over their switching date, and a fifth disagreed with the proposition that they had sufficient control.

### Gap-analysis

The national objective in relation with the switching process is described in detail in the [switching programme](#). For a number of years, Ofgem has been working on this complex programme that will make the switching process faster and more reliable. This is expected to reform the end-to-end arrangements for the switching process, including a single centralised platform for both gas and electricity switches and improvements to the quality of underlying industry data. The programme has entered its implementation phase in April 2019 and is expected to go live in Summer 2021.

Until the new arrangements enter into effect, supply licences continue to require licensees to take all reasonable steps to complete a transfer 21 calendar days after the end of the 14-day cooling-off period (or after an earlier date during the cooling-off period if agreed with the customer). In most cases, the switch is completed quicker but in some cases, it takes longer.

Even when the switching process works well, the switching process is still slow, especially when compared to other sectors and other countries. For instance, in banking, switching is possible within seven working days and in mobile telephony switching is required to take one working day from mid-2019. In addition, the actual switching time in some other European countries is already shorter and ranges from one day in the Netherlands, three, four and five days in Portugal, Poland and Ireland respectively (in electricity) to ten days in the Czech Republic and Finland<sup>60</sup>.

<sup>59</sup> See: [https://www.ofgem.gov.uk/system/files/docs/2018/10/consumer\\_engagement\\_survey\\_2018\\_report\\_0.pdf](https://www.ofgem.gov.uk/system/files/docs/2018/10/consumer_engagement_survey_2018_report_0.pdf)

<sup>60</sup> See: [https://www.acer.europa.eu/Official\\_documents/Acts\\_of\\_the\\_Agency/Publication/MMR%202017%20-%20CONSUMER%20PROTECTION.pdf](https://www.acer.europa.eu/Official_documents/Acts_of_the_Agency/Publication/MMR%202017%20-%20CONSUMER%20PROTECTION.pdf)

Reliability remains an area of primary concern, due to a significant number of erroneous, delayed and unsuccessful switches, as indicated above. To address the above, the GB regulator introduced new Guaranteed Standards of Performance for Switching on 1 May 2019 to give an incentive to suppliers to improve performance and directly compensate consumers (i.e. if a supplier does not meet the prescribed standard it has to make a payment to the affected consumer). The new Guaranteed Standards will apply in the following cases:

- When a customer reports a potential erroneous switch, these Guaranteed Standards will mean that customers will receive a standard payment of £30 from each supplier if they are unable to agree within 20 working days whether an erroneous switch has occurred;
- The customer will receive £30 from the contacted supplier if they fail to return the 20 Working Day Letter as required by the Erroneous Transfer Customer Charter within 20 working days;
- An erroneously switched customer will receive £30 from his/her old supplier if they fail to re-register the customer within 21 working days; and

Where a switch has been completed, customers will receive a payment of £30 if suppliers fail to return a credit balance within 10 working days of issue of a final bill.

## 8 Key property VII: Sufficient consumer engagement

A well-functioning market is one in which an adequate number of consumers engage with the market. Three metrics are used to measure sufficient consumer engagement.

*Table 7 – Metrics used in the self-assessment of key-property VII “Sufficient consumer engagement”*

Metric n° and name		Number of NRAs using	Number of NRAs reporting data	Number of NRAs Completing gap-analysis
20	Supplier switching rate	22	17	7
21	Percentage of inactive consumers	17	14	3
22	Percentage of prosumers	14	10	3

### 8.1 Metric 20: Supplier switching rate

The supplier switching rate, which is directly linked with the level of market competition (given that the switching rate affects the market share of competing companies and thus puts competitive pressure on energy suppliers) is used to measure the active engagement of consumers in the energy retail market. In addition to this, renegotiated contracts could also be measured as those consumers who actively decide to renegotiate their contracts with their current supplier also put competitive pressure on their energy supplier.

Most NRAs (22) use this metric, with the exception of MSs where switching is not an option. Switches are usually measured within different relevant markets (electricity, gas, household consumers, SMEs) and there are big differences within these segments and countries. Within the segment of household consumers switches for electricity range from 0.5% to 19% annually.

Six NRAs have also measured renegotiations of contracts, either through data from suppliers, or indirectly through consumer surveys. For households, the results range from 2% to 27% for renegotiated electricity contracts.

Seven NRAs<sup>61</sup> have done a gap analysis and the example from the Finnish NRA is included as a pilot below.

<sup>61</sup> Finland, Great Britain, Ireland, Luxembourg, the Netherlands, Romania and Sweden.

### 8.1.1 Pilot: Finland – Metric 20

#### Quantification & Results

The current supplier switching rate in Finland is 11.2% (2017 data) calculated from the information that the Finnish Energy Authority (Ev) receives from the distribution network operators. The information is to be delivered to Ev May of the current year at the latest and concerns the year before. DSOs have to deliver information of how many consumption points have had a change of a supplier during the year. Therefore, it does not matter how many switches of a supplier there has been in the consumption point during the year. Also, moving does not automatically constitute a supplier switch if the new resident has the same supplier as the previous one. Mere change in a contract/product is not recorded if the supplier is not switched. As an example, DSOs must deliver in May 2019 at the latest the number of consumption points which have had at least one switch of a supplier in year 2018 in that DSO's operation area. The maximum supplier switching rate in Finland is therefore 100%, which would mean that every consumption point has had a supplier switch during the year.

#### Gap-analysis

Ev's current national short-term goal is to increase the supplier switching rate to over 12 %. Therefore, currently the goal is to increase the supplier switching rate over 0.81 of a percentage point. The long-term goal is yet to be decided and finding an exact optimal switching rate could even be found to be impossible. For now, the formal mid-term goal is, however, set to 14%, which Ev strives to reach in the near-future. The goals are based on an idea of a steady and modest increase. Ev believes that the markets are already fairly well-functioning, so any major leaps in switching are not expected unless something unforeseeable happens. However, there is still room for an increased competition.

Affecting the supplier switching rate is not a simple task, as it is in the end about impacting customers' behaviour. This is, however, possible by affecting the environment of the customers in the electricity retail market. Ev has put focus on aspects it believes could have the greatest impact on customers' opinions about switching and activity in general.

Ev finds that one of the critical components for customer activity is easiness of comparing contracts. Too laborious comparison process will discourage customers who might otherwise be a 'potential switcher', but who experience the process of finding an alternative contract too complicated. Therefore, Ev's price comparison tool [sahkonhinta.fi](http://www.sahkonhinta.fi) ([www.sahkonhinta.fi](http://www.sahkonhinta.fi)) is a key component in maintaining the current switching rate and increasing it to an even more favourable level for the markets. Ev is, in the near-future, launching a new version of the tool, which will add more functions to comparison and modernise the graphical user interface. The goal is to make it more powerful for more detailed comparison serving different needs and to increase accessibility. Ev assumes every step closer to these goals will have a positive impact on customer activity and, therefore, to supplier switching rate.

Furthermore, well-functioning monitoring is paramount for keeping the customer activity high. Ev believes there to be a causation between customers' trust in markets and customers' activity. If customers have bad experiences with a supplier or in a switching process, it lowers the trust in the markets and therefore, possibly leads to apathy or at least, over caution, forming an unnecessary hindrance to switching. As the NRA, Ev can make sure that the suppliers follow the relevant regulation and that customers will enjoy at least the minimum standard of rights and service. This will to some extent, at least, increase trust in the markets. Not only does it guarantee a good level of customer protection, but legality is a value some customers appreciate in itself.

However, as the NRA, Ev is not the only authority monitoring the retail markets. Cooperation with other relevant and competent authorities is one notable part of effective monitoring. Ev holds yearly meetings with the consumer authority and, additionally, communicates with them on current issues throughout the year. Both authorities also share their monitoring decisions maintaining updated information on their activities in the sector.

Lastly, easily accessible information on customers' rights and electricity markets in general empowers customers and gives them more confidence to be active in the markets. Ev has updated its website ([www.energiavirasto.fi](http://www.energiavirasto.fi)) in order to make it more accessible and easier for customers – and other parties as well e.g. consumer advisors – to find the information that they need. This has been done by making the navigation more intuitive for customers and updating the information on the pages to be more relevant. Ev continues to monitor how the webpage is used and will add information and modify the pages accordingly.

The actual switching should also be easy for the customer to prevent restricting potential switching. This process is highly simple in Finland as the new supplier does all the required work on behalf of the customer. The most important matter left is to communicate about this simplicity properly to customers. However, even if the process seems simple for the customers, there are some administrative costs for suppliers for carrying out the switch. Ev believes decreasing these back-office tasks could lower suppliers' costs of operating in the market and positively affect competition and the supplier switching rate. One major change is the upcoming Datahub which will make the switching process even easier for suppliers. Datahub is scheduled to go live in spring 2021.

Ultimately, it is difficult to say how much these endeavours by the NRA will impact the switching rate but Ev has confidence that these actions will have a measurable positive impact given sufficient time for progress. With forthcoming other changes, for example, on regulation and market dynamics (aggregators, local energy communities, national datahub) having their own impact as well, establishing causation will surely be a challenging task. However, looking into certain factors will most likely be beneficial e.g. changes in usage of PCT, changes in the number of customer complaints and level of general compliance in the market. The details of monitoring the effects on the switching rate in particular are yet to be decided.

## 8.2 Metric 21: Percentage of inactive consumers

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.

17 NRAs use this metric in their self-assessment. Based on a survey, NRAs measure the percentage of consumers that have never switched supplier, and have never actively searched for a better deal. For example, the Hungarian regulator asked residential consumers that are aware of the opportunity to switch supplier about their intentions to switch supplier. 1% stated that they would probably or surely switch, 8% that they will probably not, and 42% that they will definitely stay with their current supplier. The questions asked by regulators differ between the various countries and therefore, the answers are not comparable between countries.

Three NRAs<sup>62</sup> did a gap analysis and the example from the Irish NRA is included as a pilot below.

---

<sup>62</sup> Ireland, Luxembourg and Sweden.



## 8.2.1 Pilot: Ireland – Metric 21

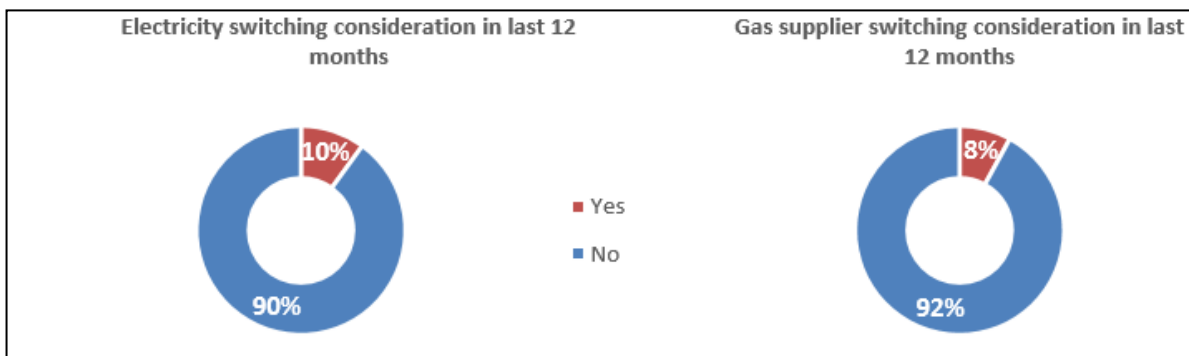
### Quantification & Results

The NRA carries out an annual consumer [survey](#) for residential and SME electricity and gas customers. Among other things, the survey provides data on those who have switched/never switched/switched within last 12 months/would be likely to switch within the next 12 months.

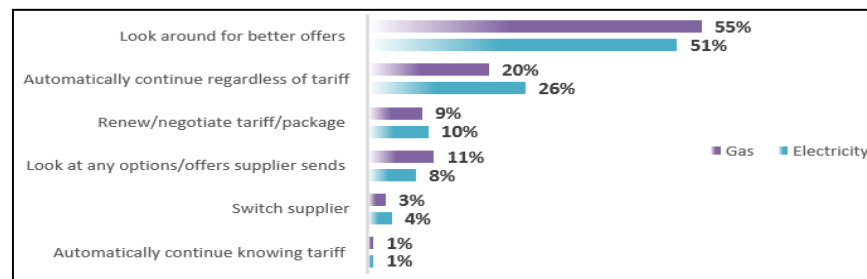
The 2017 survey found that of those who participated:

- 89% of residential electricity customers, 88% of residential gas customers, 77% of electricity SME customers and 83% of gas SME customers have not switched in the last 12 months.
- 36% of residential electricity customers, 38% of residential gas customers, 27% of SME electricity customers and 40% of SME gas customers have never switched.
- 34% of SME electricity customers and 22% of SME gas customers have considered switching in the last 12 months. Of those that have considered switching, only 35% of SME electricity customers and 36% of SME gas customers have proactively contacted suppliers when considering switching. For residential customers, of those who had not switched provider in the previous 12 months, only 10% in electricity and 8% in gas had considered it.

Switching consideration for residential electricity and gas customers:



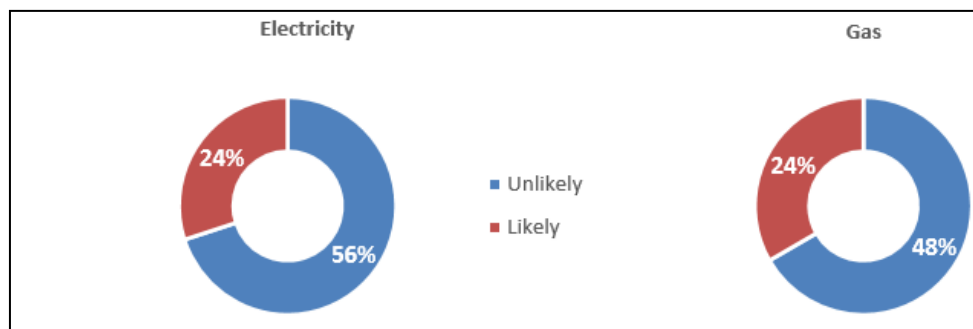
SME electricity and gas customer behaviours at contract end:



Domestic customer results:

Dependent Variable	Description	Electricity/ Gas	Year	Have Not Switched Supplier	Have Switched Supplier	Number of Cases
<b>1: Only cases that have switched supplier since 2011</b>	Have you switched supplier in the last twelve months?	Electricity	2015	65.8 %	34.2 %	345
			2016	71.0 %	29.0 %	422
			2017	82.7 %	17.1 %	645
		Gas	2015	65.4 %	34.6 %	210
			2016	66.0 %	34.0 %	475
			2017	81.1%	18.9 %	620
<b>2: All cases</b>	Have you switched supplier since 2011?	Electricity	2015	65.6 %	34.4 %	1001
			2016	57.9 %	42.1 %	1002
			2017	35.9 %	64.1 %	1007
		Gas	2015	25.1 %	74.9 %	1001
			2016	52.8 %	47.2 %	1005
			2017	37.9 %	62.1 %	999
<b>3: All cases</b>	Have you switched supplier in the last twelve months?	Electricity	2015	88.2 %	11.8 %	1001
			2016	87.8 %	12.2 %	1002
			2017	88.9 %	11.1 %	1007
		Gas	2015	92.7 %	7.3 %	1001
			2016	83.9 %	16.1 %	1005
			2017	88.3 %	11.7 %	999

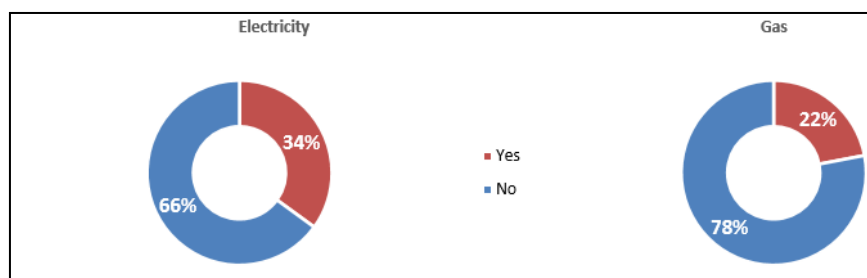
Likelihood to switch electricity and gas suppliers again in the next 12 months:



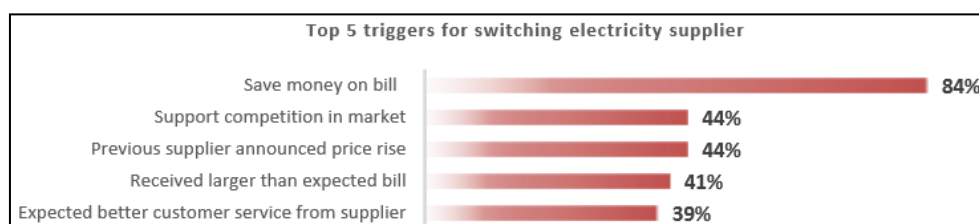
SME customer results:

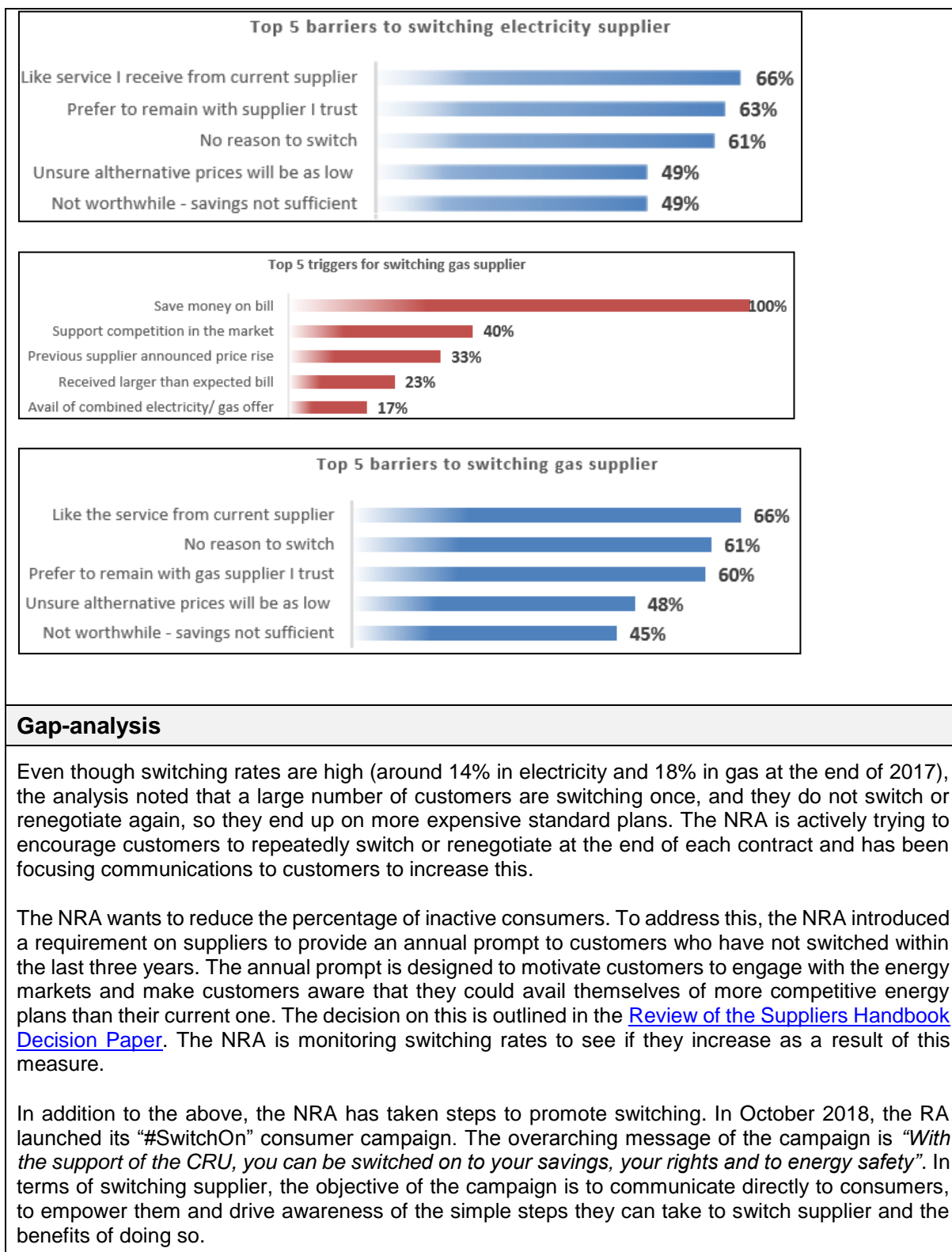
Dependent Variable	Description	Electricity/ Gas	Year	Have Not Switched Supplier	Have Switched Supplier	Number of Cases
1: Only cases that have switched supplier since 2011	Have you switched supplier in the last twelve months?	Electricity	2015	58.6 %	41.4 %	286
			2016	67.4 %	32.6 %	263
			2017	68.7 %	31.3 %	306
		Gas	2015	68.2 %	31.8 %	179
			2016	61.2 %	38.8 %	165
			2017	72.3 %	27.7 %	149
2: All cases	Have you switched supplier since 2011?	Electricity	2015	28.6 %	71.4 %	400
			2016	34.3 %	65.7 %	400
			2017	27.0 %	73.0 %	419
		Gas	2015	28.4 %	71.6 %	250
			2016	34.0 %	66.0 %	250
			2017	40.3 %	59.7 %	250
3: All cases	Have you switched supplier in the last twelve months?	Electricity	2015	70.5 %	29.5 %	400
			2016	78.6 %	21.4 %	400
			2017	77.1 %	22.9 %	419
		Gas	2015	77.2 %	22.8 %	250
			2016	74.4 %	25.6 %	250
			2017	83.4 %	16.6 %	250

SME electricity and gas customer switching consideration in the last 12 months:



The survey further provided analysis of reasons for/against switching and perceptions/experiences around the switching process and triggers/barriers for switching:





### 8.3 Metric 22: Percentage of prosumers

This metric is used to measure the percentage of “prosumers” engaged with the market for self-consumed energy and related services<sup>63</sup>.

Fourteen NRAs use this metric. Again, national circumstances lead to very different results, ranging from just above 0% to 7%. In most cases, data is collected from DSOs, although the Swedish NRA uses data from the Swedish Tax Authority.

Three of these NRAs<sup>64</sup> have done a gap analysis. Overall, it can be concluded that NRAs did not set a specific target. For instance, the Luxembourgish NRA has stated that “a target in terms of the number of self-consumers should not be a goal in itself. However, consumers that wish to self-consume, for example, because they are not eligible for feed-in-tariffs anymore should be able to do so in a cost-efficient way.”

---

<sup>63</sup> In article 15 of the Electricity Directive prosumers are regarded as active customers, which 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.

<sup>64</sup> Great Britain, Luxembourg and Sweden.

## 9 Key property VIII: Appropriate protection

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

*Table 8 – Metrics used in the self-assessment of key-property VIII “Appropriate protection”*

Metric n° and name		Number of NRAs using	Number of NRAs reporting data	Number of NRAs completing gap-analysis
23	Time between notification to pay and disconnection for non-payment	13	9	3
24	Percentage of disconnections due to non-payment	19	15	6
25	Percentage of suppliers using min standards for key info in advertising and bills	14	10	2

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

This metric is used to assess the level of protection against disconnections due to non-payment, in conjunction with metric 24 on 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 bills<sup>65</sup>. However, if those consumers continue to fail to pay their bills, suppliers and DSOs can disconnect them. Most MS have installed a procedure for disconnections, which foresees a certain period between non-payment and disconnection, to settle due amounts. That is why this metric should be assessed in conjunction with the other metric on the percentage of disconnections due to non-payment.

19 NRAs measure the share of disconnections due to non-payment, while 13 NRAs also measure the time between notification to pay and the actual disconnection.

To illustrate the kinds of issues taken into account with this metric, in Portugal, the share of disconnections in one year is 5.5% and 75% of those are reconnected within at most 12 hours after the situation has been resolved. In Hungary, the regulator concluded that out of all disconnections, 84% take place because of non-payment.

<sup>65</sup> 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.

Six NRAs<sup>66</sup> have also done a gap-analysis on the percentage of disconnections, out of which three NRAs<sup>67</sup> have done a gap-analysis on the time between the notification to pay and the disconnection as well.

### 9.1.1 Pilot: Slovenia – Metric 24

#### Quantification & Results

The following process and method for quantification of this metric is used for electricity:

1. The DSO collects all needed data from distribution utilities and aggregates the data on national level<sup>68</sup>.
2. The DSO is obliged to provide the quantitative data by using a harmonised report template integrated into the market monitoring information system managed by the Energy Agency (the NRA) as follows:
  - a. The number of disconnections due to non-payment per distribution area per month is provided once per year
  - b. The data on total number of customers per distribution area once per year
3. The Energy Agency determines
  - a. the total number of disconnected households due to non-payment during a given year;
  - b. the share of disconnections by dividing the number of disconnections by the total amount of household metering points during the same year;
  - c. The gap between the current situation and the national objective.
4. The Energy Agency may decide to gather additional information in order to analyse the reasons for a disconnection (e.g. if the metric value exceeds the threshold/national objective).
5. The Energy Agency decides in regard to needed measures to be taken.
6. The metrics are included into selected internal and public reports (e.g. Annual Report on the energy sector in Slovenia<sup>69</sup>).

Note: prepayment meters are not used in Slovenia.

Out of 846,810 household consumers in Slovenia, 6014 were disconnected due to non-payment (0.71%). In comparison to 2017, the share of disconnections due to non-payment slightly increased. The average monthly number of disconnections from 2016 to 2018 was 495. The share of disconnections due to non-payment significantly decreased in 2015 after nearly exceeding the national threshold (0.98%) in 2014. Since then, the share has remained stable (see figure below).

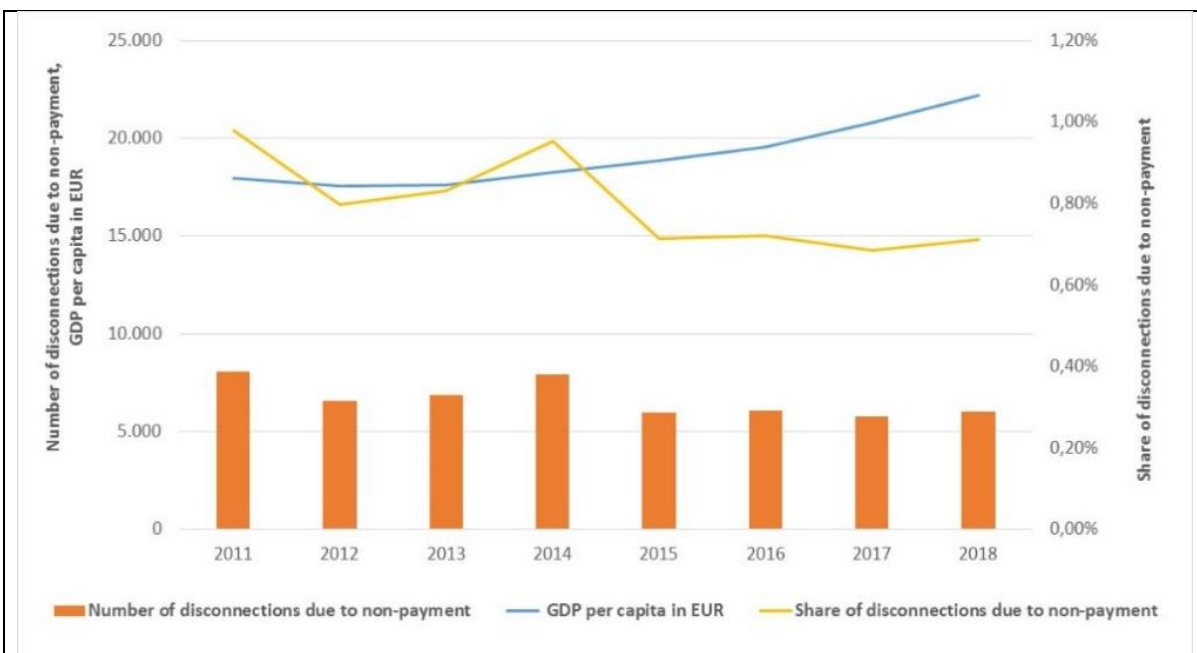
<sup>66</sup> Finland, Great Britain, Ireland, Luxembourg, Romania and Sweden.

<sup>67</sup> Great Britain, Luxembourg and Sweden.

<sup>68</sup> Slovenia has only one electricity DSO.

<sup>69</sup> [https://www.agencija.si/podrocje-energetike-v-sloveniji-v-letu-2013?inheritRedirect=false&redirect=https%3A%2F%2Fwww.agencija.si%2Fporocila-agencije%3Fp\\_id%3D101\\_INSTANCE\\_M2GdU2jRtCxV%26p\\_p\\_lifecycle%3D0%26p\\_p\\_state%3Dnormal%26p\\_p\\_mode%3Dview%26p\\_p\\_col\\_id%3Dcolumn-1%26p\\_p\\_col\\_count%3D1](https://www.agencija.si/podrocje-energetike-v-sloveniji-v-letu-2013?inheritRedirect=false&redirect=https%3A%2F%2Fwww.agencija.si%2Fporocila-agencije%3Fp_id%3D101_INSTANCE_M2GdU2jRtCxV%26p_p_lifecycle%3D0%26p_p_state%3Dnormal%26p_p_mode%3Dview%26p_p_col_id%3Dcolumn-1%26p_p_col_count%3D1)





The yearly number of disconnections of electricity household consumers due to non-payment, GDP per capita in Slovenia, share of disconnection due to non-payment in the period 2011–2018

One of the possible reasons for the lower disconnection rate could be the growth of GDP per capita in Slovenia (26% increase of GDP per capita since 2013). In March 2019, the Energy Agency gathered additional information from the DSO regarding the root cause for disconnections due to non-payment. The provided information does not indicate that disconnections are linked to a difficult social situation of these household customers, since none of the disconnected customers had applied for emergency supply even though they are explicitly informed by the DSO about this option (included in the notification on the disconnection). Moreover, the DSO informed these household customers several times before the disconnection due to non-payment, even though it is not obliged to do so. In 2018, on average, 21.2 days passed from the final notification and the actual disconnection.

More likely, the decrease of disconnection rate could be attributed to the adoption of a new Energy Act, which introduced more comprehensive and detailed regulation in the domain of vulnerable consumers and emergency supply (Energy Act, Article 51). The new Energy Act defines a vulnerable consumer as a household consumer who, due to financial circumstances, income other social circumstances and living conditions, when disconnected due to non-payment, are not able to replace electricity with alternative sources of energy for the same or a lower cost.

A definition of vulnerable consumers did not exist in the previous Energy Act nor did the detailed conditions and the price of emergency supply (before year 2014). In accordance with new Energy Act, the Energy Agency also issued a Legal Act on the criteria and rules for providing emergency supply of electricity. Also, the conditions as well as price for emergency supply are the subject of the new network codes in preparation that will be issued by the DSO.

From the available data and from what was mentioned above, it is, therefore, difficult to conclude why the number of disconnections decreased in 2015. A quite stable number of disconnections since 2015 may indicate that the structure of disconnected customers has remained mostly unchanged, so we may be dealing with either a pool of undisciplined customers or with customers living on the edge of poverty or a mix of both.

The Energy Agency is planning to gather additional information in order to perform extended analysis on the root cause for disconnections with results expected in 2021.

### Gap-analysis

The disconnections due to non-payment are appropriately regulated by national law and are in large part in accordance with the CEP. However, the number of disconnections due to non-payment could be reduced by measures covered by the CEP and are listed below.

In order to perform self-assessment and gap analysis, the Energy Agency set the internal objective on national level<sup>70</sup> for this metric in 2018: the share of disconnections should not exceed 1%. The chosen objective was a result of long-term observation of the situation in Slovenia, considering the impact of new Energy Act. Additionally the ad-hoc requests for information were included into the agency's retail market monitoring methodology aimed to provide better insight on the reasons for disconnections as needed.

As depicted in the figure above, the share of disconnections has been in line with national objective, never exceeding the national threshold since 2011. Introduction of alternative safeguard mechanisms according to CEP (article 10) may positively influence the disconnection rate: such measures would need to be regulated in an energy act or in network codes that are issued by the DSO. Due to the long-term process of amending legislation, the changes can be expected in 2021.

## 9.2 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 in the MS of minimum information standards and secondly, the proportion of suppliers complying with them<sup>71</sup>. This is a complex area and when assessing the situation an NRA must be careful to attain an accurate picture of the situation. In addition to the outcome of this metric, more background information is necessary to fully understand the situation.

14 NRAs have used this metric in their self-assessment. Usually this is done on the basis of 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 leads them to the conclusion that all suppliers adhere to the rules. Because of these different approaches, the outcome of this metric cannot be compared between MS.

Two NRAs<sup>72</sup> have started a gap analysis and the example from Romania is included as a pilot below.

<sup>70</sup> Energy Agency is responsible for market monitoring according to Energy Law and therefore sets the national objectives or thresholds for each metric in order to take appropriate measures.

<sup>71</sup> With regards to billing, Annex I of the Electricity Directive contains minimum requirements for billing and billing information.

<sup>72</sup> Romania and Sweden.

## 9.2.1 Pilot: Romania – Metric 25

### Quantification & results

According to ANRE<sup>73</sup> Order 96/2015 (following the requirements of the Directives 72 and 73/2009) suppliers have the obligation to inform their customers on several issues such as: the rights and obligations of final customers, prices and tariffs, the content of the electricity and gas bills, the main requirements of the supply contract, the procedure for resolving complaints, the procedure for changing the supplier, etc.

In order to inform customers, the suppliers could use their own web page, information published in local or national newspapers, distribute materials to the single points of contacts, send letters or emails to customers, etc.

The order establishes the main issues that should be covered by the activity of informing customers and the main ways to do this activity. The suppliers have the obligation to report yearly to ANRE on the results of their activity regarding customers' information. ANRE publishes on its website a report on this activity in order to inform the public.

The last ANRE published report<sup>74</sup> on suppliers' activity regarding advertising covers the year 2017 and the figures are based on suppliers' reports.

#### Electricity

In 2017, the share of license holders for the activity of electricity supply that produced and submitted to ANRE reports on the activity of notifying final customers was 84%. The share of final customers informed by licensees for the supply of electricity to final consumers in 2017 was 99%. From the reports received, it can be noted that the consumer information activity during 2017 was carried out as follows:

- Consumer notification through national and/or local print media was carried out by 69% of suppliers for which the number of final customers is greater than 1,000 for any one month of the calendar year;
- Consumer notification through informative materials was done by 47% of the license holders for the monitored electricity supply activity;
- Consumer information through the website was provided by 93% of monitored suppliers, with the remaining 7% having a website under construction or incomplete.
- The most common areas where end-user licensees have informed their final customers are: prices and types of applied tariffs (13%), end-user rights and obligations (11%) and the main clauses of the supply contract (10%).
- The most used methods for informing clients were: telephone conversations (23%), publishing information on their own website (21%) and distributing informative materials to customer/information points (20%).
- The most common topics on consumer telephone calls were: information on measurement, invoicing, electricity consumption calculation (48%), requests for information on how to change suppliers (20%); accidental or scheduled interruptions (17%).

Compared to 2016, in 2017 there was an increase in the frequency of consumer inquiries regarding additional energy invoice charges (green certificates), supplier switching procedure, requests for information on disruptions to electricity supply and questions related to obtaining power at a new place of consumption.

<sup>73</sup> ANRE is the Romanian NRA.

<sup>74</sup> For reference, please contact ANRE directly: <https://www.anre.ro/en/contact>.

## Gas

In 2017, the share of natural gas suppliers who produced and submitted to ANRE reports on the activity of informing final customers was 88%. The share of final consumers notified by natural gas suppliers in the year 2017 was 99.31%.

From the reports received, it is noted that the consumer notification activity during 2017 was carried out as follows:

- Notifying consumers through national and/or local print media was carried out by 84% by license holders for the monitored natural gas supply activity,
- 69% of consumers were notified through the information materials distributed by the natural gas license holders,
- Consumer information through the company website was conducted by 92% of monitored suppliers, with the remaining 8% having a website under construction or incomplete,
- The most common methods chosen by providers were: information on the site (28%), telephone conversations (27%) and the distribution of informative materials to customer/information points (21%).

Compared to 2016, in 2017 there was an increase in the frequency of consumer questions regarding applied tariffs, the technical verification/mandatory revision (once every 2 years) of the natural gas installation, questions about the connection of a new place of consumption, and requests for information on the procedure, steps and documents necessary for the process of changing the natural gas supplier.

## **Gap-analysis**

The ANRE order is mandatory for all suppliers. The target is to have 100% of suppliers reporting on their advertising activity. The publication of the report on ANRE's webpage is done in order to inform the public on the advertising activity of their suppliers.

For the moment, the gap-analysis is done only for those suppliers who have reported to ANRE and all the information from the report refers to the activity of suppliers who have submitted reports. Some information regarding the suppliers who do not comply with ANRE's order needs to be added and the ANRE report needs to take into consideration all suppliers and final customers. Hence, information from other sources will be needed.

Consumer information requirements are in the CEP, but it seems difficult to issue harmonised monitoring procedures for advertising activity at EU level.

## **10 Conclusions from the 8 key properties that define a well-functioning retail market**

Previous CEER work on market monitoring has been guided by two high-level principles: I) Competition and innovation; and II) Consumer involvement in retail energy markets. These are supported by 8 key properties (marked in bold below), which have been addressed in detail in this paper. These properties represent the desired outcomes of the key elements, which retail energy markets need to have in order to be considered to be functioning well.

Below are summarised, for each property, a number of insights and implications stemming from the information submitted by CEER NRAs:

### **1. Low concentration within a relevant market**

The information provided by NRAs shows that different methodologies are used across MSs to measure concentration with calculations based on the consumed volume for commercial consumers and calculations based on metering points for households. Also, how household consumers are defined varies either by consumption level or capacity of the connection. Data from NRAs show that the level of competition in energy retail markets varies considerably across Europe. Typically, the markets for household consumers seem to be more concentrated than the markets for commercial consumers.

### **2. Low market-entry barriers**

NRAs report that the procedures to access a national or regional wholesale market can take up to three months and cost anywhere between 0 and 50,000 euros. Some markets require a supply licence, which can take a supplier up to six months to obtain. In most markets, it is also possible for market participants to acquire permission to become a balance responsible party, which can take up to four months to obtain. .

The existence of regulated prices varies across MS. In some markets, there are social tariffs for vulnerable consumers, ex-ante and ex-post regulation. In markets with social tariffs, approximately 5% to 20% of consumers have such tariffs.

Ten of the NRAs reported 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 MS, there is a procedure for contracts between the DSO and the supplier where a supplier-centric model is applicable.

Regarding the availability of time-of-use metering and, where applicable, additional fees paid by the consumer to be able to have time-of-use price vs. traditional metering, 15 NRAs have used this metric. NRAs report that meters for time-of-use metering are available for customers in most MS. In most of these markets, customers that have time-of-use meters do not pay any additional fee.

### **3. A close relationship between wholesale markets and retail prices**

In the CEER 2017 Handbook for National Energy Regulators, NRAs were invited to compare the correlation of all categories of retail products commercialised (not only the standard product by the incumbent supplier). However, not all NRAs have been able to go beyond the analysis that has already been carried out and published in national reporting<sup>75</sup>.

One of the main conclusions is that few NRAs have provided examples of mark-ups and comparisons of mark-ups for different product types. Mark-up between wholesale and retail prices is also part of the national reporting that NRAs submit annually to the European Commission, ACER and CEER<sup>76</sup>.

### **4. A range of offers, including demand response**

The majority of NRAs do not have statistical data available regarding the share of consumers on different pricing and billing options.

Whether value-added services that contribute to demand flexibility are widely available for consumers seems, therefore hard to conclude. Also, only a small number of NRAs can quantify the number of consumers who participated in implicit demand response through a contract or quantify how many consumers had contracts which include feed-in from electricity and/or gas for self-generation. Some NRAs shared details on whether there are appliances in their markets with demand response switches or other connections available on the electricity and gas markets.

The majority of NRAs also indicate that offers are comparable online and/or through digital applications. However, not many NRAs report that the signing of contracts online through the PCT is common practice, though management of energy contracts online and/or through digital applications is available in most MS.

Finally, many NRAs show that contracts with a specific guaranteed source of production are available for consumers in many MS, although in some MS only renewable energy sources are certified.

### **5. A high level of awareness and trust**

NRAs rely on consumer surveys to identify the metrics under this key property although not all NRAs can carry out them out. Nonetheless, most NRAs do know if consumers are aware of the possibility to switch supplier. Consumers' trust is another element that almost half of all NRAs assess but the metric on the awareness of consumers about the responsibility of DSOs for the continuity of supply and, where applicable, of metering is not being assessed by many NRAs.

Since questions in consumers' surveys usually differ between MS the results will also differ, making them non-comparable.

---

<sup>75</sup> NRAs' national reporting available on: [https://www.ceer.eu/eer\\_publications/national\\_reports](https://www.ceer.eu/eer_publications/national_reports)

<sup>76</sup> ACER/CEER Annual Report on the Results of Monitoring the Internal Electricity and Natural Gas Markets in 2017, Gas Wholesale Markets Volume, September 2018

## **6. The availability of empowerment tools**

A majority of NRAs use the metric on the availability of price comparison tools as a part of their self-assessment of well-functioning retail energy markets. The outcome depends on whether a PCT exists at all, whether consumers have access to the internet and whether the PCT is state- or privately-owned.

A minority of NRAs report on the percentage of consumers having access to online historical consumption information in their assessment. Annual data is the type most frequently available historical consumption information.

More than half of all NRA's are able to assess the percentage of consumers having access to a standardised supplier switching process as well as the duration of that process. Almost every NRA has concluded that all consumers have access to a standardised supplier switching process

## **7. Sufficient consumer engagement**

The switching rate is a widespread metric used by NRAs. It is measured within different relevant markets (electricity, gas, household consumers, SMEs). Given all the different national circumstances, NRAs report different figures, ranging from 0% up to 19%.

Also, a large number of NRAs measure the percentage of consumers that have never switched supplier, and have never actively searched for a better deal, by means of a consumer survey. NRAs use different sorts of questions to assess this metric.

A slight majority of NRAs also assess the share of prosumers, using data available through DSOs. These NRAs report prosumer shares ranging from 0% to 7%.

## **8. Appropriate protection**

A large majority of NRAs measure the share of disconnections due to non-payment, while about half of the NRAs also measure the time between notification to pay and the actual disconnection. Legislation concerning disconnections differs between MS.

About half of the NRAs use the metric on minimum standards for information in their self-assessment. Usually this is done based on some sort of regulation e.g. a code of practice, or minimum standards as determined by law. Actual results differ because some NRAs assume that having this legislation in place, while not receiving complaints, means that companies ostensibly adhere to the rules.



## Annex I – List of Abbreviations

Term	Definition
ACER	Agency for the Cooperation of Energy Regulators
BEUC	The European Consumer Organisation
CEER	Council of European Energy Regulators
CEP	Clean Energy Package (Clean Energy for All Europeans package)
DSO	Distribution System Operator
GB	Great Britain (i.e. excluding Northern Ireland)
GDP	Gross Domestic Product
GGP	Guidelines of Good Practice
MS	Member State(s)
NRAs	National Regulatory Authorities
PCT	Price Comparison Tool
RES	Renewable Energy Source(s)
RMR WS	CEER Retail Market Roadmap Work Stream
SME	Small and Medium Enterprises
TSO	Transmission System Operator

## Annex II – Overview of national self-assessment 2018 – Electricity

Metric #	KEY PROPERTY	HARMONISED DEFINITIONS OF METRICS	Used by # of MS	Gapanalysis by # of MS	NRA's reported data
<u>1</u>	Low Concentration within a relevant market	Herfindahl-Hirschman Index	24	8	19
<u>2</u>	Low market entry barriers	Time needed and cost of accessing well-functioning wholesale markets and licensing/balancing regimes	10	3	6
<u>3</u>		Percentage of consumers connected to "bundled" DSOs	14	3	10
<u>4</u>		Percentage of consumers with regulated energy prices	21	5	16
<u>5</u>		Number of common standards for consumer data & for DSO-supplier contract or existence of data hub	14	5	10
<u>6</u>		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	14	7	9
<u>7</u>	Close relationship between wholesale markets and retail prices	Correlation between wholesale and retail energy prices	14	4	10
<u>8</u>		Mark-up between wholesale and retail energy prices	15	5	11
<u>9</u>	A range of offers, including demand response	Availability of a variety of pricing and billing options	21	7	17
<u>10</u>		Availability of value added services for implicit demand response and self-generation	8	3	4
<u>11</u>		Availability of online offers	17	5	13
<u>12</u>		Availability of contracts guaranteeing the origin of energy	16	4	12
<u>13</u>		Availability of explicit demand response offers	6	3	2
<u>14</u>	High level of awareness and trust	Percentage of consumers knowing they can switch supplier	14	3	10
<u>15</u>		Percentage of consumers who know that DSOs are responsible for the continuity of supply and, where applicable, of metering	7	1	3
<u>16</u>		Percentage of consumers trusting the energy market	11	3	7
<u>17</u>		Percentage of consumers having access to at least one independent and verified PCT	17	5	13
<u>18</u>	Availability of empowerment tools	Percentage of consumers having access to online historical consumption info	9	6	5
<u>19</u>		Percentage of consumers having access to standardised supplier switching process (and its duration)	15	6	11
<u>20</u>	Sufficient consumer engagement	Supplier switching rate	22	7	17
<u>21</u>		Percentage of inactive consumers	17	3	14
<u>22</u>		Percentage of prosumers	14	3	10
<u>23</u>	Appropriate protection	Time between notification to pay and disconnection for non-payment	13	3	9
<u>24</u>		Percentage of disconnections due to non-payment	19	6	15
<u>25</u>		Percentage of suppliers using min standards for key info in advertising and bills	14	2	10

## Have you used this metric in your self-assessment? – Electricity

Metric #	KEY PROPERTY	HARMONISED DEFINITIONS OF METRICS	Austria	Belgium	Czech Republic	Croatia	Cyprus	Denmark	Estonia	Finland	France	Georgia
1	Low Concentration within a relevant market	Herfindahl-Hirschman Index	Yes	NA	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2	Low market entry barriers	Time needed and cost of accessing well-functioning wholesale markets and licensing/balancing regimes	No	NA	No	Yes	Yes	Yes	No	No	No	No
3		Percentage of consumers connected to "bundled" DSOs	Yes	NA	No	No	Yes	Yes	No	Yes	No	Yes
4		Percentage of consumers with regulated energy prices	Yes	NA	Yes	No	Yes	Yes	No	Yes	Yes	Yes
5		Number of common standards for consumer data & for DSO-supplier contract or existence of data hub	Yes	NA	No	Yes	No	Yes	No	Yes	Yes	No
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	Yes	NA	No	Yes	Yes	Yes	No	Yes	Yes	No
7	Close relationship between wholesale markets and retail prices	Correlation between wholesale and retail energy prices	Yes	NA	No	No	No	Yes	No	No	No	No
8		Mark-up between wholesale and retail energy prices	Yes	NA	No	No	No	Yes	No	No	No	No
9	A range of offers, including demand response	Availability of a variety of pricing and billing options	Yes	NA	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes
10		Availability of value added services for implicit demand response and self-generation	Yes	NA	No	Yes	No	Yes	No	No	No	No
11		Availability of online offers	Yes	NA	Yes	Yes	No	Yes	No	Yes	Yes	No
12		Availability of contracts guaranteeing the origin of energy	Yes	NA	Yes	Yes	No	Yes	No	Yes	Yes	No
13		Availability of explicit demand response offers	No	NA	No	No	No	Yes	No	No	No	No
14	High level of awareness and trust	Percentage of consumers knowing they can switch supplier	Yes	NA	No	No	No	Yes	Yes	Yes	Yes	No
15		Percentage of consumers who know that DSOs are responsible for the continuity of supply and, where applicable, of metering	Yes	NA	No	No	No	Yes	No	Yes	No	No
16		Percentage of consumers trusting the energy market	Yes	NA	No	No	No	Yes	No	Yes	Yes	No
17		Percentage of consumers having access to at least one independent and verified PCT	Yes	NA	No	Yes	No	Yes	No	Yes	No	No
18	Availability of empowerment tools	Percentage of consumers having access to online historical consumption info	No	NA	Yes	Yes	No	Yes	No	Yes	No	No
19		Percentage of consumers having access to standardised supplier switching process (and its duration)	Yes	NA	No	Yes	No	Yes	No	Yes	No	No
20	Sufficient consumer engagement	Supplier switching rate	Yes	NA	Yes	Yes	No	Yes	Yes	Yes	Yes	No
21		Percentage of inactive consumers	Yes	NA	No	Yes	Yes	No	Yes	No	No	No
22		Percentage of prosumers	No	NA	No	Yes	Yes	Yes	No	Yes	No	Yes
23	Appropriate protection	Time between notification to pay and disconnection for non-payment	No	NA	No	Yes	Yes	Yes	No	No	Yes	Yes
24		Percentage of disconnections due to non-payment	Yes	NA	No	No	Yes	Yes	No	No	Yes	Yes
25		Percentage of suppliers using min standards for key info in advertising and bills	Yes	NA	No	No	No	Yes	No	No	No	Yes

Metric #	KEY PROPERTY	HARMONISED DEFINITIONS OF METRICS	Germany	Great Britain	Greece	Hungary	Ireland	Italy	Kosovo	Latvia	Lithuania	Luxembourg	Macedonia	Malta
1	Low Concentration within a relevant market	Herfindahl-Hirschman Index	NA	Yes	NA	Yes	Yes	Yes	Yes	Yes	NA	Yes	Yes	no
2	Low market entry barriers	Time needed and cost of accessing well-functioning wholesale markets and licensing/balancing regimes	NA	No	NA	Yes	Yes	No	No	No	NA	Yes	No	No
3		Percentage of consumers connected to "bundled" DSOs	NA	No	NA	No	Yes	Yes	No	No	NA	Yes	Yes	No
4		Percentage of consumers with regulated energy prices	NA	Yes	NA	Yes	Yes	No	Yes	Yes	NA	Yes	Yes	No
5		Number of common standards for consumer data & for DSO-supplier contract or existence of data hub	NA	Yes	NA	Yes	Yes	Yes	No	No	NA	Yes	No	no
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	NA	Yes	NA	Yes	No	No	Yes	No	NA	Yes	No	no
7		Correlation between wholesale and retail energy prices	NA	Yes	NA	Yes	Yes	No	Yes	No	NA	Yes	Yes	no
8	Close relationship between wholesale markets and retail prices	Mark-up between wholesale and retail energy prices	NA	Yes	NA	Yes	Yes	No	Yes	No	NA	Yes	Yes	no
9	A range of offers, including demand response	Availability of a variety of pricing and billing options	NA	Yes	NA	Yes	Yes	Yes	No	No	NA	Yes	No	no
10		Availability of value added services for implicit demand response and self-generation	NA	No	NA	Yes	No	No	No	No	NA	Yes	No	no
11		Availability of online offers	NA	Yes	NA	Yes	Yes	Yes	No	No	NA	Yes	No	No
12		Availability of contracts guaranteeing the origin of energy	NA	Yes	NA	Yes	Yes	Yes	No	No	NA	Yes	No	no
13		Availability of explicit demand response offers	NA	Yes	NA	No	No	No	No	No	NA	Yes	No	no
14		Percentage of consumers knowing they can switch supplier	NA	Yes	NA	Yes	Yes	Yes	No	Yes	NA	No	No	No
15	High level of awareness and trust	Percentage of consumers who know that DSOs are responsible for the continuity of supply and, where applicable, of metering	NA	No	NA	No	Yes	No	No	No	NA	No	No	no
16	Availability of empowerment tools	Percentage of consumers trusting the energy market	NA	Yes	NA	No	Yes	Yes	No	No	NA	No	No	No
17		Percentage of consumers having access to at least one independent and verified PCT	NA	Yes	NA	No	Yes	Yes	No	No	NA	Yes	No	No
18		Percentage of consumers having access to online historical consumption info	NA	No	NA	Yes	No	No	Yes	No	NA	Yes	No	no
19		Percentage of consumers having access to standardised supplier switching process (and its duration)	NA	Yes	NA	Yes	No	Yes	No	Yes	NA	Yes	Yes	No
20		Supplier switching rate	NA	Yes	NA	Yes	Yes	Yes	No	Yes	NA	Yes	Yes	No
21		Percentage of inactive consumers	NA	Yes	NA	Yes	Yes	Yes	No	Yes	NA	Yes	No	no
22	Sufficient consumer engagement	Percentage of prosumers	NA	Yes	NA	Yes	No	Yes	No	No	NA	Yes	No	no
23	Appropriate protection	Time between notification to pay and disconnection for non-payment	NA	No	NA	Yes	No	Yes	Yes	No	NA	Yes	No	no
24		Percentage of disconnections due to non-payment	NA	Yes	NA	Yes	Yes	Yes	Yes	No	NA	Yes	Yes	yes
25		Percentage of suppliers using min standards for key info in advertising and bills	NA	No	NA	Yes	Yes	Yes	Yes	Yes	NA	No	No	No

Metric #	KEY PROPERTY	HARMONISED DEFINITIONS OF METRICS	Netherlands	Norway	Poland	Portugal	Romania	Slovenia	Spain	Sweden
1	Low Concentration within a relevant market	Herfindahl-Hirschman Index	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2	Low market entry barriers	Time needed and cost of accessing well-functioning wholesale markets and licencing/balancing regimes	Yes	No	No	No	No	Yes	Yes	Yes
3		Percentage of consumers connected to "bundled" DSOs	Yes	Yes	No	Yes	No	No	Yes	Yes
4		Percentage of consumers with regulated energy prices	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
5		Number of common standards for consumer data & for DSO-supplier contract or existence of data hub	Yes	No	No	No	No	Yes	Yes	Yes
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	Yes	Yes	No	No	No	No	Yes	Yes
7	Close relationship between wholesale markets and retail prices	Correlation between wholesale and retail energy prices	Yes	No	No	Yes	Yes	Yes	Yes	Yes
8		Mark-up between wholesale and retail energy prices	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
9	A range of offers, including demand response	Availability of a variety of pricing and billing options	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
10		Availability of value added services for implicit demand response and self-generation	Yes	No	No	No	No	No	Yes	Yes
11		Availability of online offers	Yes	No	Yes	Yes	No	Yes	Yes	Yes
12		Availability of contracts guaranteeing the origin of energy	Yes	Yes	No	Yes	No	Yes	Yes	Yes
13		Availability of explicit demand response offers	No	No	No	Yes	No	No	Yes	Yes
14	High level of awareness and trust	Percentage of consumers knowing they can switch supplier	Yes	Yes	No	No	No	No	Yes	Yes
15		Percentage of consumers who know that DSOs are responsible for the continuity of supply and, where applicable, of metering	No	Yes	No	No	No	No	Yes	Yes
16		Percentage of consumers trusting the energy market	Yes	Yes	No	No	No	No	Yes	Yes
17		Percentage of consumers having access to at least one independent and verified PCT	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
18	Availability of empowerment tools	Percentage of consumers having access to online historical consumption info	Yes	No	No	No	No	No	Yes	Yes
19		Percentage of consumers having access to standardised supplier switching process (and its duration)	Yes	No	Yes	Yes	No	No	Yes	Yes
20	Sufficient consumer engagement	Supplier switching rate	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
21		Percentage of inactive consumers	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes
22		Percentage of prosumers	Yes	Yes	No	No	No	Yes	Yes	Yes
23	Appropriate protection	Time between notification to pay and disconnection for non-payment	Yes	No	Yes	No	No	No	Yes	Yes
24		Percentage of disconnections due to non-payment	No	No	Yes	Yes	Yes	Yes	Yes	Yes
25		Percentage of suppliers using min standards for key info in advertising and bills	Yes	No	No	Yes	Yes	Yes	Yes	Yes

## **Annex III – 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.

CEER wishes to thank in particular the following regulatory experts for their work in preparing this report: Pamela Boeri, Mattias Johansson and Matthias Noorlander in the drafting team together with the reviewers David Batič, Simone Spalletta, Maud Brassart and Odelín Calatrava.

More information is available at [www.ceer.eu](http://www.ceer.eu).