

  


ILR

INSTITUT LUXEMBOURGEOIS  
DE RÉGULATION

---

2024 REPORT BY THE LUXEMBOURG REGULATORY  
INSTITUTE ON ITS ACTIVITIES AND THE  
PERFORMANCE OF ITS DUTIES IN THE ELECTRICITY  
AND NATURAL GAS SECTORS ON THE YEAR 2023 –  
ENGLISH TRANSLATION FROM FRENCH OF THE  
FOREWORD AND OF CHAPTER 1



17, rue du Fossé  
Adresse postale  
L-2922 Luxembourg

---

T +352 28 228 228  
F +352 28 228 229  
info@ilr.lu

---

[www.ilr.lu](http://www.ilr.lu)



## FOREWORD

This report is one of a series that the Institut Luxembourgeois de Régulation, in its role as regulator of the electricity and natural gas markets, is required to draw up annually to report on developments in the electricity and natural gas markets. It is intended not only for the European Commission and the Agency for the Cooperation of Energy Regulators (hereinafter 'ACER'), as provided for in Article 59 of Directive 2019/944/EC on the electricity market and Article 41 of Directive 2009/73/EC on the natural gas market, but also to provide the public with a picture of developments on the electricity and natural gas markets in Luxembourg.

The report is intended to document developments in 2023 on the electricity and natural gas markets in Luxembourg by describing the activities carried out and supported by the Institute as part of the regulation of the electricity and natural gas networks, as well as aspects relating to competition, consumer protection and security of supply.

The “Clean Energy for All Europeans”<sup>1</sup> package highlights the European Union's climate ambitions for 2030, by modifying the rules of the electricity market to encourage the integration of renewable energies into the networks. The package also encourages cross-border energy exchanges and the development of flexibility instruments such as load shedding, storage and aggregation. It encourages innovation in the energy sector and gives consumers more tools to produce, consume and share reliable, competitive and increasingly low-carbon energy on a European scale. The adoption of the package therefore places consumers at the heart of the energy markets, giving them the opportunity to play a more active role in production, to better control their energy consumption and expenditure, and to be better informed about market developments. The directives in the “Clean Energy for All Europeans” package have been transposed into national Luxembourg law by the Act of 9 June 2023 amending the amended Act of 1 August 2007 on the organisation of the electricity market.

The year 2022 has plunged the energy sector into a period of major crisis, during which Member States and the energy regulators have had to invent and create, in real time, solutions to the challenges posed by the war in Ukraine. Faced with the exceptional rise in wholesale electricity and natural gas prices since the second half of 2021, the Government has introduced ad-hoc consumer protection measures. The Institute was involved in designing the rules and was responsible for implementing and monitoring these mechanisms.

In tripartite (Government, trade unions, employers), new aids were decided and implemented at national level. For example, the integrated price of electricity paid by residential customers until the end of 2024 has been stabilised compared with its level in 2022: to compensate for the increase in the price of electricity and the network usage tariff on 1 January 2023, a negative contribution to the compensation mechanism [for the promotion of national renewable production] has been provided for by the law of 23 December 2022 amending the amended law of 1 August 2007 on the organisation of the electricity market with a view to introducing a negative contribution to the compensation mechanism.

With regard to natural gas, the law of 17 May 2022 on the support by the State of the costs generated by the use of natural gas distribution networks provides that the State will assume the costs of using the network for end customers with meters with a maximum hourly flow of less than 65 cubic metres. The law of 2 December 2022 also introduces a financial contribution to the supply of natural gas for end customers with gas meters with a maximum hourly flow of less than 65 cubic metres. This financial contribution consists of the State covering the positive difference between the posted price and a capped price - set at €0.8325 per cubic metre of natural gas consumed - excluding network usage charges and all taxes in force on the day of invoicing. These measures have since been extended until the end of 2024.

---

<sup>1</sup> Also known as the Clean Energy Package or CEP ([https://ec.europa.eu/commission/presscorner/detail/en/ip\\_19\\_1836](https://ec.europa.eu/commission/presscorner/detail/en/ip_19_1836)).

Since the end of 2022, prices on the wholesale markets have been falling, but without returning to pre-crisis levels. The European Commission proposed in March 2023 to reform the organisation of the EU electricity market in order to accelerate the development of renewables and the phase-out of gas, to reduce the dependence of consumer bills on volatile fossil fuel prices, to better protect consumers against future price spikes and market manipulation, and to make EU industry cleaner and more competitive. This can be achieved by using long-term contracts, such as power purchase agreements and structuring investment support with two-way compensatory deviation contracts. The new rules for the organisation of the electricity market consist of the amending directive EU/2024/1711 and the amending regulation EU/2024/1747. They were adopted on 21 May 2024 and came into force on 16 July 2024.

The figures contained in this report are based on information provided by energy companies subject to the supervision of the Institut Luxembourgeois de Régulation. Unless otherwise indicated, all values relate to 31 December 2023. Although this report is intended to give an overview of the situation on the electricity and natural gas markets in 2023, recent events on the energy markets justify adding a brief overview of developments in 2024. These will, of course, be covered in greater detail in the next report.

Although the Institute makes every effort to ensure the quality of the information, some of the data provided in this report may contain imperfections of any kind, both in form and in specific content.

All this information is therefore provided without any guarantee of any kind, whether express or implied, and is not binding on the Institute, given the many external factors beyond its control that must be taken into consideration.

## 1. MAJOR DEVELOPMENTS IN THE ELECTRICITY AND NATURAL GAS MARKETS

---

### 1.1. MONITORING THE ELECTRICITY AND NATURAL GAS MARKETS

In the electricity sector, in 2023 the Grand Duchy of Luxembourg had 345,259 consumers, with energy supplied for consumption of 6.213 TWh, the latter being 2.1% lower than in 2022. The final customers are divided between ten electricity supply companies, 8 of which are active on the residential market and 10 on the non-residential market. There have been no significant movements in the market shares of electricity suppliers for the different customer segments.

In addition to the electricity generation facilities connected to the transmission or distribution networks, the electricity needs of the Luxembourg control area are largely covered by imports from Germany.

The production of electricity from renewable energy sources covers 20.3% of national consumption and amounted to 1,261 GWh in 2023, an increase of 19% compared with 2022. This increase is mainly due to a significant 59% rise in wind generation, as well as a 24% increase in hydroelectric generation and a 6% rise in solar generation. Natural gas cogeneration production fell by 13%.

In the natural gas sector, in 2023 the Grand Duchy of Luxembourg had 93,097 consumers, representing national consumption of 6.416 TWh, down by 6.3% compared with 2022. Six natural gas companies are active on the retail market, five on the residential market and six on the non-residential market.

### 1.1.1. UNBUNDLING OF TRANSMISSION AND DISTRIBUTION SYSTEM OPERATORS

The Institute shall ensure that network operators avoid any discrimination regarding access to networks through legal, functional and accounting unbundling, in particular by analysing the accounts separated by activity and the service contracts and internal rules in place within the vertically integrated undertaking. In addition, the Institute must monitor the communication practices and branding strategies of the network operator belonging to a vertically integrated undertaking. The network operator must avoid any confusion with the distinct identity of the supply arm of the vertically integrated undertaking.

The service contract between the network operator Creos Luxembourg S.A. (hereinafter 'Creos') and its parent company Encevo S.A. (hereinafter 'Encevo') brings together administrative services within a single entity of the group, i.e. for each service the one of the entities best equipped, all in compliance with the requirements of articles 31(2) and 32(3) of the amended law of 1 August 2007 on the organisation of the electricity market, respectively article 38(1) of the amended law of 1 August 2007 on the organisation of the natural gas market. As a result, Encevo is responsible for services common to the various entities in the group, such as, but not limited to, internal audit, insurance, accounting, treasury, human resources and regulation. Other shared services, notably IT, are managed by Creos.

### 1.1.2. DETERMINING THE CONDITIONS FOR CONNECTION TO AND USE OF NETWORKS

In 2023, additions to the technical conditions for connection to low-voltage networks were consulted<sup>2</sup> and approved by the Institute<sup>3</sup>, which aim in particular to:

- Establish minimum technical requirements for the connection of balcony solar installations/mini-photovoltaic installations.
- Clarify several examples of connecting production and storage facilities by adding technical diagrams.
- Implement the Grand-Ducal Regulation of 30 June 2023 establishing statistical methods for determining the production of certain photovoltaic installations.

In the electricity sector, each network operator is obliged to connect to its network any end customer and any producer who so requests. Network operators are also responsible for submitting the technical, financial and general terms and conditions of connection for acceptance by the Institute. Since 1 January 2017, tariffs for use of the electricity network have been identical in all Luxembourg distribution networks, as a result of national equalisation, whether the consumer is connected to the Creos network or to one of the other networks (Ville de Diekirch, Ville d'Ettelbruck, Sudstroum, Hoffmann Frères). Tariff equalisation<sup>4</sup> makes it easier to compare electricity products throughout Luxembourg.

The Institute has the power to set the method for determining tariffs for use of the network and for services ancillary to use of the networks. The method applicable in 2023 is set by tariff regulation ILR/E20/22 of 26 May 2020. As the framework established by this regulation expires on 31 December 2024, the Institute has been working on a new regulation ILR/E24/18 defining the methodology for determining authorised revenue for the 2025-2028 regulatory period. This was published on 28 June 2024.

---

<sup>2</sup> Public consultation from 20 July 2023 to 22 September 2023

<sup>3</sup> Regulation ILR/E23/47 of 30 October 2023 accepting the amendment to the technical conditions for connection to the low-voltage networks - Electricity sector

<sup>4</sup> The principle of tariff equalisation means that users connected to the distribution networks are charged the same network tariff, regardless of their geographical location within Luxembourg.

In 2023, electricity network tariffs have risen sharply amid the turmoil of the fossil fuel crisis, due in particular to the increased cost of auxiliary measures and services and the cost of compensating for network losses.

Analysis of load curves and projections of electricity demand point to an increase in peak loads, representing a considerable challenge that will require additional investment in new network capacity and intelligent management of flexible loads. Given that the main factor in sizing networks is the maximum load, it is particularly important to find ways of limiting its growth and deploying the flexibility potential of withdrawals and injections into the network.

The development of renewable energies and the electrification of transport and heating mean that electricity networks must be able to cope with growth in flows and maximum load. To take account of and support the rapid transformation of the electricity system, ILR has decided<sup>5</sup>, after consultation with the DSOs and a public consultation phase, on a new tariff structure for the use of low-voltage networks, which will apply from 1 January 2025.

### 1.1.3. SUPERVISION AND MONITORING OF THE DEVELOPMENT OF COMPETITION

#### 1.1.3.1. WHOLESALE MARKET

It should be remembered that Luxembourg's electricity and natural gas systems cannot be considered in isolation from the markets of neighbouring countries, even though from both a technical and a market point of view, there is strong integration into the German bloc for electricity and strong links with the Belgian system for natural gas.

In the electricity sector, there is no specific power exchange for Luxembourg. However, due to the absence of congestion on the cross-border interconnection lines with Germany, the Luxembourg wholesale market is integrated into the German bidding zone<sup>6</sup> (hereinafter referred to as the 'DE/LU zone'), which allows market participants to participate in electricity trading on any exchange that allows delivery in this zone. The reference for the wholesale market price in Luxembourg is the day-ahead price obtained for the DE/LU zone.

Since 1 October 2015, with the integrated 'BeLux' (Belgian-Luxembourg) natural gas market, suppliers wishing to deliver natural gas to Luxembourg can procure natural gas from the Zeebrugge exchange point (ZTP) or via interconnection points between the BeLux zone and adjacent countries.

The BeLux market integration simplifies the shipping for suppliers active in the Grand Duchy of Luxembourg thanks to direct access to gas from the North Sea and Norway, to the interconnector with Great Britain, to liquefied natural gas (LNG) terminals, to the Dutch, German and French markets and to storage, which considerably increases trading opportunities.

#### 1.1.3.2. RETAIL MARKET

On the retail electricity market, eleven electricity companies are active in Luxembourg: six on the residential market and nine on the non-residential market. On the natural gas retail market, six natural gas companies are active in Luxembourg: five on the residential market and six on the non-residential market. As a result,

---

<sup>5</sup> Regulation ILR/E23/49 of 15 November 2023

<sup>6</sup> Excluding the industrial network managed by Sotel Réseau, which is connected to the Belgian transmission network and, since October 2013, also to the French transmission network. The German price zone includes Germany and Luxembourg.

the Luxembourg energy market has a fairly large number of market participants for its size. However, too few of these market participants have significant market shares to this day.

The low switching rates reflect a passivity on the part of consumers with regard to their energy supply and a lack of dynamism and innovation on the part of suppliers.

There are many reasons for the low switching rates. On the one hand, the share of the energy budget in the total budget of a Luxembourg resident is the lowest in the whole of Europe. The price differences between electricity suppliers, around €48 per year per household when comparing the most widespread product with the cheapest, are not enough to activate consumers and make them aware of the possibility of choosing their energy supplier. As far as natural gas is concerned, the capping of energy prices for small consumers from October 2022 removes any incentive to switch to another supplier. Secondly, the small size of the Luxembourg market and the need for suppliers to adapt to Luxembourg's specific regulatory, contractual and procedural requirements limit the interest of suppliers from abroad. Finally, the energy crisis, with its high wholesale prices, has led suppliers to withdraw all their guaranteed price offers from the market, thereby considerably reducing the supply available to consumers and leading to a difficult competitive situation towards the end of 2022. The relative easing of prices on the wholesale markets in 2023 allowed competition on the electricity market to gradually resume through new offers from alternative suppliers.

### 1.1.3.3. SELF-CONSUMPTION AND ELECTRICITY SHARING

While the concept of individual and collective self-consumption and renewable energy communities was first introduced with the Act of 3 February 2021 amending the Act of 1 August 2007 on the organisation of the electricity market, the specifications for sharing electricity were extended with the Act of 9 June 2023 amending the amended Act of 1 August 2007 on the organisation of the electricity market. It is now possible to share self-generated electricity not only with immediate neighbours, but also with grid users across the country, including those connected to another distribution grid.

In this way, residents can first consume their own electricity production to cover their household consumption and then feed only the surplus into the distribution network. With no charges or fees for self-consumed electricity, self-consumption is both economical and environmentally friendly. It allows renewable electricity to be consumed when it is available, avoiding the costs of supplying it from the grid. As a result, people become less dependent on grid supply and market price fluctuations. Self-consumers are also eligible for remuneration on the basis of regulated feed-in tariffs for the part of the electricity produced that is not consumed or shared.

On 31 December 2023, 4,249 photovoltaic installations have been active in self-consumption mode, of which 2813 were commissioned in 2023. 23 GWh of solar electricity was self-consumed, either individually or jointly as part of collective self-consumption. Collective self-consumption represented 5.2 GWh shared in 78 sharing groups involving 281 users.

To inform the public about electricity sharing and explain the possibilities and conditions involved, in 2023 the Institute developed the Internet platform [www.weshareenergy.lu](http://www.weshareenergy.lu), where all the necessary information is available in several languages. The site also contains software that interested parties can download free of charge to simulate a Sharing Group themselves and find out whether it would be worthwhile for them to share the electricity they produce.

#### 1.1.3.4. RENEWABLE ENERGIES

The number of new photovoltaic (PV) power plants connected to the grid in 2023 was 3,058, which is almost three times the number of PV systems installed the previous year (1,053); the total power that was connected to the grid in 2023 thanks to new photovoltaic power plants was twice as high as in 2022. These figures show that not only were many more new PV power plants installed in 2023, but their respective theoretical maximum capacity was also significantly higher than in the previous year.

It should also be noted that the number and installed capacity of electricity-generating facilities can be consulted by technology and by municipality on the [www.geoportail.lu](http://www.geoportail.lu) website.

#### 1.1.3.5. SMART GRIDS

The widespread introduction of “smart” meters marks an important stage in the development of energy network management. It is the first step, essential to the advent of network and energy flow management that is both more digital and closer to real time.

But for today's electricity network to become a “Smart Grid”, the network operator must, among other things, be able to determine the load on its infrastructure at any given moment. To do this, it needs not only the consumption and production data provided by smart meters, but also information about the state of the network nodes, for example at transformer stations, substations, etc. Creos has initiated this process to develop a smart grid with a strategic investment programme covering both the physical infrastructure and the development of software solutions. By the end of the decade, this strategy should result in a network integrating measurement, control and automation equipment, feeding an ecosystem of applications capable of mobilising two-way communication and new technologies so as to be able to respond rapidly and digitally to the variability of energy demand and production.

In addition, the development of the smart grid goes hand in hand with the evolution of grid planning and developments in various areas, notably flexibility. The main objectives are to optimise the use of existing infrastructure, increase the level of renewable production and promote flexibility among market participants, while optimising new investment.

#### 1.1.3.6. PRICE MONITORING

In electricity, the prices of energy and supply as well as network charges have risen sharply between 2022 and 2023. However, the government had introduced measures to stabilise household electricity prices at the 2022 level. The implementation of these measures led to the introduction of a negative rate for the contribution to the compensation mechanism for electricity consumers with an annual consumption of less than 25,000 kWh from 2023. The level of the negative contribution has been set so as to neutralise the announced price increases for energy and the network for an average residential consumer. Notwithstanding this considerable support for the consumers concerned, the electricity market continues to function and it is still useful to compare the various offers from suppliers.

For industrial customers, on the other hand, the absence of a price stabilisation mechanism, coupled with the increase in energy and supply prices (+118%) and network usage charges (+69%), has led to a 70% rise in the total price of electricity.

In the residential segment, the range of products available to consumers remains limited. Despite the appearance of two new suppliers, there was a lack of dynamic or fixed-price offers. On the other hand, the

efforts made by the political authorities to stabilise prices have made it possible to maintain a high level of protection for small consumers.

In 2022, the structured purchases made by suppliers on the forward markets, i.e. the fact that the supplier buys part of its supplies up to three years in advance, meant that households were offered selling prices that were lower than day-ahead wholesale market prices over the same period. On the other hand, this purchasing strategy has led to an increase in the suppliers' supply price in 2023, while the price on the day-ahead market was falling. This can be explained by the fact that some of the energy delivered in 2023 had to be purchased at times when prices were still very high.

In 2023, the final price paid by residential customers for the integrated supply of natural gas did not change compared with 2022 (€86.6/MWh). This amounts to an annual charge of €2,646, or €221 per month for consumption of 30,556 kWh of natural gas. However, without the State's intervention in the form of full user charges and a cap on the price per molecule of gas, the average final price for 2023 would have been €141.8/MWh. For industrial customers, the final price in 2023 rose again to €114.1/MWh. This type of customer does not benefit from the aid available to small consumers.

The main forms of aid for consumers, namely the negative contribution to the compensation mechanism, the cap on the price of the gas molecule and the payment by the State of usage fees, are not targeted at needy consumers and completely exclude industrial consumers. Generally speaking, the Institute found that the total price for industrial consumers has increased by a factor of 2.5 for electricity and 2.7 for natural gas since 2021.

### 1.1.3.7. CONSUMER PROTECTION

Consumers are at the heart of the Institute's activities. Accordingly, the Institute's consumer website [www.mylir.lu](http://www.mylir.lu)<sup>7</sup> acts as a one-stop shop and answers consumers' questions about their rights, opportunities and duties in the liberalised energy market.

In addition, the Institute continuously updates its price comparator, "Calculix"<sup>8</sup>, which compares the various electricity and natural gas supply offers available to residential and small business customers in Luxembourg. The tool provides consumers with comprehensive and transparent information so that they can make an informed choice. In 2023, a module was added to integrate an offer to take back surplus electricity fed into the grid by a self-consumer into a consumption product.

## 1.2. EUROPEAN AND CROSS-BORDER COOPERATION

The Institute contributes to European projects to promote the creation of an internal electricity and natural gas market, i.e. a single, more competitive European market for products and services in the energy sector. The opening up of energy markets through the implementation of common rules and infrastructures ensures the availability of energy at the most economical conditions for the end user.

### 1.2.1. AT EUROPEAN UNION LEVEL

Cooperation with the Agency for the Cooperation of Energy Regulators (ACER), the Council of European Energy Regulators (CEER) and the European Commission, as well as with the regulatory authorities of other

---

<sup>7</sup> <https://myilr.lu/en/your-questions/energy/>

<sup>8</sup> [www.calculix.lu](http://www.calculix.lu)



Member States, is part of the Institute's missions. This cooperation, which includes cross-border issues and consumer protection, aims at promoting a competitive, secure and environmentally sustainable internal electricity market, effective market opening for all customers and suppliers, and electricity networks that operate efficiently and reliably.

In 2023, in cooperation with its European counterparts, the Institute continued to implement framework guidelines and network codes on market rules (long-term capacity allocation, short-term capacity allocation and congestion management, balancing) and operation of the transmission system. The Institute also took part in discussions on the development of market rules and system operation rules in the Core capacity calculation region and the Continental European synchronous zone.

### 1.2.2. REGIONAL COOPERATION AND MARKET INTEGRATION

Creos Luxembourg S.A. ("Creos") is collaborating with the transmission system operators Elia System Operator S.A. ("Elia") and Amprion GmbH ("Amprion") to operate a 400 MVA interconnection with Belgium via the installation of a phase-shifting transformer and the use of existing lines aimed at improving Luxembourg's security of supply and promoting better integration of the electricity markets. Other projects, mainly with Germany, are being developed to meet the growing demand for electricity due to the population growth, the development of electric mobility, the switch from fossil fuel heating to electricity (heat pumps) and the expected increase in demand for new data centres, all accompanied by the growing digitalisation of electricity network management. To this end, Creos will be upgrading the interconnection with Germany from 220 kV to 380 kV; the new facilities, which will use the existing 220 kV power lines as much as possible, are scheduled to be commissioned at the end of 2027.

In the electricity sector, since 1 June 2020, balancing service providers with one or more technical units connected to the Luxembourg grid have been able to offer balancing services on the German market for frequency containment reserves (FCR), subject to compliance with the regulations applicable to such reserves on the German market. In 2023, discussions on the possibility for these suppliers to offer balancing services on the German market for frequency restoration reserves (FRR) resumed.

As regards the natural gas market, a common balancing system, in line with the provisions of Commission Regulation (EU) No 312/2014 of 26 March 2014 on the establishment of a network code on the balancing of gas transmission networks, has been set up with the integrated BeLux market and is managed by Balansys S.A. In 2023, the Institute, together with the CREG, approved the introduction by Balansys S.A. in the balancing code of the concept of main causer and minor causer in order to encourage network users to follow the balancing rules for the BeLux zone more closely. Thus, the value of the small adjustment is different depending on whether it is applied to a main causer or a minor causer. In addition, an incentivizing factor now applies to the intraday imbalance charge, with different values for main and minor causers.

### 1.3. SECURITY OF SUPPLY

In 2023, the Institute did not have any specific powers in the area of security of supply. The Government Commissioner for Energy is responsible for this: he monitors the balance between supply and demand, existing and planned production capacity, the necessary investments and the security of operation of the networks. Finally, he provides information on his activities in a biannual report.

The projects to strengthen the interconnections of the electricity transmission networks with those of neighbouring countries are intended to increase Luxembourg's security of supply and contribute to market integration.

In addition to the need for investment in strengthening electricity interconnections, there is also a need to analyse investment in additional generation capacity. The match between production and consumption is generally assessed as a criterion of security of supply.

### 1.3.1. FOR ELECTRICITY

Excluding the Vianden pumped storage plant (with an installed capacity of 1,296 MW)<sup>9</sup>, the total installed generation capacity was 811 MW in 2023, compared to 655 MW in 2022. The 157 MW increase in capacity is mainly due to the commissioning of new photovoltaic power stations (+79 MW) and wind power plants (+42 MW).

Luxembourg continues to physically import its electricity mainly from Germany. In 2023, the maximum power measured on the interconnection lines in the Germany-Luxembourg direction was 796 MW, including transits to Belgium.

In view of the growth in the maximum load on the Creos network, due to population growth, the development of electric mobility (trains, trams, buses and private cars), the switch from fossil fuel heating to electricity and the growing demand for new data centres, combined with the increasing digitalization of power grid management, the interconnection with Germany will be strengthened by 2027 via the construction of a double 380 kV line using part of the existing 220 kV lines linking the 2 countries, which will increase capacity by around 1,000 MW between Luxembourg and Germany while complying with the N-1<sup>10</sup> criterion including tower damage; this project is part of the European 10-year development plan 2022 (project 328). Developments to existing lines, such as increasing the temperature supported by conductors on existing lines, also accompany this project.

### 1.3.2. FOR NATURAL GAS

Commission Regulation (EU) n°2017/1938 of 25 October 2017 concerning measures to safeguard security of natural gas supply, and repealing Regulation (EU) n°994/2010, establishes the provisions that aim at maintaining security of natural gas supply and to implement exceptional measures when the market can no longer guarantee security of supply.

Since 1 October 2015, the measures taken as part of the BeLux project have guaranteed flows of 180,000 m<sup>3</sup>/h from Belgium. However, these flows could be not sufficient to meet the demand in Luxembourg, so an additional amount is determined by Creos to cover the demand on the basis of historical values over the last 4 gas years; this additional amount is offered as quarterly conditional capacities at the Remich interconnection point.

No development of natural gas transmission capacity is currently planned.

## 1.4. THE CONTEXT OF RISING PRICES ON THE WHOLESALE ENERGY MARKETS

Like 2022, 2023 was a very difficult economic year with high energy prices.

---

<sup>9</sup> This pumped storage power station, although located in the Grand Duchy, is not connected to the Luxembourg transmission grid, but injects its output into the German transmission grid.

<sup>10</sup> The N-1 criterion stipulates that any electricity transmission system must be able to cope at all times with the loss of a system element without this having an impact on the end consumer.

The situation of electricity prices had led the European and national authorities to implement aid measures for the benefit of citizens and businesses. In tripartite (government, trade unions, employers), new aids were decided and implemented in Luxembourg. For example, the integrated price of electricity paid by residential customers until the end of 2024 has been stabilised at its 2022 level: to offset the increase in the price of electricity and the network usage tariff on 1 January 2023, a negative contribution to the compensation mechanism has been introduced and subsequently set by the Institute at -11.46 €/kWh. On 1 September 2023, this rate was revised downwards (-9.32 €/kWh) due to the reduction in grid usage tariffs.

On the gas market, the economic context remained complicated for all market participants in 2023, including consumers. The falls in the price of the gas molecule on the wholesale markets, observed throughout 2023, do not hide the fact that prices on the retail market remained at levels considerably higher than before the crisis. Against this backdrop, the decision taken by the Luxembourg government in 2022 to cover network usage charges for category 1 and 2 consumers connected to a distribution network has been extended to 2023. The same applies to the price per molecule of natural gas, which remains capped at 83.25 €/m<sup>3</sup> for these same consumer categories. In 2023, consumers in categories 1 and 2 benefited from the price cap introduced at the end of 2022; only one supplier managed to offer prices below the cap during the final months of 2023.

## 1.5. NATIONAL LEGISLATIVE AND REGULATORY FRAMEWORK

The Law of 9 June 2023<sup>11</sup> made numerous changes to the amended Law of 1 August 2007 on the organisation of the electricity market in order to transpose into national law some of the directives and regulations in the “Clean Energy for All Europeans” package presented by the European Commission at the end of 2016, including in particular Directive (EU) 2019/944 of the European Parliament and of the Council of 5 June 2019 concerning common rules for the internal market in electricity. This directive sets out the rules applicable to the generation, transmission, distribution, supply and storage of electricity and also addresses consumer protection aspects.

The main changes made to the amended law of 1 August 2007 on the organisation of the electricity market concern in particular:

### 1) Active customers, self-consumption and electricity sharing

The specifications for sharing electricity have been extended. It is now possible to share self-generated electricity not only with immediate neighbours, but also with grid users across the country, including those connected to another distribution network.

### 2) Active demand-side participation and aggregation

All end customers, including those offering active demand response through aggregation, may participate in a non-discriminatory manner alongside electricity producers in all electricity markets. The Institute draws up the terms and conditions for active participation in demand through aggregation, in close consultation with the companies in the sector.

### 3) Projects of an experimental nature

The Institute may confer the status of experimental project on projects which implement or facilitate the energy transition, increase energy efficiency, develop the digitalisation of electricity networks, increase the

---

<sup>11</sup> Law of 9 June 2023 amending: 1° the amended Law of 1 August 2007 on the organisation of the electricity market; 2° the amended Law of 1 August 2007 on the organisation of the natural gas market. (Journal Officiel du Grand-Duché de Luxembourg - Mémorial A - N° 288 du 9 juin 2023)

resilience of the electricity system or generally support the implementation of the objectives set out in the integrated national energy and climate plan.

#### **4) Obligations for suppliers**

From 2026, the technical procedure for changing supplier or aggregator must be completed within a maximum of twenty-four hours from the moment the request was received by the relevant system operator.

Suppliers supplying more than 15,000 end customers must offer their customers the option of entering into a dynamic pricing electricity contract and inform end customers of the opportunities, costs and risks associated with such a contract.

#### **5) Ancillary activities of system operators**

A new provision concerns the ancillary activities of network operators. The Institute may thus be called upon to decide on a system of third-party access and a tariff structure applicable to the beneficiaries of the ancillary activity in question. The exercise of an ancillary activity by a network operator is subject either to prior authorisation by the Institute or to prior notification to the Institute.

#### **6) Public charging infrastructure**

When the task of operating the public charging infrastructure is carried out by the network operators and in the event that there is a real and serious interest in taking over the existing public charging infrastructure, including the assets acquired and the contracts in progress, with a view to carrying out the public service task of operating the public charging infrastructure at a reasonable cost and in good time, the Minister responsible for energy launches a procedure for awarding a concession for the task of operating the public charging infrastructure. As part of this procedure for awarding the concession, the Institute is called upon to examine all of the conditions linked to the awarding of the concession, including the procedures for awarding the concession agreement or the concession agreement itself, in order to avoid any obstacles to genuine and serious competition.

#### **7) Ten-year network development plan**

Each transmission system operator and distribution system operator must draw up a ten-year development plan for its network, which is updated at least every two years. The plan provides information on planned and foreseeable investments to maintain, renew, reinforce and extend the network, whether these are network operator or third-party projects, and specifies the costs budgeted by the network operator for each measure. The Institute's powers have been extended, in particular with regard to the obligation to organise a public consultation on the ten-year extra-high voltage development plan.

#### **8) Centralised energy data platform**

The law of 9 June 2023 clarified the transmission system operator's existing obligations regarding the creation of an IT platform for energy data. The platform, known as "Leneda", is a centralised data platform that will serve as a central reference directory, acting as a single platform for data exchange and providing centralised management of market communication.

#### **9) Customer protection**

The law of 9 June 2023 strengthens the rights of customers in their contractual relations with suppliers, in particular by specifying the pre-contractual information to be provided, as well as the information and elements of the supply contract itself, especially in the event of changes to contractual conditions and prices or price formulas. In addition, billing and access to consumer information are specified with a view to strengthening consumer rights. More information on the changes can be found in chapters 2.5.1.2 and

3.4.1.2 of the full 2024 report on the year 2023 named “Rapport sur les activités et sur l’exécution des missions de l’Institut” available here:

<https://web.ilr.lu/FR/Professionnels/Electricite/Commun/Publications/Rapports-et-etudes/Pages/default.aspx>

- [Rapport 2024 sur les activités et sur l’exécution des missions de l’Institut relatif à l’année 2023](#)
- [Infographie sur l’évolution des marchés 2023](#)

Translated with the help of DeepL.com