

# Three strategic focus areas to facilitate an accessible, affordable and diversified energy transition in Brussels



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# 1. INTRODUCTION

## Foreword by the Chairwoman

### ENERGY, A MAJOR CHALLENGE WE CAN RISE TO TOGETHER

Already essential to our daily life, energy is now more than ever a crucial issue! Our world is changing at great speed. And these changes require us to collectively address universal challenges such as climate change. We need decarbonised energy to achieve carbon neutrality by 2050, and sufficient and affordable energy to make it accessible to all, regardless of income level.

To meet these needs, the energy transition is already underway. And this for all Brussels customers. The energy crisis we are experiencing underlines daily the importance of focusing our efforts on this transition, but we have not waited until now to start making changes. Indeed, **for several years now, the capital's key players have been working to build the Brussels energy landscape of tomorrow, within the framework of the objectives set at the regional level.** The situation today is accelerating this transition, in particular by pushing the authorities to increase their efforts.

Among the key players in the transition, Sibelga plays a crucial role, both as the inter-municipal operator of the natural gas and electricity distribution networks in Brussels and as a partner of the public authorities. This book highlights the strategic areas where the company will focus its energy and resources in the coming years, without neglecting its essential day-to-day service.

No one can predict with certainty what Brussels' energy landscape will look like in 10, 20 or 30 years. But we are already laying the foundations for an inclusive energy transition for all Brussels customers!

Faouzia Hariche  
Chairwoman of the Sibelga Board of Directors



## Foreword by the General Manager

### SIBELGA, A CRITICAL LINK IN THE ENERGY CHAIN

The Brussels Region has adopted an ambitious roadmap for climate objectives and carbon neutrality: a shift away from thermal mobility, renovation of buildings, and the end of heating oil, to name but a few. In order to make these happen, Sibelga has to deal with the unique characteristics of Brussels: more than a quarter of households experiencing energy poverty, limited competition between energy suppliers, energy-intensive buildings requiring major renovation, urban and architectural constraints, low local energy production and the daily influx of large numbers of commuters likely to be using electric vehicles needing to be recharged at work, on the Sibelga network.

### In the short term, Sibelga wants to meet 3 major challenges:

- Facilitate the local production of renewable energy, in particular through energy communities;
- Ensure the transition to sustainable mobility, which will be largely electric;
- And, last but not least, to prepare the future of heating, a challenge that is all the more complex in terms of network use, with customers all heating their homes at the same time. The future seems to be moving towards an energy mix, a marriage of electrons and green molecules.

As a public service company, our mission is to ensure that every customer in Brussels has reliable and quality access to energy. We do not work alone: **we are a link in a value chain with, in particular, energy producers and suppliers upstream and customers downstream.** Together with the regulator, Brugel, Sibelga takes care to factor in all of these stakeholders. In addition, we are increasingly taking on the role of energy advisor: facilitating access to new services, supporting governments and customers, and ensuring the neutral transmission of the necessary data and information to each player. All this while maintaining the efficiency of our infrastructure, focusing on innovation, and striving for technical and financial excellence. In this way, we aim to lay the foundations for an energy transition that is accessible and affordable for everyone: a mission that our 1,100 employees are proud to work towards every day.

These elements feed our strategy and are at the origin of the three focus areas that you are about to discover in these pages. Let's go! **The energy landscape of tomorrow is already being shaped today...**

Inne Mertens  
General Manager Sibelga

# 2. BACKGROUND

The strategic directions adopted by Sibelga for the coming years align with the unique context of a rapidly changing energy sector. The Brussels Region presents a number of challenges, but also great opportunities.

In line with the European goals of **carbon neutrality by 2050 and the reduction of greenhouse gas emissions by at least 55% by 2030**, the Brussels-Capital Region has set clear objectives for the energy transition.

First of all, it places particular emphasis on **mobility** with a move away from thermal vehicles and the finalisation of the deployment of a network of 11,000 public charging stations (i.e. 22,000 charging points) for electric vehicles by 2035.

The **renovation of buildings**, which account for more than 50% of greenhouse gas emissions and almost 75% of energy consumption in Brussels, is also a priority. This is reflected in the RENOLUTION strategy, which includes an exceptional support scheme to achieve average housing consumption of 100 kWh/m<sup>2</sup>/year by 2050.

At the same time, the development of **energy communities** should make it possible to further develop the share of solar energy in the energy mix and, in this way, to promote a better rate of local self-consumption.

Depending on developments, these objectives may be subject to revision. Thus, the Air Climate and Energy Plan has gone from a 40% to a **47% reduction in greenhouse gas emissions by 2030** in order to tackle the climate emergency. In addition, public authorities are called upon to set an example by meeting the targets set within shorter time frames. As a result, all non-residential public buildings in Brussels must be carbon neutral by 2040.



## 2.1 The value chain under the microscope

Sibelga does not act alone. Its activities are integrated in a true energy value chain that includes, in particular, upstream energy suppliers and producers and downstream consumers. Each link in this chain has an indispensable role to play in the energy transition. And, with the emergence of new services, new actors, such as energy community managers, are joining it.

Of course, there is no such thing as a typical Brussels consumer: from the early adopter, who owns an electric car and charges it with their own solar installation, to customers who simply want to heat or light their homes, there are a variety of profiles with different needs and means. All will have to participate in the energy transition and benefit from the same quality of service.

### a) From consumers to actors

“The best energy is the energy we don’t use.” Indeed, in order to move towards a low-carbon society, consumers are invited to consume better by playing an active role, at their own level, in terms of electricity production, heating or mobility.

Private individuals now have solar panels and generate some of their own energy. An increasing number of Brussels customers have joined this innovative and collaborative scheme: the energy communities. In this way, they collectively benefit from locally produced renewable electricity at a lower cost.

In addition, in order to make the most of the energy produced by solar panels, consumers and energy communities will benefit greatly from the installation of storage batteries. In this way, they will be able to minimise the amount of energy purchased from commercial suppliers.

Faced with rising prices and climate change, more and more consumers are looking for new, more economical and more eco-friendly heating solutions, including heat pumps, green gas, etc.

The way we travel is also changing: multi-modal travel, shared transport and soft mobility are developing in cities. Electric charging stations and vehicles are now part of the urban landscape. Moreover, thanks to digitalisation tools and the smart energy meter, customers are now able to control and even optimise consumption according to their energy production, reducing their bills. The passive consumer is increasingly becoming an active consumer. The result: greater peace of mind and energy savings that will be increasingly necessary!

### b) Future-oriented network management

In the past, a few power stations were exclusively responsible for production, and energy only flowed from these power stations to consumers; today, decentralised, renewable and, therefore, intermittent energy production has been added to the landscape.

Decentralised generation means two-way flows, and an increased risk of congestion and imbalance between generation and consumption on the electricity grid. These risks are further increased by the acceleration of electrification: from electric cars to heat pumps, the demand for electricity is growing.

In this new energy landscape, consumers will increasingly be encouraged to play an active role by shifting their consumption to times when energy is abundant. Their consumption patterns will become less predictable and there is a risk that the market – at the global level – will encourage behaviour that runs counter to the constraints of the distribution network at the local level.

Electrical infrastructures must be ready and adaptable to meet the needs of tomorrow and effectively manage these flows. The smart grid starts by increasing the observability of the grid to know the energy flows. This observability, made possible by smart meters and other measurement systems, will make it possible to strengthen the grid in a targeted manner. Incentivising customer flexibility will avoid residual congestion.

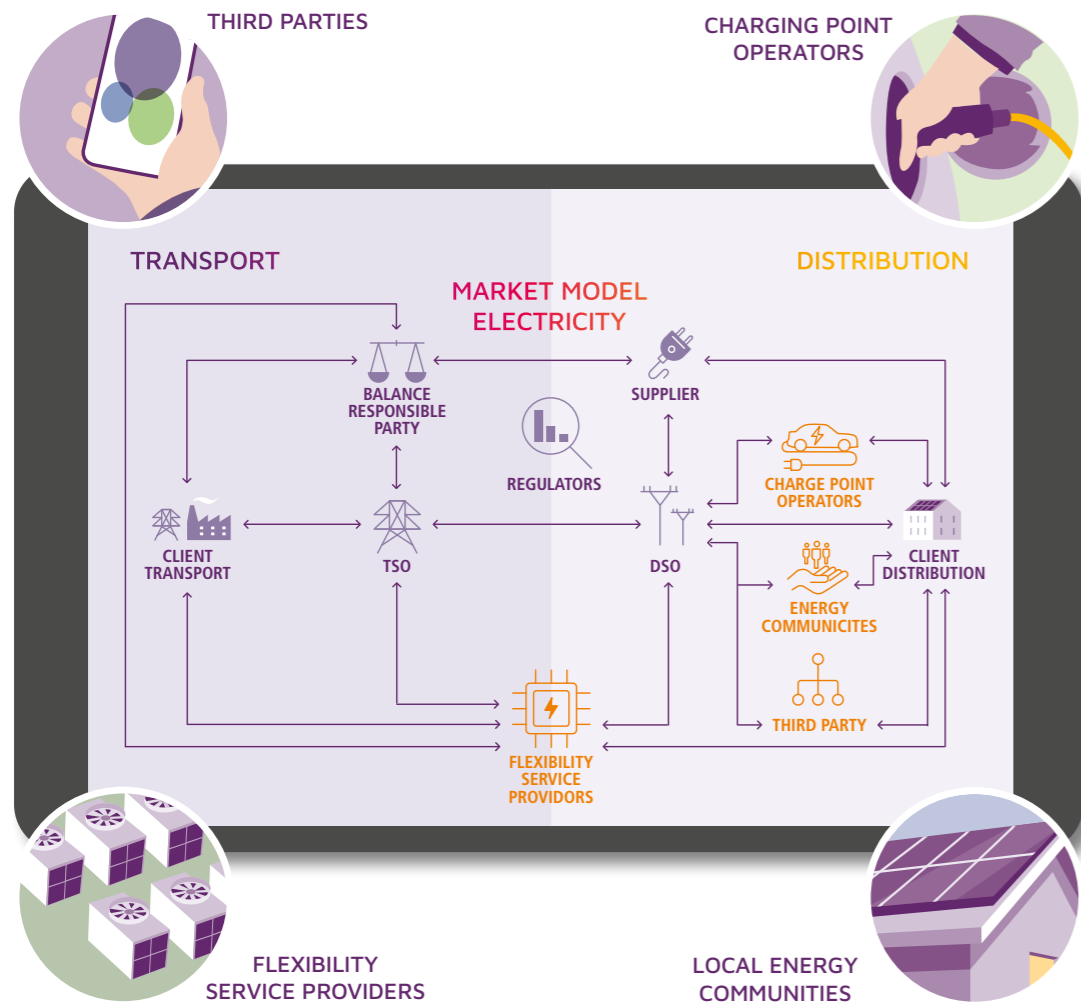
At the same time, **green gas** (biomethane, synthetic methane and hydrogen) and heating networks will emerge as complementary solutions to the electricity network to support a part of the industrial, heating and mobility needs. Ultimately, all of these solutions must be adapted to local characteristics, at the neighbourhood level.

### c) An energy market full of opportunities

With these developments, new opportunities and trends are emerging in the market: new energy service offerings are being made to customers by new players.

For example, flexible services allow service providers to pay customers to change their consumption times. For example, community managers propose the pooling of production resources within buildings. They coordinate the community by managing the billing of locally produced energy and the optimisation of collective self-consumption. Other services are being developed for recharging electric vehicles and the energy management of buildings.

The common denominator between these new services and market players? They rely on the use of data, which must be made available while respecting privacy and the role of each market player.

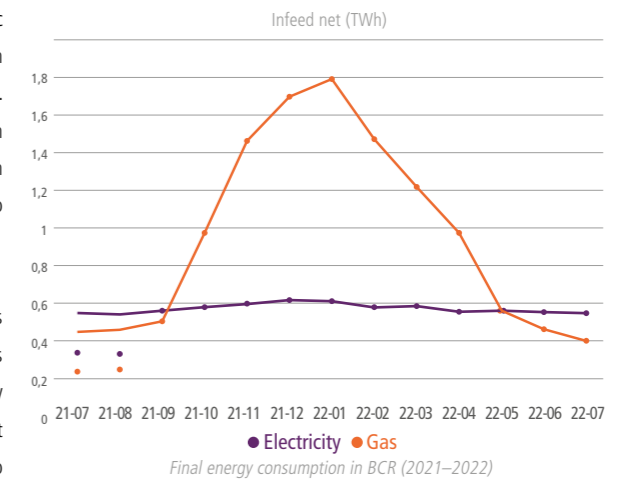


## 2.2 The uniqueness of Brussels

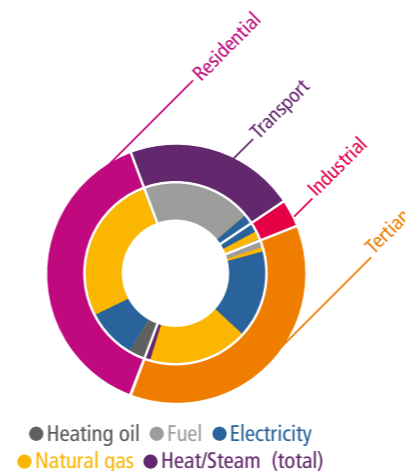
Highly urbanised, multicultural, home to numerous companies and institutions, our capital region has many special features. These unique features have an impact on the challenges of local energy production, the transition to sustainable mobility and the question of the future of heating:

- **An exclusively urban configuration:** the Brussels building stock is dense and its verticality limits the development potential of solar panels, even though it is not yet fully exploited. And wind power is difficult to envisage in an urban environment. To date, 3% of electricity consumption is self-generated in Brussels. Moreover, the city brings its own challenges when it comes to the implementation and monitoring of building sites and works.
- **Increasing electrification of mobility:** encouraged by public policies, electric mobility is developing rapidly in Brussels. With it comes new needs and an increase in demand for electricity. Transport currently accounts for 21% of final energy consumption in Brussels. In addition, **400,000 commuters** travel through Brussels, half of whom travel by car. Many Brussels residents do not have their own garage.
- **Underperforming construction:** Brussels has many old buildings that were not built to current energy performance standards and are in need of major renovation. More than 70% of energy consumption in Brussels is related to buildings. Moreover, almost 60% of inhabitants are tenants. They are therefore less likely to be able to carry out energy efficiency work or invest in renewable energy production units.
- **The future of heating is still uncertain:** unlike the demand for electric mobility, where charging can be shifted to other time slots, **the demand for heating cannot be postponed.** Indeed, everyone wants their heating on at the same time. This means that the network will be unable to support

wholesale electrification of heating systems, as the heat demand represents 50% of the energy consumption in Brussels. This is in addition to the seasonal nature of heating use. What is more, the development potential of heat pumps is limited by several factors, such as the performance of a heat pump in a poorly insulated building. Sibelga will therefore analyse all possibilities, while considering **a mix of green molecules and electrons.**



- **A high at-risk-of-poverty rate:** according to the King Baudouin Foundation's 2022 survey, more than a quarter of Brussels households live in a situation of energy and water poverty. The aim will be to leave no one behind.





## 2.3 An evolving role

Our mission is to ensure reliable and quality access to energy for all customers in Brussels. In order to fulfil this mission, Sibelga wants to become a true partner in an energy transition that is accessible and affordable for everyone.

In order to achieve this vision, some of the roles we perform are being reaffirmed while others are being expanded and diversified:

### 1. Network manager

Ensuring the distribution of gas and electricity to all customers in Brussels and managing municipal street lighting is our core business! On the one hand, we want to improve the quality of our services to our customers by limiting the impact of roadworks, breakdowns and energy interruptions, thanks to an (increasingly) smart network. On the other hand, as the world moves towards a decentralised and decarbonised model, it is crucial to prepare our infrastructures for the needs of tomorrow.

### 2. Market facilitator

New players have arrived on the energy market since the liberalisation of the energy market and the start of the energy transition. All these actors need data, advice and support. As a "neutral" data manager, Sibelga's role is to collect, validate and transmit the data, while sharing its expertise. In this way, we make life easier for the various market players and enable them to perform their role.

### 3. A partner of public authorities

On the one hand, we are driving the implementation of Brussels' energy policies in the field of social protection. On the other hand, we help public authorities through the "Click" programmes to organise, support and boost their energy efficiency, renewable energy production and sustainable mobility projects.



# 3. OUR STRATEGIC FOCUS AREAS

To ensure reliable, high-quality access for all Brussels customers and to move towards an energy transition that is accessible and affordable for everyone, Sibelga has set itself **three strategic focus areas**. They define the priorities in the actions to be carried out in order to stay on course and achieve its objectives:

- Focus 1: Integrating new uses in networks and markets
- Focus 2: Facilitating the energy transition for all customers
- Focus 3: Internal transformation for ever greater efficiency

Each strategic axis is the subject of a **roadmap** which defines key stages for its achievement. To carry out these steps, Sibelga applies a 3-step methodology:

1. An **exploration** phase, which allows us to understand technological and sectoral developments, as well as customer needs, through studies or pilots on our site, which acts as a living lab for the energy transition. This is the case, for example, with the charging stations on street lighting, which were first tested on the Sibelga site.

2. A **transformation** phase during which the adaptation of Sibelga's tools, services and processes is prepared and planned by managing a portfolio of projects.

3. Finally, the new features are integrated into Sibelga's activities during the **operational** phase.

On the following pages you will discover the three areas on which Sibelga will focus in the coming years. Each of these focus areas is illustrated by concrete projects. Please note that this is not an exhaustive overview of all the actions undertaken and avenues explored by Sibelga, but a selection of some telling examples.



# 3.1 Focus 1: Integrating new uses in networks and markets

In the wake of the energy transition in Brussels, we face three major challenges: facilitating the production of renewable energy, ensuring the transition to sustainable mobility, and preparing the future of heating in Brussels.

In order to meet these challenges, Sibelga must adapt its infrastructure so that it can support all the new uses that will emerge in the decades to come. It should be remembered that investments in the network are planned for the long term. On average, they take about 40 years! **Our challenge is therefore to anticipate changing needs in order to make the right choices from a technical and financial perspective, taking into account all of Brussels' customers and stakeholders.** On the other hand, Sibelga must put in place market mechanisms to **help balance the network and reduce the risks of congestion caused by the acceleration of electrification** in the field of mobility and heating, as well as the increase in decentralised production. Thanks to these mechanisms, the end user also plays their part in the transition and in managing this balance.

## In a nutshell

- For a future-proof infrastructure:

- Sibelga anticipates: digital twin, task forces, the exploration of heating solutions.
- Sibelga measures: the deployment of intelligent equipment such as smart meters, etc.
- Sibelga invests: in targeted development plans

- For an increasingly active market:

- Sibelga is developing an appropriate tariff structure
- Sibelga is helping to develop new flexibility services
- Sibelga supports the development of energy communities in Brussels

## On the network side

### 1.1 DEFINING FUTURE SCENARIOS

No one can predict exactly what the network will look like in 10, 20 or 30 years. But tools are now available to analyse several likely scenarios and their impacts on the network. The use of a **"digital twin"** allows us to simulate the impact of different scenarios on the network. What would happen, for example, if the share of electric vehicles in Brussels tripled? Or if heat pumps were to flourish in certain areas? What would be the impact on the network and what changes would we need to introduce?

**Sibelga participates in task forces, in collaboration with other Brussels stakeholders, in order to anticipate all possible developments, to consider the most appropriate solutions and, ultimately, to shape the scenarios of the future.**

As regards the **future of heating**, Sibelga is studying all possible avenues. The massive renovation of the Brussels building stock to increase its energy performance and reduce heating needs will be the first step in decarbonising heating. Secondly, a significant share of heating needs can be met using heat pumps because of their high energy performance when the building is energy-efficient and adapted. Finally, for residual heat needs, Sibelga is analysing the hybrid heat pump solution combining a heat pump and a gas boiler

and the potential of green gases (biomethane, synthetic methane and hydrogen). Indeed, distribution infrastructures already exist and heating systems in homes are more easily adaptable to these new gases where certain technical constraints, such as lack of insulation or the heating system, will not allow efficient electrification. Green gases could also be used as an alternative to natural gas for district heating installations, central boilers or heating networks, a solution that Sibelga is also exploring. It should be noted, however, that these green gas solutions will require the development of a global market ensuring prices and volumes.

More specifically for **green hydrogen**, a gas produced by electrolysis from water and electricity produced by renewable energy, Sibelga is analysing the feasibility of reusing the natural gas distribution network for hydrogen distribution and the potential constraints or adaptations required via the H2GridLab project which launched in 2020. In collaboration with Fluxys, the gas transmission system operator, Sibelga is also analysing the creation of a hydrogen backbone in Brussels, which could initially be required for mobility, logistics and industrial needs. In any case, green hydrogen will certainly not be the only solution, but it could be part of an energy mix of **electrons and green molecules**. A diversification of heating solutions will allow an affordable and accessible energy transition for all by capitalising on existing networks.







### 1.2 STRENGTHEN NETWORK OBSERVABILITY

Access to **real-time data is crucial for increasingly dynamic network management**. Sibelga has deployed a series of **smart assets** for several years now: sensors, telecontrol, remote control and telecommunication equipment and smart meters.

In addition, we operate specific systems and software that allow us to check the **network topology** at all times. Sibelga was a forerunner in the field of DMS (Distribution Management System), a system that allows the network topology to be updated in real time with all the technical characteristics of the assets as work is carried out and operations are performed in the field.

In concrete terms, a DMS has been operational for several years for the Brussels high-voltage network, and since autumn 2022 the functionality has been extended to the low-voltage network. This distinguishes us from other Belgian distribution system operators and is of great interest internationally, where numerous pilot projects and studies are being carried out on the subject.

In the future, smart meters will play a crucial role in the smart grid. In the event of power cuts, it will also be possible to access meters remotely and thus speed up the diagnosis of the fault without waiting for calls from customers.

### 1.3 SET TARGETED DEVELOPMENT PLANS

Developing the networks involves substantial investment amounts that must be considered in the long term, taking into account the evolving needs of all Brussels customers over the next 30 to 40 years. To achieve this, Sibelga can rely on the two points described above: the analysis of different scenarios and of all the available data concerning its network, energy flows, current and voltage.

The Brussels electricity network is robust and well meshed, and is sufficiently large to meet our growing electricity needs in the coming years. But in the medium term, reinforcements and 400V development will certainly be necessary.

However, in view of the significant cost to the community, these should not be the only solutions implemented to meet the needs and balance out energy demand. Enabling customer flexibility is one alternative, as is the establishment of technical regulations governing the power made available.

## On the market side

### 2.1 RETHINKING THE TARIFF STRUCTURE

A new tariff period starts in 2025. Under the aegis of the regulator Brugel, discussions will be held on revising the tariff structure (introduction of a capacity component, adaptation of time slots, etc.). Ultimately, the aim will always be to encourage customers to adjust their usage habits to better align with the production of renewable energy and network availability. In parallel, the development of **implicit flexibility**, via price signals, represents an additional motivator to help balance the load and promote self-consumption (possibly by means of domestic batteries), making it possible to **avoid local congestion** and to more easily include low-voltage residential customers in the flexibility schemes. For example, consumers will be encouraged to charge their electric vehicles at night, when the grid load is lower. **Indeed, with the energy transition, each energy consumer, whether professional or private, will be required to do their bit to actively or passively help balance the load or to avoid congestion.**

This need is all the more important as some uses cannot be postponed, in particular heating. When it's cold, everyone wants to warm up at the same time!

### 2.2. EXPAND THE POTENTIAL FOR FLEXIBILITY

Flexibility is the ability of a consumer to shift consumption to other times of the day in order to help maintain the balance between generation and consumption that is essential for the functioning of the electricity network and to reduce the risk of congestion.

This flexibility has been **actively** managed for several years by the Belgian transmission system operator, Elia, via flexibility services offered to large high-voltage customers for balancing purposes at federal level. For example, some customers agree to reduce their consumption based on an external signal to balance the grid in exchange for financial compensation. Over time, these services continue to develop and diversify. In the coming years, a framework will be developed by the distribution and transmission system operators to expand the potential for explicit flexibility for balancing needs among low-voltage connected customers.

Analyses are underway to ascertain how this explicit flexibility could also be used by Sibelga to reduce the risk of congestion on low voltage. For example, this could be achieved by limiting the withdrawal capacity of charging stations for a limited period. And this, no doubt, without financial compensation to avoid windfall effects.

However, where the potential for load shifting is limited, the network will need to be reinforced. For this to happen, the precise criteria for reinforcement still need to be defined.

### 2.3. SUPPORTING ENERGY SHARING

Now, more than ever, it is time to work **together**. The deployment of **energy communities** in Brussels, to which Sibelga is contributing its expertise, is a perfect illustration of this.

The energy communities, thanks to the benefits they bring participants, will develop and thus increase the share of renewable production throughout Brussels. In addition, community members will try to maximise their self-consumption and thus help to avoid congestion or imbalance between supply and demand. The community is therefore a **tool for collective flexibility**. But energy communities will also be able to go beyond sharing energy production. Collective storage facilities and shared mobility are also part of a range of possible services and will create a real social eco-system by creating links between neighbours.

The most recent ordinance on the organisation of the electricity market in the Brussels-Capital Region described a number of ways in which these communities might work. The basic principle remains the same: to **share the electricity generated** (such as solar panels) **between several consumers**. Energy-sharing is made possible using **smart meters, which provide the data required to correctly bill** the various users.





## 3.2. Focus 2: Facilitating the energy transition for all customers

It is a fact: the energy transition concerns everyone. Regardless of our income, our age, our socio-professional profile: we all consume energy and will experience the transformation of the energy landscape first hand.

As such, Sibelga wants to give all Brussels customers and the public authorities the opportunity to play an active part in this development and to promote access to affordable energy for all.

In this way, Sibelga shares its **expertise, advises and facilitates** access for all Brussels customers to the tools supporting the energy transition: customer service available to all, simplification and digitalisation of customer paths, gradual roll-out of smart meters, energy communities, etc. These services are based on the **use of data** collected, managed, and shared with the relevant players by Sibelga.

At the same time, Sibelga, in close collaboration with the Brussels Region, is developing **services dedicated to public authorities** in order to support them in achieving the objectives set by the Region in relation to energy transition and greenhouse gas reduction.

In order to carry out our mission and achieve our targets, Sibelga is part of a dynamic Brussels ecosystem that is conducive to **synergies and the establishment of partnerships**. As a trusted partner, we work closely with a wide range of stakeholders such as other energy market players, the regulator, public authorities, law firms and academia.

### IN SUMMARY

For an inclusive energy transition:

- Smart meters are driving the energy transition
- Availability of consumption data
- A truly inclusive transition
- Facilitate access to sustainable mobility

To support public authorities:

- Renoclick programme management: a one-stop-shop for efficient and sustainable public buildings
- Accelerate the greening of government mobility in Brussels

## For all Brussels customers

### 1. SMART METERS: DRIVING THE ENERGY TRANSITION

**Data is essential** to manage two-way energy flows on the grid and target investments, to optimise energy consumption and participate in energy communities, and to enable the emergence of energy services.

In this context, the deployment of smart meters in Brussels and the remote reading of the data is a crucial step in the energy transition.

Sibelga has drawn up a roadmap for gradually equipping all Brussels residents with the aim of optimising the customer experience, minimising costs, and maximising societal benefits. This will be done through a proactive awareness campaign, with the aim of **deploying smart meters in 80% of the country by 2030**. This deployment would be greatly facilitated if the customer's express consent to the activation of remote communication was waived.

For customer services and network management purposes, Sibelga will use the data in strict compliance with the regulations on the protection of personal data (GDPR) without any commercial purpose, and in a totally secure management system.

### 2. SHARING OF CONSUMPTION DATA

In addition to the deployment of smart meters, data sharing will be crucial, both for network management and for market players and end customers.

It is essential to increase the reading frequency and the accuracy of the data.

Moreover, in the context of the energy crisis, allowing customers more regular insight into their consumption is vital so that they can have a more accurate picture of their usage and so be able to anticipate their energy spend. For example, in partnership with the CPAS of the City of Brussels, Sibelga developed an energy monitoring application in 2021 as part of a pilot project for disadvantaged households.

In parallel with the accelerated roll-out of smart meters, this service will initially be extended to residential customers and eventually completed with a portal.

### 3. A TRULY INCLUSIVE TRANSITION

More than a quarter of households in Brussels live in fuel poverty: a reality that is our key concern. In collaboration with the social services centres, Brugel, and the energy suppliers, Sibelga actively promotes the protection mechanisms.

At the same time, we trust that the energy communities, which are true channels for solidarity, **will be able to foster the inclusion of disadvantaged customers** in the journey towards the energy transition.

Indeed, these innovative and collaborative projects allow Brussels customers to make the most of renewable energy and, as such, fully support carbon neutrality, whatever their situation.



### 4. FACILITATING ACCESS TO SUSTAINABLE MOBILITY

In 2020, Sibelga was commissioned by the Brussels Government to coordinate the deployment of a network of charging stations for electric vehicles in the Capital. **The aim is for Brussels to have 11,000 charging stations (i.e. 22,000 charging points) accessible to motorists by 2035**. Their deployment started in 2022 with a first batch of 500 charging points and will accelerate in the coming years with a second batch of 1,400 charging points

planned between 2023 and 2024. The aim is to ensure that every customer in Brussels has a charging station near their home, even if they don't own a garage.

Sibelga is also examining the possibility of green hydrogen for mobility and logistics, in collaboration with STIB and other mobility players active in Brussels.

## For public authorities

### 1. RENOCCLICK: A ONE-STOP-SHOP FOR EFFICIENT AND SUSTAINABLE PUBLIC BUILDINGS

Buildings account for more than 50% of greenhouse gas emissions and nearly 75% of energy consumption in Brussels. The RENOLUTION plan, set up by the Brussels Capital Region, is aiming for public buildings to be carbon-neutral by 2040.

To achieve this objective, the public authorities can count on the support of Sibelga. **As a facilitator of the energy transition, Sibelga has been supporting them for several years now in energy efficiency and renewable energy production projects.**

These services for all public authorities have now been brought together in Renoclick, a one-stop-shop, which offers:

- the thorough renovation of buildings;
- roof renovation and insulation;
- the installation of solar panels;
- energy efficiency improvements to technical installations (HVAC);
- consumption monitoring using a tracking tool;
- grouped energy purchases.

### 2. ACCELERATING THE GREENING OF MOBILITY IN BRUSSELS

Through the MobiClick programme, Sibelga supports public authorities in the greening of their fleet. In particular, by setting up a **central purchasing office for the acquisition of zero-emission vehicles** and by installing **charging stations** on their sites.



## 3.3. Focus 3: Internal transformation for ever greater efficiency

At a time when the energy landscape is changing, Sibelga, like all players in the sector, must also roll out internal changes in order to be able to respond to external challenges.

The management of networks, our historical business, is becoming increasingly complex, requiring us to be increasingly agile. The development of smart technologies and the mass of data available to us open up new opportunities to explore and, where relevant, to implement in our organisation.

Optimising our processes, guaranteeing the reliability and security of our infrastructure, systems and data, and continually adapting our organisation: this is the only way we can achieve a technical and economic optimum for the energy transition and continue to offer the best quality of service at the best cost to all our customers. This is for the benefit of all stakeholders involved in the value chain of which we are a part: from Brussels customers to our employees, energy suppliers, partners, other network operators, the regulator and the authorities.

To be able to carry out this transformation, Sibelga must be able to provide the necessary financial, technical and human resources.

### In a nutshell

- Digitalising network management
- Deployment of intelligent street lighting and conversion to LED
- Sharing infrastructures to limit urban congestion

### 1. DIGITALISING NETWORK MANAGEMENT

Sibelga optimises team planning and improves the flow of information between the field and the departments involved in the overall management of the infrastructure and investments.

Digitalisation plays a central role in the new processes. That's why we're continually integrating more innovative features that increase the flow of information exchanged and thus strengthen real-time communication between the field and all our systems. To do this, Sibelga's field technicians have a tablet app that gives them a dynamic view of the network's operating status, enables them to enter all the technical information relating to their operations and to feed back the data collected in situ to our systems.



Bat Light District, Jette municipality

This tool facilitates the sharing of information essential to the management of electricity, gas and public lighting networks. It also improves team coordination, decision-making and activity-planning. As such it facilitates the daily work of Sibelga's teams, improves the safety of our installations and ultimately benefits all Brussels customers.

### 2. SMART LIGHTING FOR THE SMART CITY AND BIODIVERSITY

The accelerated deployment of LEDs and intelligent lighting by 2030 will generate a 30% reduction in the consumption of municipal public lighting. Remotely controllable lights capable of real-time communication will make it possible to better manage public lighting and reduce its consumption, while ensuring the comfort and safety of users and protecting biodiversity.

In addition, Sibelga is exploring several avenues through pilot projects such as **bubble lighting** (sensors can automatically increase the light intensity as users move), **dynamic lighting** (public lighting adapts on the basis of publicly available data such as the traffic situation or the weather) or **coloured lighting that is kinder to urban fauna (bats)**.

### 3. SHARING INFRASTRUCTURE AND LIMITING URBAN CONGESTION

In a highly urbanised region where space is at a premium, Sibelga is constantly considering the best way to optimise its infrastructures and integrate them into the urban environment.

For example, charging points for electric vehicles have already been installed on some street lighting fixtures. This solution is still being tested and unfortunately cannot be deployed everywhere, as a number of conditions must be met. However, it represents a further step towards a less crowded urban space.

In addition, under the impetus of the Region, a fibre optic backbone is being deployed throughout the Brussels territory. On this occasion, Sibelga pooled the fibre network of some 150 km that it had deployed with other public players. The rationalisation of a 964 km fibre network, a key technology for fast data transmission, will support the acceleration of the energy transition.

# 4. SUSTAINABILITY AT THE HEART OF OUR DNA

As a responsible company, Sibelga is committed to an Environmental, Social and Governance (ESG) policy that covers all our activities and projects.

Our policy in this area is based on three pillars:

- **The environment:** Our Environmental Charter states that we conduct our business in a manner that protects and improves the environment, both in our operational activities and in the related activities of our employees, suppliers and end consumers. For example:
  - by 2030, we aim to reduce our greenhouse gas emissions (both direct and from our own electricity consumption) by 50% compared to 2019.
  - we help reduce our customers' emissions, notably through the renovation of public buildings or the deployment of smart meters in Brussels.
  - in all our construction, repair and maintenance activities, we strive to minimise the impact on and inconvenience to Brussels' environment.
- **Social:** Health and safety are basic principles for Sibelga and we are attentive to the well-being and development of our employees. In addition, we engage with all Brussels stakeholders, with projects such as our Energiguide website full of energy advice, technical courses, partnerships and, of course, support for protected customers.

In this way we create added value for society. The well-being and fulfilment of our employees are also priorities. We provide, for example:

- a healthy environment where everyone has a good work-life balance and where every member of staff is involved and sure of their role in the company and the importance of their work.
  - a culture of responsibility, where safety is paramount. Management is the catalyst and communication is key. This pervasive safety culture is also reflected in our safe and reliable gas and electricity infrastructure, which supplies energy to Brussels residents, businesses, and public authorities every day.
- **Governance:** Sibelga has prepared an integrated annual report for a number of years and takes its decisions guided by its ethical charter. Transparency and compliance with regulations are an integral part of our regulated activities in order to gain the trust of our customers and stakeholders.

# 5. THE MEANS TO MATCH OUR AMBITIONS

As you can see, Sibelga is ready to take up the challenges that await it in the coming years and to fully assume its role as a partner in an energy transition that is accessible and affordable for everyone. Let's be clear: **resources are needed to achieve these goals!** And, the resources are required at several levels.

Firstly, **we must have the necessary financial resources to cover our activities**, implement our development plans, continue to explore the future of energy in Brussels and continue to provide a reliable and quality service to our customers. It will be **essential to integrate these data in the development of distribution tariffs for the new tariff period that will begin in 2025.**

Financial means are essential, but they are not everything. **Human resources** are also crucial to the achievement of our goals. **We need people to work in today's and tomorrow's jobs.** In this respect, for several years now, Sibelga has been implementing a genuine policy of attracting, developing, and retaining its employees. It has demonstrated this by taking concrete actions which have earned it **"Top Employer"** status for the last twelve years.



# 6. CONCLUSION: BUILDING THE FUTURE TOGETHER

Never before has the energy sector faced such far-reaching transformations. The transition is underway and the energy landscape is having to reinvent itself at an incredible speed. To achieve this, the Brussels-Capital Region has reaffirmed the objective of carbon neutrality by 2050: our strategy is designed to support the achievement of our ambitions.

In this context, our mission is to ensure reliable and quality access to energy for all Brussels customers. At the same time, in addition to our core businesses, Sibelga is evolving to become a genuine partner in an energy transition that is accessible and affordable for everyone.

In the short term, we want to address three main challenges in Brussels:

1. Facilitate **local renewable energy production**, in particular through energy communities;
2. Ensure the transition to **sustainable mobility**, which will be largely electric;
3. Prepare for the **future of heating** in Brussels: a challenge that is all the more complex in terms of network use because customers all use their heating at the same time.

To do this, our strategy is based on three focus areas:

1. **Integrating new uses** in networks and markets, e.g. by supporting the development of energy sharing, integrating metering tools in the network, and reinforcing the network in a reasoned way, taking into account long-term needs.
2. **Facilitating the energy transition for all**, for example by coordinating the deployment of a network of public charging stations for electric vehicles or by supporting public authorities in renovating their buildings.
3. **Transforming the way we operate** to be ever more efficient: for example, by using innovative solutions, digitising our processes or limiting the urban footprint of our infrastructure.

For Sibelga, it is essential that everyone benefit from an inclusive energy transition. In addition to our employees, we will have to count on the **support of all Brussels customers, who will also be called upon to play an increasingly active role in the energy transition**: by shifting their consumption to the times when energy is available, by sharing the energy they produce within a community or by committing themselves to a transition towards sustainable mobility.

As the saying goes: "Alone we go faster, but together we go further." Sibelga does not act alone, but is part of a **real value chain** with a number of public and private players in society: producers, suppliers, other network operators, the regulator, public authorities, the academic world and consumers. Cooperation and co-creation will undoubtedly be required to develop **innovative solutions** to meet the needs of tomorrow.

In conclusion, the future lies in diversification: diversification of energy sources, through an alliance of molecules and electrons, diversification of expertise and business lines, as demonstrated by the many roles Sibelga has taken on over the years, and diversification of players in the energy market. Together, we are confident, we can build the energy landscape of tomorrow!

# 7. INFOGRAPHICS

## Towards an inclusive, diverse and decarbonised energy landscape

Our energy landscape is changing. The desire to reduce the use of fossil fuels as much as possible encourages the emergence of new elements. Renewable generation units, smart grids, new storage and heating technologies are shaping an energy future in which the consumer will play an increasingly active role.



# Towards an inclusive, diverse and decarbonised energy landscape

**1100** **top EMPLOYER**  
**PASSIONATE TALENTS**  
meeting the energy challenges of today and tomorrow.

**OBJECTIVE**  
**80%**  
satisfaction among residential customers, companies and public authorities.

**CABINET CONTROL**  
**25%**  
of our medium-voltage installations will be remote-controlled by 2027.

**50%**  
**DID YOU KNOW THAT...**  
natural gas currently accounts for half of the total energy consumption in Brussels.

**DEVELOPMENT PLAN 2023-2027**  
3660 connections converted to 400 V every year.

**ELECTRIC MOBILITY**  
**22 000**  
charging points available to motorists by 2035.

**ENERGY COMMUNITY**  
Production and consumption of green energy:  
this green and local energy brings environmental, social and also economic benefits. For ever more inclusiveness!

**SMART METERING**  
**80%**  
of smart meters by 2030. And the provision of a monitoring platform to consume better and less.

**RENOCLICK**  
One-stop-shop programme for more efficient and sustainable public buildings.

**SMART LIGHTING**  
**87 500**  
street lights converted to LED and smart lighting by 2030.







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