

# Annual report 2022





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# MESSAGES FROM THE CHAIR AND THE CHIEF EXECUTIVE OFFICER

A reform of the Belgian law on nuclear provisions was passed by Parliament on 7 July 2022, promulgated and sanctioned on 12 July 2022. In particular, it stipulates that the Board of Directors must include three independent directors (SYNATOM previously had two), from whom the Chair must be chosen. At the Extraordinary General Meeting on 30 January 2023, Cécile Flandre was appointed Chair of SYNATOM's Board of Directors, succeeding Didier Engels.

This brings an opportunity for a cross-interview between the Chair and the Chief Executive Officer.

## Q: What are the first lessons you've learned about SYNATOM since you took office?

**CF:** SYNATOM is a unique company in the Belgian landscape, given the varied nature of its missions, on the one hand technical (with the management of the front-end and back-end stages of the nuclear fuel cycle) and on the other financial (with the creation and management of major nuclear provisions), characterised by excessively long commitments spanning several decades. The Company is overseen by an ad hoc body, the Nuclear Provisions Commission (NPC), and operates within a regulatory framework that was modernised in 2022, notably to

incorporate more ambitious objectives in terms of governance, and to secure the financial management of nuclear provisions. SYNATOM worked diligently and professionally to meet the new requirements on time, both in terms of governance and financial management. I appreciate the constructive dynamic that drives SYNATOM, its management and its Board of Directors, which is reflected in the quality of the issues brought before the Board to enable it to take the appropriate decisions.

## Q: What do you remember about 2022?

**CF:** 2022 corresponds to the outbreak of the war in Ukraine, with dramatic human, environmental and economic consequences. This war has also triggered a major energy crisis, amplified the inflationary phenomena that appeared in 2021, and further degraded supply chains already damaged by the Covid period, all of which has had an unfavourable impact on financial market performance. Logically, these events weighed on SYNATOM's investment performance. However, during the year, the company continued to work assiduously to strengthen the governance and management of its investments, and to deploy back-end activities.

**DS:** The final shutdown of Doel 3 at the end of 2022 and of Tihange 2 at the beginning of 2023 marks the start of intensive handling and transfer of spent fuel assemblies at both sites. Intense efforts by SYNATOM and its suppliers have resulted in the delivery of the «first-of-a-kind» of major orders for new storage casks from our three suppliers. With regard to fuel supplies, 2022 saw the end of historical contracts, in the legal context of the shutdown of power plants in 2025.

**CF:** On 18 March 2022, the Belgian government announced its decision to modify its energy policy in view of the unprecedented geopolitical situation, and in so doing asked ENGIE to extend the operational life of the Doel 4 and Tihange 3 reactors by 10 years. On 21 July 2022, ENGIE and the Belgian government have signed a non-binding letter of intent to assess the feasibility and conditions of such an extension. The letter of intent lists a number of indissociable conditions, including a cap on liabilities and future costs associated with nuclear waste and spent fuel management. These terms were specified on 9 January 2023 in «heads of terms», with the ultimate aim of signing binding transactional documents by 30 June 2023. SYNATOM is not involved in the discussions between ENGIE and the Belgian government.



Cécile Flandre, Chair

**Dimitri Stroobants,**  
CEO



**DS:** SYNATOM's activities in 2022 continued within the current legal framework of the scheduled closure of power plants by 2025 at the latest, leading to an increase in activities in the back-end sector and a sharp rise in investment activities through its subsidiaries. Operations relating to the supply of enriched fissile materials have been reduced to the final execution of existing contracts.

**CF:** 2022 was also marked by the preparation of the triennial reassessment of provisions for plant dismantling and spent fuel management.

**DS:** The outcome of this review, under the supervision of the NPC, is expected in the second quarter of 2023. Pending its final opinion, SYNATOM has, as a precaution, booked an increase in provisions of 2.9 billion euros, resulting from comments made by the NPC at the end of 2022 on the file submitted by SYNATOM in September 2022.

**CF:** Also in 2022, the accelerated repayment of loans granted by SYNATOM to ELECTRABEL, in line with the latter's commitments as set out in the law of 12 July 2022, contributed to a sharp increase in the amount of cash to be invested for the very long term in relation to nuclear provisions.

**DS:** The significant increase in funds under management, the very long investment horizon for nuclear provisions and the macro-economic environment resulted in a new ALM (Asset Liability Management) analysis, which has led to an update of the investment policies for dismantling and back-end activities (which incorporate ESG principles), under the supervision of the NPC.

## Q: What major challenges have you identified for 2023?

**CF:** SYNATOM will continue to step up its financial investments, in line with its investment policy and ESG ambitions, and the delivery rate of its waste management casks. It is also preparing for the possible extension of Doel 4 and Tihange 3, provided that ELECTRABEL requires to enter into new fuel delivery contracts with its suppliers.

**DS:** SYNATOM could indeed be called upon to conclude new contracts for the purchase of uranium in its various forms in a tense market context, as Western energy players turn away from Russia, which - like for gas - is a major player in the uranium market.

**CF:** At this stage of the negotiations between ENGIE and the Belgian government, there are no known major consequences for the Company's activities. Should binding transactional documents be signed between ENGIE and the Belgian State in 2023, with an impact on SYNATOM's activities, it goes without saying that we will do everything in our power to comply.

**DS:** In conclusion, I would like to add that SYNATOM will continue, as in the past, to maintain a rich and constructive dialogue with its stakeholders, and to be extremely vigilant about the implementation of nuclear waste management solutions by the Belgian authorities, whose delay has resulted in additional costs for SYNATOM estimated at 0.9 billion euros to date.

# FRONT-END OF THE NUCLEAR FUEL CYCLE

SYNATOM's activities focus on the nuclear fuel cycle, from front-end to back-end, as well as the management of nuclear provisions and related investments, governed by a strict legal framework under the supervision of the Nuclear Provisions Commission (NPC).

In the front-end part of the cycle, the ore is either **extracted** mechanically in underground or open-pit mines, followed by a chemical process of leaching or is directly leached in-situ, a chemical extraction in the mine. These steps are followed by **concentration** of the ore in the form of a bright yellow powder, called «yellow cake».

The latter will undergo several refining operations to arrive at **conversion** into uranium hexafluoride.

The next step is **enrichment**, which, through a gas centrifugation process, increases the proportion of the isotope 235 present in natural uranium (0.7%) to values between 3 and 5%.

On a global scale, the main operators in these three sectors are few in number. This is particularly true for conversion and enrichment services. The war in Ukraine is further restricting the market, with Western electric utilities gradually turning away from Russian supplies.

The enriched uranium is then sent to the fabrication plants, which **manufacture** nuclear fuel assemblies. This last step is the responsibility of ELECTRABEL.

## End of contract

Against the backdrop of the legal shutdown of Belgium's nuclear power plants, SYNATOM continued to optimise its management of raw material inventories and associated service contracts. Thus, in 2022, it closed its last contracts covering its conversion service requirements. The last deliveries of enrichment services will take place in 2023, bringing the last contracts in force to a close. The penultimate shipment of enriched fissile material to the fuel assembly manufacturer took place in December. A final delivery took place in January 2023.

This latest delivery brings to an end SYNATOM's historic contracts and over 50 years' presence on the uranium markets.

## Government decision

Against the backdrop of the war in Ukraine, which has generated a major energy crisis in Europe, the Belgian government decided in March 2022 to extend the operation of two nuclear reactors (Doel 4 and Tihange 3) for a further 10 years beyond 2025. Negotiations then began between the government and ENGIE, with a letter of intent signed in July 2022 and a non-binding agreement in principle in January 2023. Discussions are still ongoing with a view to reaching a binding agreement in June 2023.

Notwithstanding the ongoing optimisation of its inventories through the flexibility offered in its historical contracts, SYNATOM will have a surplus stock at the end of 2025. In view of the nuclear extension, SYNATOM has decided to keep them and has initiated exploratory discussions to find out about the conditions for potential new contracts. It should be pointed out that SYNATOM faces an extremely tight market, and that the usual timetable for contracting and disposing of materials is also extremely tight, given the negotiations between ENGIE and the Belgian government that are still ongoing.



**Receipt of fresh fuel assemblies at Doel nuclear power plant**

# BACK-END OF THE NUCLEAR FUEL CYCLE



The back end of the nuclear fuel cycle covers all actions taken to ensure the safe management of nuclear fuel after its period of use in reactors. They take place in three stages:

1. The spent fuel from the Doel and Tihange units will remain in the deactivation pools for a minimum period of 3 to 5 years.
2. Intermediate storage at the Doel and Tihange sites, which will span several decades.
3. Final disposal, which will ultimately be carried out by National Agency for Radioactive Waste and Enriched Fissile Materials (ONDRAF).

All technical operations related to the first two stages are carried out by qualified personnel at the Doel and Tihange power plants, and their cost is covered by SYNATOM.

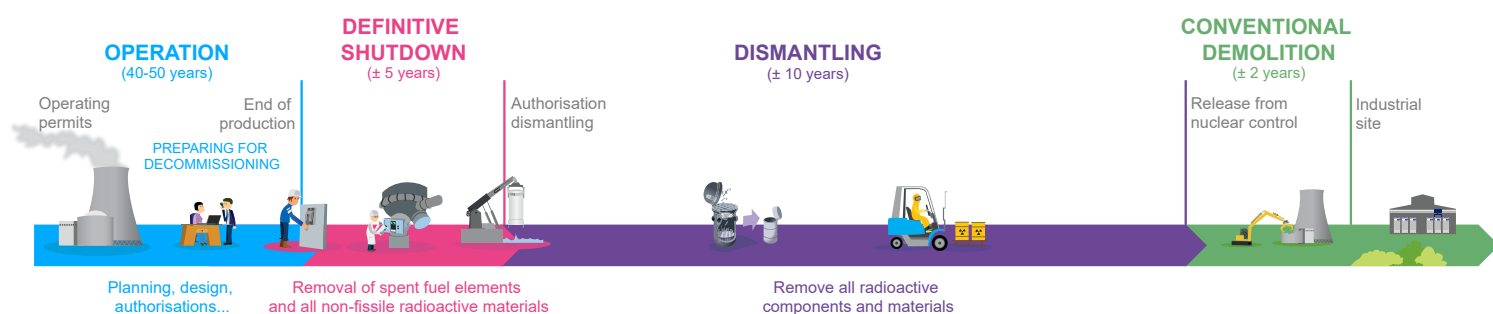
SYNATOM also finances the entire infrastructure and supplies the necessary equipment.

## The first stage of dismantling

It is important to have not only the buildings, but also the casks, ready on time for required storage space. If we take the case of the Doel 3 and Tihange 2 reactors, which have been shut down for good respectively on 23 September 2022 and

31 January 2023, the operations to empty their deactivation pools are scheduled to begin in 2024 and reach «cruising speed» as early as 2025.

### Dismantling timeline

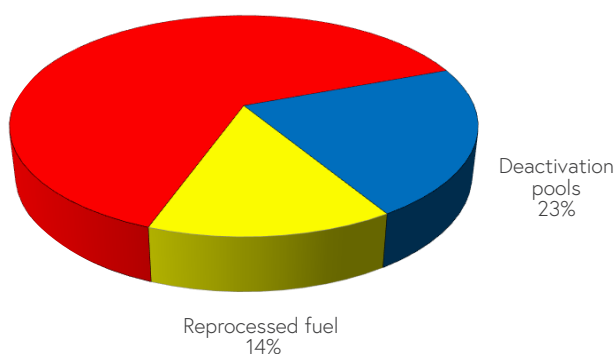


## Intermediate storage

Intermediate storage is an important stage that extends over several decades, pending the final disposal of spent fuel by ONDRAF.

### Where are the spent fuel assemblies on 31/12/2022?

On-site intermediate storage 63%



## Two new centralised storage buildings on site

To date, intermediate storage of spent fuel assemblies has taken two distinct approaches: underwater, in a pool at Tihange and dry in dedicated casks at Doel.

As the construction of additional intermediate storage capacity is needed, new centralised infrastructures have been planned for each site (Doel and Tihange). The option selected and validated by the nuclear control authorities is the use of dry storage. The spent fuel assemblies will be housed in a building called SF<sup>2</sup> (Spent Fuel Storage Facility), specially designed to guarantee optimum safety until the spent fuel assemblies are ready for final storage.

At Tihange, the construction of the SF<sup>2</sup> building began in 2020 and was completed in 2022. The year 2023 will be used to carry out a series of dry run tests at the plant to obtain the necessary authorisations and start the operation of the facility by the end of the year.

The Doel SF<sup>2</sup> construction schedule has been postponed in view of the greater storage capacity still available on the sites. The first major civil engineering works were completed in 2022, and commissioning is planned for 2025.

## Dry storage casks

The Belgian nuclear power plant fleet is characterised by the many specific features of each reactor, particularly in terms of fuel assembly dimensions. The assemblies at Doel 1 and 2 are smaller than those at Doel 3 and Tihange 2, which are themselves different from those at Doel 4 and Tihange 3. It is therefore essential to have several types of cask for their storage. SYNATOM has worked with ELECTRABEL to draw up a schedule of requirements based on the Belgian nuclear phase-out law (law of 31 January 2003), which calls for all reactors to be shut down by the end of 2025.

The year 2022 was marked by the finalisation of the manufacture of the « first-of-a-kind » cask at each of the three suppliers selected by SYNATOM to meet these requirements:

- The first cask for Doel 3, manufactured by the German company GNS (Gesellschaft für Nuklear-Service mbH), arrived at the site in May 2022.
- The first cask for Doel 1 and 2, manufactured by the US company HOLTEC, arrived at the site in March 2023.
- The first cask for Tihange, manufactured by the French company ORANO arrived at the site in March 2023.

The arrival on site of these first-of-a-kind casks enables the handling teams to familiarise themselves with each type of cask, and to carry out «dry runs» to ensure their proper functioning before loading.

It is important to plan the supply of casks several years in advance, both in terms of manufacturing time and manufacturer availability. As a result, additional orders have been placed to eventually cover all future needs. The pace of on-site deliveries and loading will accelerate over the coming months and years.

Handling a dry storage cask at SF<sup>2</sup> in Tihange



## A second transfer shuttle for the Tihange site

At Tihange, the assemblies in the deactivation pools are placed in a special cask called a shuttle to reach the centralised underwater storage building (DE). To ensure smooth draining of pools (including MOX fuel from the Tihange 2 unit), alongside the existing shuttle, a second shuttle has been ordered from the American manufacturer Holtec.

Because of its unique nature and the multitude of specific safety-related features, its manufacture is subject to a series of programmed checkpoints. Its arrival at the Tihange site is scheduled for 2024.

## Special equipment

The deactivation pools contain a small number of assemblies with identified defects. They must undergo specific treatment before being removed from the deactivation pool. For several years now, SYNATOM has set up an action plan called CIME (Combustibles Inétanches ou Mécaniquement Endommagés - Non-sealed or mechanically damaged fuel). In 2022, the process developed by Framatome at SYNATOM's request allowed for the defective rods in the Doel 1 and 2 deactivation pools to be isolated in special casks. Following this positive experience, SYNATOM has signed a new contract with Framatome for the management of defective rods present in the deactivation pools of Doel 3 and Tihange 2. The contract is part of the process of emptying the pools prior to dismantling the two reactors.

## Relationship with ONDRAF

### When will permanent storage be available?

Deep geological disposal - in a site yet to be identified and qualified in Belgium - is currently the final destination considered by ONDRAF for high-level and/or long-lived radioactive waste.

Following comments from the Federal Nuclear Control Agency concerning the operational safety of the future landfill facility, ONDRAF, after an initial analysis involving SYNATOM experts, identified risks of additional costs related to operational safety in 2021. Technical discussions continued into 2022 and led to an increase in storage fees.

To date, the scenario of deep geological disposal has not been confirmed by the adoption of a national program in compliance with Article 12 of Directive 2011/70/EURATOM.

In this regard, the European Commission sent a reasoned opinion to Belgium on 27 November 2019 under the infringement procedure of Article 258 of the Treaty on the Functioning of the European Union.

Because of the Belgian authorities' delay in implementing solutions for the management of nuclear waste, including low-level waste, SYNATOM is incurring additional costs, currently valued at 0.9 billion euros. SYNATOM has put the Belgian government on notice to put an end to the uncertainty created and the damage caused by the postponement of the various projects required to manage nuclear waste in Belgium, and the company reserves its rights to seek compensation where appropriate.

The Royal Decree published on 28 October 2022 represents a first step in the national policy for the management of spent fuel and radioactive waste (more specifically, category B and C waste), which the Belgian government must adopt and ONDRAF must take charge of. This first order endorses ONDRAF's strategy, which favours deep geological disposal of category B and C waste, while specifying that this policy is still reversible and that a process spread over time, involving the public must be followed.

With this in mind, ONDRAF wishes to build on a societal foundation. In 2022, ONDRAF inaugurated a communication center called Tabloo and, with the support of the King Baudouin Foundation, prepared a wide-ranging social debate. This campaign, called «Present for the future», began mid-April 2023 and will take several months to complete. It covers the long-term management of high-level radioactive waste and/or long-lived waste (category B and C waste).

## Support for Research and Development

Every year, the producers of nuclear waste cover the budgets allocated by ONDRAF to research and development of future solutions for the final disposal of waste. In 2022, the contribution of producers amounted to 16 million euros, of which SYNATOM is responsible for over 9 million.

# FINANCIAL MANAGEMENT

## Triennial review of nuclear provisions

In accordance with the law of 12 July 2022, partially repealing and amending the law of 11 April 2003, a review of nuclear provisions for power plant dismantling and spent fuel management set up within SYNATOM is undertaken every three years, under the control and independent authority of the Nuclear Provisions Commission (NPC).

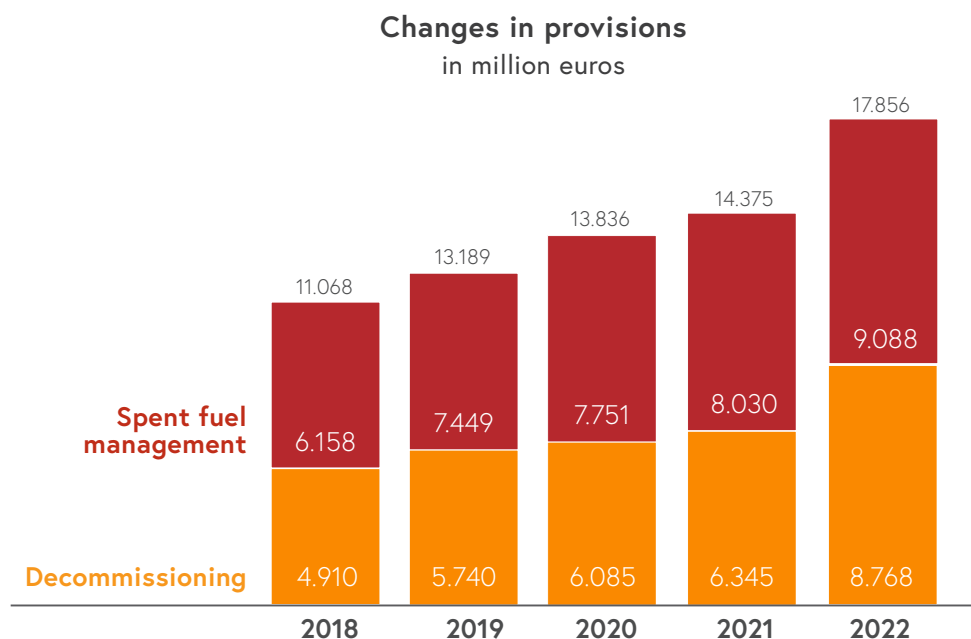
2022 was marked by the preparation of the dossier for the 7th triennial review. This technical and financial file, of more than 1,000 pages, describing the characteristics of the constitution of these provisions, was transmitted to the NPC on 2 September 2022, within the deadline set.

After analysis, in December 2022 the NPC submitted to SYNATOM a series of comments on the elements of this assessment.

After carrying out a detailed analysis of the remarks made by the NPC, SYNATOM submitted a new assessment of provisions to the NPC on 14 February 2023, specifying which of the NPC's remarks could not be taken into account as insufficiently justified. With this new information, the NPC will issue its final opinion on the amount of provisions it deems necessary.

Pending the final opinion of the NPC, and without prejudice to SYNATOM's rights to challenge it in court if necessary, it appeared prudent to include the 2.9 billion euro increase in provisions resulting from the NPC's comments in SYNATOM's accounts on 31 December 2022. On 31 December 2022, nuclear provisions amounted to 9.1 billion euros for the back-end management of the irradiated nuclear fuel cycle (Spent fuel management) and 8.8 billion euros for the dismantling of nuclear power plants (Decommissioning), for a total of 17.9 billion euros.

## Changes in provisions



In addition to ELECTRABEL's commitment to repay in full the loans granted to it by SYNATOM by 2030, the new law of 12 July 2022 on provisions set aside for the dismantling of nuclear power plants and the management of spent nuclear fuel confirms this principle.

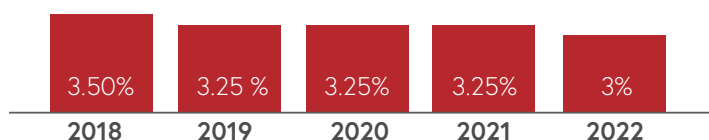
In addition, 88 million euros were withdrawn from nuclear provisions to cover the cost of storing irradiated fuel assemblies and 75 million euros in order to carry out the operations and studies required for the decommissioning and dismantling of the Doel 3 and Tihange 2 reactors.

Loan repayments and the payment of fees invoiced to operators have resulted in a largely positive cash position and substantial amounts to be invested.

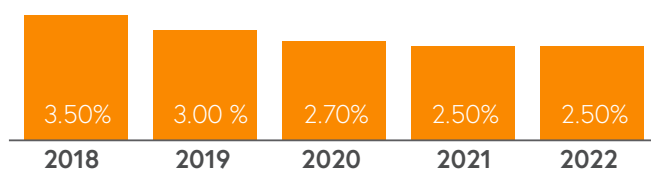
## Changes in discount rates

Following comments made by the NPC in connection with the triennial review of provisions, and without prejudice to SYNATOM's right to challenge the NPC's final decision in court, if necessary, the discount rates have been adjusted and are established respectively at 3% for provisions for the back-end nuclear fuel cycle and 2.5% for provisions for dismantling nuclear production sites, with the inflation rate unchanged at 2%.

### Changes in discount rates for spent fuel management



### Changes in discount rates for dismantling



## Nuclear tax

Every year since 2008, SYNATOM has been responsible for collecting the distribution contribution (known as the nuclear tax) on behalf of the Belgian State. This is paid in advance to the Belgian State by SYNATOM and then re-invoiced to the producers. This contribution varies from year to year according to the estimated profits from nuclear power generation. It applies to the owners of the Doel 3 and Doel 4 reactors, as well as Tihange 2 and Tihange 3.

Separate levies apply for the Doel 1 and 2 and Tihange 1 units, without SYNATOM's involvement.

The amount collected by SYNATOM in 2022 relates to calendar year 2021 and totalled 114.8 million euros. This amount is distributed in proportion to the shares held by ELECTRABEL (89.9%) and LUMINUS (10.1%) in the 4 reactors.

ELECTRABEL is responsible for 108.5 million euros and LUMINUS for 6.3 million euros.

The distribution contribution for the 2022 financial year, which will be collected in 2023, is likely to be considerably higher, given the good availability of reactors and the significant rise in electricity prices.

# INVESTMENTS

At the end of 2020, SYNATOM set up a department dedicated to investment management. In 2021, SYNATOM began a far-reaching overhaul of its rules of governance, notably with the creation of an Investment Committee chaired by an independent director and made up of experts, all of whom are SYNATOM directors. The Chief Investment Officer is a permanent guest of the Investment Committee.

In terms of investment, SYNATOM's objective is to offer a sufficient return for an acceptable level of risk in order to cover the costs associated with dismantling and spent fuel management under the constraints of diversification, risk minimisation and liquidity as defined by the law of 12 July 2022.

The return objective is set over a time frame in line with the duration of nuclear liabilities, i.e. long term for decommissioning and very long term for spent fuel. Financing needs spread over the next 20 years for dismantling and several decades for final disposal of irradiated fissile materials.

SYNATOM carried out an ALM (Asset Liability Management) analysis in 2022. On the basis of certain economic and financial assumptions and the company's liabilities, an independent expert has made stochastic simulations of asset performance and liability trends. These studies enable to identify or confirm appropriate risk profiles for each type of provision.

At the end of the year, the risk profile retained for the provisions set aside for decommissioning was 35% in equities and 65% in bonds. The risk profile for provisions set aside for spent fuel management is 50% in equities and 50% in bonds. These two risk profiles have been endorsed by the NPC, which also receives a monthly report on the status of SYNATOM's investments.

SYNATOM also integrates Environmental, Social and Governance (ESG) factors into its investment policy to enable better risk management with a view to generating long-term sustainable returns. The integration of ESG factors enables a broader consideration of the risks and opportunities that can influence financial performance. ESG policies are implemented on a decentralised basis by external asset management companies, who are responsible for managing investments while taking ESG principles into account. The inclusion of ESG principles in the investment process is adapted to the maturity of ESG integration in the markets in which the manager operates.

Investment management is entrusted to a dedicated investment team supervised by a Chief Investment Officer. The Investment Committee makes recommendations to the Board of Directors, which sets SYNATOM's investment policy, under the supervision of the NPC, and is responsible for overseeing investment decisions that fall within the scope of this policy. The Audit Committee reviews, evaluates and monitors the risk framework applicable to investments.

## Lessons from 2022

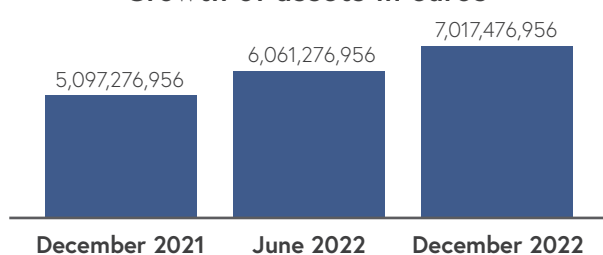
### Markets

2022 has been marked by unprecedented events that have greatly increased volatility in the equity and bond markets. The inflationary pressures that followed the Covid period, amplified since the war in Ukraine, have led to a series of interest rate hikes by various central banks. Publication of mixed macroeconomic data and the conflict in Ukraine particularly affected equity markets, especially in Europe. Against this backdrop, all asset classes, with the exception of the money market, recorded negative returns in 2022.

### Investments evolution

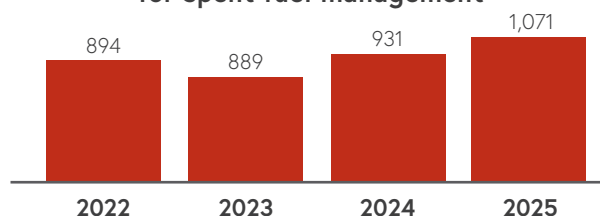
Capital invested since 2020 has been growing steadily. This increase is due to the annual repayments of the loans made to ELECTRABEL, as well as the annual increase in total provisions.

#### Growth of assets in euros



In 2020, ELECTRABEL has undertaken to repay in full the loan granted against the provisions set aside for spent fuel management by 2025.

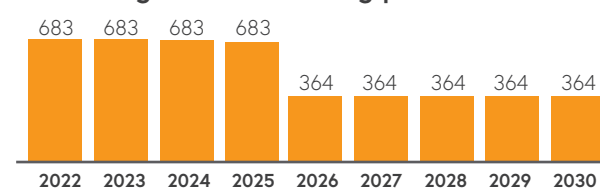
#### Repayment plan for loans against provisions for spent fuel management



ELECTRABEL has also undertaken to repay in full the loan granted against the provisions set aside for dismantling the power plants by 2022.

These commitments were also enshrined in the law of 12 July 2022.

#### Repayment plan for loans against dismantling provisions



SYNATOM deploys these investments through its two SICAVs: an institutional SICAV under Belgian law called Belgian Nuclear Liabilities Fund (BNLF) and a SICAV under Luxembourg law called Nuclear Investment Fund (NIF). By the end of 2022, their assets totalled 1.7 billion euros and 5.3 billion euros respectively.



# GOVERNANCE

SYNATOM's corporate governance is based on three pillars: the Belgian Code of Companies and Associations, the Corporate Governance Code 2020, and the company's articles of association.

It is also in line with the law of 12 July 2022, which stipulates that the Board of Directors must include three independent directors (one of whom must be of the opposite sex to the other two), including the Chair. This is how the Chair of SYNATOM was entrusted to Mrs. Cécile Flandre, an independent director, at the Extraordinary General Meeting of 30 January 2023, during which SYNATOM adapted its status to the aforementioned law.

Mr. Jan Longeval and Mr. Maximilien de Limburg Stirum had already joined the Board of Directors as Independent directors from 2021.

The Board of Directors consists of eight board members and two federal government representatives. The processes for checking good repute, required expertise and independence were initiated in December 2022.

## Members of the Board of Directors

- Didier Engels - Chair until 30 January 2023
- Cécile Flandre - Independent Chair from 30 January 2023
- Dimitri Stroobants - Chief Executive Officer
- Hélène Durand - Director
- Michael Gillis - Director
- Thierry Saegeman - Director
- Patrick Gaussent - Director
- Jan Longeval - Independent Director
- Maximilien de Limburg Stirum - Independent Director
- Carl Malbrain - Federal Government Representative
- Olivier Soumeryn-Schmit - Federal Government Representative
- Michaël Delmée - Secretary to the Board of Directors

The Board has set up an **Audit Committee** made up of three members chosen from among the directors (two of whom are independent) and an **Investment Committee** made up of four members chosen from among the directors and chaired by an independent director.

## Composition of the Audit Committee

### Chair:

- Patrick Gaussent

### Members:

- Jan Longeval - Independent Director
- Maximilien de Limburg Stirum - Independent Director

Dominique Ghislain, SYNATOM's Chief Financial Officer, is a permanent guest, with no voting rights.

## Composition of the Investment Committee

### Chair:

- Jan Longeval - Independent Director

### Members:

- Hélène Durand
- Dimitri Stroobants
- Patrick Gaussett

Xavier Piret, SYNATOM's Chief Investment Officer, is a permanent guest, without a decision-making vote.

In 2022, SYNATOM's Board of Directors met 7 times, with an attendance rate of 100%. The members of the Audit and Investment Committees held 4 and 7 meetings respectively, also with an attendance rate of 100%.

## Follow-up of mandates

In 2022, two directorships mandates changed hands:

- Hélène Durand has taken over the mandate of Karine Sirmain.
- Michael Gillis has taken over from Marc Beyens.

## Day-to-day management

The day-to-day management of the company is carried out by the Chief Executive Officer, Mr. Dimitri Stroobants, appointed by the Board of Directors.

The company is organised into five departments headed by:

- Mrs. Françoise Renneboog, Director of the Front-end Nuclear Fuel Cycle Department,
- Mr. Luc Janssen, Director of the Back-end Nuclear Fuel Cycle Department,
- Mrs. Dominique Ghislain (CFO), Director of the Finance Department,
- Mr. Xavier Piret (CIO), Director of the Investment Department,
- Mrs. Godelieve Vandeputte (CLO), Director of the Legal Department.

## THANKS TO OUR STAFF

The Chair joins all the members of the Board of Directors and Management in thanking each and every member of the team for their professionalism, commitment and adaptability in serving the company. Together, we have fully contributed to SYNATOM's mission and values. Thank you all for the work you do every day.

# MANAGEMENT REPORT

Ladies and Gentlemen,

In accordance with legal and statutory requirements, it is our pleasure to present our Company's management report for its 53rd financial year, and to submit for your approval the annual accounts for the year ended 31 December 2022.

## Context

The year 2022 was marked by a sustained recovery in global economic activity post-Covid and the war in Ukraine. On the one hand, these factors have put considerable strain on the supply chain in several sectors of the industry, and on the other, they have multiplied the inflationary dynamic set in motion in 2021. These factors have had varying degrees of impact on all of SYNATOM's activities.

On 18 March 2022, the Belgian government announced its decision to modify its energy policy in view of the unprecedented geopolitical situation, and in so doing asked ENGIE to extend the operational life of the Doel 4 and Tihange 3 reactors by 10 years.

On 21 July 2022, ENGIE and the Belgian government signed a non-binding letter of intent to assess the feasibility and conditions of such an extension. The letter of intent lists a number of inseparable conditions, including a cap on liabilities and future costs related to nuclear waste and spent fuel management.

In 2022, SYNATOM's activities have continued within the legal framework of the closure of the power plants in 2025, leading to an increase in back-end spent fuel activities and a sharp rise in investment activities.

Operations relating to the supply of enriched fissile materials have been reduced to the final execution of existing contracts. The first final shutdown, of the Doel 3 reactor, took place on the night of 23 September 2022. The Tihange 2 shutdown took place on the night of 31 January, 2023.

In 2022, our teams were busy preparing a new report on the valuation of nuclear provisions. This report was submitted to the NPC, the Nuclear Provisions Commission in September 2022, as required by the law of 12 July 2022. Numerous exchanges then took place with the members of the Commission, which issued its comments on 16 December 2022.

## Shareholder structure, capital and mission of the Company

SYNATOM's capital stands unchanged at 49.6 million euros, including approximately 25% of paid-up capital, and is represented by 2 million registered shares.

All shares are held by ELECTRABEL SA, with the exception of one special «golden» share held by the Belgian state. This golden share gives special rights, such as the presence of two Government Representatives on the Board of Directors.

## Technical activities

### Supply of enriched fissile materials

In accordance with the applicable legal and regulatory framework involving the shutdown of nuclear production in 2025, SYNATOM has executed its last deliveries under its natural uranium purchase and conversion services contracts. The last deliveries of enrichment services will take place in 2023. The penultimate delivery of enriched uranium to the manufacturing plant designated by ELECTRABEL took place in December 2022, and the last will take place in early 2023.

### Management of spent fuel assemblies and related waste

#### Transfer of spent fuel assemblies from deactivation pools to centralised storage buildings

Fewer transfers took place in 2022.

At Doel, two casks with assemblies from the Doel 1 & 2 units and one from Doel 4 were loaded and transferred to the centralised dry storage building known as SCG.

At Tihange, the transfer shuttle made three rotations between the Tihange 1 deactivation pool and the storage pool in the DE building.

#### SF<sup>2</sup>

The construction of additional dry storage capacity for spent fuel at each of the two nuclear sites is under way. These are the SF<sup>2</sup> (Spent Fuel Storage Facility) buildings.

At Tihange, construction work has reached the final stage. The main equipment is now in place, and a first phase of testing can begin in early 2023. The building should be operational by early 2024.

At Doel, work is continuing and SF<sup>2</sup> should be operational by mid-February 2025.

#### Casks

In response to the growing need for spent fuel storage casks for the Doel and Tihange power plants, and with diversification in mind, SYNATOM has signed several contracts with the American Company HOLTEC, the German Company GNS and the French Company ORANO NPS.

Delivery of the «first-of-a-kind» series of these new cask types is scheduled between 2022 and 2023. In line with site requirements, in 2022, new orders have been signed for a significant number of casks.

The context of high inflation and tension in the post-Covid supply chain has led to some delays in deliveries, but does not call into question our loading schedules for the final shutdown of units.

HOLTEC's first cask for Doel 1&2 was completed and delivered to the site in February 2023. Several other casks are currently being manufactured.

GNS' first cask for Doel 3 was delivered in May 2022, and dry runs on this model began successfully at the end of the year.

ORANO NPS, our long-standing supplier, has a large number of casks currently being manufactured.

To prepare for the arrival of these new casks, the year 2022 has been used to carry out a series of handling equipment tests and training programs for personnel involved in cask management.

### **The second transfer shuttle of the Tihange nuclear power plant**

SYNATOM has received the approval of the Federal Agency for Nuclear Control (AFCN) on the safety file of the second transfer shuttle for the Tihange power plant. The American manufacturer HOLTEC continued the manufacturing. Its arrival is scheduled for 2024.

### **Special equipment**

For several years SYNATOM has been developing an action plan named CIME (Combustibles Inétanches ou Mécaniquement Endommagés) in view of the complete emptying of the deactivation pools. This is a fundamental step in the final shutdown phase, which lasts an average of 5 years prior to the dismantling of the reactors.

In 2022, the encapsulation campaign for the concerned Doel 1 & 2 rods was completed. A new contract has been signed with FRAMATOME for Doel 3 and Tihange 2 assemblies requiring intervention.

### **Relations with the National Agency for Radioactive Waste and Enriched Fissile Materials (ONDRAF)**

Deep geological disposal - in a site still to be identified and qualified in Belgium - is today the final destination considered for the radioactive waste of high activity and/or long life. This scenario has not yet been confirmed by the adoption of a national program in accordance with Article 12 of the 2011 Directive/70/EURATOM.

In this regard, the European Commission sent a reasoned opinion to Belgium on 27 November 2019 under the infringement procedure of Article 258 of the Treaty on the Functioning of the European Union.

A Royal Decree of 28 October 2022 has since instituted «the first part of the National Policy for the Long-Term Management of High-Level Radioactive Waste and/or Long-Life Radioactive Waste and specifying the process for the phased institution of the other parts of this National Policy».

This Royal Decree confirms «the deep disposal of this waste on Belgian territory on one or several sites» as «the preliminary draft concept for the long-term management of the radioactive waste referred to in Article 3, pending the outcome of the decision-making process (...)». It also enshrines «the reversibility of the National Policy, which implies, after reconsideration, the possibility of going back on one or more parts of this Policy».

It is therefore not possible to guarantee that deep disposal of category B (low- or medium-level long-lived waste from dismantling) and C (high-level and/or long-life) will remain the technical solution chosen by Belgium.

Nevertheless, this is the assumption used by ONDRAF to assess the cost of the final disposal solution for category B and C waste. In 2022, ONDRAF has estimated the cost of this solution at 12 billion euros<sup>2019</sup>, which increased the fees at SYNATOM's expense. Fees taken into account in the assessment of provisions for spent fuel management.

In 2022, ONDRAF has dedicated a budget of around 16 million euros for the R&D of such storage, of which more than 9 million euros is covered by SYNATOM.

## **Nuclear provisions**

In 2022 takes place the triennial revision for nuclear provisions. The previous revision dates from 2019.

The nuclear provisions reassessment report submitted to the NPC on 2 September 2022, is a result of the ongoing dialogue with ONDRAF, the Federal Agency for Nuclear Control (AFCN) and the Nuclear Provisions Commission (NPC) since the last revision.

The NPC issued comments on 16 December 2022 which, pending receipt of its final opinion, led SYNATOM to increase provisions by 2,946 million euros to 17,312 million euros on 1 January 2022, mainly through to a reduction in the discount rate for the provision for spent fuel management from 3.25 % to 3.0 % and an increase in certain costs used to value the provision for dismantling nuclear production sites.

However, contesting some of the NPC's remarks as being overly conservative or technically unsuitable, SYNATOM submitted on 14 February 2023, in accordance with the law, a new adapted proposal explaining the reasons why it considers that they cannot be followed. Pending the final opinion of the NPC, nuclear provisions booked at 31 December 2022 take full account of remarks and assumptions made by the NPC in its report of 16 December 2022.

## Law of 12 July 2022

A reform of the Belgian law on nuclear provisions was passed by Parliament on 7 July 2022, promulgated and sanctioned on 12 July 2022 (M.B. 22 July 2022, effective date 1 August 2022). This law aims to strengthen the framework applicable to provisions set aside for the decommissioning of nuclear power plants and the management of spent fuel. It partially repeals and amends the law of 11 April 2003 on provisions set aside for the decommissioning of nuclear power plants and for the management of fissile materials irradiated in these nuclear power plants («the Law of 12 July 2022» or «the Law»).

Generally speaking, the Law of 12 July 2022 aims to (i) secure financing for the decommissioning and spent fuel management of nuclear power plants, and safeguard the financial performance of the nuclear operator by preventing its impoverishment, (ii) guarantee the countervalue of nuclear provisions, (iii) strengthen the prudential control of the NPC, (iv) strengthen the rules of governance applicable to SYNATOM and (v) reinforce sanctions (including criminal sanctions).

This law confirms most of SYNATOM's existing obligations, provides for additional obligations for nuclear operators, ELECTRABEL and contributing companies and also adds a series of additional obligations and inspections. It thus strengthens the composition and the general advisory and supervisory powers of the NPC. It also establishes the principle that the nuclear operator retains responsibility for nuclear provisions even if it loses this status.

Among SYNATOM's new obligations, the most important are:

- Prior approval by the NPC of capital-intensive decisions (including dividend payments) by SYNATOM (and companies under its control) above certain thresholds. The current threshold is 750 million euros.
- The preparation of consolidated financial statements at 30 June and 31 December.
- Changes to SYNATOM's corporate governance, notably the appointment of a third independent director (of the opposite sex to the others) and the allocation of the Chairmanship of the Board to one of the three independent directors.
- Legal confirmation of ELECTRABEL's commitments to reimburse SYNATOM's spent fuel provision loans by 2025, and dismantling loans by 2030. In addition, there can be no new loans between SYNATOM and ELECTRABEL. In the exceptional case of an increase in the dismantling provisions, a loan amounting to this increase and subject to an 8-year repayment schedule, can be taken.
- The introduction of securities approved by the NPC in the loan agreements between SYNATOM and ELECTRABEL.

ELECTRABEL has honoured its loan repayment schedule. By 2022, it has repaid 894 million euros in provisions for spent fuel management and 683 million euros in provisions for dismantling.

## Asset management corresponding to nuclear provisions

The year 2022 was marked by unprecedented events that greatly increased the volatility of global equity and bond markets. Indeed, the war in Ukraine has multiplied the inflationary momentum that had already set in by 2021 following the post-Covid recovery in global economic activity. These two cyclical factors were further reinforced by structural factors such as soaring energy prices and the monetary policy of central banks.

The year 2022 was particularly difficult for financial markets. All asset classes, except money market, had negative returns in 2022. In this difficult environment, SYNATOM recorded a negative performance for the fiscal year.

Following the repayment of loans by ELECTRABEL, the size of the portfolio of outsourced assets managed by SYNATOM has grown substantially, reaching over 7 billion euros as of 31/12/2022. Nearly 2 billion euros have been invested in 2022.

Based on the liabilities, an Asset-Liability Matching (ALM) analysis was carried out in 2022, taking into account the return objective and risk tolerance of SYNATOM. On the basis of these simulations, distinct risk profiles have been defined for each type of provision. For provisions relating to spent fuel management, a profile consisting of 50% equities and 50% bonds has been adopted. For provisions relating to the dismantling of power plants, a profile consisting of 35% equities and 65% bonds has been adopted. These risk profiles have been translated into SYNATOM's Investment Policy approved by the Nuclear Provisions Commission (NPC).

## Distribution contributions

Since 2008, SYNATOM has been responsible for collecting the distribution contribution, also known as the nuclear tax, on behalf of the Belgian State. For the year ended 31/12/2022, the total amount was set by the Royal Decree of 9 October 2022. It amounts to 114.8 million euros. This amount takes into account production from the Doel 3, Doel 4, Tihange 2 and Tihange 3 reactors in the calendar year 2021. This amount is divided between ELECTRABEL for 108.5 million euros and LUMINUS for 6.3 million euros.

This contribution does not apply to the Doel 1 and 2 and Tihange 1 reactors, for which special agreements have been reached directly with the nuclear operator.

## Corporate Governance

SYNATOM's corporate governance is based on the applicable legal provisions (in particular the Belgian Code of Companies and Associations, 'the CSA' and the aforementioned Law of 12 July 2022) as well as its articles of association, charters and internal regulations of its bodies.

SYNATOM is a monistic structure established in the legal form of a limited Company, organised around the following components:

- The Board of Directors formed by 8 members, including three independent directors as defined in article 7:87 CSA. It should also be noted that the Federal Government has two representatives (Golden Share). It also has two committees:
- The Audit Committee, made up of three directors, two of whom are independent; the Chief Financial Officer is a permanent guest. It formulates opinions and recommendations to the Board of Directors concerning the control of financial documents, the control of the investment policy risk framework and the control of information transmitted to the Nuclear Provisions Commission.
- The Investment Committee, comprising four directors, one of whom is independent, and the Managing Director. The Chair is an independent Director, and the Chief Investment Officer is a permanent guest. It makes recommendations to the Board of Directors on SYNATOM's investment policy, and endorses the Investment Director's proposals in accordance with the investment policy in force.

Independent directors are chosen for their knowledge of financial management (including accounting and auditing) and/or technical expertise in sectors relevant to the Company's activities.

One independent director is of the opposite sex to the other two.

In 2022, SYNATOM's Board of Directors met 7 times, with an attendance rate of 100%. During the past financial year, no decision falling within the scope of Article 7:96 of the Belgian Code of Companies and Associations was taken by the Board of Directors.

The Audit and Investment Committees met on 4 and 7 occasions respectively.

## Follow-up of mandates

Karine Sirmain, representative of the parent Company ENGIE, has asked to be relieved of her directorship, which has been taken over by H       Durand.

Marc Beyens has also asked to be relieved of his directorship. He has been replaced by Michael Gillis.

Mr. Didier Engels, representative of the parent Company ENGIE, has also asked to be relieved of his duties as Director and Chair of the Board of Directors, which have been taken over by Mrs. C       Flandre, as of 30 January 2023, the new independent Director.

## Day-to-day management

There were no changes to day-to-day management. It is managed by the Managing Director, assisted by 4 department directors. These 4 departments cover the front-end nuclear fuel cycle, the back-end nuclear fuel cycle, financial management and investments.

## Disputes

There are no disputes in progress.

However, due to the Belgian authorities' delay in implementing solutions for the management of nuclear waste, including low-level waste, SYNATOM is incurring additional costs which, to date, are estimated at 0.9 billion euros.

SYNATOM has also given the State formal notice to put an end to the uncertainty created by this state of affairs and to the damage caused by the postponement of the various projects necessary for the management of nuclear waste in Belgium and reserves its rights to claim compensation if necessary.

## Discharge

In accordance with article 7:149 of the SHA, it is proposed that the Annual General Meeting grant discharge to the directors and the auditor.

## Branches

The Company has no branches.



# ANNUAL ACCOUNTS

Below, we comment on some of the important items on the balance sheet and the profit and loss statement for the financial year.

## Balance sheet

### Financial assets - Investments in associates

This section includes the counterpart of long-term provisions invested on the financial markets through SICAV's BNLf and NIF, held at 100% by SYNATOM.

### Financial assets - Receivables from affiliated companies

This section includes outstanding loans to ELECTRABEL, including one for provisions relating to the management of irradiated fissile materials in the amount of 3,785 million euros, and another for provisions relating to dismantling in the amount of 4,550 million euros. The loan granted to cover provisions for spent fuel management will be repaid by the end of 2025, and the loan granted to cover provisions for the decommissioning of nuclear power plants by the end of 2030, in accordance with the timetables set out in the Act of 12 July 2022. In 2022, ELECTRABEL has repaid 683 million euros of the dismantling loan and 894 million euros of the spent fuel loan.

### Financial assets - Companies with a shareholding relationship

In February 2019, SYNATOM acquired a stake in the I4B fund. Receivables relate to a loan granted to the fund, with capitalised interest, for 12 years. Two capital increases took place in 2022 for a total amount of 13.1 million, bringing the total investment to 24.4 million euros by the end of 2022.

### Long-term receivables - Other receivables

At the end of 2022, the outstanding loan granted to SIBELGA in 2005, maturing in 2026, amounts to 5.2 million euros.

### Short-term receivables - Trade receivables

This heading contains current trade receivables.

- The increase compared to 31/12/2021 is mainly due to invoices to be issued to ELECTRABEL and LUMINUS, following the revision of nuclear provisions. Invoices will be drawn up and, if necessary, adjusted on the basis of the final opinion issued by the Nuclear Provisions Commission, expected after the closure of the financial year.

### Short-term receivables - Other receivables

The increase compared with 31/12/2021 is mainly due to the apportionment contribution for 2022, which was invoiced to ELECTRABEL, as LUMINUS paid its share at the end of December 2022.

This section also includes:

- the share of the ELECTRABEL loans to be repaid in 2023 for 1,572 million euros;
- the share of the SIBELGA loan maturing in 2023 for an amount of 2.0 million euros;
- 811 million euros deposited with the ETM cash pool.

### Amounts payable after one year - Other liabilities

At the end of 2022, this item includes SYNATOM's debt to ONDRAF relating to Guiding Principles (192.6 million euros) following the updating of liabilities applicable to Category C waste in storage at Belgoprocess, an ONDRAF subsidiary.

### Provisions and deferred taxes

These provisions, commonly referred to as «nuclear provisions», are intended to cover the costs of managing irradiated fissile materials and dismantling nuclear power plants, in accordance with the legal provisions in force.

## Results

### Turnover

Sales include 425 million euros in royalties invoiced to ELECTRABEL for the provision of enriched uranium. As in 2021, strong sales in 2022 are due to good availability of nuclear power plants.

### Non-recurring operating income

This item includes billings to nuclear producers of 2,946 million euros following the revision of the provisions file as set out by the Nuclear Provisions Commission in its remarks of 16 December 2022.

### Supplies and goods

This item includes purchases of natural uranium and conversion and enrichment services.

## Services and other goods

This item corresponds to withdrawals from nuclear provisions, mainly to cover costs incurred during the year for spent fuel management (88 million euros), decommissioning studies (75 million euros) and ONDRAF's R&D programme (8.9 million euros).

## Non-recurring operating expenses

This item includes the amount corresponding to the increase in provisions following the revision of the provisions file as set by the Nuclear Provisions Commission in its remarks sent on 16 December 2022. The resulting increase in provisions amounts to 2,946 million euros.

## Financial income

This item covers interest on loans and cash investments.

## Profit

The financial statements for 2022 show a profit of 952,719.80 euros, compared with 466,366.91 euros in 2021.

At the General Meeting to be held on 10 May 2023 to approve the financial statements for the 2022 financial year, shareholders will be asked to approve an amount of 47,635.99 euros to the legal reserve, and to distribute a dividend of 1.80 euros per fully paid-up share, representing a total of 902,700 euros. The balance of the year's profit, i.e. 2,383.81 euros, is added to retained earnings, which now stands at 11,448.07 euros.

## Off balance sheet

At the end of 2022, SYNATOM has set up bank guarantees for the benefit of ONDRAF for an amount of 233,058,109 euros.

## Events after the balance sheet date

### ENGIE - Belgian Government agreement

On 9 January 2023 ENGIE and the Belgian government signed an agreement in principle (Heads of Terms and Commencement of LTO Studies Agreement), which paves the way for the conclusion of full agreements within the next few months. It plans to immediately launch the environmental and technical studies required to obtain the authorisations linked to this extension. It gives concrete form to the elements set out in the Letter of Intent signed on 21 July 2022, and specifies certain terms and conditions. In particular, it defines the framework for capping the future costs of nuclear waste management, a framework that will make it possible to set the technical and financial parameters of a cap by including a risk premium.

At this stage of the negotiations between the above-mentioned parties, there are no known major consequences on the activities of the Company. Studies on fuel supply and casks have been initiated in this context.

## Compliance with the law of 12 July 2022

In accordance with the law, the Company adapted its bylaws to the law of 12 July 2022 at the Extraordinary General Meeting of 30 January 2023. On this occasion, Cécile Flandre was appointed as an independent director and became Chair of the Board with effect from the same date. Following on from this review, the Company also revised its Corporate Governance Charter.

## Beneficiary bonuses

The payment of an identical bonus to staff members (with 3 months' seniority as of 1 December 2022) of the Company is envisaged by a Belgian entity of the ENGIE group and this, in accordance with Chapter II/I of the law of 22 May 2001 relating to the participation of employees in the capital of companies and the establishment of a profit bonus for employees (MB 09/06/2001, 19.288).

## Nuclear provisions

On 14 February 2023, SYNATOM challenged some of the NPC's comments on the grounds that they were overly conservative or technically unsuitable, and submitted a new proposal in accordance with the law explaining why it considers that the request cannot be met. The NPC will then give its final opinion, if necessary, under the jurisdictional control of the Brussels Court of Contracts.

Pending this final opinion, the nuclear provisions booked at 31 December 2022 take full account of the comments and assumptions made by the NPC in its opinion of 16 December 2022.

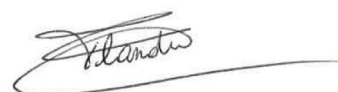
SYNATOM will issue the invoices resulting from the increase in provisions as assessed in the NPC's final opinion.

We do not anticipate any other notable circumstances that could influence future development of the Company in a substantial way.

Brussels, 05 May 2023



Dimitri STROOBANTS  
Chief Executive Officer



Cécile FLANDRE  
Chair

# BALANCE SHEET

As per 31 December (in thousands of euros)

| ASSETS                                   | 2022              | 2021              |
|--|-------------------|-------------------|
| <b>Fixed assets</b>                      | <b>0</b>          | <b>0</b>          |
| Furniture, vehicles and equipment        | 0                 | 0                 |
| <b>Financial assets</b>                  | <b>12,229,838</b> | <b>12,549,864</b> |
| Financial investment Funds - Receivables | 7,017,477         | 5,097,277         |
| Affiliated companies - Receivables       | 5,188,000         | 7,441,000         |
| Participating interests                  | 24,361            | 11,587            |
| • Participations                         | 24,361            | 11,290            |
| • Receivables                            | 0                 | 297               |
| <b>Other receivables</b>                 | <b>3,114</b>      | <b>5,158</b>      |
| Trade Receivables                        | 0                 | 0                 |
| <b>Stocks and contracts in progress</b>  | <b>307,744</b>    | <b>408,137</b>    |
| Stocks                                   |                   |                   |
| Work in progress                         | 307,744           | 408,137           |
| <b>Receivables within one year</b>       | <b>5,587,100</b>  | <b>1,699,706</b>  |
| <b>Trade debtors</b>                     | <b>3,092,233</b>  | <b>51,504</b>     |
| <b>Other receivables</b>                 | <b>2,494,867</b>  | <b>1,648,202</b>  |
| Deposits, securities and bonds           | 0                 | 70                |
| <b>Other deposits</b>                    | <b>0</b>          | <b>70</b>         |
| Cash and cash equivalents                | 1                 | 9                 |
| Prepayments and accrued income           | 1,188             | 459               |
| <b>TOTAL ASSETS</b>                      | <b>18,128,986</b> | <b>14,663,403</b> |

| EQUITY AND LIABILITIES                          | 2022              | 2021              |
|---|-------------------|-------------------|
| <b>Capital</b>                                  | <b>12,453</b>     | <b>12,453</b>     |
| Issued share capital                            | 49,600            | 49,600            |
| Capital not fully paid-up (-)                   | -37,147           | -37,147           |
| <b>Share premiums</b>                           | <b>141</b>        | <b>141</b>        |
| <b>Reserves</b>                                 | <b>1,889</b>      | <b>1,841</b>      |
| Legal reserve                                   | 1,837             | 1,789             |
| Non-available reserve                           |                   |                   |
| • Other   | 15                | 15                |
| Tax free reserve                                | 37                | 37                |
| <b>Profit brought forward</b>                   | <b>11</b>         | <b>9</b>          |
| <b>Provisions and deferred taxes</b>            | <b>17,856,801</b> | <b>14,375,201</b> |
| Provisions for liabilities and charges          | 17,856,801        | 14,375,201        |
| <b>Amounts payable after more than one year</b> | <b>192,610</b>    | <b>186,500</b>    |
| Guiding Principles                              | 192,610           | 186,500           |
| <b>Amounts payable within one year</b>          | <b>61,264</b>     | <b>84,710</b>     |
| Trade payables                                  |                   |                   |
| • Suppliers                                     | 59,718            | 53,227            |
| Taxes, payroll and social security              |                   |                   |
| • Taxes   | 172               | 30,704            |
| • Payroll and social security                   | 472               | 338               |
| Other amounts payable                           | 903               | 441               |
| <b>Accruals and deferred income</b>             | <b>3,817</b>      | <b>2,548</b>      |
| <b>TOTAL EQUITY AND LIABILITIES</b>             | <b>18,128,986</b> | <b>14,663,403</b> |

# INCOME STATEMENT

(in thousands of euros)

|  | 2022             | 2021            |
|--|------------------|-----------------|
| <b>Operating income</b>  | <b>3,271,115</b> | <b>411,336</b>  |
| Turnover   | 424,577          | 408,021         |
| Variation in stocks of finished good, work and contracts in progress<br>(increase +; decrease -) | -100,393         | -119,346        |
| Other operating income   | 581              | 6               |
| Non-recurrent operating income   | 2,946,350        | 122,655         |
| <b>Operating charges</b>   | <b>3,747,023</b> | <b>817,950</b>  |
| Supplies and goods   | 86,597           | 77,375          |
| Services and other goods   | 175,522          | 198,233         |
| Payroll, social security costs and pensions  | 3,300            | 3,141           |
| Depreciation and amounts written off on formation expenses, tangible<br>and intangible assets    | 0                | 0               |
| Provisions for liabilities and charges (increase +; decrease -)                                  | 535,263          | 416,543         |
| Other operating charges  | 4                | 3               |
| Non-recurrent operating charges  | 2,946,337        | 122,655         |
| <b>Operating result</b>  | <b>-475,908</b>  | <b>-406,614</b> |
| <b>Financial income</b>  | <b>480,913</b>   | <b>408,308</b>  |
| Income from financial assets   | 224,283          | 262,915         |
| Income from current assets   | 256,630          | 145,393         |
| Other financial assets   |                  |                 |
| <b>Non-recurrent financial income</b>  | <b>4,050</b>     | <b>1,212</b>    |
| Financial charges  | 3,979            | 1,209           |
| Other financial charges  | 71               | 3               |
| <b>Pre-tax operating result for the year</b>   | <b>954</b>       | <b>482</b>      |
| <b>Taxes on profit</b>   | <b>1</b>         | <b>15</b>       |
| <b>Profit (Loss) for the year</b>  | <b>953</b>       | <b>467</b>      |
| <b>PROFIT OF THE YEAR TO BE APPROPRIATED</b>   | <b>953</b>       | <b>467</b>      |

| APPROPRIATION ACCOUNT                        | 2022       | 2021       |
|--|------------|------------|
| <b>Profit to be appropriated</b>             | <b>972</b> | <b>474</b> |
| Profit for the period                        | 953        | 467        |
| Profit brought forward from previous year    | 9          | 7          |
| <b>Appropriation to capital and reserves</b> | <b>48</b>  | <b>23</b>  |
| To legal reserve                             | 48         | 23         |
| <b>Result to be carried forward</b>          | <b>11</b>  | <b>9</b>   |
| <b>Profit to be distributed</b>              | <b>903</b> | <b>442</b> |
| Dividends                                    | 903        | 442        |

# ADDITIONAL NOTES

(in thousands of euros)

## Financial assets

|   |                  |
|---|------------------|
| FINANCIAL INVESTMENTS FUNDS                             | 2022             |
| <b>Net book value at the end of the previous period</b> | <b>5,097,277</b> |
| Acquisitions  | 1,920,200        |
| Transfers from one heading to another                   | 0                |
| <b>Acquisition's value at the end of the period</b>     | <b>7,017,477</b> |
| <b>Net book value at the end of the period</b>          | <b>7,017,477</b> |
| AFFILIATED COMPANIES                                    | 2022             |
| <b>Affiliated companies - Receivables</b>               |                  |
| <b>Net book value at the end of the previous period</b> | <b>7,441,000</b> |
| • Additions   | 19,000           |
| • Reimbursements  | -700,000         |
| Impairment  | 0                |
| Impairment cancellation                                 | 0                |
| Others  | -1,572,000       |
| <b>Net book value at the end of the period</b>          | <b>5,188,000</b> |
| PARTICIPATING INTERESTS                                 | 2022             |
| <b>Participating interests - Participations</b>         |                  |
| <b>Net book value at the end of the previous period</b> | <b>12,408</b>    |
| Acquisitions  | 12,233           |
| <b>Acquisition value at the end of the period</b>       | <b>24,641</b>    |
| <b>Uncalled capital at the end of the period</b>        | <b>1,118</b>     |
| • Movements during the period                           | -838             |
| • Uncalled amounts at the end of the period             | 280              |
| <b>• Net book value at the end of the period</b>        | <b>24,361</b>    |
| <b>• Net book value at the end of the period</b>        | <b>296</b>       |



## Information about participations

| NAME   | INTERESTS         |            |       |                     |
|--|-------------------|------------|-------|---------------------|
|  | Nature            | Number     | %     | Equity              |
| I4B – The Belgian Infrastructure Fund SA<br>Avenue du Port 86C – 1000 Bruxelles            | Registered shares | 24,578,210 | 33.33 | 5,167,476 euros     |
| BNLF – Belgian Nuclear Liabilities Funds SA<br>Boulevard Simon Bolivar 34 - 1000 Bruxelles | Registered shares | 1,632,297  | 100   | 1,561,509,712 euros |
| Nuclear Investment Fund (NIF1) SA<br>Allée Scheffer 5 L – 2520 Luxembourg                  | Registered shares | 437,663    | 100   | 4,779,572,643 euros |
| Nuclear Investment Fund (NIF2) SA<br>Allée Scheffer 5 - L – 2520 Luxembourg                | Registered shares | 25,546     | 100   | 252,947,491 euros   |

## Deposits, securities and bonds, prepayments and accrued income

|                                       | 2022  | 2021 |
|---------------------------------------|-------|------|
| <b>Deposits, securities and bonds</b> |       |      |
| Shares                                | 0     | 70   |
| <b>Prepayments and accrued income</b> |       |      |
| Accrued interests                     | 1,118 | 459  |
| Operational costs to be regularized   | 0     | 0    |

## Equity and shareholders

|                                      |                         |
|--------------------------------------|-------------------------|
| CAPITAL                              | 2022                    |
| <b>Issued share capital</b>          |                         |
| At the end of the previous period    | 49,600                  |
| <b>At the end of the period</b>      | <b>49,600</b>           |
| <b>Representation of the capital</b> |                         |
| Type of shares:                      |                         |
| • Registered shares :                | 2,000,000 shares        |
| <b>NON FULLY PAID-UP</b>             | <b>2022</b>             |
| Shareholders (non-called capital)    |                         |
| ELECTRABEL                           | 37,147                  |
| <b>SHAREHOLDER'S STRUCTURE</b>       |                         |
| ELECTRABEL                           | 1,999,999 shares        |
| Belgian State                        | 1 share                 |
|                                      | <b>2,000,000 shares</b> |

# ADDITIONAL NOTES

## Liabilities, accruals and deferred income

|  | 2022    |
|--|---------|
| AMOUNTS PAYABLES AFTER MORE THAN ONE YEAR            |         |
| Others debts (Guiding Principles)                    | 192,610 |
| TAXES, PAYROLL AND SOCIAL SECURITY                   |         |
| Taxes  |         |
| • Due taxes  | -       |
| • Not yet due taxes                                  | 171     |
| • Estimated taxes                                    | -       |
| Payroll and social security                          |         |
| • Due liabilities to social security                 | -       |
| • Other debts related to payroll and social security | 472     |
| ACCRUALS AND DEFERRED INCOME                         |         |
| Deferred income                                      | 56      |
| Miscellaneous  | 3,761   |

## Operating results

|   | 2022    | 2021    |
|---|---------|---------|
| OPERATING INCOME                                  |         |         |
| Turnover  |         |         |
| • Fees for the availability of fissile material   | 423,637 | 407,335 |
| • Miscellaneous                                   | 940     | 685     |
|   | 424,577 | 408,020 |
| OPERATING CHARGES                                 |         |         |
| Number of staff hired                             |         |         |
| • Total at the end of period                      | 20      | 19      |
| • Average number of staff in full time equivalent | 19.1    | 17.0    |
| • Effective hours                                 | 30,548  | 27,176  |
| Employment costs                                  |         |         |
| • Payroll and social benefits                     | 2,216   | 1,796   |
| • Employer's contribution to social security      | 554     | 503     |
| • Employer's premiums for non-statutory insurance | 445     | 775     |
| • Other personnel costs                           | 86      | 67      |
|   | 3,301   | 3,141   |

|   |            |            |
|---|------------|------------|
| <b>Provisions for liabilities and charges</b> |            |            |
| • Increase                                    | 698,736    | 605,667    |
| • Use and decrease                            | (-)163,473 | (-)189,124 |
|   | 535,263    | 416,543    |
| <b>Other operating charges</b>                |            |            |
| • Taxes related to operations                 | 4          | 3          |
| • Other                                       |            |            |
|   | 4          | 3          |

## Non recurrent income and charges

|  |           |         |
|--|-----------|---------|
|  | 2022      | 2021    |
| <b>NON-RECURRENT INCOME</b>                          |           |         |
| <b>Non-recurrent operation income</b>                |           |         |
| • Other non-recurrent operation income               | 2,946,350 | 122,655 |
| <b>NON-RECURRENT CHARGES</b>                         |           |         |
| <b>Non-recurrent operating charges</b>               |           |         |
| • Exceptional provisions for liabilities and charges | 2,946,337 | 122,655 |

## Taxes

|  |        |         |
|--|--------|---------|
|  | 2022   | 2021    |
| <b>INCOME TAXES</b>  |        |         |
| <b>Income taxes on the result of prior periods</b>   |        |         |
| Income taxes on the result of prior periods  | 1      | 16      |
| <b>Main sources of disparities between pre-tax profit, expressed in the accounts, and the estimated taxable profit</b> |        |         |
| • Disallowed expenses  | 111    | 70      |
| • Use of anterior losses   | (-)354 | (-)466  |
| <b>VALUE ADDED TAX AND RETAINED TAXES CHARGED TO THIRD PARTIES</b>   |        |         |
| <b>Value added tax charged</b>   |        |         |
| • To the company (deductible)  | 27,992 | 22,196  |
| • By the company   | 80,389 | 111,472 |
| <b>Retained taxes charged to third parties</b>   |        |         |
| • On wages and salaries  | 774    | 643     |

# ADDITIONAL NOTES

## Off balance sheet rights and commitments

### Forward transactions

Purchase foreign exchange ..... 97,785

### Other commitments

In the nuclear sector, there are purchase and service contracts for uranium concentrates, conversion and enrichment on the one hand, and back-end fuel cycle management on the other.

### Brief description of the additional retirement or survival pension system

Employees are guaranteed retirement or survivor's benefits based on their length of service with the company and/or with related companies, as well as their final salary.

To cover the commitments arising from these guarantees, the company pays contributions to the above-mentioned companies or their pension funds, and has taken out a group insurance policy.

### Other off balance sheet rights and commitments

ONDRAF's warranty ..... 229,897

## Relations with affiliated companies and companies in which a participating interest is held

|  | AFFILIATED COMPANIES |                   | COMPANIES WITH PARTICIPATING INTERESTS |               |
|--|----------------------|-------------------|--|---------------|
|  | 2022                 | 2021              | 2022                                   | 2021          |
| <b>Financial assets</b>  |                      |                   |  |               |
| • Participation  | 7,017,477            | 5,097,277         | 24,361                                 | 11,290        |
| • Other receivables  | 5,188,000            | 7,441,000         | 0                                      | 296           |
|  | <b>12,205,477</b>    | <b>12,538,277</b> | <b>24,361</b>                          | <b>11,586</b> |
| <b>Receivables</b>   |                      |                   |  |               |
| • Long-term (more than 1 year)   |                      |                   |  |               |
| • Short-term (less than 1 year)  | 5,584,906            | 1,697,585         |  |               |
|  | <b>5,584,905</b>     | <b>1,697,585</b>  |  |               |
| <b>Liabilities</b>   |                      |                   |  |               |
| • Short-term (less than 1 year)  | 19,343               | 6,756             |  |               |
|  | <b>19,343</b>        | <b>6,756</b>      |  |               |
| <b>Personal and real guarantees</b>  |                      |                   |  |               |
| • Provided or irrevocably promised by affiliated companies as security for debts or commitments of the company | 619,126              | 212,701           |  |               |
| <b>Financial results</b>   |                      |                   |  |               |
| • Income from financial assets   | 224,092              | 262,644           |  |               |
| • Income from current assets   | 247,356              | 138,763           |  |               |
| • Debts loads  | 1,367                | 1,209             |  |               |

## Transactions with related parties under non-market conditions

In the absence of legal criteria for listing significant transactions with related parties that are concluded at non-market conditions, no transactions are included here.

For information purposes and in the interest of transparency, all significant transactions with related parties (other than those with companies that are (almost) wholly owned by the group to which we belong) are listed below.

### SIBELGA

SIBELGA is the sole manager of the electricity and natural gas distribution networks for the 19 municipalities in the Brussels-Capital Region.

In October 2012, ELECTRABEL transferred to SYNATOM two parts of a loan to SIBELGA. The current balance of this loan amounts to 5.1 million euros. It is repayable in annual instalments until December 2026. 7.6 million euros, is repayable in annual instalments until December 2026.

## Financial relations with :

### A. Directors and Managers

Direct and indirect remuneration and pensions paid to directors and managers, charged to the income statement:  
180,297 euros

### B. The commissioner(s) and the persons with whom he/she is connected

Commissioner's fees : 68,000 euros  
Other attestation missions: 0 euros

## Evaluation of nuclear provisions

The Belgian Law of 11 April 2003, partially repealed and modified by the law of 12 July 2022, assigns to SYNATOM, a subsidiary of ELECTRABEL, the management of provisions for the dismantling of nuclear power plants and for the management of spent fuel.

Moreover, this legislation is organising the establishment of Nuclear Provisions Commission (NPC), whose mission is to control the process of constitution and management of these provisions.

Every three years, in accordance with the law, the NPC conducts an audit of the application and adequacy of the calculation methods used to establish nuclear provisions.

In this context, SYNATOM submitted a report on the triennial revaluation of nuclear provisions to the NPC on 2 September 2022. This report issued a set of remarks on 16 December 2022, confirming the reference scenarios, adding additional costs and adjusting the discount rates. Provisions recognised in 31 December 2022 take into account the full of the comments and assumptions made by the NPC.

However, contesting some of the NPC's remarks on the grounds that they were overly conservative or technically unsuitable, ELECTRABEL submitted on 14 February 2023, in accordance with the law, a new adapted proposal explaining the reasons why it considers that they cannot be acted upon. The NPC will then give its final opinion, if necessary, under the jurisdictional control of the Brussels Court of Contracts.

In addition, with a view to a possible extension of the Doel 4 and Tihange 3 nuclear reactors, the ENGIE Group has entered into discussions with the Belgian government on the capping of nuclear waste processing costs for ENGIE, which represent approximately 58% of the total provisions accounted for on 31 December 2022.

A letter of intent between the parties was signed on 22 July 2022, confirmed and enhanced by a non-binding agreement in principle dated 9 January 2023. These documents call for broad agreements in principle by 15 March and a binding agreement by June 2023. Assuming that the parties have reached an agreement, the difference between the amount of the final cap and the amount of the provisions recognized as of 31 December 2022 would constitute a liability to be recognised.

In the absence of a global agreement to date, the provisions recognised at 31 December 2022 do not take into account any additional commitments or adjustments to liabilities that may result from these discussions, and remain based on the current contractual and legal framework setting the duration of operation of the nuclear units at 50 years for Tihange 1 and Doel 1 & 2, and 40 years for the other units.

The provisions incorporate into their assumptions all of the existing environmental regulatory requirements or regulatory requirements that are scheduled for implementation at European, national or regional level. If new legislation were to be introduced in the future, the estimated costs used as a basis for calculations would be likely to vary.

Evaluation of the provisions incorporates margins to accommodate contingencies and risks in order to take into account the degree of mastery of the decommissioning and spent fuel management techniques. Margins for waste disposal contingencies are determined by the National Agency for Radioactive Waste and enriched Fissile materials (ONDRAF) and integrated into its fees. SYNATOM also estimates appropriate margins for each cost category.

Acknowledgment of the NPC's comments and the obligations associated with nuclear waste repository projects have led to a revaluation of nuclear liabilities in SYNATOM's accounts of 2.9 billion euros, above the net charge which was the yearly recurring of the financial year, mainly due to a reduction in the discount rate for the provision for spent fuel management and an increase in certain costs used to value the provision for dismantling nuclear production sites.

Finally, the amount of the provisions thus recorded may also be revised in the event of an agreement yet to be signed with the government.

## A. Provisions for the back-end nuclear fuel cycle management

Provisions for spent fuel management are calculated on the basis of an average unit cost determined for all quantities used up until the end of the operating period of the power plants and applied to the quantities generated at the closing date. An annual allocation corresponding to the accretion of provisions is also made.

After the spent nuclear fuel is unloaded from a reactor and temporarily stored on site, it will be conditioned and then disposed of in long-term storage.

The long term storage hypothesis integrated in the scenario retained by the NPC is based on a deep geological repository in a site to be identified and qualified in Belgium. This scenario has not yet been confirmed by the adoption of a national programme in accordance with Article 12 of the 2011 Directive/70/EURATOM. On 27 November 2019, the European Commission sent a reasoned opinion to Belgium in the context of the infringement procedure under Article 258 of the Treaty on the Functioning of the European Union.

A Royal Decree of 28 October 2022 has since instituted «the first part of the National Policy for the Long-Term Management of High-Level Radioactive Waste and/or Long-Life Radioactive Waste and specifying the process for the phased institution of the other parts of this National Policy».

This Royal Decree confirms «the deep disposal of this waste on Belgian territory on one or more sites» like «the preliminary draft concept for the long-term management of the radioactive waste referred to in Article 3, pending the outcome of the decision-making process (...)». It also enshrines «the reversibility of the National Policy, which implies, after reconsideration, the possibility of going back on one or more parts of this Policy». It is therefore not possible to guarantee that the deep disposal of category B waste -low- or medium-level long-lived waste from dismantling and C - high-level and/or long-lived waste will remain the technical solution chosen by Belgium.

If this assumption were to be challenged, the costs of back-end management may need to be adjusted.

The ENGIE group has also put the government on notice to put an end to the uncertainty created by this state of affairs, and to the damage caused by the postponement of the various projects needed for the management of nuclear waste in Belgium and reserves its rights to seek redress where appropriate.

In view of a number of developments in the nuclear fuel market, the nuclear provisioning company has proposed, and the NPC has confirmed, that the scenario of partial reprocessing of fuel to allow the processing of the MOX historically used in Belgian power plants, could no longer be the reference scenario.

Contrary to previous assessments, the reference scenario no longer includes the cost of a contract for re-treatment, nor the margins for contingencies but includes an assumption of direct disposal of MOX in deep storage. Should circumstances change, the costing may be revised.

The provisions for spent fuel management set up by SYNATOM cover all the costs associated with this scenario: on-site storage, transportation, conditioning, storage and geological disposal.

They are determined based on the following principles and parameters:

- storage costs mainly comprise the cost of building and additional operating dry storage facilities and the operation of existing facilities, as well as the cost of purchasing casks;
- the irradiated, non-reprocessed fuel is conditioned, which requires the construction of conditioning installations according to the acceptance criteria issued by ONDRAF. The ONDRAF recommendations relating to the cost of this facility have been fully taken into account;
- the costs of deep geological disposal operations are estimated using the tariffs established by ONDRAF on the basis of a total cost of the disposal facility of 12 billion euros<sup>2019</sup>;
- the forward commitment is calculated on the basis of estimated internal costs and external costs evaluated from bids received from third-parties;
- the new reference scenario integrates the latest updated ONDRAF scenario with the start of geological storage in around 2070, which will then end around 2135;
- the discount rate used by the NPC is 3.0% (including inflation of 2.0%).

The costs actually incurred in the future could, however, differ from these estimates given their nature and their due dates. Some of ONDRAF's recommendations that have not yet been quantified will be discussed by the NPC, which will issue an additional opinion in 2023 if necessary.

### Sensitivity analysis

The provisions for management of the back-end of the nuclear fuel cycle remain sensitive to assumptions concerning costs, schedule of operations and commitment of expenses and to the discount rate:

- On the basis of an analysis carried out by ENGIE Group experts, some of the comments made by the NPC in connection with the triennial review procedure described above are considered unjustified and have been the subject of a reasoned opinion sent to the NPC. The impact of taking this advice into account (at a discount rate of 3.0% as recommended by the NPC) would represent a decrease in provisions of 0.5 billion euros;

- The company is also contesting the 25 bps reduction compared to the previous rate and the 50 bps reduction compared to SYNATOM's initial proposal. Maintaining the known rate from 2019 of 3.25% would represent a decrease in provisions of 0.7 billion euros. These various elements were the subject of a reasoned opinion from the ENGIE group sent to the NPC on 14 February 2023, as provided for by the law of 12 July 2022.
- A 10% increase in ONDRAF fees above the reference rate for fees for the disposal of category C waste would result, with an unchanged amount of margins of uncertainty, in an increase in provisions of around 200 million euros.

## B. Provisions for the decommissioning of nuclear production sites

At the end of their operating life, nuclear power plants must be dismantled. The provisions created in SYNATOM's accounts are intended to cover all of the costs relating to both the definitive shutdown phase, which concerns the unloading and disposal operations of the plant's irradiated fuel, and the actual dismantling period, which leads to the decommissioning and clean-up of the site.

The decommissioning strategy adopted is based on decommissioning (i) immediately after reactor shutdown, (ii) performed in series rather than one unit at a time, and (iii) completely (return to an «industrial greenfield» concept), enabling the land to be used for industrial purposes in the future.

The provisions for the decommissioning of nuclear power plants are constituted based on the following parameters:

- the beginning of the technical operations for the final shutdown of the installations depends on the unit concerned and the sequencing of the operations for the entire plant fleet. They are immediately followed by the dismantling phase.
- moreover, the scenario retained is based on a dismantling plan and schedules that should be approved by the nuclear safety authorities. A dialogue on the safety conditions for the decommissioning and dismantling phases of the power plants has been initiated with the Federal Nuclear Control Agency (FNCA). The costs may change depending on the outcome of these discussions and the detailed realisation project for these phases currently being defined;
- the amount to be disbursed is ultimately determined by the estimated costs of each nuclear power plant, based on a study conducted by an independent consultancy firm and under the assumption that the plants would be dismantled in series. The costs actually incurred in the future could, however, differ from these estimates given their nature and their due dates;
- the fees for the management of category A (low- or intermediate-level, short-lived waste) and category B (low- or intermediate-level, long-lived waste) decommissioning waste are determined using the fee schedule established by ONDRAF and including the margins recommended by ONDRAF for the risk of reclassifying waste, given the uncertainties in defining the criteria for admitting waste in these categories; difficulties in obtaining the operating permits for the category A waste storage facility have led ONDRAF to review the definition of the technical storage solution, a new assessment of has been carried out in 2022;

- for the different phases, the inclusion of contingency margins, reviewed by ONDRAF and the NPC, is taken into account;
- an 2% inflation rate is applied until the end of dismantling for determining the future value of the commitment;
- the discount rate used by the NPC is 2.5% (including inflation of 2.0%).

In addition, the liabilities recorded for the disposal of operational waste at ELECTRBEL include the tariff update approved by the Board of Directors of ONDRAF in May 2022.

Lastly, ELECTRBEL has set aside provisions, based on the provisions for the Belgian assets most closely related to these power plants, to cover costs relating to the decommissioning phase of its drawing rights at Tricastin and Chooz B as well as for the dismantling period leading up to the decommissioning and cleanup of the Chooz B site, in accordance with the respective agreements entered into with EDF.

### Sensitivity analysis

On the basis of an analysis carried out by the ENGIE group's experts, certain remarks made by the NPC in the context of the triennial review procedure described above are considered to be unjustified and have been the subject of a reasoned opinion sent to the NPC. The impact of taking this advice into account, at a discount rate of 2.50% as recommended by the NPC, would represent a decrease in provisions of 0.6 billion euros;

On the basis of the parameters currently applied for estimating costs and the timing of disbursements, a 10 basis point change in the discount rate would be likely to lead to a change in the balance of provisions for dismantling for about 85 million euros, upwards if the rate decreases and downwards if the rate increases.

## C. Financial assets dedicated to the coverage of future expenses for dismantling facilities and managing irradiated fissile materials

As indicated in the previous point, the Belgian law of 12 July 2022, partially repealing and amending the law of 11 April 2003, assigns to SYNATOM, a subsidiary 100% owned by ELECTRBEL, the task of managing and investing funds received from Belgian nuclear operators to cover the costs of dismantling nuclear power plants and spent fuel management. As stated by the law of 11 April 2003, SYNATOM could lend a maximum of 75% of these funds to nuclear operators in compliance with certain credit quality criteria.

In accordance with the law of 12 July 2022, the amount of outstanding loans between SYNATOM and nuclear operators representing the countervalue of provisions for spent fuel management will be reimbursed to SYNATOM by 31 December 2025 according to a schedule provided for in the law. The amount of the outstanding loans between SYNATOM and ELECTRBEL representing the countervalue of the provisions for decommissioning will be repaid by 31 December 2030 to SYNATOM according to a schedule set out in the law.

# ADDITIONAL NOTES

The part of the provisions not covered by loans to nuclear operators is invested by SYNATOM either in financial assets outside the nuclear operators or in loans to legal entities meeting the criteria of «credit quality» imposed by law.

## Back-end schedule (in millions of euros)

Repayment made by 31 December of the year concerned:

| 2022 | 2023 | 2024 | 2025  |
|------|------|------|-------|
| 894  | 889  | 931  | 1,071 |

## Dismantling schedule (in millions of euros)

Repayment made by 31 December of the year concerned:

| 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 |
|------|------|------|------|------|------|------|------|------|
| 683  | 683  | 683  | 683  | 364  | 364  | 364  | 364  | 364  |

In fiscal year 2022, SYNATOM has consequently invested nearly 1.9 billion euros in such assets.

SYNATOM's objective in terms of investment in these assets is to offer, in the long term, a sufficient return for an acceptable level of risk, in order to cover the costs related to the dismantling and management of irradiated fissile materials, under the constraints of diversification, risk minimisation and availability as defined by the law of 12 July 2022.

It is the responsibility of SYNATOM's Board of Directors and its Investment Committee to define SYNATOM's investment policy after advice from the NPC in accordance with the law of 12 July 2022. Based on a rigorous risk control policy, the Investment Committee supervises investment decisions, which are managed by a team headed by an Investment Director.

On 31 December 2022, the value of financial assets used to hedge nuclear provisions amounted to 67,047 million euros, with a yield of -13.56% over the year. The year 2022 was marked by unprecedented events that greatly increased the volatility of global equity and bond markets. The inflationary pressures that followed the Covid crisis prompted a series of interest rate hikes by various central banks. Publications of mixed macroeconomic data and the war in Ukraine impacted equity markets, particularly in Europe. All asset classes, except money market, had negative returns in 2022.

## Valuation of financial assets over the 2022 financial year

|                            | NIF1          | NIF2        | BNLF          | 14B        | SIBELGA   | TOTAL         |
|----------------------------|---------------|-------------|---------------|------------|-----------|---------------|
| Net assets                 | 4,779,668,703 | 252,939,767 | 1,561,520,124 | 24,361,334 | 5,157,976 | 6,623,647,904 |
| Number of shares           | 437,663       | 26,546      | 1,632,297     |            |           |               |
| VNI per share              | 10,920.88     | 9,528.26    | 956.64        |            |           |               |
| Variation VNI vs 12/N-1    | -12.89%       | -13.72%     | -15.61%       |            |           |               |
| NIF                        | -12.89%       | -13.72%     |               |            |           |               |
| Accounting valuation       | 5,042,938,248 | 273,338,708 | 1,701,200,000 | 24,361,334 | 5,157,976 | 7,046,996,266 |
| Historical VNI             | 11,522.41     | 10,296.69   | 1,042.21      |            |           |               |
| NIV Plus-Value             | -601.53       | -768.43     | -85.57        |            |           |               |
|                            | -5.22%        | -7.46%      | -8.21%        |            |           |               |
| More (less) - Latent value | -263,269,545  | -20,398,941 | -139,679,876  | 0          | 0         | -423,348,362  |



## Valuation rules

### Establishment costs

Establishment costs are paid in the year in which they are incurred.

### Property, plant and equipment

#### Acquisition value

Property, plant and equipment are recorded as assets in the balance sheet at their acquisition or production cost, or at their contribution value.

#### Incidental expenses

Costs incidental to investments are included in the acquisition value of the related property, plant and equipment.

They are depreciated at the same rate as the facilities to which they relate.

#### Depreciation

Property, plant and equipment are depreciated from the date they are put into service. For furniture and rolling stock, this date generally corresponds to the date of acquisition.

Provisions are calculated using the straight-line method at the following rates:

- Furniture: 10 %.
- Office equipment: 20 %.
- Used equipment: 33.33 %.
- Amenities: over the term of the lease.

## Financial assets

### Participations, shares and units

Participating interests, shares and units in non-consolidated companies are recorded in the balance sheet at their acquisition or contribution value, excluding incidental expenses and less any amounts still to be paid up.

At the end of each fiscal year, each security is individually evaluated based on the situation, profitability or prospects of the company concerned. The valuation method is chosen objectively, taking into account the nature and characteristics of the security concerned.

In most cases, the net asset value is used, or the market value if it is lower than the net asset value. The criterion adopted for a given security is applied systematically from one year to the next, except where changes in the circumstances justify it, in which case a specific mention is made in the notes.

Where the valuation thus carried out shows a permanent reduction in value in relation to the inventory value, the securities are subject to a write-down equal to the permanent portion of the loss in value.

An exceptional reversal of a write-down may be made when a lasting gain is observed on securities that were previously written down. Apart from this case, no revaluation of the securities is carried out, notwithstanding any capital gains, even lasting ones, that may arise from their valuation.

### Receivables recognised as financial assets

Receivables recognised as financial assets are recorded at their nominal value. Fixed-income securities are recorded at cost. If their repayment at maturity appears, in whole or in part, uncertain or compromised, these receivables and securities are written down accordingly.

### Receivables over and under one year

Receivables are recorded at their nominal value and are subject to write-downs if their repayment at maturity appears uncertain or compromised, in whole or in part.

In the event of bankruptcy or composition, unpaid claims are automatically considered doubtful and their total net value (excluding VAT) is immediately written down. Other receivables may be subject to write-downs, adapted to each case.

## Stocks

### Fuel stocks

Fuels and other raw materials are booked on the asset side of the balance sheet at their original cost, which includes, in addition to the purchase price, ancillary costs such as non-recoverable taxes and any transport costs.

Inventories are valued at the end of the accounting period on the basis of the weighted average price. Impairment losses are recorded in the accounts when the market price is proven to be lower than the net book value.

## Investments

### Shares and units

The shares are recorded in the balance sheet at their acquisition or contribution value, excluding incidental expenses and less any amounts still to be paid up.

At the end of each fiscal year, each security is individually evaluated on the basis of the situation, profitability or prospects of the company concerned. The valuation method is chosen objectively, taking into account the nature and characteristics of the security concerned.

In most cases, the net asset value is used, or the market value if it is lower than the net asset value. The criterion used for a security is applied systematically from one financial year to the next, except where changes in the circumstances justify it, in which case a specific mention is made in the notes.

Where the valuation thus carried out shows a permanent diminution in value in relation to the inventory value, the securities are subject to a write-down equal to the permanent portion of the loss in value.

An exceptional reversal of a write-down may be made when a lasting gain is observed on securities that were previously

# ADDITIONAL NOTES

written down. Apart from this case, no revaluation of the securities is carried out, notwithstanding any capital gains, even lasting ones, that may arise from their valuation.

## Fixed income securities

Fixed income securities are valued on the basis of their actuarial yield calculated at the time of purchase.

## Provisions for liabilities and charges

At the end of each fiscal year, the Board of Directors, acting prudently, honestly and in good faith, determines the provisions to be set aside to cover all anticipated risks or possible losses arising during the fiscal year or previous fiscal years.

## Provisions for decommissioning of nuclear power plants

Coverage of the expenses related to the dismantling of nuclear power plants is organised, under the supervision of the Nuclear Provisions Commission created by the law of 11 April 2023, by recording provisions on the liabilities side of the provisions balance sheet. These correspond to the present value of the best estimate of the future costs of decommissioning, dismantling and cleaning up nuclear power plants.

## Provisions for the management of irradiated fissile materials

The coverage of future expenses relating to the storage, treatment and disposal of spent fuel in nuclear power plants (back-end cycle) is organised, under the control of the Nuclear Provisions Commission created by the law of 11 April 2003, by the constitution of provisions on the liabilities side of the balance sheet of provisions. These are determined on the basis of an average unit cost established from the present value of the best estimate of the costs corresponding to all the quantities used during the operating period of the nuclear power plants.

## Amounts payable

Amounts payable are recorded at their nominal value.

## Off-balance sheet rights and commitments

Off-balance sheet rights and commitments are disclosed in the notes, by category, at the nominal value of the commitment as stated in the contract or, failing that, at the estimated value. Rights and commitments that cannot be quantified are mentioned as a reminder.

## Foreign currency transactions, assets and liabilities

Current transactions in foreign currencies are recorded at the spot exchange rate on the day of recording. In the case of forward hedging, the assets or liabilities concerned are valued at the hedging rate.

Non-monetary assets and liabilities (mainly formation expenses, property, plant and equipment, intangible assets, financial assets and inventories) continue to be valued at historical exchange rates; this value is used as the basis for calculating depreciation and any impairment losses (see above).

Exchange differences arising on the realisation of monetary assets and liabilities (receivables, borrowings and payables) are taken directly in the income statement.

Advance payments are considered as monetary or non-monetary assets depending on their purpose.

At year-end, the main monetary items in foreign currencies are revalued on the basis of the spot exchange rate at the closing date of the financial statements, except for items that are specifically hedged, for which the hedging rate is applied. The net conversion differences per currency recognised on this occasion are recorded in the deferred income statement in the case of an unrealised profit, and are charged to the income statement in the case of an unrealised loss. Translation differences on available-for-sale financial assets are recognised in the income statement, even if they are profits.

# STATUTORY AUDITOR'S REPORT ON THE ANNUAL ACCOUNTS

## Statutory auditor's report to the shareholders' meeting of Société Belge des Combustibles Nucléaires Synatom SA for the financial year ending 31 December 2022 - Annual accounts

In the context of the statutory audit of the annual accounts of the Belgian Nuclear Fuels Company SYNATOM SA (the «company»), we hereby submit our statutory audit. This includes our report on the annual accounts as well as other legal and regulatory requirements. The whole constitutes a whole and is inseparable.

We were appointed in our capacity as statutory auditor by the general meeting of 11 May 2022, in accordance with the proposal of the board of Directors. Our mandate as statutory auditor will expire on the date of the shareholder's meeting deliberating on the annual accounts for the year ending 31 December 2024. Given the absence of electronic archives prior to 1997, we have not been able to determine exactly the first year of the mission. We have performed the statutory audit of annual accounts of Société Belge des Combustibles Nucléaires SYNATOM SA for at least 25 consecutive years.

### Report on the annual accounts

#### Unqualified opinion

We have audited the annual accounts of the company, which comprise the balance sheet as at 31 December 2022, the income statement for the year then ended and the explanatory notes thereto and which show balanced sheet total of 18,128,986 (000) euros. Its income statement shows a profit for the year of 953 (000) euros.

In our opinion, the annual accounts give a true and fair view of the company's financial position and its assets and liabilities as of 31 December 2022, as well as its results for the year ending on that date, in accordance with the accounting standards applicable in Belgium.

## Basis for unqualified opinion

We conducted our audit in accordance with International Standards on Auditing (ISA), as applicable in Belgium. In addition, we have applied the International Standards on Auditing approved by the IAASB and applicable at the time of this closing, which have not yet been approved at national level. The responsibilities under these standards are described in more detail in the section «Auditor's Responsibilities in the Audit of the annual accounts» of this report. We have complied with all ethical requirements applicable to the audit of annual accounts in Belgium, including those regarding independence.

We have obtained from the Board of Directors and the company's officials the explanations and information necessary for our audit.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

## Observation paragraph

Without calling into question the unqualified opinion expressed above, we draw your attention to note C-cap 6.20 Point 2 of the annual accounts, which describes the process of evaluation of the provisions set aside for the decommissioning of nuclear power plants and for the management of irradiated fissile materials in these power plants (collectively the «nuclear provisions») in accordance with the law of 11 April 2003 on nuclear provisions, as partially repealed and amended by the law of 12 July 2022.

As indicated in this note, the evaluation of nuclear provisions at 31 December 2022 takes full account of the comments and assumptions made by the Nuclear Provisions Commission (NPC) in its report from the 16 December 2022. This evaluation remains sensitive to the industrial scenarios selected, the associated cost estimates and the macroeconomic assumptions (inflation and discount rates) to be applied.

In addition, this note reports on ongoing discussions with the Nuclear Provisions Commission concerning the valuation of nuclear provisions at 31 December 2022, and with the Belgian Government on the capping of nuclear waste processing costs in full discharge of the ENGIE Group's liabilities. The outcome of these discussions is uncertain at that date, and could lead to a significant revision of the nuclear provisions recognised at 31 December 2022.

## Responsibilities of the Board of Directors in relation to preparation of the annual accounts

The Board of Directors is responsible for the preparation of annual accounts that give a true and fair view in accordance with the financial reporting framework applicable in Belgium, and for such internal control as it determines is necessary to ensure that the annual accounts are free from material misstatement, whether due to fraud or error.

In preparing the annual accounts, it is the responsibility of the Board of Directors to assess the company's ability to continue as a going concern, and to provide, where appropriate, going

concern information where appropriate, and for applying the going concern basis of accounting unless the board of directors intends to liquidate the company or to cease trading, or unless the board of directors is unable to consider any other realistic alternative.

## Responsibilities of the auditor in relation to the audit of the annual accounts

Our objectives are to obtain reasonable assurance about whether the annual accounts taken as a whole are free from material misstatement, whether due to fraud or error, and to issue a statutory auditor's report containing our opinion. Reasonable assurance corresponds to a high level of assurance, which does not, however, guarantee that an audit performed in accordance with ISA standards will always detect any material misstatements that exists. Misstatements may be the result of fraud or error and are considered material when it is reasonable to expect that they could, individually or in the aggregate, influence the economic decisions that users of the financial statements make in reliance on them.

In performing our audit, we comply with the legal, regulatory and standard framework applicable to the audit of annual accounts in Belgium. The scope of the statutory audit does not include any assurance as to the future viability of the company or the efficiency or effectiveness with which the Board of Directors has conducted or will conduct the company's business.

In conducting an audit in accordance with ISA standards and throughout the audit, we exercise professional judgment and critical thinking. In addition:

- we identify and assess the risks of material misstatement of the annual accounts, whether due to fraud or error, and design and perform audit procedures to respond to those risks, and obtain sufficient appropriate audit evidence on which to base our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than of the risk of not detecting a material misstatement resulting from an error, since fraud may involve collusion, forgery, wilful omission, misrepresentation or circumvention of in-house audit;
- we obtain an understanding of internal control relevant to the audit to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control;
- we assess the appropriateness of the accounting policies used and the reasonableness of the accounting estimates made by the Board of Directors, as well as the information provided by the Board of Directors in this respect;
- we conclude on the appropriateness of the Board of Directors' use of the going concern basis of accounting and, based on the evidence obtained, whether there is material uncertainty related to events or circumstances that may cast significant doubt on the company's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw the attention of readers of our auditor's report to the information provided in the annual accounts about that uncertainty or, if that information is not adequate,

to express a modified opinion. Our conclusions are based on evidence gathered up to the date of our statutory auditor's report. However, future situations or events could lead the company to go out of business;

- we assess the overall presentation, structure and content of the annual accounts and evaluate whether the annual accounts reflect the underlying transactions and events in a manner that gives a true and fair view.

We communicate to those charged with governance, in particular, the scope of the audit work and the planned timetable for its completion, as well as any significant observations made during our audit, including any material weaknesses in internal inspection.

## Other legal and regulatory obligations

### Responsibilities of the Board of Directors

The board of directors is responsible for the preparation and content of the management report, the documents to be filed in accordance with the legal and regulatory provisions, compliance with the legal and regulatory provisions applicable to accounting and compliance with the Companies and Associations Code and the company's articles of association.

### Commissioner's responsibilities

In the context of our mandate and in accordance with the Belgian complementary standard to the International Standards on Auditing (ISA) as applicable in Belgium, our responsibility is to verify, in their significant aspects, the management report, certain documents to be filed in accordance with the legal and regulatory provisions, and the compliance with certain provisions of the Code of Companies and Associations and of the articles of association, and to report on these elements.

### Aspects relating to the management report

In our opinion, the management report is consistent with the annual accounts for the same financial year and has been prepared in accordance with articles 3:5 and 3:6 of the Companies and Associations Code.

In the context of our audit of the annual accounts, we must also assess, in particular on the basis of our knowledge acquired during the audit, whether the management report contains a material misstatement, i.e. information that is incorrectly formulated or otherwise misleading. Based on this work, we have no significant anomalies to report.

## Mention of the social balance sheet

The social balance sheet, to be filed with the National Bank of Belgium in accordance with article 3:12, § 1, 8° of the Companies and Associations Code, covers both the form and the content of the information required by this Code, including the information on salaries wages and training, and does not contain any significant inconsistencies with the information available to us in the context of our assignment

## Statements regarding independence

- Our audit firm and our network did not perform any engagements that were incompatible with the statutory audit of the annual accounts and our audit firm remained independent from the company during our mandate.
- The fees for the additional non-audit services compatible with the statutory audit as referred to in article 3:65 of the Companies and Associations Code have been correctly allocated and valued in the notes to the annual accounts.

## Other mentions

- Without prejudice to formal aspects of minor importance, the accounts are kept in accordance with the legal and regulatory provisions applicable in Belgium.
- The distribution of the results proposed to the Shareholders' meeting is in accordance with the legal and statutory provisions.
- We have no transactions to report to you or decisions taken in violation of the articles of association or the Companies and Associations Code.

Signed in Zaventem

The statutory auditor

**Deloitte Auditors SRL**

Represented by Laurent Boxus

Electrabel



kWh

Use

Deactivation

Fuel assemblies

Spent fuel assemblies

Manufacturing

Intermediate storage

Reprocessing

Enrichment

Conditioning

Conditioning

Conversion

Storage

Storage

Extraction & concentration

Final disposal

ONDRAF/NIRAS

FRONT-END

FRONT-END

BACK-END

BACK-END

Enriched UF<sub>6</sub>

UF<sub>6</sub>

U<sub>308</sub>

Pu

U

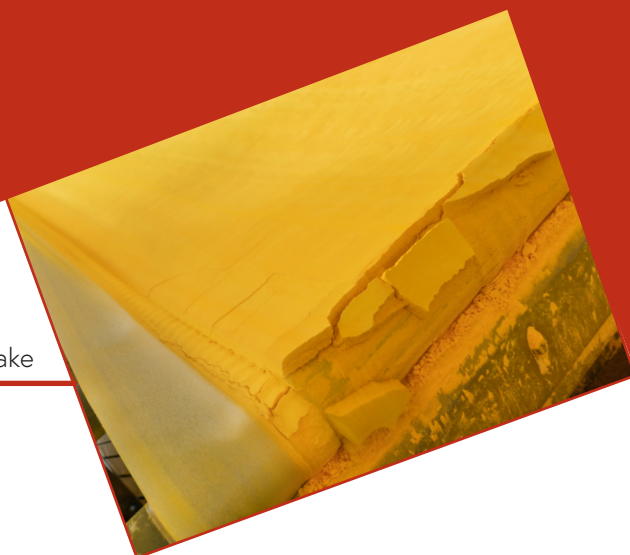
Waste

Non-reprocessing



# DETAILS OF THE NUCLEAR FUEL CYCLE

Yellow cake



## Front-end

**Extraction:** Uranium deposits are mined using open-pit or underground mining, in situ leaching (ISL, sometimes referred to as in situ recovery, or ISR), using the same methods as deployed in other mining facilities.

**Concentration:** Close to the mines, the uranium ore is processed into «yellow cake», containing roughly 85% uranium.

**Conversion:** The uranium concentrate is then refined and processed into a gaseous chemical compound : uranium hexafluoride.

**Enrichment:** Before it can be used in Belgium's nuclear reactors, the fuel must contain a higher proportion of uranium 235 than it has in its natural state. The content of uranium 235 has to be increased to more than 4%, using the centrifugation method. The result of this process is enriched uranium hexafluoride.

**Fuel assembly manufacturing:** This is the responsibility of the nuclear power plant operator, who determines the specific requirements. SYNATOM's mission is to deliver the enriched uranium hexafluoride to the fabrication plant.

## Use in the reactor

The enriched uranium contained in fuel assemblies is leased to the operator.

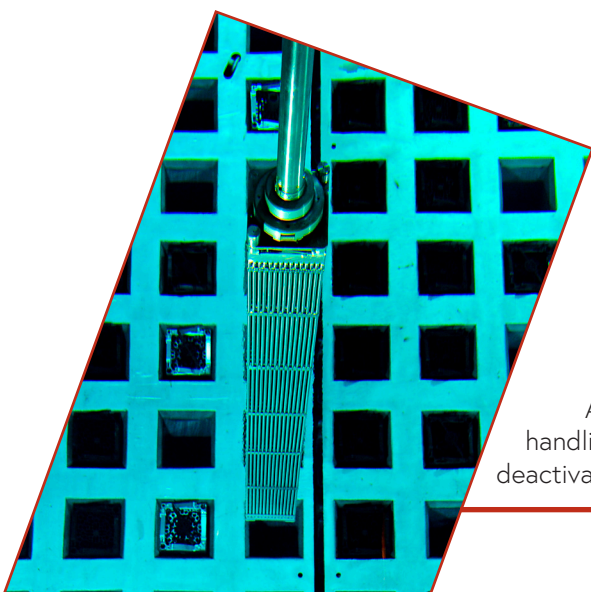
## Back-end

**Spent fuel management:** After 3 to 4 1/2 years in the reactor vessel, fuel assemblies are definitively removed and transferred to an underwater pool to begin their radioactive decay and shed some of their residual heat. This phase of spent fuel management is identical in Doel and Tihange and SYNATOM entrusts it to the operator.

**Interim storage:** After a few years in the spent fuel pool, the fuel assemblies are transferred to a centralised interim storage facility. In Doel, dry storage takes place in specific casks. In Tihange, spent fuel is stored in a centralised underwater pool. Eventually, once the current storage capacity has been extended, both facilities will use dry storage in casks.

**Conditioning:** The spent fuel is conditioned either by reprocessing which consists of the separation of uranium and plutonium - which can be recycled - from radioactive waste, or either by the conditioning of the entire spent fuel assemblies, in order to ensure final disposal.

**Final disposal:** this is the responsibility of the Belgian agency for radioactive waste and enriched fissile materials (ONDRAF/ NIRAS), which is responsible for the final management of all nuclear waste produced in Belgium. To date, the problem of final storage of high-grade, long-lived waste remains at the research stage.



Assembly handling in the deactivation pool

Belgoprocess site in Dessel - Storage building for waste from reprocessing



# COLOPHON



In accordance with Belgian Law, SYNATOM publishes its annual report in French and Dutch. An English version is also available. The French version is the original one while the other versions are unofficial translations. Every effort has been made to ensure that the language versions correspond to one another. If one difference should exist, the French version would take precedence. You can access and download the three versions at [www.synatom.com](http://www.synatom.com).

## Editorial team

SYNATOM

Pages 3 to 19: ACTE 4 SPRL - Jean-Jacques Pleyers


## Photos


- Page 4: Cécile FLANDRE - Chair - Private photo
- Page 5: Dimitri STROOBANTS - Chief Executive Officer - ELECTRABEL photo library
- Page 7: Reception of fresh fuel assemblies at Doel nuclear power plant - ELECTRABEL photo library
- Page 9: Dismantling timeline - ELECTRABEL graphics
- Page 10: Handling a dry storage cask at SF<sup>2</sup> in Tihange - ELECTRABEL photo library
- Page 45 - Top left: Yellow cake on band filter. Muyunkum plant, Kazakhstan - Copyright: Orano, AMANKULOV JANARBEBK AMAN
- Page 45 - Bottom left: Handling a fuel assembly in the deactivation pool - ELECTRABEL photo library
- Page 45 - Bottom right: Storage building for reprocessed waste at the Belgoprocess site in Dessel - ONDRAF photo library

## Content officer

Dimitri Stroobants

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## Concept

**ACTE 4 SPRL** - Jean-Jacques Pleyers

## Design


**Snoeck Medias** - Céline Snoeck  
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10 May 2023

Four large, tilted squares in orange, yellow, dark blue, and light blue are arranged diagonally across the middle of the page.

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