

Commissie Strategische Opgaven 26 juni 2026

Vragen Inez Flameling (PvdA-GL), over Antwoorden Statenvragen - Statenfractie PvdA-GL - Memorandum of Understanding met Thorizon - 260 – 822761, agendapunt 4.1

Vragen Commissie Strategische Opgaven	Antwoorden
We hebben de brief 102.14 (Antwoorden Statenvragen - Statenfractie PvdA-GL - Memorandum of Understanding met Thorizon - 260 - 822761) teruggevraagd voor behandeling. Volgens de antwoorden op de vragen (vraag 1) is de MoU openbaar; waar kunnen we deze vinden?	Het document is toegevoegd als bijlage.

Memorandum of Understanding - Molten Salt roadmap

Memorandum of Understanding

This Memorandum of Understanding is concluded by and between:

Thorizon Holding B.V., having its registered office at Energy Transition Campus Amsterdam, Grasweg 31, 1031HW Amsterdam, The Netherlands (registered with the Dutch chamber of commerce under number 71135472), represented by, Kiki Lauwers, CEO and Sander de Groot, CSO, also acting on behalf of its affiliates,

(hereinafter referred to as "**THORIZON**"),

AND

N.V. Elektriciteits-Produktiemaatschappij Zuid-Nederland, having its registered office at Zeedijk 32, 4454 PM Borssele registered in Middelburg with company number 17059425, duly represented by its CEO Marco Muilenburg

(hereinafter referred to as "**EPZ**")

AND

NRG PALLAS B.V., a private limited liability company incorporated and registered in Petten with company number 41151233, having its place of business at Westerduinweg 3 32, 1755 LE Petten, duly represented by its CEO, Maurits Wolleswinkel

(hereinafter referred to as "**NRG PALLAS**")

AND

Provincie Zeeland, having its registered office in Abdij 6, 4331BK Middelburg, The Netherlands (registered with the Dutch chamber of commerce within the register of governmental organisations under number 20168636), duly represented by Johan Aalberts, member of the Provincial Executive

(hereinafter referred to as "**Zeeland**")

AND

Provincie Noord-Holland, having its registered in Dreef 3, 2012 HR Haarlem, The Netherlands (registered with the Dutch chamber of commerce within the register of governmental organisations under number 34362354), duly represented by Esther Rommel, member of the Provincial Executive

(hereinafter referred to as "**Noord-Holland**")

AND

N.V. Economische Impuls Zeeland, having its registered office in Edisonweg 37 D1, 4382 NV Vlissingen, The Netherlands (registered with the Dutch chamber of commerce under number 22064282), duly represented by Dick ten Voorde, CEO

(hereinafter referred to as "**Impuls**")

AND

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ROM InWest B.V., having its registered office at Dreef 40, 2012 HS Haarlem (registered with the Dutch chamber of commerce under number 84148527), duly represented by its CEO Janet Nieboer

(hereinafter referred to as “**ROM InWest**”)

AND

Invest-NL Capital N.V., a public company (naamloze vennootschap), having its registered office in Amsterdam, and with address at Kingsfordweg 43 117, 1043 GP Amsterdam, registered with the trade register under number 76646971, duly represented by Rinke Zonneveld, CEO

(hereinafter referred to as “**Invest-NL**”)

Individually referred to as a “**Party**” or collectively as “**Parties**”.

WHEREAS THORIZON is developing a small-scale nuclear power reactor based on the inherently safe molten salt technology that will generate carbon-free electricity and heat;

WHEREAS, EPZ, as operator of the Netherlands’ only commercial nuclear power plant at Borssele, represents a cornerstone of the Dutch nuclear infrastructure and contributes materially to national energy security and decarbonization objectives;

WHEREAS, EPZ and THORIZON have successfully completed a joint pre-feasibility assessment regarding the potential siting of a first of a kind Thorizon reactor at the Borssele site;

WHEREAS, based on the ‘Letter of Intent Thorizon investigation of activities at EPZ site in Borssele’ d.d. February 18, 2026, THORIZON and EPZ jointly undertake activities to assess the suitability of (parts of) the site of EPZ and to develop the conditions under which site availability could be realized;

WHEREAS, NRG PALLAS is a leading Dutch nuclear technology organization with decades of experience in research reactor operation, nuclear safety engineering, reactor newbuild, medical isotope production and nuclear infrastructure management;

WHEREAS, Zeeland is the only Dutch province currently hosting a commercial nuclear reactor, and aims to further strengthen the nuclear ecosystem and economic activity through commercial development and educational initiatives;

WHEREAS, Noord-Holland, hosting the NRG PALLAS research reactor in Petten, plays a central role in Dutch nuclear research and is committed to further strengthening its capabilities and supporting future technological and educational advancement;

WHEREAS, Impuls and ROM InWest strengthen the regional economy in Zeeland and North-Holland respectively through investment, innovation and business development. They serve as a bridge between public ambition and private execution, unlocking investment and anchoring strategic projects in regional economies;

WHEREAS, Invest-NL sees the potential of Molten Salt Technology in general and THORIZON in particular and wants to financially support the next stage of the development being the Roadmap of a demonstrator in Petten and a first commercial reactor in Borssele;

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WHEREAS, the Parties share the ambition to strengthen the Netherlands' position as a European hub for advanced nuclear innovation and sustainable fuel cycle solutions;

WHEREAS, while not anticipating on any future conclusion of the site selection process of the plans for the 2 large NPP's, the Parties acknowledge that building the first commercial reactor Thorizon One at the Borssele site of EPZ will not compete or conflict with the plans of NEO NL to construct 2 large NPP's in the Netherlands and will not compete or conflict with the plans of EPZ to extend the operation of the Borssele NPP beyond 2033 and will even contribute to the creation of a nuclear ecosystem in the Netherlands in line with the ambitions of NEO NL;

WHEREAS, the strategic relevance of the collaboration between the Parties can be described by THORIZON as follows:

THORIZON is developing a **new generation of nuclear technology** (molten salt reactors) to address three of Europe's most pressing challenges: affordable clean energy, energy independence, and industrial competitiveness.

- The project aims to deliver **affordable, CO₂-free energy**. It develops a reactor capable of providing reliable, cost-competitive clean energy directly at the point of use. Through intrinsic safety, low-pressure operation and a modular, scalable design, this can be achieved at fundamentally competitive cost levels. The technology supports the European energy transition and strengthens the competitiveness of energy-intensive industries.
- The project aims to strengthen **energy independence**. By reusing existing spent nuclear fuel as a resource, the project unlocks a strategic opportunity for Europe. The continent already holds sufficient used fuel to supply energy for decades, transforming what is often considered waste into a valuable asset for long-term energy security.
- The project contributes to a strong **Dutch and European high-tech innovation ecosystem**. In collaboration with industrial partners and leading research institutions, the project drives the development of new components, materials and manufacturing methods, while building a robust intellectual property position. These innovations extend beyond nuclear and reinforce Europe's broader high-tech industry and long-term technological leadership.
- This positions the Netherlands, France and Europe to build a sovereign value chain for advanced reactors, spanning fuel production, manufacturing, operations, and research.
- The project follows a clear, **phased roadmap** from component development and system loops, to the Pilot, the PIONEER nuclear demonstrator, and the first commercial Thorizon One reactor.
- Each phase anchors **R&D, manufacturing and high-value activities in the Netherlands and France**, while progressively de-risking deployment and mobilising industrial investment. This translates into a stepwise scale-up from early-stage development to large-scale industrialisation, with cumulative investment growing from tens of millions to over €1 billion.

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- At full deployment, the project supports the emergence of a new European industrial sector, creating **thousands of high-skilled jobs and up to ~65,000 direct jobs** across the value chain.

The collaboration aligns with national and European priorities.

- In the Netherlands, the project is highlighted as a **flagship project for competitiveness in the Dutch Wennink report** and contributes to the SMR strategy and the development of a domestic nuclear supply chain. The project builds on work carried out by TU Delft, NRG PALLAS, DIFFER and ongoing programs such as PROMOSA (Noord-Brabant consortium with Thorizon, VDL Groep and Demcon), ZILT (Zeeland consortium with Thorizon, EPZ and Schelde Exotech) and the call for projects for Mission-driven Research, Development and Innovation (PRONTO, project proposal with Thorizon, TU Delft, TNO and VDL Groep).
- In France, the project has been selected within the **France 2030 innovative reactor program**. It aligns with French priorities on advanced reactor development and fuel cycle closure, supports the national nuclear relaunch strategy, and strengthens industrial and technological leadership in next-generation nuclear energy. The project builds on work carried out within the Proxima consortium (Thorizon, Orano, University of Lille, CEA).
- At the European level, the project has been selected as **one of eight prioritized projects within the European SMR Alliance**, positioning it among the leading initiatives shaping Europe's next-generation nuclear landscape. It directly contributes to the objectives of the European Green Deal and the Net-Zero Industry Act by enabling scalable, CO₂-free energy production, strengthening European clean-tech manufacturing capacity, and reducing reliance on imported fossil fuels and non-European technologies. In addition, the project supports European ambitions to build a sovereign nuclear value chain, from fuel cycle capabilities to advanced reactor manufacturing and deployment.

Together, these efforts position the Netherlands and France as leaders in the European SMR sector and reinforce Europe's strategic autonomy, industrial competitiveness, and decarbonisation goals.

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1. PURPOSE OF THE MEMORANDUM OF UNDERSTANDING

The purpose of this Memorandum of Understanding (“**MOU**”) is laying down the principles to work together with the goal to realize the first commercial molten salt reactor in Europe in the Netherlands, by pursuing the following objectives:

- To realize the **full Thorizon roadmap** from component prototypes to molten salt pilots, R&D work, nuclear demonstrator (PIONEER) and first commercial reactor (THORIZON ONE) by 2034;
- To secure early **site allocation** such that permitting processes and nuclear licensing can start which are critical for the timeline;
- To secure **financing** in terms of direct private financing from the parties involved as well as shared work to secure public financing in the Netherlands, France and Europe;
- To secure early **offtake commitments** for the electricity produced by the first commercial Thorizon reactor;
- To jointly build the **accompanying ecosystem**, with manufacturing companies, universities and research institutes;
- To provide **expertise** to the project in terms of design, licensing, operations;
- To support **stakeholder management** and communications in the regions, on national and European level.

For the avoidance of doubt, this MOU constitutes an obligation of best efforts (“inspanningsverplichting”) only.

2. THORIZON ROADMAP

Thorizon aims to realize the first commercial molten salt reactor in Europe in the Netherlands with the following target milestones:

- 2027: Realization of a **non-nuclear molten salt test facility** to roll out the Thorizon **PILOT program** with stakeholders in Zeeland (a.o. at EPZ in Borssele), together with VDL Groep;
- 2028 – 2030: Realization of the **demonstrator reactor Thorizon PIONEER** at NRG PALLAS in Petten, Noord-Holland;
- 2034: Realization of the **first commercial powerplant THORIZON ONE** (100MWe molten salt reactor) at EPZ in Borssele, Zeeland.

For context, the following activities on the roadmap have already started and will be used as basis for future activities:

- Ongoing: **Component prototyping** and testing with Thorizon partners (incl., VDL Groep, Huygens) at **Thorizon labs** in Amsterdam and Eindhoven, and the development of a non-nuclear test facility at EPZ in Borssele, Zeeland under the ZILT subsidy project (incl. Schelde Exotech, Delmeco);
- Ongoing: **R&D work** at NRG PALLAS in Petten, TU Delft, JRC Petten, Orano, CEA;

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- Ongoing: assessment of the suitability of (parts of) the **Site of EPZ** and the conditions under which site availability for the first commercial reactor could be realized.

3. INTENDED ROLES

The fulfilment of the following roles is subject to further investigation.

- **Thorizon** will develop molten salt reactor technology, advance the design of the PILOT, PIONEER and THORIZON One, build a supply chain consortium for all assets on the roadmap, build a network of research partners to ensure validation needed for safety and licensing, coordinate;
- **EPZ** will explore the possibilities and conditions of becoming the owner, licensee and operator of the first Thorizon commercial plant and is interested in signing a commercially attractive offtake agreement;
- **EPZ** will explore the possibilities and conditions of availability of a site for the THORIZON One, the first commercial reactor on the Thorizon roadmap, provided that **Thorizon** supplies the relevant technical detailed design information required for siting;
- **NRG PALLAS** intends to be the owner, licensee and operator of the nuclear demonstrator Thorizon PIONEER;
- **NRG PALLAS** will provide a site for the demonstrator reactor Thorizon PIONEER;
- **Zeeland and Impuls** have the intention to support the project financially, and support on stakeholder management and permits and licensing needed for the roadmap;
- **Noord-Holland** supports on stakeholder management and permits and licensing needed for the roadmap;
- **ROM InWest** has the intention to support the project financially;
- **Invest-NL** intends to continue to support the project financially, and support on stakeholder management.

4. JOINT WORKSTREAMS

Parties will, each from within their intended role, consider how they can contribute to joint workstreams needed to fulfill the Thorizon roadmap as described in Article 2 of this MOU.

Example joint workstreams include but are not limited to:

- **Technical collaboration**, including joint assessment of how the reactor modules, auxiliary systems and supporting infrastructure fit the indicated sites;
- **Permitting and licensing**, including joint preparation of required documentation, coordination with regulatory authorities, and alignment of project planning with national nuclear licensing procedures. For both PIONEER and Thorizon One, an assessment needs to be done on the existing licenses on site and necessary

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- amendments. The licensing trajectories have started and will be intensified in the second half of 2026 with Parties and the regulator;
- **Public acceptance**, including coordinated regional and national engagement, transparent communication, and initiatives designed to strengthen engagement of key public and private stakeholders;
 - **Securing public financing**, including joint efforts to prepare applications, coordinate with funding agencies in the Netherlands, France and Europe, and develop supporting materials required for grant and subsidy processes (see more details in Article 5);
 - **Collaboration with knowledge institutions**, including an assessment of how partnerships with TU Delft, TNO, DIFFER and other relevant institutes can be established to execute research, innovation and educational activities in Zeeland and Petten;
 - Activities within joint workstreams under this Memorandum of Understanding will be worked out in more detail in specific Agreements.

5. PUBLIC PRIVATE COFINANCING

- **Thorizon** coordinates and secures private and public financing for the realization of the roadmap;
- **Zeeland and Impuls** have the intention to support Thorizon financially, with Zeeland's support subject to approval by her Provincial Council (in compliance with state aid regulations)
- **ROM InWest**, has a positive stance towards exploring an investment through its funds PDENH and/or Transitiefonds;
- **Invest-NL** has the intention to invest in Thorizon as continuation of its earlier investments;
- **EPZ** assesses (in kind) investment in Thorizon;
- **NRG PALLAS** assesses (in kind) investment in Thorizon;
- Parties work together to secure **EIB and EIC financing** for the first commercial reactor **Thorizon One**;
- Parties work together to explore financing in the Netherlands, through available energy innovation mechanisms and potentially the European **IPCEI** framework, for the nuclear demonstrator Thorizon **PIONEER**;
- Parties work together to secure other forms of Dutch, French and European public funding for the realization of the **Thorizon PILOT program** in an innovation hub at EPZ in Borssele, Zeeland;
- Arrangements regarding financial contributions will be further detailed in specific Agreements.

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6. COLLABORATIONS

The Parties recognize that the successful realization of the Thorizon roadmap requires coordinated collaboration with strategic industrial and research partners in the Netherlands and across Europe. To this end, the Parties involved in the relevant workstreams, may contribute to the objective to jointly pursue partnerships and aligned development activities supporting **fuel readiness, research capabilities, manufacturability, and broader ecosystem development**, such as:

- Collaboration with **Orano** on fuel synthesis, including the construction of facilities on a timeline aligned with the needs of the PIONEER demonstrator and the first commercial reactor, Thorizon One. The Parties further intend to develop a plan to secure access to raw materials (Pu, HALEU), involving external partners such as Urenco. In addition, the Parties will explore the financing of the fuel roadmap through France 2030 and French IPCEI programs, in collaboration with Orano;
- Involvement of Orano and CEA in this project and to integrate, where relevant, **French requirements for the closure of the fuel cycle** roadmap, as requested by the French Conseil de Politique Nucléaire on 17 March, into the requirements of PIONEER;
- Build on the manufacturability testing already carried out in the **Province of Noord-Brabant** within the framework of the PROMOSA project, in collaboration with VDL KTI and Demcon. Furthermore, should the MOOI subsidy be granted to the consortium including Thorizon and NRG PALLAS, the Parties intend to further develop their collaboration with TU Delft, TNO and VDL Groep through the PRONTO project;
- Accelerate collaborations between **European research institutes** such as but not limited to TU Delft, TNO, DIFFER, JRC and CEA. In particular, Thorizon, Zeeland and Noord-Holland, will investigate how to involve TU Delft and TNO in the realization of the molten salt innovation hub for the Thorizon PILOT and PIONEER with the aim to establish a permanent educational and research program around these activities.

7. CONFIDENTIALITY

In light of the Wet open overheid (Woo), only information that may be made public shall be disclosed or exchanged under this MOU. Any disclosure or exchange of Confidential Information required for the performance of the activities contemplated under this MOU shall take place exclusively pursuant to one or more separate non-disclosure agreements to be agreed between the relevant Parties, provided that they are compatible with the Woo.

Any external communication regarding the content of this MOU and associated objectives and workstreams must be approved by all Parties.

Any communication on the contribution of one of the Parties, must be approved by the concerned Party.

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8. DURATION OF THE MOU

The present MOU shall come into force on the date of the last signature of the Parties. The present MOU shall expire on July 1st 2034, the targeted date of realization of the Thorizon One, unless extended by the Parties in writing.

This MOU shall terminate immediately upon the occurrence of any of the following events:

- Parties entering into an agreement that supersedes this MOU;
- Either Party giving to the other Parties written notice to terminate.

9. CLAIMS AND OBLIGATIONS

This MOU doesn't obligate a party to enter into an agreement regarding the realization of the first commercial molten salt reactor in Europe in the Netherlands, or any other agreement. For the avoidance of doubt, this MOU constitutes an obligation of best efforts only and is not legally binding, except for the provisions on confidentiality and applicable law.

In case of expiration or termination of this MOU as set out herein, neither Party shall have any claim against the other Party for any indemnification, compensation or consequential damages of any kind, for reasons of termination of non-conclusion of a specific agreement.

10. CONDITIONS

Commitment under this MOU for any of the Parties will always be conditional to obtaining internal and external approvals such as supervisory board approval, works council advice, shareholders' approval and approvals or commitment from other relevant stakeholders.

11. GOVERNING LAW

This MOU shall be governed by and construed in accordance with the laws of the Netherlands.

12. DISPUTE RESOLUTION

The Parties agree that should any dispute or claim arise out of or in connection with this MOU or related to the validity, interpretation and performance of the MOU (hereinafter the "**Dispute**"), they shall first use their best efforts to settle such Dispute, upon written request of one of the Parties, through negotiations. If the Dispute is not settled by negotiations within thirty (30) calendar days upon notification by one of the Parties, then Parties will seek to resolve the Dispute via mediation, failing which the Dispute will be settled by the court of Amsterdam. This clause shall supersede and replace any other conflicting clause.

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IN WITNESS THEREOF, the Parties have caused this MOU to be executed in two (2) originals, one (1) for each Party, by their duly authorized representatives, on the date of the last signature below.

For THORIZON Mrs. Kiki Lauwers Acting as CEO Mr. Sander de Groot Acting as Founder / CSO	For EPZ Mr. Marco Muilenburg Acting as CEO
For NRG PALLAS Dhr. Maurits Wolleswinkel Acting as CEO	For ZEELAND 14/4/2026 3:44 EDT  Dhr. Johan Aalberts Acting as Member of the Provincial Executive
For Noord-Holland Mevr. Esther Rommel Acting as Member of the Provincial Executive	For Impuls 14/4/2026 3:34 EDT  Dhr. Dick ten Voorde Acting as CEO
For ROM InWest 14/4/2026 3:38 EDT  Mevr. Janet Nieboer Acting as CEO	For Invest-NL 14/4/2026 3:44 EDT  Dhr. Rinke Zonneveld Acting as CEO