



The SMR Umbrella Promise in Europe: from broad promissory discourses to local articulations in the Czech Republic

Mathias Sabbe, Ph.D.

Université de Liège

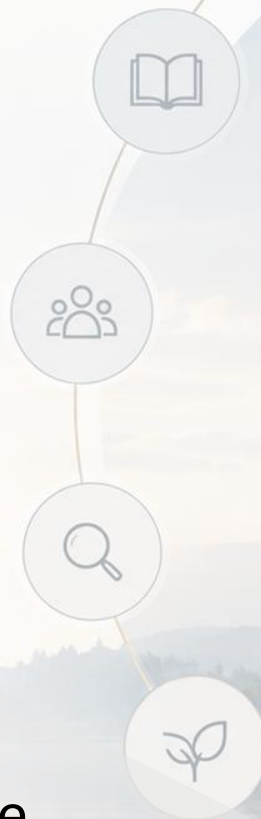
RICOMET 2026 Conference, Prague

Friday 25 September



I. Introduction

SMRs at the forefront of the
nuclear innovation race in Europe





SMRs at the forefront of the nuclear innovation race in Europe

- **127 SMR technologies identified worldwide in the NEA SMR Dashboard (2025)**
- **SMRs advertized as a cornerstone of future energy landscapes (e.g. Sabbe & Parotte, 2026; Lehtonen et al., 2026; Kari et al., 2023), notably promising :**
 - Lower capital costs and lead times compared to large reactors ;
 - Greater flexibility (in both use and siting possibilities) ;
 - Cutting emissions in hard-to abate sectors ;
 - Improved safety ;
 - Greater social acceptability ;
 - Etc.
- **The sociology of expectations : Techno-scientific promises, hype, and promissory inflation (Van Lente et al., 2012; Konrad et al., 2006; Joly, 2010; etc.).**
 - Expectations as “real-time representations of future technologies, situations and capabilities” (Borup et al., 2006, p. 286)



https://s203.q4cdn.com/103172959/files/doc_news/2026/02/Passive-Safety-Infographic.pdf



An “innovation race” in Europe :



“SMRs are a promising technology and there is a race underway. The race is among leading countries and companies to prove this technology and bring it to market.” (Ursula Von der Leyen, 2024)

“We want this new technology [SMRs] to be operational in Europe by the early 2030s.” (Ursula Von der Leyen, 2026)

“Beyond generating electricity, SMRs offer wide-ranging opportunities: from helping steel and chemical producers to decarbonise, to providing citizens with reliable low-carbon energy for district heating.” (Dan Jørgensen, 2026)



“The EU wants to lead the world in innovative nuclear technologies, which will be key to securing our energy independence, competitiveness and decarbonisation.” (Ekaterina Zaharieva, 2026)





The EU has been developing an increasingly coordinated agenda for SMR deployment, combining :

- **Industrial coordination** - The European Industrial Alliance on SMRs (February 2024) :
 - The main EU platform to connect industry, regulators, researchers, investors... ;
- **Strategic objectives** - The European SMR Strategy (march 2026) :
 - Standardization of SMR designs and components to facilitate fleet deployment ; Financial de-risking (InvestEU); Fostering a European industry and supply chain (SMR valleys) ; Encouraging Regulatory Cooperation (SMR coalitions) ; etc.
 - First SMR/AMR projects in Europe by the early 2030s and up to 17 - 53 GW of SMR capacity in the EU by 2050 ;
- **EU-level financing** - The European Investment Bank (EIB) backed by InvestEU (September 2026) :
 - First EIB investment in SMR technology, providing up to €40 million to Finland's Steady Energy (R&D, licencing) ;
- **Research & innovation** - Euratom Research and Training Programme & the "EU SMRs 2030" Declaration (2023) :
 - Approx. €30m of Euratom funding for recent SMR/AMR safety research + €15m additional funding planned for 2026–27.



From a European SMR “umbrella promise” to national and local articulations

A broad promissory discourse – or “umbrella promise” (Parandian et al., 2019) – about SMRs in Europe :

- **Decarbonized multi-purpose energy** : low-carbon electricity or heat for hard-to-abate sectors (incl. district heating, industrial/process heat, hydrogen) ;
- **Energy Security / sovereignty** : reduced fossil-fuel dependence and greater strategic autonomy ;
- **Industrial competitiveness and technological leadership** : European leadership in next-generation nuclear technologies & revitalizing the European nuclear industry and supply chain ;
- **Flexibility and complementarity with renewables** : complementing variable renewables with flexible energy sources ;

Yet, little is known about the extent to which this European SMR “umbrella promise” resembles, overlaps with, or diverges from, SMR expectations articulated within individual Member States.



To what extent do country-specific and local SMR-related expectations resemble, overlap with, or diverge from the broader European SMR umbrella promise ?

Which expectations are shared, prioritized, reconfigured, or contested in the Czech context ?

Why the Czech Republic ?

- Strong political and institutional commitment to SMRs ;
- Advanced industrial mobilization around a specific technology and deployment program ;
- SMRs deployment discussed across national, regional, and local scales ;
- Provides a particularly rich case for examining proximity and divergence between European, national and local SMR expectations.

II. The Czech Republic

Energy context, Nuclear
Strategy, and SMR Roadmap





A. The Czech energy context : rising adequacy pressure

Czech electricity generation (2025) : Nuclear 42% ; Coal 33% ; Solar 7% ; Gas 5% ; Hydro 3–4% ; Other renewables 5-6%

Capacity challenges are expected in the 2030s: Coal phase out; Rising demand ; Greater flexible capacity needs due variable renewables, limited reliable import availability

Transition drivers

- National coal phase-out policy target : 2033 ;
- EU climate obligations: -55% net GHG emissions EU-wide by 2030 (vs 1990 levels);
- Czech non-ETS target -26% net GHG emissions by 3030 (vs 2005 levels).

TSO projections (ČEPS, 2023)

- Mid-2020s : Gradual shift from a traditional net-export position toward higher import dependence ;
- 2030-2035: the share of imported electricity in consumption exceeds 20 % ;
- Expected capacity gap in 2035 : 1.6 - 1.9 GW (coal retirement and need for flexible sources).

Policy response (NECP, 2024)

- Security of supply is a key policy priority ;
- Nuclear + renewables become the long-term low-carbon backbone ;
- Up to 68% nuclear in electricity generation by 2040 (MPO, 2024) ;
- Need for flexible generation to balance the increasing share of variable renewable sources.



B. The three-track pathway of the Czech nuclear energy strategy

1. Existing Fleet LTO

6 reactors (4.22 GWe)

- Dukovany : 4 VVER-440 (4 × 512 MWe). Commissioned 1985-87 ;
- Temelín : 2 VVER-V320 (2 × 1027 MWe). Commissioned 2002-03 ;
- In 2026 LTO policy shifted from 50-60 years to up to 80 years for Dukovany and Temelín (MPO, 2026) ;
- Contingent on maintenance, modernisation, periodic safety assessments, and SÚJB oversight.

2. Large new build

Dukovany 5 & 6 (2.1 GWe)

- **2024** : KHNP selected for 2 APR1000 reactors (2 × 1063 MWe) ;
- **2025** : Engineering, Procurement and Construction (EPC) contract signed ;
- **2027-2029** : Licensing & preparatory work (permits, infrastructure preparation, supplier mobilization) ;
- **2030** : First concrete ;
- **2037-2038** : Commissioning of Dukovany 5 & 6.

Temelín 3 & 4 remain a strategic option

3. SMR fleet

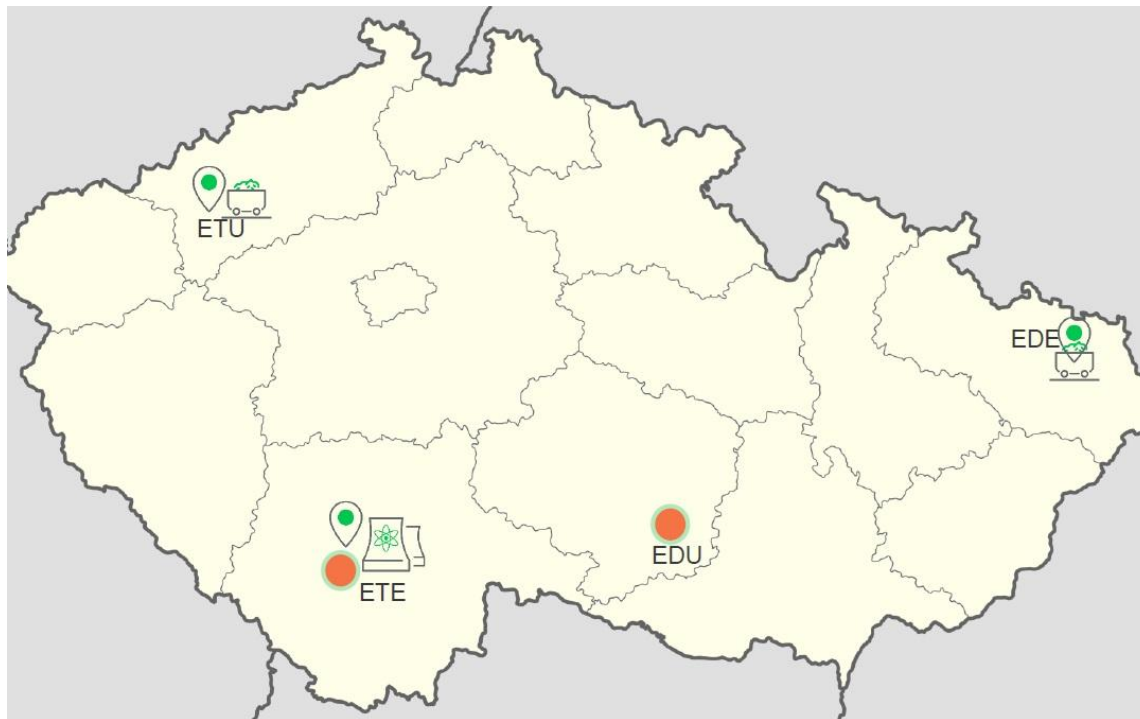
Up to 6 Rolls-Royce SMRs (3 GWe)

- **First deployment**: Temelín (1 x 470 MWe) targeted for the second half of the 2030s (ČEZ, 2026) ;
- **Fleet expansion**: Up to 5 additional reactors envisaged at Tušimice and Dětmarovice (MPO, 2026) ;
- **Regulatory adaptation**: 2025 Atomic Act amendment adapts licensing procedures to support SMR deployment.

Key policy documents : State Energy Policy (2015) ; Nuclear Action Plan (2015) ; SMR Roadmap (2023) ; Updated NECP (2024)



C. Considered locations for SMR siting in the Czech Republic



Temelín (ETE) : Existing nuclear site ;



Tušimice (ETU) : Coal site undergoing phase-out, raw-water supply, grid connection ;



Dětmárovice (EDE) : Coal site undergoing phase-out, raw-water supply, grid connection ;

Currently operating NPPs : Dukovany (EDU) ; Temelín (ETE)





D. Expected uses for SMRs in Czech Republic

- **Stated ambitions in the Czech SMR Roadmap (2023) :**
 - **Address a potential capacity gap of up to 3 GWe by 2050 ;**
 - **Complement large nuclear units and renewables:** smaller units, capable of load-following, could provide flexibility in a system with a growing share of intermittent generation ;
 - **Support the coal transition:** potentially replace retiring coal-fired electricity/CHP capacity and contribute to district heating; hydrogen production also identified as a possible use ;
 - **Develop the Czech industry:** preserve nuclear know-how, expand domestic manufacturing and enable Czech firms to participate in international SMR supply chains ;
- **Expected SMR uses of at considered locations (MPO, 2026) :**
 - **Temelín (ETE) :** Czech FOAK, electricity production ;
 - **Tušimice (ETU) :** Coal-site repurposing; electricity generation with potential heat-supply applications and reuse of existing energy/grid infrastructure ;
 - **Dětmárovice (EDE) :** Coal-site repurposing; electricity generation with potential heat-supply applications and reuse of existing energy/grid infrastructure ;



E. ČEZ's technology choice : the Rolls-Royce SMR

- **Rolls-Royce SMR - UK reactor developer established in 2021 :**
 - Design : 470 MWe pressurised water reactor (PWR) ;
 - Currently undergoing Generic Design Assessment (GDA) by ONR ;
 - UK FOAK : three units planned at Wylfa, expected to become operational in the mid-to-late 2030s ;



Source : Kouklik, I. (2026). *Aktuální vývoj malých modulárních reaktorů v ČEZ* [Conference presentation]. NERS 2026 Conference, Prague, Czech Republic.



E. ČEZ's technology choice : the Rolls-Royce SMR

- **ČEZ started reviewing SMR concepts in 2022 (demand of the Ministry of Industry and trade) :**
 - ČEZ has been monitoring of the SMR market since 2019 ;
 - 7 Concepts reviewed : NUWARD; NuScale; Rolls-Royce SMR; AP300; BWRX-300; Holtec SMR ; I-SMR ;
 - Review based on technological familiarity (PWR or BWR technologies), design maturity, and economic criteria ;
- **Since 2024, a growing ČEZ-Rolls-Royce SMR cooperation became central to the Czech SMR fleet program :**
 - 2024 : ČEZ–Rolls-Royce SMR partnership signed, up to 3 GW of SMR capacity envisaged in Czechia ;
 - 2025 : ČEZ acquires 20% stake in Rolls-Royce SMR ;
 - Apr. 2026 : ČEZ and Rolls-Royce SMR sign an Early Works Contract for Temelín, launching preparation of project, licensing and permitting documentation ;
 - July 2026 : MoU between ČEZ, Rolls-Royce & the Czech State on the expansion of preparatory work to Dětmarovice and Tušimice.



Focus : The Rolls-Royce SMR project at Temelín (ETE) in South Bohemia



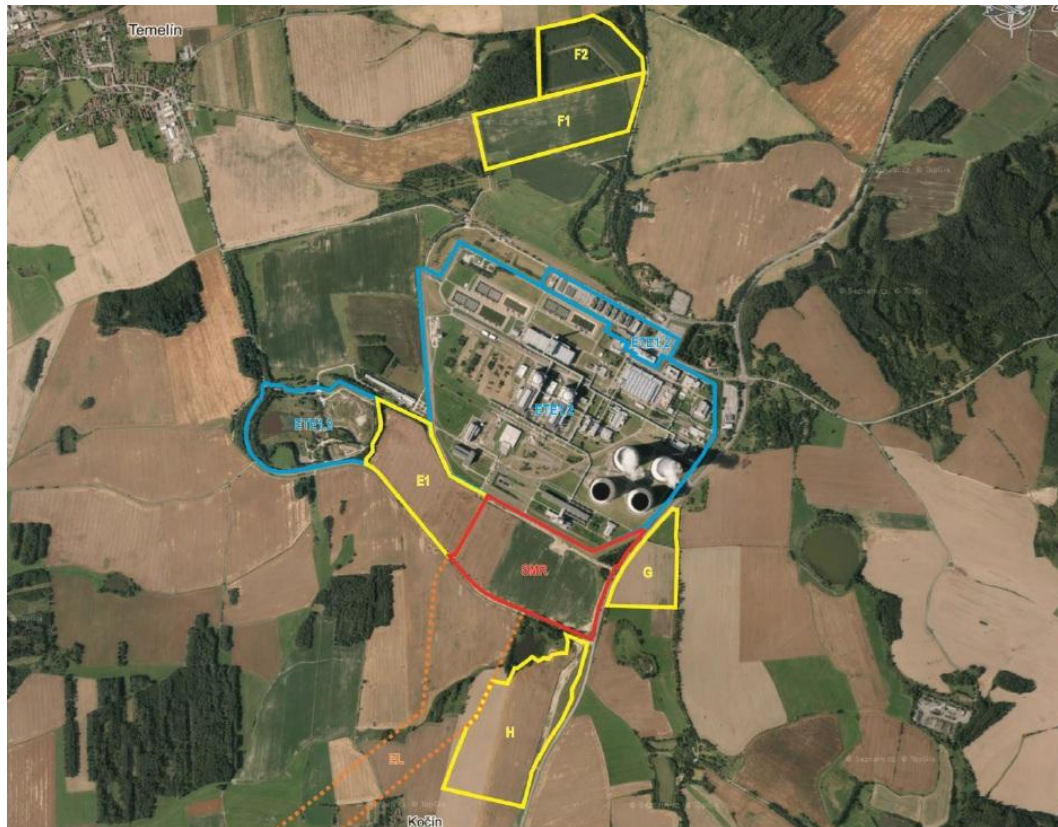
Source : Kouklík, I. (2026). *Aktuální vývoj malých modulárních reaktorů v ČEZ* [Conference presentation]. NERS 2026 Conference, Prague, Czech Republic.

- **2022** : ČEZ formally reserves an area at Temelín for a potential first Czech SMR (ČEZ, 2022) ;
- **2024** : ČEZ–Rolls-Royce SMR partnership signed & Temelín identified as lead site ;
- **2025** : ČEZ and Rolls-Royce SMR sign an Early Works Agreement for Temelín ;
- **2026 (April)** : Early Works Contract between ČEZ and Rolls-Royce SMR for site-specific design, EIA documentation, licensing and construction-permitting preparation (MPO, 2026) ;
- **Current status** :
 - Environmental Impact Assessment preparation (by ČEZ) ;
 - Pre-licensing activities (SURA0) ;
 - Construction-permit documentation under preparation ;
 - No Final Investment Decision (FID) yet.



Temelín SMR project schedule:

- **2027** : Target completion of the EIA process ;
- **2028** : Target siting authorisation under the Atomic Act ;
- **2028** : Indicative Final Investment Decision (FID), subject to agreement by the Czech government ;
- **3031** : Target construction authorisation under the Atomic Act ;
- **Second half of the 2030s** :
Commissioning of the Rolls-Royce SMR at Temelín



Source : Mynář, P. (2024, October 22). *Nový jaderný zdroj SMR v lokalitě Temelín: Oznámení záměru*. Jacobs Clean Energy s.r.o.

III. Data collection



A. 26 semi-structured interviews... So far

- **Interviews targeting national / state-level actors involved in or holding relevant perspectives on Czech SMR developments :**
 - **Public institutions & nuclear governance** : Ministry of Industry and Trade; SÚJB; SÚRO; SÚRAO; ČEPS; etc.
 - **Nuclear industry & supply chain** : ČEZ; Škoda JS; Doosan Škoda Power; other suppliers and energy companies.
 - **Academia & research** : Czech Technical University in Prague (CTU); Czech Academy of Sciences; UWB; etc.
 - **Civil society & advocacy groups** : EUROSOLAR; Calla; Platforma proti úložišti; SEČR; other environmental and nuclear-related associations
 - **Political actors & policymakers.**
- **Interviews targeting regional / local actors near earmarked SMR sites (Temelín) :**
 - **Regional authorities** : South-Bohemian Region representatives ;
 - **Local elected officials** : Mayors and municipality representatives (Ceske Budejovice, Všemyslice, Temelin, etc.) ;
 - **Local civil society** : community-centre members; local environmental / anti-nuclear organisations; anti-repository groups ;
 - **Local residents.**
- **Analysis** : A thematic analysis of actors' positive and negative expectations, promises, concerns and uncertainties surrounding SMRs, using MAXQDA.



N°	Category	Brief description
1	Nuclear industry / utility	Manager at the CEZ SMR program department; Nuclear engineer
2	Electricity system operator	ČEPS transmission system development manager
3	Nuclear regulator	Director of SÚJB
4	Research / academia	Sociologist, Czech Academy of Sciences
5	Civil society / Renewable energy advocacy	Head of EUROSOLAR Czech Republic
6	Nuclear safety research / technical expertise	Head of Nuclear Safety Research and Analysis at SURO; CTU academic
7	Research / academia	CTU nuclear reactor researcher
8	Nuclear industry / supply chain	Škoda JS business development representative
9	Political / policy actor	ANO-affiliated policy expert / ANO think-tank collaborator
10	Innovation and research policy support	Deputy Director, Technology Centre Prague
11	National government / energy policy	Senior official at the Ministry of Industry and Trade, Nuclear Energy Strategy and Research
12	Nuclear industry / utility	SMR business development specialist at ČEZ
13	Radioactive waste management	Geological repository program manager at SÚRAO
14	Research / academia	Member of the Academic Council of the Czech Academy of Sciences (Director of the Institute of Thermomechanics); Member of the DAVID SMR scientific council
15	Energy industry association	Energy policy manager at SEČR (Czech Energy Association)



N°	Category	Brief description
16	Anti-repository civil society / local elected official	Mayor of Horažďovice / head of Platforma proti úložišti (anti DGR platform)
17	Regional government	Director of the South Bohemian Regional Office
18	Local elected official	Mayor of České Budějovice
19	Local Civil Society	Member of Jihočeské matky (Antinuclear NGO, České Budějovice)
20	Local elected official	Mayor of Všemyslice, near Temelín NPP
21	Local Resident	Všemyslice resident / primary school teacher
22	Local Resident / Nuclear worker	Všemyslice resident / Temelín NPP security employee
23	Local Resident	České Budějovice resident / IT worker
24	Local Resident	Týn nad Vltavou resident / bus driver
25	Local Civil Society	Member of Týn nad Vltavou Community Centre
26	Local education sector	Principal of a technical secondary school in České Budějovice
4-5 interviews still pending.		



B. Field observations



NERS 2026 Conference
Prague, 11 June 2026

- “On the Way to the Success of the Czech Nuclear Programme” ;
- Participation of key actors of the Czech SMR ecosystem ;
- ČEZ, KHNP, SÚJB, Czech nuclear industry, etc. ;
- Speech of Minister of Industry and trade ;



Nuclear Days 2026 Conference
Pilsen, 9-11 September 2026

- “Nuclear Energy – Path to Europe’s Energy Self-Sufficiency” ;
- Strong involvement from ČEZ, Škoda JS, KHNP, SÚRAO, universities and research organisations ;
- Dedicated sessions on “Modular Reactors and New Technologies” ;



Temelin area, South Bohemia
13-18 July 2026

- Biking through villages in the inner and outer emergency planning zones of the NPP ;
- Combining local semi-structured interviews with punctual field observations ;
- Janoch, Litoradlice, Midlovary ;

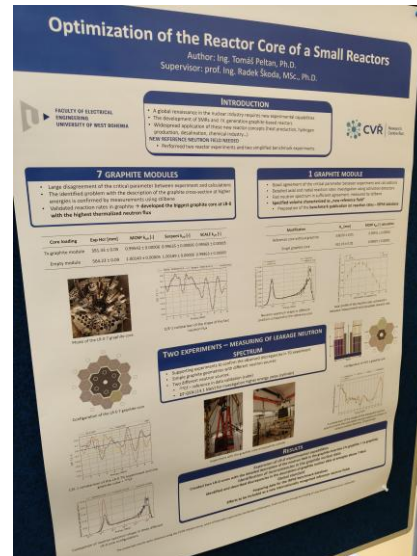
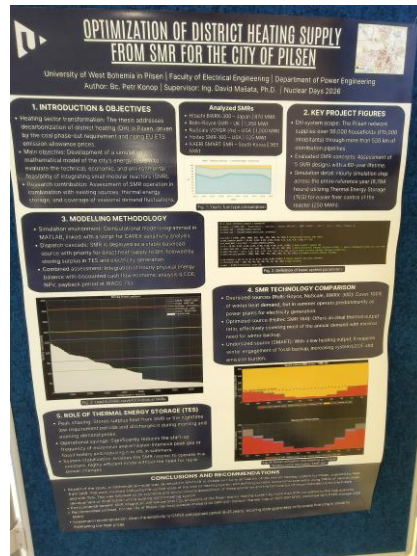
IV. Preliminary Results





Preliminary observation : SMRs are hot topic in the Czech nuclear ecosystem

Some SMR posters presented at the “Nuclear Days 2026” conference in Pilsen



While SMRs are intensely discussed within the Czech nuclear sector, they remain little known among lay citizens (including near Temelín)



A. Proximity with the European “umbrella promise”

Interviews with national / state-level stakeholders usually signal clear resonances with most key dimensions of the European SMR “umbrella promise”

- **SMRs for decarbonisation (coal-phase-out) and district heating in the Czech Republic :**
 - Most national-level actors envisage SMRs as a source of low-carbon energy to replace retiring coal-fired generation, including combined heat and power plants ;
 - SMRs are expected to supply electricity and district heating, drawing on existing grid connections and heat networks where feasible ;
- **Flexibility and complementarity within the Czech energy mix (renewables & nuclear) :**
 - ČEPS, ČEZ, SEČR and ministry representatives often stress constraints on renewable deployment, particularly wind, and challenges associated with variable generation. They regularly associate rising renewable penetration with grid instability (Spanish blackout example) ;
 - SMRs are expected to complement large nuclear units and variable renewables through both firm supply and flexible operation (load following capability) ;
 - Gas power plants as an alternative to SMRs (load following), but exposure to imports and geopolitical risks weakens its attractiveness as a long-term solution ;



A. Proximity with the European “umbrella promise”

“From our perspective, **SMRs should be seen as a complement, not a substitute, for large reactors.** The most plausible balance is that large reactors provide the backbone of bulk low-carbon generation, while **SMRs later add flexibility, coal-site replacement, cogeneration and regional heat applications.**”

(SEČR energy-sector association)

“**SMRs, as we established, is the replacement for the coal.** That's the intention. So we are **looking not just for the electricity, but also for the heat production** because we have district heating systems.” ; “Second thing, **solar.** On a system scale, it doesn't make sense **because it creates intermittency and we are subject to intermittency from the wind on the Baltic Sea from Germany.** And we are sort of flattening this intermittency curve with our coal fired **power plants and nuclear.** Hence, we don't want to increase this.”

(ČEZ representative)



A. Proximity with the European “umbrella promise”

- **SMRs & Energy security: reducing dependence and securing domestic supply :**
 - Reduce exposure to imported gas: interviewees invoke the war in Ukraine and tensions around Hormuz to argue for replacing coal without deepening dependence on volatile fossil-fuel supplies.
 - Limit reliance on electricity imports: concerns about simultaneous shortages in neighbouring countries reinforce ambitions to maintain domestic generation and Czechia’s position as a net exporter.
 - Strengthen resilience: nuclear fuel can be stockpiled, offering greater security of supply-although nuclear does not eliminate external dependencies.

“And I was speaking also about **energy security**. You see during the last four years what has been happening with gas, and again today because of Hormuz and the Middle East? It's not reliable, especially when you can't have stocks of it.”
[...] “Nuclear, again, [speaking about SMRs] we are not totally independent, but of course you can make stocks. And we typically, if I'm right the legislation says that **we have to have to have stocks for 2 or 3 years of operation**. So this is, let's say, a better approach to energy security.”
(Ministry of Industry and Trade, senior official)



A. Proximity with the European “umbrella promise”

- **Consolidate the industrial competitiveness and leadership of the Czech nuclear industry and supply chain :**
 - ČEZ’s acquisition of a 20% stake in Rolls-Royce SMR and the SMR fleet deployment program in Czechia are expected to bring sustained opportunities for local manufacturing activity, investment, and skilled employment ;
 - Increase the Czech foothold into international markets: for example, Škoda JS (part of ČEZ group) aims to become a key actor in the global Supply Chain for a future international SMR fleet ;
 - Participation in technology development: early collaboration with vendors offers opportunities to influence design and manufacturing, securing roles with greater added value.

“Well, our mother company [ČEZ] wants us to involve other Czech companies as our sub-tiers. [...] So yeah, the emphasis to onboard as many Czech companies as it is possible there.” [...] “So, this is really our aim and our factories were built to produce reactor sets on serial basis. We have, between the years 1980 and 1993, we have delivered 24 reactor sets for VVER technology. So, we believe that we can support this serial production for the purposes of SMR.”

(Skoda JS representative)



B. National, regional, and local articulations

- **Several state-level and key industrial actors expect that SMRs will put Czechia in a dominant position for Europe's awaited nuclear revival :**
 - The prospect of hosting one of Europe's first operational SMRs carries national prestige, reinforcing recognition of Czech nuclear engineering and nuclear expertise ;
 - Breaking the waiting game: early deployment both entails significant risks, but also large industrial and strategic advantages. But someone has to build first ;
 - At political level, advancing the SMRs program also serves a dual political ambition: produce a narrative about Czech energy sovereignty (powerful domestic theme), while gaining influence among European partners.

These political ambitions sometimes take on a tone of national vindication: **“Our European partners used to laugh at us and now they are begging us for help!”** (K. Havlíček, Minister of Industry and Trade, NERS 2026 conference)

“We know, because we talk to other utilities, we know there's appetite. But someone has to do it first. And by beating around the bush. We could lose the opportunity that will be seized in Russia, China, elsewhere. That itself, is a bigger risk than the costs and risks of having a FOAK in my opinion.” (ČEZ representative)



B. National, regional and local articulations

- **At a regional level (South Bohemia), SMRs are perceived as an opportunity to attract resources and boost regional attractiveness :**
 - Strengthen technical education as well as university-industry links, with ambitions to develop an SMR expertise hub in Ceske Budejovice ;
 - Boost the economic and demographic dynamism of České Budějovice by attracting skilled workers, young graduates and their families ;
 - Create opportunities for regional suppliers and research activities, reinforcing South Bohemia's position as a center of nuclear expertise.

“Another objective is to involve local companies that could become part of the supply chain. The aim is not merely to create employment in support occupations, but **to attract educated people** to higher-value-added jobs, **encourage them to settle in the region** and make it their home, similarly to what happened during the construction of the Temelín Nuclear Power Plant in the past, and **thereby positively influence the region's sociodemographic composition.**” (South Bohemia Region representative)



B. National, regional and local articulations

- **At local level, expecting for jobs opportunities, local services, and a future for younger generations :**
 - Generate employment and contracts for local businesses, alongside opportunities for training and career development ;
 - Give young people reasons to stay: access to skilled jobs and research activities without leaving the region ;
 - Build on existing relationships with ČEZ, with expectations that SMR deployment will translate into tangible local benefits ;



Orange Days Festival – Tyn nad
Vltavou



ČEZ playground – Temelín



ČEZ playground – Litoradlice



C. Conditional, uncertain, and contested promises

- **Czech SMR ecosystem interviewees highlight a risk of shortages in skilled workers and specialized nuclear expertise :**
 - Large reactor construction, SMR deployment and continued operation of existing plants increase demand for skilled workers and specialized engineers ;
 - Recruitment pressures extend beyond industry and utilities to regulation, safety expertise and waste management -including SÚJB, SÚRO and SÚRAO ;
 - Promoting technical training in Czech Republic becomes a priority for ČEZ the Ministry of Industry and trade ;

“Maybe you can get, let's say 20, 30 people per year. But we are talking about the need of several hundreds of them. They do not need to be necessarily nuclear, but they need to be at least, let's say, mechanical, electrical, and so on.”

(Skoda JS representative)

“But we need other specific expertise. Welders, mechanics, electricians, material specialists, and many others. And, this is not fully covered because these people have many other options, not only the nuclear option, and we are an industrial country so they are going to automotive, they are going to the IT sector... and **this is really challenging.**”

(SÚJB director)



C. Conditional, uncertain, and contested promises

- **SMR economics and delivery remain to be demonstrated :**
 - Much hinges on successful delivery of the first projects at Temelín and abroad: construction times, costs and operational performance ;
 - ČEZ's economic expectations rely on serial production and learning across an international fleet; cost reductions remain to be demonstrated ;
 - Financing, state support and investor certainty remain key conditions for deployment that remain to be clarified ;

“Of course, **the first will probably hurt** but you have to think of the fleet perspective. [...] So, the idea of SMR is to be built in series. And **since we don't have an operating fleet yet, we are still working in rough estimates.**” [...] **“We need the state to provide us at least for the first units** with some backing. Otherwise, projects like these, you know, it's really hard to do it without the state” (ČEZ representative)



C. Conditional, uncertain, and contested promises

- **When much becomes too much? An accumulation of projects and environmental legacies near Temelín :**

- Litoardlice : Janoch site identified by SURAO for the deep geological repository (5 km from Temelín) ;
- Litoradlice - Temelín : Hůrka industrial and hazardous-waste incinerator project (and Janoch) ;
- Mydlovary : the former MAPE uranium-processing plant and its waste impoundments, leaving a legacy of contamination and remediation ;
- Temelín : large reactors 3 & 4 remain a possible option ;
- Temelín : The Rolls-Royce SMR project.

“Uh it’s a dream place, literally! Everybody wants to live in Litoradlice apparently. Uh, **very nice view from the houses there: power plant, cooling towers, SMRs, DGR, waste incinerators...**” (Local community-centre, Týn nad Vltavou)

“And there is this facility and that's why maybe **people from this side are a little bit nervous because they told us that they have already all of these facilities and they don't need another one.** And I understand this opinion but on other sites they have different problems. Each of the site has some special topic which they bring to the process.” (SURAO representative)



C. Conditional, uncertain, and contested promises



The former MAPE uranium-processing plant at Mydlovary



C. Conditional, uncertain, and contested promises

- **A so-called “small reactor”. Yet, substantial local nuisances are still expected during construction at the Temelín NPP :**
 - Local elected officials are concerned about the capacity of existing roads and junctions, and the need for infrastructure improvements ;
 - Local elected officials and civil society anticipate that SMR construction will still generate traffic, noise and dust, alongside pressure on accommodation, healthcare and other local services ;
 - Possible SMR construction revives difficult memories of Temelín 1 & 2: population displacement, influx of foreign construction workers, and lasting changes to community structure and relationships.

“And here is it is problem with SMRs because any population increase with **modular reactor construction will put pressure on medical services**. You know, doctors... We don’t have enough medical doctors, dentists, etc. **We have a big shortage issue with health services here.**” (Local community-centre, Týn nad Vltavou)



“And this region was broken, villages around of the nuclear power plant were moved. People around of nuclear power plant were relocated. New people came, it was a big problem.” (Local community-centre, Týn nad Vltavou)



Obec Knín



Obec Podhájí



Blanice - Tyn nad Vltavou



C. Conditional, uncertain, and contested promises

- **“A je to!”: Solving a problem with SMRs, but creating several new problems in the process ?**
 - New reactors (SMRs) and longer operating lifetimes require repeated revisions to expand the capacity of SURAO’s deep geological repository project. However, geological constraints in Czechia don’t allow for infinite expansion ;
 - Reusing coal sites may create cross-border challenges : at Dětmarovice, the proximity to Poland requires additional geological investigations and complex coordination with Polish counterparts (SUJB) ;
 - Etc.

“Every person from the Czech Republic sees a bit of himself in ‘A Je To!’ [...] This cartoon is showing a typical Czech person because all of us, **we think that we understand how things work, we believe that we can build and do it by ourselves, that we know the best way. But after trying, there are usually a lot of mistakes and new problems.**

[...]

‘A Je To!’ also shows our relation to new projects, like SMRs for example, because we believe that we understand it all. [...] But we are not thinking about the complications, and how this will influence us.” (SURAO representative)



Source : <https://filmoteka.eu/izdelek/a-je-to/>

V. Concluding Remarks



VI. Concluding remarks

Next research steps

- **Deepen and extend the Czech case study :**
 - Finalize the interviews (policymakers, local stakeholders, academics, utilities) and field observations, complete the thematic analysis ;
 - Systematize the document analysis ;
- **Further specify Europe's SMR "umbrella promise" :**
 - Implement a systematic review of grey literature produced by actors & institutions articulating the umbrella promise ;
- **Extend the research with country comparisons :**
 - Other small nuclearized countries in Europe such as Belgium and Finland ;
 - To what extent Europe's SMR umbrella promise is embraced, rearticulated, or contested in other small nuclearized countries in Europe ?

Thank you for your attention !

Any questions?

Mathias Sabbe, Ph.D.

NuVanguard project (PDR ULiège)

Université de Liège (ULiège), SPIRAL

Contact : mathias.sabbe@uliege.be