**EDF submits to EDUII Europe’s integrated offer for a Czech new nuclear programme of up to four EPR1200 units in Dukovany and Temelín**

EDF and its strategic partners reaffirm their commitment to the success of the Czech new nuclear programme and are fully mobilised to deliver to ČEZ/EDUIIand to the Czech government the best offer for the construction of a **fleet of up to four EPR1200 nuclear power units in the Czech Republic.**

Ensuring **energy security and independence is a pivotal decision for Czechia's future**, requiring a partner that aligns with its long-term vision. The proposal from EDF and its strategic partners stands out as a fully **integrated European solution**, positioning Czechia at the forefront of the anticipated European nuclear renaissance.

The industrial and technological synergies between Czech and French industries lay a solid foundation for future European nuclear initiatives. **With numerous projects underway across the continent** *(14 EPR in France, 4 EPR in the United Kingdom and more than 10 prospects programmes ahead, including Slovenia, Slovakia, the Netherlands, and Poland),* **EDF emerges as the unique contender capable of ensuring a prosperous future for the Czech nuclear sector**. EDF and its European partners’ offer includes opportunities for Czech companies to expand their market reach by exporting products and services and for ČEZ to become an integral part of the evolving **European EPR family**. This vision charts a course for comprehensive economic development and industrial enhancement in the nuclear domain.

This partnership not only elevates Czechia's role in new nuclear projects across Europe but also opens doors for joint development of projects across Europe, not only in the field of nuclear power plant construction, but also in engineering, education and research and development. Such collaboration will ensure **sustained economic growth for Czechia's nuclear industry** for the construction of the Czech fleet and beyond.

EDF strongly believes that a **fleet effect is a key contributor to the competitiveness** of the Czech new nuclear programme and will enable the Czech new nuclear programme to solidify a robust nuclear industrial alliance within Europe. As such, EDF very much welcomes the decision of the Czech government to expand its programme up to four units. This decision will undoubtedly bring increased competitiveness, maximised **localised value added to the Czech economy and provide long-term perspective for human capacity building**.

The combined advantages of the **fleet effect**—procuring and building multiple reactors simultaneously or in an optimised sequence within the country—and the **site effect**—optimising construction infrastructure, procedures, and schedules across successive units on the same site—are fully integrated into EDF's proposal. These benefits are elaborately detailed, drawing on EDF's and its industrial partners' experience of over 50 years in constructing nuclear reactors in France, the UK, and internationally. This proposal also incorporates EDF’s most recent experiences and lessons learned from constructing EPR reactors in France and the UK.

EDF’s vision for Dukovany 5 Nuclear Power Plant Project and the Czech Nuclear Programme

EDF’s proposal for the Czech nuclear programme is based on the principle of providing a long-term, sustainable carbon-free solution for the future eclectic mix of the Czech Republic that also **guarantees energy safety, security, and economic development for its citizens**.

EDF has specified and secured for EDUII, ČEZ and the Czech Republic a comprehensive offer to facilitate the **emergence of a sovereign and independent Czech nuclear programme**.

EDF’s proposal is designed to establish a **long-term Czech-French partnership that will serve as a driving force of the European nuclear renaissance.**

The proposed Czech-French partnership would serve as the backbone of the growing **European EPR family**. As such, it would secure the Czech Republic’s long-term and unhindered access to:

* **EPR1200 technology:** adapted from EDF’s flagship GEN3+ European EPR technology, EPR1200 is designed to fit the needs defined by ČEZ and the Czech government,
* **EPR Owner Operator Group**: access to the lessons-learned and sharing of experience brought by EPR construction projects and operating EPR plants in Europe and in the world,
* **Secured access to services, equipment, and fuel**, thanks to a robust and growing European EPR family and European supply chain,
* **Engagement and synergies with EDF’s EPR supply chain**; creating opportunities for the Czech industry participation in other EPR projects outside of the Czech Republic in order to establish a European EPR industrial platform,
* **Reenforced technological, industrial, and political alignment** between France and the Czech Republic in defending the future role of nuclear in the Europe.

In addition to the new a EPR1200 unit at Dukovany 5, EDF has been proactively elaborating a cohesive set of scenarios for a fleet approach in the Czech Republic for up to four EPR1200 units in total, following the request of ČEZ.

**The Czech Nuclear Programme at Dukovany and Temelín carries many similarities and opportunities for synergy with the French Nuclear programme.** In February 2022, President Emanuel Macron confirmed the launch of a six-EPR2 reactor programme in France and further confirmed the willingness to extend the programme to 8 additional reactors for the second phase. The public consultation process has already begun for the first pair of units at Penly in Normandy, and the French government has unveiled in 2023 a bill to speed up procedures related to the construction of new nuclear plants in the country. Preliminary site works at Penly will begin as soon in the summer of 2024.

EDF’s strategy to embark Czech Industry for the Czech nuclear programme, and beyond

EDF’s proposal to EDUII, ČEZ and the Czech Republic for the Czech programme is the only **fully integrated and independent offer** available that maximises the potential of the Czech nuclear industry.

EDF and the French nuclear industry, have over **40 years of experience in delivering new nuclear projects** with high localised value in countries across the world. The French nuclear industry has extensive experience in exporting nuclear technology in particular in **Brazil, China, Finland, South Africa, South Korea, and the United Kingdom**.

EDF has perfected and demonstrated its **comprehensive localisation strategy, that allows to maximise the value created** through its projects on both local and national levels. Subsequently, EDF’s localisation process for EPR projects in Europe has proven its efficiency, namely in the United Kingdom, where the construction of two EPR units at Hinkley Point C (HPC) is **allocating 64% of the total value of the project to British businesses**. Across the United Kingdom **22,000** people are currently working on HPC representing **3,600** British businesses.

**EDF’s proposed localisation process for Czechia has been adapted to take into account the already impressive and experienced industrial skills and capacity of the Czech Nuclear Industry**

Several major Czech companies are **already part of the EPR supply chain**, participating in EPR projects in the UK and in Finland. EDF hopes to further intensify collaboration with Czech companies to participate in future EPR development not only in the Czech Republic but also in the rest of Europe, including in France.

Furthermore, beyond the Czech new nuclear programme, EDF aims to further intensify collaboration with Czech companies to **participate in future EPR and EPR1200 projects** in the rest of Europe, including in France, and around the globe.

As of today, EDF has conducted an extensive assessment of the Czech nuclear and industrial supply chain, covering a variety of scopes of activity. A **comprehensive mapping of the industrial capabilities and capacities** has been established in the fields of Mechanical and Electrical equipment, Erection Activities, Balance-of-Plant Processes, Cooling Towers, Radiation Monitoring Systems, HVAC and Civil Works, notably following the recommended list of the Czech Ministry of Industry and Trade.

EDF has gone as far as to officially submitting **tens of Requests For Quotation (RFQs) to Czech suppliers for the Dukovany 5 project**. In all, nearly **300 companies** have been screened, **more than one hundred** of which have been sent a **Request for Information** questionnaires, and **formal relationships** have been established with over **70 local players.**

Moreover, since November 2021, +30 Memoranda of Cooperation have been signed between EDF and major Czech major companies, including with the Czech Power Industry Alliance (CPIA):

|  |  |  |
| --- | --- | --- |
| * **ABO Valve**
* **ADAMEC**
* **BAEST**
* **CAPPA COOLING**
* **CHEMCOMEX**
* **ELEKTRO Kromeriz**
* **Enersys**
* **I&C ENERGO**
* **ISH Pumps**
 | * **HUTNI MONTAZE**
* **KLIKA**
* **LDM**
* **METROSTAV**
* **MICO**
* **MSA**
* **NOPO Engineering**
* **OSC**
* **REKO Praha**
 | * **SIGMA**
* **SKODA JS**
* **UJV**
* **VITKOVICE ES**
* **VF NUCLEAR**
* **ZAT**
* **ZVVZ**
 |

The vast majority of the value of the Czech nuclear programme will be directly reinvested into local Czech industry and overall economy.

The planned construction of new nuclear reactors in the Czech Republic is not only a matter of energy self-sufficiency and meeting climate goals, but also an opportunity to create significant economic value within the national economy. The issue of macroeconomic and microeconomic effects was addressed in the study "New Energy for the National Economy and Local Development", prepared by the Centre for Economic and Market Analysis (CETA) with the collaboration of EDF.

The impact on the national economy will mainly affect the number of new nuclear units to be built. Relative economic and social effects depend on key factors, in particular:

* degree of involvement of domestic companies in the project (localisation)
* downstream opportunities for Czech companies to supply nuclear projects abroad (export)
* the rate of use of domestic human resources (training and retraining)
* setting up the project to contribute to the creation of lasting value at the place of implementation (region)

The study concludes that the construction of new nuclear power plant units will have **many times higher economic benefits for the region and the Czech economy than the investment itself.**

This is especially so if a significant share of the total value of the contract is awarded to Czech industry. In such a case, **the total value creation multiplier reaches 3.27**, meaning that every CZK 1 invested in the construction of a new nuclear power unit generates a total benefit for the Czech economy of CZK 3.27, through a combination of direct, indirect and induced effects.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **1 unit** | **2 units** | **3 units** | **4 units** |
| **Investment (estimate)** | CZK 250 billion | CZK 500 billion | CZK 750 billion | CZK 1.000 billion |
| ... for the Czech economy | 65 % | 65 % | 65 % | 65 % |
| **Impact on GDP** |
| Direct + indirect | CZK 484 billion | CZK 966 billion | CZK 1.450 billion | CZK 1.932 billion |
| Induced | CZK 48 billion | CZK 96 billion | CZK 144 billion | CZK 192 billion |
| **TOTAL** | **CZK 532 billion** | **CZK 1.062 billion** | **CZK 1.594 billion** | **CZK 2.124 billion** |
| **Impact on public budgets** | **CZK 183 billion** | **CZK 365 billion** | **CZK 548 billion** | **CZK 731 billion** |

Source: CETA calculations based on CSO data (input-output analysis)

**The question of the degree of involvement of Czech companies in the project is closely related to business opportunities abroad**. Opportunities for involvement of Czech companies in similar projects in Europe should be taken into account.

**The positive contribution to regional education** is also seen as one of the main long-term benefits. Maximising the benefits of construction will therefore not only depend on the amount invested but also on indirect **value created in human capacity building**. The topic of education and training of human capacities is crucial for the success of the Czech nuclear programme, especially in view of the ongoing nuclear renaissance in many other European countries.

**The Czech Republic will need thousands of highly skilled human resources** - the construction of one reactor is estimated to require approximately five thousand people at the peak of construction. To have a positive socio-economic effect, it is necessary to ensure that a **largest proportion as possible is made up residents of the Czech Republic, rather than experts or short-term workers hired from abroad.**

Striving for long-term and sustainable development in South Moravia and Vysočina

EDF is committed to fostering **social and economic benefits for the regions of South Moravia and Vysočina** as part of our proposal for the Czech New Nuclear Programme. This commitment is a cornerstone of our strategy, aimed at ensuring the success of the construction phases of two new nuclear power plants, should EDF be selected as the preferred bidder for the construction of a fleet of reactors in Czechia.

EDF’s ambition is to formalise of a strong and balanced relationship with regional stakeholders based on the principles of **respect, excellence, solidarity, and openness**. By sharing consistent information and engaging with all local stakeholders, we aim to establish a foundation for cooperation that supports **sustainable local growth during the construction phase** of the power plant projects. This includes the **development of local infrastructure**, **working with local companies**, and enhancements in **educational, cultural, and social services**.

EDF will propose to local authorities, associations, and citizens to work together to identify **initiatives that promote social development, particularly targeting the youth through educational and sporting programs**. EDF recognises the importance of integrating the local communities into the project's lifecycle and are dedicated to mitigating any negative impacts on local populations.

EDF’s EPR1200 technology: Integrated, European, Independent

The proposed EPR1200 technology is a **1200MW Generation 3+ pressurised nuclear water reactor** designed to meet the most **stringent safety and performance requirements in Europe**.

* EPR1200 benefits from the **same safety referential as EDF’s EPR2 technology**, which fully incorporates operational and safety requirements defined by the AIEA, WENRA and French Nuclear Regulator (ASN), and passes post-Fukushima stress tests.
* EPR1200 takes into account EPR2 design evolutions as well as **construction and operation feedback from all current EPR projects.**
* All major design options of EPR1200 have been **reviewed and accepted by the French Nuclear Regulator**
* EPR1200 integrates **proven passive and active safety features** that ensure reliability, cost effectiveness and optimised safety performance.
* EPR1200 leverages EDF’s unrivalled experience in **flexible nuclear power production in ‘load-following’** **mode**.

Leveraging EDF unique industrial experience

EPR1200 is the latest adaptation of EPR technology; leveraging the lessons learned of the largest nuclear fleet operated worldwide, with more than **2200 reactor-years of cumulated operating experience**.

The core EPR technology behind EPR1200 has already proven its robustness and adaptability to a variety of regulatory and licensing regimes. **EPR technology has been adapted to three European countries and licensed by three recognised Safety Authorities (Finland, UK and France).**

EPR1200 benefits from the cumulative lessons learned from of other EPR projects, including design adaptations in **diverse regulatory, environmental and construction environments**.

A Fully Independent and European Technology

EDF has **complete ownership and mastery of the EPR1200 design**: basic design and detailed design are all performed in-house within EDF its subsidiaries and local partners.

EDF brings **manufacturing capabilities for large components** (reactor pressure vessel, steam generators, pressuriser, primary pumps) thanks to its subsidiary, Framatome.

EDF offers a **single point of entry** for project management as the general contractor of the project and will be the sole interface for ČEZ/EDU II during the entire project.

EDF’s offer in numbers

The integrated offer supplement for the construction of up to 4 new EPR1200 units in the Czech Republic was officially submitted to ČEZ/EDUII on 30 April 2024.

The offer is composed of over 10.000 pages of documentation intricately detailed EDF’s offer. This documentation include :

* Detailed **technical description of the EPR1200**: its performances, safety functions and architecture,
* EDF’s **commercial proposition and project execution plan**, designed to deliver the project in accordance with CEZ/EDUII‘s requirements and aiming for **at least 65% of Czech industry involvement**,
* EDF’s detailed proposal for a **fleet effect** if more than one reactor were to be built, including a detailed and thorough analysis of all the optimisations and synergies that could be leveraged in project performance and competitiveness.

Over the past three years EDF and its strategic industrial partners (namely Framatome, Bouygues Travaux Publics, GE Steam Power and Atos) have mobilised over **400 engineers** to develop a competitive and robust offer, including world-class experts globally recognised in their respective fields of expertise.

Some past and upcoming key events

In June 2021, EDF held a **French-Czech EDF Suppliers’ Day** dedicated to mobilising the Czech nuclear supply chain in the EDF-led EPR1200 reactor offer for the Dukovany 5 nuclear power plant. The event was a major success gathering more than 50 leading Czech companies.

On June 29th 2022, EDF held the first **Czech-French EDF Partners’ Day**. It offered a unique opportunity for Czech and French industrial partners to coordinate the preparation of EDF’s EPR1200 proposal and to share insight and aspirations for the Dukovany 5 project as we work together to further the integration of a significant local portion into EDF’s proposal to build the first EPR1200 in the Czech Republic.

In June 2022, EDF announced the opening of its permanent **EDF Nuclear Czechia** branch in Prague, Headed by Mr. Roman Zdebor. EDF Nuclear Czechia supports all EDF’s nuclear activities in the Czech Republic, with a prime focus on contributing to the consolidation of EDF’s EPR1200 bid for the Dukovany 5 tendering process launched by ČEZ as well as promoting EDF’s SMR NUWARD™ at Temelín.

In October 2022, EDF held its first **Czech Suppliers’ Academy**. This marks EDF’s commitment to provide its Czech partners and prospective suppliers with training on EDF’s safety culture, EPR1200 technology, as well the required codes, standards and practices to become and EPR1200 supplier.

In October 2023, EDF joined the **Czech-French Nuclear Academy**. The initiative, under the patronage of the French Embassy in Prague, will facilitate the creation of advanced vocational training programmes for Czech Industry with specific human capacity building resources managed through EDF’s Training Campus (UFPI).

On March 5th 2024, EDF and the French government organized a **Czech-French Nuclear Forum** in Prague in presence of the French President Emmanuel Macron, EDF Chairman and CEO and the key representatives of French major players: CEA, Framatome and Orano, as well as potential Czech partners. The forum served as an opportunity for the French government to reiterate its full support for the enhancement of Czech-French relations in nuclear power development in Europe and underline the strategic impact of EDF’s offer in cementing a European “Nuclear Airbus” around the Czech-French partnership.

On April 4th 2024 took place the **third edition of the Czech-French Nuclear Summit**, organized by CPIA and GIFEN in Prague, which attracted a record number of Czech and French industrial players, well beyond the traditional scope of CPIA. This session allowed to further advance the relationship building between Czech and French industry and envisage concrete actions on how to collaborate in the first phase of execution of the Czech nuclear programme, if EDF’s offer were to be selected as Preferred Bidder.

On June 4, 2024, EDF will host the inaugural **EDF European Nuclear Suppliers’ Days** in Paris. This event is expected to attract a significant number of current and prospective Czech industrial partners. It will offer an in-depth view of EDF’s strategies for its growing nuclear fleet in Europe and provide Czech industrial entities opportunities to engage with their counterparts who are already part of EDF’s European supply chain for ongoing and future EPR and Nuward SMR projects across Europe.