



APR1000 for New Nuclear Build in Dukovany

KHNP

<http://www.khnp.co.kr/eng/index.do>

October 15, 2025



Dukovany 5,6 NPP Project

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APR 1000

Dukovany 5,6 NPP Project
CHAPTER 1

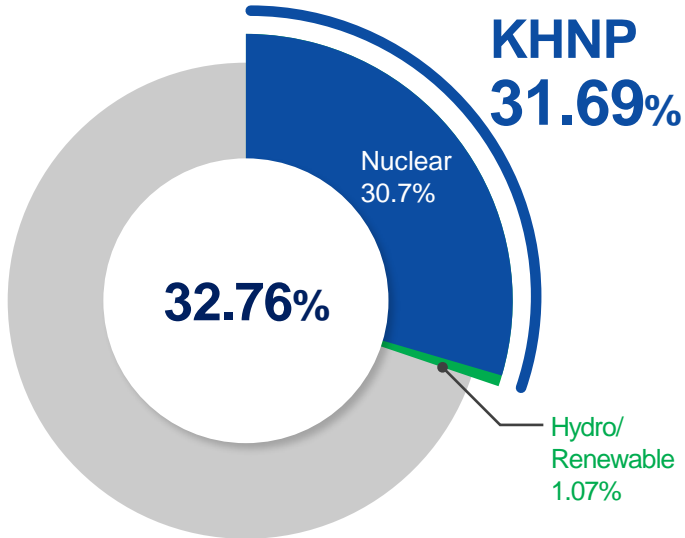


About KHNP

Produces One-Third of the Nation's Electricity

2024 Power Generation

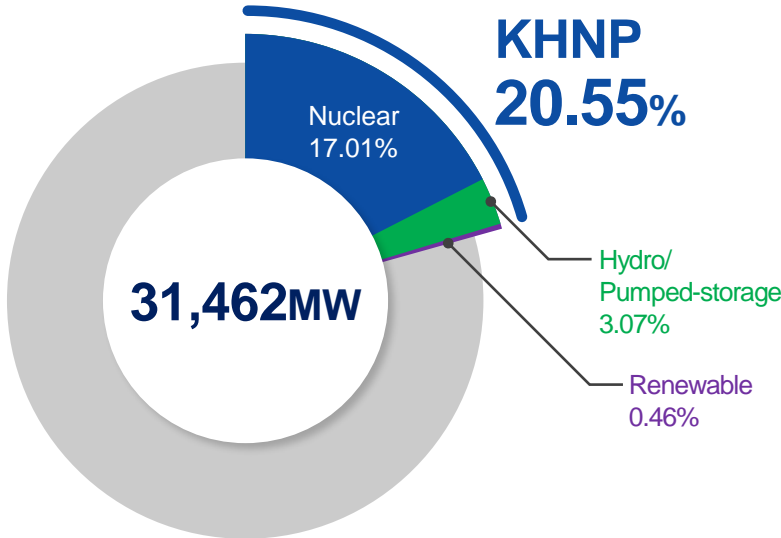
(Based on the Total Domestic Power Generation of 588,047GWh)



Proportion of the total domestic power generation

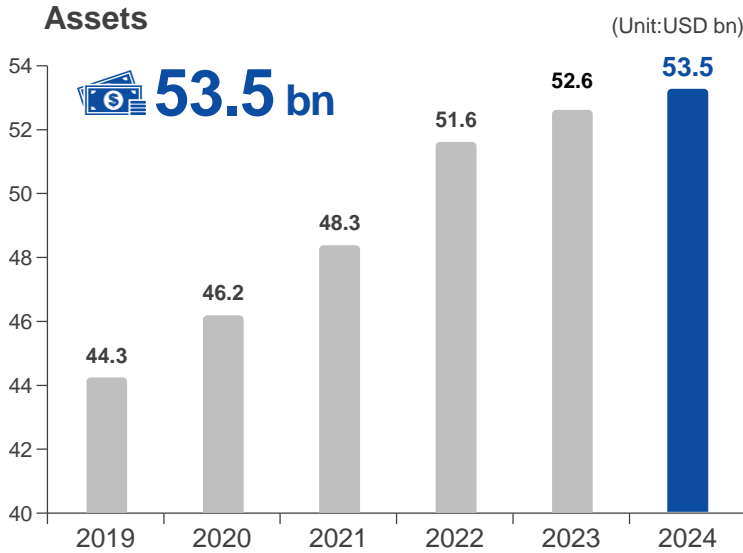
2024 Installed Capacity Distribution

(Based on the Total Domestic Installed Capacity of 153,071MW)



Installed Capacity

Robust Financial Stability



Credit Ratings

(As of Dec 31, 2023)

S&P Global	Moody's INVESTORS SERVICE	FitchRatings
AA (Stable)	Aa2 (Stable)	AA- (Stable)



Our Team

More than **12,500** Employees Including **7,500** Engineers

Korea's Largest Power Generation Company

Power Plants

146 Units



Nuclear Power

- In operation: 26 Units
- Under construction: 4 Units



Hydro and Pumped-Storage Hydro Power

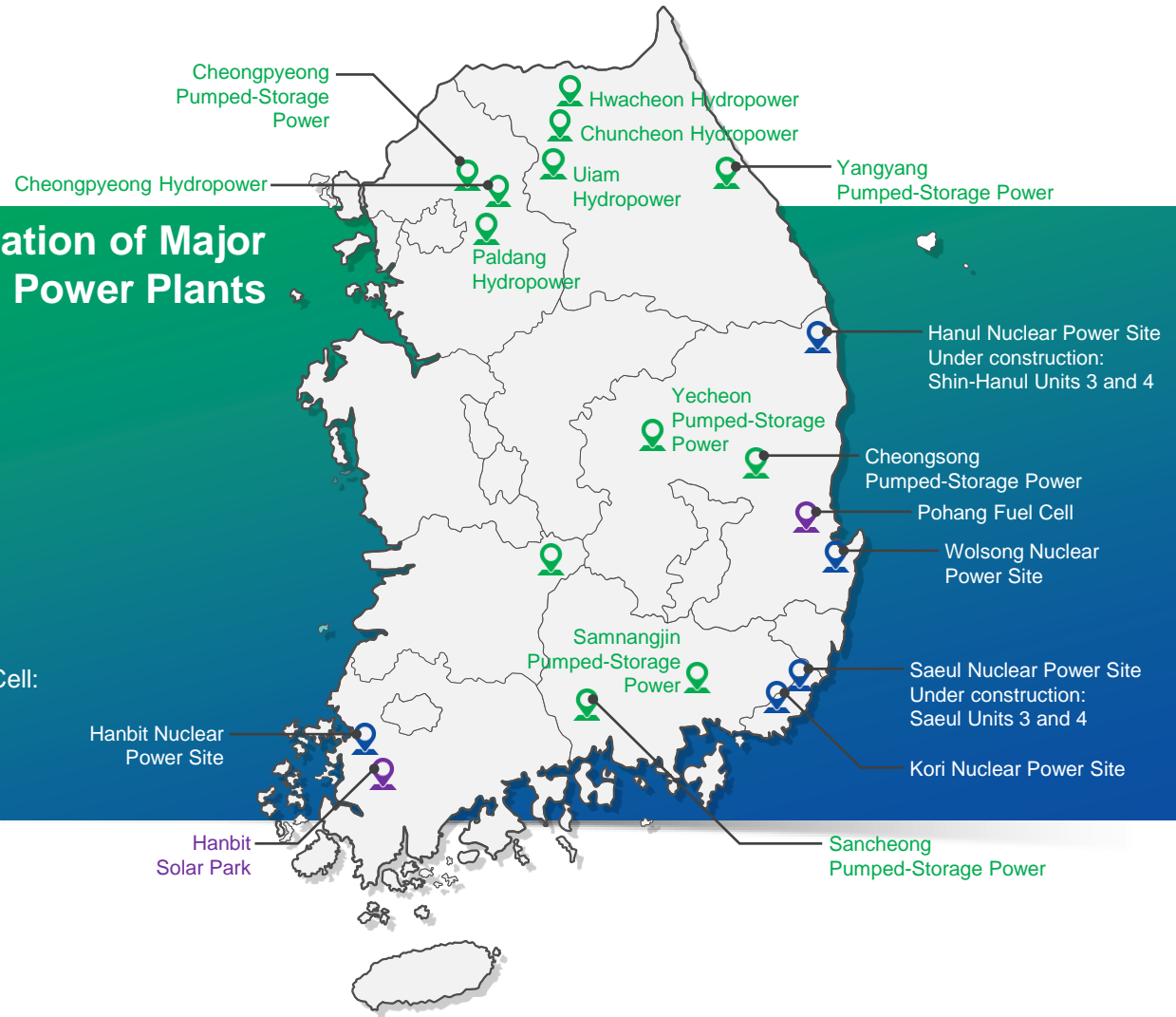
- Hydro: 37 Units
- Pumped-storage: 16 Units
- *New PSHP Construction Plan (3.7GW)



Renewables

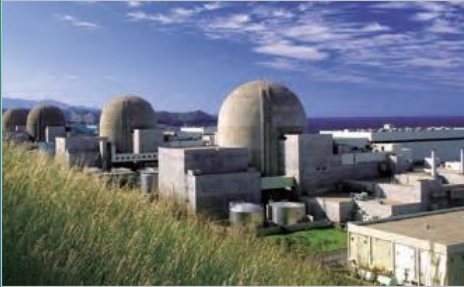
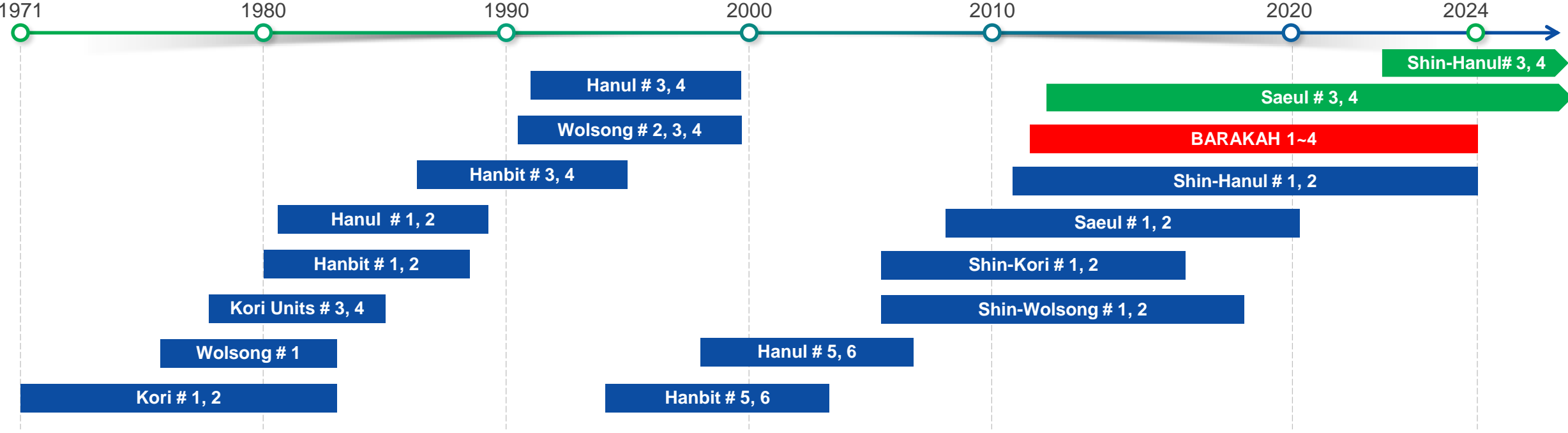
- Solar, Wind, Fuel Cell: 67 Units

Location of Major Power Plants



Over 50 Years of Continuous Construction

KHNP's Power Plant Construction History (36 Units)



Construction of Nuclear Power Plant in Korea

Saeul Unit 3 and Unit 4



- **Capacity:** 2 x 1,400MW (APR1400)
- **Construction Start:** April 2017 (Unit 3)
September 2018 (Unit 4)
- **Completion:** 2026 (Unit 3), 2026 (Unit 4)

Shin Hanul Unit 3 and Unit 4



- **Capacity:** 2 x 1,400MW (APR1400)
- **Construction Start:** May 2025 (Unit 3)
May 2026 (Unit 4, Planned)
- **Completion:** 2032 (Unit 3), 2033 (Unit 4)

KHNP President & CEO “We will do our utmost to ensure the safe construction of Shin Hanul Units 3 and 4, and **Complete the project on time and within budget(May 20 2025)”**”

Global Projects

📍 UAE Barakah NPP

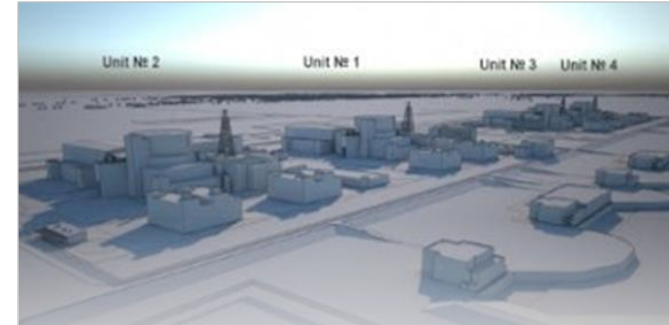


- The first-ever nuclear power in the Middle East
- 4 units of APR1400 (Total 5,600MW)
Unit #1 (2021), #2 (2022), #3 (2023), #4 (2024)



The only case among OECD countries since 2009 where a nuclear power plant export project has been successfully completed construction on time.

📍 Egypt



- Supply of equipment, construction of turbine buildings, etc. (2022-2029)



Second Part of El-Dabaa Project in Egypt

📍 Romania



- TRF EPC (2023-2027)
- Overall management and construction of major auxiliary facilities (2024-2030)



1. Tritium Removal Facility Project
2. Cernavoda Unit 1 Refurbishment Project

📍 Dukovany NPP in Czech Republic



- Czech New Build: **Contract Signed**
- 2 units APR1000 (1000MW, up to 4 units)



Reaffirming Korea's nuclear edge: 16 years post-UAE

Dukovany 5,6 NPP Project

CHAPTER 2

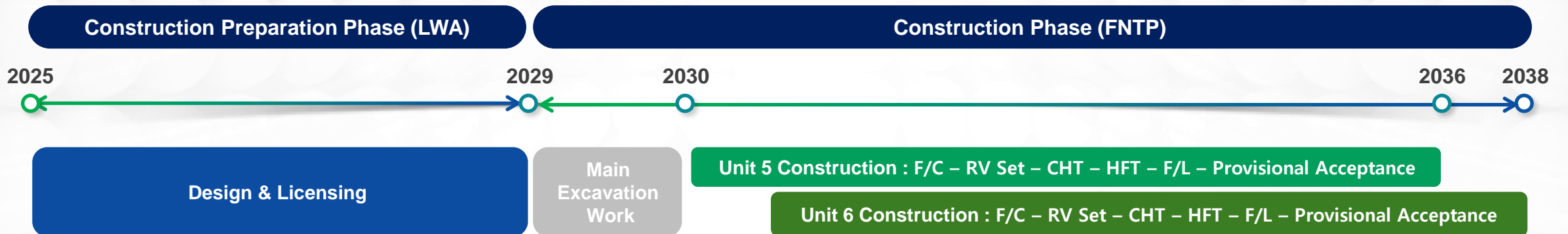


Overview of the Dukovany 5,6 Project

Project Overall – Dukovany 5,6

Overview and Progress of the Czech Nuclear Power Project

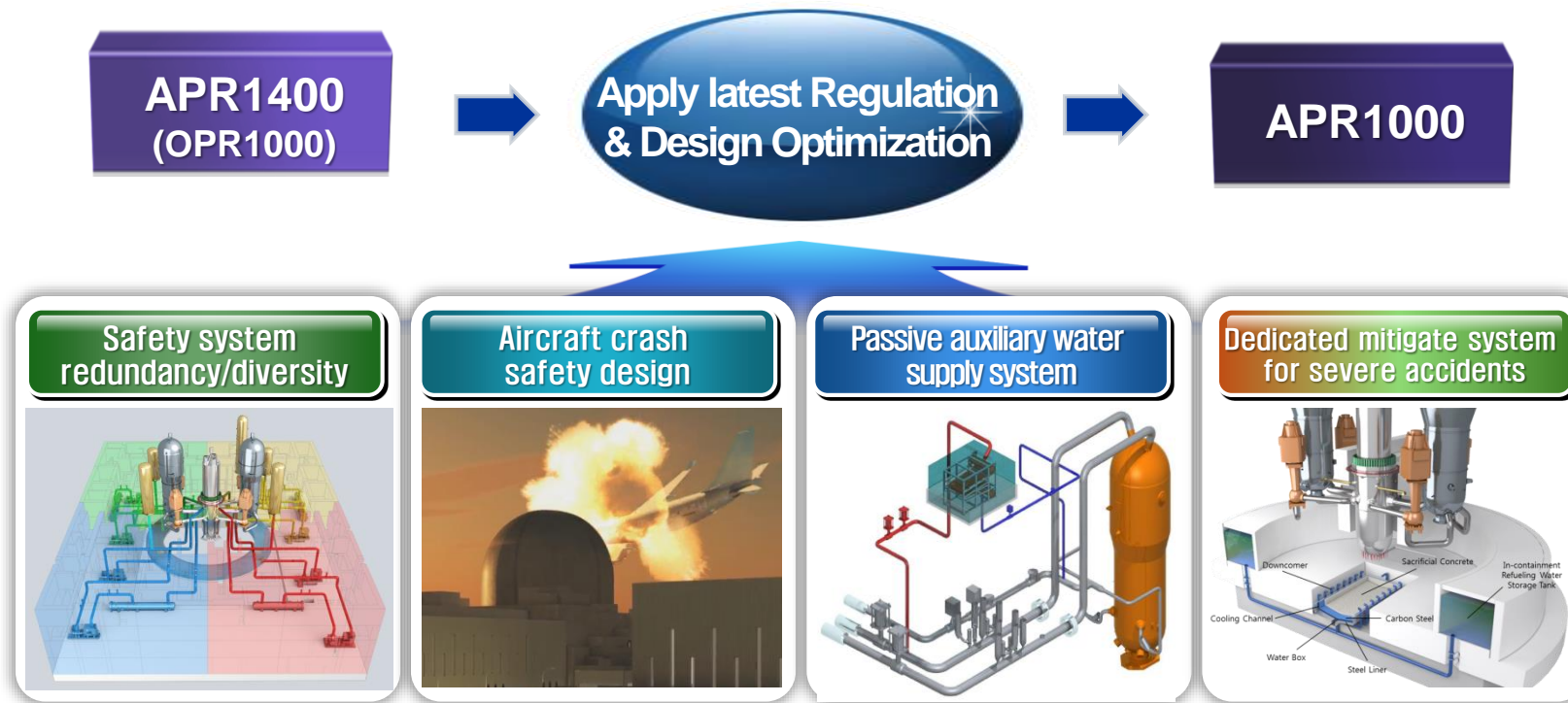
- **Project Scope:** Dukovany 5,6 (**APR1000**, 2 units)
 - * Construction options for 2 units at Temelin (Temelin Units 3 and 4) to be determined later depending on progress
- **Scope of Contract:** Engineering, Procurement, and Construction (EPC) and nuclear Fuel supply
- **Owner:** EDU II (Elektrárna Dukovany II, a.s.)
- **Prime Contractor :** KHNP(Korea Hydro & Nuclear Power Co, Ltd.)
 - * KHNP will form Team Korea with: KEPCO E&C(design), KEPCO NF(nuclear fuel supply), KEPCO KPS(maintenance) Doosan Enerbility(major components and construction), Daewoo E&C(Construction)
- **Project Schedule:** June 2025 ~ April 2038 (Total: 153 months)



- LWA(Limited Work Authorization) : Pre-construction phase involving limited preliminary activities such as design, permitting, licensing
- FNTP(Full Notice To Proceed) : Commencement of full-scale construction activities covering the entire scope of the project

APR1000 for Dukovany 5,6

- Developed for medium capacity (1,000MW) design considering European environment (limited on cooling water and grid capacity), reflecting higher safety requirement of Fukushima accident and EU requirement)



The EUR Association hereby certifies that the:

APR1000 standard design

has successfully passed all the steps of the analysis of compliance against the EUR Document Revision E with the contribution of: *KHNP, KEPCO E&C, KEPCO NF and Doosan.*

Following this analysis, a specific subset of the EUR Document Volume 3, dedicated to the APR1000 design, has been published by the EUR Association

March 2nd 2023

Manuel Carrasco
President of the EUR Association

Obtained March 2023

Proven safety design by successfully passed EUR certification

Dukovany 5,6 NPP Project

CHAPTER 3



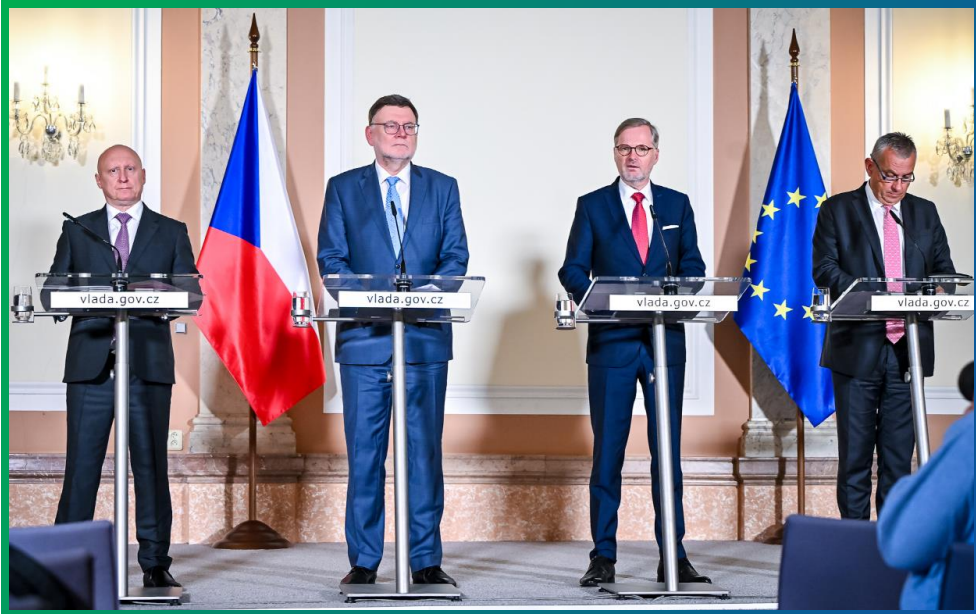
Progress of the Dukovany 5,6 Project

Milestones to Final Contract Signing

📍 Press Briefing on the Preferred Bidder(17th July 2024)

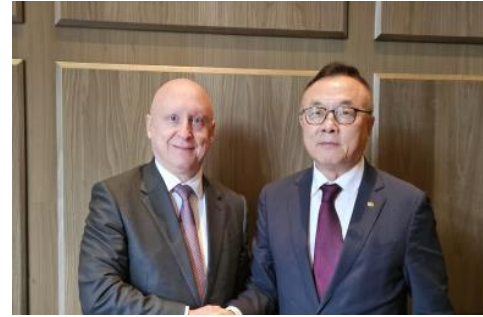
Prime Minister

“The Decision was unanimous”
“The KHNP offer was better practically in all assessed criteria”



250 times(including virtual) negotiations
Approximately 7,000 Man-Day

CEOs of CEZ and KHNP



Shared Vision
for the Project's Success

Negotiation Kick-off



Beginning the Preparation
For the Final Contract

Negotiation(Aug & Sep)



90 KHNP Engineer in CZ

Negotiation(Nov & Dec)



60 CEZ Engineer in KOR
90 KHNP Engineer in CZ

Negotiation(Jan)



60 KHNP Engineer in CZ

End of Negotiation(Mar)



60 KHNP Engineer in CZ

Milestones to Final Contract Signing

📍 Press Briefing on the Contract Signing(4th June 2025)

Prime Minister

“KHNP offered the best conditions and also the strongest guarantees”
“This is an important step towards greater energy self-sufficiency and security for Czech Republic”



Dukovany 5,6 NPP Project
CHAPTER 4



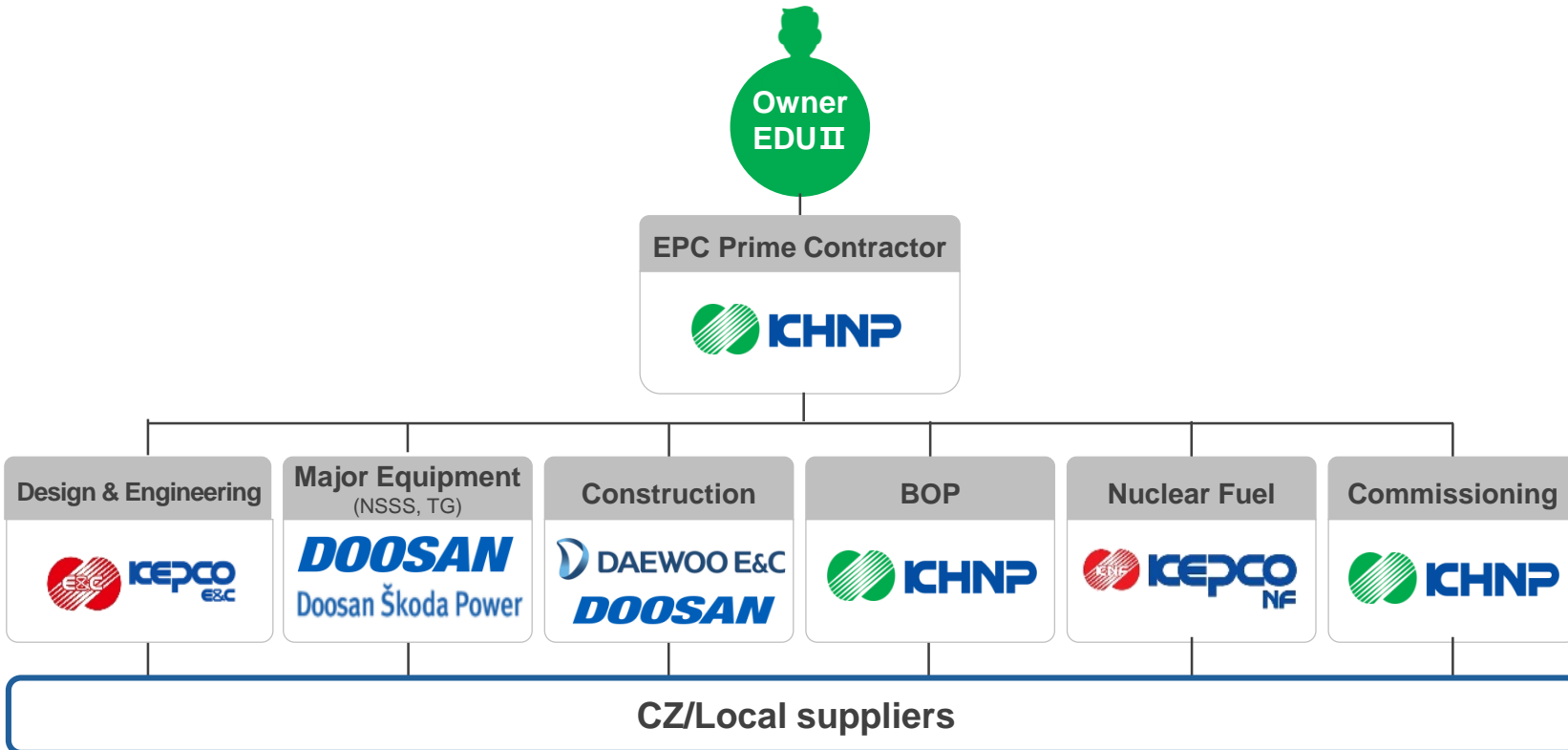
Future Plans






Project Structure of Team Korea

📍 Proven Project Management Capability and Robust Supply Chain

Team Korea

Key Advantages as Team Korea

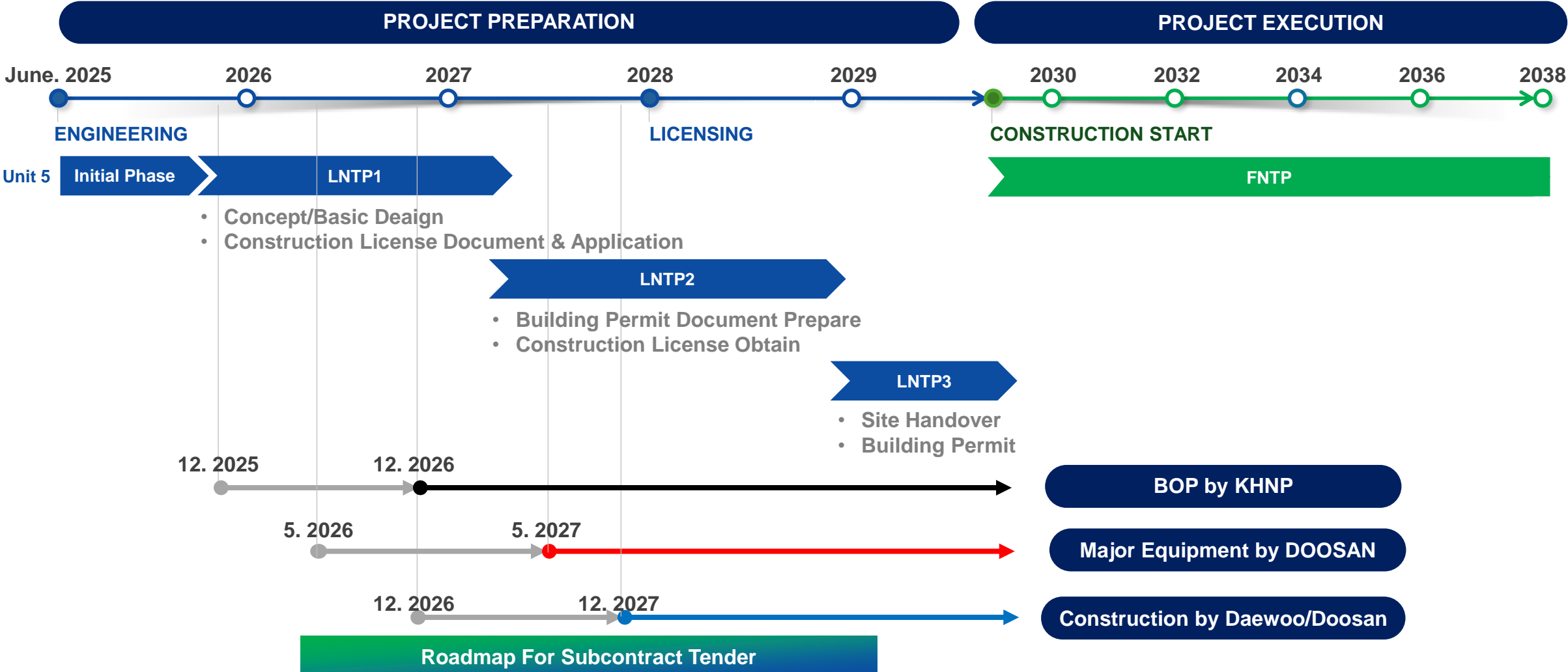


-  **One-stop EPC Solution**
 - Seamless integration of design, equipment, construction
-  **Joint Execution Experience**
 - Members jointly delivery the Barakah project
-  **Strong Internal Coordination**
 - Vertically integrated team enables fast decision-making
-  **Full Lifecycle Support**
 - Comprehensive coverage from design to long-term services
-  **Deep Partnership with Czech Industry**
 - Long-term cooperation potential through supply chain

With the integrated capabilities of Team Korea,
KHNP will ensure successful project execution - on time and within budget

Project Plan

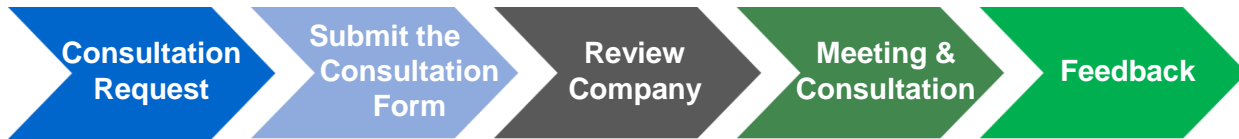
📍 Preparing for Full-scale Construction starting from 2029



Localization Implementation (CZ companies participation)

Localization will be implemented and closely monitored throughout the project to achieve the goals by the project's end
“Achievement of Planned localization : 60% By 2039”

Localization Support Center (LSC, Launched on March 2025)

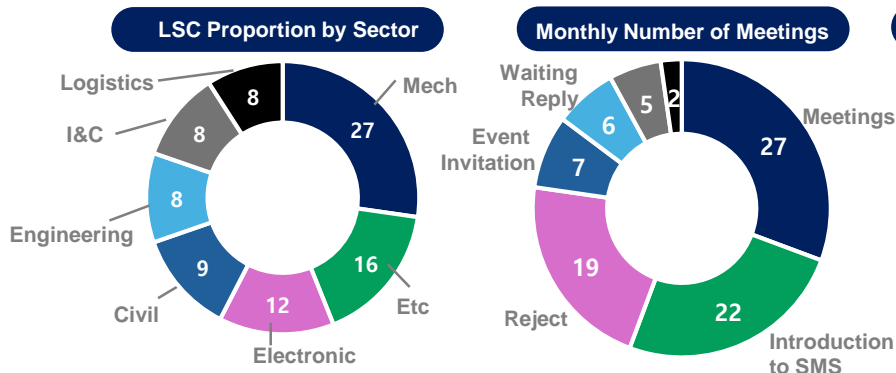


Contact Point Registration

- email : localization.khnp@gmail.com
- Contact No. : +420 222 753 180

Operational Results of Localization Support Center

- A total of 88 companies have requested meetings



Main Topics

- Company Introduction
- Project Status update
- Opening time of SCM
- Registration Procedure
- Evaluation Method

Supplier Registration Information Session

Information Sessions on Procurement Plans and Participation Criteria held *in July 24*



Intensive Support Sessions for Czech Industries
 - Date/Venue: **Oct 21 to 24 / Prague**

Detailed Site Investigation & On-boarding Education

Site Data Acquisition and Licensing Documentation for NPP Structure and Facility Design
 “To be conducted for 12 months after contract commencement by ČEZ EP ”

On-boarding Education Program for Owner and KHNP
 “To be conducted until December 2025 to support adaptation to the APR 1000 project”

Key Site Investigation Activities (Aug. 2025 ~)

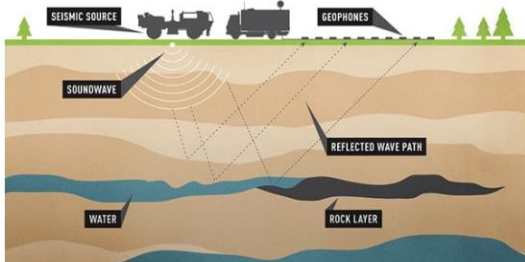
Borehole Drilling



Cone Penetration Test



Surface Geophysical Survey



Surface Geophysical Survey



Training Content and Schedule (July 2025 ~)

Stages	Training Topic	Target Participants	Location
On-boarding	Organization & Project Management	KHNP Employees	Korea
	APR1000 Overview	EDUII Employees	Czechia
	APR1000 System Overview	EDUII Employees	Czechia
Familiarization	APR1000 Design	EDUII Employees	Korea
	New Nuclear Equipment Procurement	EDUII Employees	Korea
	Document Management System	EDUII Employees	Korea

New President Lee and Prime Minister Fiala assessed that

The Signing of the final contract marks a “cornerstone” for deepening economic ties between the two countries

*The two leaders agreed to work closely together to expand comprehensive cooperation in other area,
Including high-tech industries, infrastructure, and energy.*

- 11 June 2025 -

Korea and Czechia “100 years” partnership for the Nuclear industry

