



The role of nuclear energy in Slovenia's green transition



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Content

1. International and national context of nuclear energy
2. JEK2 project status
3. Government activities in support of JEK2

Nuclear renaissance in EU

- Overview:
 - EU: 100 Rx in operation - ¼ of electricity
 - World: 412 Rx in operation and 58 under construction
- New attitude towards nuclear – COP28 (Tripling of nuclear - Declaration)
- SLO member of EU Nuclear Alliance
- EU support framework: Taxonomy – nuclear is sustainable source, NZIA, Energy market reform
- Challenges: financing, people, supply chains

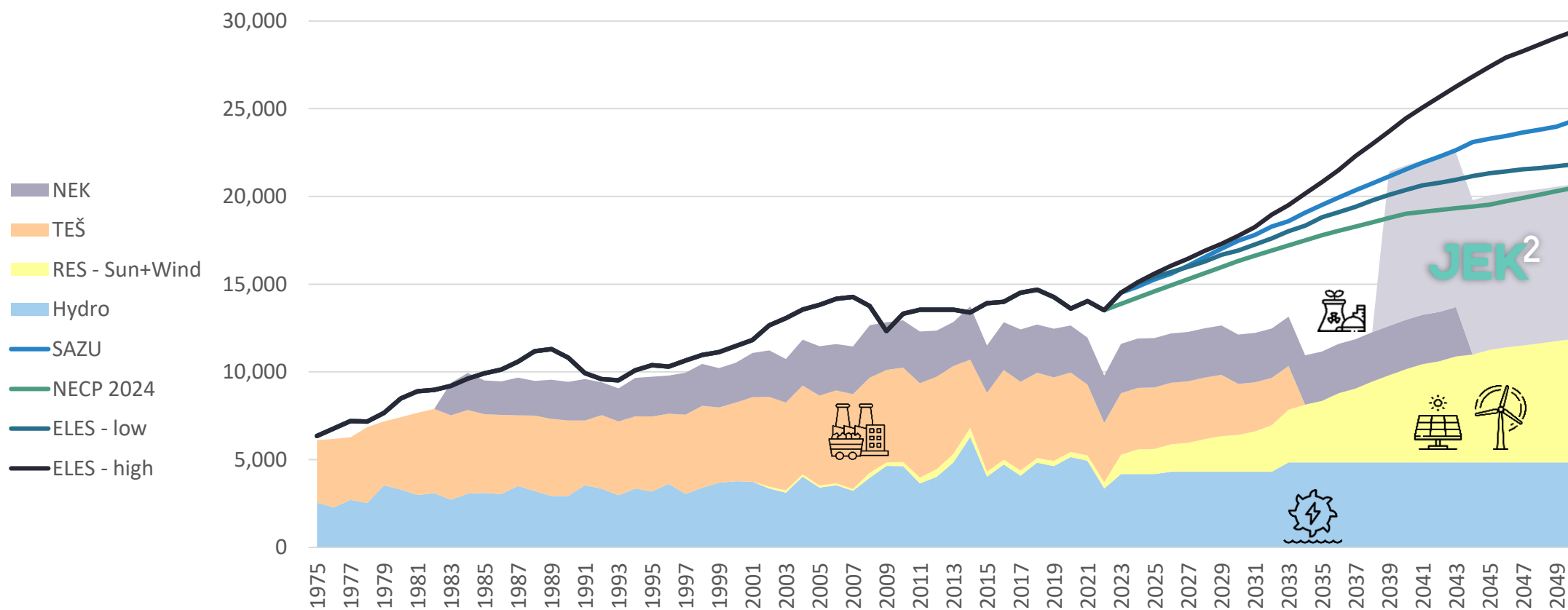


Slovenia has a developed nuclear programme



Electricity needs in Slovenia

Sources: GEN, ELES, SAZU, proposed NECP 2024



NEK – over 40 years of positive experience

Ownership: **GEN Energija 50 %, HEP 50 %**

Operator: **Nuklearna elektrarna Krško**

Technology: **Westinghouse PWR (ZDA)**

Reactor Type: **pressurized water reactor (PWR)**

Construction permit: **1975**

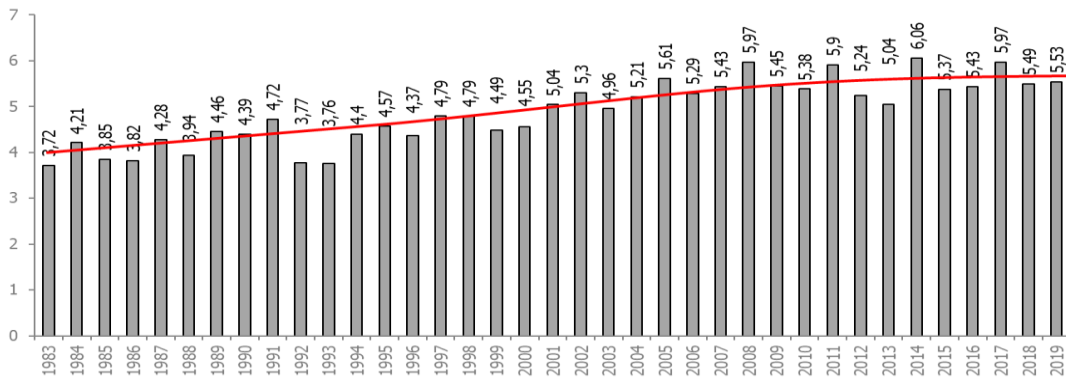
First criticality: **1981**

Commercial operation: **1983**

Lifetime extension: **40+10+10 let (2043)**

Employees: **630**

Rated power: **727 MW**

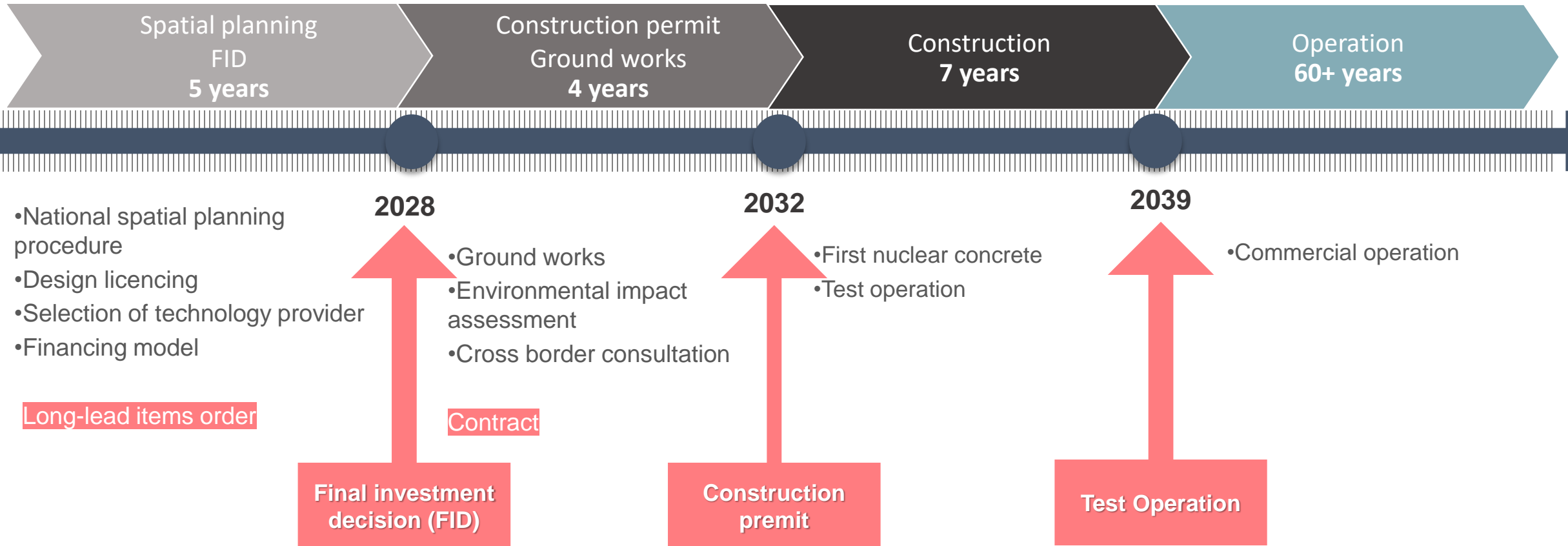




JEK2 ID

- Investor: GEN energija
- Location: upstream (west of) NEK
- Technology: gen 3+
- Rated power: **up to 1.600 MW**
- Lifetime: 60+ years
- Energy permit issued in 2021

JEK2 project timeline



Nuclear waste solution is a prerequisite for nuclear sector's expansion

- Milestone: June 6 2024 construction of LILW began
- Operational by 2027
- Funded by Decommissioning Fund
- Nuclear waste solution as a prerequisite for JEK2 and credibility of nuclear programme



JEK2 is a government strategic project with high priority

- Government visit in Krško (June 2023)
- Nomination of State Secretary for Nuclear Programme Development and Acceleration of JEK2 project (August 2023)
- Government working group for Coordination of JEK2 project (September 2023)
- Scenario JEK2+RES as priority scenario in Energy Strategy (NECP)
- **PM meeting from 30.1.2024 – political consensus on the future of nuclear in Slovenia**
- Resolution on Longterm Peaceful Use of Nuclear Energy in Slovenia adopted by parliament (May 2024)
- Referendum approved by the parliament (May 2024)

Resolution on Longterm Peaceful Use of Nuclear Energy in Slovenia – Decision in Principle

- International practice: Finland, France, Poland
- First high level nuclear programme with nuclear policy
- Political support for development of nuclear programme and newbuild projects in Slovenia
- Stakeholders signal to change operational to development mode
- Foundation for referendum
- Adopted by the parliament on 24. 5. 2024 with 90% support

Conclusions

- Slovenia is a nuclear state with developed nuclear programme
- JEK2 is a strategic project with high priority
- Political support for development of nuclear programme and newbuild projects in Slovenia
- Project future focus: On time and on budget
 - Build competence
 - Supply chain
 - Financing



Thank you!