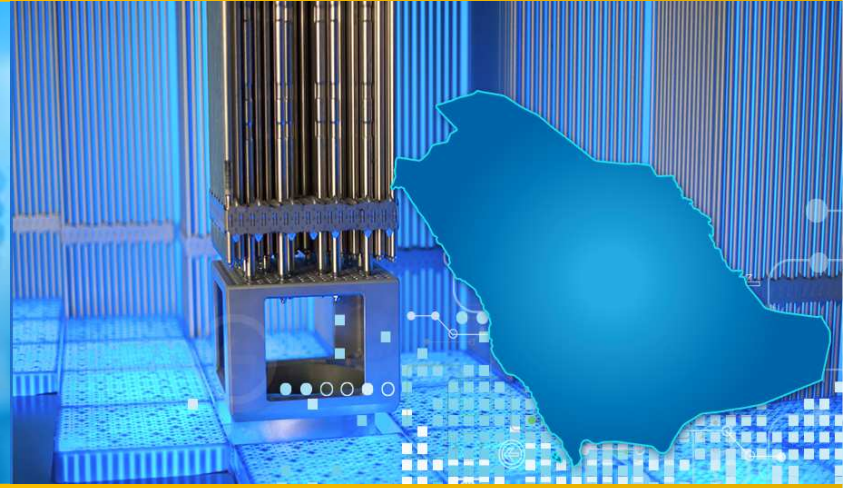


Update on the Nuclear Power Program in the Kingdom of Saudi



مدينة الملك عبد الله للطاقة
الذرية والمتجددة K.A.CARE



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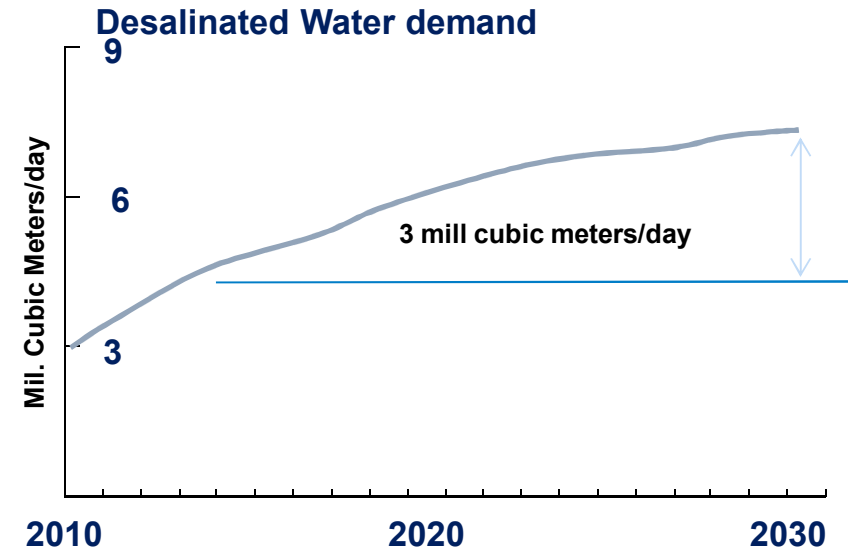
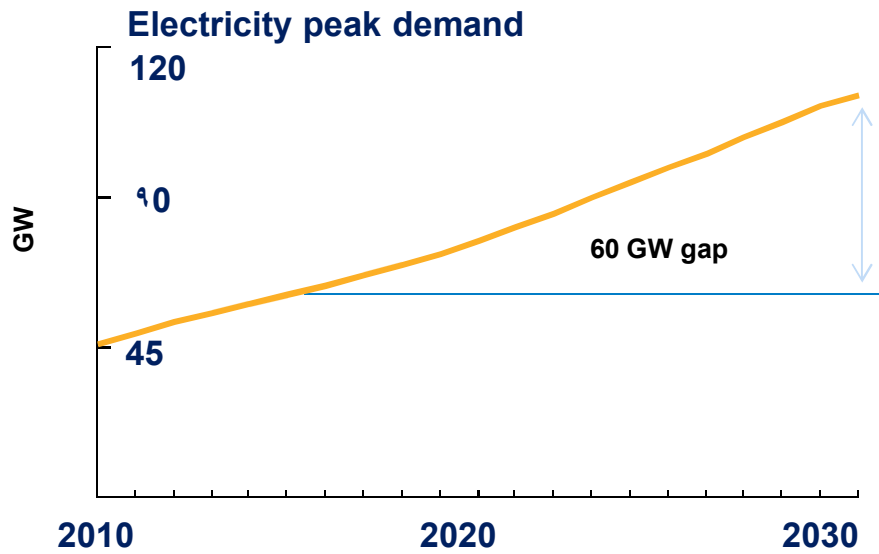


Introduction

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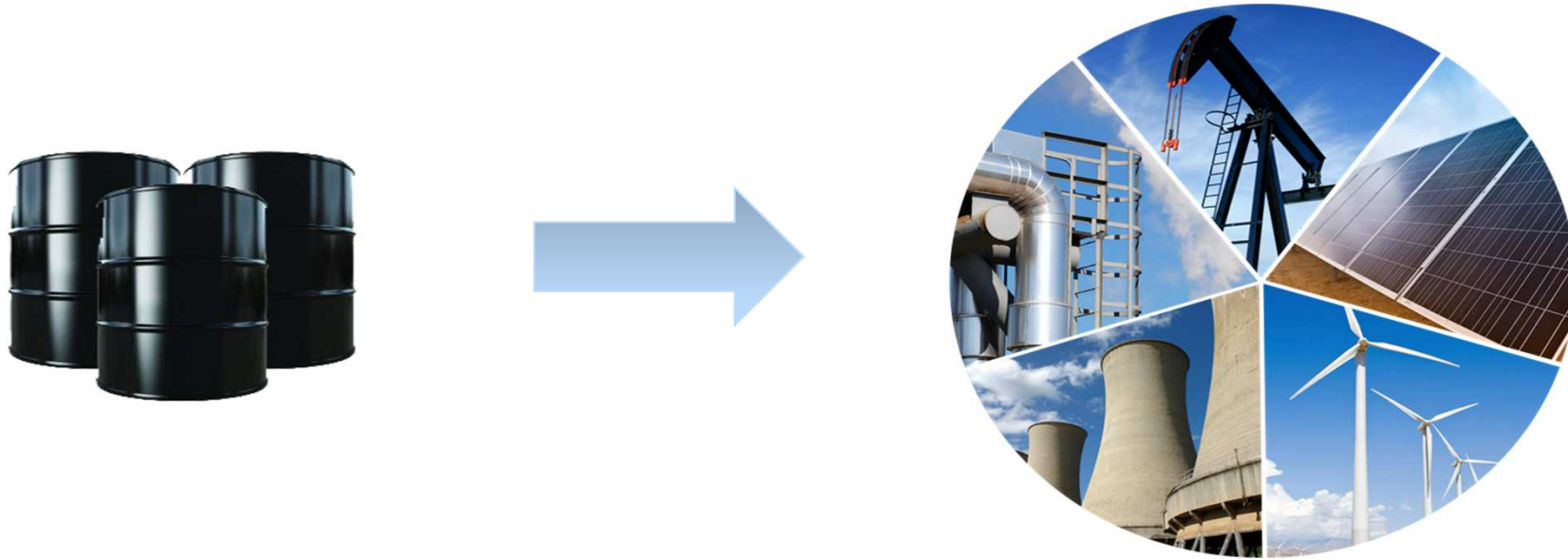


Projected Growth in Electricity Peak Demand



At current pace, energy peak demand is expected to exceed 120 GW and Desalinated water 7 million cubic meter per day by 2030

Towards Energy Sustainability



Building Resources for the Future

Towards Energy Sustainability – K.A.CARE Mandate

- ✓ **Sustainability**
- ✓ **Reliability**
- ✓ **Electricity generation & Desalination**

“Sources for **sustainable** and **reliable** electricity generation and desalinated water production that **reduces the reliance** on hydrocarbon resources and thus provides an additional guarantee for the production of water and electricity in the future and **prolongs** at the same time hydrocarbon resources to keep them a source of income for a longer period”

رؤية
VISION



المملكة العربية السعودية
KINGDOM OF SAUDI ARABIA



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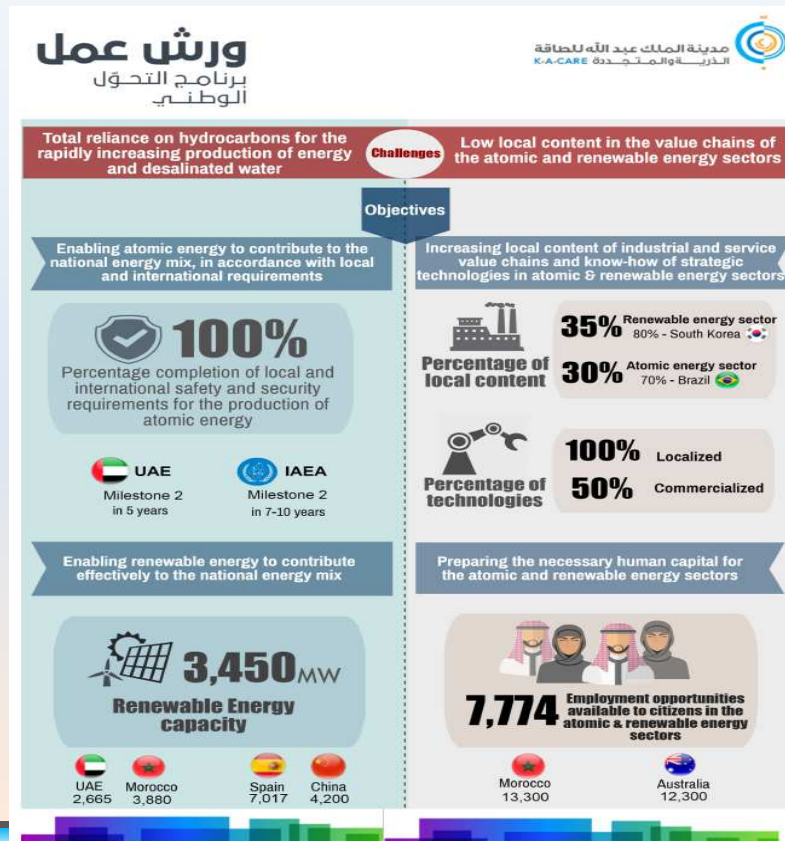


National Transformation Program 2020

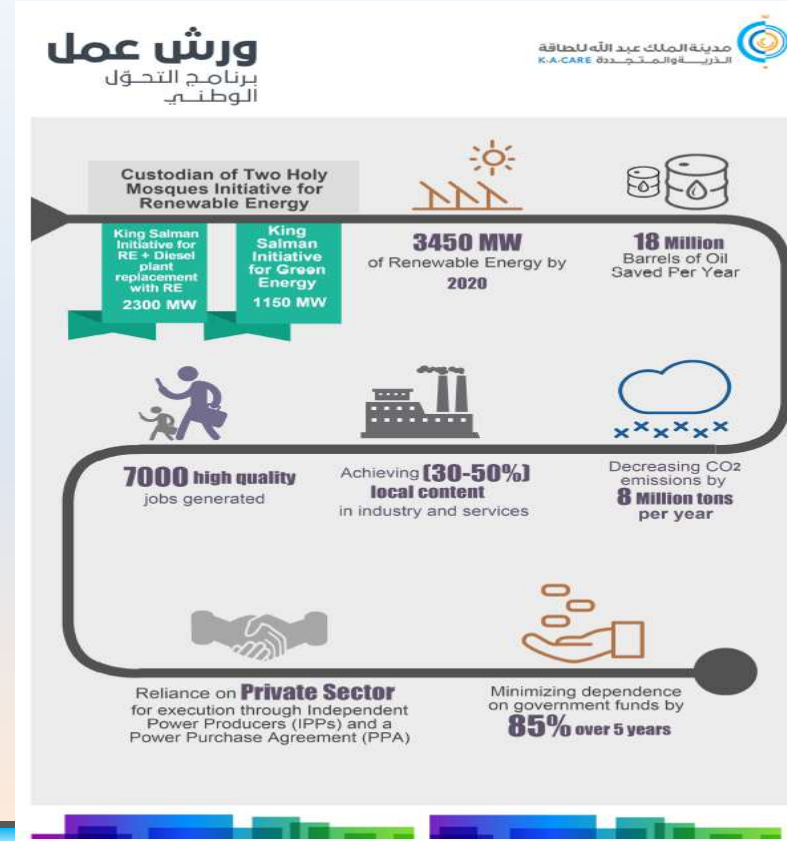


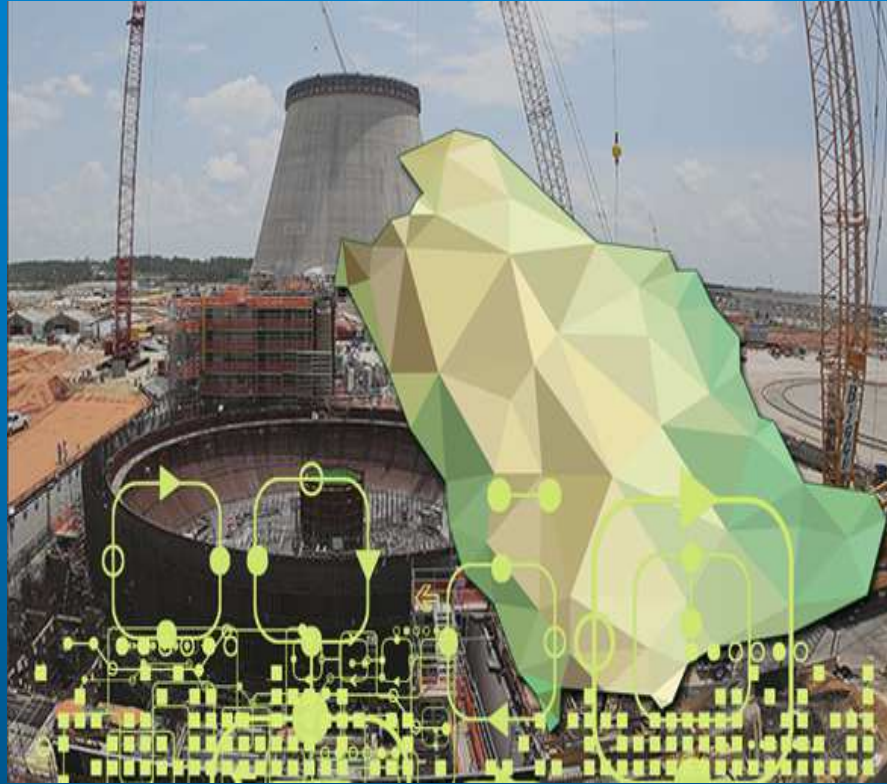
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National Transformation Plan Roadmap



Saudi National Atomic Energy Project





Saudi National Atomic Energy Project

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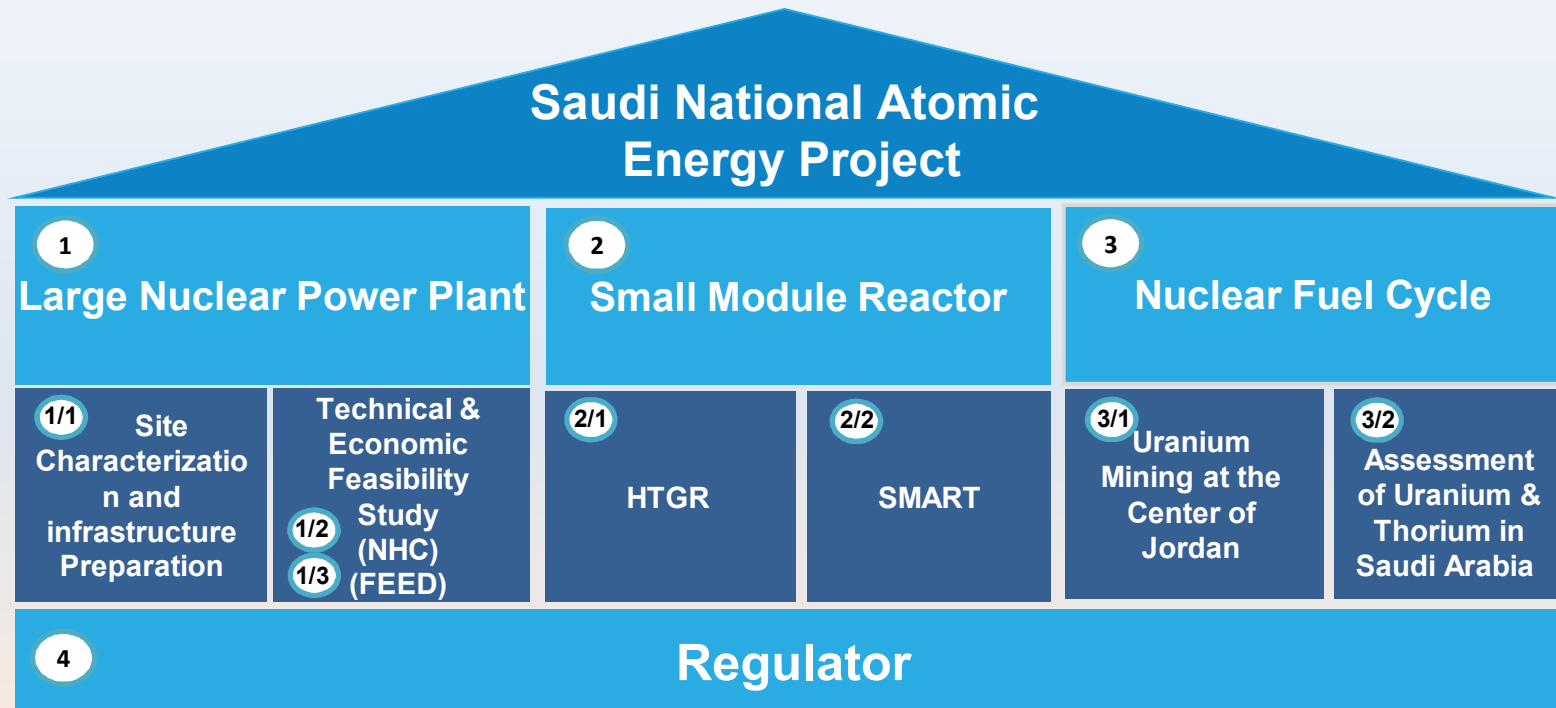


Guiding Principles

The following are the guiding principles for a peaceful Atomic energy program in the KSA

- Safety First
- Transparency
- Civil Applications Only
- Involve Saudi Stakeholders
- World-Wide Cooperation and Coordination
- Highest Standards and Best Practices
- Independent, Credible Regulator
- Role of Atomic Energy in Improving the Environment and Sustaining the Economy
- Nuclear Value Chain Development

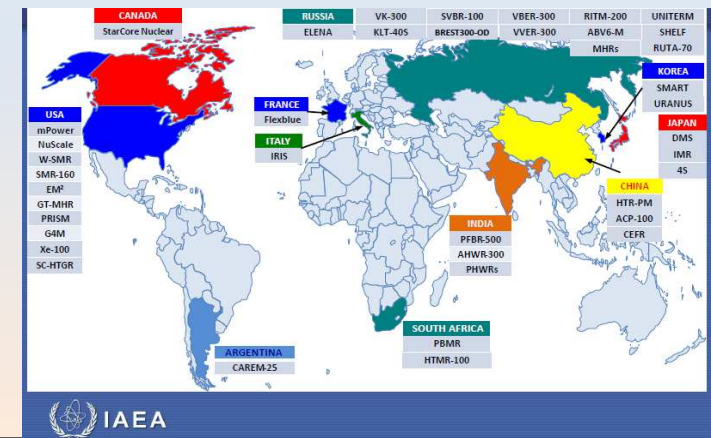
Saudi National Atomic Energy Project



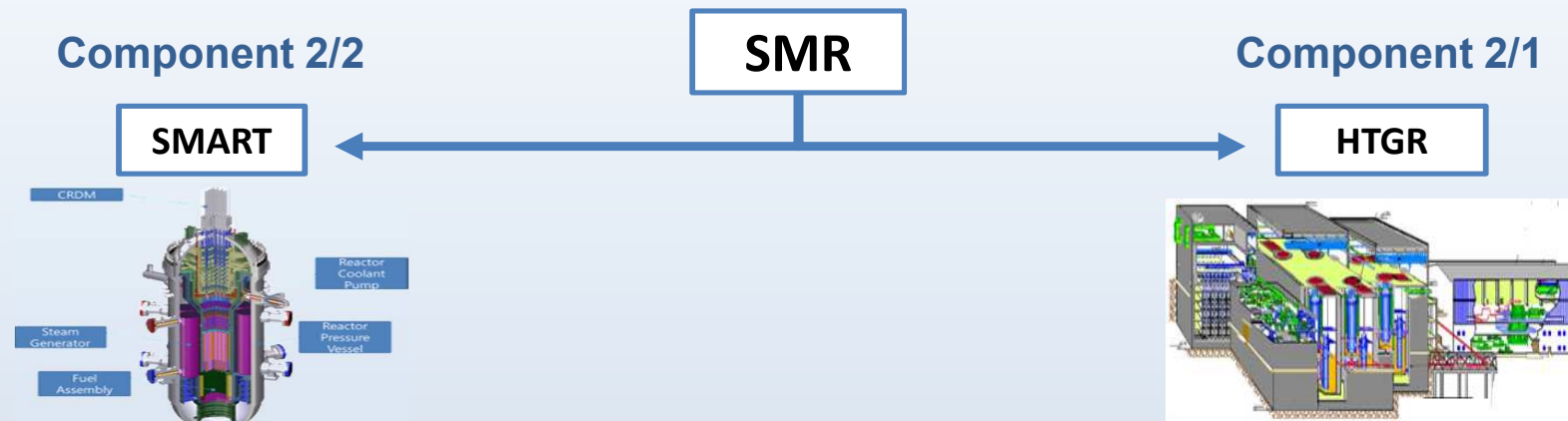
Component 2: Small Modular Reactor (SMR)

SMR is developing technology and Saudi Arabia is targeting to own and develop this technology because:

- Desire of IP ownership of SMR technology
- Inherent safety, short construction time and lower capital costs
- Potential coastal and inland sites
- Reduced zone isolation criteria
- Thermal Applications and Desalination



Component 2: Small Modular Reactor (SMR)



- Saudi Arabia joint IP ownership with Korea on SMART Technology.
- The Saudi-Korean partnership in three years to achieve the design and starting the construction.
- Full knowledge transfer to Saudi Engineers
- Investment for Saudi companies.
- Marketing SMART Technology globally.

- A long-term strategic partnership with the China to localize and own the technology.
- HTGR is a fourth-generation nuclear reactor.
- inherent safety.
- high power generation efficiency.
- simplified system design and multi industrial applications.

Regulator

- The primary objective of the regulator is to maintain atomic and radiological safety for individuals, environment and nuclear installations.
- There is a network of international organizations, coalitions and organizations that support the safe use of atomic energy in peaceful fields. It works to develop and implement safety and security standards and strategies through international cooperation and information networks.



List of activities that require authorization by the Regulator

Licensing installations of nuclear facilities

1. Site license
2. construction permit
3. Operating license (renewed every 3 years)
4. License for disassembly and decommissioning

Licensing of storage facilities for nuclear materials and radioactive waste

Licensing of Nuclear Material Transport and Radioactive Waste Management.



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Thank You