NUCLEAR POWER & ENERGY AGENCY

ROADMAP FOR KENYA'S NUCLEAR POWER PROGRAME

COFEK - CONSUMER DIALOGUE FORUM

15TH JUNE 2020

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NuPEA

NuPEA

KENYA VISION 2030 Towards a globally competitive and prosperous nation.

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PRESENTATION OUTLINE

NuPEA

1. Energy for Economic Growth
2. NuPEA Evolution
3. Milestone Approach
4. Research Reactor Programme
5. Conclusion

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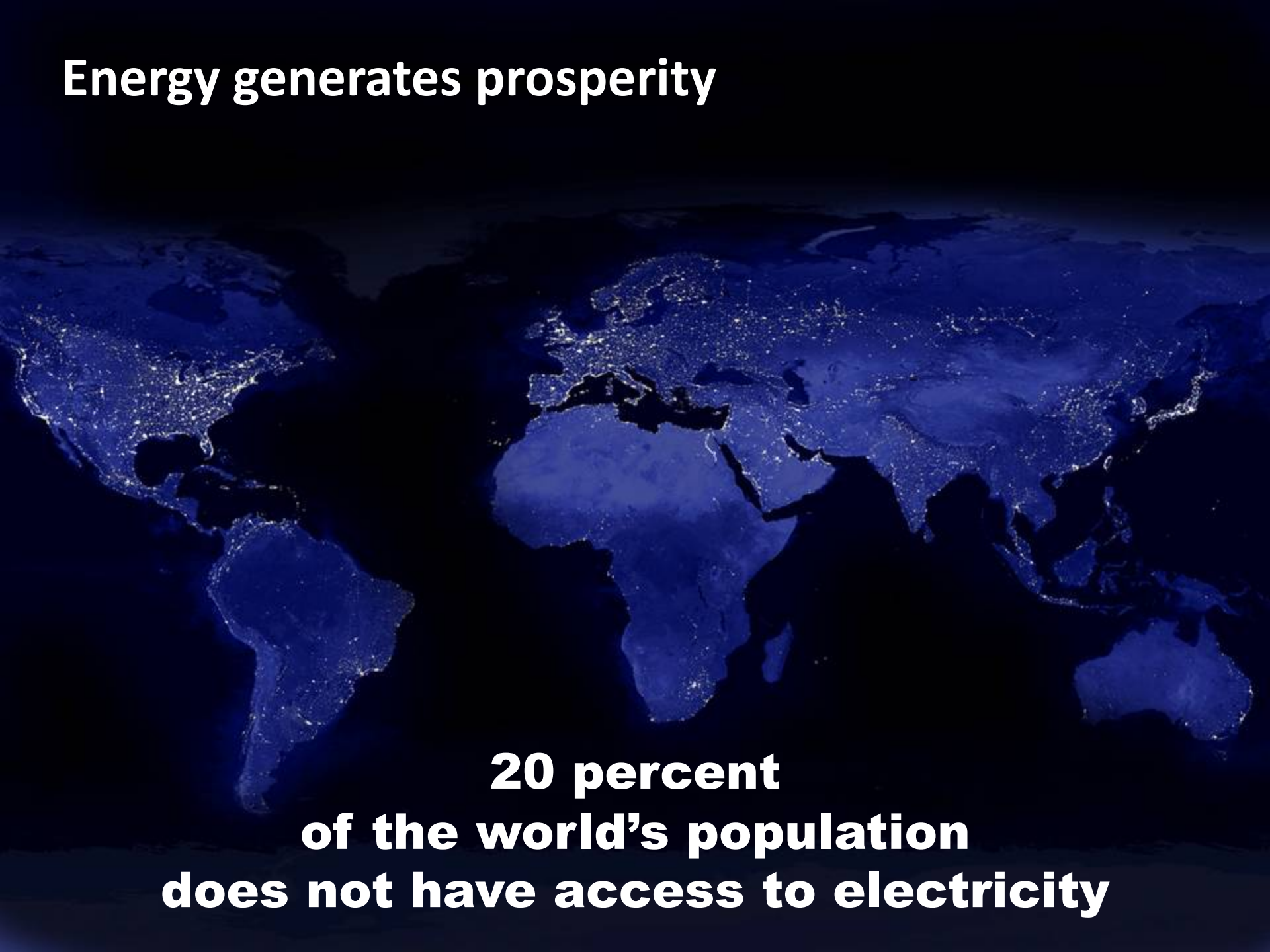
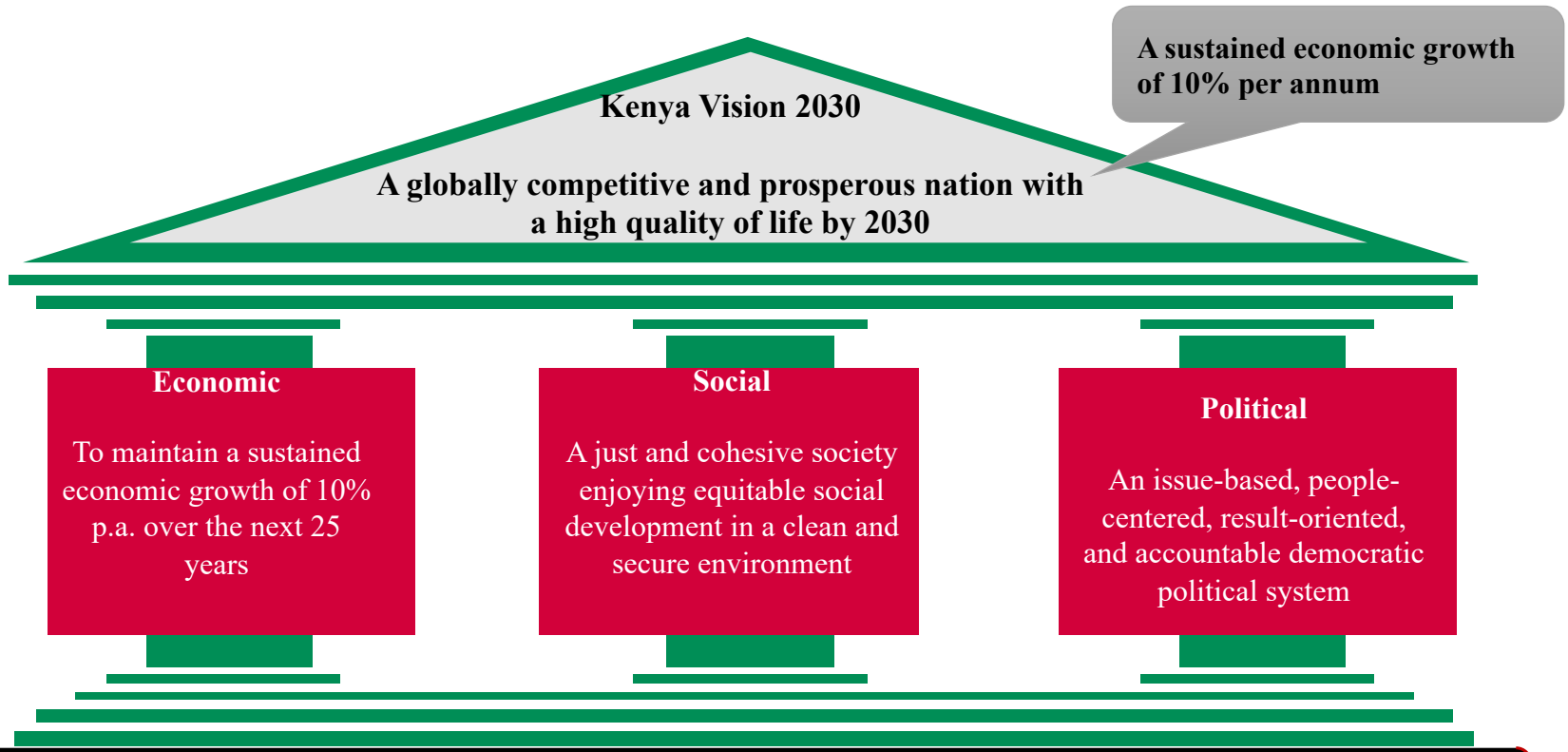
Energy generates prosperity



20 percent
of the world's population
does not have access to electricity

Energy is a key Enabler for Vision 2030



Key Enabler:

A vibrant power sector that meets electricity required to drive flagship projects and programmes

NATIONAL ENERGY FOCUS

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Powering the Nation

Adequate Power

Reliable Power

Competitively Priced

Exponential Economic Growth

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Nuclear Technology For Peaceful Application and Socio-economic Development

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Security of energy supply:

Reduce dependence on external fuel sources

Employment:

High proportion of skilled and graduate staff relative to most other major energy and manufacturing industries.

Spin-off:

Supporting industries growth side by side with NPP

Economics

Low cost and stability of electricity prices/energy costs

Reliable and Stable Electricity:

The desire of industrial development and the potential of nuclear in such development

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N*u*PEA EVOLUTION

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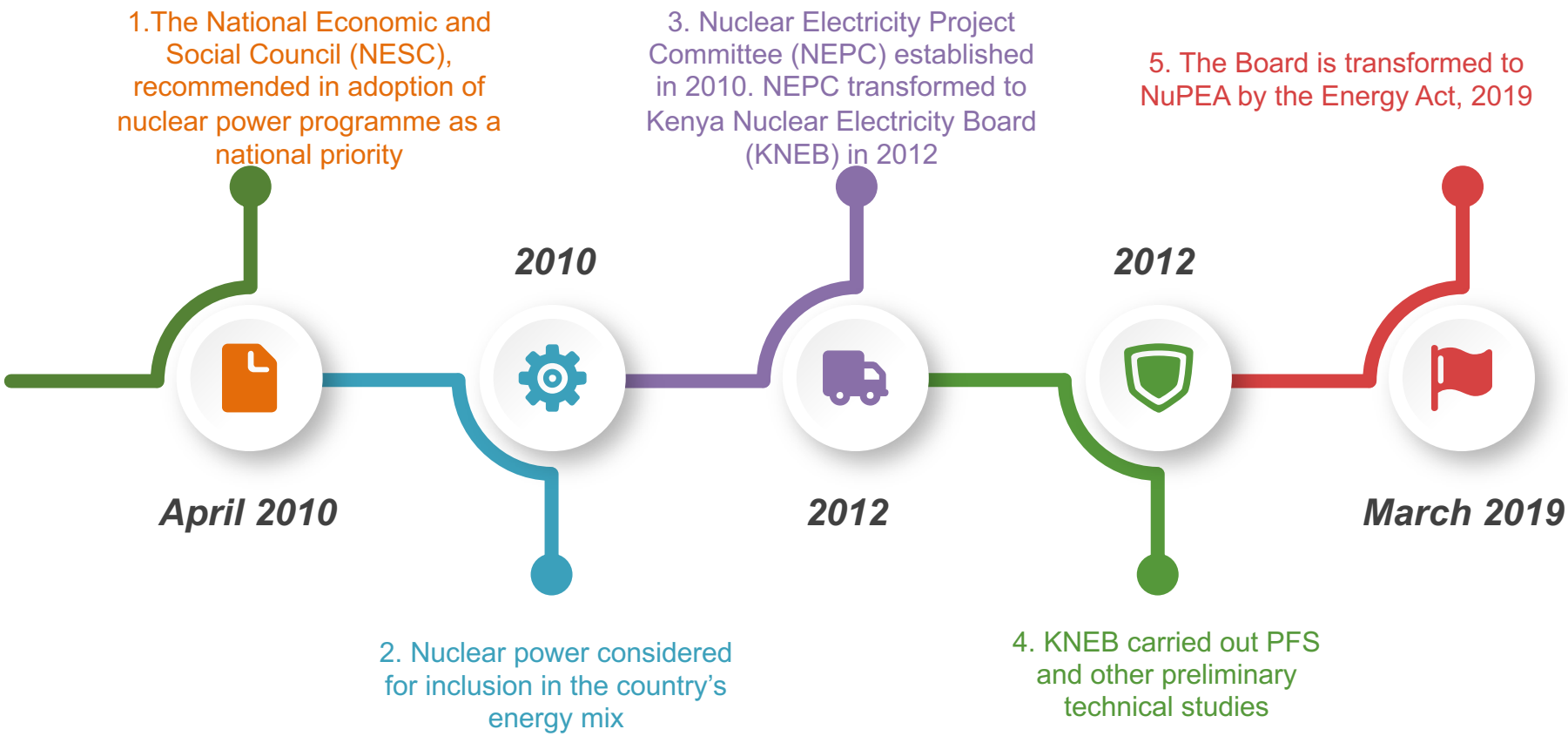
Establishment and Evolution of the Nuclear Power Programme



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Mandate of N*u*PEA

1. Development of infrastructure necessary for establishment of a Nuclear Power Programme in Kenya;
2. Coordinate research and development in the Energy Sector in Kenya;
3. Coordinate Capacity Building in the Energy Sector in Kenya.

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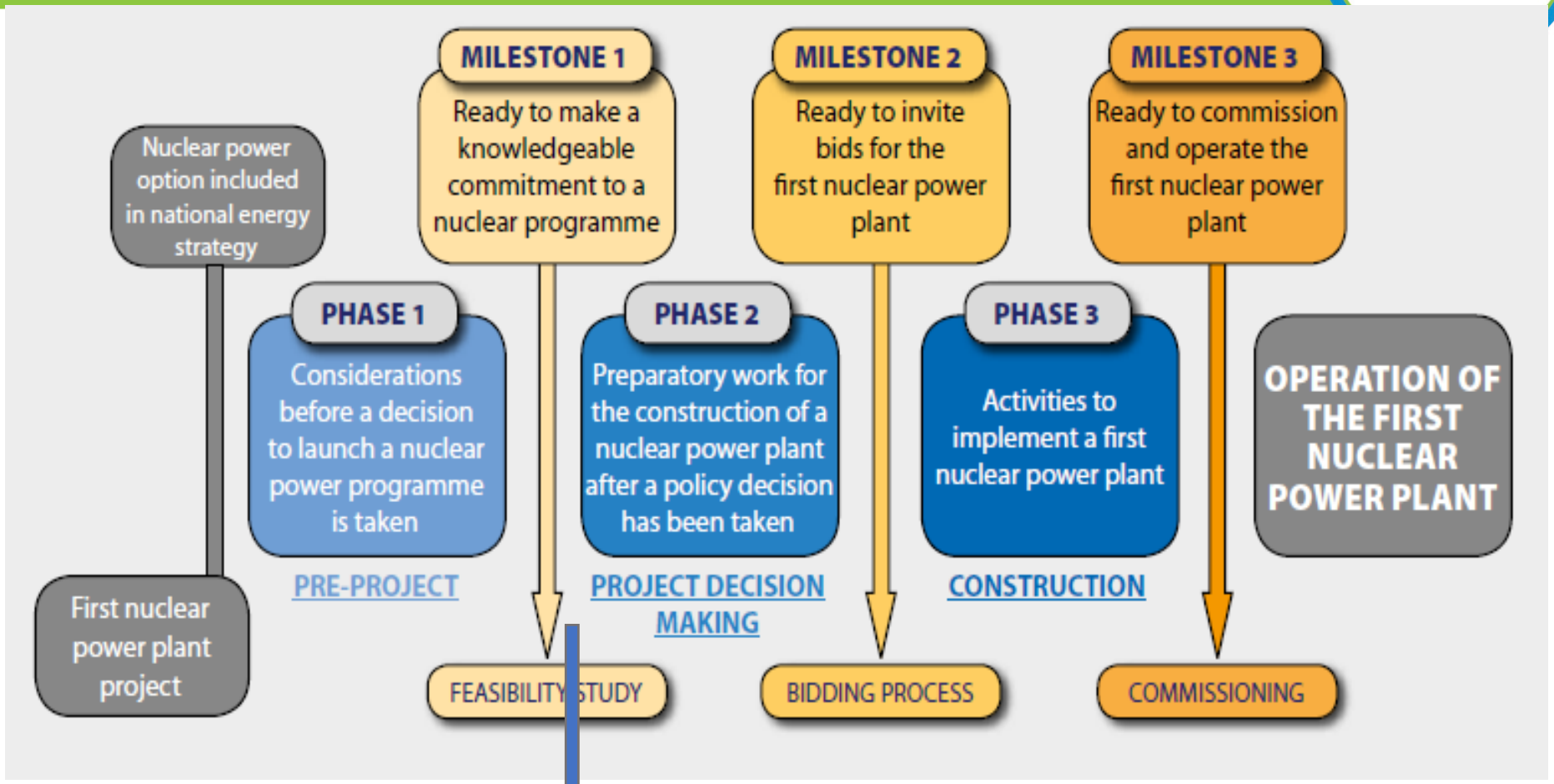
MILESTONE APPROACH

Kenya's NPP is Based on Milestone Approach



10 – 15 years

We are here

National Infrastructure to be Developed

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NuPEA Strategies for Implementation of New Mandate

- Develop framework for coordinating R&D in the energy sector
- Develop a framework for collaboration in Energy, Research and Innovation with local, regional and international organizations
- Develop an integrated capacity building framework for the energy sector
- Establish a National Energy Research Centre
- Establish an energy sector information resource and dissemination centre
- Develop a framework for Intellectual Property Rights management
- Develop international cooperation for joint research activities
- Develop funding strategies for research and capacity building

RESEARCH REACTOR PROGRAMME

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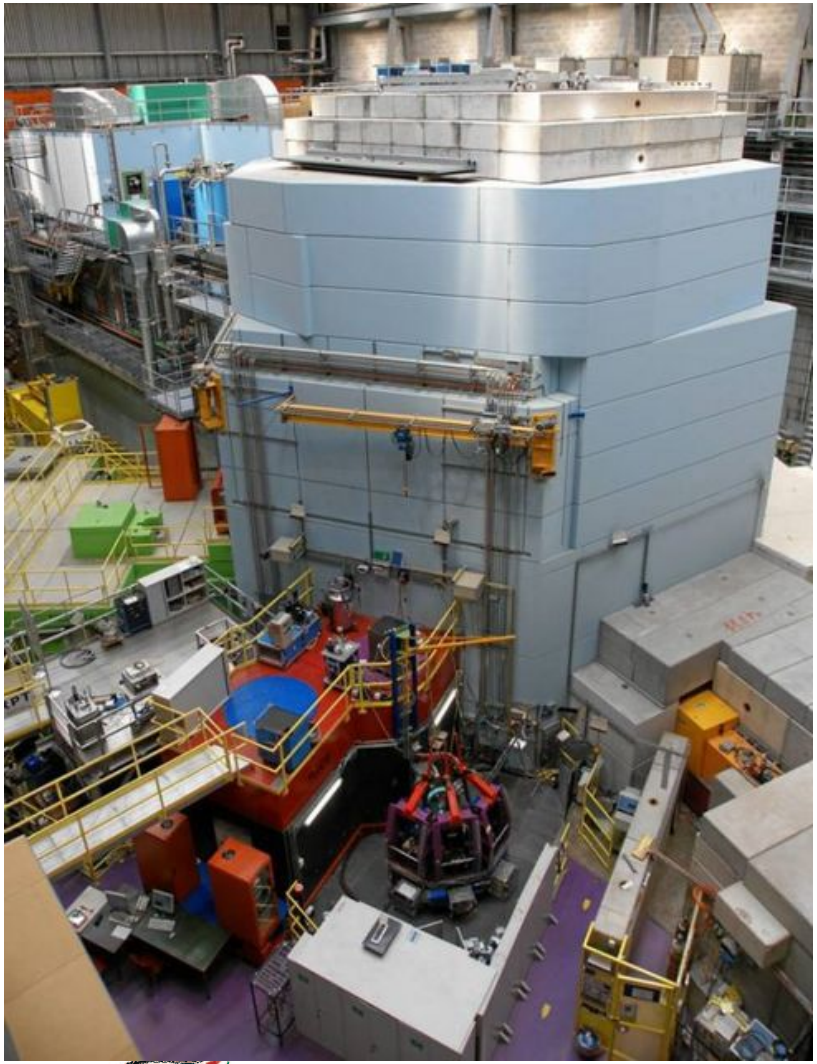
Research Reactor Applications



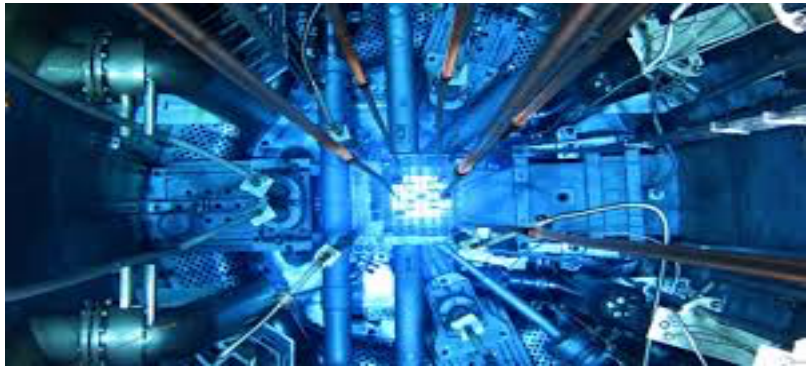
- Research reactors are primarily used to provide neutrons for research and various applications, including education and training
- *Nuclear technology research:* research in nuclear safety, safeguards, security etc.

Common applications

- *Production of radioisotopes:* for medical, industrial and research applications
- Teaching/training
- Material/fuel irradiation (sterilization)
- Neutron scattering – material science
- Transmutation (gemstones)
- Geochronology – dating of rocks – exploration

Research Reactor (RR) Programme

- RR Feasibility study is being undertaken in collaboration with Korea Atomic Energy Research Institute.
- RR Project is proposed for siting at Konza Technopolis
- Benefits of RR;
  - Enhancement of Kenya's capability to implement the nuclear power programme *(related infrastructure issues)*
  - Enhanced Research & Development
  - Radioisotopes production for industrial and medical applications
  - Training



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Conclusion

- Nuclear technology is important for Kenya for electricity generation and non-electric applications.

- Nuclear technology has potential to provide economic benefits, reduced emissions of pollutants, increased reliability and power quality, better use of nuclear fuel, and flexibility to the electrical grid.

- The technology is readily available, proven to be a safe and effective way of generating power with low accident probability

- Stakeholder support is critical for successful implementation of nuclear and research reactor programmes.

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