



INPRO Dialogue Forum on Global Nuclear Energy Sustainability:  
**Long-term Prospects for Nuclear Energy in the  
Post-Fukushima Era**

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**GHANA'S NUCLEAR ENERGY PROGRAMME:  
VISION AND STRATEGIES AFTER  
FUKUSHIMA**

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# 1. National vision and strategy for Nuclear Power in the 21<sup>st</sup> century in Ghana



- Current Status

- Installed Capacity – 2700 MW  
(hydro – 48% and Thermal – 52%)
- Bui Dam – 400 MW (capacity factor 27%) come on line in July 2013
- Current shortfall – 950 MW

- Projection

- 2020 – 7500 MW
- 2030 - 15,000

- No Geothermal, Wind, and expensive oil, and solar

# 1. National vision and strategy for Nuclear Power in the 21<sup>st</sup> century in Ghana



- Long-term policy for nuclear energy
  - Ghana's national energy policy is to Include the nuclear option in the national energy mix to meet long term energy needs (in Ghana Power Policy, 2010)
  - Ghana has also prepared a draft nuclear power policy which has a long term objective of developing the nuclear power industry for adequate, secure and stable supply of electricity available at prices, which will support general development.
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# 1. National vision and strategy for Nuclear Power in the 21<sup>st</sup> century in **Ghana**



- Nuclear power programme:
- Currently the necessary steps are being taken towards the implementation of a nuclear power programme in the country.

This include:

- Formation of NEPIO which is to see to the planning and implementation the nuclear project
- The NEPIO is placed at the Ministry of Energy and operates in collaboration with the Ghana Atomic Energy Commission and Energy Commission

Seven technical groups operates under NEPIO. They are: Techno-Economic Assessment, **Regulatory**, Legal, Siting and Grid Infrastructure, **Human Resource Development**, Nuclear Power Technology Assessment, Nuclear Power Programme Management and Stake Holder Involvement Groups

## 2. Main lessons learned after Fukushima in Ghana



- In Ghana the Fukushima accident however did not affect the country's decision to go nuclear - Minister of EST (IAEA General Conference, 2011)

But:

- The Fukushima accident has brought to fore sitting issue – Historical geological data, flooding, etc.
- Reactor design which will assist mitigate some of the emergency situations – back up power system, cooling of core, etc
- Use the goodwill in other nuclear applications (such as medicine, agriculture, etc)
- Independent Regulatory Authority

### 3. **COUNTRY's** expectations for global Nuclear Power development in the 21<sup>st</sup> century



- National anticipation in the next 100 years
  - In the next 10 - 100 years the anticipated high energy demand vis-à-vis the low indigenous energy resources like fossil fuel reserves call for a high share of nuclear power in our energy mix
- Major policy implications and challenges
  - The draft nuclear policy stipulates that nuclear power should contribute almost 10 – 65 % to electricity generation in the country
  - This expectation is however faced with some challenges which include, negative public perception, high upfront infrastructure cost, possible break through in solar technologies, negative stance of certain industrialised countries on its use, etc.

These challenges may go a long way affect the expansion of nuclear power in both short and medium term.