



The Abdus Salam  
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**NEPIO and its Role in Launching and Managing a Nuclear Power Project**

FREELAND Kent  
*Industrial Analysts Incorporated  
Worley Parsons Inc., La Mesa  
CA  
U.S.A.*

# NEPIO and its Role in Launching and Managing a Nuclear Power Project

Kent Freeland, P.E.

WorleyParsons Nuclear Services



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# NEPIO

## Nuclear Energy Programme Implementing Organization

How can all of these organizations be brought into the planning process? NEPIO is a way to coordinate these activities.

- NEPIO is the executable for the IAEA NG-G-3.1 Phase 1, “Ready for Commitment to Nuclear Power”.
- Planning for effective, safe, secure, safeguarded nuclear power involves many Government Ministries, Regulatory Bodies, Owner organization, Grid operator, Industry, Educational and research institutions.
- Building sufficient national infrastructures to prepare the country for nuclear power
- For establishing the organizations and institutions that will continue to develop in phase 3
- For issuing a bid for the first nuclear power plant



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# NEPIO

## Nuclear Energy Programme Implementing Organization

### Forming a NEPIO

- During Phase 1, a NEPIO prepares policy and strategy recommendations to decision makers in government with respect to infrastructure issues identified in the Milestones Document
- During Phase 2, a NEPIO turns these strategies into firm action plans for each issue and assigns responsibility to institutional organizations which will become a permanent part of the overall programme infrastructure.



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Starting Out ... Phase 1

- Study infrastructure issues
- Develop strategies
- Understand implications and possible resolutions
- Prepare for a Government decision (Milestone 1)



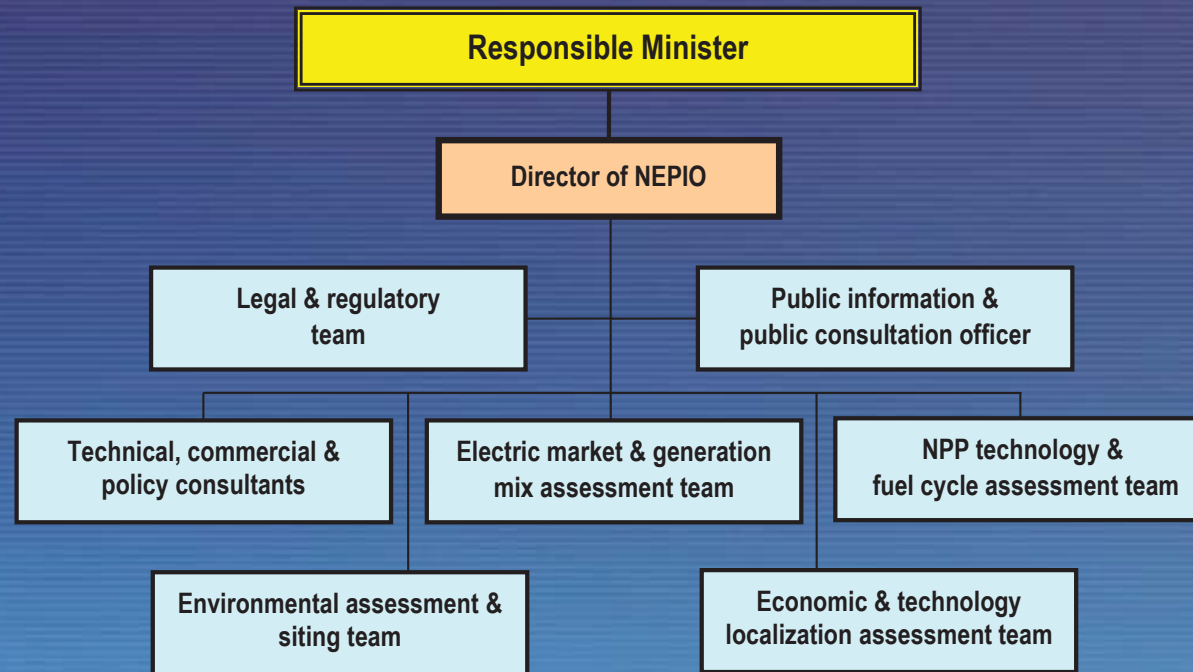
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# NEPIO

## Nuclear Energy Programme Implementing Organization

### Structure



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### Implementation ... Phase 2

- Oversee or coordinate development of infrastructure to support the NPP project. This can include systems to capture and control document and data content, as well as knowledge capture.
- Many functions may be delegated to implementing organizations
- Plan implementation by steps, interfaces, milestones
- Monitor progress and coordinate among the various implementing organizations and stakeholders – regulator, NPP owner-operator, grid operator, and national electricity reliability mandates, as well as academic and educational assets. .



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Decisions ... Phase 3

- Design and Safeguards Considerations
- Law, Regulations and Licensing, including state authority and Inspectorate
- Reactor Technology and Fuel Cycle
- Logistics of Nuclear Fuel Cycle
- Nuclear Materials Handling
- Essential Equipment and Safety Analysis Report (SAR)
- Proliferation Protection
- Balance of Co-ordination and Integration



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## Transition and Turnover

- NEPIO transfer of responsibilities to dedicated government agencies
- Maintain Oversight
- Continue to identify and assist in recruitment of required nuclear talent
- Transfer and maintenance of Nuclear Knowledge systems
- Smooth and structured transition
- Maintain Authority and Mandate over nuclear activities



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# NEPIO

## Nuclear Energy Programme Implementing Organization

### Choose the People

- Picking the right director and management is essential
  - Trust and confidence of government, industry and public
  - Should be familiar with nuclear sciences
  - Should have “street credibility”, some fame in the field
- Key leadership positions should be filled with local nationals, to encourage for stakeholder involvement
- Knowledge and understanding of local culture, processes
- Use of consultants and contractors encouraged, and serves as a way to preview potential EPC's and Owner's Engineering firms.



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Watch for ...

- Common issues:
- Human resources (filling the experience gap)
- Financing
- Schedule and time
- Knowledge Capture and Management
- Sustained government commitment
- There may be more than one right answer
- IAEA and other Expert Missions useful in identifying gaps and developing action plans



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# NEPIO

## Nuclear Energy Programme Implementing Organization

### References

- IAEA NG-G-3.1, “Milestones in the Development of a National Infrastructure for Nuclear Power”
- IAEA TECDOC-1555, “Managing the First Nuclear Power Project”

Many NEPIO Organizations from first-time nuclear states begin and grow the NEPIO process through IAEA Knowledge Management Assist Missions

- IAEA TECDOC-1510, Knowledge Management for Nuclear Industry Operating Organizations”
- IAEA TECDOC-1586, “Planning and Execution of Knowledge Management Assist Mission for Nuclear Organizations”



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## Questions?

Thank you!  
Grazie!



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