



# **THE INTRODUCTION OF NUCLEAR POWER IN EGYPT AN OVERVIEW**

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**on**

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# Electricity Demand And Supply

- **Electricity demand increased at an average annual growth rate of 7% in the last decade. Last year growth rate was 10.3%.**
- **Current total installed capacity is 21.3 GW**
- **The last year peak load was 18.2 GW.**
- **Total installed capacity is expected to reach 63 GW by year 2027.**
- **Hydro sources are currently almost fully utilized.**
- **Wind Energy installed capacity at the Red Sea coast are 230 MW ( ~1% of total installed capacity) and is expected to reach 3% by 2010.**
- **The first integrated solar-thermal power plant (~150 MW with solar contribution by 30 MW) is currently under evaluation.**



# Key concerns of Egypt

- **The growing demand for energy in Egypt and limited resources of oil and natural gas mean that we must be more concerned with nuclear energy and with diversifying sources of energy**



# The Introduction Of Nuclear Power In Egypt

- **Within the framework between the IAEA and Egypt, a meeting was organized between the IAEA and Egyptian authorities in order to prepare an Action Plan in support of Egypt's ongoing studies concerning the feasibility of introducing nuclear power into the national energy mix.**
- **The meeting took place at the Headquarters of NPPA in Cairo, 25 – 28 March 2007.**
- **GOV/INF/2007/2, “Considerations to Launch a Nuclear Power Programme”, served as a basic reference in the identification of the major areas of potential IAEA assistance.**



# Current Activities

- **The Action Plan includes the following areas, as agreed upon during the meeting:**
  - **Overall project management**
  - **Generic activities for the introduction of nuclear power**
  - **Energy planning**
  - **Legal and legislative framework**
  - **Site evaluation**
  - **Strengthening of the safety infrastructure**
  - **Human resources development and public communication**



# Overall Project Management

- **Semi-annual review meeting to review status and define actions to be implemented.**
- **It is planned to conduct the next RM on 21-22 November, 2007.**
- **It is assumed that:**
  - **Phase 1 (by taking one year) leads to decision-making to launch nuclear power programme (Milestone 1),**
  - **Phase 2 (by taking 2-3 years) leads to signing contract for the first NPP project (Milestone 2).**



# The Generic activities for the introduction of nuclear power

- **Phase 1. Conduct “Basic Study” by Egyptian inter-ministerial committee, in order to review status, study viability of NP option and formulate basic policy.**
- **It is planned to conduct a RM on 20-21 November, 2007 on TCP RAF/0/028 to review the final report of the “Basic Study” including assessment against milestone 1.**
- **The result of the review meeting would be considered in phase 2,**
- **The executive summary of the “Basic Study” will be available to the Supreme Council of Energy to be ready for decision-making to launch nuclear power programme by the end of December 2007.**



# Energy planning

- **IAEA has reviewed the report of the on-going planning study prepared by MOEE.**
- **The Egyptian Electricity Holding Company (EEHC) is following up the on-going study for the Egyptian energy assessment in cooperation with Ministry of Petroleum (MOP).**





# Legal and legislative framework

- **Initial legislative draft has been prepared by EAEA and reviewed by the representatives of the Ministry of Electricity and Energy, Nuclear Power Plants Authority and Nuclear Material Authority.**
- **Inter-ministerial committee of working-level expert has been established by MOEE, in conjunction with Ministry of Health and other relevant ministries to prepare draft legislation and proposals for consideration at Government level.**



# Site evaluation

- **The NCNSRC has already prepared the early site approval regulatory requirements.**
- **NPPA has prepared the status report and work plan of El-Dabaa site studies, and work is going on by the National Research Institute of Astronomy and Geophysics (NRIAG) in operating of micro-seismic network and updating the seismic hazards studies of El-Dabaa site.**
- **The NRIAG is working on updating and completing the geological, geophysical and paleo-seismic studies of El-Dabaa site.**
- **The scope of work for completing and updating oceanography, demography in land use studies have been developed.**



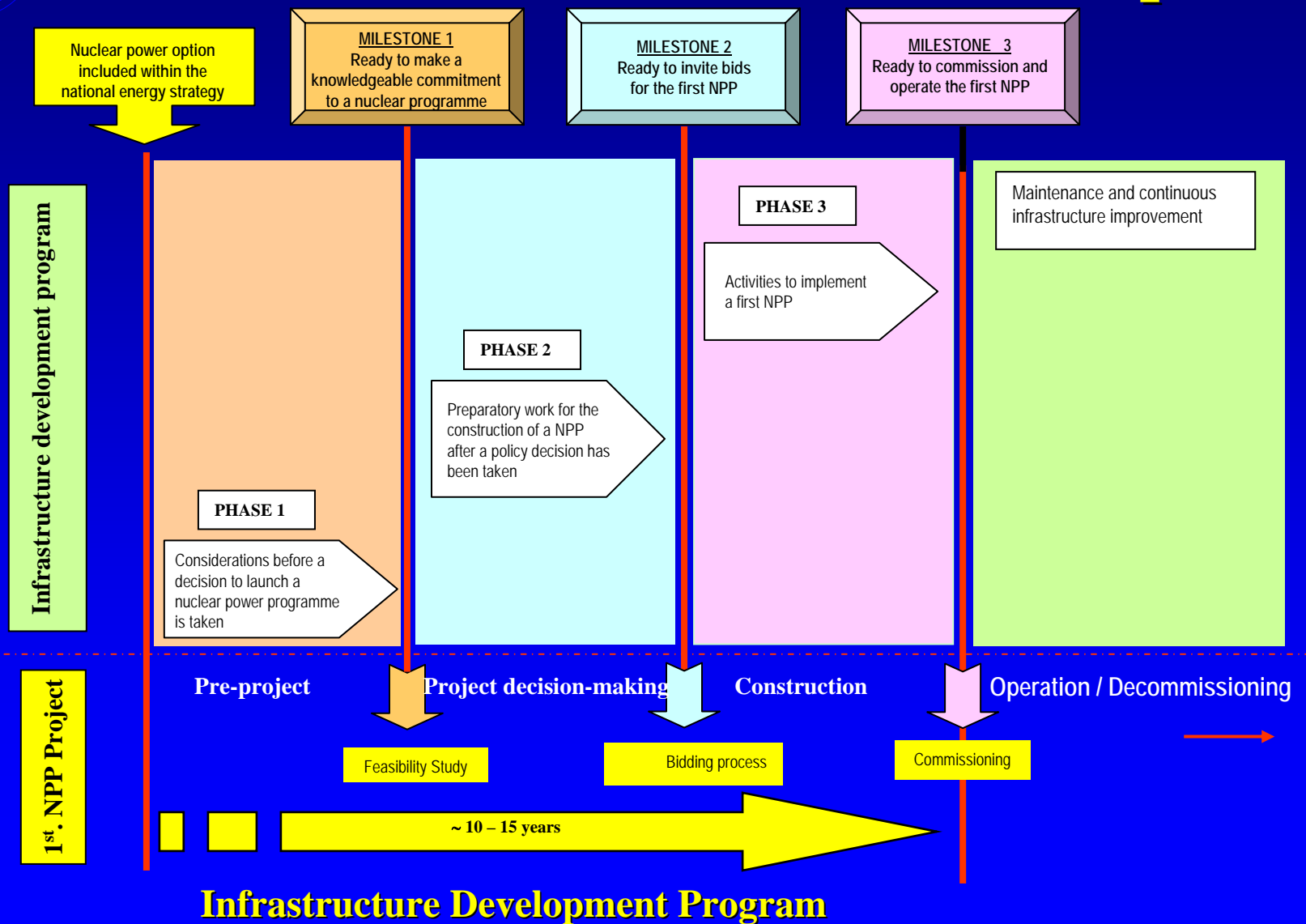


# Strengthening of the safety infrastructure

- **A report on the "Current status of the National Centre of Nuclear Safety and Radiation Control (NCNSRC)" has been prepared for evaluation.**
- **An action plan agreed by the NCNSRC and the IAEA has been set on 6 September 2007, and assumed to be concluded by June 2008.**
- **The starting point of the action plan is to conclude the nuclear act taking into account independence aspects of RB, and ending with liaising and writing memoranda of understanding with all concerned parties or stakeholders.**



# Milestones for Nuclear Power Infrastructure Development





# Assessment Against Milestone 1

- **The IAEA NUCLEAR ENERGY SERIES No. NG-G-3.1 “MILESTONES IN THE DEVELOPMENT OF A NATIONAL INFRASTRUCTURE FOR NUCLEAR POWER” was developed to facilitate the assessment of progress towards the development of infrastructure for a country that is considering the introduction of nuclear power as part of its national energy strategy.**
- **The delegates involved in the project has studied the above IAEA Guidance, and accordingly assessed the current status of the project against milestone 1 of the IAEA Guidance.**

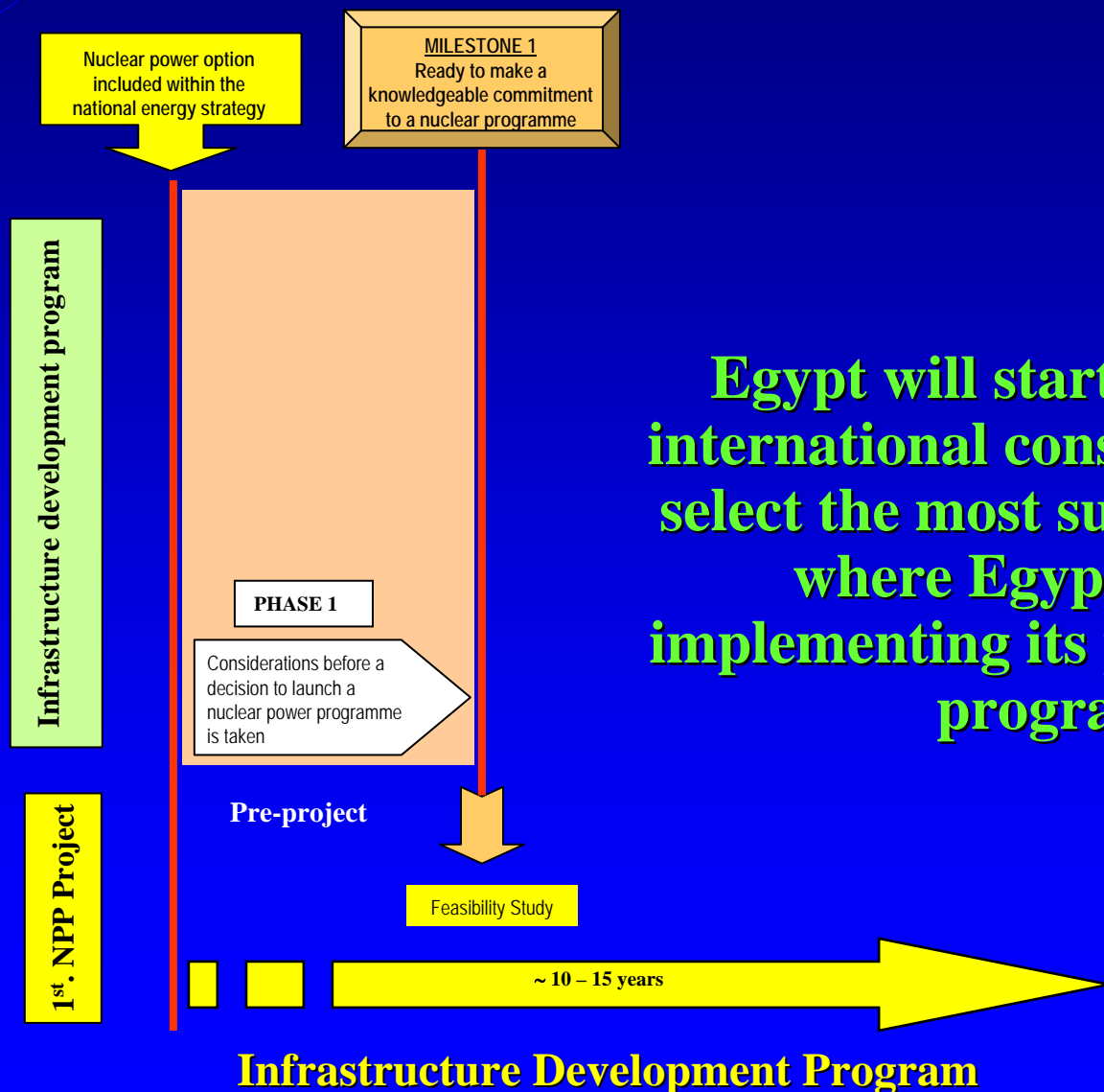


# Announcement

- **In September 2006, President Mubarak initiated a national dialogue to discuss the electrical energy resources including the nuclear power option.**
- **On 29 October 2007 (Last week), the president announced the decision to start a programme to build nuclear power stations,**
- **He announced also that he will issue a decree on the re-forming of the Supreme Council for the Peaceful Purposes of Nuclear Energy, activating its role in policy-making and approving projects related to the programme.**
- **Adding that Egypt would seek the help of its 'international partners' and the IAEA, in implementing the nuclear power plants.**



# Towards Achieving Milestone 2



Egypt will start contacting international consultancy firms to select the most suitable locations, where Egypt can begin implementing its peaceful nuclear programme





**Thank you for your  
kind attention**

