

(The Ghana Nuclear Power Programme Organization (GNPPO) is mandated with the task of coordinating, overseeing and administering the phase-to-phase implementation of the Nuclear Power Programme in Ghana until the commissioning of Ghana's first nuclear power plant.)

October, 2016

Vol 1. No. 005

# GNPPO NEWSLETTER



## INIR Mission

### BACKGROUND

In the current issue of GNPPO newsletter, we take our attention from the necessary nineteen (19) infrastructural issues for developing or embarking on a nuclear power programme to present an important activity that borders on an *international peer review of the status and progress of these infrastructural issues*. This is called an Integrated Nuclear Infrastructure Review (INIR) mission instituted by the International Atomic Energy Agency (IAEA) where detailed comprehensive assessment of all these issues is performed. The major objective of the INIR mission scheduled to take place in Ghana from 16 – 23 January 2017, is for Ghana to receive international experts' view on the development status of nuclear infrastructure and to identify further development needs. The focus of the upcoming INIR mission is limited to Phase 1 of the programme. As we advance to other Phases of the programme, similar missions would be requested.

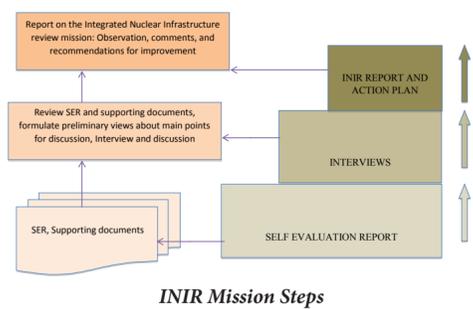
### WHAT INIR MISSION DOES?

The INIR mission is a holistic, IAEA coordinated peer review conducted by a team of international experts who have direct experience in specialised nuclear infrastructure areas. The goal of INIR mission is to evaluate the development status of the national nuclear-required infrastructure issues; clarify gaps, provide recommendations and suggestions to fill the gaps, and provide assistance to the embarking country to develop them. The prerequisite to the conduct of INIR mission is for Ghana to conduct a self-evaluation of the status of the nuclear infrastructure and come up with a report called Self Evaluation Report (SER).

The SER should be detailed, comprehensive and should cover the status of all the 19 infrastructure issues according to a standardised evaluation conditions. What the INIR mission does is to build upon the self-evaluation report in order to determine areas where further work would be beneficial. It is instructive to say that while the upcoming INIR mission aims to perform an independent and objective review of the nuclear power programme in Ghana, it is not intended to be an external critical audit of the nuclear infrastructure in Ghana. Thus, the INIR mission is geared towards helping Ghana identify areas for further action and assistance, including that from the IAEA.

During the INIR mission, interviews would be conducted with a range of stakeholders who primarily are national institutions relevant to the nuclear power programme development in the country and being part of or having strong collaborations with the Ghana Nuclear Power Programme Organisation (GNPPO), the Nuclear Regulatory body, and owner-operator (if it is already established). The interviews are aimed at investigating the extent of work, understanding, involvement and clarity in terms of direction of the programme development and planning activities. It also helps establish the level of effectiveness of the programme coordination; that clear responsibilities and roles are efficiently being addressed by the stakeholders and are supportive of national goals and aspirations. During this review, areas that need more attention and efforts are identified.

The mission's report then provides recommendations and suggestions which will inform an action plan by Ghana to facilitate achievement of the programme milestone. The results of the INIR mission would be communicated to government decision-makers.

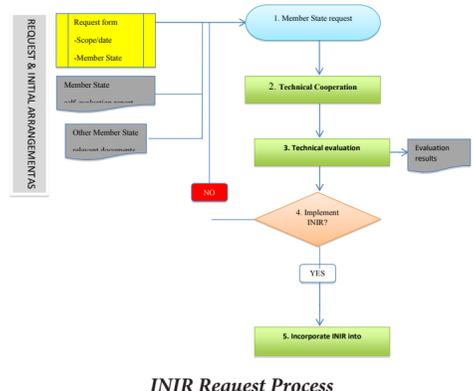


### PROCESS OF REQUESTING FOR INIR MISSION

The INIR mission process is usually initiated by the interested Member State by official request to the IAEA which should be followed with the submission of the country's nuclear infrastructure self-evaluation report, SER (and other relevant information or supporting documents). In the case of Ghana, the official request was made in December 2015 and the SER was submitted on April 1st 2016.

The IAEA after receiving the request and the SER from the Member State assigns a Technical Cooperation Project Management Officer (PMO) to review the request. The PMO during the process of review, could make contacts with the requesting Member State for clarification. The PMO would also have transmitted the request to the Technical Officer and to the IAEA Integrated Nuclear Infrastructure Group (INIG) leader.

The INIG leader, will in consultation with the Technical Officer, PMO and appropriate IAEA technical staff complete an evaluation of the request and submit recommendations to the Director, Division of Nuclear Power at the IAEA. If a decision is reached to undertake the mission, it is incorporated into the Technical Cooperation project as illustrated below.



### INIR IMPLEMENTATION

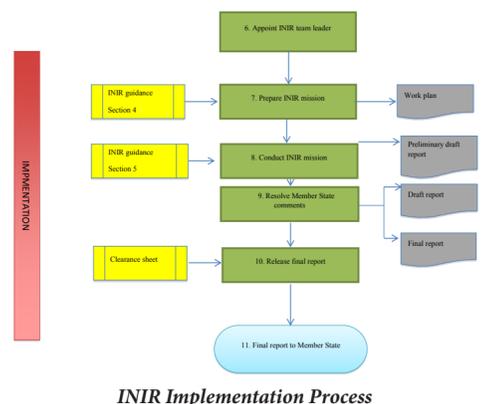
Provided the conditions in the INIR request are satisfied and the process completed, the INIR implementation stage is initiated. At the implementation stage, the INIG leader consults with the relevant IAEA staff to propose the INIR mission team leader, who is appointed by the Deputy Director General, Head of Nuclear Energy (DDG-NE). The team leader has the responsibility for ensuring achievement of the mission objectives. The team leader is in charge of the overall coordination of the technical mission preparation activities. He/she works in consultation with the INIG leader, the technical officer, the project management officer and any technical staff at the IAEA who could provide required inputs for a successful mission.

The team leader also engages the host counterpart to determine the scope of the mission and reference materials. He/she, among other things, collaborates to determine suitable mission dates, discusses and selects team members, and distributes the SER for technical review by the team. An important process of the INIR implementation is a preparatory support mission which consist of the actual INIR Team leader, the requesting Member State's Technical Coordinator at the IAEA and a few international experts.

The Pre-INIR (Self-Evaluation) Support Mission has the following objectives:

- Meeting of the team(s) responsible for the SER preparation to share detailed feedback on whether each section of the report contains sufficient and complete information;
- Offer suggestions for some improvements that could be made to help the INIR mission proceed effectively and enable the requesting Member State get the maximum benefit from it;
- Discuss and agree on the terms of reference for the main INIR mission, including dates and the composition of the IAEA team;
- Discuss logistics for the main INIR mission including potential venues.

The INIR implementation process is illustrated in a flowchart below



### WHAT ARE THE KEY SUCCESS FACTORS OF INIR MISSION?

Although INIR mission is not an audit or inspection against an established requirement in order to confirm or endorse Member State's processes and the self evaluation report, there are important factors that may increase the overall success of the INIR mission and most importantly, the embarking Member State's

nuclear power programme development. Such factors include:

- The preparation of a quality Self Evaluation Report
- The active involvement of all relevant organisations
- Responses during mission; readiness to request for additional information and reviewing write-ups
- Action plan to address INIR recommendations after the mission

### WHAT IS THE STATE OF GHANA'S INIR MISSION?

Ghana made an official request to the IAEA to carry out a Phase 1 Integrated Nuclear Infrastructure Review Mission (INIR) in Ghana on 3rd December 2015 and the IAEA agreed after reviewing the request. The Nuclear Power Institute, an arm of Ghana Nuclear Power Programme Organisation (GNPPO) had already started the assessment of all the nineteen infrastructure issues and the preparation of the Self Evaluation Report (SER). By 31st March 2016, the SER was ready after it had gone through both internal and external review processes. The SER together with all the supporting documents were submitted to the IAEA on 1st April 2016.

The IAEA reviewed Ghana's SER and communicated to Ghana on their initial impression of the SER and subsequently scheduled the next major phase of the INIR process; the Pre-INIR (Self-Evaluation) Support mission. This took place from August 8th to August 10th, 2016 in Ghana. The general conclusions from the IAEA experts at the Pre-INIR support mission were that for most conditions on nuclear power development infrastructural issues, Ghana already has sufficient basis, provided in the SER and supporting documents to formulate preliminary views and interview questions. This international appraisal of Ghana's SER shows its clarity and comprehensive nature. Few more recommendations and suggestions were provided to update the SER so that the country will benefit the most in the main INIR mission. Currently, the Nuclear Power Institute together with the stakeholders are reviewing and updating the SER. Meetings and discussions have been held with some of the stakeholders and are still ongoing. The updated SER together with all supporting documents will be forwarded to the IAEA on or before 31st November 2016.

As noted, the INIR Mission will be conducted from 16-23 January 2017 and the focus will be on all the 19 infrastructure issues. The opening ceremony on the 16th of January 2017 will be attended by high profile dignitaries, decision makers, the media and some members of the public. During the INIR mission, there would be presentations and interviews. Ghana will provide an overview of the Nuclear Power Programme development at the opening session. The INIR team (a team of experts recruited by IAEA) will provide briefing on the mission implementation and agenda at the opening session and a briefing on the main results and recommendations during the exit meeting.

Interviews with representatives of GNPPO stakeholders will be conducted for all 19 infrastructure issues. The interviews will mainly be based on the self-evaluation report. In this regard, the GNPPO has already designated representatives of stakeholder institutions to be responsible for an infrastructure issue and to respond to the questions during the interview session on that particular infrastructure. As noted earlier the main purpose of the interview session is for information gathering to assess the issues as well as to establish the extent of national common goal and the active participation of all relevant stakeholders to help achieve the national aspiration. We look forward to seeing you on 16 – 23 January 2017 @ Mensvic Hotel.