



**DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA**

**STATE MINISTRY OF SOLAR POWER, WIND & HYDRO POWER  
GENERATION PROJECTS DEVELOPMENT**



**SRI LANKA ATOMIC ENERGY BOARD**

**EXPRESSION OF INTEREST (EOI)**

**TO INVEST TO ESTABLISH CYCLOTRON BASED  
RADIOPHARMACEUTICAL PRODUCTION FACILITY IN SRI LANKA TO  
PRODUCE RADIOISOTOPES NEEDED FOR PET-CT SCANNERS**

Sri Lanka Atomic Energy Board (SLAEB) was established by the Sri Lanka Atomic Energy Act No. 40 of 2014. The mandate of SLAEB is for promotion and encouragement of the use of Nuclear Science and Technology for national development purposes in Sri Lanka and it is Government's premier Nuclear Science and Technology Organization which is operated under the State Ministry of Solar Power, Wind & Hydro Power Generation Projects Development.

SLAEB operates as the focal point of International Atomic Energy Agency (IAEA). It involves in promotion and encouragement of the use of Nuclear Science and Technology for national development purposes and promotes and encourages peaceful applications of nuclear technology through related services and Research and Development work and to provide radiation protection services to meet regulatory requirements while ensuring safety, security and quality.

#### **The Project Description**

SLAEB has obtained the Approval of the Department of National Planning and the Cabinet of Ministers to establish a Cyclotron based radio pharmaceutical production facility in Sri Lanka. The objective of this project is to produce several radiopharmaceuticals mainly <sup>18</sup>F- FDG (Fluoro-Deoxy-Glucose) used in PET- CT Scanners in Sri Lanka.

The expected project outcomes are, widening the accessibility of cancer diagnosis by facilitating to a large number of patients to be tested at a reasonable cost, reducing the economic burden on cancer patient management to the health sector by early detection of cancer and saving foreign exchange spent on importation of radiopharmaceuticals to Sri Lanka. Furthermore, the facility can be used for the related research and development activities based on the cyclotron technique.

**The project will be operated as a collaboration project of SLAEB and Kotelawala Defense University (KDU) at the hospital premises of KDU situated in Werahera which has close proximity to Apeksha Hospital and to the highway road network for distribution.**

#### **Market Forecast**

The largest challenge in the healthcare system in Sri Lanka is non-communicable disease burden such as cancer and it has been identified as a serious health problem in Sri Lanka. It has been identified that in average annually more than 25,000 new cancer patients are detecting and more than 15,000 cancer deaths are confirmed.

Early detection of a cancer is the only globally accepted solution to overcome this issue. Establishment of a Cyclotron machine is needed to produce the radioactive tracers locally to be used in PET-CT scanners very effectively. The forecasted annual potential demand for PET – CT scanning would be more than 30,000 if these tracers are available sufficiently at an affordable price locally.

Further, these radioactive tracers can be used for other medical diagnoses such as cardiology and detection of bone cancer etc.

### **Government Rules and Regulations**

Following the Sri Lanka Atomic Energy Act, No 40 of 2014, Section 4(f), 4(g) ; build and operate installations or facilities for the production and distribution of radioisotopes is one of the duty & function of SLAEB and provisions given under the section 5(q), 5(r), SLAEB can operate such facility for commercial purposes.

### **Financial Scope**

This will be a Facility for the production and distribution of  $^{18}\text{F}$  - FDG at early stage and to expand into other PET –CT tracers of radiopharmaceuticals in due course.

**SLAEB invites EOI from eligible investors from Government Institutions, Government Owned Private Companies or Private Companies to invest in this project related to the establishment of a cyclotron based radiopharmaceutical production facility in Sri Lanka to produce radioisotopes needed for PET-CT scanners**

The estimated cost of the project is LKR.1.50 BIL.

### **Technical Feasibility**

The proposed project and Cyclotron machine to be installed shall be satisfied with the following terms and conditions, technical features and systems optimized to produce positron emitting radionuclides and shall include mainly the following capabilities/features:

1. Construction of a Cyclotron Facility, administrative area and staff accommodation in a green field adhered with the applicable local regulations.
2. Establishment of a shelf shielded Cyclotron which is capable to produce and accelerate a beam of protons at energies between 15 to 20 MeV with complete automated operations.
3. Establishment of necessary production and laboratory facilities to produce a range of short-lived positron emitters ( $^{11}\text{C}$ ,  $^{13}\text{N}$ ,  $^{15}\text{O}$ ,  $^{18}\text{F}$  and  $^{64}\text{Cu}$ ) in a flexible, efficient and reliable manner.
4. Establishment of relevant Quality Assurance (QA) and Quality Control (QC) laboratories for the produced radiopharmaceuticals with all required facilities.
5. Operate the facility as per stipulated requirements ensuring a high level of safety to produce the required amount of radiopharmaceuticals and supply of raw materials.
6. Carryout the routine maintenance, preventive maintenance, breakdown repairs and supply of spare parts to the cyclotron and other accessories in the Facility.
7. Manage the facility and distribute produced radiopharmaceuticals to the island wide hospitals with an appropriate organizational set up, well-defined line of command and responsibilities during operation, maintenance, safety and radiological protection activities.

For further details, please contact the Director Administration (Head of Procurement) of SLAEB on +94 11 2533427/28 or e-mail [manel@aeb.gov.lk](mailto:manel@aeb.gov.lk)

Interested parties are requested to submit their technical, operational, commercial and financial proposals along with a detailed company profile to the Tender Box located in Room No. F-29 of the following address on or before 3.00 pm on 29<sup>th</sup> December 2021 (Sealed Proposals only).

- ★ EOI's in two copies indicating "Original" and "Duplicate", must be delivered to the address below on or before **3.00pm on 29<sup>th</sup> December 2021**.
- ★ EOI's will be opened soon after the closing in the presence of bidders or their representatives according to the Covid 19 Health Guidelines issued by the Government at the Board Room G 31.
- ★ Late EOI's will be rejected.
- ★ The title of the bid should be clearly mentioned on the top left hand corner of the EOI's submission envelope.

Suitable party will be selected after evaluation of their technical, operational, commercial and financial proposals. The SLAEB reserves the right to accept or reject any proposal and to annul the EOI process and to reject all the proposals at any given time prior to signing of the agreement.

Director General

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