INVITATION FOR EXPRESSION OF INTEREST (EOI) FOR SELECTION OF SYSTEM INTEGRATOR FOR CUSTOMIZATION, SUPPLY & INTEGRATION OF BURIED FIBER OPTIC BASED INTRUSION DETECTION SYSTEM AND VIDEO SURVEILLANCE SYSTEM.

1. Engineering Projects India Limited (EPIL) is a Central Public Sector Enterprise functioning under the aegis of Ministry of Heavy Industries & Public Enterprises and one of the premier engineering services organization of India engaged in execution of multi-disciplinary projects on turnkey basis in India & Overseas.

2. EPIL invites Expression of Interest from reputed companies/system integrators from India and overseas, having experience in customization, supply and integration of Buried Fiber Optic Based Intrusion Detection & Video Surveillance System for an effective perimeter security as part of Integrated Security Solution to its clients in various states of India. It is reiterated that only such companies that have successfully completed and executed comprehensive surveillance system in major organizations/industries will be considered for pre-qualification.

3. System Integrator should have the capability to undertake design, supply & integration of integrated intrusion detection system based on requirements of clients. Further, they should be capable of undertaking modifications to design of the same based on feedback of clients in a short response time.

4. Interested system integrators shall meet the following pre-qualification criteria:

Part 1 - Technical Criteria

A. Buried Fiber Optic Based Intrusion Detection System:

Fiber Optics based Border Intrusion Detection System will be used by Military, Border & Civil defense forces etc. for linear protection and intrusion detection across the border. The technology used is based on Coherent Optical Time Domain Reflectometry (C-OTDR) to reconstruct the acoustic signals that are present at many thousands of discrete locations, along the sensing cable, from the inherent back scatter from a pulse of transmitted light. The Fiber optics cable works as vibration sensor, which is completely passive in nature. The sensor cable does not need any power or network connectivity in the field, which makes it more suitable for deployment in an application like border security system for intrusion detection.

The Fiber optics based Border Intrusion Detection System should ensure the following:

a. The system shall be impervious to external jamming or interference from Electro Magnetic radiations, Radio Frequency radiations etc.

b. The system shall be able to detect intrusion events in real time.

c. The system field devices shall comply with IP 67 (Ingress Protection Rating as per IEC Standard 60529)

d. The system field devices shall be truly passive. The field sensor/s should not require to be powered by batteries in the field.

e. The system field devices shall not require any additional network connectivity to the head end device.

f. The system performance shall be unaffected in Day or Night conditions.
g. The system shall be capable of detecting and locating multiple simultaneous intrusion events.

h. The system shall be capable of monitoring changes in the optical signal resulting from the distributed acoustic signals and vibration of the sensor.

i. The system shall be capable to integrate with video surveillance system and wireless communication system.

Range
The average detection range from fiber should be up to –
Person - 2 M; Vehicle - 10 M; Digging - 10 M

Detection Accuracy
The system shall be able to detect large scale events to an accuracy of +/- 10 Meters or more.

Sensor Cables
a. Fiber Single Mode contained in inner jacket buffered cable contained in steel taped armour/Steel Wire Armour, with an outer black PVC jacket.

b. Cable shall be suitable for direct burial application like rodent protection, termite protection, water ingress protection etc.

c. The cable shall have a nominal lifetime of 20 years.

d. The sensor installed in the field shall be intrinsically safe and immune to lightning strikes, EMI and RFI events.

Graphical User Interface (Central Alarm Monitoring Software and hardware)

a. The system shall provide a PC-based operator interface with graphical alarm communication at the head end.

b. Monitoring and control of the entire fiber optic security system from a central location.

c. Logging of all alarm information and operator actions and responses to database

d. Isolation or disabling of individual sections of the sensor cable (user privilege dependent).

e. Display of all sensor alarm conditions and the location of intrusions in real time.

f. Display of a customized site map showing the status of each alarm zone.

g. A site-specific database that includes sensor cable and zone information, camera interfaces, and external relay inputs and outputs.

B. Video Surveillance System:

a. Video surveillance system shall consist of cameras designed for outdoor rapid deployment operations during day and night.

b. The video surveillance system shall enable camera installation close enough to the required observation area and communicates data to a remote center.

c. The technology of the system shall be state-of-the-art in all aspects: advanced embedded Digital Signal Processing (DSP) for video enhancement, state-of-the-art IVA and Video Motion Detection (VMD) etc.

d. The data shall be processed, compressed, encrypted and transmitted through a wide bandwidth wireless network into a remote observation site. At the observation end, data is decrypted, decompressed, processed and displayed on a regular tablet PC or alternate display of Intruder detection system.

e. Video Surveillance System shall be capable to integrate with several surveillance sensors into a single observation module by networking.

f. Video Surveillance System shall be capable to integrate with command and control center by relaying the transmission from an intermediate mobile C&C into a remote C&C site.
C. **Power Package**

Operation of Integrated Security Surveillance System shall be primarily supported by suitably designed solar power package in addition to auxiliary batteries and external supply etc.

The firm/system integrator must be a registered company and incorporated in India under the Companies Act 1956. The firm must be well established in the area of security surveillance system & working in India. If the company is based abroad they must have its office in India. The firms/system integrators should submit the following particulars with the EOI—

i) **Certified Copy of Certificate of Incorporation and Memorandum & Articles of Association.**

ii) **Authorization certificate from all relevant OEMs.**

iii) **Statement of work orders of completed & ongoing works of similar nature with copy of work orders.**

iv) **Statement of completion certificates of completed works of similar nature with satisfactory completion certificates from client for each work.**

---

**Part 2 – Financial Criteria**

The firm/system integrator shall submit the following information & documents with the EOI—

i) **Solvency Certificate indicating present solvency from Scheduled Banks.**

ii) **The firm should submit an undertaking on firm’s letter head that no criminal/economic fraud case is pending or contemplated against the organization.**

iii) **The firm should not have been blacklisted/ debarred by any Foreign / Indian Government /Semi-Govt./ PSU Organization in India. Undertaking regarding the same on the firm’s Letter Head should be submitted.**

5. The firm shall enclose with EOI the Company Profile and copy of presentation on the proposed system, audited balance sheets and profit & loss statement for last three years ending 31.03.2015 or immediate previous years, copies of PAN, Service Tax, VAT, PF, ESI etc.

6. EPI reserves the right to accept or reject any or all EOIs or annul this process without assigning any reason and liability whatsoever and to re-invite EOI at its sole discretion. The details of EOI may be viewed on [www.epi.gov.in](http://www.epi.gov.in) & [www.eprocure.gov.in](http://www.eprocure.gov.in). The corrigendum to this EOI, if any, shall be displayed on the both the websites only. Joint Ventures/Consortium are not allowed.

7. Reputed firms must meet technical and financial criteria and submit the proposal complete in all respects. All required documents are to be enclosed failing which EPI may consider the proposal as incomplete and reserve the right to reject the same.

8. The firm fulfilling the above requirements and willing to associate with EPI may submit their formal expression (Hard Copies) in sealed envelope superscribed with name of EOI with all prescribed supporting documents / undertakings mentioned in EOI not later than 08th Dec’ 2015 up to 1500 Hrs (IST) on below mentioned address :

Rakesh Kumar  
(Senior Manager)  
Engineering Projects (India) Limited  
4th Floor, Core-3, SCOPE Complex, 7, Lodhi Road, New Delhi – 110003, India  

Landline Tel: 011-24361965, Extn: 2432, Fax: 011-24363426, Email ID: rakesh.kumar@epi.gov.in