

**EXPRESSION OF INTEREST**

**THE DESIGN, SUPPLY, INSTALL, AND MAINTENANCE OF A SMART PUBLIC STREET LIGHTING SYSTEM**

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IMPORTANT NOTES FOR ECONOMIC OPERATORS RESPONDING TO THIS EXPRESSION OF INTEREST

The contracting authority, the Gibraltar Electricity Authority, via HM Government of Gibraltar (HMGoG), invites responses from suitably qualified and experienced economic operators interested in design, supply, installation, and maintenance of a smart public street lighting system.

This expression of interest is being published as a means of preliminary market consultation leading up to the release of the tender under the provision of regulation 40 of the Procurement (Public Sector Contracts) Regulations 2016.

The contracting authority is interested in understanding, and responses should demonstrate:

1. Whether the specifications contained hereunder in the Draft Tender Specification and the contract/remuneration model outlined therein are viable;
2. What possible technical solutions available in the market and how these could maximise HMGoG’s Smart City objectives;
3. The vagaries, conditions and subjectivities of replacing the existing light fittings and replacing this with energy efficient LED alternatives;
4. What other infrastructure work would be required to implement the Smart Street Lighting System;
5. Through the submission of outline methodologies and project programmes the resources (including workforce) required to install and manage the Street Lighting System and infrastructure;
6. Whether installation of the new light fittings and infrastructure could be carried out by the contracting authority and the impact of this to the outline methodologies and project programmes; and
7. What further information is required from the contracting authority.

The contracting authority further reserves the right, following the publication of this expression of interest, under the provisions of regulation 48 of the aforementioned Procurement Regulations, to reduce the tender timescales application to the resultant tender.

Respondents shall not be entitled to claim from the contracting authority or HMGoG any costs or expenses that may be incurred in preparing their responses. This notice creates no legal rights or obligations and cannot be relied on for any such purpose.

The responses and results of this process will be kept confidential, save as the provisions of regulation 41 of the aforementioned Procurement Regulations or other such legal instrument may apply.

**DRAFT TENDER SPECIFICATION**

**Introduction**

Economic operators should note that the intention is to award the tender to a single entity/organisations or collection of organisations working together as joint venture partners (or similar relationship), or to a single organisation who, through strategic subcontracting, if applicable, can deliver this multi-sector, multi-disciplinary requirement. Reference to Economic Operator shall mean reference to one or all of the parties as the context dictates. Nevertheless, in the event of any conflict Economic Operators shall be considered to mean every entity, organisation identified as participating in the tender/contract, with the exception of HM Government of Gibraltar and the Gibraltar Electricity Authority who are identified separately or jointly as the Contracting Authority.

The Contracting Authority shall not accept or consider any tender received which does not include the provision of all the elements captured by these specifications.

Whilst the requirements specified further on omit this it is the intention that the Economic Operator will be the entity managing the Street Lighting throughout Gibraltar for the duration of the contract, and thus managing the Smart Street Lighting System (SSLS). Whilst the GEA will require access to the SSLS to have visibility on the state of play of street lighting throughout Gibraltar, which will allow it to, for example, recommend adjustments to light intensity in certain areas, it will be the responsibility of the Economic Operator to undertake any adjustments necessary.

Similarly, omitted is the requirement to train and provide suitable user guides to the successful economic operator, this should be incorporated into the economic operators own margins, training, to at least two groups of GEA staff, to enable them to successfully undertake the management of the SSLS upon configuration of the operating software, must be included.

**Costs**

HM Government of Gibraltar, via the GEA, hereinafter referred to as the Contracting Authority will remunerate and tenderers must base their cost proposals on as follows:

1. Design: Single fee on completion of the final design, which shall be approved in writing, to include all discussions, meetings, travel, consultancy, etc.
2. Survey: Single one-off fee payable on completion. The Economic Operator shall, at the start of the contract conduct their own survey of the Street Lighting; completing this in one month, or other agreed period. The survey shall be no less detailed than the survey attached at appendix A.
3. Software Configuration: Single fee payable on completion of the configuration in accordance with the design.
4. Training: Single fee payment for the provision of training and user guides, manuals etc. that would enable the GEA to operate the SSLS.
5. Software License: Annual software licence fee, inclusive of access to the software developers help and support services, payable on inception and thereafter on each applicable anniversary, with sufficient users to enable the operation of the SSLS by the Contracting Authority and the maintenance of (the physical components of) the SSLS by the maintenance provider. The Contracting Authority shall retain ownership of all licences issued in respect of the SSLS provided.
6. Installation costs: One-off payments relating to the installation and installation works of the necessary equipment/hardware per lighting zone, to be made 30 days in arrears on completion of the installation. These payments will be determined by the rates provided by the Economic Operators in their cost proposal. The rates shall be inclusive of but not limited to all labour, 3rd party fees, plant and equipment used, consumables, hardware, electrical components (e.g. lamps, luminaires, ballasts, sensors, controllers etc.), connections electrical or otherwise and configuration to the SSLS fully broken down showing all costs attributable to the Contracting Authority for this element of the requirement. The installation costs shall also include the disposal of (or repurposing) of any obsolete items through authorised waste streams in accordance with the WEEE directive. The Economic Operator shall provide itemised invoices with supporting documentation. The Contracting Authority is not obliged to accept or pay any invoices for Installations costs where, the installations have not been performed to its satisfaction, or where the installation of the street lighting zone is incomplete.
7. Maintenance costs: Monthly payments for the provision of maintenance services 24/7 basis. The maintenance services shall begin on the 1st of the month following completion of the installation of the equipment/hardware 30 days in arrears, the Contracting Authority remunerating on a quantum meruit basis. Maintenance services shall include the repair and replacement of any of the installed equipment/hardware, cabling, pole, surrounding floor, etc. inclusive but not limited to all labour, 3rd party fees, plant and equipment used, consumables, hardware, electrical components (e.g. lamps, luminaires, ballasts, sensors, controllers, etc.), connections electrical or otherwise and configuration. Maintenance payments may be reduced on a pro-rata basis where failure to carry out any maintenance, repair or replacement results in Street Lighting operating at less than 95% for more than 5 consecutive days. Where street lighting operates at less than 80%, the Contracting Authority reserves the right to, step in and appoint a replacement contractor to provide these services on a temporary or permanent basis, without any liability. Any additional monies paid by the Contracting Authority, as a result of the appointment of a replacement contractor, shall be monies recoverable from the Economic Operator. Cost of maintenance will be calculated on a per lamp basis.

The Contracting Authority is not obliged to accept any tender from any Economic Operator whose cost proposal’s structure varies significantly from the above.

Any item, cost, expense, fee, charge, duty not itemised or included in the Economic Operator’s cost proposal shall be considered to be included elsewhere and nil for valuation and payment purposes.

Economic Operators will not be entitled to claim from the Contracting Authority any costs and/or expenses that may be incurred in preparing their response to the tender whether or not their tender response is successful.

**Maintenance**

If so required by the Contracting Authority, maintenance of all the existing street lighting system may be assigned to the Economic Operator, the cost of which will not exceed the amount payable under point 7 under section titled “Cost” above.

Maintenance shall, depending on the design of the SLSS be on demand following notification by the Contracting Authority, through the SSLS or any other means of communication, including reports from the general public, with the relevant contact details to be made publicly available. Nothing in this document shall inhibit the Economic Operator from carrying out any maintenance, repair or replacement, having been notified of the need by a 3rd party (e.g. member of the public, Royal Gibraltar Police, HM Government of Gibraltar’s Technical Services Department, etc.) or of their own initiative having identified the issue themselves.

The Economic Operator will be required to provide the Contracting Authority with a monthly report on all notifications generated by the SSLS or fault reports received via other means of communication, as mentioned above.

The Economic Operator will also provide the GEA a monthly SAID (System Average Interruption Duration) condition report. This report must detail:

1. Number of outages:
   1. including number of lamps, duration, date & times, location(s), lamp unique identifier, reason/cause
   2. Replacements including dates, times and locations.

It is the Economic Operator’s duty to ensure that the Street Lighting operates at the highest possible levels at all times. That the Street Lighting is in a safe, operable, and aesthetically acceptable condition to be determined by the Contracting Authority at their sole discretion. The Economic Operator will be responsible to check the light levels of all streets and roads every six months and provide the Contracting Authority with a report on their findings and recommendations.

The GEA expects there to be a 24/7 maintenance service provided by the Economic Operator, with any equipment failure being dealt with within certain response times; these to be suggested by the Economic Operator in their maintenance method statement in addition to any other key performance indicators (KPIs), which may be amended during the contract period by agreement between both parties, to ensure the services delivered are to the highest standard.

The Contracting Authority reserves the right to supervise, monitor, and oversee the execution of contract and the KPIs. To this end the Economic Operator shall grant the contracting authority all possible assistance free of charge to enable the contracting authority to supervise, monitor, and oversee the execution of contract and to assess the Economic Operator’s performance against these KPIs and any other deliverables mentioned in the Economic Operator’s tender response.

The cost of any new street lighting infrastructure will be borne by the Economic Operator during the period of the contract. All new street lighting infrastructure appertaining to this contract will become the property of the GEA as soon as it laid.

The cosmetic appearance of the street lighting must be kept up by painting and cleaning as well as the effectiveness of light levels by regular cleaning the lanterns.

The Economic Operator shall, if so necessary or required, install anti bird fouling devices/measures on the poles/lamps.

The Economic Operator shall liaise with all necessary bodies, in the delivery of the services, examples as follows:

1. Housing associations, as the lighting or lack thereof has a direct impact on them
2. Town Planning and the Development & Planning Commission, in relation to any design elements
3. Royal Gibraltar Police and/or Technical Services Department for any permissions, conditions or approvals relating to work on the public highway and traffic management procedures
4. Gibraltar Electricity Authority for the submission of updated wiring diagrams regarding any modifications made to existing, or new infrastructure, as soon as possible, not exceeding two weeks from the completion of the works. These modifications or new infrastructure must comply with relevant British Standards or any other requirement as expressed by the GEA.

The Economic Operator will form part of the Site Service Clearance process, as a free service to all Government bodies, contractors and developers.

The Economic Operator shall ensure that it has sufficient resources, to include qualified staff, plant, equipment, tools, vehicles, consumables, spares in order to deliver the services. Such resources to be scalable where the provision of services is phased in accordance points 6 and 7 under section titled “Costs” above. All resources, by way of qualified staff, must be duly registered with the Gibraltar Electricity Authority as approved contractors.

Access required by the Economic Operator to GEA infrastructure will require supervision by GEA competent persons, and might incur a cost.

GEA infrastructure cannot be used by the Economic Operator without prior written approval by the GEA. Use of GEA infrastructure will be solely for the purposes that the Economic Operator has been contracted for.

Any use by the Economic Operator of technologies associated to the successful delivery of its obligations under the contract, must ensure that local licensed providers are given the first opportunity to provide the service.

The Economic Operator will grant permission at no cost to the Contracting Authority to piggy back any services required for the delivery of its own services.

**Environmental Considerations**

Irrespective of comments further on in this document the design of the SSLS must allow for EV charging via existing lampposts from the Contracting Authority or 3rd parties; save, where the electrical infrastructure to support this is not, in the sole opinion of the Contracting Authority, feasible. Wherever there is sufficient load up to the feeder pillar, the possibility of future EV Charging through the lampposts shall be made available in the design and the equipment supplied/installed.

Furthermore, the Gibraltar Electricity Authority will require access to the SSLS in order to control EV Charging Points, in particular, in the event of a power outage.

**Public Lighting Tender Specification**

**Background and Statement of Requirement**

The Gibraltar Electricity Authority (hereinafter referred to as the Contracting Authority) would like to upgrade all of Gibraltar’s public lighting with the purpose of becoming a Smart City.

The Contracting Authority, after having conducted initial market research, is seeking to install a ‘smart’ solution to improve the quality and efficiency of street lighting. This will include the conversion of all street lighting to Led Lights, with additional separate sensors which ensure that only the strength of light necessary for the daylight prevailing is utilised. In Gibraltar, all street lighting is currently switched on at 100% of capacity out of daylight hours, however recently retrofitted Led Lighting is factory set to 50% dimming between the hours of 01:00 and 05:00.

The research undertaken towards the procurement of the above technology suggests that these systems are automatically conducive towards savings as Led lights use significantly less power than traditional lighting. Having sensors will no doubt even reduce further the power required to light Gibraltar’s streets. At the same time, it will allow the Contracting Authority to provide a modern and improved service to the community with the ability to monitor consumption, to be notified immediately with regard to breakdowns and faults as well as for the Contracting Authority to request immediate data on the state of play of street lighting at any time.

With this ‘smart’ system, the Contracting Authority should be provided with LIVE advance warning of future failing lamps as well as issuing the necessary alerts as soon as a street light is either without power or not working. This will enable the Contracting Authority to have live information across all of our streets and allow for all public lighting infrastructure to be managed from the same platform.

**Proposal**

Tenderers must produce a proposal which:

1. Explains in detail the system offered, its equipment and devices, functions, features, capabilities and its benefits;

2. Provides the overall functionality of the system offered;

3. Explains the quality of the equipment offered including colour temperature and the MTBF of the lamps, as well as all the relevant technical specifications, brochures, warranty documentation as well as evidence of previous case studies/feedback and relevant reviews of any similar systems the tenderer might have installed in other jurisdictions;

4. Includes a specific and detailed plan of installation from contract signature to completion of the installation, and a strategy of how they will conduct this (including all works required as well as detailed timelines), taking into account all other stakeholders in conducting a project of this magnitude;

5. Due to the current climate, any proposal will need to also factor in full details in respect of resilience and spares. Furthermore, the Tenderer will inherit all street lighting spares held by the Contracting Authority upon signing of the contract, with provisions made for the storage of all items;

6. Includes a bespoke team of individuals who will be responsible moving forward for the installation and maintenance of Gibraltar’s public lighting for a period of not less than **5 years**. The Contracting Authority is also placing particular importance in connection to response and resolution times with regard to incidents and faults;

7. Also factors in all the relevant equipment, fitting, software and training.

An executive summary should be appended to these documents summarizing the technical and functional characteristics of the equipment offered (including screenshots of any user interface showing basic system functions) stating how these would benefit the Contracting Authority.

Any proposals should include the possibility of an APP contained within the solution. Access to any ‘smart’ solution offered will also need to be possible through any browser. SMS notifications within the actual system and its users should also be considered. Furthermore, the proposal should include the possibility for the installation of Electric Vehicle charging points on selected lamp posts within Gibraltar as part of the ‘smart’ initiative.

Solar and non-solar Belisha Crossings which forms part of the Street Lighting network in Gibraltar, will also need to be covered and included as part of any proposal.

If required, the tenderer should request a meeting with the Contracting Authority to clarify any specific detail with regard to records of the street lighting network or any of the requirements mentioned above.

Bearing in mind the magnitude of this project, tenderers should also provide any details in connection to how they would minimise the impact of these works on the Contracting Authority, as well as all ancillary departments and the general public.

The full refit should be installed as discreetly as possible and all installation sites should be made good after the relevant works. The economic operator will be required to produce a monthly report on the refit identifying the replacements carried out, the dates (start and completion of each replacement) and location (including any unique identifiers).

All new and replacement lamp posts will, for the duration of the contract, be subject to the GEA’s prior written approval and must:

1. Be suitable for the location
2. Have retention sockets
3. Anti-fouling installed and maintained throughout the contract
4. Coated with anti-sticker/graffiti paint

Economic operators will also have to meet all of the requirements of the following Regulations;

* BS7671 IET Wiring Regulations;
* BS EN40 Lighting Columns;
* BS5489 and BS EN13201 Road Lighting;
* BS60598 Luminaires;
* BS EN60529 Ingress Protection;
* BS EN12767 Passive Safety of Support Structures for Road Equipment.
* WEEE directive.

Economic operators are also encouraged to follow;

* the IET Guide to Highway Electrical Street Furniture;
* any local or UK legislation which governs the issue of street lighting and environmental concerns (such as light pollution and cut-off consideration near the airport);
* Construction Design and Management Regulations;
* the IET Code of Practice for Electric Vehicle Charging Equipment Installation, 4th Edition

Economic Operators should also be aware that the Gibraltar Electricity Authority network operates on a TN-S system.

Submissions made by Economic Operators should demonstrate that their SSLS is an IoT system or IoT ready.

Any disputes regarding the fulfilment of this contract, will be governed by the laws of Gibraltar.

**APPENDIX A - Public Illumination Report 2015**



**02/11/2015 Ref: Gibraltar Public Illumination Survey**

The Gibraltar Electricity Authority is responsible for the design, installation and maintenance of all public illumination of Gibraltar. After conducting a public illumination survey the following observations have been highlighted.

• A total number of 3586 lanterns have been identified, comprising of approximately 65 different types of lanterns and fittings.

• The GEA’s Distribution Section, Street lighting team is in the process of an ongoing LED replacement programme. To date approximately a 10% of the total number of lanterns have already been replaced by LED Lanterns and fittings.

• A total number of 2794 lampposts, wall brackets, bollards, etc, have been counted of which the Galvanized type are the highest. Aluminium lampposts are the second highest, followed by wall mount brackets. Other types of lampposts and bollards were also identified such as Glass Fibre & Plastic. It may be worth noting that only two concrete lampposts have been identified. (See Street Lighting Survey)

The public illumination survey illustrates number of lanterns/fittings, lampposts, wall brackets etc and the approximate consumption of Gibraltar’s public illumination.

I predict that the Gibraltar public illumination network will grow considerably with ongoing new developments and continuous handing over of MOD land to the Gibraltar Government. Following the assessment of the survey, I would recommend that a detailed database is put in place, so that every location (P number) is highlighted in a Gibraltar map and each lantern/lamppost holds detailed information such as;

• Lantern type

• Wattage

• Fed from

• Last inspected

• Drawings available

• Any other useful information required.

Cross referenced by a label. See appendix 1 & 2. The data base should also be updated monthly or quarterly, as the street lighting team are continually working on the public illumination network.