

## Tender for upgrade of PIACL B777/A320 Fleet Cabin LED Lighting

### IMPORTANT NOTES

Bidding documents, containing detailed terms and conditions, etc. are available and can be downloaded from PIA Website <https://www.piac.com.pk/corporate/sales-procurement/tender> as well as from E-PADS PPRA web site [www.eprocure.gov.pk](http://www.eprocure.gov.pk) free of cost. Bidders need to get registered at E-web portal of E-PADS PPRA (Federal) to access the tender document and other relevant information including electronic bid submission. In case of any help regarding EPADS online Bid submission and vendor registration ,email at [auditcell.scm@piac.aero](mailto:auditcell.scm@piac.aero) and [contract.tech@piac.aero](mailto:contract.tech@piac.aero) may be contacted.

Bids should be submitted electronically ONLY through EPADS PPRA web portal. Manual submission of bid, without EPADS electronic bid is NOT acceptable. For registration and training on EPADS or in case of any technical difficulty in using EPADS, prospective bidder/s may also contact Mr. Rizwan Mehmood, Director MIS Room No.109, 1<sup>st</sup> Floor, FBC Building Sector G-5/2, Islamabad or Helpline Contact No. 051-111-137-237.

The bids prepared in accordance with the instructions in the bidding documents must be submitted through EPADS web portal by closing time & date mentioned in the tender document. Bids will be opened on the same day at 11:00 AM through EPADS.

All interested bidders must register themselves at EPADS by using link: <https://eprocure.gov.pk/#/supplier/registration>

Original Bid Security and Tender Fee instrument MUST BE attached with the Technical Proposal and the reference / Pay Order copy must be submitted through EPADS online submission as well, before Tender Closing Date & Time (For Local Bidders only).

### *Note for International Bidders*

International Suppliers/Vendors/Bidders are requested to register on EPADS if for assistance to get registered contact at following emails [auditcell.scm@piac.aero](mailto:auditcell.scm@piac.aero) and [contract.tech@piac.aero](mailto:contract.tech@piac.aero).

Bids should be submitted electronically ONLY through EPADS PPRA web portal. Manual submission of bid, without EPADS electronic bid is NOT acceptable and will be rejected without intimation.

Bidders must claim their deposit refund (Bid Security/Performance Guarantee) within 180 days of the financial bid opening (if rates are higher side) or completion of contract period/project (in case awarded) or in case of any earlier termination. The time barred CRs (receipts)/refund cases shall not be processed. ( For Local Bidders only).

M/s \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**SUB: Tender for upgrade of PIACL B777/A320 Fleet Cabin LED Lighting**

We are pleased to invite your sealed tenders for the services/ items listed in the attached schedule (s).

**A) SUBMISSION OF TENDER**

1. You are required to send your tenders addressed to GM Contact Management, Supply Chain Management Department, PIA Head Office, JIAP Karachi latest by **17-02-2025 till 1030 Hrs**. The tenders may be dropped in the tender box marked as **“Tender Box Commercial Purchases”** placed at the entrance of the PIA Supply Chain Management latest by **10:30 hours** on the specified date. You may also send your tenders through registered A/D mail addressed to GM Contact Management, which must reach before the closing date and time mentioned above. **Tenders will be opened at 11:00 hours on the same day** in the presence of bidders.
2. Tenders received after stipulated date & time shall not be considered. The Corporation will not be responsible for postal delays.
3. Bidders are required to submit a Pay Order of Rs. 15,000/- (Not Refundable) as tender fee along with Technical Proposal. (For Local Bidders Only)

**B) BID SECURITY (For Local Bidders Only)**

The tender should be accompanied by a Pay Order of **PKR 500,000.00** in the name of M/S PAKISTAN INTERNATIONAL AIRLINES as interest free Bid Security (Refundable). Bid Security in any other shape shall not be accepted. Bid Security deposited against a running contract (s) purchase orders(s) shall not be transferable as Bid Security for any other tender. All tenders without Bid Security shall not be considered.

**C) PERFORMANCE GUARANTEE (For Local Bidders Only)**

The successful bidder(s) upon award of Contract will be required to furnish Performance Guarantee in the amount equivalent to **5 %** of total base value of the contract as interest free Security deposit in shape of Pay Order / Bank Guarantee. The Bid Security already held can be converted into Performance Guarantee and balance amount if any shall be deposited as above.

**D) INSTRUCTIONS TO BIDDER**

**PREPARATION OF TENDER**

**“Single Stage Two Envelope Basis”**

- The BID (Tender) submitted shall comprise of a single package containing two sealed envelopes, each envelope shall be marked and will contain “**TECHNICAL**” and “**FINANCIAL**” proposal.
- On the given tender opening date only “**Technical Proposal**” will be opened in the presence of tenderers available.
- The “**Financial Proposal**” shall be shown to the parties but will be retained with PIA without being opened.
- After Technical Evaluation of the received Technical Proposals, Financial Proposals will be opened publicly at the date, time & venue to be announced and will be communicated to the bidders in advance.
- PIA will open the “**Financial Proposals**” publicly of the parties whose Technical Proposals have been found acceptable.
- Financial Proposals of the technically not-acceptable bids shall be remained **un-opened** till the completion of tender process.

**E) PREPARATION OF TENDER - TECHNICALPROPOSAL:**

All mandatory requirements are given in the schedule

Please give all the available technical details of the items offered by you, supported with the technical literature, brochure, drawings and pictures, client list details, authorization certificates etc.

BIDS / Tenders / Technical Proposal received shall be evaluated in accordance with the given technical specifications.

PIA’s requirements with Technical Specifications are given.

Bidders **MUST:**

- Be registered with Sales Tax Authorities; please attach copy of Registration Certificate (Local Bidders Only).
- Quote Rates, GST and other taxes separately.
- Bid on Prescribed Performa issued by PIA (Schedule-A).
- Affix the company seal on all tender documents.

Mention clearly Tender Reference on **TOP RIGHT CORNER OF PROPERLY SEALED ENVELOPE BEARING COMPANY’S STAMP**

## F) PREPARATION OF TENDER - FINANCIAL PROPOSAL

The tenders should be enclosed in double cover. The inner cover should be sealed having enclosed the following documents:

- a) Price Schedule 'A' duly filled in, signed and sealed.
- b) Original Pay Order for Bid Security/Earnest Money.
- c) Undertaking on Rs. 100/= above non-judicial Stamp Paper duly signed and stamped by a Public Notary Oath Commissioner (Local Bidders Only).
- d) The outer cover should bear address of the **General Manager Contract Management**, PIA SCM Building, Karachi Airport and reference number of the tender with opening date of tender.
- e) All information about the services /material proposed to be supplied must be given as required in the schedule to tender.

## G) PRICES

- a) The Prices mentioned in the tender will be treated as firm till the completion of Purchase Order /Contract.
- b) The Prices must be stated both in words and figures. Additional information, if any must be linked with entries on the Schedule to Tender.
- c) Offers must be valid for 180 days.

Detailed contract document and pricing mechanism will be decided and signed after final selection of the vendor

Yours truly,

GM Contract Management  
Supply Chain Management  
PIA Head Office, Karachi  
Pakistan

**Tel: +92-21 - 9904 4216, 9904 5277**

**Email: gm.cm@piac.aero**  
[contract.tech@piac.aero](mailto:contract.tech@piac.aero)

## **Terms of Reference (TOR)**

### **Project Title: Aircraft Cabin LED Lighting Upgrade, B777 & A320 Airplanes**

#### **1. Project Scope:**

The project entails the complete removal of the existing 'Classic' OEM fluorescent tube and ballast assemblies on PIA's Boeing 777 and 'Classic' & 'Enhanced' Airbus A320 aircraft, replacing them with an advanced LED lighting solution. PIA expects the new system to be a full RGBW LED cabin mood lighting system, plug-and-play (PnP) with no changes to aircraft-side wiring and connectors. It should utilize the latest advancements in lighting technology, support zonal control for different lighting scenes per zone, and offer both day and night modes to align with the airline's premium brand identity, enhancing the cabin ambiance for various phases of flight.

#### **Effectivity:**

1. A320 Effectivity: A320-214 & A320-216 (13 aircraft)
2. B777 Effectivity: B777-200LR, B777-300ER, B777-200ER (08 aircraft)

#### **Objectives:**

1. Upgrade Cabin Space Lighting Systems: Transition from fluorescent to LED lighting to improve energy efficiency, reduce maintenance costs, and enhance the overall cabin space ambiance.
2. Enhance Brand Identity: Utilize latest in advanced LED lighting technologies to reinforce PIA's brand identity within the cabin environment.
3. Improve Passenger Experience: Implement human-centric lighting to create a more comfortable and visually appealing atmosphere for passengers.
4. Operational Efficiency: Achieve greater operational efficiency through reduced power consumption, fuel savings, and longer lifespan of LED lighting systems.

#### **Expected Outcomes:**

- Brand Elevation: The new LED lighting is expected to significantly enhance the visual identity of PIA's cabin space, aligning with the airline's branding strategy.
- Passenger Comfort: Improved lighting quality will contribute to a better passenger experience, increasing customer satisfaction and loyalty.

- Efficiency Gains: The transition to LED lighting will result in lower energy consumption and reduced maintenance requirements, leading to cost savings and operational efficiencies.

## **2. Mandatory Requirement**

### **2.1. Project Scope of Supply**

- Engineering solution, kits and equipment for replacement of currently installed OEM fluorescent tubes and ballast assemblies from cabin ceiling, side wall panels, galley entry and lavatory lights, with LED technology.
- Installation and activation of LED light shall only require general tools.
- Retain capability to remove LED Lights and re-installation of originally installed (as per Boeing/ Airbus maintenance data) fluorescent lighting system.
- FAA/ EASA/ UK-CAA/ TCCA approved engineering package including continuing airworthiness instructions.
- Installation of LED lights on above mentioned fleet will be performed in phases. Therefore, kits quantity will be advised phase wise.
- Not more than 12 weeks for 1st phase kits delivery from contract award and receipt of required aircraft data.
- Bids shall be submitted for all mentioned B777 and A320 with cost defined on a per aircraft basis.
- Design Organization Authority must have prior experience of product engineering package design for B777 or A320 aircraft.
- The offered product must have an in-service history and be presently operating on B777 and A320 aircraft.
- Engineering package for A320 MSN 4392, 5152, 5162, 5253, 5746, 7784 & 7792 must include instructions for re-installation of originally installed fluorescent cabin lights as designed by M/s Airbus.

### 3. Product Description:

#### Light

- Input power consumption shall be less than 12W per meter producing a ~70% reduction to OEM system.
- Ceiling and Sidewall LED light shall be a full RGBW LED cabin space mood lighting system with the facility to control scenes from a control panel.
- Installation of proposed LED light system shall NOT involve modification/removal of current wiring provisioning for PIA B777 and A320 cabin illumination.
- For B777 LED system should be operated with existing CACP panel or vendor dedicated panel. Bidder is responsible for the development of software, if required.
- For Airbus aircraft, there MUST be hybrid control, using aircraft CIDS and supplier control panels mounted in the forward & aft cabin crew sections near the existing FAP.
- LED lights shall be plug-n-play type having tube lengths comparable with the currently installed fluorescent lights on PIA B777 and A320 aircraft.
- LED system shall be manufactured with strict quality controls in place and offer PIA a service history with an MTTF in excess of 750,000 hours.
- LED system must be flexible for use with multiple color standards and scenes.
- LED light shall facilitate a 0-100% brightness range, following Airbus' defined log dimming designed to match and adjust for the human eye's natural response to brightness.
- LED systems must be supplied to PIA with Age Consistency Technology (ACT) using smart algorithms to keep lighting units consistent in brightness and color throughout their lifetime and eliminate problems with color matching when replacing light.

- LED systems must be supplied using real-time thermal correction algorithms that adjust the color of LEDs for thermal changes – all in real time.
- LED systems shall be supplied with a customer application enabling the development of lighting scenes by the customer without the need for manufacturer support but prohibiting permanent changes to the lighting system without manufacturer/ design holder liaison.
- Post installation, updating any color scheme and scene must not required any additional reprogramming or part number upgrades. Spare shall also not be effected with such change.
- Product installation shall NOT include changes to aircraft software controlling existing general illumination. OR Vendor is responsible for the development of software, if required. Preference will be given to no change in existing software.
- LED lighting OEM shall have prior aviation authority approval of FAA/ EASA/ UK-CAA/ TCCA for production of offered product.

#### **4. Supplier Furnish Equipment (SFE)**

- LED modification system(s) shall be delivered as a complete individual kit for each aircraft type included in this tender. Individual kits shall be inclusive of all LED light, control panel(s), and mounting brackets.
- It is expected by PIA that the first kit delivery will be provisioned with an appreciable set of LED light considered as 'safety spares' only. The rate of provisioning shall be 10% of the total quantity of tubes or at the rate of one (1) of each type and size for first B777 and A320 cabin ceiling and side wall.
- System shall be delivered with PIAC default/selected scene file. Moreover, a Customer Interface Tool (CIT) & Scene File Development Software Application enabling PIA to develop new scene files in real-time for any desired post-installation changes shall be part of the kit.



## **5. Buyer Furnish Equipment (BFE)**

- Nil

## **6. Documents**

- FAA/ EASA/ UK-CAA/ TCCA approved Service Bulletin Package with minor change approval certificate (for minor modification).
- FAA/ EASA approved STC and engineering Package (for major modification).
- FAA/ EASA/ UK-CAA/ TCCA approved Instructions for Continuing Airworthiness.
- LED lights arrangement drawings i.a.w. aircraft LOPA.
- Form-1/FAA 8130 for offered product.
- Product installation/ user manual.

## 7. Technical Evaluation Criteria

SN	Criteria	Score		
		B777 & A320	B777 or A320	Neither B777, nor A320
1	<b>Design organization experience for Engineering of offered product</b>			
	Weightage = 10	10	5	0
2	<b>Project Lead time</b>	<b>&lt; 03 months</b>	<b>3– 4 months</b>	<b>&lt;4 months</b>
	Weightage = 30	10	5	2
3	<b>Reliability of LED lights</b>	<b>&gt;500,000 FH</b>	<b>300,000–500,000 FH</b>	<b>&lt;300,000 FH</b>
	Weightage = 10	10	5	2
4	<b>Product Warranty</b>	<b>≥ 5 years</b>	<b>3-5 year</b>	<b>&lt; 3 years</b>
	Weightage = 30	10	7	4
5	<b>After sale support</b>	<b>&gt; 8 years</b>	<b>4-8 years</b>	<b>&lt; 4 years</b>
	Weightage = 10	10	5	2

### Methodology for assessing Highest Technical Scoring Bid

$$X = [(B/A) \times TEW]$$

Where,

X= Net Outcome

A= Maximum Points of Technical Criteria

B= Points obtained in Technical Criteria

TEW= Technical Evaluation Weightage

**Passing marks 60 %**

**8. Financial Evaluation Criteria** (Schedule-A)

The following table is to be filled out and submitted as part of the financial offer.

**SUBMITTED BY (Name of Bidder):** \_\_\_\_\_

<b>SN</b>	<b>Criteria</b>	<b>Rate (to be filled in)</b>
01	<b>Cost of Engineering Package including ICAs for Replacement of currently installed fluorescent lighting system on PIA B777 and A320 airplanes with Wireless Cabin LED lighting.</b>	
02	<b>Cost of Equipment per aircraft</b>	
03	<b>Volume Discount</b>	
04	<b>Any other financial requirement (please specify)</b>	

**NOTE:**

- The agreement signed between PIAC, and service provider will be non-exclusive.
- 03-year agreement shall be signed between PIAC and bidder, which may be extended up to one more agreement cycle on same terms and conditions.
- No escalation will be applicable in the case of agreement is extended for the next agreement cycle.
- All Invoices, except any proforma deposits to be made, are payable on Net 30 days basis as per PIA Policy.

**Final Evaluation= Technical (30%)+ Financial (70%)**