

**PETROLEUM CONSERVATION RESEARCH ASSOCIATION
NEW DELHI**

TENDER DOCUMENT FOR

**DESIGN, MANUFACTURE, SUPPLY, AND INSTALLATION
OF DIGITAL ELECTRONIC COUNTDOWN TIMERS (DCT)
AND VARIABLE MESSAGE SIGNS (VMS) FOR TRAFFIC
SIGNALS IN VARIOUS CITIES OF INDIA**

TENDER NO: PCRA/CDT/FA/07-08/02

OFFICE OF

**ADDITIONAL DIRECTOR (FA)
PETROLEUM CONSERVATION RESEARCH ASSOCIATION
SANRAKSHAN BHAWAN, 10 BHIKAJI CAMA PLACE
NEW DELHI - 110066**

Cost of Tender Document: Rs. 1,000.00 (Rupees One Thousand Only)

N.B. Please check that all the 57 pages are intact in the document

**PETROLEUM CONSERVATION RESEARCH ASSOCIATION
SANRAKSHAN BHAWAN, 10 BHIKAJI CAMA PLACE
NEW DELHI - 110066**

NOTICE INVITING TENDER

TENDER NO: PCRA/CDT/FA/07-08/02

1. Petroleum Conservation Research Association, New Delhi invites sealed tender under two-bid system in the prescribed tender form, from the prospective competent bidders for the job of Design, Manufacture, Supply, and Installation of Digital Electronic Countdown Timers (DCT) and Variable Message Signs (VMS) for Traffic Signals in various cities of India
2. Brief description of the tender is as below:

1	Brief description	Design, Manufacture, Supply, and Installation of Digital Electronic Countdown Timers (DCT) and Variable Message Signs (VMS) for Traffic Signals in various cities of India
2	Scope of Work	As defined in the tender
3	Completion Schedule	All activities covered in the scope of work should be covered in all respects in 90 days from date of Notification of award of work
4	Tender fee	1,000/- (One thousand Only)
5	Earnest Money Deposit	4,00,000/- (Rs. Four Lakh Only)
6	Sale of Tender Document	From 19.09.07 to 08.10.07
7	Last Date & time for submitting Tender	09.10.07 by 1500 hrs.
8	Date & Time of Tender opening	09.10.07 at 1600 hrs or thereafter.
9	Validity of Bids	90 days
10	Tender issuing Authority	Addl. Director (FA)
11	Tender receiving Authority	Addl. Director (FA)
12	Correspondence address	Addl. Director (FA), PCRA, Sanrakshan Bhawan, 10 Bhikaji Cama Place, New Delhi - 110066

2. Tender documents containing detailed terms and conditions can be purchase on payment of requisite tender fees by way of Account Payee Demand Draft (only) in favour of **Petroleum Conservation Research Association payable at New Delhi** during office working hours from 19.09.07 to 08.10.07. Tender documents can also be downloaded from PCRA website www.pcra.org and the required tender fees shall be submitted as above with the technical offer.

If the last date of submission of the tender happens to fall on holiday, the same will be extended on the next working day.

Submission of Bids after the due date and time will not be entertained/accepted under no circumstances.

3. Pre-qualifying criteria:

- a) The bidder should have experience in field of Traffic Signaling, Digital Electronic Countdown Timers and Variable Message Signs (VMS) for a minimum period of five years. The bidder must attach proof of the work order of executing such jobs in at least five major cities out of the list as enclosed in Annexure III. The firm should submit proof of manufacturing/supplying and installing the same and enclose necessary documentation in support of their claim.
- b) The bidder should have executed a gross annual billing of minimum Rs. 100 lakhs with one single Government/State Government Traffic authorities or b) Rs. 50 lakhs gross annual billing each with any two Government/State Government Traffic authorities, involved in Traffic Signaling, Digital Electronic Countdown Timers and Variable Message Signs (VMS) during the one financial year during the last three years. Documentary proof in support of successful execution of such projects to be attached with the Technical bid duly certified by the Competent authority.
- c) The bidder should have their offices in major cities through out the country. The list of the offices & contact person should be submitted with the tender. Since the job is across the country, the bidders representation in each territory is essential. The same can be in the form of the work orders executed in the various

regions of the country. A declaration to the same has to be provided in the tender.

- d) Bidders are advised to study the tender document thoroughly. Submission of tender shall be deemed to have been done after careful study and examination of the tender document with full understanding of its implications.
 - e) It will be imperative on each bidder to fully acquaint himself with all the local conditions and factors, which would have any effect on the performance of the contract. No request for the change of price or time schedule of delivery of tendered item shall be entertained, on account of any local condition or factors once the offer is accepted by the Purchaser.
 - f) Bidders shall not be permitted to alter or modify their bids at any stage after expiry of the deadline for receipt of Bids.
4. Earnest Money Deposit - The EMD of requisite amount shall be submitted along with the technical bid in the form of a crossed demand draft/Bank guarantee as per Performa attached in Annexure IV in favour of Petroleum Conservation Research Association payable at New Delhi along with Technical offer.
5. Tenders shall be dropped in the Tender Box in the office as mentioned at Sr. No. 2 (12) above on or before last date and time of submission of bid documents.

Chapter - 1

1.0.0 Background

Petroleum Conservation Research Association (PCRA), on behalf of Govt. Of India, Ministry of Petroleum & Natural Gas, has been working for the development and deployment of strategies for energy conservation and environment protection in the major sectors of economy, i.e. Industry, agriculture, transport, domestic and commercial.

1.1.0 Emergence of PCRA

The oil crisis of 1970s brought into sharp focus the need for conservation of petroleum products due to the enormous hike in country's import bill. The Govt. in response set up the Petroleum Conservation Action Group (PCAG) in 1976, which was subsequently reconstituted as PCRA in 1978. Over the years, new developments have shaped and given thrust to PCRA's programs and activities.

The demand of petroleum products in the country is growing steadily and Govt. Policy as spelt out in India hydrocarbon vision 2025 considers issues such as energy security, use of alternate fuels and interchangeability of technology as vital to ensure that mix of energy sources used in economy is optimal and sustainable. The Energy Conservation Act 2001 provides the legal and institutional framework for energy conservation activities.

In its mission for improvement of quality of life, PCRA works with the support of Public Sector Oil Companies, Govt. & Non-Govt. Organizations, Research Institutes and Laboratories, Educational Institutes, Consumer Associations and other Organizations. parties after studying about activities of PCRA available on PCRA website www.pcra.org and also the annual report for 2005-06.

1.2.0 Organizational Setup of PCRA

PCRA has an All India presence through its setup of regional and sub-regional offices. The four regional offices are located in Delhi, Kolkata, Chennai and Mumbai respectively. The sub regional offices of PCRA are located in Jaipur, Chandigarh, Lucknow, Dehradun, Ranchi, Bhubneshwar, Guwahati, Vishakapatnam, Hyderabad, Coimbatore, Cochin, Bangalore, Pune, Bhopal, Raipur, Ahmedabad and Nagpur and the officials located in these offices maintain close liaison with the industries, industrial

associations, State Govt. officials, Educational and Research Institutions etc. with a purpose of conducting the chartered activities of PCRA.

1.3.0 Functions of PCRA

PCRA provides direct services in fuel efficiency and sustainable development through various activities.

Its industrial programs focus on improvement in fuel efficiency through up gradation of technologies and reducing wastage, brought out through energy audit in large, medium and small-scale industries.

In transport sector, it conducts variety of programs for State Transport Undertakings, Private Fleet Operators, Organizations in Private & Public Sector to promote efficient use of Petrol, Diesel, Lubricants and Greases through better maintenance practices, inculcating better driving habits, Model Depot Studies, Workshops and Clinics etc. As part of this program, PCRA wishes to emphasize the importance of petroleum conservation at the Traffic signals across the country through procurement and Installation of Digital Electronic Countdown Timers and Variable Message Signs (VMS).

Chapter - 2

2.1.0 Objective of this Job

1. PCRA wishes to procure and install Digital Electronic Countdown Timers and Variable Message Signs (VMS) at various traffic intersections. PCRA conducts several activities through its set up at HQs, regional and sub-regional offices that directly or indirectly lead to conservation of energy consumption. One of the core activities of PCRA is to create mass awareness at traffic intersections about the quantum of the fuel which is wasted due to continued ignition of vehicles. A few of the studies conducted by PCRA to this effect are as follows:

- **Studies on passenger cars for fuel efficiency at different speeds by IIP, Dehradun.**

This project was sponsored on IIP, Dehradun with the objective of finding the optimum speed for new cars for maximum fuel efficiency. This had become essential in view of new generation cars now having come to the market in a big way & necessity to give right information to users through our education campaign. Elaborate experiments were done by IIP on Maruti-800, Santro & Indica cars. All showed maximum fuel efficiency is achieved between 40 to 50 km/ hr speed.

- **Estimation of fuel loss during idling of vehicles at selected intersections of Delhi by CRRI, New Delhi.**

A project was sponsored on CRRI, Delhi with the objective of estimation of loss of petroleum products due to idling of vehicles at signalized intersections under varying traffic conditions in Delhi. The study also identifies various remedial measures for minimizing the delays & fuel losses.

The fuel loss works out to be Rs. 994.5 crores per annum due to idling of vehicles at 600 intersections in Delhi. With the introduction of suitable traffic engineering measures these losses could be reduced by 40-45% of fuel loss. Remedial measures have also been recommended in the study.

One of the remedial measures suggested is to educate the masses about this loss, which can be minimized by adoption of education through these Digital Electronic Countdown Timers and Variable Message Signs (VMS). It is with this objective that this tender has been floated by PCRA.

2.2.0 Schedule of Tender

- i. Tender documents containing detailed terms and conditions can be purchase on payment of requisite tender fees by way of Payee Demand Draft (only) in favour of Petroleum Conservation Research Association payable at New Delhi during office working hours from 19.09.07 to 08.10.07. Tender documents can also be downloaded from PCRA website www.pkra.org and the required tender fees shall be submitted as above with the technical offer. Failure to do so will result in rejection of the bid.
- ii. The sealed bids will be accepted till 1500 hrs on 09.10.2007. The sealed bids can be put personally in the Tender Box kept in the office of PCRA. Alternatively, the bids may be sent by Registered Post/Courier addressed to the **Additional Director(FA), Petroleum Conservation Research Association, 'SANRAKSHAN BHAWAN', 10 BHIKAJI CAMA PLACE, NEW DELHI - 110066** so as to reach before the date and time of sealing of Tender Box. The Technical bids will be opened at 1600 hrs on 09.10.2007 in the Committee Room on the third floor of the PCRA building. The bidders or their authorized representatives may be present, if they so desire.

After evaluation of the Technical bids, the technical details submitted by the bidders will be referred to Technical Evaluation Committee to hold a technical committee meeting with the Bidders to discuss any matter at the discretion of the technical evaluation committee.

On the basis of recommendations of Technical Committee, the commercial bids will be opened after giving due notice to the bidders.

- iii. PCRA in the tender document at Annexure-I has given the detailed population of the cities and has arrived the basis for providing the DCT and VMS. Annexure-II indicates the detailed specifications of the Digital Electronic Countdown Timers and Variable Message Signs

(VMS). The locations of the cities where these equipment shall be provided has also been listed at Annexure-III. Please note that the locations as indicated in Annexure-III are tentative and may change. As far as possible, the number of counter in each state is likely to be the same, but may change due to any unforeseen circumstances. The decision of PCRA in this case shall be final and shall be binding on the bidders. In the tender documents, bidders must indicate the locations where the bidders have a presence as listed in Annexure-III and also should indicate the number of traffic signals/DCT and VMS installed as per proforma attached.

- iv. Bidders to note that these Job involved by PCRA shall be only to Design, Manufacture, Supply, and Installation of Digital Electronic Countdown Timers (DCT) and Variable Message Signs (VMS) for Traffic Signals in various cities of India. With specific reference to the installation, it shall be the responsibility of the bidders to install them at the major traffic intersections in the cities as per the details given in the Annexure-III. It may be noted that the identification of the traffic intersections shall be done in close co-ordination of the PCRA's various SRO's , the address of which are attached in the corporate profile attached with this tender. It may be possible that DCT/VMS may be installed separately at various traffic signals as per the requirement of the Traffic authorities due to their existing installations.
- v. It is therefore important that the bidders must have sound knowledge about the various traffic signaling systems in these cities and should be able to install them at the existing traffic signals. PCRA's Regional and State offices shall be assisting the bidders in co-ordination with the State authorities, however the Primary responsibility shall lie with the bidders only.
- vi. PCRA shall not be undertaking any civil/electrical/mechanical job towards installation of these Digital Electronic Countdown Timers and Variable Message Signs (VMS). It may be noted PCRA shall not be making any additional payment towards these charges as PCRA has undertaken sufficient market feedback that the signaling systems as stipulated in the tender is fully functional in the cities as mentioned. The Bidder therefore, has to integrate these Digital Electronic Countdown Timers and Variable Message Signs (VMS) with the existing traffic signals of whatsoever designs existing at the earmarked/identified traffic signals incorporating the messages with sufficient readability speed as indicated below:

- Delhi burns petrol/diesel worth Rs. 994 Crores per annum at traffic red lights.
 - Switch off your engine if traffic red light persists beyond 15 seconds to reduce your petrol bill.
 - Drive your car at 45 KMPH and save petrol up to 15% against driving at 65 KMPH.
 - If you drive your car at 80 KMPH, you burn 30% more petrol.
 - Correct tyre pressure can save up to 10% petrol.
 - Follow traffic rules for your own safety.
 - Besides this some of the Traffic related messages can also be incorporated in the VMS.
- vii. It may be noted by the bidders that at any given point of time only three messages shall be run. However, there should be a provision for changing the messages in the VMS as per the advise of the tenderer through their CRC's office/SRO's. Also bidder to note that the VMS must be able to undertake minimum two languages, one of which can be a regional Language other than Hindi. For example, a counter/VMS installed in Hyderabad can be in English/Telgu, whereas the language of the same can be English/Hindi in Delhi.
- viii. The Commercial bids of only the short-listed Bidders will be opened in the Committee room of PCRA, Delhi with prior intimation and such short-listed bidders will be intimated about the date and time accordingly. The short-listed bidders or their authorized representatives may be present, if they so desire.
- ix. Purchaser's Right to vary quantities at the time of placement of Supply Order/signing of Contract: The Purchaser reserves the right to vary the quantities and/or split the order among the selected Bidders.
- x. Purchaser's right to accept any Bid and to reject any or all bids: The Purchaser reserves the right to accept any bid, and to annul the bid process and reject all bids at any time, without assigning any reason, prior to placement of supply order/ signing of contract, without thereby incurring any liability to the affected Bidder(s) or any obligation to inform the affected Bidder(s) of the grounds for the Purchaser's action.

- xi. Bidder Qualification: The "Bidder" as used in the tender document shall mean the one who has signed the Bid Form. The Bidder must satisfy all pre-qualification criteria as specified in the tender documents and must quote for all the items as per the price bid of the tender documents as per Annexure-XIV.

2.3.0 Bid Security (Earnest Money):

- i. Bid Security (Earnest Money) amount for Rs.4,00,000/- (Rs. Four Lakh Only) in the form of Account Payee Demand Draft or Bank Guarantee, from any of the Nationalized /Scheduled bank, in favour of Petroleum Conservation Research Association, payable at Delhi. The Earnest Money can also be deposited in the form of the Bank Guarantee, a format of which is attached in the tender at Annexure-IV. Failure to do so will result in the rejection of the bid.
- ii. Firm shall from time to time at the request of the Purchaser suitably extend the validity of any Bank Guarantee (whether furnished by way of Initial Security Deposit, Security Deposit or Composite Bank Guarantee) or to secure any advance for such period(s) as may from time to time be required by the Purchaser failing which, without prejudice to any other right or remedy available to the Purchaser, the Purchaser shall be entitled to encash Bank Guarantee.
- iii. In case the bidders desires to avail exemption from depositing the earnest money, the bidders shall have to enclose documentary proof to authenticate their firm's registration with these organizations for the specific item to avail this exemption and obtain prior approval from the Finance department of PCRA, Delhi before the submission of the bids.
- iv. The Bid Security (Earnest Money) shall be valid for a period of six calendar months from the date of opening of the Bid by the Purchaser, in case of short-listed Bidders. No interest will be payable by the Purchaser on this amount.

- v. The Bid Security (Earnest Money) may be forfeited:
 - a) If a Bidder withdraws his bid during the period of bid validity; or
 - b) In the case of the finally selected Bidder, if the Bidder fails;
 - I. To sign the Performance Contract in accordance with the conditions of the Tender, or
 - II. To furnish Contract Performance Security in accordance with the Tender conditions, or
 - III. If at any stage any of the information/ declaration is found false.
- vi. Bid Security (Earnest Money) in respect of the finally selected Bidder will be adjusted against the Performance Guarantee consequent to the Bidder signing the Contract.
- vii. Period of Validity of Bids: Bids shall remain valid for 90 (Ninety) days from the date of Bid opening. A bid valid for a shorter period may be rejected by the Purchaser as non-responsive.
- viii. The bidders should have their firm registered with the Sales Tax/VAT Department, with respect to Sales Tax/ VAT and shall furnish copies of the same with their Technical Bid along with their latest Sales Tax/ VAT Clearance Certificates. It may be noted that PCRA shall not be able to issue any declaration what so ever with respect to Sales Tax/VAT to claim any benefit by the Bidder. However, the price quoted as per the price schedule format must incorporate these elements to arrive at the final uniform landed price as per Price bid (Annexure-XIV) across all cities in accordance with the Annexure-III of the Tender.
- ix. Printed terms and conditions of Bidder shall not be considered as forming part of their Bids.
- x. Bidder must state categorically whether or not his offer conforms to all the tender terms and conditions. No variation in any of the terms and conditions of the tender is allowed.
- xi. Bidder must state categorically whether or not his offer conforms to the specifications given in Annexure-II. No deviation shall be allowed in the tender. Bidder is free to quote better version or to add any

- better configuration in line with technical specification of Annexure-II. However, the right to accept or reject the same shall be with the purchaser.
- xii. The Bidder must quote for all items and quantities as listed under the Schedule of Specification (Annexure-II) in the Price Schedule format (Annexure-XIV).
 - xiii. The Successful Bidder(s) shall be required to furnish Contract Performance Bank Guarantee for 10% of the Contract Price, at the time of award of Contract as per the prescribed proforma. Performance Security (Security Deposit) shall be obtained from any successful bidder irrespective of its registration status.
 - xiv. All the bidders participating in the Tender must submit a list of their Purchasers, partners, etc. and a certificate to the effect that the firm is neither blacklisted by any Government Department nor any Criminal Case is registered against the firm or its Purchaser or partners or directors anywhere in India.
 - xv. Bids not accompanied by Tender Fee and Earnest Money will be rejected.
 - xvi. Conditional bids, Telex/Fax bids and incomplete bids will be summarily rejected.
 - xvii. The bid shall contain no interlineations; errors or overwriting and all pages of the Bid must be signed and sequentially numbered by the Bidder.

2.4.0 Security Deposit:

- i. The Agency shall furnish Security Deposit in the amount equivalent to 10% (ten percent) of the total contract value. Such Security Deposit is to be held by the PURCHASER as security for the due performance of the Agency's obligations under the contract.
- ii. The Security Deposit shall be payable :
 - a) By Demand draft/Bank Guarantee of Nationalized/ Scheduled Bank payable to the PURCHASER at Delhi where the Office of the

PURCHASER is situated (Cheques shall not be accepted) within 15 days from the date of the award of the job.

- b) The Earnest Money Deposited by the Agency may be permitted to be adjusted towards Security Deposit and pay the balance in the manner stipulated at (i) above.
 - c) By Bank Guarantee (s) in the prescribed form as included in the Tender Documents, from a Nationalized / Scheduled Bank in India acceptable to the PURCHASER, provided the amount covered by such Bank Guarantee is not less than Rs 100,000/- (Rupees One Lakh Only). This Bank Guarantee shall be valid up to a period of 3 (three) months beyond the end of the Defects Liability period.
 - d) The firm will be required to furnish a Demand Draft/Bank Guarantee for the full Security Deposit of 10% (ten percent) of the Total Contract Value.
- iii. The Security Deposit shall be held by the PURCHASER as security for the due performance of the firm's obligations under the Contract, PROVIDED that nothing herein stated shall make it incumbent upon the PURCHASER to utilize the Security Deposit in preference to any other remedy which the PURCHASER may have, nor shall be construed as confining the claims of the PURCHASER against the firm to the quantum of the Security Deposit.
 - iv. The Security deposit including the Earnest money, and other withheld amounts from the Running Accounts Bill(s), if any, time remaining in the hands of the PURCHASER, shall be free of any liability for payment of any interest to the firm.
 - v. Upon determination of the contract prior to completion of work(s) for any cause, the PURCHASER shall in so far as the Security Deposit constitutes cash refund and in so far as the Security Deposit is in any other form release /discharge/return, as the case may be, to firm, the unutilized balance of the Security Deposit, if any, for the time being remaining in the hands of the PURCHASER after settlement of accounts and discharge of all amounts due from the firm to the PURCHASER and fulfillment of all obligations of the firm.

2.5.0 Bid Prices:

- i. The Bidder shall indicate on the Price Schedule (Annexure - XIV) attached to these documents the Unit Prices and total Prices of the Equipments it proposes to supply under this tender in the following manner:-

A-i		Digital Electronic Count Down Timers (DCT)
	1.	Single Unit price in Indian Rupees for all locations
	2.	Total Price in Indian Rupees for all locations
A-ii		Variable Message Signs (VMS)
	1.	Single Unit price in Indian Rupees for all locations
	2.	Total Price in Indian Rupees for all locations
B.		Annual Maintenance Contract after Guarantee period for one year
	1.	Single Unit price in Indian Rupees for all locations
	2.	Total Price in Indian Rupees for all locations

- ii. The price should be quoted strictly in line with the price schedule leaving no column blank whatsoever to avoid any ambiguity.
- iii. It should be noted that payment by the Purchaser towards Digital Electronic Countdown Timers and Variable Message Signs (VMS) shall be on FOR basis and shall include all the levies etc. For the purpose of uniformity, PCRA shall issue the purchase order from Delhi for various locations as annexed in the tender. All bidder must therefore quote the net landed one rate for all locations. PCRA shall not be able to give any sales tax declaration form for purchase of these items and therefore, all bidders must account for the same in the tender. Any other Govt. levies/ incidental charges, shall has to be absorbed by the bidder. No other sundry charges shall be payable by PCRA except the price quoted in the price bid.
- iv. The Purchaser will make all payments, under this contract, in Indian rupees.
- v. The bidder should ensure that all columns of the price schedule are duly filled and no column is left blank. After opening of the price bid, no clarifications whatsoever shall be entertained by the Purchase Committee.

CHAPTER - 3 CONDITIONS OF CONTRACT

3.1.0 Award of Contract:

- i. Prior to the expiry of the period of bid validity, the Purchaser will notify the finally selected Bidder and place the supply order within 7 days thereafter. If a need for extension of the bid validity period arises, it should be extended. The notification of award/placement of supply order will constitute the formation of the Contract.
- ii. At the time of placement of the supply order, the finally selected Bidder shall sign the contract with the Purchaser. The finally selected bidder shall bring along with him, the power of attorney, the contract performance bank guarantee and official seal etc. for signing the contract.

3.2.0 Contract Performance Bank Guarantee:

- i. At the time of signing the contract, the Supplier shall furnish a Contract Performance Bank Guarantee for 10 percent of the value of the Contract price, as per the prescribed proforma from a Scheduled Bank.
- ii. The Contract Performance Bank Guarantee will be in the name of the Petroleum Conservation Research Association, 10, Bhikaji Cama Place, New Delhi-110 066.
- iii. In the event of delay in acceptance of the Equipments, the Supplier shall, at the request of the Purchaser, extend the validity of the Contract Performance Bank Guarantee so as to cover the warranty period.

3.3.0 Payment Schedule :

- i. The standard payment terms subject to recoveries, if any, under the Liquidated Damages clause will be as follows :-
 - Delivery of Equipments: The Supplier shall notify the Purchaser about the delivery of the Equipments to the Delivery Site one week in advance of the expected date of partial or complete delivery.
- ii. The payment will be made after receipt/Final Acceptance of the Equipments on commissioning and receipt of Supplier's bill complete in all respect duly certified by the SRO's /CRCs offices . Part payment on the monthly basis shall be allowed to prevent suppliers from hardships. However, each bidder shall be able to submit only one bill during a month. The bills for many locations can be combined in one bill for submission of a consolidated bill.
- iii. No advance payment shall be made.

3.4.0 Packing, Forwarding & Shipment :

- i. The Supplier shall provide proper packing of the Equipments to prevent their damage or deterioration during transit to the final destination site. The Supplier shall notify Purchaser of the date of each shipment from his works and the expected date of arrival of goods at the site.

3.5.0 Delivery, Installation and Commissioning :

- i. Delivery, installation, testing & commissioning of the equipments at various traffic intersections shall be completed by the Supplier in accordance with the terms specified by the Purchaser within Three (3) months from the date of Award of Contract.

3.6.0 Insurance :

- i. The Goods supplied under the Contract shall be fully insured on a warehouse-to-warehouse basis by the Supplier against loss or damage incidental to manufacture or acquisition, transportation, storage and delivery at their cost.

3.7.0 Inspection of Tests:

- i. The Purchaser shall have the right to inspect and/or test the Equipments for conformity to the Contract Specification.
- ii. Should any inspected or tested Equipments fail to conform to the specification, the Purchaser may reject them and the Supplier shall either replace the rejected Equipments or make all alterations necessary to meet specification requirements free of cost to the Purchaser.
- iii. The Supplier shall provide installation and standard test procedures for the individual equipment and for the complete System offered.
- iv. The Supplier shall test individual equipment and the complete System after installation at site. The Supplier shall submit complete documentation of all the measurements conducted during installation period for future reference of the Purchaser.
- v. For the purpose of taking over the Equipments/system supplied, an Acceptance Test shall be carried out at the Purchaser destination site. The equipment that meets the acceptance test shall only be accepted by the Purchaser.
- vi. The installation or commissioning shall not be deemed to have been completed unless all the equipments and system are accepted by the purchaser.
- vii. Before the equipment is taken over by the Purchaser, the Supplier shall install the equipment/system as per the terms and conditions given in the schedule of this tender

3.8.0 Guarantee/Warranty

- i. The Supplier shall provide comprehensive on-site Guarantee/Warranty for all Equipments/equipment supplied under the Contract at least for a period of 02 (two) years from the date of final acceptance of the equipment.
- ii. The Supplier must have a maintenance base in major cities of India to provide maintenance service, of the System being offered, efficiently and promptly.
- iii. If the performance of any individual equipment or System fails to meet the contract specifications then the same shall be replaced by the Supplier free of cost during the term of the warranty/guarantee period.
- iv. The maintenance services, including spares shall be free of cost during the warranty/guarantee period.
- v. During the term of warranty/guarantee the service/repair calls will have to be attended by the Supplier within two hours from the time of such calls. The defective card/item/equipment should be repaired the same day at Purchaser's location. In case of major defects requiring the defective card/item/equipment to be taken to the Supplier's workshop, it should be returned within a week duly repaired and an immediate substitute card/item/equipment will be provided by the Supplier for the smooth operation of the System. The to and fro transportation of the card/item/equipment will be the responsibility of Supplier. It may be noted that PCRA shall notify the concerned traffic traffic/signaling authorities about the installation of such systems at major traffic intersections and all future calls shall be made by them towards maintenance of such equipments. A copy of the work order shall be made available to them. However , PCRA continues to be an overall monitoring agency towards provision of these equipments and their decision shall be final and binding on each bidder.
- vi. Apart from the service/repair calls, the service engineer deputed by the Supplier will visit the site once in every 03 months to carryout the Preventive Maintenance and diagnostics of the equipment during the Warranty Period.

- vii. Delays in attending the calls and or repairing the defective card/item/equipment beyond time limit specified in this Clause, without providing the substitute, will attract penalties in accordance with the performance clause.
- viii. If the Supplier fails to repair or replace the defective Equipment/ Item, the Purchaser will be free to get the same repaired/replaced from the market and its cost will be adjusted from the Supplier's Contract Performance Bank Guarantee.

3.9.0 Post-Warranty services and maintenance

- i. The Supplier shall be responsible for the comprehensive on-site maintenance of the equipment, at a reasonable price, for a minimum period of two (2) years after expiry of the warranty/guarantee period assuming the life span of the System to be Four(4) years. The bidder shall indicate the estimated life span of the quoted System.
- ii. The Supplier shall quote the rates for comprehensive Annual Maintenance for one year for the entire equipment in the Price Schedule after the expiry of the warranty/guarantee period. AMC may be extended for another one year on mutual agreement.
- iii. The payment towards AMC shall be payable periodically after successful completion of the maintenance service during that period, the period being not more than three months.
- iv. Under the AMC, the Supplier shall provide comprehensive maintenance services of the entire equipment including the spares and no separate cost of spares will be paid.
- v. Preventive maintenance service of the equipment under AMC must be carried out once in three months.
- vi. During the period of AMC, the service/repair calls are to be attended by the Supplier within two days from the time of such calls. The defective equipment should be repaired the same day at Purchaser's location. In case of major defects requiring the defective cart/item/equipment to be taken to the Supplier's workshop, it should be returned within, a week duly repaired and immediate substitute

card/item/equipment will be provided by the Supplier for the smooth operation of the System. The to and fro transportation of the card/item/equipment will be the responsibility of Supplier.

- vii. Delays in attending the calls and or repairing the defective equipment beyond time limit given in this Clause, without providing the substitute, will attract penalties. AMC charges of the delayed period will not be paid if the delay is more than 6 hours from the specified time limit on pro-rata basis.
- viii. If the Supplier fails to perform any of the Services of the Contract within the time period specified in the tender, the Purchaser shall, without prejudice to its other remedies under the tender, deduct from the bills or Contract Performance Bank Guarantee, by way of penalty, a sum equivalent to One (1) percent of the price of the AMC rates for each and every week (part of a week being treated as full week) of delay until actual performance, up to a maximum deduction of Five percent (5%) of the AMC charges.
- ix. If the Supplier fails to repair or replace the defective card/item, the Purchaser will be free to get the same repaired/replaced from the market and its cost will be adjusted from the pending bills/Security deposit of the Supplier.
- x. The Purchaser shall also have the right to decide whether or not to enter into the maintenance agreement with the Supplier.
- xi. It shall be the duty of the purchaser to initiate action towards the AMC before the expiry of the guarantee/warranty period and the contract for the AMC must be signed before the expiry.

3.10.0 Delay in the Suppliers performance

- i. Delivery of the Goods and performance of Services including Warranty and Post Warranty Services shall be made by the Supplier in accordance with the time schedule specified by the Purchaser. Delay by the Supplier in the performance of its Delivery or Service obligations shall render the Supplier liable to imposition of Liquidated Damages in accordance with clause listed below and thereafter, upon reaching the maximum deduction set out therein, to termination for

default in accordance with termination Clause as below accompanied by forfeiture of Bank Guarantee.

- ii. If the bidder fails to supply the equipments within the stipulated period, the Purchaser reserves the right to purchase the equipments from open market and charges will be recovered from the bills of the bidder.

3.11.0 Liquidated Damages :

- i. If the Supplier fails to deliver any or all of the Goods or perform the Services within the time period specified in the Contract, the Purchaser shall, without prejudice to its other remedies under the Contract, deduct from the Contract Price, as liquidated damages, (not by way of penalty) a sum equivalent to 1(one) percent of the price of the contract value for each & every week (part of a week being treated as a full week) of delay until actual delivery or performance, upto a maximum deduction of 05% (Five Percent) of the contract Value.

3.12.0 Force Majeure:

- i. The Contractor shall not be liable for forfeiture of its performance security, liquidated damages or termination for default, if the delay in performance or other failure to perform its obligations under the contract is a result of an event of Force Majeure. For purposes of the clause, "Force Majeure" means an event beyond the control of the Contractor and not involving the Contractor's fault or negligence and not foreseeable. Such events may include wars or revolutions, fires, floods, epidemics, quarantine restrictions, freight embargoes etc.

3.13.0 Patent Indemnification:

- i. The Supplier shall indemnify the Purchaser against all third party claims of infringement of patent, copyright, trademark, license or industrial design rights, software piracy arising from use of the goods or any part thereof in the Purchaser's country.

3.14.0 Waiver:

- i. Failure or delay on the part of the Supplier or the Purchaser to exercise right or power hereunder shall not operate as a waiver thereof.

3.15.0 Assignability:

- i. Neither this Contract nor any rights under it may be assigned by either Party without the explicit and prior written consent of the other Party. However, upon assignment of the assignor's interest in this Contract, the assignor shall be released and discharged from its obligations hereunder only to the extent that such obligations are assumed by the assignee.

3.16.0 Severability:

- i. If any portion of this Contract or any of the Contract Documents hereto is held to be invalid, such provision shall be considered severable, and the remainder of this Contract hereof shall not be affected.

3.17.0 Governing Law :

- i. This Contract including the Contract Documents shall be governed by and construed in accordance with the laws of India and the Delhi Courts shall have jurisdiction in this regard.

3.18.0 Termination for Default

- i. The Purchaser may without prejudice to any other remedy for breach of Contract, by Thirty (30) days written notice of default sent to the Supplier and upon the Supplier's failure and neglect to propose and/or execute any corrective action to cure the default, terminate this Contract in whole or in part:
 - a. If the Supplier fails to deliver any or all of the Equipments within the time period(s) specified in the Contract; or
 - b. If the Supplier fails to perform any other obligation(s) under the Contract.

- c. On termination of the Contract for default, the security deposit of the Supplier will be forfeited.
- d. On termination of the Contract for default, action will be taken to black list the Supplier.

3.19.0 Termination for Insolvency

- i. The Purchaser may at any time terminate the Contract by giving written notice to the Supplier, without compensation to the Supplier, if the Supplier becomes bankrupt or otherwise insolvent, provided that such termination will not prejudice or affect any right of action or remedy which has accrued or will accrue thereafter to the Purchaser.

3.20.0 Termination for Convenience

- i. The Purchaser shall have the right to terminate the Contract in whole or in part at any time for its convenience. The notice of termination shall specify that termination is for the Purchaser's convenience, the extent to which performance of work under the contract is terminated and the date upon which such termination becomes effective.
- ii. The Goods those are complete and ready for shipment within two (02) weeks after the Supplier's receipt of notice of termination shall be purchased by the Purchaser at the Contract terms and prices. For the remaining Goods the Purchaser may elect:
 - to have any portion completed and delivered at the Contract terms of prices, and/or
 - to cancel the remainder and pay to the Supplier an agreed amount for partially completed Goods and for materials and parts previously procured by the Supplier.

3.21.0 Resolution of Disputes:

- i. In the case of dispute or difference arising between the Purchaser and the Supplier relating to any matter connected with this contract, the same shall be settled through amicable negotiations, failing which, the dispute shall be referred to arbitrator in accordance with the provisions of the Indian Arbitration and Conciliation Act, 1996 and any

re-enactment(s) and /or modifications thereof and the rules framed there under shall apply to arbitration proceedings, and the Arbitrator's decision shall be final & binding. The language of arbitration shall be English. The venue of the conciliation and/or arbitration proceedings shall be in Delhi, India.

Chapter 4

Conditions for Submission of Bids:

4.1.0 Contents of Bid: The Bids prepared by the Bidder shall comprise of the following two components:-

a) Technical cum commercial Bid (Price to be quoted in Price Bid only) comprising of the following and to be filled on the format sheets provided in each Tender Document. This is mandatory:	
i)	Bidders Particulars (Annexure VI)
ii)	Bid Form (Annexure VII)
iii)	Technical Specifications of the Equipments (Annexure II). Deviations to be recorded in the format.
iv)	Guarantee/Warranty (Annexure VIII)
v)	A Demand Draft/Bank Guarantee in favour of Petroleum Conservation Research Association, New Delhi towards Tender Fee of Rs. 1,000/- (copy of the receipt in case of Tender Purchase to be enclosed)
vi)	All technical brochures/documents relevant to the Bid
vii)	Copies of ST/VAT Regn. & Clearance Certificates
viii)	A Demand Draft/Bank Guarantee in favour of Petroleum Conservation Research Association, New Delhi towards EMD of Rs. 4,00,000/-
ix)	Check List of Technical Bid (Annexure IX)
x)	Prior Experience (Annexure XII)
xi)	Check List for Tender (Annexure XIII)
b) Price Bid comprising of the following and to be filled in accordance with the formats provided in the Tender Document:	
i)	Bid Letter (Annexure X)
ii)	Price Schedule (Annexure XIV)
iii)	Check List of Commercial Bid (Annexure XI)

4.2.0 Procedure for Submission of Bids:

It is proposed to have a Two-bid System for this tender.

- a) Technical cum Commercial Bid in one cover super scribing "Technical cum Commercial Bid", 'Tender for Digital Electronic Countdown Timers and Variable Message Signs (VMS) and date of opening". Please note that prices should not be indicated in the Technical Bid.
- b) Price Bid in one cover super scribing "Price Bid for Tender for Digital Electronic Countdown Timers and Variable Message Signs (VMS) ".

- c) Both the Technical Bid cover and Price Bid Cover prepared as above are to be kept in a single sealed cover super scribed with "Tender for Digital Electronic Countdown Timers and Variable Message Signs (VMS)" and date of opening.
- d) All the covers should also indicate clearly the name and address of the Bidder.

4.3.0 Time period for completion

The job of supply and installation of these Digital Electronic Countdown Timers and Variable Message Signs (VMS) shall be completed within 90 days of the award of the work.

4.4.0 Payment terms

The selected Firm would be entitled for payment as per the terms and conditions enumerated below:

- a. Within 30 days of the submission of the bills at PCRA headquarters at DELHI duly certified and verified by the SRO concerned after installation and commissioning of the Digital Electronic Countdown Timers and Variable Message Signs (VMS).
- b. Payment shall be allowed once in a month.
- c. Bidders can club bills of many location after following the procedure as stated above and can submit a consolidated bill.
- d. Bills without proper certification and verification shall be duly returned to the bidder. No communication shall be entertained directly by the bidders regarding certification/verification of the bills.
- e. The bills shall be prepared in three copies. All the three copies are to be certified and verified by the respective PCRA officers. The original copy for payment shall be submitted with the consolidated bill. The second copy shall be retained by the concerned SRO and the third copy shall be for the bidder for records.
- f. As far as possible, PCRA shall issue " At Par' Cheques payable at Corporation Bank branches. PCRA shall not be liable for any delay towards the receipt of money in your account.

4.5.0 Price Bid

The price bid with the total quoted cost in the proforma as per Annexure-XV is to be submitted in a separate sealed envelope. Both the technical and price bids shall be sealed in separate envelopes, which shall be together enclosed in a sealed envelope with the name of the work and Tender Number clearly marked along with the date of opening.

(Overleaf of the envelope should clearly specify the title).

4.6.0 Submission of Tender documents

The bidder shall submit the following document along with the tender.

1. EMD of Rs. 4 Lakhs in the form of Demand Draft/ Bank guarantee from a nationalized/scheduled bank in favour of PCRA payable at Delhi.
2. The Detailed corporate brochure of your company and the works carried out by you.
3. Particulars of company.
4. Qualifying requirement for procurement and installation.
5. Details and proof of full-fledged office at Metros cities and other major cities.
6. All the forms should be complete with required certificate/ documents mentioned therein.
7. Each page of tender document is to be signed by the authorized person of the tenderer.

4.7.0 Evaluation of Tenders

4.7.1 Preliminary Scrutiny

Preliminary scrutiny of the tender document will be made to determine whether the documents have been properly signed, EMD deposited, all relevant papers are submitted and the bids are generally in order.

Tenders not conforming to such preliminary requirements will be prima facie rejected.

4.7.2 Screening of pre-qualification criterion

A Screening Committee, on the basis of pre qualifying criterion, will undertake the screening of all tenders. The bidders must essentially meet all pre-qualification criterions. Any agency not meeting any of the pre-qualification requirements will not be short listed for final evaluation.

4.7.3 Other Important information

1. Tender should remain valid for 90 days from the closing date of the proposals.
2. PCRA is not bound to accept the lowest or any tender or to assign any reason for non-acceptance. PCRA reserves its right to accept the tender either in full or in part. Conditional and incomplete Bids will be rejected outright.
3. PCRA reserves its right to summarily reject offer received from any agency on national security considerations, without any intimation to the bidder.
4. **PCRA reserves the right to place an order for the full or part quantities under any items of work under scope of work.**
5. Bidders will not be permitted to alter or modify their bids once submitted.

6. No mobilization advance will be paid.
7. **Penalty Clause-** After award of the contract, any delay in the execution of the contract shall be governed by the Clause 3.10.0 and 3.11.0 under the section delay in suppliers performance and liquidity damages and finally shall be subjected to maximum of forfeiting of the performance guarantee of the firm.
8. **Termination by Default-** PCRA reserves the right to terminate contract of any bidder(s) in case of change in the Government procedures or unsatisfactory services.
9. **Force Majeure-** Neither party will be liable in respect of failure to fulfill its obligations, if the said failure is entirely due to Acts of God, Governmental restrictions or instructions, natural calamities or catastrophe, epidemics or disturbances in the country. The party affected by an event of Force Majeure will immediately notify the other party of such an event and will also notify the unaffected party on cessation of disability resulting from such Force Majeure act.

10. Arbitration -

- (I) The Sole Arbitrator shall be selected by the Firm out of a panel of 3 (three) persons nominated by the PURCHASER for the purpose of such selection, and should the FIRM fail to select an arbitrator within 30 (thirty) days of the panel of names of such nominees being furnished by the PURCHASER for the purpose, the Sole Arbitrator shall be selected by the PURCHASER out of the said panel.
- (II) Any dispute(s) of difference(s) with respect to or concerning or relating to any of the following matters are hereby specifically excluded from the scope, purview and ambit of this Arbitration Agreement with the intention that any dispute or difference with respect to any of the

said following matters and or relating to the Arbitrator's or Arbitral Tribunal's jurisdiction with respect thereto shall not and cannot form the subject matter of any reference or submission to arbitration, and the Arbitrator or the Arbitral Tribunal shall have no jurisdiction to entertain the same or to render any decision with respect thereto, and such matter shall be decided by the General Manager prior to the Arbitrator proceeding with or proceeding further with the reference. The said excluded matters are:

- a. With respect to or concerning the scope or existence or otherwise of the Arbitration Agreement;
- b. Whether or not a Claim sought to be referred to arbitration by the firm is a Notified Claim;
- c. Whether or not a Notified Claim is included in the firm's Final Bill
- d. Whether or not the firm has opted for the Alternative Dispute Resolution Machinery with respect to any Notified Claim included in the firm Final Bill.

(III) The provisions of the **Indian arbitration & CONCILIATION Act, 1996** and any re-enactment(s) and/or modification(s) thereof and of the Rules framed there under shall apply to arbitration proceedings pursuant hereto subject to the following conditions:

- a. The Arbitrator shall give his Award separately in respect of each Claim and Counter-Claim; and
- b. The arbitrator shall not be entitled to review any decision, opinion or determination (howsoever expressed), which is stated to be final and/or binding on the FIRM in terms of the Contract Documents.

(IV) The venue of the arbitration shall be New Delhi or any other place as decided by the purchaser.

- (V) In case of any difference of opinion or any dispute arising out of any matter pertaining to this arbitration, the decision of Executive Director, PCRA shall be final and binding on both the agencies.
11. **Jurisdiction** - The contract shall be governed by laws of India and all Government rules on purchase matter issued from time to time and force for the time being are applicable to this contract tender. All the disputes will be settled in Delhi Court only.

CHAPTER 5

TECHNICAL SPECIFICATIONS OF DIGITAL ELECTRONIC COUNTDOWN TIMERS (DCT) VARIABLE MESSAGE SIGNS (VMS) (Enclose with Technical Bid)

The specifications fozen by PCRA is enclosed for your kind perusal. However, manufacturers are free to quote a better specification. Advantage shall be taken by PCRA for better specification in case the bid prices are same.

5.1.0 DCT/VMS Requirements Definition

Specifications define the requirements for the Digital Electronic countdown timers and Variable Message Sign system (VMS).

The DCT are programmable devices which indicates the waiting time for the vehicle at any traffic junction during the stoppage time. VMSs are to be programmable traffic control devices that display messages composed of letters, pre-defined symbols or both. They are used to provide information about changing conditions in order to improve operations, reduce accidents, and inform travellers. The information displayed on VMSs can be classified as advice, warnings, guidance and other requirements. Some definitions to be incorporated in the VMS have been indicated in the schedule of the tender.

5.2.0 Technical Requirements

The detailed specifications are listed in the Annexure II

PCRA requires the following sizes of the DCT and the VMS:

DCT	:12 inch (height) x 12 inch (width)
VMS	:1 feet (height) x 4 feet (length)

5.3.0 Sign Technologies

Electronic - High Luminosity wide viewing angle Oval LEDs for outdoor ambient light. Hood arrangement should also be there for each LED for improved visibility.

5.4.0 Display Requirements

The display background shall be non-reflective and the display shall be U.V. resistant. There are 3 types of displays:

- Text only display, and these shall be displayed in two contrasting colours (Red & Amber)
- Graphics only display
- This display must be able to produce colours (2 colours only) and shapes according to the standard road traffic requirements
- Combination display, i.e. which combines the text only and graphics only units into one unit.

The display area will be one continuous bit-addressable matrix in the following two sizes :-

DCT	:12 inch (height) x 12 inch (width)
VMS	:1 feet (height) x 4 feet (length)

There should be no material such as transparent glass or polycarbonate sheet etc. in front of the LEDs, which may reduce the visibility.

The display panels should be housed in weatherproof casing and it should be possible to clean the LEDs from outside.

Normally two lines of text characters of font size 300mm x 450mm would be displayed. However, fonts from 265mm x 265mm to 450mm x 450mm should be available for displaying more lines if required. The over all luminosity shall be a minimum of 9000 cd/m

5.5.0 Language Requirements

The system must be bilingual as has been detailed in the tender.

5.6.0 Sign Data Storage

Each individual VMS's shall be able to store all the required data for displaying information locally. The equipment shall be capable of storing minimum 3 messages and should need require, there should be facility to change the messages.

5.7.0 Location of Equipment

The location of the equipment shall be strategically placed to:

- Ensure maximum visibility for the road user from all the traffic lanes of the carriageway,
- Allow the road user sufficient time to read and comprehend the message and react.

Equipment shall be placed off-shoulder (pole mounted) and clear of the traffic and any emergency lane and position shall be determined so that extraneous effects such as direct sunlight are negated with consent of the traffic authorities. The Details of the same has been mentioned in the schedule of the tender.

5.8.0 Power requirements

DCT/VMSs shall be powered by 230V AC, 50 Hz single phase power supply. The equipment components shall have adequate surge and lightning protection. Power shall be drawn from the existing traffic pole.

5.9.0 Design life

The minimum design life for the equipment before replacement shall be 04 (four) years.

Annexure: I**Transport Sector**

State wise Transport Density in India
(As per data of Ministry of Road Transport)

<u>Sl.</u>	<u>State</u>	<u>No. of Vehicles (in lakhs)</u>	<u>%age of total</u>	<u>Rank</u>
1	Maharashtra	89.69	12.33	1
2	Tamilnadu	85.75	11.79	2
3	Gujarat	70.87	9.75	3
4	Uttar Pradesh	64.60	8.88	4
5	Andhra Pradesh	57.19	7.80	5
6	Delhi	25.48	5.83	6
7	Karnataka	39.77	5.47	7
8	Rajasthan	38.34	5.27	8
9	Madhya Pradesh	38.04	5.23	9
10	Punjab	35.29	4.85	10
11	Kerala	27.92	3.84	11
12	Haryana	25.48	3.50	12
13	West Bengal	25.48	3.50	13
14	Orissa	15.25	2.10	14
15	Jharkhand	12.17	1.67	15
16	Chattisgarh	12.16	1.67	16
17	Bihar	7.51	1.03	17
18	Assam	7.27	1.00	18
19	Chandigarh	5.86	0.81	19
20	Uttaranchal	5.16	0.71	20
21	Jammu & Kashmir	4.39	0.60	21
22	Goa	4.36	0.60	22
23	Pondichery	3.13	0.43	23
24	Himachal Pradesh	2.89	0.40	24
25	Nagaland	1.72	0.24	25
26	Manipur	1.06	0.15	26
27	Tripura	0.76	0.10	27
28	Meghalaya	0.73	0.10	28
29	Daman & Diu	0.48	0.06	29
30	Mizoram	0.42	0.06	30
31	Dadra & Nagar Haveli	0.35	0.05	31
32	Andaman & Nicobar	0.28	0.04	32
33	Arunachal Pradesh	0.21	0.03	33
34	Sikkim	0.17	0.02	34
35	Lakshadweep	0.05	0.01	35
Total		727.00		

Annexure: II

TECHNICAL SPECIFICATIONS			
A.MESSAGE SIGN BOARD	Our Specifications	Bidders specifications	Deviations
No of rows of LEDs per feet	16		
No of columns	96		
Dot size	20 mm Pixel Pitch		
LED type	High bright Oval shape Potted led		
Color of LED	Ultra Bright-Red & Yellow		
Viewing Angle	Horizontal 100 & Vertical 40		
Visibility	Up to 300 Meters		
Language displayed	Bilingual		
Operating temperature	0 to 70 deg		
Relative humidity	0 to 90%		
Case material	Powder Coated MS cabinet		
Cabinet dimensions	L:1382mmXH:270mmXW:66mm with clear display of 4'(Feet) x 1'(feet)		
Front cover	Potted LED with Hood (No separate front cover)		
Operating voltage	180-250 V AC 50 Hz Single phase		
Power Supply	5VDC, 1 Amp per LED Module /100W SMPS		
LED Drivers	16x16 Pixel LED Driver		
LEDmounting PCB	IP65 protected 16 x 16 Pixel Matrix LED Module with row wise hood		
Switching	electronic based on Traffic Signal		
Intensity of LED	6300 mcd		
Density of LEDs	2400 pixel/sq mtr		
Type of Technology used	Micro-controller Based System Design		
IP Rating	IP 65		

Contd..Annexure: II

B.DIGITAL REVERSE COUNTER			
LED's	High efficiency 5MM Bright RED LED		
Display	2 ½ digit		
Maximum count	199		
Digit size	208mm x 115 mm (Each Digit Size)		
Mode of counting	Lamp drive signal (Red,Amber, Green) derived from main signal group of Traffic controller used as input signal;Sensing GREEN,AMBER,RED.signls in first cycle.and confirmation of timing in second cycle; Microprocessor/ Microcontroller based system design		
Visibility	100 Mtrs Minimum		
Cabinet	Powder Coated MS Cabinet with minimum 140mm hood		
Power consumption	30VA ;input voltage Derived from lamp drive lines (180-250 VAC 50 Hz) of a fixed time traffic controller		
Mounting	Retrofit to existing signals/Pole mountable		
IP rating	IP 65		

Annexure: III

Details of the Traffic Intersections where CDTs and DDB will be installed									
SL No.	State	Names of cities and Number of Traffic intersections in that city						Bidders Presence	NO of TS/DCT/VMS installed.(Give individual details)
		City 1	No	City 2	No	City 3	No		
1	Maharashtra	Mumbai	15	Pune	8				
2	Tamilnadu	Chennai	10	Other	5				
3	Gujarat	Ahmedabad	5	Other	5				
4	Uttar Pradesh	Lucknow	8	Kanpur	5	Agra	5		
5	Andhra Pradesh	Hyderabad	8	Other	5				
6	Delhi	Delhi	15						
7	Karnataka	Bangalore	8	Other	5				
8	Rajasthan	Jaipur	5	Other	5				
9	Madhy Pradesh	Bhopal	5	Other	5				
10	Punjab	Jalandhar	5	Ludhiana	5				
11	Kerala	Kochi	5	Other	5				
12	Haryana	Gurgaon	5	Other	2				
13	West Bengal	Kolkota	10	Other	5				
14	Orissa	Bhubneshwar	5						
15	Jharkhand	Ranchi	5	Jamshedpur	5				
16	Chattisgarh	Raipur	5						
17	Bihar	Patna	5						
18	Assam	Guwahati	5						
19	Chandigarh	Chandigarh	10						
20	Uttaranchal	Dehradun	5						
21	Jammu & Kashmir	Srinagar	5	Jammu	5				
22	Goa	Panji	5						
23	Pondichery		2						
24	Himachal Pradesh	Shimla	2						
25	Nagaland		2						
26	Manipur		2						
27	Tripura		2						
28	Meghalaya		2						
29	Damman & Diu		2						
30	Mizoram		2						
31	Arunachal Pradesh		2						
32	Sikkim		2						
33	Lakshadweep		0						
34	Misc		6						

Note: It is assumed that One (1) Traffic Intersection consists of 4 DCT and 4 VMS.

Annexure: IV

FORM OF BANK GUARANTEE
(On Non Judicial Stamp Paper of Rs. 100/-)
IN LIEU OF SECURITY DEPOSIT/INITIAL SECURITY DEPOSIT

BG NO:.....

DATED:

VALID UPTO:.....

To,

PETROLEUM CONSERVATION RESEARCH ASSOCIATION
Sanrakshan Bhavan, 10 Bhikaji Cama Place, New Delhi 110 066

Dear Sirs,

In consideration of Petroleum Conservation Research Association (Hereinafter called "the Owner " which expression shall include its successors and assigns), having awarded certain work for and relative to (Name of the Project/Work) to(Name and Address of the Firm) (hereinafter called "The Firm" which expression shall include its successors and assigns). Upon certain terms and conditions inter-alia mentioned in the Owner's Letter of Acceptance No.....dated.....read with the relative Tender Documents (hereinafter collectively called "the Contract", which expression shall include any formal contract entered into between the Owner and the Firm in supersession of the said Letter of Acceptance and all amendments and/or modification in the contract) inclusive of the condition that the Owner may accept a Bank Guarantee/undertaking of a Scheduled Bank in India in lieu of Cash Deposit of the Initial Security Deposit as provided for in General Conditions of Contract forming part of the said Tender Document.

We(Name of the Bank), a body registered/constituted under the Act, having our Registered Office/Head Office at(hereinafter called "the Bank" which expression shall include its successors and assigns), at the request of the Firm and with the intent to bind the Bank and its successors and assigns, do hereby unconditionally and irrevocably undertake to pay to the Owner at New Delhi forthwith on first demand without protest or demur or proof of

satisfaction and without reference to this guarantee upto an aggregate limit of Rs.(Rupeesonly).

AND the bank do hereby further agrees as follows:

- (i) This *Guarantee/Undertaking* shall be a continuing guarantee and shall remain valid and irrevocable for all claims of the Owner upon the Bank made up to the midnight of.....provided that the Bank shall upon the written request of the Owner made upon the Bank at any time within 6 (six) months from the said date extend the validity of the bank *Guarantee* by a further 6 (six) months so as to enable claims to be made under this *Guarantee* by a further 6 (six) months from the said date with the intent that the validity of this *Guarantee* shall automatically stand extended by a further 6(six) months upon such request by the Owner.
- (ii) The Owner shall have the fullest liberty without reference to the Bank and without affecting in any way the liability of the Bank under this *Guarantee/Undertaking*, at any time and/or time and/or from time to time to amend or vary the *Contract* and/or any of the terms and conditions thereof or relative to the said initial *Security Deposit* or to extend time to time any of the obligations of the Owner and/or the powers or remedies exercisable by the Owner against the Firm and either to enforce or forbear from enforcing any of the terms and conditions of or governing the said *Contract* or the said *Initial Security Deposit* or the securities available to the Owner or any of them and the Bank shall not be released from its liability under these presents and the liability of the Bank hereunder shall remain in full force and effect notwithstanding any exercise by the Owner of the liberty with reference to any or all the matters aforesaid or by reason of time being given to the Firm or any other forbearance, act of omission on the part of the Firm or of any indulgence by the Owner to the *Agencies* or of any other act, matter or thing whatsoever which under the law relating to sureties or otherwise which could but for the provision have the effect of releasing the bank from its liability hereunder or any part thereof and the Bank hereby specifically waives any and all contrary rights whatsoever.
- (iii) The obligations of the Bank to the Owner hereunder shall be as principal to principal and shall be wholly independent of the

contract and it shall not be necessary for the Owner to proceed against the Firm before proceeding against the bank and the Guarantee/undertaking herein contained shall be enforceable against the bank notwithstanding the existence of any other Guarantee/undertaking or security for any indebtedness of the Firm to the Owner (including relative to the said Security Deposit) and notwithstanding that any such undertaking or security shall at the time when claim is made against the Bank or proceedings taken against the bank hereunder, be outstanding or unrealized.

- (iv) The amount stated by the Owner in any demand, claim or notice made with reference to this guarantee shall as between the bank and the Owner for the purpose of these presents be conclusive of the amount payable by the bank to the Owner hereunder.
- (v) The liability of the bank to the Owner under this Guarantee/undertaking shall remain in full force and effect notwithstanding the existence of any difference or dispute between the Firm and the Owner, the Firm and the bank and /or the Bank and the Owner or otherwise howsoever touching or affecting these presents for the liability of the Firm to the Owner, and notwithstanding the existence of any instructions or purported instructions by the Owner or any other person to the Bank not to pay or for any cause withhold or defer payment to the Owner under these present, with the intent that notwithstanding the existence of such difference, dispute or instruction, the Bank shall be and remain liable to make payment to the Owner in terms hereof.
- (vi) The Bank shall not revoke this undertaking during its currency except with the previous consent of the Owner in writing and also agrees that any change in the constitution of the Firm or the Bank or the Corporation shall not discharge the bank's liability hereunder.
- (vii) Without prejudice to any other mode of service, a demand or claim or other communication may be transmitted by fax. If transmitted by fax, the transmission shall be complete as soon as acknowledged by bank.

(viii) Notwithstanding anything contained herein:

- a) The Bank's liability under this guarantee/undertaking shall not exceed (Amount in figures & words);
- b) This guarantee/undertaking shall remain in force upto.....and any extension(s) thereof: and
- c) The Bank shall be released and discharged from all liability under this guarantee/undertaking unless a written claim or demand is issued to the Bank on or before.....or the date of expiry of any extension(s) thereof if this guarantee/undertaking has been extended.

(ix) The Bank do hereby declare that Shri.....(Name of the person signing on behalf of the Bank) who is.....(his designation), is authorized to sign this undertaking on behalf of the Bank and to bind the Bank hereby.

Dated this.....day of200.....

Yours faithfully,

Signature:.....

Name & Designation:.....

Name of the Branch:

Dated.....

FORM OF CONTRACT

THIS CONTRACT made at New Delhi this.....day of;
BETWEEN PETROLEUM CONSERVATION RESEARCH ASSOCIATION
having its Headquarters at Sanrakshan Bhavan, 10 Bhikaji Cama Place, New
Delhi 110 066 (hereinafter referred to as the "OWNER" which expression
shall include its successors and assigns) of the One Part; AND
..... carrying on business in sole
proprietorship/carrying on business in partnership/carrying on business in
company registered under Indian Company's Act 1956..... (hereinafter
referred to/as collectively referred to as the "Agency" which expression
shall include his/their/its executors, administrators, representatives and
permitted assigns/successors and permitted assign) of the other part:

WHEREAS

The OWNER desires to have executed the work of
.....
.....more specifically mentioned and
described in the contract documents (hereinafter called the "work"
which expression shall include all amendments therein and/or
modifications thereof) and has accepted the tender of the FIRM for
the said work.

NOW, THEREFORE. THIS CONTRACT WITNESSETH as follows:

ARTICLE -1

CONTRACT DOCUMENTS

- 1 The following documents shall constitute the Contract documents,
namely:
 - a. This contract;
 - b. Tender documents as defined in the General Instructions to
Tenderers;

c. Letter of Acceptance of Tender along with Fax/Telegram of Intent.

1.1 A copy of each of the Tender Documents is annexed hereto and the said copies have been collectively marked annexure 'A' while a copy of the Letter of Acceptance of Tender along with annexures thereto and a copy of Fax/Telegram of Intent datedare annexed hereto and said copies have been collectively marked as Annexure - 'B'.

ARTICLE -2

WORK TO BE PERFORMED

2.1 The Firm shall perform the said work upon the terms and conditions and within the time specified in the Contract Documents.

ARTICLE -3

COMPENSATION

3.1 Subject to and upon the terms and conditions contained in the Contract documents, the OWNER shall pay FIRM compensation as specified in the Contract documents upon the satisfactory completion of the work and/or otherwise as may be specified in the Contract documents.

ARTICLE-4

JURISDICTION

4.1 Notwithstanding any other courts having jurisdiction to decide the questions(s) forming the subject matter of the reference if the same had been the subject matter of a suit, any and all actions and proceedings arising out of or relative to the contract (including any arbitration in terms thereof) shall lie only in the court of competent civil jurisdiction in this behalf at Delhi. (where this Contract has been signed on behalf of the OWNER) and only the said Court(s) shall have jurisdiction to entertain and try any such actions(s) and/or proceeding(s) to the exclusion of all other Courts.

ARTICLE-5

ENTIRE CONTRACT

- 5.1 The Contract documents mentioned in Article-1 hereof embody the entire Contract between the parties hereto, and the parties declare that in entering into this Contract they do not rely upon any previous representation, whether express or implied and whether written or oral, or any inducement, understanding or agreements of any kind not included within the Contract documents and all prior negotiations, representations, contract and/or agreements and understandings relative to the work are hereby cancelled.

ARTICLE-6

NOTICES

- 6.1 Subject to any provisions in the Contract documents to the contrary, any notice, order or communication sought to be served by the FIRM on the OWNER with reference to the Contract shall be deemed to have been sufficiently served upon the OWNER (notwithstanding any enabling provisions under any law to the contrary) only if delivered by hand or by Registered Acknowledgment Due Post to the Engineer-in-Charge as defined in the General Conditions of Contract.
- 6.2 Without prejudice to any other mode of service provided for in the Contract Documents or otherwise available to the OWNER, any notice, order or other communication sought to be served by the OWNER on the CONTRACTOR with reference to the Contract, shall be deemed to have been sufficiently served if delivered by hand or through Registered Post Acknowledgement Due to the principal office of the FIRM at or to the FIRM's representatives as referred to in the General Conditions of Contract forming part of the Contract Documents.

ARTICLE-7

WAIVER

7.1 No failure or delay by the OWNER in enforcing any right or remedy of the OWNER in terms of the Contract or any obligation or liability of the FIRM in terms thereof shall be deemed to be a waiver of such right, remedy, obligation or liability, as the case may be, by the OWNER and notwithstanding such failure or delay, the OWNER shall be entitled at any time to enforce such right, remedy, obligation or liability, as the case may be.

ARTICLE-8

NON-ASSIGNABILITY

8.1 The Contract and benefits and obligations thereof shall be strictly personal to the FIRM and shall not on any account be assignable or transferable by the FIRM.

IN WITNESS WHEREOF the parties hereto have executed this Contract in duplicate the place, day and year first above written.

SIGNED AND DELIVERED

SIGNED AND DELIVERED

For and on behalf of

For and on behalf of

Firm

PETROLEUM CONSERVATION RESEARCH ASSOCIATION

By.....(this day of2007)

By..... (this day of2007)

In the presence of:

1.

2.

BIDDER PARTICULARS
(Enclose with Technical Bid)

1. Name of the Bidder :

2. Address of the Bidder :

3. Name of the Manufacturer(s) :

4. Address of the Manufacturer :

5. Name & address of the person to whom all references shall be made regarding this tender enquiry. :

Telephone :

Fax :

e-mail :

Witness:

Signature

Signature

Name

Name

Address

Designation

Date

Company Seal

Date

BID FORM
(Enclose with Technical Bid)

Date: ___/___/___

Additional Director (Field Activities)
Petroleum Conservation Research Association
(Ministry of Petroleum & Natural Gas)
Sanrakshan Bhavan
10, Bhikaji Cama place
New Delhi 10066

Sir,

Having examined the Bid Documents of **TENDER NO.** _____
We, _____, offer to supply and deliver _____
(Name of the Firm)

(Description of Equipment and Services)

in conformity with the said tender provisions for sums as may be ascertained in accordance with the Schedule of Prices provided in the Commercial Bid.

We undertake, if our bid is accepted, to complete delivery, installation and commissioning of the equipment as per the schedule specified in the Tender.

We further undertake that, if our bid is accepted, we will obtain the Guarantee of a Scheduled Bank in a sum equivalent to 10% of the Contract Price for the due Performance of the Contract as per **terms and conditions** of the Tender.

We agree to abide by this bid for a period of 90 days from the date fixed for bid opening and it shall remain binding upon us and may be accepted at any time before the expiration of that period. This bid together with your written acceptance thereof and your notification of award shall constitute a binding Contract between us.

We have noted the contents of Contract Form and agree to abide by terms and conditions in the same.

We understand that you are not bound to accept the lowest or any bid you may receive. We also understand that you have the right to vary the quantities and/or split the total order among the Bidders and/or procure the available and compatible items/ equipments under DGS&D Rate Contract.

SIGNATURE AND SEAL OF BIDDER

G U A R A N T E E / W A R R A N T E E
(Enclose with Technical Bid)

To
Additional Director (Field Activities)
Petroleum Conservation Research Association
(Ministry of Petroleum & Natural Gas)
Sanrakshan Bhavan
10, Bhikaji Cama place
New Delhi 10066

Ref: TENDER FOR -----

We guarantee that everything to be supplied and fabricated by us hereunder shall be brand new, free from all encumbrances, defects and faults in material, workmanship and manufacturer and shall be of the highest grade and quality and consistent with the established and generally accepted standards for materials of the type ordered and shall be in full conformity with the specifications, drawings or samples, if any, and shall operate properly. We shall be fully responsible for its efficient and effective operation. This guarantee shall be valid for a period up to **24 months** from the date of installation and acceptance of the goods by the Purchaser.

The obligations under the Guarantee expressed above shall include all costs relating to labour, repair, maintenance (preventive and unscheduled), and transport charges from site to manufacturers' works and back and for repair/adjustment or replacement at site of any part of the equipment/ item which under normal care and proper use and maintenance proves defective in design, material or workmanship or fails to operate effectively and efficiently or conform to the specifications and for which notice is promptly given by the Purchaser to the Supplier.

SIGNATURE OF THE WITNESS

SIGNATURE AND SEAL OF BIDDER

DATE _____

CHECK LIST - TECHNICAL BID
(Enclose with Technical Bid)

- | | | |
|-----|------------------------------------------------------------------------------------|---------|
| 1. | Have you purchased the tender document? | Yes/No |
| 2. | Have you furnished bidder's particulars furnished as per Annexure-VI | Yes/No |
| 3. | Have you furnished Bid Form (Annexure-VII) | Yes/No |
| 4. | Have you furnished tender fee demand draft? | Yes/No |
| 5. | Have you furnished Bid security (Earnest Money) ? | Yes/No |
| 6. | Do you fully comply with Technical Specifications? | Yes/No |
| 7. | Are you offering the goods & services as per delivery schedule? | Yes/No |
| 8. | Have you quoted for all the items of the tender? | Yes/No |
| 9. | Have you enclosed Tax registration and Clearance certificates? | Yes/No |
| 10. | Have you furnished the guarantee for supply of spares in the post warranty period? | Yes/No |
| 11. | Have you signed and sequentially numbered each page of your Bid? | Yes/No |
| 12. | Have enclosed the certificate as per clause 2.2.0(iii) | Yes/No |
| 13. | Have you noted the contents of Contract Form (Annexure-V) | Yes/No |
| 14. | Have you submitted design drawings of the DCT and VMS | Yes/No. |

BID LETTER
(Enclose with Commercial Bid)

To

Additional Director (Education Campaign)
Petroleum Conservation Research Association
(Ministry of Petroleum & Natural Gas)
Sanrakshan Bhavan
10, Bhikaji Cama place
New Delhi 10066

Ref: **Tender for purchase of Digital Electronic Countdown Timers (DCT) & Variable Message Signs (VMS)**

Sir,

We declare:

1. a) That we are manufacturers/suppliers of _____.
b) That we are equipped with adequate machinery for production, quality control and testing of materials manufactured and used by us and that our factory is open for inspection by your representatives.
2. We hereby offer to supply the Stores at the prices and rates mentioned in the Commercial Bid.
3. Period of Delivery: We do hereby undertake, that in the event of acceptance of our bid, the **supply of the equipments** shall be completed at site within **stipulated period** from the date of Award of Contract, and that we shall perform all the incidental services as per contract.
4. Terms of Delivery: The prices quoted are inclusive of all charges up to delivery at all the location (site) to be indicated by PCRA.
5. We enclose herewith the complete Commercial Bid as required by you and also enclosed the Check List.
6. We agree to abide by our offer for a period of 90 days from the date fixed for opening of the price Bids and that we shall remain bound by a communication of acceptance within that time.
7. We have carefully read and understood the terms and conditions of the tender and the conditions of the Contract applicable to the tender and we do hereby undertake to supply as per these terms and conditions.

8. Certified that the Bidder is:
a sole proprietorship firm and the person signing the tender is the sole proprietor/constituted attorney of the sole proprietor.
or
a partnership firm, and the person signing the tender is a partner of the firm and he has authority to refer to arbitration disputes concerning the business of the partnership by virtue of the partnership agreement/by virtue of general power of attorney.
or
a company and the person signing the tender is the constituted attorney.

NOTE: Delete whatever is not applicable. All corrections/ deletions should be duly attested by the person authorised to sign the tender document.

9. We do hereby undertake, that until a formal Contract is prepared and executed, this bid, together with your written acceptance thereof and placement of letter of intent awarding the contract, shall constitute a binding Contract between us.

Dated this _____ day of _____ 200_.

Signature of the Bidder

Details of enclosures:

Full address:

Telephone/Fax No.

Mobile No.

CHECK LIST - PRICE BID
(Enclose with Commercial Bid)

- | | |
|-------------------------------------------|--------|
| 1. Have you furnished the Bid Letter? | Yes/No |
| 2. Have you filled in the Price Schedule? | Yes/No |
| 3. Have you quoted for all the items. | Yes/No |

Prior Experience

Using the format below, provide information on each assignment for which your firm, was legally contracted either individually as a corporate entity or as one of the major companies within an association, for carrying out ad services should give information about maximum of five projects covering the areas of design as indicated.

Name of the Firm:	
Assignment /job name:	
Nature of Assignment:	
Description of Project:	
Approx value of the contract (in Rupees):	
Country	
Location within country:	
Duration of Assignment /job (months):	
Details of the signals covered	
Details of the Traffic Signals/DCT/VMS installed	
Start date (month /year):	
Completion date (month /year):	

Note : Please attach Letter of Intent or Purchase Order or certificate of successful completion for each project, from the respective Client(s).

Witness:

Authorized Representative

Signature/date _____ Signature/Date _____

Name _____ Name _____

Address _____ Designation _____

_____ Company _____

Seal

CHECK LIST
(TO BE ATTACHED WITH THE TENDER)

1.	NAME OF THE FIRM	
2.	CORRESPONDENCE ADDRESS WITH TELEPHONE AND FAX NO.	
3.	LOCAL ADDRESS WITH TELEPHONE AND FAX NO.	
4.	WEHTHER REGISTERED WITH NSIC, IF YES, ATTACH COPY	
5.	EARNEST MONEY Rs.4,00,000/- IN FORM OF BANK DRAFT	
6.	SALES TAX /VAT REGISTRATION CERTIFICATE	
7.	CURRENT/LATEST SALES TAX CLEARANCE CERTIFICATE.	
8.	EXCISE DUTY CERTIFICATE	
9.	LIST OF OWNERS/PARTNERS	
10.	WHETHER MANUFACTURER, IF YES, ATTACH COPY	
11	WHETHER YOU AGREE TO SUBMIT ADVANCE SAMPLE OF MAIN SUPPLY WITHIN 15 DAYS AFTER OPENING OF THE COMMERCIAL/ PRICE BID.	
12.	A CERTIFICATE TO THE EFFECT THAT THEY HAVE NOT BEEN BLACK LISTED BY ANY DEPARTMENT AND THAT NO CRIMINAL CASE/COMPLAINT IS PENDING AGAINST THEM.	
13.	HAS QUOTED THE RATES AS PER TENDERED TECHNICAL SPECIFICATIONS.	
14.	PROOF OF PAST PERFORMANCE (IF ANY)	
15.	COPY OF TERMS AND CONDITION DULY SIGNED	
16.	ANY OTHER CONDITION, SPECIFY WITH DETAILS	

SIGNATURES OF THE TENDERER WITH STAMP

PROFORMA FOR PRICE SCHEDULE

(To be enclosed with commercial bid)

Tender No. _____ General Branch (Traffic) dated _____

Date of opening _____ Time _____/hours

Sl. No.	Description of work/item	Qty.	Single Unit price in Indian Rupees for all locations*	Total Price in Indian Rupees for all locations*
A. i	DIGITAL ELECTRONIC COUNTDOWN TIMERS (DCT)	1000		
ii	VARIABLE MESSAGE SIGNS (VMS)	1000		
B	ANNUAL MAINTENANCE CONTRACT AFTER GUARANTEE PERIOD			
I	AMC for One Year (Lum Sum)	<i>LS</i>		

* The price should be indicated in NUMERIC as well as in WORDS.

- * The price for AMC is to be quoted for DCT and VMS together for 1000 number each.

Note:

- (i) All applicable taxes, duties are to be included in the quoted price and the breakup of each price component is to be indicated separately
- (iii) All pages of the Tender Document are to be signed and submitted as a token of Acceptance of the Tender Document and specifications. Deviations (if any) are to be clearly indicated separately.

It is hereby certified that we have understood all the terms & conditions specified in the tender document and are thoroughly aware of the nature of job required to be done and equipment/items to be supplied. We agree to abide by all the tender terms and conditions.

We hereby offer to carry out the job and (or) duly the store/items detailed above or such portion(s) thereof as you specify in the notification of award.

Dated:-

Signature and seal of Bidder