

**Selection of Vendor Firm for  
Supply and Maintenance of Electronic Fare  
Collection System for Bus Operations in  
Ranchi, Dhanbad and Jamshedpur (UA)**

**February , 2010**

**JHARKHAND TOURISM DEVELOPMENT CORPORATION Ltd.**

Tourist Complex, Hotel Birsa Vihar Campus, 5 Main Road, Ranchi – 834002

Telephone No: 0651-2331828; Email: [jtdeltd@gmail.com](mailto:jtdeltd@gmail.com)

# Disclaimer

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This RFP is being issued by the Urban Development Department, Govt. of Jharkhand (UDD) on behalf of Jharkhand Tourism Development Corporation (JTDC) for inviting tenders for Supply and Maintenance of Electronic Fare Collection System. It is hereby clarified that this RFP is not an agreement and is not an offer or invitation by JTDC to any parties hereunder. The purpose of this RFP is to provide the Bidder(s) with information to assist in the formulation of their proposals. While the RFP has been prepared in good faith with due care and caution, JTDC or any of its employees, advisors or consultants do not accept any liability or responsibility for the accuracy, reasonableness or completeness of the information, or for any errors, omissions or misstatements, negligent or otherwise, relating to any feasibility /detailed project report or any other reference document mentioned, implied or referred herein or pertaining to this Project. The information is not intended to be exhaustive. Interested parties are required to make their own inquiries and respondents will be required to confirm in writing that they have done so and they do not rely on the information in submitting a Bid. JTDC reserves the right not to proceed with the project, to alter the timetable reflected in this document or to change the process or procedure to be applied. It also reserves the right to decline to discuss the Project further with any party submitting a bid. No reimbursement of cost of any type will be paid to persons, entities, or consortiums submitting a Bid.

**1 Table of Contents**

- 1 Table of Contents ..... 3
- 2 RFP Summary ..... 5
- 3 Introduction ..... 6
  - 3.1 Purpose ..... 6
- 4 Reference ..... 6
  - 4.1 Scope of Services..... 6
- 5 Instructions to Bidders ..... 7
  - 5.1 Due Diligence ..... 7
  - 5.2 Cost of Bidding ..... 7
  - 5.3 Cost of Document ..... 7
  - 5.4 Clarification to RFP Documents ..... 7
  - 5.5 Proposal Process ..... 7
    - 5.5.1 Proposal Format..... 7
    - 5.5.2 Proposal Submission Format ..... 8
    - 5.5.3 Number of Copies of Bid ..... 8
    - 5.5.4 Validity Period ..... 8
    - 5.5.5 Submission Document Checklist ..... 8
  - 5.6 Eligibility Criteria ..... 8
  - 5.7 Bid Security ..... 8
  - 5.8 Technical Bid Evaluation Criteria ..... 8
  - 5.9 Determination of Successful Bidder..... 9
  - 5.10 Delivery of the Machines ..... 10
  - 5.11 Fraud and Corruption..... 10
- 6 Technical Bid Forms ..... 11
  - 6.1 Form 6A: Format for Proposal Covering Letter..... 11
  - 6.2 Form 6B: Format for Providing References ..... 12
  - 6.3 Form 6C: Organization Experience..... 13
  - 6.4 Form 6D: Comments and Suggestions on the Terms of Reference Provided by the Client ..... 14
  - 6.5 Form 6E: Proposed Maintenance Mechanism..... 15

7	Financial Bid Documents.....	16
7.1	Form 7A: Format for Financial Proposal Covering Letter .....	16
7.2	FORM 7B: Performance Security (Bank Guarantee).....	17
7.3	Form 7C: Summary of Pricing.....	18
7.4	Devices .....	18
	Appendix A - Responsibility Matrix.....	19
	Appendix B – Technical Specifications.....	20
	EFC (Handheld).....	20
	General Requirement.....	20
	Operational Requirements .....	20
	Other Requirement.....	<u>21</u> <del>20</del>
	Smart Card (SC).....	21
	General Requirements.....	21
	Interface Requirements .....	21
	EEPROM	22
	Security	22

## 2 RFP Summary

Project Title	Selection of vendor firm for supply and maintenance of Electronic Fare Collection (EFC) System in Ranchi, Dhanbad and Jamshedpur (UA)
Name Of Agency	Jharkhand Tourism Development Corporation Ltd. (JTDC)
Project Sites	Ranchi, Dhanbad and Jamshedpur
Description Of Work	Supply and maintenance of EFC System 265 (No.)
Contract Period	5 years
Date of Issue of RFP	06-02-10
Authority and Place for Purchase of RFP, Seeking Clarifications on the RFP , Submission of Bids	<b>Managing Director,</b> Jharkhand Tourism Development Corporation Ltd. Tourist Complex, Hotel Birsa Vihar Campus, 5 Main Road, Ranchi - 834002 Telephone No: 0651-2330538 Email: jtdcltd@gmail.com Fax No.: 0651-2331643
Pre-bid meeting	<b>1500 hrs on 17-02-10</b>
Venue of Pre-Bid Meeting	Chamber of Secretary, Urban Development Department, 4 <sup>th</sup> floor, Project Building, Ranchi
Bid Security Amount	Rs. 1,00,000/- (Rupees One Lakh Only)
Last Date and Time for Receipt of Bids	1400 hrs on 04-03-10
Bid Validity	6 months from bid opening date
Date and Time of making a demo and presentation to the client and opening of Technical Bid	1500 hrs on 04-03-10 in The chamber of Secretary, Urban Development Department, 4 <sup>th</sup> floor, Project Building, Ranchi
Date and Time of Opening of Financial Bid	04-03-10
Address for Correspondence	Jharkhand Tourism Development Corporation Ltd. Tourist Complex, Hotel Birsa Vihar Campus, 5 Main Road, Ranchi - 834002 Telephone No: 0651-2330538 Email: jtdcltd@gmail.com Fax No.: 0651-2331643
Performance Security Amount	Rs. 5,00,000/- (Rupees Five Lakhs Only)
Website	<a href="http://www.jharkhand.gov.in">www.jharkhand.gov.in</a> and <a href="http://jharkhand.nic.in">jharkhand.nic.in</a> .

### 3 Introduction

Urban Development Department on behalf of Jharkhand Tourism Development Corporation, invites technical and financial proposals from established and eligible firms for the Supply and maintenance of Electronic Fare Collection (EFC) System. The system is to be implemented for bus operations in Ranchi, Dhanbad and Jamshedpur in Jharkhand.

#### 3.1 Purpose

The purpose of introduction of city bus services is to offer better civic facilities and JTDC is committed to provide the bus passengers with the best service at reasonable prices. To this end, JTDC is adopting, in phases, Intelligent Transportation Systems (ITS) solutions with the following objectives:

- Electronic ticketing to get correct revenue collection, input on passenger load factors, and origin-destinations along the route. In addition, reduce fare leakages and passenger convenience by introducing smart cards.
- Continuously analyze the bus tracking system to constantly improve the bus operations and fleet management.
- Generate Reports and Management Information System (MIS) which can be used for monitoring and evaluation
- Provide accurate real-time passenger information on bus arrivals and departures to reduce passenger frustration levels and increase ridership;
- Develop acceptable service levels for passengers that are duly monitored.

### 4 Reference

JTDC is deploying new buses in three cities- Ranchi, Dhanbad and Jamshedpur – in the state of Jharkhand. Public transportation is being launched in these three cities to provide travel options to commuters and to combat congestion in the long run by reducing dependence on private vehicles. ITS is a cost-effective strategy that further enhances the public transportation experience. ITS is the application of advanced communications and technologies to transportation systems providing advanced monitoring, control, and traveler information capabilities that allow better real-time management of roads and transit systems. **While city wide ITS has been planned for the three cities to be implemented over a period of time, at the first level and immediate level, there is a need to purchase and deploy EFC System.** This smart card and paper ticket based EFC system needs to be implemented along with the launch of city bus operations in all the cities.

#### 4.1 Scope of Services

- Supply of EFC
- Supply of paper tickets on expense basis at the rates finalized on yearly basis

- Provide fare related MIS from the EFC
- Perform comprehensive tests for all the components at own cost to show proof-of-concept before deployment.
- Provide compatible software updates.
- Provide training on various components of the EFC system
- Maintain the hardware and software systems for the contract period (5 years) with minimum downtime.

## **5 Instructions to Bidders**

### **5.1 Due Diligence**

The Bidder is expected to examine all instructions, forms, terms and specifications in the RFP. The Bid should be precise, complete and in the prescribed format as per the requirement(s) of the RFP. Failure to furnish all information required by the RFP or submission of a Bid not responsive to the RFP in every respect will be at the Bidder's risk and may result in rejection of the Bid.

### **5.2 Cost of Bidding**

The Bidder shall bear all costs associated with the preparation and submission of its Bid and JTDC, will in no case be held responsible or be liable for these costs, regardless of the conduct or outcome of the Bidding Process.

### **5.3 Cost of Document**

The RFP Document would cost Rs. 1,000- (Rupees One Thousand only) payable in cash or in the form of a Demand Draft drawn in favor of MD, JTDC and payable at Ranchi. The Bidders who are downloading the RFP Document from Website shall deposit (in the form of a Demand Draft) the said cost of the RFP Document along with the Bid. In the event of failure to deposit the requisite cost by a Bidder, his Bid shall not be processed further.

### **5.4 Clarification to RFP Documents**

In the event that any Bidder requires any clarification on the RFP, such Bidder are expected to send their queries to JTDC at least 24 (twenty four) hours prior to the time of the Pre Bid Meeting in order to enable JTDC to have adequate notice of the said queries so that the same may be addressed at the Pre Bid Meeting.

### **5.5 Proposal Process**

#### **5.5.1 Proposal Format**

The bidding is a two stage process comprising the technical and the financial bid. The purpose of the technical bid is to ensure the technical and financial capability of the bidder to supply the products and services as required. In addition, the bidders will also be required to make the presentation and

demonstration of the machines to a committee. Financial bids of only those Bidders qualifying in the Technical Bid would be opened.

### **5.5.2 Proposal Submission Format**

The interested bidders are to submit their bids, in a sealed envelope with "Proposal for JTDC EFC System" written on top of the proposal document. The proposals must be submitted in two envelopes. The first envelope should contain the covering letter, capability statement, bid security and technical proposal. The second envelopment should contain the financial bid for procurement and installation of the EFC systems. The proposals should reach the office of MD, JTDC on or before the specified dates by 14:00 Hours (IST).

### **5.5.3 Number of Copies of Bid**

One original and one copy of the Technical Bid should be submitted and marked as "Technical Bid – Original" and "Technical Bid – Copy". Bidder shall submit only one original of the Financial Bid, clearly marking the same as "Financial Bid"

### **5.5.4 Validity Period**

The submitted bids shall remain valid for a period of 6 months from the date of bid opening by JTDC. JTDC reserves the right to reject a Bid as nonresponsive if such Bid is valid for a period less than 6 months and JTDC shall not be liable to send an intimation of any such rejection to such Bidder.

### **5.5.5 Submission Document Checklist**

Bidders would be required to submit the documents as per the formats enclosed in the RFP.

## **5.6 Eligibility Criteria**

Parties meeting with following qualifying criteria can only bid for this tender.

- Should have supplied and maintained at least 40 same/ similar EFC in the preceding three years.
- Should have entered at least one contracts valuing more than Rs 20 lakhs each
- Should have an average annual turnover of Rs 25 lakhs in the preceding three financial years.

## **5.7 Bid Security**

All bid submitted shall be accompanied by a Bid Security of sum of Rupees One Lakh in the form of a DD drawn in favour of Managing Director, Jharkhand Tourism Development. Any bid submitted without the Bid Security shall be summarily rejected.

## **5.8 Technical Bid Evaluation Criteria**

The two stage evaluation is based on technical and financial evaluations. First, the technical evaluation including the presentation/demo will be scored as per the evaluation criteria given in Table below. Teams with more than 60 points will be shortlisted.



**Table: Evaluation criteria and valuation of Technical Bids**

<b>SN</b>	<b>Qualification Criteria</b>	<b>Weightage Marks</b>	<b>Maximum Marks awarded</b>	<b>Evaluation Criteria</b>
1	<b>Presentation and demo to the Committee</b>	20	20	
2	<b>Supply of Similar Machines</b>			
2.2	Supply of at least 40 Machines	40	0	
2.3	Supply of more than 40 machines		20	1 marks/5 (no.) additional machines supplied
<b>3</b>	<b>Reference of previous clients</b>	<b>20</b>	<b>20</b>	<b>5 marks for every reference letter</b>
4	<b>Annual Turnover</b>			
4.1	Minimum Annual Turnover of Rs.20 lakhs	20	0	
4.2	Annual Turnover of more than Rs. 20 lakhs		20	1 mark for every additional Rs.2.5 lakhs above Rs. 20 lakhs
5	<b>Annual Net Worth</b>			
5.1	Minimum Annual Net worth of Rs. 25 lakhs	20	0	
5.2	Annual Net worth of more than Rs. 25 lakhs		20	1 mark for every additional Rs.2.5 lakhs above Rs. 25 lakhs
	<b>Total</b>	<b>100</b>	<b>100</b>	

Only those Technical Bids which score a minimum of 60 (sixty marks) out of a maximum of 100 (hundred marks) in the assessment at the end of the Technical Bid evaluation process will be considered for the Financial Bid evaluation.

### **5.9 Determination of Successful Bidder**

The successful Bidder shall be determined on the basis of Financial Bids. A sum total of the payments quoted in financial bid toward cost of machines and total monthly AMC fee to be paid for 60 months (5

Years) shall be calculated. The bidder with the lowest value will be declared as successful bidder. In case there is a tie then the bidder with the lower cost of machine will be declared as winner.

### **5.10 Delivery of the Machines**

The agreement to supply the machines will be signed within fifteen days of opening of financial bid. Successful bidder will have to provide a performance guarantee for Rs 5 lakhs (Rupees Five Lakhs only) at the time of signing of the agreement. The contractor will have to deliver the machines at Ranchi within ten days of the signing of the agreement, failing which his performance security will be forfeited.

### **5.11 Fraud and Corruption**

JTDC requires that the bidders, suppliers, and contractors and their subcontractors for this project, observe the highest standard of ethics during the procurement and execution of the contracts.

## 6 Technical Bid Forms

### 6.1 Form 6A: Format for Proposal Covering Letter

[Location, Date]

To:

Managing Director

Jharkhand Tourism Development Corporation Ltd.

Tourist Complex, Hotel Birsa Vihar Campus, Ranchi

5 Main Road, Ranchi - 834002

Dear Sir/ Madam:

We, the undersigned, offer to provide **EFC System for Ranchi, Dhanbad and Jamshedpur** in accordance with your Request for Proposal dated *06-02-10*. We are hereby submitting our Technical Proposal; the Financial Proposal is sealed under a separate envelope.

We hereby declare that all the information and statements made in this Proposal are true and accept that any misinterpretation contained in it may lead to our disqualification.

- We undertake, if our Proposal is accepted, to supply and operationalise the EFC system related to the assignment not later than the [insert date].
- We understand you are not bound to accept any Proposal you receive.

Yours sincerely,

Authorized Signature [*In full and initials*]: \_\_\_\_\_

Name and Title of Signatory: \_\_\_\_\_

Name of Firm: \_\_\_\_\_

Address: \_\_\_\_\_

**6.2 Form 6B: Format for Providing References**

Item	Reference 1	Reference 2	Reference 3
Name of the customer			
Organization			
Country			
Government/Nongovernment			
Geographical			
Coverage			
Contact Details			
Contact Person			
Name			
Designation			
Phone			
Email			
Website			

### 6.3 Form 6C: Organization Experience

[Using the format below, provide information on each assignment for which your firm, was legally contracted for carrying out services similar to the ones requested under this assignment. ]

Assignment name:	Approx. value of the contract (in current Rupees):
Name of Client:	
Address:	Approx. value of the Order provided by your firm under the contract (in current Rupees):
Start date (month/year): Completion date (month/year):	
Narrative description of Assignment:	

#### **6.4 From 6D: Comments and Suggestions on the Terms of Reference Provided by the Client**

*[Present and justify any modifications or improvement to the Terms of Reference. Such suggestions should be concise and to the point ]*

## **6.5 Form 6E: Proposed Maintenance Mechanism**

*[Present and justify the needs for maintaining the proposed EFC System for the contract period. The maintenance contract amount in the financial bid must be a factor of the monthly needs provided in this form.]*

## 7 Financial Bid Documents

### 7.1 Form 7A: Format for Financial Proposal Covering Letter

[Location, Date]

To:

MD, JTDC

Dear Sir:

We, the undersigned, offer to provide the **EFC System for Ranchi, Dhanbad and Jamshedpur** in accordance with your Request for Proposal dated 06-02-10. We are hereby submitting our Financial Proposal.

We hereby declare that all the information and statements made in this Proposal are true and accept that any misinterpretation contained in it may lead to our disqualification.

Yours sincerely,

Authorized Signature [*In full and initials*]: \_\_\_\_\_

Name and Title of Signatory: \_\_\_\_\_

Name of Firm: \_\_\_\_\_

Address: \_\_\_\_\_



## 7.2 FORM 7B: Performance Security (Bank Guarantee)

To: \_\_\_\_\_ [Name of Govt Official]

\_\_\_\_\_ [Address of Govt Official]

WHEREAS \_\_\_\_\_ [name and address of Contractor/Service Provider]

(Hereinafter called "the Contractor") has undertaken, in pursuance of Contract No. \_\_\_\_\_ dated \_\_\_\_\_ to execute \_\_\_\_\_ [Name of Contract and brief description of Works] (Hereinafter called "the Contract"); AND WHEREAS it has been stipulated by you in the said Contract that the Contractor shall furnish you with a Bank Guarantee by a recognized bank for the sum specified therein as security for compliance with his obligations in accordance with Contract; AND WHEREAS we have agreed to give Contractor such a Bank Guarantee; NOW THEREFORE we hereby affirm that we are the Guarantor and responsible to you, on behalf of the Contractor, up to a total of \_\_\_\_\_ [amount of Guarantee]<sup>3</sup> \_\_\_\_\_ [in words] such sum being payable in the types and proportions of currencies in which the Contract Price is payable, and we undertake in which the Contract Price is payable, and we undertake to pay you, upon your first written demand and without cavil or argument, any sum or sums within the limits of \_\_\_\_\_ [amount of Guarantee] as aforesaid without your needing to prove or to show grounds or reasons for your demand for the sum specified therein. We hereby waive the necessity of your demanding the said debt from Contractor before presenting us with the demand.

We further agree that no change or addition to or other modification of the terms of the Contract or of the Works to be performed there under or of any of the Contract documents which may be made between you and the Contractor shall in any way release us from any liability under this guarantee, and we hereby waive notice of any such change, addition or modification.

This guarantee shall be valid until the date.....

Signature and of the guarantor: \_\_\_\_\_

Name of Bank: \_\_\_\_\_

Address: \_\_\_\_\_

Date: \_\_\_\_\_

<sup>3</sup>An amount is to be inserted by the Guarantor, representing the percentage of the Contract Price specified in the Contract, and denominated either in the currency of the Contract.

### 7.3 Form 7C: Summary of Pricing

The price bid should contain the cost of EFC System in the following format:

#### Pricing Format

Sr. No.	Items	Amount	Remarks
1	EFC Device and Software Costs (including		
2	Installation Costs		
3	Out of Pocket Expenses (provide itemized summary)		
4	Miscellaneous Expenses		
5	Sub Total		
6	Service Tax or Any Other Tax		
7	Total (in Figures)		
8	Equated Monthly Installment (EMI) or maintenance cost for all EFC System	Payment per month	

### 7.4 Devices

EFC System	Device	Numbers	Unit Cost (Rupees)	Initial Capital Cost (Rupees)
<b>Electronic Ticketing</b>	Electronic Ticketing Device	265		
	Bulk Initialization Machine	1		
	Card Personalization Device	1		
<b>Software</b>	Fare Collection Software, if any	1		
<b>Other</b>	Other Consumables to include paper etc	LS		
<b>Total Costs</b>				

## Appendix A - Responsibility Matrix

Location	Entity	Items
Ranchi, Dhanbad and Jamshedpur (UA)	Vendor	EFC System (Software, Hardware)
		Providing the consumables like paper, Printer ribbons, smart cards,
		Maintenance support(24x7)

## **Appendix B – Technical Specifications**

Recommended functional/technical specifications:

### **EFC (Handheld)**

#### **General Requirement**

- ISO certified
- Equipment shall withstand rough working conditions of heat, cold, dust, moisture, vibrations, drops and rough usage.
- Handheld, battery operated, light weight (<750gms without battery) device
- 

#### **Operational Requirements**

- The unit shall have 4MB storage that is expandable up to 8MB. The memory storage should also be sufficient to allow 5 days transaction data on a busy route, device configuration data for the depot, maximum of 50,000 black listed card data.
- Shall allow manual change of stops / stages, Driver / conductor log on / log off at the beginning and at the end of the shift through PIN entry and Select route through user friendly menu
- EFC shall be able to store additional configuration sets with designated future time and date for activation to enable JTDC to implement changes to fares and business rules on all buses at once.
- The EFC shall be able to fully support driver / conductor functions, user authentication, route selection, trip start / end, shift closure, end of the shift reports for user and transfer of end of the shift data for cash management at the terminal.
- The printer should provide thermal Printing with 10 lines/sec. The printing should not take more than five key strokes. The printer should be able to print paper tickets in absence of Smart Card.
- The printer paper replacement time shall not be more than 30 seconds
- The validation & read/write cycle time for smart cards should be less than 300ms.
- The reader should read cards at a distance between 0mm to 30mm and shall not operate at a distance that introduces a risk of unintentional operation (tolerance limit + 10%) .

## Other Requirement

- The EFC unit shall have a 128x64 or better LCD screen with backlight for displaying ticketing process with an alpha-numeric keypad including software configurable function keys next to the display. The EFC should also provide navigation keys, enter, cancel, configurable function keys below display, Power on off toggle button and other status indication led's.
- The Passenger validator display shall have colour LED's for status indication besides audio/visual feedback/alarms.
- Rechargeable Battery (preferably Lithium-Ion) capable of generating 400 tickets without charging
- A maintenance engineer with maintenance access card shall be able to access maintenance mode of the device which shall allow the maintenance engineer to diagnose the faults and update the device settings when required.

## Smart Card (SC)

### General Requirements

- The media shall be contactless. The Contactless Smart Cards (CSC) shall be used for Stored Value tickets, period passes, staff Passes and other ticket types that are retained long-term by the passenger.
- The Contact less Smart Card has to be fully compliant with ISO 14443 Type A Standard, and include Mifare 4K or DESFire chip and shall be fully compliant with ISO/IEC 14443 parts 1-4 and other relevant ISO/IEC standards..
- Certificate from the Chip supplier is mandatory.
- The dimensions of the Smart Card shall comply with ISO 7810.
- It shall provide for full colour printing under transparent overlay, graphical personalization compatible with thermal transfer and dye sublimation.
- It has to withstand mechanical stress 250 bending cycles per side and 500 torsion cycles as specified in ISO 10373.
- It has to be durable against Chemical as per ISO 10373 (resistant to alcohol, Fuel B, Sweat etc)

### Interface Requirements

- Contactless transmission of data and supply energy (no battery needed)
- Operating distance: Up to 50mm
- Operating frequency: 13.56 MHz

- Fast data transfer: 106 kbit/s
- High data integrity: 16 bit CRC, parity, bit coding, bit counting
- True anti-collision
- Typical ticketing transaction: < 100 ms (including back up management)
- It has to be operating range 0-10 cm at 23° C +/- 3°C

### EEPROM

- 4 Kbyte, organised in 32 sectors with 4 blocks and 8 sectors with 16 blocks (one block consists of 16 bytes)
- User definable access conditions for each memory block
- Data retention of 10 years.
- Write endurance 100.000 cycles

### Security

- Mutual three pass authentication (ISO/IEC DIS9798-2)
- Data encryption on RF-channel with replay attack protection
- Unique serial number for each device
- Transport key protects access to EEPROM on chip delivery