VENDOR MEET
On

GLOBAL POSITIONING SYSTEM (GPS) BASED OPERATOR INDEPENDENT TRUCK DESPATCH SYSTEM (OITDS) AT OC-I & OC-II, RG-III, OCP-III, RG-II AND PK OCP, MNG UNDER BUILD-OWN-OPERATE CONCEPT

1.SUBJECT:

Installation of Global Positioning System (GPS) based Operator Independent Truck Dispatch System (OITDS) at OCP-I & OC-II, RG-III Area, OCP-III, RG-II Area and PK OCP, MNG Area under Build-Own-Operate (BOO) concept, for a period of 5 years.

2.SCOPE OF WORK:

a. The firm is required to supply, install, implement, operate and maintain GPS based OITDS at OCP-I, RG-III Area, OCP-III, RG-II Area and PK OCP, MNG Area. For the purpose, the firm is required to supply, install, configure, integrate a complete package of equipment such as computer hardware and peripherals, networking / communication hardware and software, application software, systems software and RDBMS. They are also required to operate, maintain the system and impart training to SCCL personnel. Monitoring room will be manned by SCCL personnel.

b. The Supplier shall be responsible for the provision of all items comprising the OITDS.

c. The proposed OITDS should have an interface with SAP for data import and export related to Production, Equipment Performance, Manpower attendance etc for updation of database. The OITDS should provide remote access from GM Office as well as from Corporate Office using SCCL existing network. It should be Web enabled.

d. The required functional input parameters will be framed as per mine administration.

e. SCCL will furnish TOPO sheets showing the location of the Projects in AUTOCAD dxf format.

f. SCCL will furnish KEY PLAN showing the existing quarry with dump yards, shovels deployment and existing lead and location of different offices.

g. SCCL will provide free of cost infrastructural facilities such as land, electricity, water.

3. PROJECT WISE LIST OF HEMM EQUIPMENTS (WHERE OITDS WILL BE IMPLEMENTED):

HEMM POPULATION (Tentatively)

EQUIPMENT	MNG PK OC	RG OC1	RG OC2	RG OC3	TOTAL	Group Total
H.E.C. - W2000(Drag line) 24 Cu.M		1			1	**2**
B.E.M.L.- 7820(Drag line)30.6 Cu.M				1	1	
Sub- Total	**0**	**1**	**0**	**1**	**2**	
SHOVELS (11-15 CUM)Hydraulic						**17**
HITACHI EX-2600E-6 FE(15CuM)CCP				**4**	**4**	
L&T Komatsu PC-2000-8 B/H(12CuM)	1	**2**	**3**	**1**	**7**	
Hitachi EX1900-6 FE (11CuM)CCP	4	**2**		**2**	**8**	
Tata EX 1200 (5.0 Cu.M)	2	1		2	5	**12**
Tata EX 1200(CCP) (5.0 Cu.M)		2	2	2	6	
L&T Komatsu PC-1250 (5 Cu.M)		0	1		1	
L & T 300 CK (3 Cu.M)					0	**2**
L & T PC 450 (3 Cu.M)	1			1	2	
Tata Zx 450 (3 Cu.M)		0			0	
Volvo EC 460 BLC (3 Cu.M)					0	
B.E.M.L- 220LC (1 Cu.M)			1		1	**8**
Tata Hitachi Ex200 (1 Cu.M)	3	1	1	2	7	
Sub - Total	**6**	**4**	**5**	**7**	**22**	
DUMPERS						
BEML BH100 100 T	10	34			44	**218**
CAT 777D 100 T				14	14	
L&T Komatsu HD 785 - 7 100 T	9	6	26	17	58	
L&T Komatsu HD 785 - 7(CCP)100 T	50	18		34	102	
CAT 773E(CCP) 60 T	22	3		28	53	**129**
BEML BH60M 60 T	11	12	12	11	46	
BEML BH60M(CCP) 60 T	10	6		14	30	
B.E.M.L BH 35 35 T					0	**3**
BEML BH35-2(OCDB) 35 T	3				3	
HM 1035 35 T					0	
HM 1035(OCDB) 35 T					0	
Telecon 35 T					0	
Sub - Total	**115**	**79**	**38**	**118**	**350**	
Grand Total	**121**	**84**	**43**	**126**	**374**	

In addition to the above, at upcoming JVROC-II project, OITDS is to be implemented for Coal operations, without some features like Dynamic allocations.

(*) Equipment population is likely to change with addition of new equipment, survey-off and transfer. Hence, the option to change OITDS apparatus and other paraphernalia from one equipment to other equipment shall be open throughout the period of contract. The total population of equipment may increase and the firm should provide the necessary apparatus & paraphernalia to the additional equipment also. M/s SCCL will provide project wise Date of Commission (DOC) and Model of the Equipments.

4. OBJECTIVES TO BE FULFILLED BY THE SYSTEM:

a. To display vehicle position on real time basis on a mine map with a lag time of not more than 30 seconds on all clients. Mine map on which vehicle position is to be displayed will be provided by SCCL and the same will be updated once in a month.
b. Trace, Track and Zoom the trucks and other equipment.
c. To show position, speed and time duration for HEMM to complete an event.
d. The system should monitor all the SCCL defined Performance indicators in on line, and send alert messages to the supervisor the moment any of these Performance Indicators go out of user settable limits.
e. To display Instantaneous and periodic alert messages regarding break down, idle time, in the control panel and to the connected clients of all the equipment.
f. To support different icons for different vehicles/ equipment.
g. To log vehicle movement.
h. To provide instant warning on inadvertent entry of vehicles in blasting zone during specified time. [Blasting zones are liable to vary day to day].
i. To provide interface to attendance recording system provided by SCCL. SCCL will provide the standard API / feed to the firm for interface.
j. To capture the status of equipment like breakdown, loading, empty travel, loaded travel, dumping, speed etc. Operator will communicate through system the breakdown status to control room.
k. Capture electrical signals from the equipment for vital sign monitoring. Firm should ensure the compatibility for capturing the signals from the systems available on the equipment. Firm is responsible for making all such arrangements, without tampering / disturbing the electrical circuits of the equipment. The vital parameters to be monitored are mentioned below

Dumpers/Water tankers

Low Engine lubrication oil pressure
High engine coolant temperature
High torque converter oil temperature
Engine Coolant level/Flow Indication.

Electric Shovels:

Power on/off condition
Motor protective Relay (MPR) Indicator
Phase sequence relay (PSR)
HMR

Diesel Shovels:

HMR
Engine low lube oil pressure temperature
High Coolant temperature

SCCL shall extend necessary support if required to obtain the above data from OEM of the respective HEMM.

The network shall support to transfer any other data from the dashboard apparatus to the control room in future. This data may not be integrated to the application soft ware, but may be stored separately for SCCL use.

l. To support both voice and data communication between Control station and dumpers and shovels. Project Officials will furnish the 5 Years operating plan of the mine. The bidders are to visit the site for the necessary details of TOPO Plan and SCCL will provide the necessary details.

m. Dynamic allocation of dumpers between shovels. In case of breakdown of equipment during the shift, the equipment operator will provide input on equipment status through OITDS on board system.

n. To capture hour meter reading of all equipment.

o. To monitor the current and historical data of various signals of the HEMM. The signals to be monitored as are 4K above. These signals can be monitored from any of the user terminals. System also generates warning for signals that cross the allowable limits. Timely intervention by maintenance crew can save an HEMM from serious breakdowns.

p. Generating alerts in case of equipment idleness.

q. Generating reports on achieved production, equipment utilization, operator-wise production, breakdown hours, idle hours and time taken to complete an activity.

r. To interface with attendance recording system provided by SCCL.

s. Attendance based work allocation.

t. Trip counting function.

u. Monitoring of bench-wise, grade-wise coal production and movement to the designated unloading points. If required, in addition to the GPS equipment, RFID /WiFi tags also to be incorporated, specifically for coal shovels, coal dumpers and unloading points to monitor grade wise production.

Quality parameters of coal on GIS plan, designated quality of coal of each unloading point will be provided by SCCL.

5. FEATURES REQUIRED:

The following audio-visual indications shall be provided for monitoring the parameters of different equipment (HEMM).

a. DUMPERS: Hour meter recording, Position display and Engine on/off status**.**

b. SHOVELS: Hour meter recording, availability of power to the machine and Prime mover on/off status**.**

c. OTHER FEATURES:

- REAL TIME MONITORING: The system should display production data, equipment status such as available, allocated, idle, breakdown, operator wise production data etc.
- Record breakdown and preventive maintenance activities of HEMM.
- Recording operator's performance during the shift.
- Real time production figures.
- Dynamic allocation of dumpers optimally.
- Access control based on user profile.

Proper security to access the database has to be incorporated in the system to ensure confidentiality & Security of the information as per SCCL requirement where SCCL shall define the privilege level.

- Data up-dation based on survey in AUTOCAD dxf file format.

6. MESSAGING FEATURES OF APPLICATION SOFTWARE:

The following audiovisual indications should be provided for monitoring the parameters of different Equipment.

a. **Dumpers.**
Low Engine lubrication oil pressure
High engine coolant temperature
High torque converter oil temperature
Engine Coolant level/Flow Indication.

b. Shovels.
Indication of power availability to machine.

c. The System should be able to record run hours both of Dumpers and Shovels.

NOTE: The firm shall have to use the available Electrical signals from the dash board for monitoring**.**

d. The firm should supply a display system with Colour Screen 50" diagonal LED display and integrate with TDS for display of allocation details by operator name, equipment code, allocation time etc, in Telugu and English. The LAN interface will be provided by SCCL.

e. After the operator attendance and allocation is over the system should display production data, Equipment status like, available, allocated, idle, breakdown Equipment, operator-wise production data etc., on REAL TIME BASIS.

f. Record of time loss at shift start, shift end and during rest intervals breaks.

g. Record breakdown and preventive maintenance activities of HEMM.

h. Give details of each operator performance during the shift.

i. To give production figures of coal and overburden on real time basis.

The system should be able to monitor and provide production figures for OB and coal without intervention of operators. Shovels and Dumpers working in OB can get diverted to coal or vice-versa in between the shifts.

The production figures are to be based upon the designated carrying capacity multiplied by number of trips made by the dumper.

j. Allocate Dumpers optimally on dynamic basis for each trip considering the no. Of dumpers queuing at each shovel, respective lead distance with allocated dump yards etc.

k. Ensure reliable messaging through on board instrument. Voice and data communication should be available.

l. The HEMM Operator should be able to communicate after getting clearance from monitoring station.

m. Identify vehicles that have moved in and out of prohibited zones, not following allocated routes, which can be changed by the user from time to time.

7. REPORTS TO BE GENERATED BY THE SYSTEM:

a. PRODUCTION REPORTS:

i) Cause wise equipment idleness reports.
ii) Equipment production report
iii) Dumper production report

iv) Shift production report
v) Dump yard wise production report
vi) Operator performance report
vii) Target achievement report
viii) Equipment status report
x) Shift wise trip sheet report
xi) First loading at shift beginning and last load at shift ending
xii) Waiting time at shovel, Loading time, Loaded Travel time & distance, Dumping time, Empty Travel time & distance per each dumper trip should be recorded.
xiii) Lead distance & Lift per each dumper trip
xiv) Shovels marching time & distance
xv) Generation of customized reports as per the requirement of mine authorities from time to time without Additional cost.

b. **MAINTENANCE REPORTS:**

i) Breakdown analysis reports
ii) Equipment availability reports
iii) Schedule maintenance alerts
iv) Exception reports such as dumper over speeding, overtaking.

v) **Standard Display** consisting of

- Configurable maps of haul roads and other survey features in the mine superimposed with a dynamic representation of equipment location and status.
- The real time movement of HEMM can be seen on the computer screen. Equipment with different status is represented with different coloured icons.

vi) This module displays configurable maps of haul roads and other survey features in the mine superimposed with a dynamic representation of equipment location and status.
vii) The real time movement of HEMM can be seen on the computer screen. Equipment with different status is represented with different coloured icons.

viii) Relevant information regarding the equipment's performance is to be provided in this module. The information shall include when was an operator allocated to this equipment, when did he take the first load, how many trips has it made in the current shift, working/ idle/ maintenance hours in current shift, current operation status, allocation and graphical representation of performance.

8. **OTHERS:**

a) OITDS on board equipment:

- OITDS on board equipment is to be provided to any new equipment/ model of equipment whenever it is introduced in the projects.
- On board equipment existing on one equipment is to be shifted to other equipment on request of the respective project authorities.

- There should not be any shadow zones and no loss of connectivity or data owing to the shadow zones in the respective entire project area.

b) ON BOARD Instruments:

- The instruments installed on the equipment should be capable of withstanding vibrations of various types of HEMM as mentioned under para 3.
- The instruments shall withstand ambient temperature prevailing at respective project site in all seasons.
- Provision of audible alarm on status change.
- *LCD/LED colour (not less than 7") display with iconic key board/ well protected touch screen shall be provided and screen should be in bilingual (English/Telugu)*
- Mobile data terminal should be well protected touch screen.
- *The on board instrument should be EMI-EMC compliant*
- *The instruments should conform to not less than Ingress Protection rating of IP65*.

c) GUARANTEED UPTIME EFFICIENCY AND BACKUP ARRANGEMENT:

The uptime efficiency of main system, excluding on board systems, should be 99%. The uptime efficiency of individual equipment should not be less than 97%. In case of system failure, there should be provision for capturing the data manually to keep continuity. SCCL will specify where the manual operations are to be configured. Proper data warehousing is to be provided with minimum two copies.

9. ***GPS* RECEIVER & ANTENNA:**

GPS receiver and antenna with suitable frequency and multi channeled are to be designed to achieve a horizontal accuracy of around 3Mts. The positional data is to be on "Conformal Conic Coal Grid" by conversion using appropriate software inbuilt in the system to ensure compatibility with the existing system at SCCL [SCCL Mines fall in Conformal Conic Zone-III].

Particulars of Conformal Conic Projections being followed at SCCL.

a.	Zone	:	Zone-III
b.	Limit		
	Latitude	:	16°15' - 22°15'
	Longitude	:	76° - 82°
c.	Standard parallel ϕ1	:	17°15'
	ϕ2	:	21°15'
d.	Central Meridian Lo	:	79°
e.	False origin		
	Easting	:	30,00,000 m
	Northing	:	10,00,000 m.

10. NETWORK, HARDWARE AND SYSTEM SOFTWARE:

a. **NETWORK AND COMMUNICATION SYSTEM:**

- The firm should establish network and communication system with *Spread Spectrum Technology or higher generation* technology covering entire quarry for transmitting data from HEMM equipment to Control room.

- *The firm shall provide and maintain VHF based or any other latest suitable wireless Voice Communication Equipment covering the total nos. of HEMM including control room connected with OITDS, with required Licences and approvals if any for using the equipment at our respective project sites.*

b. **HARDWARE (Per Project):**

- Latest RISC Based Server with 50 user licenses with LINUX / Windows operating system and Oracle OR any other RDBMS.

- Workstations for Base Station and Project offices (2 Nos.).

- Electronic Wall mounted colour display board 50" diagonal LED display.

c. **SYSTEM SOFTWARE:**

System should have capability to interface with the following Mine management application software. Proper security to access the database has to be incorporated in the system to ensure confidentiality & Security of the information as per SCCL requirement where SCCL shall define the privilege level.

- Attendance booking system on VB forms / .net.

- Oracle data base containing various parameters of the equipment and production details

- Should be of LINUX / Windows based GUI platform.

- Capturing input from Biometric equipment and to integrate with CA-TS of SAP.

- Integration with SAP modules.

11. FUNCTIONAL REQUIREMENTS OF APPLICATION SOFTWARE:

The application Software should provide the following functional requirements for Shovel and Dumpers:

a. **Equipment Tracking (Geo-referenced Location):**

Sl.No	Item	Broad Specification
1.	Shovel	Eqp ID, X-Y location (within ± 3.0 m) and Bench ID on map
2.	Truck(Dumper)	Eqp ID, X-Y location (within ± 5.0 m) on route

b. Equipment status (Shift wise Availability / Utilization):

c.

Sl.No	Item	Broad Specification
1.	**Shovel**	Eqp ID
1.1	Idle	Start time, duration

1.2	Running	Start time, duration
1.3	Breakdown	Start time, duration
1.4	Maintenance	Start time, duration
2.	**Truck(Dumper)**	Eqp ID
2.1	Idle	Start time, duration
2.2	Running	Trip No
2.2.1	Loading	Start time, duration
2.2.2	Traveling Loaded	Start time, duration
2.2.3	Traveling Empty	Start time, duration
2.2.4	Dumping	Start time, duration
2.3	Breakdown	Start time, duration
2.4	Maintenance	Start time, duration

d. Operator Status (Shiftwise):

Sl.No	Item	Broad Specification
1.	Operator	Operator Id assigned Eqp ID
1.1	Idle	Start time, duration
1.2	Working	Start time, duration

e. Cycle Time optimization/monitoring:

Sl.No	Item	Broad Specification
1.	Queue management	Minimize queue
2.	Route management	Optimum route

f. Exception Notification:
Automatic Exception notification to all concerned.

g. The Application Software will provide the following for Production Data Capture, Maintenance and data storage/retrieval.

- **Data Capture (Production):**

Sl.No	Item	Broad Specification
1.	**Shovel**	
1.1	Facility	Automatic Data Capture with instant system response
1.2	Shift Id	Maintain Shift wise record
1.3	Truck Id	Truck loaded
1.4	Cycle Id	Record for each cycle
1.5	Material	Material Handled
1.6	Load duration	Cycle time and time for every cycle component
1.7	Swing duration	
1.8	Dump duration	
1.9	Location	Eqp ID, X-Y location (within ± 3.0 m) and Bench ID on
1.10	Idle time	Start time, duration
1.11	Running time	Start time, duration
1.12	Breakdown time	Start time, duration
1.13	Maintenance time	Start time, duration
2.	**Truck(Dumper)**	
2.1	Facility	Automatic Data Capture with instant system response
2.2	Shift Id	Maintain Shift wise record

2.3	Trip Id	Record for each cycle
2.4	Material	Material Handled
2.5	Load duration	Trip time and time for every trip component
2.6	Travel with load duration	
2.7	Dump duration	
2.8	Travel without load duration	
2.9	Location	Eqp ID, X-Y location (within ± 7.0 m) and Bench ID on
2.10	Idle time	Start time, duration
2.11	Running time	Start time, duration
2.12	Breakdown time	Start time, duration
2.13	Maintenance time	Start time, duration
3.	**Operator**	
3.1	Assignment	Operator Id assigned Eqp ID
3.2	Idle time	Start time, duration
3.3	Working time	Start time, duration

- **Data Retrieval:**

Sl.No	Item	Broad Specification
2.	**Map/GIS Interface**	
2.1	Map Display	Dynamically display Eqp ID, X-Y location (within ± 3.0 m for shovel & ± 5.0 m for truck) and Bench ID on Geo-referenced map
2.2	Map Query Interface	Dynamically display Eqp ID, X-Y location (within ± 3.0 m for shovel & ± 7.0 m for truck) and Bench ID on Geo-referenced map based on Equipment status attributes, date/time, operator, material handled etc.
2.3	Map Replay Facility	Replay Equipment movement / advance during a day/shift at defined intervals / steps.
3.	**Operator Interface(Via equipment mounted touch display)**	
3.1	**Shovel**	
3.1.1	Objective	Operator performance monitoring
3.1.2	Material Handled	Quantity handled since Shift Start
3.1.2	Delay Details	Hours lost since Shift Start
3.1.3	Cycle times	Each sub component of the cycle
3.1.4	Machine conditions	Maintenance callouts / Alarms
3.2	**Truck(Dumper)**	
3.2.1	Objective	Operator performance monitoring
3.2.2	Delay Details	Hours lost since Shift Start
3.2.3	Cycle times	Each sub component of the cycle
3.2.4	Travel distances	Distance covered since Shift Start
3.2.5	Machine conditions	Maintenance callouts / Alarms
4.	**Supervisor Interface (Via any networked PC)**	
4.1	**Shovel**	
4.1.1	Objective	Shovel wise Details and Summary of all Shovels
4.1.2	Material Handled	Quantity handled since Shift Start
4.1.3	Delay Details	Hours lost since Shift Start

4.1.4	Cycle times	Each sub component of the cycle
4.1.5	Machine conditions	Maintenance callouts / Alarms
4.2	**Truck(Dumper)**	
4.2.1	Objective	Truck wise Details and Summary of all Trucks
4.2.2	Delay Details	Hours lost since Shift Start
4.2.3	Cycle times	Each sub component of the cycle
4.2.4	Travel distances	Distance covered since Shift Start
4.2.5	Machine conditions	Maintenance callouts / Alarms
5.	**Analytical Reporting Interface**	
5.1	Shift-wise Performance	Shift-wise Material Handled Summary and Detail
5.2	Day-wise Performance	Day-wise Material Handled Summary and Detail
5.3	Month-wise Performance	Month-wise Material Handled Summary and Detail
5.4	Bench-wise Progress	Bench-wise Material Handled Summary and Detail
5.5	Equipment Performance	Equipment-wise Performance Summary and Detail
5.6	Equipment Downtime	Equipment-wise Downtime Summary and Detail
5.7	Operator Performance	Operator-wise Performance Summary and Detail
5.8	Supervisor Performance	Supervisor-wise Performance Summary and Detail
5.9	Road Condition	Road condition based on Truck cycle times

h. Response Time of System:

The response time measured in seconds occurring between a command entered in the mobile vehicle and the control room and vice versa and result returned in the corresponding remote location shall be of the following maximum values:

Data view : 3 seconds
Data add/modify : 3 seconds

Measurement of response time shall exclude time delays due to the following occurring in the system:

(i) Loading and initialization of programs.
(ii) Abnormal delay in signal propagation in the telecommunication system. Abnormal delays are delays which are beyond the control of the supplier.

12. **Services:**

As a part of the contract the supplier have to undertake the following services during implementation of the Truck Dispatching System as also during the warranty and maintenance period. The details of the services are provided below:

a. Installation & Commissioning:

The supplier will be responsible for delivery, erection, commissioning and configuration and integration of all items of hardware and software including telecommunication system and all on board electronic equipment within the

time period as specified in project time schedule, to the full satisfaction to the SCCL.

b. Implementation:

The supplier will be responsible for implementing the system to the full satisfaction to the SCCL so that the system as a whole including all its Hardware, Software and Telecommunication components meets all the technical requirements given in Technical Specification.

The supplier shall provide all services specified in the technical specifications in accordance with the highest standards of professional competence and integrity. The SCCL reserves the right to require the replacement of any supplier staff assigned to work on the SCCL site(s) by a suitably qualified staff, in the event that the staff concerned is determined to be incompetent or loses the confidence of SCCL.

c. Training:

The supplier will be responsible to provide training to the SCCL nominated personnel so that they are able to use the system effectively. The supplier will be required to submit a training plan giving the details of the schedule, contents and programme of the training to be provided both to the systems and user departments. Whenever necessary and available the SCCL will provide the class room facilities required for conducting such training.

d. Time Schedule :

The firm should complete the entire project *in 6 months period* from the date of receipt of purchase order.

e. Acceptance Testing:

The firm should formulate acceptance procedures. The acceptance test will be carried by SCCL nominated personnel of respective project. Acceptance test will be carried out at SCCL site. On signing the acceptance test plan by both SCCL and the firm, the project is deemed accepted and the payment will be made from that day subject to terms and conditions.

f. Period Of Contract:

The period of contract is for 5 years on BOO concept basis from the date of acceptance.

g. Accommodation:

Regarding accommodation, SCCL may provide bachelor accommodation to the personnel of the successful tenderer if available on chargeable basis. The charges will be as applicable to Private firms as per SCCL rules.

h. Payment Terms:

Payment shall be made once in a month against the bills duly certified by respective Project Officer.

The penalties for non-performance shall be deducted from the monthly bills. The payment shall start from the date of completion of entire scope of work

i.e. from the date of acceptance of the acceptance test plan (ATP), subject to terms and conditions.

i. Provision of Engineers

The firm shall provide 2 engineers per shift at each project for smooth operation of the systems. It shall be manned 24x7 support. The Engineers should have been trained in the offered GPS software.

j. Offered version

The supplier shall categorically furnish the details of offered version/offered items.

Eligibility Criteria, Provenness Criteria and Deliverables

Eligible Bidders

Bids may be submitted by the following categories of bidders only:

(a) A Sole Bidder
(b) A Joint Venture or A Consortium of firms

The Sole Bidder must be either :

(i) A Developer of offered GPS based Operator Independent Truck Dispatch System who has proven capability to undertake implementation services for the offered system

OR

(ii) A Software implementation company authorized by the developer of the offered Truck Dispatching System

However, it may be noted that

(a) A sole bidder in one bid, who is a developer of a Operator Independent truck dispatching system, cannot submit another bid as a sole bidder as the developer of another truck dispatching system.

(b) A sole bidder who is a software implementation company representing a particular GPS based Operator Independent Truck dispatching system can not submit another bid for a different truck dispatching system (TDS). One implementer can represent one GPS based Operator Independent TDS developer only. Similarly, one GPS based Operator Independent TDS developer can authorize one implementer only.

(c) Similar provision as at (b) above, will apply for a partner in-charge of a joint venture / consortium, who is a software implementation company. However, this provision will not be applicable for respective manufacturers of computer hardware, system software and RDBMS, Network and communication equipment etc. In other words such manufacturers can participate in multiple bids as partners in a joint venture / consortium or as associate of a sole bidder.

Qualification criteria for Eligible Bidders

A. For a Sole Bidder:

In case of a Sole Bidder , the bidder shall furnish authorization certificate from the developer of OITDS along with the bid, in case the sole bidder is a Software Implementation Company.

B. For Joint venture /Consortium:

Bids submitted by a joint venture/ consortium of two or more firms (not exceeding four) as partners shall comply with the following requirements;

a) A properly executed agreement, legally enforceable in India, signed by all partners of the joint venture/consortium. The Agreement, shall be signed so as to be legally binding on all partners;

b) One of the partners of consortium shall be nominated as Partner in- charge and this authorization shall be evidenced by submitting a power of attorney signed by legally authorised signatories of all the partners.

The partner in charge of the Joint Venture / Consortium must be either (a) Developer of the Offered Truck Dispatching System or (b) Software Implementation Company authorized by the developer of offered Truck Dispatching System.

c) The partner in charge shall be authorised to incur liabilities and receive any payment for and on behalf of any and all partners of the joint venture/consortium during the entire period of execution of the contract. All contractual obligations of the contract will be discharged by the partner-in-charge and all contacts, correspondences and notices including payment, shall be made exclusively with the partner in charge by the purchaser.

d) All partners of the joint venture/consortium shall be liable jointly and severally for the execution of the contract in accordance with the contract terms defined in the NIT and a statement to this effect shall be included in the authorization mentioned under c) above, as well as in the bid and in the Agreement (in case of a successful bid);

e) The proposed role of each of the joint venture/consortium partners in respect of design, supply, operation and maintenance of hardware, software, service support and training should be stated clearly in the joint venture/consortium agreement, and should not be changed without the prior written approval of the Purchaser;

f) The Joint venture/consortium agreement should be legally enforceable in India.

g) A self attested copy of the agreement entered into by the joint venture consortium partners shall be submitted with the bid.

C. For a Software Implementation company:

The qualification requirements for the Sole Bidder who is a Software Implementation Company or the Partner-in-charge of joint venture/ consortium, who is a Software Implementation Company (in case the bid is submitted by a joint venture/consortium) shall be as follows:

a) The Sole Bidder or the partner-in-charge of the joint venture/consortium (in case the bid is submitted by a joint venture/consortium) who is a software implementation company, authorized by the supplier of the Truck Despatch System as an implementer of the Truck Despatch System and shall have an average annual turnover of not less than the equivalent of ***Rs 7 crores*** during the previous 3 years. In case the supplier of the Truck Despatch System, carry out the implementation themselves, there shall be no need for a separate authorisation letter, but an explanatory letter to this effect shall be enclosed.

b) The Sole Bidder or the partner-in-charge of the joint venture/consortium (in case the bid is submitted by a joint venture/consortium) **must** be an Indian company and submit the following documents in support of the same:

a) Attested copies of latest valid Income Tax Permanent Account Number.
b) Attested copies of Memorandum of Association and Articles of Association

c) Shall be in their respective business for a minimum period of 5 years (from date of incorporation).

d) Shall have sufficient number of professional software implementation personnel , trained on the *offered* TDS software on the date of submission of bid. The bidder shall submit the details of employees with designation and responsibility.

e) Shall confirm that they shall establish “Help Desk” and support service in *all* the sites during BOO maintenance period, consisting of at least 2 technical experts (one hardware and one software).

f) The offered GPS based Operator Independent Truck Despatch System shall be of the *latest* commercially available version of the product of the respective TDS developer in international/national market on the date of submission of bid.

g) *The offered GPS based Operator Independent Truck Despatching System must have been provided and successfully completed /working in at least in one (1) High capacity open cast mines, producing at least 20 million bench cubic meter of Coal, Overburden, Ore per year all together with Shovel – Dumper combination any where in the world, working with Spread Spectrum Technology or higher generation for atleast one year as on the date of opening of the techno-commercial bid, with at least 30 HEMM (Heavy Earth Moving Machinery) in each mine*.

D. For a Developer of OITDS:

The qualification requirements for the Sole Bidder who is a Developer of the *offered* GPS based Operator Independent Truck Despatch System or the Partner-in-charge in joint venture/consortium, who is a Developer of Truck Despatch System (in case the bid is submitted by a joint venture/consortium) shall be as follows:

a) Shall have an average annual turnover of not less than the equivalent of ***Rs 7 crores*** during the immediately preceding previous 3 financial years.

b) Shall have sufficient software development personnel (minimum 2persons per project) on their roll on the date of the submission of the bid.

c) The offered GPS based Operator Independent Truck Despatch System shall be of the *latest* commercially available product on the date of submission of bid.

d) *The offered GPS based Operator Independent Truck Despatching System must have been provided and successfully completed /working in at least in one (1) High capacity open cast mines, producing atleast 20 million bench cubic meter of Coal, Overburden, Ore per year all together with Shovel – Dumper combination any where in the world, working with Spread Spectrum Technology or higher generation for atleast one year on the date of opening of the techno-commercial bid, with at least 30 HEMM (Heavy Earth Moving Machinery) in each mine*.

n) The sole bidder or the partner in charge of the Joint Venture/Consortium , must have facilities/presence in India for supply spare parts and service support. Supporting documents to be submitted along with techno-commercial bid.

Sole Bidder or the partner-in-charge of the joint venture/consortium (in case the bid is submitted by a joint venture/consortium) **must** be an Indian company and submit the following documents in support of the same

a) Attested copies of latest valid Income Tax Permanent Account Number.
b) Attested copies of Memorandum of Association and Articles of Association

Financial Turnover :

i) Average annual financial turnover during the last 3 (three) years ending 31st March of the previous financial year should be at least *7.00 Crores*.

ii) The tenderer should provide Audited / Certified Accounts / Financial statements from a practicing Chartered Accountant, establishing their annual turnover for the preceding Financial Year reckoned from date of opening of the bids of not less than INR ***7.00 Crores*** to justify their financial soundness.

PROVENNESS CRITERIA:

The System/product similar to the enquired system/product to be offered by the bidder shall be considered proven provided the system / product similar to the enquired system /product offered must have been supplied in the past to the Mining Industry and / or to the other industries (Private or Government/ Public Sector Undertaking) and executed successfully during the last 5 years and/or in case of contracts under execution it should have performed satisfactorily for at least a period of one year as on the date of bid submission. The bidder shall submit relevant order copy for the item/product similar to the enquired items.

Bidders are required to submit Satisfactory Performance reports for the contracts executed against the order copies submitted.

In case of supply to Govt. Sector/Public Sector, satisfactory performance report issued by authorized representative of the Company shall be considered valid.

In case of Private Sector, detailed Satisfactory Performance Report issued by Chief Executive Officer / Director (Head of Operations) / Head of the Project or Mining Unit shall be considered valid. In such cases, the name and designation of the signing authority should be clearly indicated in the Performance report and the reports should be authenticated and stamped by the bidder.

FAILURE TO SUBMIT THE ABOVE DOCUMETS MAY RENDER A TENDER UNACCEPTABLE.

In case, if at any point of time during procurement process or subsequently, it is detected that the above information given by the bidder regarding performance of the system /product similar to the enquired system / product supplied by them is false, SCCL reserves the full right to take action as deemed fit including rejection of the offer and / or debarring the bidder in SCCL for all future tenders and the **decision of SCCL will be final.**

Evaluation Criteria:

The bidders have to submit the offer project wise.

Price bids will be evaluated and L1 status will be arrived by totaling the landed cost of all four projects, considering taxes and input tax credits dully applicable.