OPEN TENDER NIT OPEN TENDER NIT I must not be road directly or induced in the property of BHARATHEATY ELECTRICALS LIMITED. I must not be need directly or induced in the property of BHARATHEATY ELECTRICALS LIMITED. FOR ENGINEERING SERVICES OF GAS, STEAM, CO-GEN. & COMBINED CYCLE POWER PLANTS GAS, STEAM, CO-GEN. & COMBINED CYCLE POWER PLANTS OF THE COMPANY. OPEN TENDER NIT OPEN TENDER N	TD-201 Rev No. 00	Form No.	बी एच ई एल FILE HYDERABAD	Se PRO	rvices of Po DJECT ENGINE	tion for Engineering wer Plant projects ERING DEPARTMENT YDERABAD-502 032	g Doc No-PESD/ESC/PQC Rev No. 00 Page 1 of 15
Revisions: Prepared: Checked: Approved: Date:	COPYRIGHT AND CONFIDENTIAL The information on this document is the property of RHARAT HEAVY RIECTRICAL STIMITED	It must not be used directly or indirectly in any way detrimental to the interest of the company.	GAS,		QUALI	FICATION CRITERIA FOR IEERING SERVICES OF	E POWER PLANTS

P.MISHRA

B I BABU

10.02.12

Refer to record

of revisions :

PMISHRA

COPYRIGHT AND CONFIDENTIAL The information on this document is the property of BHARAT HEAVY ELECTRICALS LIMITED. It must not be used directly or indirectly in any way detrimental to the interest of the company.

HYDERABAD

PRODUCT STANDARD PROJECT ENGINEERING HYDERABAD

Doc No-PED/ESC/PQC

Rev No. 00

Page 2 of 15

A. INTENT::

- 1. Project Engineering &system division BHEL Hyderabad [PE&SD] executes System Engineering, Balance of Plant [BOP] Engineering and Procurement for Gas Turbine and Steam Turbine based Power Projects for Industrial and Utility Business Sectors for domestic and international customers. These power stations are built around equipment and packages [Turbines, Generators, Compressors, Boilers, High capacity Transformers, HT switchgear, Control System, etc] manufactured by BHEL.
- 2. Civil engineering and detail engg of non core areas of other disciplines [Mechanical, Process, Electricals and Instrumentation] are being offloaded to reputed establishments which have a long standing and experience of successfully handling such jobs.
- **3.** Offers are invited from reputed, qualified and well established organisation, fullfilling the Pre-Qualifying Criteria [PQC] for registration in either one or both category of pojects as described.
- 4. This registration will be reviewed based on yearly performance.
- **5.** During this validity period, enquiries for engg offloading would be floated only to vendors who are registered through this process [except where a vendor is customer's PMC or review consultant for the given project].
- 6. Category-1 shall comprise of projects having -
 - I. Open cycles above project rating of 50 MW and more
 - II. BTG project above 60 MW and more
 - **III.** Co-gen, Combined Cycle & Cogen cum Combined Cycle projects above project rating of 40 MW and HRSG above 80 TPH.
 - IV. Overseas Projects
- 7. Catergory -2 shall comprise of indian projects having
 - i. Open cycle up to project rating of 50 MW
 - ii. BTG project having 60 MW or less
 - iii. Co-gen upto project rating of 40 MW and HRSG upto 80 TPH.
- **8.** During the validity of enlistment, if a bidder is not interested in participating in a tender for which enquiry was either forwarded or purchased by him, he has to submit a "**Regret Letter**" before opening date. If not complied with, the vendor may not be considered for future requirements. Repeated regrets/non response may also lead to de enlistment

B. Procedure for registration

- 1. Response to BHEL's PQC requirements is to be submitted in a sealed cover by filling annexures along with relevant attachments.
- 2. The vendors, who wish to get registered in both the categories, should submit offers for each category separately.
- 3. The sealed tender super-scribing **Tender Number**, **due date**, **bidder's details**, **category** etc. on each cover shall be marked submitted to Addl. Gen. Manager / PESD, BHEL, Ramachandrapuram, Hyderabad- 502032 before the due date. The DD towards "**Tender fee**" should have Tender Number, Due date, Category, bidder's details on the back of it.
- 4. BHEL reserves its right to reject an offer due to unsatisfactory past performance at any stage of tender process.



Doc	No-PED/ESC/PQC

Rev No. 00

Page 3 of 15

C. PREQUALIFYING CRITERIA [PQC] OF ENGG OFFLOADING AGENCY [VENDOR, BIDDER]

::		_		,
SI No	Description Of Criteria		icable tegory	Annexure to be filled by bidders in their
		1	2	offer
1	Organization			
A	The bidder can be an Indian organization or an Indian office/group company of a multinational organization. In the latter case, the Indian office shall be a full fledged engineering establishment regularly undertaking such jobs. If experience and expertise are drawn from the Principals for satisfying the PQC requirements, proof of commitment from the Principals shall be attached.	Yes	Yes	Annex-1
В	Multiple establishments of the same organization in India will be registered as a single agency, and hence can apply only once. Multiple applications from the same organization will be rejected. In case such organisations propose to execute individual orders based on their policy, the same is to be brought out in their application. BHEL reserves the right to accept or reject their proposal, and insist for registration and execution by a particular establishment	Yes	Yes	Annex-1
2	Experience and infrastructure			
	Bidder shall have successfully executed as EPC contractor's detail engg. agency, detailed engineering and issue of BOQs & "Released for Construction" [RFC] documents for minimum two Thermal Power projects in the Utility or Captive Sectors. (If all the features described below are not available in a single project executed by the bidder, it is acceptable if the bidder has undertaken these jobs in different power projects, provided each reference job substantially covers activities of other categories mentioned below.)			
а	Power block [Turbines, Generators, Boilers, etc, along with their dedicated auxiliary systems]	yes	NA	Annex-4
	Utilities and Balance of Plant Packages [Natural Gas or Liquid Fuel systems, Water Systems, Cooling Towers, Tankages, De-aerators, Air Systems, Fire Protection, HVAC, Effluent Treatment, Emergency power sources, utility and steam piping, cabling, earthing, illumination, Communication system, Environment monitoring, etc]			
	Electricals [Generation, evacuation, in plant distribution, Energy Management, Numerical Relays, SCADA interfaces, etc]			
	Instrumentation [Plant and package control systems, Flow elements, Control valves, field instruments, etc]			
	Civil Engg [piling, machine/equipment foundations, RCC chimneys, plant and non plant buildings/sheds, structures			

COPYRIGHT AND CONFIDENTIAL

The information on this document is the property of BHARAT HEAVY ELECTRICALS LIMITED. It must not be used directly or indirectly in any way detrimental to the interest of the company.



Doc No-PED/ESC/PQC

Rev No. 00

Page 4 of 15

	SI No	Description Of Criteria		cable egory	Annexure to be filled by bidders in their
			1	2	offer
		for De-aerators, Pipe/cable racks etc, roads, drains, landscaping, fabrication drawings etc]			
		Integration and interfacing with Terminal Points.			
TED.		Layouts of abovementioned systems and their interconnectivities for following typical projects			
CIMI		Change as per description of Cat 1			
CALS 1		Open cycles above project rating of 50 MW and more			
TRIC		BTG project above 60 MW and more			
Y ELEC'he intere		 Co-gen above project rating of 40 MW and HRSG above 80 TPH. 			
HEAV	b	Power block [Turbines, Generators, etc, along with their dedicated auxiliary systems]	NA	yes	Annex-4
COPYRIGHT AND CONFIDENTIAL nation on this document is the property of BHARAT HEAVY ELECTRICALS LIMITED not be used directly or indirectly in any way detrimental to the interest of the company.		Utilities and Balance of Plant Packages [Natural Gas or Liquid Fuel systems, Water Systems, De-aerators, utility and steam piping, cabling, earthing, illumination, Communication system, etc]			
FT ANI operty o y in any		Electricals [Generation, evacuation, in plant distribution, Numerical Relays, interfaces, etc]			
YRIGH s the prodirectly		Instrumentation [Plant and package control systems, Flow elements, Control valves, field instruments, etc]			
COP document i		Civil Engg [piling, equipment foundations, , plant and non plant buildings/sheds, structures for De-aerators, Pipe/cable racks etc, roads, drains, landscaping, fabrication drawings etc]			
this used		Integration and interfacing with Terminal Points.			
ation or not be u		Layouts of above mentioned systems and their interconnectivities for following typical projects			
		Change as per description of Cat 2			
The inform It must		Open cycle up to project rating of 50 MW			
F		BTG project having 60 MW or less			
		 Co-gen upto project rating of 40 MW and HRSG upto 80 TPH. 			
		Manpower & Infrasturture			
		 Well established design office facility having separate sections for civil, mechanical, layout & piping, Electrical & Instrumentation. 			
Ref. Doc		 Adequate qualified and experienced manpower as furnished below. Out of the total strength (min. 40% with Graduation, in each disciplinewise). At least 10% in each field shall be having more than 10 			

Pyperabad Hyderabad

PRODUCT STANDARD PROJECT ENGINEERING HYDERABAD

Doc No-PED/ESC/PQC

Rev No. 00

Page 5 of 15

COPYRIGHT AND CONFIDENTIAL The information on this document is the property of BHARAT HEAVY ELECTRICALS LIMITED. It must not be used directly or indirectly in any way detrimental to the interest of the company.

SI No	Description Of Criteria		icable tegory	Annexure to be filled by bidders in their
		1	2	offer
	years experience in the field of Power plant detailed design.			
а	Minimum 120 (45 in civil, 35 in mech, 25 in electrical and 15 in C&I).	Yes	NA	Annex-5
b	Minimum 60 (23 in civil, 18 in mech, 13 in electrical and 6 in C&I).	NA	yes	Annex-5
3	Adequate infrastructure with latest licensed version of state of the art Engineering and Project Monitoring software like			
Α	Civil Structural analysis [STAAD PRO / GT STRUD]	Yes	Yes	Annex-6
В	Drawing [AutoCAD-2008 onwards]	Yes	Yes	Annex-6
С	Piping [CAESAR or CAEPIPE]	Yes	NA	Annex-6
D	Electrical System Studies [ETAP/CYME/SKM]	Yes	NA	Annex-6
E	Computer aided Process & Instrumentation Design [PDS/PDMS]	Yes	NA	Annex-6
F	3D modeling [PDMS & PDS]	Yes	NA	Annex-6
G	Project Monitoring and MIR generation [MS Projects/Primavera]	Yes	NA	Annex-6
4	No subcontracting of activities is permitted. In case bidder draws expertise from other organizations for special activities [items 3(d, F or G)], approval shall be obtained for the agency proposed by the bidder as part of registration, and utilized for execution thereafter.	yes	NA	Annex-8
5	At least 2 nos of qualified Architects for conceptual design and detailing of Architectural works for power plants.	yes	NA	Annex-5
6	Experience in participating in technical audits like HAZOP	yes	NA	Annex-7
7	Experience in providing engineering support during Erection & Commissioning. Agency should ensure deputation of their engineers for Erection Commissioning activities for attending to any problem solving arising out of incorrect engineering / execution at site within a period of 7 days of intimation. In case of delay, BHEL reserves the right to get the job completed at the risk and cost of the agency.	yes	yes	NA

Form No.

Hyderabad

PRODUCT STANDARD PROJECT ENGINEERING HYDERABAD

Doc No-PED/ESC/PQC

Rev No. 00

Page 6 of 15

SI No	Description Of Criteria		icable tegory	Annexure to filled by	
		1	2	bidders in the offer	
9	Experience:				
	Bidder should have executed at least any one of the following:-				
	40 % of value for 3 nos of works				
	Experience: Sidder should have executed at least any one of the billowing:- • 40 % of value for 3 nos of works • 50 % of value for 2 nos of works • 80 % of value for one work • a financial year in the last 7 years. Itermally 2-3 projects are expected to be offloaded in a nancial year amounting to total value of 5 crores. Itermally 2-3 projects are expected to be offloaded in a nancial year amounting to total value of 2 crores. Itermally 2-3 projects are expected to be offloaded in a nancial year amounting to total value of 2 crores. Itermalial Soundness: • Organisation shall be financially sound having turnover of 30 % of the total value of work to be offloaded in each financial year. • This shall be supported with documents like audited balance sheets, IT returns, Service tax, PF Sales tax / VAT registration, PAN No etc. Iter 5 crores, for the last 3 years (i.e. 2008-09, 2009-10 & 010-11).				
	80 % of value for one work				
	in a financial year in the last 7 years.				
а	Normally 2-3 projects are expected to be offloaded in a financial year amounting to total value of 5 crores.	yes	NA	Annex-4	
b	Normally 2-3 projects are expected to be offloaded in a financial year amounting to total value of 2 crores.	NA	Yes	Annex-4	
10	Financial Soundness:				
	turnover of 30 % of the total value of work to be				
	audited balance sheets, IT returns, Service tax, PF,				
а	Rs 5 crores, for the last 3 years (i.e. 2008-09, 2009-10 & 2010-11).	yes	NA	Annex-10	
b	Rs 2 crores), for the last 3 years (i.e. 2008-09, 2009-10 & 2010-11).	NA	Yes	Annex-10	

The information on this document is the property of BHARAT HEAVY ELECTRICALS LIMITED. It must not be used directly or indirectly in any way detriment.

Doc No-PED/ESC/F	PQC
Rev No. 00	
Page 7 of 15	

Annexure-1

(Please fill all the relevant detail in the format below. Any change in format is liable for rejection)

SL NO	Organisation	Bidder's Reply	Whether Supporting Document
		(Pl Tick)	Attached (Yes/No)
1	Company under indian company		
	act		
2	Indian unit of multinational		
	company		
3	Proprietary firm		
4	Any other type , pl specify		

Annexure-2

(Please fill all the relevant detail in the format below. Any change in format is liable for rejection)

SL NO	Experience as per cl of PQC	Bidder's Reply	Whether Supporting Document
		(Pl Tick)	Attached (Yes/No)**
1	Available with Indian office		
2	Drawn from the principals		

^{**}Letter of technological support from organisation required in case of principals. In case of collaborator, letter along with MOU are required to be attached.

Annexure-3

(Please fill all the relevant detail in the format below. Any change in format is liable for rejection)

SL NO	Establishment proposed to be	Bidder's Reply	Whether Suppo	orting Document
	registered	(Pl Tick)	Attached	(Yes/No)**
1	Single office			
2	Multiple offices			

^{**}Address of all the offices in India to be furnished along with relevant detail.

The information on this document is the property of BHARAT HEAVY ELECTRICALS LIMITED. It must not be used directly or indirectly in any way detrimental to the interest of the company. COPYRIGHT AND CONFIDENTIAL



COPYRIGHT AND CONFIDENTIAL

The information on this document is the property of BHARAT HEAVY ELECTRICALS LIMITED.

It must not be used directly or indirectly in any way detrimental to the interest of the company.

Ref. Doc

PRODUCT STANDARD PROJECT ENGINEERING HYDERABAD

Rev No. 00

Page 8 of 15

Annexure-4 (Details of work carried out during last 7 years)

[May enclose in a separate sheet in the same proforma, if space below is not sufficient. Note not to change the proforma given below. Any change in proforma is liable for rejection)

Whether documentary proof attached for item 2-8	10						
Value of work (Rs)	6						
Part of work offlaoded by bidder to other agencies (yes or no , if yes furnish the detail)	8						
LOI & date of completion	7						
Completion	9						
Scope of work	5						
Owner's consultant	4						
owner	8						
Project	2						
S on IS	1						



Doc No-PED/ESC/PQ	C
Rev No. 00	
Page 9 of 15	

Annexure-5

DETAILS OF TECHNICAL PERSONNEL AVAILABLE IN COMPANY:

Note: - Please fill all relevant the details in the format below (not to change the proforma given below. The list should include E&M personnel also, if available)

SI. No.	Name of Technical staff available in your firm	Qualification	Designation & Discipline	Experience in the works of similar nature

The information on this document is the property of BHARAT HEAVY ELECTRICALS LIMITED. It must not be used directly or indirectly in any way detrimental to the interest of the company. COPYRIGHT AND CONFIDENTIAL



Doc No-PED/ESC	C/PQC
Rev No. 00	

Page 10 of 15

Annexure-6

AVAILABILITY OF SOFTWARE:

Note: - Please fill all relevant the details in the format below (not to change the proforma given below)

SLNO	NAME OF LICENCED SOFTWARE	Category-1 (Minimum 2 licence for each)	Category-2 (Minimum 1 licence for each)
1	Civil Structural analysis [STAAD PRO / GT STRUD]		
2	Drawing [AutoCAD-2008 onwards]		
3	Piping [CAESAR or CAEPIPE]		
4	Electrical System Studies [ETAP/CYME/SKM]		
5	Computer aided Process & Instrumentation Design [PDS/PDMS]		
6	3D modeling [PDMS & PDS]		
7	Project Monitoring and MIR generation [MS Projects/Primavera]		

COPYRIGHT AND CONFIDENTIAL

The information on this document is the property of BHARAT HEAVY ELECTRICALS LIMITED.

It must not be used directly or indirectly in any way detrimental to the interest of the company.



Doc No-PED/ESC/PQC	
Rev No. 00	
Page 11 of 15	

Ant	nexur	e-7
<i>4</i> MII	ICAUI	C /

PARTICIPATION IN TECHNICAL AUDIT, : (For last five years) (for category -1 only) Note: - Please fill all relevant the details in the format below (not to change the proforma given below)

SLNO	NAME OF AUDIT	SCOPE OF AUDIT

Annexure-8

SPECIAL ACTIVIITES ENVISAGED FOR OUTSOUCING, :

Note: - Please fill all relevant the details in the format below (not to change the proforma given below)

SLNO	NAME OF ACTIVITIES	OUTSOUCING AGENCY



Doc No-PED/ESC/PQC
Rev No. 00

Page 12 of 15

Annexure-9

S.No	Terms and Conditions		Confirmation by vendor
1.	Earnest Money Deposit as specified in NIT [x]	Х	
2.	Security Deposit [SD] as specified in NIT (Refer Note - d) [x]	Х	
3.	Finalising order on Reverse Auction Basis [Refer note c]		
4.	Schedule of Document release as per NIT [x]	Х	
5.	Weightage of each document as per NIT [x]	Х	
6.	Separate Penalty on account of delays @ 0.5% per week subject to max of 10% of total contract value		
7.	Separate Penalty on incorrect engg / rework accruable to Vendor @ actual, subject to max of 10% of order value. However, total penalty on account of Item No-6 & 7 shall be limited to 10 % of the total contract value.		
8.	Milestone based payment [as %age of order value] for release of documents [taking into account its weightage] :: [x] a. First submission by BHEL to customer : 50% b. Approval code 2 by customer : 30% c. Approval Code 1 by customer : 10% d. As Built Drawings : 10 %	X	
9.	Payment will be released within 90 days of submission of invoices with requisite supporting information. (Refer Note-b).		
10.	Offer validity :: at least 60 days from PRICE BID opening date.	Х	
11.	Prices :: a. Price offered to be firm during the contract period (Refer Note-e) b. Lump-sum price to be quoted for the job, inclusive of total no. of visits as specified from time to time. c. Unit rates to be indicated for post order changes like: i. additional work ii. additional visits d. Tax to be deducted at source from the Invoices as per applicable laws. Item [b] will be the basis for evaluation of	х	
12.	the lowest bid Contract validity period of 36 months from	X	

COPYRIGHT AND CONFIDENTIAL

The information on this document is the property of BHARAT HEAVY ELECTRICALS LIMITED. It must not be used directly or indirectly in any way detrimental to the interest of the company.

Electron Processing No. Hyderabad

PRODUCT STANDARD PROJECT ENGINEERING HYDERABAD

Doc No-PED/ESC/PQC
Rev No. 00
Page 13 of 15

	date of order placement		
13.	Refund of SD :: After submission of :: a. As built documents b. Other Project completion documents	Х	
14.	Contract termination: Due to unforeseen circumstances or due to customer's instructions it may be required to terminate/ suspend the project engineering work. ESC shall be asked to stop the work and Payment will be limited to work completed and accepted as on date of termination / notice as per rules asserted by BHEL. No other damages / cancellation charges whatsoever, arising out of such suspensions / cancellation shall be payable by BHEL.	X	

Notes ::

- Items marked '[x]' are not negotiable, and non compliance will automatically lead to rejection of offer without further correspondence.
- b. Bidders are advised not to deviate from other terms and conditions. In case of non compliance, for the purpose of evaluation, loading would be applied @
 - b1. For Penalties [items 6 & 7] :: Difference between BHEL's terms and bidder's offer.
 - b2. For release of payment earlier than that stipulated in item-9, bidders offer will be loaded with 1.5 % per month beyond 30 days for evaluation of lowest bid.
- c. As a Company initiative, BHEL might decide to finalize orders on Reverse Auction basis from time to time and as mentioned in the NIT. However, due certain reasons, it may be required to forego the reverse auction procedure and resort to normal tendering procedures. In that case, price bids of the bidders will be opened with due intimation to them and evaluation of bids will follow to select the L1-bidder. Therefore, bidders are requested to quote their most competitive prices in the original bid itself.
- d. Successful bidder shall be required to deposit the security deposit as specified in NIT either in form of cash / demand draft or produce bank guarantee (to be valid for the entire contact period) in prescribed format from any of the nationalised banks. Security deposit will not carry any interest.
- e. In the event of project extending beyond the contract period for reasons not attributable to ESC, the charges payable to ESC for the left out portion of the work will be mutually discussed and settled.

The information on this document is the property of BHARAT HEAVY ELECTRICALS LIMITED It must not be used directly or indirectly in any way detrimental to the interest of the company. COPYRIGHT AND CONFIDENTIAL



Doc	No-PED/ESC/PQC
Rev	No. 00

Page 14 of 15

Annexure-10

SALES / TURN OVER OF THE FIRM: (For last five years)

Note:- Please fill all relevant the details in the format below (not to change the proforma given below)

YEAR	TURN OVER IN LAKHS	REMARKS
2010-2011		Audited Report to be
2009-2010		enclosed to support the
2008-2009		turnover/sales figures
2007-2008		
2006-2007		

Audited Report to be enclosed to support the turn over figure.

COPYRIGHT AND CONFIDENTIAL

The information on this document is the property of BHARAT HEAVY ELECTRICALS LIMITED.

It must not be used directly or indirectly in any way detrimental to the interest of the company.

TD-106-3 Rev No. 5 Form No.



PRODUCT STANDARD PROJECT ENGINEERING HYDERABAD-32

Doc No.: PED/ESC/PQC

Rev No. 00

Page 15 of 15

RECORD OF REVISIONS

		RECORD OF REVISIONS							
		Rev. No.	Date	Revision Details	Revised By	Approved By			
COPYRIGHT AND CONFIDENTIAL The information on this document is the property of BHARAT HEAVY ELECTRICALS LIMITED, It must not be used directly or indirectly in any way detrimental to the interest of the company.		Rev 00		First Issue					
	ַט פו								
	5								
	ם ב								
	<u>ש</u>								
	<u>a</u> –								
	<u> </u>								
	_ ر _								
	<u>g</u>								
	ر الح الح								
cume	5								
is do									
on th	DD								
ation									
forme									
he int									
F -									
	_								
	-								
	-								
- J									
e Z									