



BHAGYANAGAR GAS LIMITED
(A JOINT VENTURE OF HPCL & GAIL)

BID DOCUMENT FOR

**TENDER FOR LAYING OF MDPE PIPELINES NETWORK &
OTHER ASSOCIATED WORKS FOR SUPPLY OF PIPED
NATURAL GAS IN VIJAYAWADA CITY.**

**UNDER OPEN DOMESTIC
COMPETITIVE BIDDING**

Bid Document No.: BGL/361/2017-18



**Tender for Laying of MDPE pipelines Network & Other Associated
Works For Supply of Piped natural gas in
Vijayawada City.
Bid Document No. BGL/361/2017-18**

**SOR/PRICE
SCHEDULE**

SCHEDULE OF RATES/PRICE SCHEDULE



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tem No.	Activity	Unit	Quantity	Unit Rate (inclusive of all taxes and duties except Service tax) in Rs.	Total amount (inclusive of all taxes and duties except Service tax) in Rs.
1	2	3	4	5	6 = 4x5
1.0	PE PIPELINE				
1.1	Laying of MDPE Pipeline of PE100 grade with SDR 11 having following sizes by trenching in all kind of soil, except built up sections on the top as different types of concrete pavement/footpath/asphalt roads pavements, all kind of pathways etc in VIJAYAWADA Geographical Area (GA). The trenching can be made by using mechanical excavator or manually depending upon the site condition. The minimum depth of the trench shall so that to ensure minimum cover from top of the pipe as per the specification. The following are in the scope of this item: a) Trenching of the required width and depth in all kind of the surface. b) Uncoiling, stringing ,laying and alignment of the MDPE pipes of the required sizes in trench c) Jointing of the pipes by using Electro-Fusion techniques by qualified personnel having proper tools and tackles. d) Providing and fixing all kind of fittings/accessories such as PE Bends, Couplers, end caps, Tee, Reducer or any other fittings required to make complete pipeline network e) Item also includes dewatering from the trench before laying of the pipes if required f) Receiving, loading, unloading and transporting and stacking of MDPE pipes issued by BGL as free issue material from BGL designated store yard within VIJAYAWADA GA limit but upto maximum 50Km from working site.				
	The above item also include liasioning with state authorities / land owners :Principle permission for laying of the pipeline from the concerned land owning authority shall be obtained by BGL. However all the liasioning during the pipeline laying execution with any authorities such as local bodies, traffic police, police,				



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<p>BSNL,NHAI, Railways, RTO etc. and any other utility companies / agencies such OFC operators etc are in the scope of the contractor. The scope also includes liasioning with Society / individual land owners for smooth execution of pipeline laying. Repairing/replacement of all damaged utilities if any, and payment of any compensation (if claimed by owner/other utility agencies) is in scope of the contractor.</p>				
<p>All the Proposed route alignment drawings of main pipeline (125/90/63/32 mm) shall be indicated by BGL/consultant. However for 20mm dia pipeline, preparation of route map, as per site condition shall be prepared by contractor and submitted to BGL/consultant for approval and execution shall start after due approval. Further, the scope also includes preparation of drawing, for any change in route due to site condition for mainline (125/90/63/32mm) , re- route alignment drawing shall also be prepared by contractor.</p>				
<p>During the execution of the work, the construction area shall be barricaded with steel barricades and Warning Caution tape to ensure the smooth execution of work and safety of the public/ working area. The item also includes supply, transportation and placing the barricading at the site.</p>				
<p>After laying of Pipeline, back filling with available soft soil upto depth of minimum 300mm, placing brick as per given drg or as per instruction of BGL/Consultant, backfilling with available soil upto minimum depth of 200mm above bricks, putting approved warning mat of 0.5 mm thk and 250 mm wide with traceability provision (as per attached specifications), dressing the backfilled and compacted soil and backfilling & compaction of remaining trench depth with available soil.(The cost of supply & laying of Bricks shall be paid separately)</p>				
<p>The item also includes interconnection with the existing PE network by extending/tapping from the commissioned PE pipeline through saddle tapping or any other method. Excavation for such pits, making safety barricading etc.,</p>				



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	Once pipeline network is completed, pneumatic testing is required to be carried out as per the details specification. After testing nitrogen purging is required to be done for complete network as per the specification.				
	Carrying out all works required to make the PE pipeline ready for commissioning /Gas-In as per specification. Commissioning the pipeline as per specification & approved procedure, providing tools & tackles, instruments, manpower and other accessories as per instructions of Engineer - In -Charge.				
	Item also includes grading of the pipeline route, if any required. The dismantling of the any structure, falling in pipe line route and making it good after completion of the work shall be carried out by contactor without any additional cost to BGL.				
	Final clean-up of construction area used for laying of pipeline works including disposal of debris and surplus material to designated disposal areas. (which is to be identified by the contractor)				
	Reconciliation of materials, handing over the completed Pipeline Network to Bhagyanagar Gas Ltd. for their operation and submission of As-built Drgs and other related documents as per contract.				
a)	32 mm PE 100 pipe	Meters	54000	425	2,29,50,000
b)	63 mm PE 100 pipe	Meters	18000	440	79,20,000
c)	90 mm PE 100 pipe	Meters	12000	470	56,40,000
d)	125 mm PE 100 pipe	Meters	7000	500	35,00,000
	Note:				
i	For restoration of asphalt / concrete roads, the item for construction of asphalt top / concrete top / red stone / paver shall be paid separately as per the rates quoted for the same elsewhere in the price schedule.				
ii	The above items include activity for open cut trenching only for all types of soils except rock. The decision regarding use of open cut/moling /HDD method at various locations shall be made by Engineer In -Charge/Owner based on permissions from authority etc.				



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1.2	Same as item 1.1 above but by trenching in all types of rocks using mechanical means such as rock breakers / excavators (blasting prohibited) etc. Scope also includes disposal of rocky earth and providing soft soil / sand for bedding and all around PE pipeline of minimum 150 mm thickness. The supply of the soft soil / sand is also in scope of this particular item.				
a)	32 mm PE 100 pipe	Meters	1000	750	7,50,000
b)	63 mm PE 100 pipe	Meters	500	800	4,00,000
c)	90 mm PE 100 pipe	Meters	500	850	4,25,000
d)	125 mm PE 100 pipe	Meters	500	900	4,50,000
1.3	Same as item 1.1 above but with built-up sections (different type of pavement/foot paths/roads etc.,) on the top surface.				
a)	32mm PE 100 Pipe	Meters	6500	440	28,60,000
b)	63 mm PE 100 pipe	Meters	4500	510	22,95,000
c)	90 mm PE 100 pipe	Meters	4500	550	24,75,000
d)	125 mm PE 100 pipe	Meters	2500	580	14,50,000
1.4	Same as item 1.1 above but pipeline laying by using manual / machine moling technique (without casing) for PE pipe sizes as per specification: Warning mat is not required to be laid in above pipe line.				
a)	32mm PE 100 Pipe	Meters	10000	600	60,00,000
b)	63 mm PE 100 pipe	Meters	2000	700	14,00,000
c)	90 mm PE 100 pipe	Meters	3000	750	22,50,000
d)	125 mm PE 100 pipe	Meters	1000	825	8,25,000



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1.5	Same as item no 1.1 above but pipeline laying by using machine moling technique (with casing pipe) for PE pipe sizes. The items also include supply of HDPE casing pipe of PE 100 PN 6 as per specifications. Warning mat is not required to be laid above the pipe line				
a)	32mm PE 100 Pipe (in 63 mm dia. HDPE Casing Pipe)	Meters	800	750	6,00,000
b)	63 mm PE 100 pipe (in 125 mm dia. HDPE Casing Pipe)	Meters	700	1200	8,40,000
c)	90 mm PE 100 pipe (in 180 mm dia HDPE Casing Pipe)	Meters	500	1500	7,50,000
d)	125 mm PE 100 pipe (in 250 mm dia. HDPE Casing Pipe)	Meters	60	2000	1,20,000
1.6	Pipe Laying using Horizontal Directional Drilling (HDD) Technique:				
	Laying of PE pipe including supply of Couplers, as required to complete the job. Survey of U/G utilities, survey with requisite equipment / manpower, submission of profile drawings and design for approval, execution of the work as per standard procedure attached with proper capacity machine including excavation of pits and subsequent backfilling, compaction, jointing and insertion of PE pipe, testing & commissioning, restoration of the pits to original condition, submission of As-Built Graph as per specifications and the instruction of Engineer-in-charge. If any additional temporary space is required for positioning of equipment for HDD adjacent to pipeline route, same needs to be arranged by the contractor. Item also includes liasioning with all local authorities, permission if any required, shall be obtained by the contractor. In case of HDD with casing, supply of HDPE pipes of grade PN6 above also included in the scope. Warning mat is not required to be laid above the pipe line.				
i)	HDD Without casing Pipe				
a)	32mm PE 100 Pipe	Meters	1000	700	7,00,000



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b)	63 mm PE 100 pipe	Meters	3000	900	27,00,000
c)	90 mm PE 100 pipe	Meters	4000	1300	52,00,000
d)	125 mm PE 100 pipe	Meters	7000	1750	1,22,50,000
ii) HDD With casing Pipe					
a)	32mm PE 100 Pipe (in 63 mm dia. HDPE Casing Pipe)	Meters	50	900	45,000
b)	63 mm PE 100 pipe (in 125 mm dia. HDPE Casing Pipe)	Meters	1000	1200	12,00,000
c)	90 mm PE 100 pipe (in 180 mm dia. HDPE Casing Pipe)	Meters	2000	2600	52,00,000
d)	125 mm PE 100 pipe (in 250 mm dia. HDPE Casing Pipe)	Meters	2500	3800	95,00,000
2 Restoration of asphalted roads / concrete roads / pavements / foot paths					
a)	Asphalt road: Restoration of bitumen Asphalt road after laying of MDPE pipe line as per the drawing and to the original conditions, specifications and instruction of Engineer-In-Charge. Restoration of roads shall be done to the satisfaction of local authorities and to get NOC from the concerned authorities.	Meters	5000	850	42,50,000
b)	Restoration of the all kind of pathway by using excavated material such as tiles/pavers/granite/red stone etc by providing PCC 1:4:8 of 75mm thickness and making it as original as per the drawings and to the original conditions Item includes providing of extra material such as Tiles/Paver/Granite etc matching to original pathways.	Meters	1000	650	6,50,000
c)	Concrete road/ Concrete pavement: Restoration of concrete road and pavements shall be done by providing PCC 1:4:8 of 75 mm thick and RCC 1:2:4 of specified thickness as per the drawing and to the original condition. The cost of reinforcement. Shuttering, compacting the base surface etc.. are in the scope of this item.	Meters	1000	800	8,00,000



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3	Supply & Laying of Bricks				
	Supply and placing of Class 50 bricks in trenches as per the direction of EIC and as per the specification, drawing and instruction of EIC. Item includes cost of transportation, loading & unloading and labour for placing the bricks in trenches .				
a)	32mm PE 100 Pipe	Meters	61500	50	30,75,000
b)	63 mm PE 100 pipe	Meters	23000	50	11,50,000
c)	90 mm PE 100 pipe	Meters	17000	90	15,30,000
d)	125 mm PE 100 pipe	Meters	10000	90	9,00,000
4	Supply and installation of PE stop off Isolation Ball Valves				
	Supply and installation of isolation valves of approved make as per typical drawing and specification and instructions of EIC. The scope includes supply of couplers, tapping's and handles etc.,. Payment for civil works involved in the valve pits shall be made separately and not covered in this item.				
a)	PE Valve 32mm dia	Nos.	73	5500	4,01,500
b)	PE Valve,63 mm dia	Nos.	29	6500	1,88,500
c)	PE Valve, 90 mm dia	Nos.	26	17000	4,42,000
d)	PE Valve 125mm dia	Nos.	20	29000	5,80,000
5	Construction of Valve pits				
	Construction of Value Pits as per the enclosed drawing nos. MEC/23QQ/01/31/T4/PE/LY/014/R0/A3 and MEC/23QQ/01/31/T4/PE/LY/015/R0/A3 and specification. The item includes supply of all the material including Pre-cast RCC cover, shuttering, reinforcement, labour, curing etc as per the drgs, specification and instruction of EIC.				
a	Type-1 having Internal size of Minimum 1000x1000mm	Nos.	20	28000	5,60,000
b	Type-2 having Internal size of Minimum 600x600mm	Nos.	120	22000	26,40,000



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6	Fabrication & Installation of Markers				
i)	RCC Route Markers				
	Supply, fabrication and installation of RCC route markers as per the attached drawing no. BGL/PE/PNG/DWG/11, along the route including transportations of Marker. Item also includes excavation of pit in all type of soil, Concrete Grouting of Marker and removing of debris from site all complete.	Nos.	3000	730	21,90,000
ii)	Pole Markers with Foundation				
	Supply, fabrication and installation of pole markers as per the attached drawing no. BGL/PE/PNG/DWG/12 including all associated civil works such as excavation and construction in all types of soils grouting with concrete, cleaning, stencil lettering. Item also includes grouting with 1:2:4 concrete, painting, letter writing with stencil letter as per approved drg. with all completeness.	Nos.	25	8000	2,00,000
7	DRS works				
	Installation of DRS				
	Receiving and taking over, handling, loading, transportation and unloading of DRS Skid from Owner's designated stockyards to site, installation at foundation and hooking up with MDPE pipe, at inlet/outlet or both including all works as required to complete the job as per the drawings and specification, scope of work mentioned in tender document. The scope includes supply of transition fittings and other MDPE and CS fittings as per requirements and various associated works (including steel welding, if required) to commission DRS Note: Amount towards civil/structural work shall be payable as per related SOR items.				
a	DRS (Maximum weight of single DRS shall be about 6.0 T)	Nos	2	60,000	1,20,000
8	CIVIL WORKS				
8.1	Site Grading				



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	Earth in excavation and filling to the grades and levels shown in the approved drawings in all kinds of conditions including for Road embankments, using approved quality good earth from designated borrow area, for all heights and depths including clearing and stripping (min. 150mm) of the area marked for filling, taking spot levels, consolidating the exposed natural soil surface, excavating the earth from borrow area loading, transporting & unloading, spreading in layers not exceeding 150mm thickness, breaking clods, watering (if reqd.), ramming and compacting by manual/ mechanical means to give minimum 92% of modified Proctor's density of earth, testing & dressing including disposal of all unserviceable material all complete as per specifications and directions of Engineer-in-charge.	M ²	30	350	10,500
	(Rate to include cost of all labour, tools, tackles, equipment, hire charges, cost of borrow earth by way of royalties, right of way, cess etc., as applicable with all bye works and sundry works).				
8.2	PCC 1:2:4				
	1 Cement: 2 Coarse sand : 4 stone aggregate 20mm nominal size.	M ³	20	7,000	1,40,000
8.3	PCC 1:4:8				
	1 Cement: 4 Coarse sand : 8 stone aggregate 40mm nominal size.	M ³	25	6,000	1,50,000
	(Rate to include cost of all labour, tools, tackles, equipment, hire charges, supply of all materials, shuttering, earthwork in excavation and backfilling using approved earth in all conditions etc. with all bye works and sundry works.)				
8.4	Reinforced Cement Concrete				
	Providing and laying reinforced cement of grade M-25 with 20mm and down grade crushed stone aggregate in all types of structures like foundations, pedestals, pedestal bases, pipe supports, sleepers cable trench including construction joints, bitumen painting on surface in contact with soil, supplying and fixing reinforcing steel, shuttering, inserts, finishes etc. at all depths and heights complete as per drawings, specifications and direction of the Engineer-in-charge.	M ³	25	15,000	3,75,000



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	Rate to include cost of all labour, tools, tackles, equipment, hire charges, supply of all materials such as minimum 43 grade cement including sulphate resistant cement for sub-structures, R/F steel, Inserts, bolts, conduits, bitumen, other minor construction materials, shuttering, stanging, earthwork in excavation and backfilling using serviceable earth in all conditions, shorting bailing and pumping out water, testing of concrete, curing etc. with all bye works and syndry works.				
8.5	Concrete Pavement				
	Providing and laying reinforced cement concrete of (M-25 grade) with 20mm and down grade crushed stone aggregate in pavement, including preparation of base (i.e. compacted subgrade, 200 thk sand and 50 thk PCC M-10 grade), leaving pockets if necessary, making recess, projections, fixing inserts conduit pipes (GI, PVC, HDPE, etc.) laying in alternate panels, filling the gaps between the panels with bitumen etc., making slopes, finishing edges, leaving bars for pedestals & sleepers including providing sand fill isolation , shuttering, providing and fixing reinforcing steel, curing, chipping and modification works etc. as specified in any shape, thickness, position and finishing the top surface smooth as per requirement etc. all complete as per drawings, specifications and directions of the Engineer-in-charge.				
	- 150mm thick (Type-I)	M ²	25	2,250	56,250
8.6	Brick Work				
	Providing brick work with brick class designation M-7.5 of IS:1077 in cm1:4 (1 cement : 4 sand) in steps, walls, retaining walls and load bearing structures drains, or any shape with all lead, depths & height including curing, scaffolding, etc., as per specifications and drawings with all bye-works and direction of the Engineer-in-charge.	M ³	40	7,200	2,88,000



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	(Rate to include cost of all labour, tools, tackles, equipment, hire charges, supply of all materials such as minimum 43 grade cement bricks, finishes, bitumen, other minor construction materials, shuttering, staging, masonry work, plastering, painting etc. with all bye-works and sundry works).				
	Note: The quantities of individual item can varied as per site requirement. The payment will be made as per actual certified measurement at site.				
8.7	Sand filling of 150 mm layer on MDPE in case of rocky surface.	cum	50	4,000	2,00,000
9	Structural Work				
9.1	Supply & erection of single leaf mild steel gate 2.5m high with mesh upto 2m height and barbed wire fencing and 2m wide complete in all respect including painting as per TS on all MS items, all works as per specification and drawings <u>excluding</u> foundations and RCC beams.	No.	4	25,000	1,00,000
9.2	Supply of all materials, fabrication and erection of chain link fencing 2.5m high with mesh up to 2m height and barbed wire fencing complete in all respects including painting as per TS on all MS items, all works as per specification and drawings <u>excluding</u> foundation and RCC beams.	RM	120	3,000	3,60,000
10	Liasoning				
	Liasoning and co-ordination with all statutory authorities having jurisdiction. Submission of application to the authorities expedition, follow-up, preparation of drawings and approvals. Maintaining good cordial relations with the authorities.	Mtrs	100000	25	25,00,000
Total Amount (inclusive of all taxes and duties except Service tax)					12,45,51,750.00



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SUMMARY OF SCHEDULE OF RATES

Sl. No	Description	Total Estimated Cost (Excluding Service Tax) in Rupees	Quoted Variation		
			'INCREASE' OR "DECREASE" (Refer note no 1 below)	Percentage In Figures	Percentage In Words
(1)	(2)	(3)	(4 a)	(4 b)	(4 c)
1	LAYING OF MDPE NETWORK AND OTHER ASSOCIATED WORKS FOR SUPPLY OF PNG IN VIJAYAWADA CITY	12,45,51,750			
2	Service Tax (incl. Swachh Bharat cess & Krishi kalyan cess) @ 15% on 40% of bidder's quoted total price shall be payable extra as per provisions of tender document. Note: Bidder's total price to be arrived by applying quoted % age increase / decrease on total estimated cost given at col. No. 3 above.				

Note:

1	Under column '4a', the bidder has to indicate clearly either " INCREASE" or " DECREASE " as applicable. In case the column is left blank, it will be considered as "DECREASE" in terms of percentage.
2	In case of discrepancy between percentage in figures & words, percentage in words will prevail.

Place : _____
 Date : _____

Signature of Authorized Signatory
 Name :
 Designation :
 Seal :

(Seal & Stamp of Bidder)