

**PROJECT: 66 KV GIS system for CPP package for Visakh Refinery Modernization Project (VRMP), Vishakhapatnam.****Bill Of Quantity Cum Price Schedule**

SR_NO	Description of Item	SAC_Code	Quantity	UOM	Unit_Rate (Rs.)	AMOUNT (Rs.)
1	<p>(1) 66kV Indoor GIS &amp; its Accessories- Work shall include erection / installation, testing and commissioning of 66kV GIS including LCC panels. The supervision for ETC works shall be provided by OEM/ GIS manufacturer. Arrangement of special tools &amp; tackles/ plants, and testing instrument shall be done by OEM/ BHEL on returnable basis, however, general tools &amp; tackles/ plants, and testing instrument as per anenxure-A&amp;B shall be under contractor's scope on returnable basis. The scope includes complete installation of GIS bays, including Surge Arrester, Cable Connection Module/(s), associated Local Control Cabinet (LCC) and any other module, if applicable. Any other services required for ETC of complete GIS, walkways/ support structure, earthing / grounding, Internal cabling between GIS to LCC, SF6 Gas treatment, handling / filling / top-up etc complete in all respect.</p> <p>Any dismantling/ rework before commissioning shall be in also be in contractor's scope. Please refer notes and relevant technical specification/ drawings for additional details.</p> <p>(1.1) Generator Transformer (GTG) Bay (GTG-07 Bay) (1 set= 1 no. bay including all associated activities)</p>		1	Set	37,800.00	37,800.00
2	<p>(1) 66kV Indoor GIS &amp; its Accessories- Work shall include erection / installation, testing and commissioning of 66kV GIS including LCC panels. The supervision for ETC works shall be provided by OEM/ GIS manufacturer. Arrangement of special tools &amp; tackles/ plants, and testing instrument shall be done by OEM/ BHEL on returnable basis, however, general tools &amp; tackles/ plants, and testing instrument as per anenxure-A&amp;B shall be under contractor's scope on returnable basis. The scope includes complete installation of GIS bays, including Surge Arrester, Cable Connection Module/(s), associated Local Control Cabinet (LCC) and any other module, if applicable. Any other services required for ETC of complete GIS, walkways/ support structure, earthing / grounding, Internal cabling between GIS to LCC, SF6 Gas treatment, handling / filling / top-up etc complete in all respect.</p> <p>Any dismantling/ rework before commissioning shall be in also be in contractor's scope. Please refer notes and relevant technical specification/ drawings for additional details.</p> <p>(1.2) Future Grid Transformer Bay (Future GT Bay) (1 set= 1 no. bay including all associated activities)</p>		1	Set	37,800.00	37,800.00
3	<p>(1) 66kV Indoor GIS &amp; its Accessories- Work shall include erection / installation, testing and commissioning of 66kV GIS including LCC panels. The supervision for ETC works shall be provided by OEM/ GIS manufacturer. Arrangement of special tools &amp; tackles/ plants, and testing instrument shall be done by OEM/ BHEL on returnable basis, however, general tools &amp; tackles/ plants, and testing instrument as per anenxure-A&amp;B shall be under contractor's scope on returnable basis. The scope includes complete installation of GIS bays, including Surge Arrester, Cable Connection Module/(s), associated Local Control Cabinet (LCC) and any other module, if applicable. Any other services required for ETC of complete GIS, walkways/ support structure, earthing / grounding, Internal cabling between GIS to LCC, SF6 Gas treatment, handling / filling / top-up etc complete in all respect.</p> <p>Any dismantling/ rework before commissioning shall be in also be in contractor's scope. Please refer notes and relevant technical specification/ drawings for additional details.</p> <p>(1.3) Station Transformer (STG) Bay (STG-01 Bay) (1 set= 1 no. bay including all associated activities)</p>		1	Set	37,800.00	37,800.00

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4	<p>(1) 66kV Indoor GIS &amp; its Accessories- Work shall include erection / installation, testing and commissioning of 66kV GIS including LCC panels. The supervision for ETC works shall be provided by OEM/ GIS manufacturer. Arrangement of special tools &amp; tackles/ plants, and testing instrument shall be done by OEM/ BHEL on returnable basis, however, general tools &amp; tackles/ plants, and testing instrument as per anenxure-A&amp;B shall be under contractor's scope on returnable basis. The scope includes complete installation of GIS bays, including Surge Arrester, Cable Connection Module/(s), associated Local Control Cabinet (LCC) and any other module, if applicable. Any other services required for ETC of complete GIS, walkways/ support structure, earthing / grounding, Internal cabling between GIS to LCC, SF6 Gas treatment, handling / filling / top-up etc complete in all respect.</p> <p>Any dismantling/ rework before commissioning shall be in also be in contractor's scope. Please refer notes and relevant technical specification/ drawings for additional details.</p> <p>(1.4) 220/66kV Transformer Bay (TR-9301, TR-9302 Bay) (1 set= 1 no. bay including all associated activities)</p>		2	Set	37,800.00	75,600.00
5	<p>(1) 66kV Indoor GIS &amp; its Accessories- Work shall include erection / installation, testing and commissioning of 66kV GIS including LCC panels. The supervision for ETC works shall be provided by OEM/ GIS manufacturer. Arrangement of special tools &amp; tackles/ plants, and testing instrument shall be done by OEM/ BHEL on returnable basis, however, general tools &amp; tackles/ plants, and testing instrument as per anenxure-A&amp;B shall be under contractor's scope on returnable basis. The scope includes complete installation of GIS bays, including Surge Arrester, Cable Connection Module/(s), associated Local Control Cabinet (LCC) and any other module, if applicable. Any other services required for ETC of complete GIS, walkways/ support structure, earthing / grounding, Internal cabling between GIS to LCC, SF6 Gas treatment, handling / filling / top-up etc complete in all respect.</p> <p>Any dismantling/ rework before commissioning shall be in also be in contractor's scope. Please refer notes and relevant technical specification/ drawings for additional details.</p> <p>(1.5) Bus Coupler Bay (Bus Coupler 1-2 Bay, 3-4 Bay) (1 set= 1 no. bay including all associated activities)</p>		2	Set	37,800.00	75,600.00
6	<p>(1) 66kV Indoor GIS &amp; its Accessories- Work shall include erection / installation, testing and commissioning of 66kV GIS including LCC panels. The supervision for ETC works shall be provided by OEM/ GIS manufacturer. Arrangement of special tools &amp; tackles/ plants, and testing instrument shall be done by OEM/ BHEL on returnable basis, however, general tools &amp; tackles/ plants, and testing instrument as per anenxure-A&amp;B shall be under contractor's scope on returnable basis. The scope includes complete installation of GIS bays, including Surge Arrester, Cable Connection Module/(s), associated Local Control Cabinet (LCC) and any other module, if applicable. Any other services required for ETC of complete GIS, walkways/ support structure, earthing / grounding, Internal cabling between GIS to LCC, SF6 Gas treatment, handling / filling / top-up etc complete in all respect.</p> <p>Any dismantling/ rework before commissioning shall be in also be in contractor's scope. Please refer notes and relevant technical specification/ drawings for additional details.</p> <p>(1.6) Bus Sectionalizer Bay (Bus Sectionlizer 1-3 Bay, 2-4 Bay) (1 set= 1 no. bay including all associated activities)</p>		2	Set	37,800.00	75,600.00

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7	<p>(1) 66kV Indoor GIS &amp; its Accessories- Work shall include erection / installation, testing and commissioning of 66kV GIS including LCC panels. The supervision for ETC works shall be provided by OEM/ GIS manufacturer. Arrangement of special tools &amp; tackles/ plants, and testing instrument shall be done by OEM/ BHEL on returnable basis, however, general tools &amp; tackles/ plants, and testing instrument as per anenxure-A&amp;B shall be under contractor's scope on returnable basis. The scope includes complete installation of GIS bays, including Surge Arrester, Cable Connection Module/(s), associated Local Control Cabinet (LCC) and any other module, if applicable. Any other services required for ETC of complete GIS, walkways/ support structure, earthing / grounding, Internal cabling between GIS to LCC, SF6 Gas treatment, handling / filling / top-up etc complete in all respect.</p> <p>Any dismantling/ rework before commissioning shall be in also be in contractor's scope. Please refer notes and relevant technical specification/ drawings for additional details.</p> <p>(1.7) Transformer Bay (TR-9401, TR-9402, TR-9403, TR-9404 Bay) (1 set= 1 no. bay including all associated activities)</p>		4	Set	37,800.00	1,51,200.00
8	<p>(1) 66kV Indoor GIS &amp; its Accessories- Work shall include erection / installation, testing and commissioning of 66kV GIS including LCC panels. The supervision for ETC works shall be provided by OEM/ GIS manufacturer. Arrangement of special tools &amp; tackles/ plants, and testing instrument shall be done by OEM/ BHEL on returnable basis, however, general tools &amp; tackles/ plants, and testing instrument as per anenxure-A&amp;B shall be under contractor's scope on returnable basis. The scope includes complete installation of GIS bays, including Surge Arrester, Cable Connection Module/(s), associated Local Control Cabinet (LCC) and any other module, if applicable. Any other services required for ETC of complete GIS, walkways/ support structure, earthing / grounding, Internal cabling between GIS to LCC, SF6 Gas treatment, handling / filling / top-up etc complete in all respect.</p> <p>Any dismantling/ rework before commissioning shall be in also be in contractor's scope. Please refer notes and relevant technical specification/ drawings for additional details.</p> <p>(1.8) Fully Equipped Spare Bay ( Spare-01, Spare-02 Bay) (1 set= 1 no. bay including all associated activities)</p>		2	Set	37,800.00	75,600.00
9	<p>(1) 66kV Indoor GIS &amp; its Accessories- Work shall include erection / installation, testing and commissioning of 66kV GIS including LCC panels. The supervision for ETC works shall be provided by OEM/ GIS manufacturer. Arrangement of special tools &amp; tackles/ plants, and testing instrument shall be done by OEM/ BHEL on returnable basis, however, general tools &amp; tackles/ plants, and testing instrument as per anenxure-A&amp;B shall be under contractor's scope on returnable basis. The scope includes complete installation of GIS bays, including Surge Arrester, Cable Connection Module/(s), associated Local Control Cabinet (LCC) and any other module, if applicable. Any other services required for ETC of complete GIS, walkways/ support structure, earthing / grounding, Internal cabling between GIS to LCC, SF6 Gas treatment, handling / filling / top-up etc complete in all respect.</p> <p>Any dismantling/ rework before commissioning shall be in also be in contractor's scope. Please refer notes and relevant technical specification/ drawings for additional details.</p> <p>(1.9) Transformer Bay (TR-8301 Feeder, TR-8302 Bay) (1 set= 1 no. bay including all associated activities)</p>		2	Set	37,800.00	75,600.00

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10	<p>(1) 66kV Indoor GIS &amp; its Accessories- Work shall include erection / installation, testing and commissioning of 66kV GIS including LCC panels. The supervision for ETC works shall be provided by OEM/ GIS manufacturer. Arrangement of special tools &amp; tackles/ plants, and testing instrument shall be done by OEM/ BHEL on returnable basis, however, general tools &amp; tackles/ plants, and testing instrument as per anenxure-A&amp;B shall be under contractor's scope on returnable basis. The scope includes complete installation of GIS bays, including Surge Arrester, Cable Connection Module/(s), associated Local Control Cabinet (LCC) and any other module, if applicable. Any other services required for ETC of complete GIS, walkways/ support structure, earthing / grounding, Internal cabling between GIS to LCC, SF6 Gas treatment, handling / filling / top-up etc complete in all respect.</p> <p>Any dismantling/ rework before commissioning shall be in also be in contractor's scope. Please refer notes and relevant technical specification/ drawings for additional details.</p> <p>(1.10) Transformer Bay (TR-8401, TR-8402, TR-8403, TR-8404 Bay) (1set= 1 no. bay including all associated activities)</p>		4	Set	37,800.00	1,51,200.00
11	<p>(1) 66kV Indoor GIS &amp; its Accessories- Work shall include erection / installation, testing and commissioning of 66kV GIS including LCC panels. The supervision for ETC works shall be provided by OEM/ GIS manufacturer. Arrangement of special tools &amp; tackles/ plants, and testing instrument shall be done by OEM/ BHEL on returnable basis, however, general tools &amp; tackles/ plants, and testing instrument as per anenxure-A&amp;B shall be under contractor's scope on returnable basis. The scope includes complete installation of GIS bays, including Surge Arrester, Cable Connection Module/(s), associated Local Control Cabinet (LCC) and any other module, if applicable. Any other services required for ETC of complete GIS, walkways/ support structure, earthing / grounding, Internal cabling between GIS to LCC, SF6 Gas treatment, handling / filling / top-up etc complete in all respect.</p> <p>Any dismantling/ rework before commissioning shall be in also be in contractor's scope. Please refer notes and relevant technical specification/ drawings for additional details.</p> <p>(1.11) Transformer Bay (TR-8201, TR-8202 Bay) (1 set= 1 no. bay including all associated activities)</p>		2	Set	37,800.00	75,600.00
12	<p>(1) 66kV Indoor GIS &amp; its Accessories- Work shall include erection / installation, testing and commissioning of 66kV GIS including LCC panels. The supervision for ETC works shall be provided by OEM/ GIS manufacturer. Arrangement of special tools &amp; tackles/ plants, and testing instrument shall be done by OEM/ BHEL on returnable basis, however, general tools &amp; tackles/ plants, and testing instrument as per anenxure-A&amp;B shall be under contractor's scope on returnable basis. The scope includes complete installation of GIS bays, including Surge Arrester, Cable Connection Module/(s), associated Local Control Cabinet (LCC) and any other module, if applicable. Any other services required for ETC of complete GIS, walkways/ support structure, earthing / grounding, Internal cabling between GIS to LCC, SF6 Gas treatment, handling / filling / top-up etc complete in all respect.</p> <p>Any dismantling/ rework before commissioning shall be in also be in contractor's scope. Please refer notes and relevant technical specification/ drawings for additional details.</p> <p>(1.12) Transformer Feeder (TR-8601, TR-8602 Bay) (1 set= 1 no. bay including all associated activities)</p>		2	Set	37,800.00	75,600.00

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13	<p>(1) 66kV Indoor GIS &amp; its Accessories- Work shall include erection / installation, testing and commissioning of 66kV GIS including LCC panels. The supervision for ETC works shall be provided by OEM/ GIS manufacturer. Arrangement of special tools &amp; tackles/ plants, and testing instrument shall be done by OEM/ BHEL on returnable basis, however, general tools &amp; tackles/ plants, and testing instrument as per anenxure-A&amp;B shall be under contractor's scope on returnable basis. The scope includes complete installation of GIS bays, including Surge Arrester, Cable Connection Module/(s), associated Local Control Cabinet (LCC) and any other module, if applicable. Any other services required for ETC of complete GIS, walkways/ support structure, earthing / grounding, Internal cabling between GIS to LCC, SF6 Gas treatment, handling / filling / top-up etc complete in all respect.</p> <p>Any dismantling/ rework before commissioning shall be in also be in contractor's scope. Please refer notes and relevant technical specification/ drawings for additional details.</p> <p>(1.13) Transformer Bay (TR-9001, TR-9002 Bay) (1 set= 1 no. bay including all associated activities)</p>		2	Set	37,800.00	75,600.00
14	<p>(1) 66kV Indoor GIS &amp; its Accessories- Work shall include erection / installation, testing and commissioning of 66kV GIS including LCC panels. The supervision for ETC works shall be provided by OEM/ GIS manufacturer. Arrangement of special tools &amp; tackles/ plants, and testing instrument shall be done by OEM/ BHEL on returnable basis, however, general tools &amp; tackles/ plants, and testing instrument as per anenxure-A&amp;B shall be under contractor's scope on returnable basis. The scope includes complete installation of GIS bays, including Surge Arrester, Cable Connection Module/(s), associated Local Control Cabinet (LCC) and any other module, if applicable. Any other services required for ETC of complete GIS, walkways/ support structure, earthing / grounding, Internal cabling between GIS to LCC, SF6 Gas treatment, handling / filling / top-up etc complete in all respect.</p> <p>Any dismantling/ rework before commissioning shall be in also be in contractor's scope. Please refer notes and relevant technical specification/ drawings for additional details.</p> <p>(1.14) Bus Measurement Bay with Disconnecter &amp; Earthswitch (1 set= 1 no. including all associated activities)</p>		4	Set	37,800.00	1,51,200.00
15	<p>(1) 66kV Indoor GIS &amp; its Accessories- Work shall include erection / installation, testing and commissioning of 66kV GIS including LCC panels. The supervision for ETC works shall be provided by OEM/ GIS manufacturer. Arrangement of special tools &amp; tackles/ plants, and testing instrument shall be done by OEM/ BHEL on returnable basis, however, general tools &amp; tackles/ plants, and testing instrument as per anenxure-A&amp;B shall be under contractor's scope on returnable basis. The scope includes complete installation of GIS bays, including Surge Arrester, Cable Connection Module/(s), associated Local Control Cabinet (LCC) and any other module, if applicable. Any other services required for ETC of complete GIS, walkways/ support structure, earthing / grounding, Internal cabling between GIS to LCC, SF6 Gas treatment, handling / filling / top-up etc complete in all respect.</p> <p>Any dismantling/ rework before commissioning shall be in also be in contractor's scope. Please refer notes and relevant technical specification/ drawings for additional details.</p> <p>(1.15) Bus Earth Switch Bay (1 set= 1 no. including all associated activities)</p>		4	Set	37,800.00	1,51,200.00

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16	<p>(1) 66kV Indoor GIS &amp; its Accessories- Work shall include erection / installation, testing and commissioning of 66kV GIS including LCC panels. The supervision for ETC works shall be provided by OEM/ GIS manufacturer. Arrangement of special tools &amp; tackles/ plants, and testing instrument shall be done by OEM/ BHEL on returnable basis, however, general tools &amp; tackles/ plants, and testing instrument as per anenxure-A&amp;B shall be under contractor's scope on returnable basis. The scope includes complete installation of GIS bays, including Surge Arrester, Cable Connection Module/(s), associated Local Control Cabinet (LCC) and any other module, if applicable. Any other services required for ETC of complete GIS, walkways/ support structure, earthing / grounding, Internal cabling between GIS to LCC, SF6 Gas treatment, handling / filling / top-up etc complete in all respect.</p> <p>Any dismantling/ rework before commissioning shall be in also be in contractor's scope. Please refer notes and relevant technical specification/ drawings for additional details.</p> <p>(1.16) SF6 gas processing &amp; filling for placing GIS &amp; its accessories into successful operation. This activity includes evacuation, filling, recovering, and refilling etc. This cycle may be repeated till the completion of work</p>		27	Bay	11,340.00	3,06,180.00
17	<p>(1) 66kV Indoor GIS &amp; its Accessories- Work shall include erection / installation, testing and commissioning of 66kV GIS including LCC panels. The supervision for ETC works shall be provided by OEM/ GIS manufacturer. Arrangement of special tools &amp; tackles/ plants, and testing instrument shall be done by OEM/ BHEL on returnable basis, however, general tools &amp; tackles/ plants, and testing instrument as per anenxure-A&amp;B shall be under contractor's scope on returnable basis. The scope includes complete installation of GIS bays, including Surge Arrester, Cable Connection Module/(s), associated Local Control Cabinet (LCC) and any other module, if applicable. Any other services required for ETC of complete GIS, walkways/ support structure, earthing / grounding, Internal cabling between GIS to LCC, SF6 Gas treatment, handling / filling / top-up etc complete in all respect.</p> <p>Any dismantling/ rework before commissioning shall be in also be in contractor's scope. Please refer notes and relevant technical specification/ drawings for additional details.</p> <p>(1.17) Fixing of support structure including foundation bolts, embedded plates, structures, walkway platform, railing and other support structure etc. (1 lot= all the activities complete in all respect)</p>		1	Lot	1,13,400.00	1,13,400.00
18	<p>(1) 66kV Indoor GIS &amp; its Accessories- Work shall include erection / installation, testing and commissioning of 66kV GIS including LCC panels. The supervision for ETC works shall be provided by OEM/ GIS manufacturer. Arrangement of special tools &amp; tackles/ plants, and testing instrument shall be done by OEM/ BHEL on returnable basis, however, general tools &amp; tackles/ plants, and testing instrument as per anenxure-A&amp;B shall be under contractor's scope on returnable basis. The scope includes complete installation of GIS bays, including Surge Arrester, Cable Connection Module/(s), associated Local Control Cabinet (LCC) and any other module, if applicable. Any other services required for ETC of complete GIS, walkways/ support structure, earthing / grounding, Internal cabling between GIS to LCC, SF6 Gas treatment, handling / filling / top-up etc complete in all respect.</p> <p>Any dismantling/ rework before commissioning shall be in also be in contractor's scope. Please refer notes and relevant technical specification/ drawings for additional details.</p> <p>(1.18) Earthing of GIS bays in complete including LCC and other associated equipment. This activity includes cutting, bending, brazings, if applicable, applying paint, clamping to GIS body/ LCC to earth grid complete in all respect shall be in scope of contractor, however, supply of hardwares, lugs, bimetallic sleeves, Cu conductor/ flat for completion of earthing work shall be in the scope of OEM/ BHEL. Work shall be done as per relevant drawings.</p>		27	Bay	330.75	8,930.25

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19	<p>(1) 66kV Indoor GIS &amp; its Accessories- Work shall include erection / installation, testing and commissioning of 66kV GIS including LCC panels. The supervision for ETC works shall be provided by OEM/ GIS manufacturer. Arrangement of special tools &amp; tackles/ plants, and testing instrument shall be done by OEM/ BHEL on returnable basis, however, general tools &amp; tackles/ plants, and testing instrument as per anenxure-A&amp;B shall be under contractor's scope on returnable basis. The scope includes complete installation of GIS bays, including Surge Arrester, Cable Connection Module/(s), associated Local Control Cabinet (LCC) and any other module, if applicable. Any other services required for ETC of complete GIS, walkways/ support structure, earthing / grounding, Internal cabling between GIS to LCC, SF6 Gas treatment, handling / filling / top-up etc complete in all respect.</p> <p>Any dismantling/ rework before commissioning shall be in also be in contractor's scope. Please refer notes and relevant technical specification/ drawings for additional details.</p> <p>(1.19) Cabling from GIS equipment/ components to LCC/ CRP including laying on trays/ supports, dressing, tagging, termination, ferruling etc. including arrangement of consumables etc. Supply of cables shall be in the scope of OEM/ BHEL.</p>		27	Bay	1,559.25	42,099.75
20	<p>(1) 66kV Indoor GIS &amp; its Accessories- Work shall include erection / installation, testing and commissioning of 66kV GIS including LCC panels. The supervision for ETC works shall be provided by OEM/ GIS manufacturer. Arrangement of special tools &amp; tackles/ plants, and testing instrument shall be done by OEM/ BHEL on returnable basis, however, general tools &amp; tackles/ plants, and testing instrument as per anenxure-A&amp;B shall be under contractor's scope on returnable basis. The scope includes complete installation of GIS bays, including Surge Arrester, Cable Connection Module/(s), associated Local Control Cabinet (LCC) and any other module, if applicable. Any other services required for ETC of complete GIS, walkways/ support structure, earthing / grounding, Internal cabling between GIS to LCC, SF6 Gas treatment, handling / filling / top-up etc complete in all respect.</p> <p>Any dismantling/ rework before commissioning shall be in also be in contractor's scope. Please refer notes and relevant technical specification/ drawings for additional details.</p> <p>(1.20) High voltage (HV) testing of GIS system- HV test kit shall be arranged by OEM/ BHEL on returnable basis. Testing shall be carried out under GIS OEM supervision. However, contractor shall provide all necessary assistance for carrying out the succesful testing. This testing may be required to carry out many times as per actual requirement. Any dismantling, if required for completion of work shall also be in contractor's scope. (1 lot= all the activities complete in all respect)</p>		1	Lot	42,525.00	42,525.00
21	<p>(2) 66kV EHV Cable &amp; its Accessories- 66kV, 1Cx500sqmm stranded Cu conductor XLPE insulated cable shall be laid in trench, to be filled with sand/ pipe rack/ hanger rack assembly. The activity shall further include cable jointing, if required, termination at ends, fixing of trefoil/ single clamps, earthing link box with/ without SVL and laying of bonding/ earthing cable. The supervision of installation of EHV cable &amp; earthing/ bonding cable, fixing of earthing link box with/ without SVL, fixing of trefoil/ single clamps and fixing of support structure mateials shall be done by OEM. In addition to this, testing &amp; commissioning of cabing system along with installation, testing &amp; commissioning of jointing &amp; termination kit shall be done by OEM with assistance of contractor. However, supply of cable tag &amp; markers, if applicable, small consumables, minor modifications in civil works, fabrication and welding etc. for completion of activities shall be in contractor's scope. Civil &amp; structure works including supply and filling of sand for trench/ pipe rack assembly shall be in BHEL's scope. Please refer notes and relevant technical/ drawings specification for additional details.</p> <p>(2.1) 1Cx500sqmm, 66kV XLPE, stranded Cu cable along with fixing of single clamp/ trefoil clamps, as applicable</p>		15000	Running Meter	378.00	56,70,000.00

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SR_NO	Description of Item	SAC_Code	Quantity	UOM	Unit_Rate (Rs.)	AMOUNT (Rs.)
22	<p>(2) 66kV EHV Cable &amp; its Accessories- 66kV, 1Cx500sqmm stranded Cu conductor XLPE insulated cable shall be laid in trench, to be filled with sand/ pipe rack/ hanger rack assembly. The activity shall further include cable jointing, if required, termination at ends, fixing of trefoil/ single clamps, earthing link box with/ without SVL and laying of bonding/ earthing cable. The supervision of installation of EHV cable &amp; earthing/ bonding cable, fixing of earthing link box with/ without SVL, fixing of trefoil/ single clamps and fixing of support structure materials shall be done by OEM. In addition to this, testing &amp; commissioning of cabling system along with installation, testing &amp; commissioning of jointing &amp; termination kit shall be done by OEM with assistance of contractor. However, supply of cable tag &amp; markers, if applicable, small consumables, minor modifications in civil works, fabrication and welding etc. for completion of activities shall be in contractor's scope. Civil &amp; structure works including supply and filling of sand for trench/ pipe rack assembly shall be in BHEL's scope. Please refer notes and relevant technical/ drawings specification for additional details.</p> <p>(2.2) 66kV EHV Cable Accessories</p> <p>(2.2.1) Extending support for 66kV Indoor cable termination kit (plug/ socket type) suitable/ compatible for 1Cx500sqmm, 66kV XLPE, copper cable for GIS end. (1 set= 1 no. phase with all associated work)</p>		99	Set	3,307.50	3,27,442.50
23	<p>(2) 66kV EHV Cable &amp; its Accessories- 66kV, 1Cx500sqmm stranded Cu conductor XLPE insulated cable shall be laid in trench, to be filled with sand/ pipe rack/ hanger rack assembly. The activity shall further include cable jointing, if required, termination at ends, fixing of trefoil/ single clamps, earthing link box with/ without SVL and laying of bonding/ earthing cable. The supervision of installation of EHV cable &amp; earthing/ bonding cable, fixing of earthing link box with/ without SVL, fixing of trefoil/ single clamps and fixing of support structure materials shall be done by OEM. In addition to this, testing &amp; commissioning of cabling system along with installation, testing &amp; commissioning of jointing &amp; termination kit shall be done by OEM with assistance of contractor. However, supply of cable tag &amp; markers, if applicable, small consumables, minor modifications in civil works, fabrication and welding etc. for completion of activities shall be in contractor's scope. Civil &amp; structure works including supply and filling of sand for trench/ pipe rack assembly shall be in BHEL's scope. Please refer notes and relevant technical/ drawings specification for additional details.</p> <p>(2.2) 66kV EHV Cable Accessories</p> <p>(2.2.2) Extending support for 66kV Indoor cable termination kit (heat shrinkable/ cold shrinkable type) suitable/ compatible for 1Cx500sqmm copper cable for weatherproof cable box of transformer (1 set= 1 no. phase with all associated work)</p>		48	Set	5,670.00	2,72,160.00
24	<p>(2) 66kV EHV Cable &amp; its Accessories- 66kV, 1Cx500sqmm stranded Cu conductor XLPE insulated cable shall be laid in trench, to be filled with sand/ pipe rack/ hanger rack assembly. The activity shall further include cable jointing, if required, termination at ends, fixing of trefoil/ single clamps, earthing link box with/ without SVL and laying of bonding/ earthing cable. The supervision of installation of EHV cable &amp; earthing/ bonding cable, fixing of earthing link box with/ without SVL, fixing of trefoil/ single clamps and fixing of support structure materials shall be done by OEM. In addition to this, testing &amp; commissioning of cabling system along with installation, testing &amp; commissioning of jointing &amp; termination kit shall be done by OEM with assistance of contractor. However, supply of cable tag &amp; markers, if applicable, small consumables, minor modifications in civil works, fabrication and welding etc. for completion of activities shall be in contractor's scope. Civil &amp; structure works including supply and filling of sand for trench/ pipe rack assembly shall be in BHEL's scope. Please refer notes and relevant technical/ drawings specification for additional details.</p> <p>(2.2) 66kV EHV Cable Accessories</p> <p>(2.2.3) Extending support for 66kV straight through jointing kit (heat shrinkable/ cold shrinkable type) suitable/ compatible for 1Cx500sqmm copper cable (1 set= 1 no. phase with all associated work)</p>		3	Set	5,670.00	17,010.00



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SR_NO	Description of Item	SAC_Code	Quantity	UOM	Unit_Rate (Rs.)	AMOUNT (Rs.)
25	<p>(2) 66kV EHV Cable &amp; its Accessories- 66kV, 1Cx500sqmm stranded Cu conductor XLPE insulated cable shall be laid in trench, to be filled with sand/ pipe rack/ hanger rack assembly. The activity shall further include cable jointing, if required, termination at ends, fixing of trefoil/ single clamps, earthing link box with/ without SVL and laying of bonding/ earthing cable. The supervision of installation of EHV cable &amp; earthing/ bonding cable, fixing of earthing link box with/ without SVL, fixing of trefoil/ single clamps and fixing of support structure materials shall be done by OEM. In addition to this, testing &amp; commissioning of cabling system along with installation, testing &amp; commissioning of jointing &amp; termination kit shall be done by OEM with assistance of contractor. However, supply of cable tag &amp; markers, if applicable, small consumables, minor modifications in civil works, fabrication and welding etc. for completion of activities shall be in contractor's scope. Civil &amp; structure works including supply and filling of sand for trench/ pipe rack assembly shall be in BHEL's scope. Please refer notes and relevant technical/ drawings specification for additional details.</p> <p>(2.2) 66kV EHV Cable Accessories</p> <p>(2.2.4) 1nox3phase link box without SVL (sheath voltage limiter) at GIS end along with metallic screen bonding/ earthing cable along with accessories (1 set= all three phase with all associated work)</p>		33	Set	2,362.50	77,962.50
26	<p>(2) 66kV EHV Cable &amp; its Accessories- 66kV, 1Cx500sqmm stranded Cu conductor XLPE insulated cable shall be laid in trench, to be filled with sand/ pipe rack/ hanger rack assembly. The activity shall further include cable jointing, if required, termination at ends, fixing of trefoil/ single clamps, earthing link box with/ without SVL and laying of bonding/ earthing cable. The supervision of installation of EHV cable &amp; earthing/ bonding cable, fixing of earthing link box with/ without SVL, fixing of trefoil/ single clamps and fixing of support structure materials shall be done by OEM. In addition to this, testing &amp; commissioning of cabling system along with installation, testing &amp; commissioning of jointing &amp; termination kit shall be done by OEM with assistance of contractor. However, supply of cable tag &amp; markers, if applicable, small consumables, minor modifications in civil works, fabrication and welding etc. for completion of activities shall be in contractor's scope. Civil &amp; structure works including supply and filling of sand for trench/ pipe rack assembly shall be in BHEL's scope. Please refer notes and relevant technical/ drawings specification for additional details.</p> <p>(2.2) 66kV EHV Cable Accessories</p> <p>(2.2.5) 1nox3phase link box with SVL (sheath voltage limiter) at Transformer end along with metallic screen bonding/ earthing cable along with accessories (1 set= 1 no. phase with all associated work)</p>		16	Set	2,362.50	37,800.00
27	<p>(2) 66kV EHV Cable &amp; its Accessories- 66kV, 1Cx500sqmm stranded Cu conductor XLPE insulated cable shall be laid in trench, to be filled with sand/ pipe rack/ hanger rack assembly. The activity shall further include cable jointing, if required, termination at ends, fixing of trefoil/ single clamps, earthing link box with/ without SVL and laying of bonding/ earthing cable. The supervision of installation of EHV cable &amp; earthing/ bonding cable, fixing of earthing link box with/ without SVL, fixing of trefoil/ single clamps and fixing of support structure materials shall be done by OEM. In addition to this, testing &amp; commissioning of cabling system along with installation, testing &amp; commissioning of jointing &amp; termination kit shall be done by OEM with assistance of contractor. However, supply of cable tag &amp; markers, if applicable, small consumables, minor modifications in civil works, fabrication and welding etc. for completion of activities shall be in contractor's scope. Civil &amp; structure works including supply and filling of sand for trench/ pipe rack assembly shall be in BHEL's scope. Please refer notes and relevant technical/ drawings specification for additional details.</p> <p>(2.2) 66kV EHV Cable Accessories</p> <p>(2.2.6) Bonding/ earth continuity conductor Cable (1 circuit-no= all the earthing work pertaining to one circuit in all respect)</p>		16	Circuit-no	3,307.50	52,920.00

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SR_NO	Description of Item	SAC_Code	Quantity	UOM	Unit_Rate (Rs.)	AMOUNT (Rs.)
28	<p>(2) 66kV EHV Cable &amp; its Accessories- 66kV, 1Cx500sqmm stranded Cu conductor XLPE insulated cable shall be laid in trench, to be filled with sand/ pipe rack/ hanger rack assembly. The activity shall further include cable jointing, if required, termination at ends, fixing of trefoil/ single clamps, earthing link box with/ without SVL and laying of bonding/ earthing cable. The supervision of installation of EHV cable &amp; earthing/ bonding cable, fixing of earthing link box with/ without SVL, fixing of trefoil/ single clamps and fixing of support structure materials shall be done by OEM. In addition to this, testing &amp; commissioning of cabling system along with installation, testing &amp; commissioning of jointing &amp; termination kit shall be done by OEM with assistance of contractor. However, supply of cable tag &amp; markers, if applicable, small consumables, minor modifications in civil works, fabrication and welding etc. for completion of activities shall be in contractor's scope. Civil &amp; structure works including supply and filling of sand for trench/ pipe rack assembly shall be in BHEL's scope. Please refer notes and relevant technical/ drawings specification for additional details.</p> <p>(2.2) 66kV EHV Cable Accessories</p> <p>(2.2.7) Cable support structure system at GIS end (1 set= 1 no. with all associated work)</p>		16	Set	4,252.50	68,040.00
29	<p>(2) 66kV EHV Cable &amp; its Accessories- 66kV, 1Cx500sqmm stranded Cu conductor XLPE insulated cable shall be laid in trench, to be filled with sand/ pipe rack/ hanger rack assembly. The activity shall further include cable jointing, if required, termination at ends, fixing of trefoil/ single clamps, earthing link box with/ without SVL and laying of bonding/ earthing cable. The supervision of installation of EHV cable &amp; earthing/ bonding cable, fixing of earthing link box with/ without SVL, fixing of trefoil/ single clamps and fixing of support structure materials shall be done by OEM. In addition to this, testing &amp; commissioning of cabling system along with installation, testing &amp; commissioning of jointing &amp; termination kit shall be done by OEM with assistance of contractor. However, supply of cable tag &amp; markers, if applicable, small consumables, minor modifications in civil works, fabrication and welding etc. for completion of activities shall be in contractor's scope. Civil &amp; structure works including supply and filling of sand for trench/ pipe rack assembly shall be in BHEL's scope. Please refer notes and relevant technical/ drawings specification for additional details.</p> <p>(2.2) 66kV EHV Cable Accessories</p> <p>(2.2.8) Cable support structure system at Transformer end (1 set= 1 no. with all associated work)</p>		16	Set	4,252.50	68,040.00
30	<p>(2) 66kV EHV Cable &amp; its Accessories- 66kV, 1Cx500sqmm stranded Cu conductor XLPE insulated cable shall be laid in trench, to be filled with sand/ pipe rack/ hanger rack assembly. The activity shall further include cable jointing, if required, termination at ends, fixing of trefoil/ single clamps, earthing link box with/ without SVL and laying of bonding/ earthing cable. The supervision of installation of EHV cable &amp; earthing/ bonding cable, fixing of earthing link box with/ without SVL, fixing of trefoil/ single clamps and fixing of support structure materials shall be done by OEM. In addition to this, testing &amp; commissioning of cabling system along with installation, testing &amp; commissioning of jointing &amp; termination kit shall be done by OEM with assistance of contractor. However, supply of cable tag &amp; markers, if applicable, small consumables, minor modifications in civil works, fabrication and welding etc. for completion of activities shall be in contractor's scope. Civil &amp; structure works including supply and filling of sand for trench/ pipe rack assembly shall be in BHEL's scope. Please refer notes and relevant technical/ drawings specification for additional details.</p> <p>(2.2) 66kV EHV Cable Accessories</p> <p>(2.2.9) Extending support for earthing/ grounding of EHV cable system including installation of rod electrode/ pipe electrode, connection with main grid etc. as per technical specification/ drawings. Supply of earthing materials shall be in scope of OEM/ BHEL. (1 set= 1 no. with all associated work)</p>		16	Set	2,362.50	37,800.00

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SR_NO	Description_of_Item	SAC_Code	Quantity	UOM	Unit_Rate (Rs.)	AMOUNT (Rs.)
31	<p>(3) 220kV EHV Cable &amp; its Accessories- 220kV, 1Cx1000sqmm stranded Cu conductor XLPE insulated cable shall be laid in trench, to be filled with sand/ pipe rack/ hanger rack assembly. The activity shall further include cable jointing, if required, termination at ends, fixing of trefoil/ single clamps, earthing link box with/ without SVL and laying of bonding/ earthing cable. The supervision of installation of EHV cable &amp; earthing/ bonding cable, fixing of earthing link box with/ without SVL, fixing of trefoil/ single clamps and fixing of support structure materials shall be done by OEM. In addition to this, testing &amp; commissioning of cabling system along with installation, testing &amp; commissioning of jointing &amp; termination kit shall be done by OEM with assistance of contractor. However, supply of small consumables, minor modifications in civil works, fabrication and welding etc. for completion of activities shall be in contractor's scope. Civil &amp; structure works including supply and filling of sand for trench/ pipe rack assembly shall be in BHEL's scope. Please refer notes and relevant technical specification/ drawings for additional details.</p> <p>(3.1) 1Cx1000sqmm, 220kV XLPE, stranded Cu cable along with fixing of single clamp/ trefoil clamps, as applicable</p>		1800	Running Meter	1,260.00	22,68,000.00
32	<p>(3) 220kV EHV Cable &amp; its Accessories- 220kV, 1Cx1000sqmm stranded Cu conductor XLPE insulated cable shall be laid in trench, to be filled with sand/ pipe rack/ hanger rack assembly. The activity shall further include cable jointing, if required, termination at ends, fixing of trefoil/ single clamps, earthing link box with/ without SVL and laying of bonding/ earthing cable. The supervision of installation of EHV cable &amp; earthing/ bonding cable, fixing of earthing link box with/ without SVL, fixing of trefoil/ single clamps and fixing of support structure materials shall be done by OEM. In addition to this, testing &amp; commissioning of cabling system along with installation, testing &amp; commissioning of jointing &amp; termination kit shall be done by OEM with assistance of contractor. However, supply of small consumables, minor modifications in civil works, fabrication and welding etc. for completion of activities shall be in contractor's scope. Civil &amp; structure works including supply and filling of sand for trench/ pipe rack assembly shall be in BHEL's scope. Please refer notes and relevant technical specification/ drawings for additional details.</p> <p>(3.2) 220kV EHV Cable Accessories</p> <p>(3.2.1) Extending support for 220kV Indoor cable termination kit (plug/ socket type) suitable/ compatible for 1Cx1000sqmm, 220kV XLPE, copper cable for GIS end (1 set= 1 no. phase with all associated work)</p>		12	Set	4,252.50	51,030.00
33	<p>(3) 220kV EHV Cable &amp; its Accessories- 220kV, 1Cx1000sqmm stranded Cu conductor XLPE insulated cable shall be laid in trench, to be filled with sand/ pipe rack/ hanger rack assembly. The activity shall further include cable jointing, if required, termination at ends, fixing of trefoil/ single clamps, earthing link box with/ without SVL and laying of bonding/ earthing cable. The supervision of installation of EHV cable &amp; earthing/ bonding cable, fixing of earthing link box with/ without SVL, fixing of trefoil/ single clamps and fixing of support structure materials shall be done by OEM. In addition to this, testing &amp; commissioning of cabling system along with installation, testing &amp; commissioning of jointing &amp; termination kit shall be done by OEM with assistance of contractor. However, supply of small consumables, minor modifications in civil works, fabrication and welding etc. for completion of activities shall be in contractor's scope. Civil &amp; structure works including supply and filling of sand for trench/ pipe rack assembly shall be in BHEL's scope. Please refer notes and relevant technical specification/ drawings for additional details.</p> <p>(3.2) 220kV EHV Cable Accessories</p> <p>(3.2.2) Extending support for 220kV Indoor cable termination kit (plug/ socket type) suitable/ compatible for 1Cx1000sqmm copper cable for oil filled weatherproof cable box of transformer end (1 set= 1 no. phase with all associated work)</p>		12	Set	4,725.00	56,700.00

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SR_NO	Description_of_Item	SAC_Code	Quantity	UOM	Unit_Rate (Rs.)	AMOUNT (Rs.)
34	<p>(3) 220kV EHV Cable &amp; its Accessories- 220kV, 1Cx1000sqmm stranded Cu conductor XLPE insulated cable shall be laid in trench, to be filled with sand/ pipe rack/ hanger rack assembly. The activity shall further include cable jointing, if required, termination at ends, fixing of trefoil/ single clamps, earthing link box with/ without SVL and laying of bonding/ earthing cable. The supervision of installation of EHV cable &amp; earthing/ bonding cable, fixing of earthing link box with/ without SVL, fixing of trefoil/ single clamps and fixing of support structure materials shall be done by OEM. In addition to this, testing &amp; commissioning of cabling system along with installation, testing &amp; commissioning of jointing &amp; termination kit shall be done by OEM with assistance of contractor. However, supply of small consumables, minor modifications in civil works, fabrication and welding etc. for completion of activities shall be in contractor's scope. Civil &amp; structure works including supply and filling of sand for trench/ pipe rack assembly shall be in BHEL's scope. Please refer notes and relevant technical specification/ drawings for additional details.</p> <p>(3.2) 220kV EHV Cable Accessories</p> <p>(3.2.3) Extending support for 220kV Straight through jointing kit (heat shrinkable/ cold shrinkable type) suitable/ compatible for 1Cx1000sqmm copper cable (1 set= 1 no. phase with all associated work)</p>		3	Set	11,340.00	34,020.00
35	<p>(3) 220kV EHV Cable &amp; its Accessories- 220kV, 1Cx1000sqmm stranded Cu conductor XLPE insulated cable shall be laid in trench, to be filled with sand/ pipe rack/ hanger rack assembly. The activity shall further include cable jointing, if required, termination at ends, fixing of trefoil/ single clamps, earthing link box with/ without SVL and laying of bonding/ earthing cable. The supervision of installation of EHV cable &amp; earthing/ bonding cable, fixing of earthing link box with/ without SVL, fixing of trefoil/ single clamps and fixing of support structure materials shall be done by OEM. In addition to this, testing &amp; commissioning of cabling system along with installation, testing &amp; commissioning of jointing &amp; termination kit shall be done by OEM with assistance of contractor. However, supply of small consumables, minor modifications in civil works, fabrication and welding etc. for completion of activities shall be in contractor's scope. Civil &amp; structure works including supply and filling of sand for trench/ pipe rack assembly shall be in BHEL's scope. Please refer notes and relevant technical specification/ drawings for additional details.</p> <p>(3.2) 220kV EHV Cable Accessories</p> <p>(3.2.4) 1nox3phase link box without SVL (sheath voltage limiter) at GIS end along with installation of metallic screen bonding &amp; earthing continuity conductor cable along with accessories (1 set= all three phase with all associated work)</p>		4	Set	4,252.50	17,010.00
36	<p>(3) 220kV EHV Cable &amp; its Accessories- 220kV, 1Cx1000sqmm stranded Cu conductor XLPE insulated cable shall be laid in trench, to be filled with sand/ pipe rack/ hanger rack assembly. The activity shall further include cable jointing, if required, termination at ends, fixing of trefoil/ single clamps, earthing link box with/ without SVL and laying of bonding/ earthing cable. The supervision of installation of EHV cable &amp; earthing/ bonding cable, fixing of earthing link box with/ without SVL, fixing of trefoil/ single clamps and fixing of support structure materials shall be done by OEM. In addition to this, testing &amp; commissioning of cabling system along with installation, testing &amp; commissioning of jointing &amp; termination kit shall be done by OEM with assistance of contractor. However, supply of small consumables, minor modifications in civil works, fabrication and welding etc. for completion of activities shall be in contractor's scope. Civil &amp; structure works including supply and filling of sand for trench/ pipe rack assembly shall be in BHEL's scope. Please refer notes and relevant technical specification/ drawings for additional details.</p> <p>(3.2) 220kV EHV Cable Accessories</p> <p>(3.3.5) 1nox3phase link box with SVL (sheath voltage limiter) at oil filled weatherproof cable box of transformer along with installation of metallic screen bonding &amp; earthing cable along with accessories (1 set= all three phase with all associated work)</p>		4	Set	4,252.50	17,010.00

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SR_NO	Description of Item	SAC_Code	Quantity	UOM	Unit_Rate (Rs.)	AMOUNT (Rs.)
37	<p>(3) 220kV EHV Cable &amp; its Accessories- 220kV, 1Cx1000sqmm stranded Cu conductor XLPE insulated cable shall be laid in trench, to be filled with sand/ pipe rack/ hanger rack assembly. The activity shall further include cable jointing, if required, termination at ends, fixing of trefoil/ single clamps, earthing link box with/ without SVL and laying of bonding/ earthing cable. The supervision of installation of EHV cable &amp; earthing/ bonding cable, fixing of earthing link box with/ without SVL, fixing of trefoil/ single clamps and fixing of support structure materials shall be done by OEM. In addition to this, testing &amp; commissioning of cabling system along with installation, testing &amp; commissioning of jointing &amp; termination kit shall be done by OEM with assistance of contractor. However, supply of small consumables, minor modifications in civil works, fabrication and welding etc. for completion of activities shall be in contractor's scope. Civil &amp; structure works including supply and filling of sand for trench/ pipe rack assembly shall be in BHEL's scope. Please refer notes and relevant technical specification/ drawings for additional details.</p> <p>(3.2) 220kV EHV Cable Accessories</p> <p>(3.2.6) Bonding/ earth continuity conductor Cable (1 circuit-no= all the earthing work pertaining to one circuit in all respect)</p>		4	Circuit-no	4,252.50	17,010.00
38	<p>(3) 220kV EHV Cable &amp; its Accessories- 220kV, 1Cx1000sqmm stranded Cu conductor XLPE insulated cable shall be laid in trench, to be filled with sand/ pipe rack/ hanger rack assembly. The activity shall further include cable jointing, if required, termination at ends, fixing of trefoil/ single clamps, earthing link box with/ without SVL and laying of bonding/ earthing cable. The supervision of installation of EHV cable &amp; earthing/ bonding cable, fixing of earthing link box with/ without SVL, fixing of trefoil/ single clamps and fixing of support structure materials shall be done by OEM. In addition to this, testing &amp; commissioning of cabling system along with installation, testing &amp; commissioning of jointing &amp; termination kit shall be done by OEM with assistance of contractor. However, supply of small consumables, minor modifications in civil works, fabrication and welding etc. for completion of activities shall be in contractor's scope. Civil &amp; structure works including supply and filling of sand for trench/ pipe rack assembly shall be in BHEL's scope. Please refer notes and relevant technical specification/ drawings for additional details.</p> <p>(3.2) 220kV EHV Cable Accessories</p> <p>(3.2.7) Cable support system at GIS end (1 set= 1 no. with all associated work)</p>		4	Set	4,252.50	17,010.00
39	<p>(3) 220kV EHV Cable &amp; its Accessories- 220kV, 1Cx1000sqmm stranded Cu conductor XLPE insulated cable shall be laid in trench, to be filled with sand/ pipe rack/ hanger rack assembly. The activity shall further include cable jointing, if required, termination at ends, fixing of trefoil/ single clamps, earthing link box with/ without SVL and laying of bonding/ earthing cable. The supervision of installation of EHV cable &amp; earthing/ bonding cable, fixing of earthing link box with/ without SVL, fixing of trefoil/ single clamps and fixing of support structure materials shall be done by OEM. In addition to this, testing &amp; commissioning of cabling system along with installation, testing &amp; commissioning of jointing &amp; termination kit shall be done by OEM with assistance of contractor. However, supply of small consumables, minor modifications in civil works, fabrication and welding etc. for completion of activities shall be in contractor's scope. Civil &amp; structure works including supply and filling of sand for trench/ pipe rack assembly shall be in BHEL's scope. Please refer notes and relevant technical specification/ drawings for additional details.</p> <p>(3.2) 220kV EHV Cable Accessories</p> <p>(3.2.8) Cable support system at Transformer end (1 set= 1 no. with all associated work)</p>		4	Set	4,252.50	17,010.00

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SR_NO	Description of Item	SAC_Code	Quantity	UOM	Unit_Rate (Rs.)	AMOUNT (Rs.)
40	<p>(3) 220kV EHV Cable &amp; its Accessories- 220kV, 1Cx1000sqmm stranded Cu conductor XLPE insulated cable shall be laid in trench, to be filled with sand/ pipe rack/ hanger rack assembly. The activity shall further include cable jointing, if required, termination at ends, fixing of trefoil/ single clamps, earthing link box with/ without SVL and laying of bonding/ earthing cable. The supervision of installation of EHV cable &amp; earthing/ bonding cable, fixing of earthing link box with/ without SVL, fixing of trefoil/ single clamps and fixing of support structure materials shall be done by OEM. In addition to this, testing &amp; commissioning of cabling system along with installation, testing &amp; commissioning of jointing &amp; termination kit shall be done by OEM with assistance of contractor. However, supply of small consumables, minor modifications in civil works, fabrication and welding etc. for completion of activities shall be in contractor's scope. Civil &amp; structure works including supply and filling of sand for trench/ pipe rack assembly shall be in BHEL's scope. Please refer notes and relevant technical specification/ drawings for additional details.</p> <p>(3.2) 220kV EHV Cable Accessories</p> <p>(3.2.9) Extending support for earthing/ grounding of 220kV EHV cable system including installation of rod electrode/ pipe electrode, connection with main grid etc. as per technical specification/ drawings. Supply of earthing materials shall be in scope of OEM/ BHEL. (1 set= 1 no. with all associated work)</p>		4	Set	2,362.50	9,450.00
41	<p>(4) 220/66kV, 80/100MVA Transformer &amp; its accessories- Transformer consisting of filled insulating oil, marshalling box, radiator bank along with cooling arrangement, conservator, cooler control cabinet/ marshalling kiosk and any other accessories, if applicable. This includes erection of all auxiliaries such as turrets, HV terminals along with bushings, cable boxes, associated transformer earthing works (excluding riser connections to main earthmat), laying of cable from Transformer auxiliaries to MK, Oil filtration, filling of oil, hot oil circulation, Oil testing etc as required to complete the installation of transformer. Please refer notes for additional details. Please refer notes and relevant technical specification/ drawings for additional details.</p> <p>(4.1) Transformer complete in all respect including its marshalling box, radiator bank along with cooling arrangement, conservator, cooler control cabinet/ marshalling kiosk and any other accessories, if applicable. This includes erection of all auxiliaries such as turrets, HV terminals along with bushings, cable boxes, associated transformer earthing works (excluding riser connections to main earthmat), laying of cable from Transformer auxiliaries to marshalling kiosk, oil filtration, filling of oil, hot oil circulation, oil testing etc as required to complete the testing/ commissioning of transformer (1 set= 1no. transformer along with all accessories and associated work).</p>		2	Set	2,36,250.00	4,72,500.00
42	<p>(4) 220/66kV, 80/100MVA Transformer &amp; its accessories- Transformer consisting of filled insulating oil, marshalling box, radiator bank along with cooling arrangement, conservator, cooler control cabinet/ marshalling kiosk and any other accessories, if applicable. This includes erection of all auxiliaries such as turrets, HV terminals along with bushings, cable boxes, associated transformer earthing works (excluding riser connections to main earthmat), laying of cable from Transformer auxiliaries to MK, Oil filtration, filling of oil, hot oil circulation, Oil testing etc as required to complete the installation of transformer. Please refer notes for additional details. Please refer notes and relevant technical specification/ drawings for additional details.</p> <p>(4.2) Unloading of transformer tank (1 set= 1no. transformer tank).</p>		2	Set	1,41,750.00	2,83,500.00

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SR_NO	Description of Item	SAC_Code	Quantity	UOM	Unit_Rate (Rs.)	AMOUNT (Rs.)
43	<p>(4) 220/66kV, 80/100MVA Transformer &amp; its accessories- Transformer consisting of filled insulating oil, marshalling box, radiator bank along with cooling arrangement, conservator, cooler control cabinet/ marshalling kiosk and any other accessories, if applicable. This includes erection of all auxiliaries such as turrets, HV terminals along with bushings, cable boxes, associated transformer earthing works (excluding riser connections to main earthmat), laying of cable from Transformer auxiliaries to MK, Oil filtration, filling of oil, hot oil circulation, Oil testing etc as required to complete the installation of transformer. Please refer notes for additional details.Please refer notes and relevant technical specification/ drawings for additional details.</p> <p>(4.3) Dragging/ shifting charges of transformer tank to its main transformer foundation</p>		80	Meter	1,134.00	90,720.00
44	<p>(4) 220/66kV, 80/100MVA Transformer &amp; its accessories- Transformer consisting of filled insulating oil, marshalling box, radiator bank along with cooling arrangement, conservator, cooler control cabinet/ marshalling kiosk and any other accessories, if applicable. This includes erection of all auxiliaries such as turrets, HV terminals along with bushings, cable boxes, associated transformer earthing works (excluding riser connections to main earthmat), laying of cable from Transformer auxiliaries to MK, Oil filtration, filling of oil, hot oil circulation, Oil testing etc as required to complete the installation of transformer. Please refer notes for additional details.Please refer notes and relevant technical specification/ drawings for additional details.</p> <p>(4.4) Dryout procedure for transformer by Nitrogen purging as per OEM recommended procedure including arrangement of nitrogen/ hot air ( 1set= one time for one transformer).</p>		1	Set	1,89,000.00	1,89,000.00
45	<p>(4) 220/66kV, 80/100MVA Transformer &amp; its accessories- Transformer consisting of filled insulating oil, marshalling box, radiator bank along with cooling arrangement, conservator, cooler control cabinet/ marshalling kiosk and any other accessories, if applicable. This includes erection of all auxiliaries such as turrets, HV terminals along with bushings, cable boxes, associated transformer earthing works (excluding riser connections to main earthmat), laying of cable from Transformer auxiliaries to MK, Oil filtration, filling of oil, hot oil circulation, Oil testing etc as required to complete the installation of transformer. Please refer notes for additional details.Please refer notes and relevant technical specification/ drawings for additional details.</p> <p>(4.5) Hot oil circulation, oil testing and other testing/ commissioning activities for testing/ commissioning of transformer. This item shall be payable, if contractor shall carry these activities second time and reasons for the same is not attributable to contractor (1 Lot= all activities pertaining to one transformer for one time)</p>		1	Lot	1,89,000.00	1,89,000.00
46	<p>(4) 220/66kV, 80/100MVA Transformer &amp; its accessories- Transformer consisting of filled insulating oil, marshalling box, radiator bank along with cooling arrangement, conservator, cooler control cabinet/ marshalling kiosk and any other accessories, if applicable. This includes erection of all auxiliaries such as turrets, HV terminals along with bushings, cable boxes, associated transformer earthing works (excluding riser connections to main earthmat), laying of cable from Transformer auxiliaries to MK, Oil filtration, filling of oil, hot oil circulation, Oil testing etc as required to complete the installation of transformer. Please refer notes for additional details.Please refer notes and relevant technical specification/ drawings for additional details.</p> <p>(4.6) Complete earthing for transformer including connection with main grid, excluding supply &amp; installation of rod electrode/ pipe electrode as per technical specification/ drawings (1 set= all earthing work for one transformer)</p>		2	Set	22,680.00	45,360.00

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SR_NO	Description of Item	SAC_Code	Quantity	UOM	Unit_Rate (Rs.)	AMOUNT (Rs.)
47	<p>(4) 220/66kV, 80/100MVA Transformer &amp; its accessories- Transformer consisting of filled insulating oil, marshalling box, radiator bank along with cooling arrangement, conservator, cooler control cabinet/ marshalling kiosk and any other accessories, if applicable. This includes erection of all auxiliaries such as turrets, HV terminals along with bushings, cable boxes, associated transformer earthing works (excluding riser connections to main earthmat), laying of cable from Transformer auxiliaries to MK, Oil filtration, filling of oil, hot oil circulation, Oil testing etc as required to complete the installation of transformer. Please refer notes for additional details. Please refer notes and relevant technical specification/ drawings for additional details.</p> <p>(4.7) Supply &amp; installation of rod electrode/ pipe electrode as per technical specification/ drawings (1 set= all earthing work for one rod electrode/ pipe electrode)</p>		4	Set	5,670.00	22,680.00
48	<p>(5) 220/33kV, 80/100MVA Transformer &amp; its accessories- Transformer consisting of filled insulating oil, marshalling box, radiator bank along with cooling arrangement, conservator, cooler control cabinet/ marshalling kiosk and any other accessories, if applicable. This includes erection of all auxiliaries such as turrets, HV terminals along with bushings, cable boxes, associated transformer earthing works (excluding riser connections to main earthmat), laying of cable from Transformer auxiliaries to MK, Oil filtration, filling of oil, hot oil circulation, Oil testing etc as required to complete the installation of transformer. Please refer notes and relevant technical specification/ drawings for additional details.</p> <p>(5.1) Transformer complete in all respect including its marshalling box, radiator bank along with cooling arrangement, conservator, cooler control cabinet/ marshalling kiosk and any other accessories, if applicable. This includes erection of all auxiliaries such as turrets, HV terminals along with bushings, cable boxes, associated transformer earthing works (excluding riser connections to main earthmat), laying of cable from Transformer auxiliaries to marshalling kiosk, oil filtration, filling of oil, hot oil circulation, oil testing etc as required to complete the testing/ commissioning of transformer. (1 set= 1no. transformer along with all accessories and associated work).</p>		2	Set	2,36,250.00	4,72,500.00
49	<p>(5) 220/33kV, 80/100MVA Transformer &amp; its accessories- Transformer consisting of filled insulating oil, marshalling box, radiator bank along with cooling arrangement, conservator, cooler control cabinet/ marshalling kiosk and any other accessories, if applicable. This includes erection of all auxiliaries such as turrets, HV terminals along with bushings, cable boxes, associated transformer earthing works (excluding riser connections to main earthmat), laying of cable from Transformer auxiliaries to MK, Oil filtration, filling of oil, hot oil circulation, Oil testing etc as required to complete the installation of transformer. Please refer notes and relevant technical specification/ drawings for additional details.</p> <p>(5.2) Unloading of transformer tank (1 set= 1no. transformer tank).</p>		2	Set	1,41,750.00	2,83,500.00
50	<p>(5) 220/33kV, 80/100MVA Transformer &amp; its accessories- Transformer consisting of filled insulating oil, marshalling box, radiator bank along with cooling arrangement, conservator, cooler control cabinet/ marshalling kiosk and any other accessories, if applicable. This includes erection of all auxiliaries such as turrets, HV terminals along with bushings, cable boxes, associated transformer earthing works (excluding riser connections to main earthmat), laying of cable from Transformer auxiliaries to MK, Oil filtration, filling of oil, hot oil circulation, Oil testing etc as required to complete the installation of transformer. Please refer notes and relevant technical specification/ drawings for additional details.</p> <p>(5.3) Dragging/ shifting charges of transformer tank to its main transformer foundation</p>		80	Meter	1,134.00	90,720.00



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SR_NO	Description of Item	SAC_Code	Quantity	UOM	Unit_Rate (Rs.)	AMOUNT (Rs.)
51	<p>(5) 220/33kV, 80/100MVA Transformer &amp; its accessories- Transformer consisting of filled insulating oil, marshalling box, radiator bank along with cooling arrangement, conservator, cooler control cabinet/ marshalling kiosk and any other accessories, if applicable. This includes erection of all auxiliaries such as turrets, HV terminals along with bushings, cable boxes, associated transformer earthing works (excluding riser connections to main earthmat), laying of cable from Transformer auxiliaries to MK, Oil filtration, filling of oil, hot oil circulation, Oil testing etc as required to complete the installation of transformer. Please refer notes and relevant technical specification/ drawings for additional details.</p> <p>(5.4) Dryout procedure for transformer by Nitrogen purging as per OEM recommended procedure including arrangement of nitrogen/ hot air (1 set= one time for one transformer).</p>		1	Set	1,89,000.00	1,89,000.00
52	<p>(5) 220/33kV, 80/100MVA Transformer &amp; its accessories- Transformer consisting of filled insulating oil, marshalling box, radiator bank along with cooling arrangement, conservator, cooler control cabinet/ marshalling kiosk and any other accessories, if applicable. This includes erection of all auxiliaries such as turrets, HV terminals along with bushings, cable boxes, associated transformer earthing works (excluding riser connections to main earthmat), laying of cable from Transformer auxiliaries to MK, Oil filtration, filling of oil, hot oil circulation, Oil testing etc as required to complete the installation of transformer. Please refer notes and relevant technical specification/ drawings for additional details.</p> <p>(5.5) Hot oil circulation, oil testing and other testing activities for testing/ commissioning of transformer. This item shall be payable, if contractor shall carry these activities second time and reasons for the same is not attributable to contractor (1 Lot= all activities pertaining to one transformer for one time).</p>		1	Lot	1,89,000.00	1,89,000.00
53	<p>(5) 220/33kV, 80/100MVA Transformer &amp; its accessories- Transformer consisting of filled insulating oil, marshalling box, radiator bank along with cooling arrangement, conservator, cooler control cabinet/ marshalling kiosk and any other accessories, if applicable. This includes erection of all auxiliaries such as turrets, HV terminals along with bushings, cable boxes, associated transformer earthing works (excluding riser connections to main earthmat), laying of cable from Transformer auxiliaries to MK, Oil filtration, filling of oil, hot oil circulation, Oil testing etc as required to complete the installation of transformer. Please refer notes and relevant technical specification/ drawings for additional details.</p> <p>(5.6) Complete earthing for transformer including connection with main grid, excluding supply &amp; installation of rod electrode/ pipe electrode as per technical specification/ drawings (1 set= all earthing work for one transformer)</p>		2	Set	22,680.00	45,360.00
54	<p>(5) 220/33kV, 80/100MVA Transformer &amp; its accessories- Transformer consisting of filled insulating oil, marshalling box, radiator bank along with cooling arrangement, conservator, cooler control cabinet/ marshalling kiosk and any other accessories, if applicable. This includes erection of all auxiliaries such as turrets, HV terminals along with bushings, cable boxes, associated transformer earthing works (excluding riser connections to main earthmat), laying of cable from Transformer auxiliaries to MK, Oil filtration, filling of oil, hot oil circulation, Oil testing etc as required to complete the installation of transformer. Please refer notes and relevant technical specification/ drawings for additional details.</p> <p>(5.7) Supply &amp; installation of rod electrode/ pipe electrode as per technical specification/ drawings (1 set= all earthing work for one rod electrode/ pipe electrode)</p>		4	Set	5,670.00	22,680.00
55	<p>(6) Control Relay Panels- The scope of work includes erection, testing &amp; commissioning of Control Relay Panels, however, supervision of testing and commissioning of relays is in scope of OEM/ BHEL. Arranging necessary manpower support, tools, tackles and testing equipment required shall be in scope of ETC contractor. Please refer notes and relevant technical specification for additional details. Numerical relay test kit shall be in scope of OEM/BHEL. Please refer notes and relevant technical specification/ drawings for additional details.</p> <p>(6.1) 66kV Incomer Panel (GTG-07, STG-01) ( 1 Set=1 Panel)</p>		2	Set	5,250.00	10,500.00

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SR_NO	Description of Item	SAC_Code	Quantity	UOM	Unit_Rate (Rs.)	AMOUNT (Rs.)
56	(6) Control Relay Panels- The scope of work includes erection, testing & commissioning of Control Relay Panels, however, supervision of testing and commissioning of relays is in scope of OEM/ BHEL. Arranging necessary manpower support, tools, tackles and testing equipment required shall be in scope of ETC contractor. Please refer notes and relevant technical specification for additional details. Numerical relay test kit shall be in scope of OEM/BHEL. Please refer notes and relevant technical specification/ drawings for additional details.  (6.2) 66kV Transformer Feeder Panel (Bay-2,Bay-10,Bay-16,Bay-19) ( 1 Set=1 Panel)		4	Set	5,250.00	21,000.00
57	(6) Control Relay Panels- The scope of work includes erection, testing & commissioning of Control Relay Panels, however, supervision of testing and commissioning of relays is in scope of OEM/ BHEL. Arranging necessary manpower support, tools, tackles and testing equipment required shall be in scope of ETC contractor. Please refer notes and relevant technical specification for additional details. Numerical relay test kit shall be in scope of OEM/BHEL. Please refer notes and relevant technical specification/ drawings for additional details.  (6.3) 66Kv Bus Coupler Panel ( 1 Set=1 Panel)		2	Set	5,250.00	10,500.00
58	(6) Control Relay Panels- The scope of work includes erection, testing & commissioning of Control Relay Panels, however, supervision of testing and commissioning of relays is in scope of OEM/ BHEL. Arranging necessary manpower support, tools, tackles and testing equipment required shall be in scope of ETC contractor. Please refer notes and relevant technical specification for additional details. Numerical relay test kit shall be in scope of OEM/BHEL. Please refer notes and relevant technical specification/ drawings for additional details.  (6.4) 66KV Incomer GridTransformer Panel (Bay-9,18 & 22) ( 1 Set=1 Panel)		3	Set	5,250.00	15,750.00
59	(6) Control Relay Panels- The scope of work includes erection, testing & commissioning of Control Relay Panels, however, supervision of testing and commissioning of relays is in scope of OEM/ BHEL. Arranging necessary manpower support, tools, tackles and testing equipment required shall be in scope of ETC contractor. Please refer notes and relevant technical specification for additional details. Numerical relay test kit shall be in scope of OEM/BHEL. Please refer notes and relevant technical specification/ drawings for additional details.  (6.5) 66kV Outgoing Feeder Panel (Bay-3,Bay-5,bay-6,bay-7,Bay-8,11,13,17,20,21,23,24,25,26) ( 1 Set=1 Panel)		14	Set	5,250.00	73,500.00
60	(6) Control Relay Panels- The scope of work includes erection, testing & commissioning of Control Relay Panels, however, supervision of testing and commissioning of relays is in scope of OEM/ BHEL. Arranging necessary manpower support, tools, tackles and testing equipment required shall be in scope of ETC contractor. Please refer notes and relevant technical specification for additional details. Numerical relay test kit shall be in scope of OEM/BHEL. Please refer notes and relevant technical specification/ drawings for additional details.  (6.6) 66kV Bus Sectionalizer Panel ( 1 Set=1 Panel)		2	Set	5,250.00	10,500.00
61	(6) Control Relay Panels- The scope of work includes erection, testing & commissioning of Control Relay Panels, however, supervision of testing and commissioning of relays is in scope of OEM/ BHEL. Arranging necessary manpower support, tools, tackles and testing equipment required shall be in scope of ETC contractor. Please refer notes and relevant technical specification for additional details. Numerical relay test kit shall be in scope of OEM/BHEL. Please refer notes and relevant technical specification/ drawings for additional details.  (6.7) 66kV Busbar protection panel ( 1 Set=1 Panel)		1	Set	5,250.00	5,250.00

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SR_NO	Description of Item	SAC_Code	Quantity	UOM	Unit_Rate (Rs.)	AMOUNT (Rs.)
62	(6) Control Relay Panels- The scope of work includes erection, testing & commissioning of Control Relay Panels, however, supervision of testing and commissioning of relays is in scope of OEM/ BHEL. Arranging necessary manpower support, tools, tackles and testing equipment required shall be in scope of ETC contractor. Please refer notes and relevant technical specification for additional details. Numerical relay test kit shall be in scope of OEM/BHEL. Please refer notes and relevant technical specification/ drawings for additional details.  (6.8) Transducer Panel for ECS/RTU/SCAP interface ( 1 Set = 2 Panel)		1	Set	10,500.00	10,500.00
63	(6) Control Relay Panels- The scope of work includes erection, testing & commissioning of Control Relay Panels, however, supervision of testing and commissioning of relays is in scope of OEM/ BHEL. Arranging necessary manpower support, tools, tackles and testing equipment required shall be in scope of ETC contractor. Please refer notes and relevant technical specification for additional details. Numerical relay test kit shall be in scope of OEM/BHEL. Please refer notes and relevant technical specification/ drawings for additional details.  (6.9) Dummy Panel for interface between CR Panel and owner supplied RTU/ECS/SCAP Panels. ( 1 Set = 2 Panel)		1	Set	10,500.00	10,500.00
64	(6) Control Relay Panels- The scope of work includes erection, testing & commissioning of Control Relay Panels, however, supervision of testing and commissioning of relays is in scope of OEM/ BHEL. Arranging necessary manpower support, tools, tackles and testing equipment required shall be in scope of ETC contractor. Please refer notes and relevant technical specification for additional details. Numerical relay test kit shall be in scope of OEM/BHEL. Please refer notes and relevant technical specification/ drawings for additional details.  (6.10) Interposing relay panel for ECS/RTU/SCAP interface ( 1 Set= 1 Panel)		1	Set	5,250.00	5,250.00
65	(6) Control Relay Panels- The scope of work includes erection, testing & commissioning of Control Relay Panels, however, supervision of testing and commissioning of relays is in scope of OEM/ BHEL. Arranging necessary manpower support, tools, tackles and testing equipment required shall be in scope of ETC contractor. Please refer notes and relevant technical specification for additional details. Numerical relay test kit shall be in scope of OEM/BHEL. Please refer notes and relevant technical specification/ drawings for additional details.  (6.11) Laptop with software		1	Set	525.00	525.00
66	(6) Control Relay Panels- The scope of work includes erection, testing & commissioning of Control Relay Panels, however, supervision of testing and commissioning of relays is in scope of OEM/ BHEL. Arranging necessary manpower support, tools, tackles and testing equipment required shall be in scope of ETC contractor. Please refer notes and relevant technical specification for additional details. Numerical relay test kit shall be in scope of OEM/BHEL. Please refer notes and relevant technical specification/ drawings for additional details.  (6.12) Relay configuration tool to be installed in control room work stations		1	Set	525.00	525.00
67	(6) Control Relay Panels- The scope of work includes erection, testing & commissioning of Control Relay Panels, however, supervision of testing and commissioning of relays is in scope of OEM/ BHEL. Arranging necessary manpower support, tools, tackles and testing equipment required shall be in scope of ETC contractor. Please refer notes and relevant technical specification for additional details. Numerical relay test kit shall be in scope of OEM/BHEL. Please refer notes and relevant technical specification/ drawings for additional details.  (6.13) Armoured Optical Fibre cable system and Copper medium Communication cable system for Substation automation system & Data concentrator, as applicable		2	km	15,120.00	30,240.00

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SR_NO	Description_of_Item	SAC_Code	Quantity	UOM	Unit_Rate (Rs.)	AMOUNT (Rs.)
68	<p>(7) LT Power and Control Cables- Cabling including laying, tagging, dressing, ferruling, lugging, soldering, tapping, jointing, crimping, termination, and drilling/ cutting holes in cable gland plates- laying can be either on trays/ pipe rack assembly, supports, underground, buried in ground/ through GI pipe over/ under ground, through wall etc. All erection materials such as ferrules, copper lugs, cable ties / straps, Aluminium tags, markers, GI wall sleeves with rubber/ nylon bushes and flexible steel conduits shall be supplied by bidder in line with technical specification and with prior approval of BHEL/PMC/ Customer. Please refer notes and relevant technical specification for additional details.</p> <p>(7.1) 4Cx6 sq mm XLPE/ Al Aux Power Cable</p>		9500	Meter	15.07	1,43,173.68
69	<p>(7) LT Power and Control Cables- Cabling including laying, tagging, dressing, ferruling, lugging, soldering, tapping, jointing, crimping, termination, and drilling/ cutting holes in cable gland plates- laying can be either on trays/ pipe rack assembly, supports, underground, buried in ground/ through GI pipe over/ under ground, through wall etc. All erection materials such as ferrules, copper lugs, cable ties / straps, Aluminium tags, markers, GI wall sleeves with rubber/ nylon bushes and flexible steel conduits shall be supplied by bidder in line with technical specification and with prior approval of BHEL/PMC/ Customer. Please refer notes and relevant technical specification for additional details.</p> <p>(7.2) 5Cx2.5 sq mm XLPE/ Cu Control Cable</p>		29000	Meter	13.69	3,97,147.40
70	<p>(7) LT Power and Control Cables- Cabling including laying, tagging, dressing, ferruling, lugging, soldering, tapping, jointing, crimping, termination, and drilling/ cutting holes in cable gland plates- laying can be either on trays/ pipe rack assembly, supports, underground, buried in ground/ through GI pipe over/ under ground, through wall etc. All erection materials such as ferrules, copper lugs, cable ties / straps, Aluminium tags, markers, GI wall sleeves with rubber/ nylon bushes and flexible steel conduits shall be supplied by bidder in line with technical specification and with prior approval of BHEL/PMC/ Customer. Please refer notes and relevant technical specification for additional details.</p> <p>(7.3) 10Cx2.5 sq mm XLPE/ Cu Control Cable</p>		18500	Meter	14.67	2,71,303.57
71	<p>(7) LT Power and Control Cables- Cabling including laying, tagging, dressing, ferruling, lugging, soldering, tapping, jointing, crimping, termination, and drilling/ cutting holes in cable gland plates- laying can be either on trays/ pipe rack assembly, supports, underground, buried in ground/ through GI pipe over/ under ground, through wall etc. All erection materials such as ferrules, copper lugs, cable ties / straps, Aluminium tags, markers, GI wall sleeves with rubber/ nylon bushes and flexible steel conduits shall be supplied by bidder in line with technical specification and with prior approval of BHEL/PMC/ Customer. Please refer notes and relevant technical specification for additional details.</p> <p>(7.4) 14Cx2.5 sq mm XLPE/ Cu Control Cable</p>		1000	Meter	19.56	19,560.76
72	<p>(7) LT Power and Control Cables- Cabling including laying, tagging, dressing, ferruling, lugging, soldering, tapping, jointing, crimping, termination, and drilling/ cutting holes in cable gland plates- laying can be either on trays/ pipe rack assembly, supports, underground, buried in ground/ through GI pipe over/ under ground, through wall etc. All erection materials such as ferrules, copper lugs, cable ties / straps, Aluminium tags, markers, GI wall sleeves with rubber/ nylon bushes and flexible steel conduits shall be supplied by bidder in line with technical specification and with prior approval of BHEL/PMC/ Customer. Please refer notes and relevant technical specification for additional details.</p> <p>(7.5) 19Cx2.5 sq mm XLPE/ Cu Control Cable</p>		4500	Meter	21.51	96,805.92

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SR_NO	Description_of_Item	SAC_Code	Quantity	UOM	Unit_Rate (Rs.)	AMOUNT (Rs.)
73	<p>(7) LT Power and Control Cables- Cabling including laying, tagging, dressing, ferruling, lugging, soldering, tapping, jointing, crimping, termination, and drilling/ cutting holes in cable gland plates- laying can be either on trays/ pipe rack assembly, supports, underground, buried in ground/ through GI pipe over/ under ground, through wall etc. All erection materials such as ferrules, copper lugs, cable ties / straps, Aluminium tags, markers, GI wall sleeves with rubber/ nylon bushes and flexible steel conduits shall be supplied by bidder in line with technical specification and with prior approval of BHEL/PMC/ Customer. Please refer notes and relevant technical specification for additional details.</p> <p>(7.6) Instrumentation/ Shielded cable</p>		2000	Meter	21.00	42,000.00
74	<p>(8) Cable Glands for LT Power and Control Cables- The scope includes supply and fixing of Cable Glands at site to the satisfaction of BHEL/PMC/Owner. Cable glands shall be of nickel plated brass unless otherwise specified (coating thickness shall not be less than 10 microns unless otherwise specified). Make shall be EIL approved vendor list. Glands shall be complete in all respect. The single compression type cable glands shall be used for indoor panels/equipment (e.g. substation, control room etc). The cable glands for outdoor terminations shall be weather protected, double compression type. All cable glands shall comply with the requirements given in IS/IEC-60079 Part 0. Entry thread of cable gland shall be compatible to the entry thread provided in the equipment (BS, ET, NPT, PG as applicable). If required, suitable reducers/adapters shall be used. The quantity shown herewith is indicative only and shall change to any extend as per site requirements. Please refer notes and relevant technical specification for additional details</p> <p>(8.1) Single Compression Cable Glands</p> <p>(8.1.1) 4Cx6 sq mm XLPE/ Al Aux Power Cable</p>		158	No	236.73	37,403.36
75	<p>(8) Cable Glands for LT Power and Control Cables- The scope includes supply and fixing of Cable Glands at site to the satisfaction of BHEL/PMC/Owner. Cable glands shall be of nickel plated brass unless otherwise specified (coating thickness shall not be less than 10 microns unless otherwise specified). Make shall be EIL approved vendor list. Glands shall be complete in all respect. The single compression type cable glands shall be used for indoor panels/equipment (e.g. substation, control room etc). The cable glands for outdoor terminations shall be weather protected, double compression type. All cable glands shall comply with the requirements given in IS/IEC-60079 Part 0. Entry thread of cable gland shall be compatible to the entry thread provided in the equipment (BS, ET, NPT, PG as applicable). If required, suitable reducers/adapters shall be used. The quantity shown herewith is indicative only and shall change to any extend as per site requirements. Please refer notes and relevant technical specification for additional details</p> <p>(8.1) Single Compression Cable Glands</p> <p>(8.1.2) 5Cx2.5 sq mm XLPE/ Cu Control Cable</p>		1000	No	156.47	1,56,468.45

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SR_NO	Description of Item	SAC_Code	Quantity	UOM	Unit_Rate (Rs.)	AMOUNT (Rs.)
76	<p>(8) Cable Glands for LT Power and Control Cables- The scope includes supply and fixing of Cable Glands at site to the satisfaction of BHEL/PMC/Owner. Cable glands shall be of nickel plated brass unless otherwise specified (coating thickness shall not be less than 10 microns unless otherwise specified). Make shall be EIL approved vendor list. Glands shall be complete in all respect. The single compression type cable glands shall be used for indoor panels/equipment (e.g. substation, control room etc). The cable glands for outdoor terminations shall be weather protected, double compression type. All cable glands shall comply with the requirements given in IS/IEC-60079 Part 0. Entry thread of cable gland shall be compatible to the entry thread provided in the equipment (BS, ET, NPT, PG as applicable). If required, suitable reducers/adapters shall be used. The quantity shown herewith is indicative only and shall change to any extend as per site requirements. Please refer notes and relevant technical specification for additional details</p> <p>(8.1) Single Compression Cable Glands</p> <p>(8.1.3) 10Cx2.5 sq mm XLPE/ Cu Control Cable</p>		700	No	211.23	1,47,860.83
77	<p>(8) Cable Glands for LT Power and Control Cables- The scope includes supply and fixing of Cable Glands at site to the satisfaction of BHEL/PMC/Owner. Cable glands shall be of nickel plated brass unless otherwise specified (coating thickness shall not be less than 10 microns unless otherwise specified). Make shall be EIL approved vendor list. Glands shall be complete in all respect. The single compression type cable glands shall be used for indoor panels/equipment (e.g. substation, control room etc). The cable glands for outdoor terminations shall be weather protected, double compression type. All cable glands shall comply with the requirements given in IS/IEC-60079 Part 0. Entry thread of cable gland shall be compatible to the entry thread provided in the equipment (BS, ET, NPT, PG as applicable). If required, suitable reducers/adapters shall be used. The quantity shown herewith is indicative only and shall change to any extend as per site requirements. Please refer notes and relevant technical specification for additional details</p> <p>(8.1) Single Compression Cable Glands</p> <p>(8.1.4) 14Cx2.5 sq mm XLPE/ Cu Control Cable</p>		160	No	234.70	37,552.43
78	<p>(8) Cable Glands for LT Power and Control Cables- The scope includes supply and fixing of Cable Glands at site to the satisfaction of BHEL/PMC/Owner. Cable glands shall be of nickel plated brass unless otherwise specified (coating thickness shall not be less than 10 microns unless otherwise specified). Make shall be EIL approved vendor list. Glands shall be complete in all respect. The single compression type cable glands shall be used for indoor panels/equipment (e.g. substation, control room etc). The cable glands for outdoor terminations shall be weather protected, double compression type. All cable glands shall comply with the requirements given in IS/IEC-60079 Part 0. Entry thread of cable gland shall be compatible to the entry thread provided in the equipment (BS, ET, NPT, PG as applicable). If required, suitable reducers/adapters shall be used. The quantity shown herewith is indicative only and shall change to any extend as per site requirements. Please refer notes and relevant technical specification for additional details</p> <p>(8.1) Single Compression Cable Glands</p> <p>(8.1.5) 19Cx2.5 sq mm XLPE/ Cu Control Cable</p>		250	No	254.26	63,564.76

**PROJECT: 66 KV GIS system for CPP package for Visakh Refinery Modernization Project (VRMP), Vishakhapatnam.****Bill Of Quantity Cum Price Schedule**

SR_NO	Description of Item	SAC_Code	Quantity	UOM	Unit_Rate (Rs.)	AMOUNT (Rs.)
79	<p>(8) Cable Glands for LT Power and Control Cables- The scope includes supply and fixing of Cable Glands at site to the satisfaction of BHEL/PMC/Owner. Cable glands shall be of nickel plated brass unless otherwise specified (coating thickness shall not be less than 10 microns unless otherwise specified). Make shall be EIL approved vendor list. Glands shall be complete in all respect. The single compression type cable glands shall be used for indoor panels/equipment (e.g. substation, control room etc). The cable glands for outdoor terminations shall be weather protected, double compression type. All cable glands shall comply with the requirements given in IS/IEC-60079 Part 0. Entry thread of cable gland shall be compatible to the entry thread provided in the equipment (BS, ET, NPT, PG as applicable). If required, suitable reducers/adapters shall be used. The quantity shown herewith is indicative only and shall change to any extend as per site requirements. Please refer notes and relevant technical specification for additional details</p> <p>(8.1) Single Compression Cable Glands</p> <p>(8.1.6) Instrumentation/ shielded cable</p>		50	No	210.00	10,500.00
80	<p>(8) Cable Glands for LT Power and Control Cables- The scope includes supply and fixing of Cable Glands at site to the satisfaction of BHEL/PMC/Owner. Cable glands shall be of nickel plated brass unless otherwise specified (coating thickness shall not be less than 10 microns unless otherwise specified). Make shall be EIL approved vendor list. Glands shall be complete in all respect. The single compression type cable glands shall be used for indoor panels/equipment (e.g. substation, control room etc). The cable glands for outdoor terminations shall be weather protected, double compression type. All cable glands shall comply with the requirements given in IS/IEC-60079 Part 0. Entry thread of cable gland shall be compatible to the entry thread provided in the equipment (BS, ET, NPT, PG as applicable). If required, suitable reducers/adapters shall be used. The quantity shown herewith is indicative only and shall change to any extend as per site requirements. Please refer notes and relevant technical specification for additional details</p> <p>(8.2) Double Compression Cable Glands</p> <p>(8.2.1) 4Cx6 sq mm XLPE/ Al Aux Power Cable</p>		158	No	295.91	46,754.20
81	<p>(8) Cable Glands for LT Power and Control Cables- The scope includes supply and fixing of Cable Glands at site to the satisfaction of BHEL/PMC/Owner. Cable glands shall be of nickel plated brass unless otherwise specified (coating thickness shall not be less than 10 microns unless otherwise specified). Make shall be EIL approved vendor list. Glands shall be complete in all respect. The single compression type cable glands shall be used for indoor panels/equipment (e.g. substation, control room etc). The cable glands for outdoor terminations shall be weather protected, double compression type. All cable glands shall comply with the requirements given in IS/IEC-60079 Part 0. Entry thread of cable gland shall be compatible to the entry thread provided in the equipment (BS, ET, NPT, PG as applicable). If required, suitable reducers/adapters shall be used. The quantity shown herewith is indicative only and shall change to any extend as per site requirements. Please refer notes and relevant technical specification for additional details</p> <p>(8.2) Double Compression Cable Glands</p> <p>(8.2.2) 5Cx2.5 sq mm XLPE/ Cu Control Cable</p>		1000	No	195.59	1,95,585.56

**PROJECT: 66 KV GIS system for CPP package for Visakh Refinery Modernization Project (VRMP), Vishakhapatnam.****Bill Of Quantity Cum Price Schedule**

SR_NO	Description of Item	SAC_Code	Quantity	UOM	Unit_Rate (Rs.)	AMOUNT (Rs.)
82	<p>(8) Cable Glands for LT Power and Control Cables- The scope includes supply and fixing of Cable Glands at site to the satisfaction of BHEL/PMC/Owner. Cable glands shall be of nickel plated brass unless otherwise specified (coating thickness shall not be less than 10 microns unless otherwise specified). Make shall be EIL approved vendor list. Glands shall be complete in all respect. The single compression type cable glands shall be used for indoor panels/equipment (e.g. substation, control room etc). The cable glands for outdoor terminations shall be weather protected, double compression type. All cable glands shall comply with the requirements given in IS/IEC-60079 Part 0. Entry thread of cable gland shall be compatible to the entry thread provided in the equipment (BS, ET, NPT, PG as applicable). If required, suitable reducers/adapters shall be used. The quantity shown herewith is indicative only and shall change to any extend as per site requirements. Please refer notes and relevant technical specification for additional details</p> <p>(8.2) Double Compression Cable Glands</p> <p>(8.2.3) 10Cx2.5 sq mm XLPE/ Cu Control Cable</p>		700	No	264.04	1,84,826.04
83	<p>(8) Cable Glands for LT Power and Control Cables- The scope includes supply and fixing of Cable Glands at site to the satisfaction of BHEL/PMC/Owner. Cable glands shall be of nickel plated brass unless otherwise specified (coating thickness shall not be less than 10 microns unless otherwise specified). Make shall be EIL approved vendor list. Glands shall be complete in all respect. The single compression type cable glands shall be used for indoor panels/equipment (e.g. substation, control room etc). The cable glands for outdoor terminations shall be weather protected, double compression type. All cable glands shall comply with the requirements given in IS/IEC-60079 Part 0. Entry thread of cable gland shall be compatible to the entry thread provided in the equipment (BS, ET, NPT, PG as applicable). If required, suitable reducers/adapters shall be used. The quantity shown herewith is indicative only and shall change to any extend as per site requirements. Please refer notes and relevant technical specification for additional details</p> <p>(8.2) Double Compression Cable Glands</p> <p>(8.2.4) 14Cx2.5 sq mm XLPE/ Cu Control Cable</p>		160	No	293.38	46,940.53
84	<p>(8) Cable Glands for LT Power and Control Cables- The scope includes supply and fixing of Cable Glands at site to the satisfaction of BHEL/PMC/Owner. Cable glands shall be of nickel plated brass unless otherwise specified (coating thickness shall not be less than 10 microns unless otherwise specified). Make shall be EIL approved vendor list. Glands shall be complete in all respect. The single compression type cable glands shall be used for indoor panels/equipment (e.g. substation, control room etc). The cable glands for outdoor terminations shall be weather protected, double compression type. All cable glands shall comply with the requirements given in IS/IEC-60079 Part 0. Entry thread of cable gland shall be compatible to the entry thread provided in the equipment (BS, ET, NPT, PG as applicable). If required, suitable reducers/adapters shall be used. The quantity shown herewith is indicative only and shall change to any extend as per site requirements. Please refer notes and relevant technical specification for additional details</p> <p>(8.2) Double Compression Cable Glands</p> <p>(8.2.5) 19Cx2.5 sq mm XLPE/ Cu Control Cable</p>		250	No	317.82	79,455.94



**PROJECT: 66 KV GIS system for CPP package for Visakh Refinery Modernization Project (VRMP), Vishakhapatnam.****Bill Of Quantity Cum Price Schedule**

SR_NO	Description of Item	SAC_Code	Quantity	UOM	Unit_Rate (Rs.)	AMOUNT (Rs.)
85	<p>(8) Cable Glands for LT Power and Control Cables- The scope includes supply and fixing of Cable Glands at site to the satisfaction of BHEL/PMC/Owner. Cable glands shall be of nickel plated brass unless otherwise specified (coating thickness shall not be less than 10 microns unless otherwise specified). Make shall be EIL approved vendor list. Glands shall be complete in all respect. The single compression type cable glands shall be used for indoor panels/equipment (e.g. substation, control room etc). The cable glands for outdoor terminations shall be weather protected, double compression type. All cable glands shall comply with the requirements given in IS/IEC-60079 Part 0. Entry thread of cable gland shall be compatible to the entry thread provided in the equipment (BS, ET, NPT, PG as applicable). If required, suitable reducers/adapters shall be used. The quantity shown herewith is indicative only and shall change to any extend as per site requirements. Please refer notes and relevant technical specification for additional details</p> <p>(8.2) Double Compression Cable Glands</p> <p>(8.2.6) Instrumentation/ shielded cable</p>		50	No	262.50	13,125.00
86	<p>(9) Structural Steel- Structural steel work welded in built up sections like angles, channels &amp; framed work etc including providing cutting, hoisting, fixing in position (cutouts of panels, EHV cable module etc.) and applying a priming coat of approved steel primer complete in all respect. The scope includes supply and fixing at site to the satisfaction of BHEL/PMC/Owner. Please refer notes and relevant technical specification/ drawings for additional details.</p>		0.5	MT	70,433.07	35,216.53
87	<p>(10) Earthing- The earthing/ grounding includes earthing of hanger &amp; rack assembly, tray system, cable trench, CRP &amp; associated work. For earthing for GIS, EHV cable system, Transformer are covered with respective item BOQ.</p> <p>This activity includes cutting, bending, brazings, if applicable, applying paint, clamping to structure/ building wall etc. to complete in all respect in line with specification. Supply &amp; fixing of Braided cu cable, Hardwares, lugs, bimetallic sleeves, support/ holding arrangement for earth flat on trench/ hanger &amp; rack assembly etc. shall be included in the scope of Contractor. Please refer notes and relevant technical specification/ drawings for additional details.</p> <p>(10.1) 75x12mm GI Flat</p>		12	MT	19,845.00	2,38,140.00
88	<p>(10) Earthing- The earthing/ grounding includes earthing of hanger &amp; rack assembly, tray system, cable trench, CRP &amp; associated work. For earthing for GIS, EHV cable system, Transformer are covered with respective item BOQ.</p> <p>This activity includes cutting, bending, brazings, if applicable, applying paint, clamping to structure/ building wall etc. to complete in all respect in line with specification. Supply &amp; fixing of Braided cu cable, Hardwares, lugs, bimetallic sleeves, support/ holding arrangement for earth flat on trench/ hanger &amp; rack assembly etc. shall be included in the scope of Contractor. Please refer notes and relevant technical specification/ drawings for additional details.</p> <p>(10.2) 50x6mm GI Flat</p>		1	MT	24,570.00	24,570.00
89	<p>(10) Earthing- The earthing/ grounding includes earthing of hanger &amp; rack assembly, tray system, cable trench, CRP &amp; associated work. For earthing for GIS, EHV cable system, Transformer are covered with respective item BOQ.</p> <p>This activity includes cutting, bending, brazings, if applicable, applying paint, clamping to structure/ building wall etc. to complete in all respect in line with specification. Supply &amp; fixing of Braided cu cable, Hardwares, lugs, bimetallic sleeves, support/ holding arrangement for earth flat on trench/ hanger &amp; rack assembly etc. shall be included in the scope of Contractor. Please refer notes and relevant technical specification/ drawings for additional details.</p> <p>(10.3) Braided Cu Cable. This item shall be applicable for earthing other than GIS equipment.</p>		10	Meter	236.25	2,362.50

**PROJECT: 66 KV GIS system for CPP package for Visakh Refinery Modernization Project (VRMP), Vishakhapatnam.****Bill Of Quantity Cum Price Schedule**

SR_NO	Description_of_Item	SAC_Code	Quantity	UOM	Unit_Rate (Rs.)	AMOUNT (Rs.)
90	(11) Conduiting & Piping- The scope includes supply and fixing at site to the satisfaction of BHEL/PMC/Owner. Fixing of GI Pipes on floors/ wall/ structure including clamping, fixing of sockets/ bends as required etc. complete in all respect. Both end of conduit/ pipe shall be closed in proper manner. Please refer notes and relevant technical specification/ drawings for additional details. Please refer notes and relevant technical specification/ drawings for additional details.  (11.1) 100NB Pipe		10	Meter	425.25	4,252.50
91	(11) Conduiting & Piping- The scope includes supply and fixing at site to the satisfaction of BHEL/PMC/Owner. Fixing of GI Pipes on floors/ wall/ structure including clamping, fixing of sockets/ bends as required etc. complete in all respect. Both end of conduit/ pipe shall be closed in proper manner. Please refer notes and relevant technical specification/ drawings for additional details. Please refer notes and relevant technical specification/ drawings for additional details.  (11.2) 50NB Pipe		10	Meter	378.00	3,780.00
92	(11) Conduiting & Piping- The scope includes supply and fixing at site to the satisfaction of BHEL/PMC/Owner. Fixing of GI Pipes on floors/ wall/ structure including clamping, fixing of sockets/ bends as required etc. complete in all respect. Both end of conduit/ pipe shall be closed in proper manner. Please refer notes and relevant technical specification/ drawings for additional details. Please refer notes and relevant technical specification/ drawings for additional details.  (11.3) 100mm dia		10	Meter	425.25	4,252.50
93	(11) Conduiting & Piping- The scope includes supply and fixing at site to the satisfaction of BHEL/PMC/Owner. Fixing of GI Pipes on floors/ wall/ structure including clamping, fixing of sockets/ bends as required etc. complete in all respect. Both end of conduit/ pipe shall be closed in proper manner. Please refer notes and relevant technical specification/ drawings for additional details. Please refer notes and relevant technical specification/ drawings for additional details.  (11.4) 50mm dia		10	Meter	378.00	3,780.00
94	(12) Hanger & Rack Assembly- This work includes fixing of pre-fabricated hanger & rack assembly in GIS cable cellar and trench/ pipe rack assembly, if required. This activity includes installation of hanger & rack assembly by welding/ fixing through anchor fastener/ insert plates, cutting, drilling, punching, minor civil works for carrying out the work in line with specification shall also be included in the scope. Welding and application of protective primer/ zinc rich paint on welded surface is also included in the scope. Supply of anchor fastener for fixing of hanger & rack assembly shall be in contractor's scope. Please refer notes and relevant technical specification/ drawings for additional details.  (12.1) 3-tier ceiling supported under hung assembly		4.22	MT	11,340.00	47,854.80
95	(12) Hanger & Rack Assembly- This work includes fixing of pre-fabricated hanger & rack assembly in GIS cable cellar and trench/ pipe rack assembly, if required. This activity includes installation of hanger & rack assembly by welding/ fixing through anchor fastener/ insert plates, cutting, drilling, punching, minor civil works for carrying out the work in line with specification shall also be included in the scope. Welding and application of protective primer/ zinc rich paint on welded surface is also included in the scope. Supply of anchor fastener for fixing of hanger & rack assembly shall be in contractor's scope. Please refer notes and relevant technical specification/ drawings for additional details.  (12.2) 3-tier wall/ column supported rack assembly		0.86	MT	11,340.00	9,752.40

**PROJECT: 66 KV GIS system for CPP package for Visakh Refinery Modernization Project (VRMP), Vishakhapatnam.****Bill Of Quantity Cum Price Schedule**

SR_NO	Description_of_Item	SAC_Code	Quantity	UOM	Unit_Rate (Rs.)	AMOUNT (Rs.)
96	(12) Hanger & Rack Assembly- This work includes fixing of pre-fabricated hanger & rack assembly in GIS cable cellar and trench/ pipe rack assembly, if required. This activity includes installation of hanger & rack assembly by welding/ fixing through anchor fastener/ insert plates, cutting, drilling, punching, minor civil works for carrying out the work in line with specification shall also be included in the scope. Welding and application of protective primer/ zinc rich paint on welded surface is also included in the scope. Supply of anchor fastener for fixing of hanger & rack assembly shall be in contractor's scope. Please refer notes and relevant technical specification/ drawings for additional details.  (12.3) 2-tier ceiling supported & floor grouted hanger assembly		10.00	MT	11,340.00	1,13,400.00
97	(12) Hanger & Rack Assembly- This work includes fixing of pre-fabricated hanger & rack assembly in GIS cable cellar and trench/ pipe rack assembly, if required. This activity includes installation of hanger & rack assembly by welding/ fixing through anchor fastener/ insert plates, cutting, drilling, punching, minor civil works for carrying out the work in line with specification shall also be included in the scope. Welding and application of protective primer/ zinc rich paint on welded surface is also included in the scope. Supply of anchor fastener for fixing of hanger & rack assembly shall be in contractor's scope. Please refer notes and relevant technical specification/ drawings for additional details.  (12.4) 2-tier Channel supported hanger assembly		20.00	MT	11,340.00	2,26,800.00
98	(13) Tray Assembly- This work includes fixing of trays on hanger & rack assembly in GIS cable cellar and trench/ pipe rack assembly, if required, in all respect. This activity includes installation of trays by welding/ fixing through hardware, cutting, drilling, punching, minor civil works for carrying out the work in line with specification shall also be included in the scope. Welding and application of protective primer/ zinc rich paint on welded surface is also included in the scope. Supply of any hardware other than mentioned in below items for fixing of trays shall be in contractor's scope. Please refer notes and relevant technical/ drawings specification for additional details.  (13.1) 750mm wide, 100mm high, 2mm tk.(min.) galvanised mild steel slotted rung, ladder/ channel type cable trays each 3.0m long with 2sets side coupler plate, along with 8mm dia bolts with nuts and washers for each number of cable tray along with fixing arrangement with hanger & rack assembly		1564	No	236.25	3,69,495.00
99	(13) Tray Assembly- This work includes fixing of trays on hanger & rack assembly in GIS cable cellar and trench/ pipe rack assembly, if required, in all respect. This activity includes installation of trays by welding/ fixing through hardware, cutting, drilling, punching, minor civil works for carrying out the work in line with specification shall also be included in the scope. Welding and application of protective primer/ zinc rich paint on welded surface is also included in the scope. Supply of any hardware other than mentioned in below items for fixing of trays shall be in contractor's scope. Please refer notes and relevant technical/ drawings specification for additional details.  (13.2) 756mm cable tray cover each 2.5m long with 3sets of top clamp strip, 3sets of bottom clamp strip and 6sets bolts along with nuts & washers suitable for covering the top layer of 750mm wide slotted rung, ladder/ channel type cable trays		521	No	141.75	73,851.75
100	(14) Insulating Mat- The scope includes supply and fixing of insulating mats confirming to relevant standards at site to the satisfaction of BHEL/PMC/Owner. These insulating mats shall be laid in front of all floor mounted AC/DC switchboards/control & relay panels/LCC and 66kV GIS. Please refer notes and relevant technical/ drawings specification for additional details.  (14.1) LV grade insulation mat for CRP/LCC, if applicable		70	sqm	2,079.00	1,45,530.00

[illegible]

PROJECT: 66 KV GIS system for CPP package for Visakh Refinery Modernization Project (VRMP), Vishakhapatnam.

**Bill Of Quantity Cum Price Schedule**

SR. NO	Description of Item	SAC Code	Quantity	UOM	Unit Rate (Rs.)	AMOUNT (Rs.)
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**Note:-**

1) This Bill of Quantity (BOQ) entails unloading of materials, storage, safety & security of materials, proper & periodic verification, up-keeping as per OEM recommendations, handling, shifting of materials to location (Stores are be in HPVP Plant, approx. 8km away from the project site), erection, testing & commissioning & handing over including final documentation pertaining to 66kV GIS & its associated system. Work shall includes up-keeping of records & issuing of material to other contractors as and when required. Final material reconciliation and handing over of spares to PMC/customer shall be in contractor's scope.

2) Refer - ANNEXURE-1 ( BHEL Specification) & Annexure-2 ( EIL Specification) shall be followed for ETC work.

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## ANNEXURE-II

**TRANSMISSION BUSINESS GROUP  
(SUB- CONTRACTS MANAGEMENT)  
TBG - NOIDA**

**PRICE SCHEDULE FORMAT**

**SUB: TENDER FOR "RECEIPT OF EQUIPMENT/MATERIAL AT SITE, UNLOADING, RECONCILIATION, INSPECTION, VERIFICATION, STORAGE, UP-KEEPING DURING STORAGE, ERECTION, TESTING, COMMISSIONING AND HANDING OVER OF 66KV GIS SYSTEM FOR CAPTIVE POWER PLANT (CPP) PACKAGE FOR "VISAKH REFINERY MODERNIZATION PROJECT (VRMP), OF VISHAKHAPATNAM ( ANDHRA PRADESH), INDIA".**

**TENDER SPEC. NO.:- TBSM/ HPCL-VRMP VIZAG /ETC /TENDER /19-20      DATE 15.07.2019**

(a) I/ We hereby agree to execute the above work at ----- % (in figure).....  
----- (in words) Above / Below/ At Par the rates of items given in BOQ  
(Annexure-I) of subject tender.

**NOTE:**

1. In this annexure the tenderer shall quote a percentage above/ below/At Par the rates shown in the Bill of Quantities (Annexure-I) of subject tender. The percentage quoted shall be clearly written both in words and figures In case of discrepancy in rates in figure and words, the minimum will be taken into account by BHEL.
2. The quoted percentage will apply to the individual items uniformly.

Date:  
Place

Signature of tenderer  
Name & Designation of authorized person(s) with seal

**ANNEXURE-III**  
**( Summary Of Prices)**

NAME OF WORK :- "RECEIPT OF EQUIPMENT/MATERIAL AT SITE, UNLOADING, RECONCILIATION, INSPECTION, VERIFICATION, STORAGE, UP-KEEPING DURING STORAGE, ERECTION, TESTING, COMMISSIONING AND HANDING OVER OF 66KV GIS SYSTEM FOR CAPTIVE POWER PLANT (CPP) PACKAGE FOR "VISAKH REFINERY MODERNIZATION PROJECT (VRMP), OF VISHAKHAPATNAM ( ANDHRA PRADESH), INDIA"

SI No.	Description	Amount (Rs.)
1	Total Amount as per rates in BOQ for "Receipt of equipment/material at site, unloading, reconciliation, inspection, verification, storage, up-keeping during storage, erection, testing, commissioning and handing over of 66kV GIS system for captive power plant (CPP) package for "Visakh refinery modernization project (VRMP), of Vishakhapatnam ( Andhra Pradesh), India" <b>(Annexure-I)</b>	190,51,903.63
2	Value of percentage above/below/at par (As indicated in Price Schedule Format, <b>Annexure-II</b> ) applicable to the total amount of ETC work ( at Sl. no. 1 above)	.....% above/below/ at par
3	<b>Total amount after consideration of percentage above/below/ at par.</b>	