

Dear All,

On behalf of Daya Bersih Sdn Bhd, I would like to invite you to bid price, as below details:

No	Descriptions
1	Date: 14/12/2023
2	Proposed: Replace SF6 gas breaker ABB, replace cable and repair faulty transformer no 2, at PPU International Islamic University Malaysia Kuantan Campus.

The details are as follows:				
	Descriptions	Unit	RM	Total (RM)
	Mobilization and demobilization, load, unloading, and transport of tools and equipment.	1 lot		
	To provide insurance for projects and equipment for the unexpected	1 lot		
	To provide competencies 33kV for switching and PTW (7 Days).	1 lot		
	<p><b>Breaker 33kV</b></p> <p>To carry out gas SF6 replacement work for panel H3, H4 and H5 I.</p> <ul style="list-style-type: none"> <li>-To recover existing SF6 into empty cylinder</li> <li>- To open gas compartment, inspect and clean the compartment I.</li> <li>-To replace drying agent/desiccant with new</li> <li>- To close back the compartment with new O-ring</li> <li>- To vacuum the compartment and fill up with new gas SF6</li> <li>- To carry out leak test</li> </ul> <p>To check the newly filled SF6</p>	3 nos		

<p>33KV ABB GIS testing</p> <ul style="list-style-type: none"> <li>- IR test</li> <li>-Contact resistance test</li> <li>- CB timing test</li> <li>- Operation and interlock test</li> <li>- AC pressure test</li> <li>- Relay 33KV check and trip test <ul style="list-style-type: none"> <li>i. OCEF</li> <li>ii. Transformer Differential test</li> <li>iii. REF test</li> </ul> </li> </ul> <p>To provide test plug for testing breaker gis ABB</p>	2 nos		
To supply and install heater	6 nos		
Replace timer	1 nos		
<p><b>Cable</b></p> <p>To provide manpower, tools, equipments and standard accessories to lay HT cables (cabling works) in cable trench as follows:</p> <p>To supply and lay 3 x 1-Core 240mm<sup>2</sup> Copper XLPE/ SWA/PVC cable from 33kV Gis – Outgoing to transformer 33kV including necessary accessories</p> <p>To carry out termination works for 3 x 1-Core 240mm<sup>2</sup> Copper XLPE/ SWA/PVC cable from Feeder 33kV Gis – Outgoing to transformer 33kV including materials and standard / necessary accessories</p> <p>To provide manpower, equipments, tools and accessories to carry out commissioning test of the above inclusive of Insulation Resistance &amp; Pressure test</p>	<p>25 mtr</p> <p>1 lot</p> <p>1 lot</p>		

	<p><b>Transformer 33kV</b>  Mobilization and demobilization as per contract  - load, unloading and transport of oil filtration machine, Skid tank/drum, tools, hoses and equipment.</p>	1 lot		
	<p>To supply and replace gasket parts that is causing the leakage.  -5 sheet 6.4mm Nebar white gasket  -Donut/oil seal for LV bushing  - gasket cable box 33kV &amp; 11kV</p>	1 lot		
	<p>Transformer repair work as below:-  - To drain out oil below bushing level inside skid tank/clean empty drums.  - To replace gasket at LV bushing that causing the leakage  - To refill previously drained oil through filtration machine.  - To painted transformer after service work  - to cleaning bushing 33kV and 11kV  - to repair cable box chasing  - to supply and replace all bolt and nut broken  . *include supply mobile crane for liftng top cover work</p>	1 lot		
	<p>OLTC Servicing Work:-  -Supply manpower ABB OLTC trained specialist, tools and transportation to carry out servicing of one unit of ABB OLTC type UBBRT 350/400  - Gasket for OLTC cover  - To replace the oil in OLTC compartment via filtration machine  - To carry out filtration until oil test the oil dielectric strength &gt;60kV shall meet before energized the transformer  - To supply 6 drum new transformer oil</p>	1 lot		
	<p>To perform filtration of transformer oil inside maintank after service work (not more 60 deg Celcius and results BDV&gt;60kV, Moisture&lt;15ppm)  24 hour to repair result paper/coil wet (lembab)  - to perform testing FDS/DFR test and Tan Delta test to compare first result tranfomer.</p>	1 lot		

	In case result paper/coil fail filtration 48 hour need to do. (moisture % below 2%) <b>* refer to table insulation assessment transformer</b>			
	To perform filtration of transformer oil inside maintank after service work (not more 60 deg Celcius and results BDV>60kV, Moisture<15ppm) 48 hour to repair result paper/coil wet (lembab) - to perform testing FDS/DFR test and Tan Delta test to compare 24 hour filtration result tranfomer.  To perform oil test before and after leak repair :- Measure dielectric strength (BDV) water content (ppm)	1 lot		
	To collect transformer oil sample after filtration and send it to accredited lab for oil analysis. Analysis to be carried out: DGA (Maintank only) BDV (Maintank and OLTC) Moisture Content (Maintank and OLTC)	1 lot		
	To perform electrical testing for transformer: -Insulation resistance -Polarization Index -Turn Ratio -Static winding resistance test -Functional tx guard - Dynamic winding resistance	1 lot		

**Table Insulation Assessment Transformer**

Insulation assessment				
Measurement:	<b>CHG: (1)</b>			
Capacitance, pF:	<b>17392</b>	%DF:	<b>1.92</b>	
%DF @ 20°C:	<b>1.38</b>	< 0.30% <i>As new</i>	0.30-0.50% <i>Good</i>	0.50-1.0% <i>Deteriorated</i>
Moisture, %:	<b>3.5</b>	< 1.0% <i>As new</i>	1.0-2.0% <i>Dry</i>	2.0-3.0% <i>Moderately wet</i>
Oil Cond, @ 25°C, pS/m:	<b>4.26</b>	< 0.37 pS/m <i>As new</i>	0.37-3.7 pS/m <i>Good</i>	3.7-37 pS/m <i>Service aged</i>
		> 1.0% <i>Investigate</i>	> 3.0% <i>Wet</i>	> 37 pS/m <i>Deteriorated</i>