

**SALIENT TECHNICAL FEATURES
FOR
Procurement of Tie Transformer 400/33KV; 150 MVA for pooled spare of Solar PV
Stations at Shimbhu Ki Burj-1 Solar Plant
TIE TRANSFORMER
(GeM Bid No. GEM/2024/B/5503787)**

TECHNICAL REQUIRMENTS:

Sr. No	TRANSFORMER	Tie Transformer (TT)
i)	MVA Rating	90/150 MVA
ii)	Voltage Ratio (KV)	400 / 33 kV
iii)	Winding	TWO
iv)	Frequency	50 Hz
v)	Service & Duty	Outdoor & Continuous
vi)	Nos. of Phase	THREE
vii)	Vector Group & Neutral earthing	YNyn0 (As per system requirement)
viii)	Cooling	ONAN (60%)/ONAF (100%)
ix)	Tap Changer	OLTC,+/-10% @2.5%step(min.) on HV
x)	Impedance at75°C	
	a) Principal Tap	As per system requirement
	b) Other Taps	As per system requirement
xi)	Permissible Temperature rise over an ambient of 50 deg C (irrespective of tap)	
	a) Top Oil	50 deg.C
	b) Winding	55 deg.C
xii)	SC withstand time (thermal)	2 sec.
xiii)	Fault Level & Bushing CT	As per system requirement
xiv)	Termination	As per system requirement
xv)	Bushing rating, Insulation class (Winding & bushing)	As mentioned below.
xvi)	Noise level	AS PER NEMA TR-1
xvii)	Loading Capability	Continuous operation at rated MVA on any tap with voltage variation of +/-10%, also transformer shall be capable of being loaded in accordance with IS:6600 / IEC60076-7.
xviii)	Flux density	Not to exceed 1.9 Wb/sq.m. at any tap position with +/-10% voltage variation from voltage corresponding to the tap. Transformer shall also withstand following overfluxing conditions due to combined voltage and frequency fluctuations: a) 110% for continuous rating. b) 125% for at least one minute. c) 140% for at least five seconds. Bidder shall furnish overfluxing char. upto 170%
xix)	Air Clearance	As per CBIP