INDIAN BANK,

CORPORATE OFFICE,

No.254 - 260, Avvai Shanmugam Salai,

Royapettah, Chennai - 600 014.

Ph: 044-2813 4401 / 4307 / 4308, Fax: 044-28134021

PART - 2: PRICE BID

Tender document for "Design, Engineering, Supply, Installation, Testing and Commissioning of Total Capacity 110 kWp (10 kWp each at Triplicane Branch, Alwarpet Branch & Hastinapuram Branch, 15 kWp each at T.Nagar Branch & Padi Branch, 20 kWp at Zonal Office, Chennai South & 30 KWp at Maraimalai Nagar Branch) Grid interactive Solar Photo Voltaic system" at Indian Bank, own premises in and around Chennai".

ISSUED TO

M/s._____

(This document contains 37 pages)

Sr No	Description	Qty	Unit	Supply		Installation		Total Amount S+I (excluding tax)
				Rate	Amount	Supply	Amount	
	LOCATION 01: TRIPLICANE BRANCH: NO: 84, BIG STREET, TRIPLICANE, CHENNAI 600 005 -10 kWp							
1	DESITC of 320Wp solar PV panels as per technical specifications (If higher wattage capacity panels are used, the power output of 10 kWp to be maintained).	32	No					
2	DESITC of 10 kVA solar inverter (or higher capacity) as per technical specifications mentioned in the Tender and safety mat for operating personnel etc	1	No					
3	DESITC of Weather proof IP-65 array junction box with SPD, Fuse and as per technical specifications etc. (minimum 02 nos)	2	No					
4	DESITC of ACDB with all accessories (with AC surge arrestor ,fuse etc)and suitable rating 32A 4P MCCB to evacuate power (Current rating to be adjustable in the range from 80 % - 100%) (near to the invertor), with all necessary accessories and supply & installation of 1 no. 32A 4P, MCCB (Current rating to be adjustable in the range from 80 % - 100%) (near to the mains of the Branch) with suitable enclosure to terminate the solar power supply to the mains of the Branch, which includes all the necessary addition & modification works at the mains as per technical specifications and safety mat shall be provided for operating personnel etc	1	set					

Sr No	Description	Qty	Unit	Supply		Installation		Total Amount S+I (excluding tax)
				Rate	Amount	Supply	Amount	
5	**Earthing of solar panel structures and AC DB**							
5.1	Supply and fixing GI pipe earth station conforming fully to IS 3043 with latest amendments, complete with 2.5 m long 40mm dia GI pipe with Funnel on Top with holes drilled for tapping connection. The rate includes making 300 mm diameter pit and after excavation pit to be filled with to surface with alternate layer of salt/charcoal mixture. A brick work masonry shall be constructed of size 450x450x300 mm with RCC cover. Note : Test report of resistance of the new earth pit to be submitted.	4	No					
5.2	DESITC of 25 x 3 MM GI Strip to be clamped on wall, cable tray, buried in ground to interconnect the earth electrodes mentioned above (5.1) to the solar panel structures and power evacuation panel / combiner panel (The GI strip shall be painted with green paint as per electrical inspectorate norms)	150	Mt					
5.3	DESITC of 10MM Dia multi-stranded Cu wire, FRPVC insulated green colored cable to be drawn in 20 MM Dia PVC conduit, 1.5MM thick to be clamped on wall, cable tray, buried in ground to interconnect the earth electrode with inverter neutral point	150	Mt					
6	DESITC of AC & DC cabling between panels and inverter with heat resistant insulated copper wires drawn in UPVC Conduit properly fixed properly on pedestals on the floor	1	Lot					

Sr No	Description	Qty	Unit	Supply		Installation		Total Amount S+I (excluding tax)
				Rate	Amount	Supply	Amount	
7	DESITC of 4C x 10 Sqmm aluminium armored cable from combiner panel to spare feeder of Main LT panel in basement including terminations at both ends	100	Mt					
8	Design, fabrication, supply and installation of concrete pedestals of minimum M20 grade [(1:11/2:3) and the same shall be plastered with 12mm thick cement sand mortar of ratio 1:4 of 300mm wide x 450mm high to be fixed on terrace floor for supporting solar panel structures. And the pedestals shall be painted with exterior emulsion paint	1	Lot					
9	Design & Supply, Installation of GI structures for supporting the solar panels as per technical specifications	1	Lot					
10	Supply & Installation of safety items like fire extinguishers, fire buckets and danger boards / Signages / Identification stickers on modules / inverters / Array junction box etc., / first aid kit etc., and safety mat at the location of inverters / AC distribution panel etc., Shock treatment chart both in Hindi & English, as required and which found necessary as per electrical inspectorate norms	1	Lot					
11	Supply and installation of lightning protection terminals as required to protect the entire building including the solar installation with GI strip / copper down conductors and earth pit as per IS standard each for Lightning terminal / mast	1	Job					

Sr No	Description	Qty	Unit	Supply		Installation		Total Amount S+I (excluding tax)
				Rate	Amount	Supply	Amount	
12	Liaison with TANGEDCO for installation of two meters .One for measuring solar power generation and the other is to measure import and export of energy. (As per TNERC - Order No: 3 of 2019). The cost of new/additional meters provided for the net feed-in scheme and the installation and testing charges shall be borne by the Bank (Invoice of M/s TANGEDCO to be submitted). For Procurement of Meters the distribution licensee (M/s TANGEDCO) shall procure, test and install the meters. However Liasoning with M/s TANGEDCO for procurement of Energy Meters to be done by the contractor only. If M/s TANGEDCO or M/s TNERC hosts the lists of manufacturers of energy meters in their website, the contractor shall procure the energy meter from the market (in the same Technical Specification & rate as prescribed by M/s TANGEDCO) (Purchase Bill of the Energy Meter to be submitted to the Bank). The Contractor is wholly responsible for liaisoning with M/s TANGEDCO during the calibration, testing & commissioning of energy meters procured by them as per the Technical Specifications of M/s TNEB.	1	Job					
13	Liasoning with Govt agencies (for project approval) and Preparation of as-built drawings, SLD etc., Liasoning with CEA / Government agencies (TEDA / MNRE) after, arranging	1	Job					

Sr No	Description	Qty	Unit	Supply		Installation		Total Amount S+I (excluding tax)
				Rate	Amount	Supply	Amount	
	inspection and getting approval and arrange for , subsidy etc. after completion							
	Sub Total							
	Grand total for Supply and Installation – (A)							
14	Operation & Maintenance (O&M) of Solar PV System (To be considered for Tender evaluation purpose)							
14.a	O&M During DL period	01	Year					
14.b	O&M for the 1st year after DLP	01	Year					
14.c	O&M for the 2nd year after DLP	01	Year					
14.d	O&M for the 3rd year after DLP	01	Year					
14.e	O&M for the 4th year after DLP	01	Year					
14.f	O&M for the 5th year after DLP	01	Year					
	O&M - SUB TOTAL ----------(B)							
	GRAND TOTAL (A+ B) – TRIPLICANE BRANCH (Exclusive of all taxes)							

Sr No	Description	Qty	Unit	Supply		Installation		Total Amount S+I (excluding tax)
				Rate	Amount	Supply	Amount	
	LOCATION 02: ALWARPET BRANCH: NO: 9, ELDAMS ROAD, ALWARPET, CHENNAI 600 018 -10 kWp.							
1	DESITC of 320Wp solar PV panels as per technical specifications (If higher wattage capacity panels are used, the power output of 10 kWp to be maintained).	32	No					
2	DESITC of 10 kVA solar inverter (or higher capacity) as per technical specifications mentioned in the Tender and safety mat for operating personnel etc	1	No					
3	DESITC of Weather proof IP-65 array junction box with SPD, Fuse and as per technical specifications etc. (minimum 02 nos)	2	No					
4	DESITC of ACDB with all accessories (with AC surge arrestor ,fuse etc)and suitable rating 32A 4P MCCB to evacuate power (Current rating to be adjustable in the range from 80 % - 100%) (near to the invertor), with all necessary accessories and supply & installation of 1 no. 32A 4P, MCCB (Current rating to be adjustable in the range from 80 % - 100%) (near to the mains of the Branch) with suitable enclosure to terminate the solar power supply to the mains of the Branch, which includes all the necessary addition & modification works at the mains as per technical specifications and safety mat shall be provided for operating personnel etc	1	set					

Sr No	Description	Qty	Unit	Supply		Installation		Total Amount S+I (excluding tax)
				Rate	Amount	Supply	Amount	
5	**Earthing of solar panel structures and AC DB**							
5.1	Supply and fixing GI pipe earth station conforming fully to IS 3043 with latest amendments, complete with 2.5 m long 40mm dia GI pipe with Funnel on Top with holes drilled for tapping connection. The rate includes making 300 mm diameter pit and after excavation pit to be filled with to surface with alternate layer of salt/charcoal mixture. A brick work masonry shall be constructed of size 450x450x300 mm with RCC cover. Note: Test report of resistance of the new earth pit to be submitted.	4	No					
5.2	DESITC of 25 x 3 MM GI Strip to be clamped on wall, cable tray, buried in ground to interconnect the earth electrodes mentioned above (5.1) to the solar panel structures and power evacuation panel / combiner panel (The GI strip shall be painted with green paint as per electrical inspectorate norms)	150	Mt					
5.3	DESITC of 10MM Dia multi-stranded Cu wire, FRPVC insulated green colored cable to be drawn in 20 MM Dia PVC conduit, 1.5MM thick to be clamped on wall, cable tray, buried in ground to interconnect the earth electrode with inverter neutral point	150	Mt					
6	DESITC of AC & DC cabling between panels and inverter with heat resistant insulated copper wires drawn in UPVC Conduit properly fixed properly on pedestals on the floor	1	Lot					

Sr No	Description	Qty	Unit	Supply		Installation		Total Amount S+I (excluding tax)
				Rate	Amount	Supply	Amount	
7	DESITC of 4C x 10 Sqmm aluminium armored cable from combiner panel to spare feeder of Main LT panel in basement including terminations at both ends	100	Mt					
8	Design, fabrication, supply and installation of concrete pedestals of minimum M20 grade [(1:11/2:3) and the same shall be plastered with 12mm thick cement sand mortar of ratio 1:4 of 300mm wide x 450mm high to be fixed on terrace floor for supporting solar panel structures. And the pedestals shall be painted with exterior emulsion paint	1	Lot					
9	Design & Supply, Installation of GI structures for supporting the solar panels as per technical specifications	1	Lot					
10	Supply & Installation of safety items like fire extinguishers, fire buckets and danger boards / Signages / Identification stickers on modules / inverters / Array junction box etc., / first aid kit etc., and safety mat at the location of inverters / AC distribution panel etc., Shock treatment chart both in Hindi & English, as required and which found necessary as per electrical inspectorate norms	1	Lot					
11	Supply and installation of lightning protection terminals as required to protect the entire building including the solar installation with GI strip / copper down conductors and earth pit as per IS standard each for Lightning terminal / mast	1	Job					

Sr No	Description	Qty	Unit	Supply		Installation		Total Amount S+I (excluding tax)
				Rate	Amount	Supply	Amount	
12	Liaison with TANGEDCO for installation of two meters .One for measuring solar power generation and the other is to measure import and export of energy. (As per TNERC - Order No: 3 of 2019). The cost of new/additional meters provided for the net feed-in scheme and the installation and testing charges shall be borne by the Bank (Invoice of M/s TANGEDCO to be submitted). For Procurement of Meters the distribution licensee (M/s TANGEDCO) shall procure, test and install the meters. However Liasoning with M/s TANGEDCO for procurement of Energy Meters to be done by the contractor only. If M/s TANGEDCO or M/s TNERC hosts the lists of manufacturers of energy meters in their website, the contractor shall procure the energy meter from the market (in the same Technical Specification & rate as prescribed by M/s TANGEDCO) (Purchase Bill of the Energy Meter to be submitted to the Bank). The Contractor is wholly responsible for liaisoning with M/s TANGEDCO during the calibration, testing & commissioning of energy meters procured by them as per the Technical Specifications of M/s TNEB.	1	Job					
13	Liasoning with Govt agencies (for project approval) and Preparation of as-built drawings, SLD etc., Liasoning with CEA / Government agencies (TEDA / MNRE) after,	1	Job					

Sr No	Description	Qty	Unit	Supply		Installation		Total Amount S+I (excluding tax)
				Rate	Amount	Supply	Amount	
	arranging inspection and getting approval and arrange for , subsidy etc. after completion							
	Sub Total							
	Grand total for Supply and Installation – (A)							
14	Operation & Maintenance (O&M) of Solar PV System (To be considered for Tender evaluation purpose)							
14.a	O&M During DL period	01	Year					
14.b	O&M for the 1st year after DLP	01	Year					
14.c	O&M for the 2nd year after DLP	01	Year					
14.d	O&M for the 3rd year after DLP	01	Year					
14.e	O&M for the 4th year after DLP	01	Year					
14.f	O&M for the 5th year after DLP	01	Year					
	O&M - SUB TOTAL --(B)							
	GRAND TOTAL (A+ B) – ALWARPET BRANCH (Exclusive of all taxes)							

Sr No	Description	Qty	Unit	Supply		Installation		Total Amount S+I (excluding tax)
				Rate	Amount	Supply	Amount	
LOCATION 03: HASTINAPURAM BRANCH: NO: 124, DR. RAJENDRA PRASAD ROAD, NEHRU NAGAR, HASTINAPURAM, CH. 44 -10 kWp								
1	DESITC of 320Wp solar PV panels as per technical specifications (If higher wattage capacity panels are used, the power output of 10 kWp to be maintained).	32	No					
2	DESITC of 10 kVA solar inverter (or higher capacity) as per technical specifications mentioned in the Tender and safety mat for operating personnel etc	1	No					
3	DESITC of Weather proof IP-65 array junction box with SPD, Fuse and as per technical specifications etc. (minimum 02 nos)	2	No					
4	DESITC of ACDB with all accessories (with AC surge arrestor ,fuse etc)and suitable rating 32A 4P MCCB to evacuate power (Current rating to be adjustable in the range from 80 % - 100%) (near to the invertor), with all necessary accessories and supply & installation of 1 no. 32A 4P, MCCB (Current rating to be adjustable in the range from 80 % - 100%) (near to the mains of the Branch) with suitable enclosure to terminate the solar power supply to the mains of the Branch, which includes all the necessary addition & modification works at the mains as per technical specifications and safety mat shall be provided for operating personnel etc	1	set					

Sr No	Description	Qty	Unit	Supply		Installation		Total Amount S+I (excluding tax)
				Rate	Amount	Supply	Amount	
5	**Earthing of solar panel structures and AC DB**							
5.1	Supply and fixing GI pipe earth station conforming fully to IS 3043 with latest amendments, complete with 2.5 m long 40mm dia GI pipe with Funnel on Top with holes drilled for tapping connection. The rate includes making 300 mm diameter pit and after excavation pit to be filled with to surface with alternate layer of salt/charcoal mixture. A brick work masonry shall be constructed of size 450x450x300 mm with RCC cover. Note: Test report of resistance of the new earth pit to be submitted.	4	No					
5.2	DESITC of 25 x 3 MM GI Strip to be clamped on wall, cable tray, buried in ground to interconnect the earth electrodes mentioned above (5.1) to the solar panel structures and power evacuation panel / combiner panel (The GI strip shall be painted with green paint as per electrical inspectorate norms)	150	Mt					
5.3	DESITC of 10MM Dia multi-stranded Cu wire, FRPVC insulated green colored cable to be drawn in 20 MM Dia PVC conduit, 1.5MM thick to be clamped on wall, cable tray, buried in ground to interconnect the earth electrode with inverter neutral point	150	Mt					
6	DESITC of AC & DC cabling between panels and inverter with heat resistant insulated copper wires drawn in UPVC Conduit properly fixed properly on pedestals on the floor	1	Lot					

Sr No	Description	Qty	Unit	Supply		Installation		Total Amount S+I (excluding tax)
				Rate	Amount	Supply	Amount	
7	DESITC of 4C x 10 Sqmm aluminium armored cable from combiner panel to spare feeder of Main LT panel in basement including terminations at both ends	100	Mt					
8	Design, fabrication, supply and installation of concrete pedestals of minimum M20 grade [(1:11/2:3) and the same shall be plastered with 12mm thick cement sand mortar of ratio 1:4 of 300mm wide x 450mm high to be fixed on terrace floor for supporting solar panel structures. And the pedestals shall be painted with exterior emulsion paint	1	Lot					
9	Design & Supply, Installation of GI structures for supporting the solar panels as per technical specifications	1	Lot					
10	Supply & Installation of safety items like fire extinguishers, fire buckets and danger boards / Signages / Identification stickers on modules / inverters / Array junction box etc., / first aid kit etc., and safety mat at the location of inverters / AC distribution panel etc., Shock treatment chart both in Hindi & English, as required and which found necessary as per electrical inspectorate norms	1	Lot					
11	Supply and installation of lightning protection terminals as required to protect the entire building including the solar installation with GI strip / copper down conductors and earth pit as per IS standard each for Lightning terminal / mast	1	Job					

Sr No	Description	Qty	Unit	Supply		Installation		Total Amount S+I (excluding tax)
				Rate	Amount	Supply	Amount	
12	Liaison with TANGEDCO for installation of two meters .One for measuring solar power generation and the other is to measure import and export of energy. (As per TNERC - Order No: 3 of 2019). The cost of new/additional meters provided for the net feed-in scheme and the installation and testing charges shall be borne by the Bank (Invoice of M/s TANGEDCO to be submitted). For Procurement of Meters the distribution licensee (M/s TANGEDCO) shall procure, test and install the meters. However Liasoning with M/s TANGEDCO for procurement of Energy Meters to be done by the contractor only. If M/s TANGEDCO or M/s TNERC hosts the lists of manufacturers of energy meters in their website, the contractor shall procure the energy meter from the market (in the same Technical Specification & rate as prescribed by M/s TANGEDCO) (Purchase Bill of the Energy Meter to be submitted to the Bank). The Contractor is wholly responsible for liaisoning with M/s TANGEDCO during the calibration, testing & commissioning of energy meters procured by them as per the Technical Specifications of M/s TNEB.	1	Job					
13	Liasoning with Govt agencies (for project approval) and Preparation of as-built drawings, SLD etc., Liasoning with CEA / Government agencies (TEDA / MNRE) after,	1	Job					

Sr No	Description	Qty	Unit	Supply		Installation		Total Amount S+I (excluding tax)
				Rate	Amount	Supply	Amount	
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14	Operation & Maintenance (O&M) of Solar PV System (To be considered for Tender evaluation purpose)							
14.a	O&M During DL period	01	Year					
14.b	O&M for the 1st year after DLP	01	Year					
14.c	O&M for the 2nd year after DLP	01	Year					
14.d	O&M for the 3rd year after DLP	01	Year					
14.e	O&M for the 4th year after DLP	01	Year					
14.f	O&M for the 5th year after DLP	01	Year					
	O**&M - SUB TOTAL -----(B)**							
	GRAND TOTAL (A+ B) – Hastinapuram branch (Exclusive of all taxes)							

Sr No	Description	Qty	Unit	Supply		Installation		Total Amount S+I (excluding tax)
				Rate	Amount	Supply	Amount	
LOCATION 04: PADI BRANCH: NO: 97, FIRST MAIN ROAD, OPP AIEMA TOWER, AMBATTUR INDUSTRIAL ESTATE, CH.58 – 15 kWp								
1	DESITC of 320Wp solar PV panels as per technical specifications (If higher wattage capacity panels are used, the output of 15 kWp to be maintained).	47	No					
2	DESITC of 15 kVA solar inverter (or higher) as per technical specifications and safety mat for operating personnel etc	1	No					
3	DESITC of Weather proof IP-65 array junction box as per technical specifications (minimum 02 nos)	2	No					
4	DESITC of ACDB with all accessories (with AC surge arrestor ,fuse etc)and suitable rating 63A , 25 KA 4 Pole MCCB (Current rating to be adjustable in the range from 80 % - 100%) to evacuate power (near to the invertor), with all necessary accessories and supply & installation of 1 no. 63A 4P, MCCB (Current rating to be adjustable in the range from 80 % - 100%) (near to the mains of the Branch) with suitable enclosure to terminate the solar power supply to the mains of the Branch, as per technical specifications and safety mat shall be provided for operating personnel etc	1	set					

Sr No	Description	Qty	Unit	Supply		Installation		Total Amount S+I (excluding tax)
				Rate	Amount	Supply	Amount	
5	**Earthing of solar panel structures and AC DB**							
5.1	Supply and fixing GI pipe earth station conforming fully to IS 3043 with latest amendments, complete with 2.5 m long 40mm dia GI pipe with Funnel on Top with holes drilled for tapping connection. The rate includes making 300 mm diameter pit and after excavation pit to be filled with to surface with alternate layer of salt/charcoal mixture. A brick work masonry shall be constructed of size 450x450x300 mm with RCC cover. Note: Test report of resistance of the new earth pit to be submitted.	4	No					
5.2	DESITC of 25 x 3 MM GI Strip to be clamped on wall, cable tray, buried in ground to interconnect the earth electrodes mentioned above (5.1) to the solar panel structures and power evacuation panel / combiner panel (The GI strip shall be painted with green paint as per electrical inspectorate norms)	400	Mt					
5.3	DESITC of 10MM Dia multi-stranded Cu wire, FRPVC insulated green colored cable to be drawn in 20 MM Dia PVC conduit, 1.5MM thick to be clamped on wall, cable tray, buried in ground to interconnect the earth electrode with inverter neutral point	400	Mt					
6	DESITC of AC & DC cabling between panels and inverter with heat resistant insulated copper wires drawn in UPVC Conduit properly fixed properly on pedestals on the floor	1	Lot					

Sr No	Description	Qty	Unit	Supply		Installation		Total Amount S+I (excluding tax)
				Rate	Amount	Supply	Amount	
7	DESITC of 4C x 25 Sqmm aluminium armored cable from AC Distribution Board to spare feeder of Main LT panel situated at the ground floor including terminations at both ends	200	Mt					
8	Design, fabrication, supply and installation of concrete pedestals of minimum M20 grade [(1:11/2:3) and the same shall be plastered with 12mm thick cement sand mortar of ratio 1:4 of 300mm wide x 450mm high to be fixed on terrace floor for supporting solar panel structures. And the pedestals shall be painted with exterior emulsion paint	1	Lot					
9	Design & Supply, Installation of GI structures for supporting the solar panels as per technical specifications	1	Lot					
10	Supply & Installation of safety items like fire extinguishers, fire buckets and danger boards / Signages / Identification stickers on modules / inverters / Array junction box etc., / first aid kit etc., and safety mat at the location of inverters / combiner panel etc., Shock treatment chart both in Hindi & English, as required and which found necessary as per electrical inspectorate norms	1	Lot					
11	Supply and installation of lightning protection terminals as required to protect the entire building including the solar installation with GI strip / copper down conductors and earth pit as per IS standard each for Lightning terminal / mast	2	nos					

Sr No	Description	Qty	Unit	Supply		Installation		Total Amount S+I (excluding tax)
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13	Liasoning with Govt agencies (for project approval) and Preparation of as-built drawings, SLD etc., Liasoning with CEA / Government agencies (TEDA / MNRE) after, arranging	1	Job					

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	Grand total for Supply and Installation – (A)							
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14.b	O&M for the 1st year after DLP	01	Year					
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14.e	O&M for the 4th year after DLP	01	Year					
14.f	O&M for the 5th year after DLP	01	Year					
	O**&M - SUB TOTAL -----(B)**							
	GRAND TOTAL (A+ B) – Padi branch (Exclusive of all taxes)							

Sr No	Description	Qty	Unit	Supply		Installation		Total Amount S+I (excluding tax)
				Rate	Amount	Supply	Amount	
LOCATION 05: T.NAGAR BRANCH: NO: 7, PRAKASAM ROAD, PANAGAL PARK, T.NAGAR, CHENNAI 600 017- 15kWp.								
1	DESITC of 320Wp solar PV panels as per technical specifications. (If higher wattage capacity panels are used, the output of 15 kWp to be maintained).	47	No					
2	DESITC of 15 kVA solar inverter (or higher) as per technical specifications and safety mat for operating personnel etc	1	No					
3	DESITC of Weather proof IP-65 array junction box as per technical specifications (minimum 02 nos)	2	No					
4	DESITC of ACDB with all accessories (with AC surge arrestor ,fuse etc)and suitable rating 63A 4P MCCB , 25 KA 4 Pole MCCB to evacuate power (near to the invertor) (Current rating to be adjustable in the range from 80 % - 100%) , with all necessary accessories and supply & installation of 1 no. 63A,25 KA 4P, MCCB (Current rating to be adjustable in the range from 80 % - 100%) (near to the mains of the Branch) with suitable enclosure to terminate the solar power supply to the mains of the Branch, as per technical specifications and safety mat shall be provided for operating personnel etc	1	set					

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5.2	DESITC of 25 x 3 MM GI Strip to be clamped on wall, cable tray, buried in ground to interconnect the earth electrodes mentioned above (5.1) to the solar panel structures and power evacuation panel / combiner panel (The GI strip shall be painted with green paint as per electrical inspectorate norms)	400	Mt					
5.3	DESITC of 10MM Dia multi-stranded Cu wire, FRPVC insulated green colored cable to be drawn in 20 MM Dia PVC conduit, 1.5MM thick to be clamped on wall, cable tray, buried in ground to interconnect the earth electrode with inverter neutral point	400	Mt					
6	DESITC of AC & DC cabling between panels and inverter with heat resistant insulated copper wires drawn in UPVC Conduit properly fixed properly on pedestals on the floor	1	Lot					

Sr No	Description	Qty	Unit	Supply		Installation		Total Amount S+I (excluding tax)
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7	DESITC of 4C x 25 Sqmm aluminium armored cable from AC Distribution Board to spare feeder of Main LT panel situated at the ground floor including terminations at both ends	200	Mt					
8	Design, fabrication, supply and installation of concrete pedestals of minimum M20 grade [(1:11/2:3) and the same shall be plastered with 12mm thick cement sand mortar of ratio 1:4 of 300mm wide x 450mm high to be fixed on terrace floor for supporting solar panel structures. And the pedestals shall be painted with exterior emulsion paint	1	Lot					
9	Design & Supply, Installation of GI structures for supporting the solar panels as per technical specifications	1	Lot					
10	Supply & Installation of safety items like fire extinguishers, fire buckets and danger boards / Signages / Identification stickers on modules / inverters / Array junction box etc., / first aid kit etc., and safety mat at the location of inverters / combiner panel etc., Shock treatment chart both in Hindi & English, as required and which found necessary as per electrical inspectorate norms	1	Lot					
11	Supply and installation of lightning protection terminals as required to protect the entire building including the solar installation with GI strip / copper down conductors and earth pit as per IS standard each for Lightning terminal / mast	2	nos					

Sr No	Description	Qty	Unit	Supply		Installation		Total Amount S+I (excluding tax)
				Rate	Amount	Supply	Amount	
12	Liaison with TANGEDCO for installation of two meters .One for measuring solar power generation and the other is to measure import and export of energy. (As per TNERC - Order No: 3 of 2019). The cost of new/additional meters provided for the net feed-in scheme and the installation and testing charges shall be borne by the Bank (Invoice of M/s TANGEDCO to be submitted). For Procurement of Meters the distribution licensee (M/s TANGEDCO) shall procure, test and install the meters. However Liasoning with M/s TANGEDCO for procurement of Energy Meters to be done by the contractor only. If M/s TANGEDCO or M/s TNERC hosts the lists of manufacturers of energy meters in their website, the contractor shall procure the energy meter from the market (in the same Technical Specification & rate as prescribed by M/s TANGEDCO) (Purchase Bill of the Energy Meter to be submitted to the Bank). The Contractor is wholly responsible for liaisoning with M/s TANGEDCO during the calibration, testing & commissioning of energy meters procured by them as per the Technical Specifications of M/s TNEB.	1	Job					
13	Liasoning with Govt agencies (for project approval) and Preparation of as-built drawings, SLD etc., Liasoning with CEA / Government agencies (TEDA / MNRE) after,	1	Job					

Sr No	Description	Qty	Unit	Supply		Installation		Total Amount S+I (excluding tax)
				Rate	Amount	Supply	Amount	
	arranging inspection and getting approval and arrange for , subsidy etc. after completion							
	Sub Total							
	Grand total for Supply and Installation – (A)							
14	Operation & Maintenance (O&M) of Solar PV System (To be considered for Tender evaluation purpose)							
14.a	O&M During DL period	01	Year					
14.b	O&M for the 1st year after DLP	01	Year					
14.c	O&M for the 2nd year after DLP	01	Year					
14.d	O&M for the 3rd year after DLP	01	Year					
14.e	O&M for the 4th year after DLP	01	Year					
14.f	O&M for the 5th year after DLP	01	Year					
	O**&M - SUB TOTAL -----(B)**							
	GRAND TOTAL (A+ B) – T.Nagar branch (Exclusive of all taxes)							

Sr No	Description	Qty	Unit	Supply		Installation		Total Amount S+I (excluding tax)
				Rate	Amount	Supply	Amount	
LOCATION 06: ZONAL OFFICE CHENNAI SOUTH – NO: 55, ETHIRAJ SALAI, EGMORE, CHENNAI 600 008 – 20kWp.								
1	DESITC of 320Wp solar PV panels as per technical specifications (If higher wattage capacity panels are used, the power output of 20 kWp to be maintained).	63	No					
2	DESITC of 20 kVA (or higher) solar inverter as per technical specifications and safety mat for operating personnel etc	1	No					
3	DESITC of Weather proof IP-65 array junction box with SPD, Fuse and as per technical specifications (minimum 03 nos)	3	No					
4	DESITC of ACDB with all accessories (with AC surge arrestor ,fuse etc)and suitable rating 63A , 25 KA 4 Pole MCCB (Current rating to be adjustable in the range from 80 % - 100%) to evacuate power (near to the invertor), with all necessary accessories and supply & installation of 1 no. 63A,25 KA 4P, MCCB (Current rating to be adjustable in the range from 80 % - 100%) (near to the mains of the Branch) with suitable enclosure to terminate the solar power supply to the mains of the Branch, as per technical specifications and safety mat shall be provided for operating personnel etc	1	set					

Sr No	Description	Qty	Unit	Supply		Installation		Total Amount S+I (excluding tax)
				Rate	Amount	Supply	Amount	
5	**Earthing of solar panel structures and AC DB**							
5.1	Supply and fixing GI pipe earth station conforming fully to IS 3043 with latest amendments, complete with 2.5 m long 40mm dia GI pipe with Funnel on Top with holes drilled for tapping connection. The rate includes making 300 mm diameter pit and after excavation pit to be filled with to surface with alternate layer of salt/charcoal mixture. A brick work masonry shall be constructed of size 450x450x300 mm with RCC cover. Note: Test report of resistance of the new earth pit to be submitted.	6	No					
5.2	DESITC of 25 x 3 MM GI Strip to be clamped on wall, cable tray, buried in ground to interconnect the earth electrodes mentioned above (5.1) to the solar panel structures and power evacuation panel / combiner panel (The GI strip shall be painted with green paint as per electrical inspectorate norms)	500	Mt					
5.3	DESITC of 10MM Dia multi-stranded Cu wire, FRPVC insulated green colored cable to be drawn in 20 MM Dia PVC conduit, 1.5MM thick to be clamped on wall, cable tray, buried in ground to interconnect the earth electrode with inverter neutral point	500	Mt					
6	DESITC of AC & DC cabling between panels and inverter with heat resistant insulated copper wires drawn in UPVC Conduit properly fixed properly on pedestals on the floor	1	Lot					

Sr No	Description	Qty	Unit	Supply		Installation		Total Amount S+I (excluding tax)
				Rate	Amount	Supply	Amount	
7	DESITC of 4C x 35 Sqmm aluminium armored cable from AC Distribution Board to spare feeder of Main LT panel situated at the ground floor including terminations at both ends	400	Mt					
8	Design, fabrication, supply and installation of concrete pedestals of minimum M20 grade [(1:11/2:3) and the same shall be plastered with 12mm thick cement sand mortar of ratio 1:4 of 300mm wide x 450mm high to be fixed on terrace floor for supporting solar panel structures. And the pedestals shall be painted with exterior emulsion paint	1	Lot					
9	Design & Supply, Installation of GI structures for supporting the solar panels as per technical specifications	1	Lot					
10	Supply & Installation of safety items like fire extinguishers, fire buckets and danger boards / Signages / Identification stickers on modules / inverters / Array junction box etc., / first aid kit etc., and safety mat at the location of inverters / combiner panel etc., Shock treatment chart both in Hindi & English, as required and which found necessary as per electrical inspectorate norms	1	Lot					
11	Supply and installation of lightning protection terminals as required to protect the entire building including the solar installation with GI strip / copper down conductors and earth pit as per IS standard each for Lightning terminal / mast	2	nos					

Sr No	Description	Qty	Unit	Supply		Installation		Total Amount S+I (excluding tax)
				Rate	Amount	Supply	Amount	
12	Liaison with TANGEDCO for installation of two meters .One for measuring solar power generation and the other is to measure import and export of energy. (As per TNERC - Order No: 3 of 2019). The cost of new/additional meters provided for the net feed-in scheme and the installation and testing charges shall be borne by the Bank (Invoice of M/s TANGEDCO to be submitted). For Procurement of Meters the distribution licensee (M/s TANGEDCO) shall procure, test and install the meters. However Liasoning with M/s TANGEDCO for procurement of Energy Meters to be done by the contractor only. If M/s TANGEDCO or M/s TNERC hosts the lists of manufacturers of energy meters in their website, the contractor shall procure the energy meter from the market (in the same Technical Specification & rate as prescribed by M/s TANGEDCO) (Purchase Bill of the Energy Meter to be submitted to the Bank). The Contractor is wholly responsible for liaisoning with M/s TANGEDCO during the calibration, testing & commissioning of energy meters procured by them as per the Technical Specifications of M/s TNEB.	1	Job					
13	Liasoning with Govt agencies (for project approval) and Preparation of as-built drawings, SLD etc., Liasoning with CEA / Government agencies (TEDA / MNRE) after,	1	Job					

Sr No	Description	Qty	Unit	Supply		Installation		Total Amount S+I (excluding tax)
				Rate	Amount	Supply	Amount	
	arranging inspection and getting approval and arrange for , subsidy etc. after completion							
	Sub Total							
	Grand total for Supply and Installation – (A)							
14	Operation & Maintenance (O&M) of Solar PV System (To be considered for Tender evaluation purpose)							
14.a	O&M During DL period	01	Year					
14.b	O&M for the 1st year after DLP	01	Year					
14.c	O&M for the 2nd year after DLP	01	Year					
14.d	O&M for the 3rd year after DLP	01	Year					
14.e	O&M for the 4th year after DLP	01	Year					
14.f	O&M for the 5th year after DLP	01	Year					
	O**&M - SUB TOTAL -----(B)**							
	GRAND TOTAL (A+ B) – ZO Chennai South (Exclusive of all taxes)							

Sr No	Description	Qty	Unit	Supply		Installation		Total Amount S+I (excluding tax)
				Rate	Amount	Supply	Amount	

LOCATION 07: MARAIMALAI NAGAR BRANCH – NO: 28A, THIRUVALLUVAR SALAI, NH -1, MARAIMALAI NAGAR, KANCHEEPURAM – 603209 – 30kWp.

1	DESITC of 320Wp solar PV panels as per technical specifications (If higher wattage capacity panels are used, the power output of 30 kWp to be maintained).	94	No					
2	DESITC of 30 kVA solar inverter (or higher) as per technical specifications and safety mat for operating personnel etc	1	No					
3	DESITC of Weather proof IP-65 array junction box with SPD, Fuse and as per technical specifications (minimum 03 nos)	3	No					
4	DESITC of ACDB with all accessories (with AC surge arrestor ,fuse etc)and suitable rating 100A, 25 KA 4 Pole MCCB (Current rating to be adjustable in the range from 80 % - 100%) to evacuate power (near to the invertor), with all necessary accessories and supply & installation of 1 no. 100A 4P, MCCB (Current rating to be adjustable in the range from 80 % - 100%) (near to the mains of the Branch) with suitable enclosure to terminate the solar power supply to the mains of the Branch, as per technical specifications and safety mat shall be provided for operating personnel etc	1	set					

Sr No	Description	Qty	Unit	Supply		Installation		Total Amount S+I (excluding tax)
				Rate	Amount	Supply	Amount	
5	**Earthing of solar panel structures and AC DB**							
5.1	Supply and fixing GI pipe earth station conforming fully to IS 3043 with latest amendments, complete with 3 m long 80mm dia GI pipe with Funnel on Top with holes drilled for tapping connection. The rate includes making 300 mm diameter pit and after excavation pit to be filled with to surface with alternate layer of salt/charcoal mixture. Brick work masonry shall be constructed of size 450x450x300 mm with RCC cover. Note: Test report of resistance of the new earth pit to be submitted.	6	No					
5.2	DESITC of 25 x 3 MM GI Strip to be clamped on wall, cable tray, buried in ground to interconnect the earth electrodes mentioned above (5.1) to the solar panel structures and power evacuation panel / combiner panel (The GI strip shall be painted with green paint as per electrical inspectorate norms)	500	Mt					
5.3	DESITC of 10MM Dia multi-stranded Cu wire, FRPVC insulated green colored cable to be drawn in 20 MM Dia PVC conduit, 1.5MM thick to be clamped on wall, cable tray, buried in ground to interconnect the earth electrode with inverter neutral point	500	Mt					
6	DESITC of AC & DC cabling between panels and inverter with heat resistant insulated copper wires drawn in UPVC Conduit properly fixed properly on pedestals on the floor	1	Lot					

Sr No	Description	Qty	Unit	Supply		Installation		Total Amount S+I (excluding tax)
				Rate	Amount	Supply	Amount	
7	DESITC of 4C x 50 Sqmm aluminium armored cable from AC Distribution Panel to spare feeder of Main LT panel (or any electrical distribution panel identified by Bank) including terminations at both ends	400	Mt					
8	Design, fabrication, supply and installation of concrete pedestals of minimum M20 grade [(1:11/2:3) and the same shall be plastered with 12mm thick cement sand mortar of ratio 1:4 of 300mm wide x 450mm high to be fixed on terrace floor for supporting solar panel structures. And the pedestals shall be painted with exterior emulsion paint	1	Lot					
9	Design & Supply, Installation of GI structures for supporting the solar panels as per technical specifications	1	Lot					
10	Supply & Installation of safety items like fire extinguishers, fire buckets and danger boards / Signages / Identification stickers on modules / inverters / Array junction box etc., / first aid kit etc., and safety mat at the location of inverters / combiner panel etc., Shock treatment chart both in Hindi & English, as required and which found necessary as per electrical inspectorate norms	1	Lot					
11	Supply and installation of lightning protection terminals as required to protect the entire building including the solar installation with GI strip / copper down conductors and earth pit as per IS standard each for Lightning terminal / mast	2	nos					

Sr No	Description	Qty	Unit	Supply		Installation		Total Amount S+I (excluding tax)
				Rate	Amount	Supply	Amount	
12	Liaison with TANGEDCO for installation of two meters .One for measuring solar power generation and the other is to measure import and export of energy. (As per TNERC - Order No: 3 of 2019). The cost of new/additional meters provided for the net feed-in scheme and the installation and testing charges shall be borne by the Bank (Invoice of M/s TANGEDCO to be submitted). For Procurement of Meters the distribution licensee (M/s TANGEDCO) shall procure, test and install the meters. However Liasoning with M/s TANGEDCO for procurement of Energy Meters to be done by the contractor only. If M/s TANGEDCO or M/s TNERC hosts the lists of manufacturers of energy meters in their website, the contractor shall procure the energy meter from the market (in the same Technical Specification & rate as prescribed by M/s TANGEDCO) (Purchase Bill of the Energy Meter to be submitted to the Bank). The Contractor is wholly responsible for liaisoning with M/s TANGEDCO during the calibration, testing & commissioning of energy meters procured by them as per the Technical Specifications of M/s TNEB.	1	Job					
13	Liasoning with Govt agencies (for project approval) and Preparation of as-built drawings, SLD etc., Liasoning with CEA / Government agencies (TEDA / MNRE) after, arranging	1	Job					

Sr No	Description	Qty	Unit	Supply		Installation		Total Amount S+I (excluding tax)
				Rate	Amount	Supply	Amount	
	inspection and getting approval and arrange for , subsidy etc. after completion							
	Sub Total							
	Grand total for Supply and Installation – (A)							
14	Operation & Maintenance (O&M) of Solar PV System (To be considered for Tender evaluation purpose)							
14.a	O&M During DL period	01	Year					
14.b	O&M for the 1st year after DLP	01	Year					
14.c	O&M for the 2nd year after DLP	01	Year					
14.d	O&M for the 3rd year after DLP	01	Year					
14.e	O&M for the 4th year after DLP	01	Year					
14.f	O&M for the 5th year after DLP	01	Year					
	O**&M - SUB TOTAL -----(B)**							
	GRAND TOTAL (A+ B) – T.Nagar branch (Exclusive of all taxes)							

Sr No	Description	Qty	Unit	Supply		Installation		Total Amount S+I (excluding tax)
				Rate	Amount	Supply	Amount	

S.No	Name of Location	Grand Total (Supply , Installation & O&M) (Exclusive of Taxes)
01	Triplicane Branch -10kWp	
02	Alwarpet Branch -10kWp	
03	Hastinapuram Branch – 10kWp	
04	Padi Branch-15kWp	
05	T.Nagar Branch-15kWp	
06	Zonal Office – Chennai South -20 kWp	
07	Maraimalai Nagar Branch – 30 kWp	
	Final Total (exclusive of taxes)	