

M/s _____



PAKISTAN RAILWAYS

Pakistan Railways, Karachi.

**DESIGN, SUPPLY, INSTALLATION, TESTING AND COMMISSIONING
FOR CONVERSION OF EXISTING GRID-TIED SOLAR SYSTEMS INTO
HYBRID SOLAR SYSTEMS AT 21 NOS RAILWAY STATIONS ACROSS
KARACHI DIVISION ON A TURNKEY BASIS.**

On

Single Stage-Two Envelope Basis

**VOLUME 2 OF 2
(Financial Proposal Format)**

Tender No. 258-W/Genl/Solar/RS-4

**OFFICE OF THE DIVISIONAL SUPERINTENDENT
PAKISTAN RAILWAYS
KARACHI**

TABLE OF CONTENTS

Description	Page No.
FORM OF BID	
Form	
FINANCIAL PROPOSAL	
Supply & Installation of Solar System	

FORM OF BID
AND
FINANCIAL PROPOSAL FORMAT

Form of Bid

Date: _____

Bid Reference No. _____

To:

**Divisional Superintendent
Pakistan Railways,
Karachi.**

Subject: **DESIGN, SUPPLY, INSTALLATION, TESTING AND COMMISSIONING
FOR CONVERSION OF EXISTING GRID-TIED SOLAR SYSTEMS INTO
HYBRID SOLAR SYSTEMS AT 21 NOS RAILWAY STATIONS ACROSS
KARACHI DIVISION ON A TURNKEY BASIS.**

Gentleman,

I/We, the undersigned, declare that:

- (a) I/We have examined and have no reservations to the Bidding Document, including Addenda No.: _____;
- (b) I/We offer to execute the subject works in conformity with the Bidding Document and in accordance with the Completion Period.
- (c) The total price of my/our Bid is: _____;
- (d) My/Our Bid shall be valid for a period of _____ days from the date fixed for the bid submission deadline in accordance with the Bidding Document, and it shall remain binding upon us and may be accepted at any time before the expiration of that period.
- (e) If my/our Bid is accepted, we commit to obtain a Performance Security in the amount of 05% of the Contract Price for the due performance of the Contract.
- (f) I/We am/are not participating, as Bidders, in more than one Bid in this bidding process.
- (g) My/Our firm, its affiliates or subsidiaries, including any subcontractors or suppliers for any part of the Contract, has not been declared ineligible by the Purchaser.
- (h) I/We, the understand that this Bid, together with your written acceptance thereof included in your notification of award, shall constitute a binding contract between us, until a formal Contract is prepared and executed.
- (i) I/We understand that you are not bound to accept the lowest evaluated bid or any other bid that you may receive.

- (j) I/We agree to permit the Purchaser or its representative to inspect our accounts and records and other documents relating to the bid submission and to have them audited by auditors appointed by the Bank.

Name _____

In the capacity of _____

Signed _____

Duly authorized to sign the Bid for and on behalf of _____

Date _____

Witness:

Name: _____

Signature: _____

Address: _____

Occupation: _____

FINANCIAL PROPOSAL

Summary

S.No.	Station Name	Capacity (kW)	Amount Quoted (Rs.)
1	Drigh Road	25	
2	Malir City	15	
3	Jumma Goth	15	
4	Bin Qasim	35	
5	Dhabeji	15	
6	Ranpathani	10	
7	Jungshahi	8	
8	Jhampir	7	
9	Bolari	10	
10	Kotri	30	
11	Detha	10	
12	Aladino Sand	10	
13	Pali Jani	10	
14	Odero Lal	10	
15	Wahab Shah	10	
16	Tando Adam	20	
17	Sindh University	10	
18	Buddhapur	10	
19	Khannote	10	
20	Gopang	10	
21	SAN	10	
Grand Total (Rs).			

Bidder Signature

FINANCIAL PROPOSAL

FINANCIAL PROPOSAL - Part-1

Name of Bidder_____

DESIGN, SUPPLY, INSTALLATION, TESTING AND COMMISSIONING FOR CONVERSION OF EXISTING 07-KW GRID-TIED SOLAR SYSTEM INTO HYBRID SOLAR SYSTEM AT JHAMPIR RAILWAY STATION OVER KARACHI DIVISION.

1	Design, Supply, installation, testing and commissioning work for conversion of existing Grid-Tied solar systems into Hybrid solar system at Railway Stations with all allied accessories i.e., Hybrid inverter, additional protective equipment, including all civil and electrical works, wiring, cabling. (Complete in all respects). NOTE: The bidder will fill out each BOQ separately as per mentioned System Capacity.				
	Description	Unit	Qty	Amount (Rs.)	
				In Figures	In Words
1.1	Inverter Type: Three Phase HYBRID Inverter equipped with a built-in online monitoring system and Wi-Fi-enabled monitoring device (dongle), IP-65 with built in DC and AC Surge Protection Devices. 10 years warranty. Manufacturing Brand: Inverex, GoodWe, Huawei Solis, Sungow or Equivalent Tier-1	Each	As per System Capacity requirement		
1.2	Batteries: Lithium-ion Battery, Nominal voltage: 48 V. Rated capacity: 100-AH. This includes battery cables and allied accessories. Warranty: 05 Years. Brands: Narada, Inverex, or equivalent reputed manufacturers.	Each	02		
1.3	Dust Proof Powder Coated Metallic Distribution Box, indoor/outdoor, appropriate housing space, as per site requirements complete in all respects, IP 54 or higher.	Each	01		
1.4	Additional Protective Devices Required for Conversion of existing Grid-Tied Solar Systems into Hybrid Solar Systems.: - Three Phase Four Pole 200-A MCCB for Mains Supply from Utility - Three phase Three/Four Pole MCBs for input side and output side of the inverter separately. - Three Phase Over/Under Voltage and Phase Sequence Protection Device on inverter input side and load side separately. - DC Two Pole Circuit breakers and Fuses for DC input to inverter and also between Battery/Batteries and Inverter - SPDTs, Three Phase Four Pole 150A Manual Change over Switch Brand for Circuit Breakers: Schneider, Terasaki or Equivalent.	Job	01		
1.5	Additional DC & AC Cables Required for Conversion of existing Grid-Tied Solar Systems into Hybrid Solar Systems. (Note: lengths & size may vary on each site;) Brands Newage, Allied, Fast, Pakistan Cables or equivalent	Job	As per site requirement		
1.6	Installation and Transportation Charges as per site requirement to complete the project in all respect.	Job	01		
GRAND TOTAL OF QUOTED AMOUNT (RS.)					

Bidder Signature

FINANCIAL PROPOSAL - Part-2

Name of Bidder _____

DESIGN, SUPPLY, INSTALLATION, TESTING AND COMMISSIONING FOR CONVERSION OF EXISTING 08-KW GRID-TIED SOLAR SYSTEM INTO HYBRID SOLAR SYSTEM AT JUNGSHAHI RAILWAY STATION OVER KARACHI DIVISION.

1	Design, Supply, installation, testing and commissioning work for conversion of existing Grid-Tied solar systems into Hybrid solar system at Railway Stations with all allied accessories i.e., Hybrid inverter, additional protective equipment, including all civil and electrical works, wiring, cabling. (Complete in all respects). NOTE: The bidder will fill out each BOQ separately as per mentioned System Capacity.				
	Description	Unit	Qty	Amount (Rs.)	
				In Figures	In Words
1.1	Inverter Type: Three Phase HYBRID Inverter equipped with a built-in online monitoring system and Wi-Fi-enabled monitoring device (dongle), IP-65 with built in DC and AC Surge Protection Devices. 10 years warranty. Manufacturing Brand: Inverex, GoodWe, Huawei Solis, Sungow or Equivalent Tier-1	Each	As per System Capacity requirement		
1.2	Batteries: Lithium-ion Battery, Nominal voltage: 48 V. Rated capacity: 100-AH. This includes battery cables and allied accessories. Warranty: 05 Years. Brands: Narada, Inverex, or equivalent reputed manufacturers.	Each	02		
1.3	Dust Proof Powder Coated Metallic Distribution Box, indoor/outdoor, appropriate housing space, as per site requirements complete in all respects, IP 54 or higher.	Each	01		
1.4	Additional Protective Devices Required for Conversion of existing Grid-Tied Solar Systems into Hybrid Solar Systems.: - Three Phase Four Pole 200-A MCCB for Mains Supply from Utility - Three phase Three/Four Pole MCBs for input side and output side of the inverter separately. - Three Phase Over/Under Voltage and Phase Sequence Protection Device on inverter input side and load side separately. - DC Two Pole Circuit breakers and Fuses for DC input to inverter and also between Battery/Batteries and Inverter - SPDTs, Three Phase Four Pole 150A Manual Change over Switch Brand for Circuit Breakers: Schneider, Terasaki or Equivalent.	Job	01		
1.5	Additional DC & AC Cables Required for Conversion of existing Grid-Tied Solar Systems into Hybrid Solar Systems. (Note: lengths & size may vary on each site;) Brands Newage, Allied, Fast, Pakistan Cables or equivalent	Job	As per site requirement		
1.6	Installation and Transportation Charges as per site requirement to complete the project in all respect.	Job	01		
GRAND TOTAL OF QUOTED AMOUNT (RS.)					

Bidder Signature

FINANCIAL PROPOSAL - Part-3

Name of Bidder _____

DESIGN, SUPPLY, INSTALLATION, TESTING AND COMMISSIONING FOR CONVERSION OF EXISTING 10-KW GRID-TIED SOLAR SYSTEMS INTO HYBRID SOLAR SYSTEMS AT ALADINO SAND RAILWAY STATION OVER KARACHI DIVISION.

1	Design, Supply, installation, testing and commissioning work for conversion of existing Grid-Tied solar systems into Hybrid solar system at Railway Stations with all allied accessories i.e., Hybrid inverter, additional protective equipment, including all civil and electrical works, wiring, cabling. (Complete in all respects). <u>NOTE: The bidder will fill out each BOQ separately as per mentioned System Capacity.</u>				
	Description	Unit	Qty	Amount (Rs.)	
				In Figures	In Words
1.1	Inverter Type: Three Phase HYBRID Inverter equipped with a built-in online monitoring system and Wi-Fi-enabled monitoring device (dongle), IP-65 with built in DC and AC Surge Protection Devices. 10 years warranty. Manufacturing Brand: Inverex, GoodWe, Huawei Solis, Sungow or Equivalent Tier-1	Each	As per System Capacity Requirement		
1.2	Batteries: Lithium-ion Battery, Nominal voltage: 48 V. Rated capacity: 100-AH. This includes battery cables and allied accessories. Warranty: 05 Years. Brands: Narada, Inverex, or equivalent reputed manufacturers.	Each	01		
1.3	Dust Proof Powder Coated Metallic Distribution Box, indoor/outdoor, appropriate housing space, as per site requirements complete in all respects, IP 54 or higher.	Each	01		
1.4	Additional Protective Devices Required for Conversion of existing Grid-Tied Solar Systems into Hybrid Solar Systems.: - Three Phase Four Pole 200-A MCCB for Mains Supply from Utility - Three phase Three/Four Pole MCBs for input side and output side of the inverter separately. - Three Phase Over/Under Voltage and Phase Sequence Protection Device on inverter input side and load side separately. - DC Two Pole Circuit breakers and Fuses for DC input to inverter and also between Battery/Batteries and Inverter - SPDTs, Three Phase Four Pole 150A Manual Change over Switch Brand for Circuit Breakers: Schneider, Terasaki or Equivalent.	Job	01		
1.5	Additional DC & AC Cables Required for Conversion of existing Grid-Tied Solar Systems into Hybrid Solar Systems. (Note: lengths & size may vary on each site;) Brands Newage, Allied, Fast, Pakistan Cables or equivalent	Job	As per site requirement		
1.6	Installation and Transportation Charges as per site requirement to complete the project in all respect.	Job	01		
GRAND TOTAL OF QUOTED AMOUNT (RS.)					

Bidder Signature

FINANCIAL PROPOSAL - Part-4

Name of Bidder _____

DESIGN, SUPPLY, INSTALLATION, TESTING AND COMMISSIONING FOR CONVERSION OF EXISTING 10-KW GRID-TIED SOLAR SYSTEMS INTO HYBRID SOLAR SYSTEMS AT DETHA RAILWAY STATION OVER KARACHI DIVISION.

1	Design, Supply, installation, testing and commissioning work for conversion of existing Grid-Tied solar systems into Hybrid solar system at Railway Stations with all allied accessories i.e., Hybrid inverter, additional protective equipment, including all civil and electrical works, wiring, cabling. (Complete in all respects). NOTE: The bidder will fill out each BOQ separately as per mentioned System Capacity.				
	Description	Unit	Qty	Amount (Rs.)	
				In Figures	In Words
1.1	Inverter Type: Three Phase HYBRID Inverter equipped with a built-in online monitoring system and Wi-Fi-enabled monitoring device (dongle), IP-65 with built in DC and AC Surge Protection Devices. 10 years warranty. Manufacturing Brand: Inverex, GoodWe, Huawei Solis, Sungow or Equivalent Tier-1	Each	As per System Capacity Requirement		
1.2	Batteries: Lithium-ion Battery, Nominal voltage: 48 V. Rated capacity: 100-AH. This includes battery cables and allied accessories. Warranty: 05 Years. Brands: Narada, Inverex, or equivalent reputed manufacturers.	Each	01		
1.3	Dust Proof Powder Coated Metallic Distribution Box, indoor/outdoor, appropriate housing space, as per site requirements complete in all respects, IP 54 or higher.	Each	01		
1.4	Additional Protective Devices Required for Conversion of existing Grid-Tied Solar Systems into Hybrid Solar Systems.: - Three Phase Four Pole 200-A MCCB for Mains Supply from Utility - Three phase Three/Four Pole MCBs for input side and output side of the inverter separately. - Three Phase Over/Under Voltage and Phase Sequence Protection Device on inverter input side and load side separately. - DC Two Pole Circuit breakers and Fuses for DC input to inverter and also between Battery/Batteries and Inverter - SPDTs, Three Phase Four Pole 150A Manual Change over Switch Brand for Circuit Breakers: Schneider, Terasaki or Equivalent.	Job	01		
1.5	Additional DC & AC Cables Required for Conversion of existing Grid-Tied Solar Systems into Hybrid Solar Systems. (Note: lengths & size may vary on each site;) Brands Newage, Allied, Fast, Pakistan Cables or equivalent	Job	As per site requirement		
1.6	Installation and Transportation Charges as per site requirement to complete the project in all respect.	Job	01		
GRAND TOTAL OF QUOTED AMOUNT (RS.)					

Bidder Signature _____

FINANCIAL PROPOSAL - Part-5

Name of Bidder _____

DESIGN, SUPPLY, INSTALLATION, TESTING AND COMMISSIONING FOR CONVERSION OF EXISTING 10-KW GRID-TIED SOLAR SYSTEMS INTO HYBRID SOLAR SYSTEMS AT GOPANG RAILWAY STATION OVER KARACHI DIVISION.

1	Design, Supply, installation, testing and commissioning work for conversion of existing Grid-Tied solar systems into Hybrid solar system at Railway Stations with all allied accessories i.e., Hybrid inverter, additional protective equipment, including all civil and electrical works, wiring, cabling. (Complete in all respects). <u>NOTE: The bidder will fill out each BOQ separately as per mentioned System Capacity.</u>				
	Description	Unit	Qty	Amount (Rs.)	
				In Figures	In Words
1.1	Inverter Type: Three Phase HYBRID Inverter equipped with a built-in online monitoring system and Wi-Fi-enabled monitoring device (dongle), IP-65 with built in DC and AC Surge Protection Devices. 10 years warranty. Manufacturing Brand: Inverex, GoodWe, Huawei Solis, Sungow or Equivalent Tier-1	Each	As per System Capacity Requirement		
1.2	Batteries: Lithium-ion Battery, Nominal voltage: 48 V. Rated capacity: 100-AH. This includes battery cables and allied accessories. Warranty: 05 Years. Brands: Narada, Inverex, or equivalent reputed manufacturers.	Each	01		
1.3	Dust Proof Powder Coated Metallic Distribution Box, indoor/outdoor, appropriate housing space, as per site requirements complete in all respects, IP 54 or higher.	Each	01		
1.4	Additional Protective Devices Required for Conversion of existing Grid-Tied Solar Systems into Hybrid Solar Systems.: - Three Phase Four Pole 200-A MCCB for Mains Supply from Utility - Three phase Three/Four Pole MCBs for input side and output side of the inverter separately. - Three Phase Over/Under Voltage and Phase Sequence Protection Device on inverter input side and load side separately. - DC Two Pole Circuit breakers and Fuses for DC input to inverter and also between Battery/Batteries and Inverter - SPDTs, Three Phase Four Pole 150A Manual Change over Switch Brand for Circuit Breakers: Schneider, Terasaki or Equivalent.	Job	01		
1.5	Additional DC & AC Cables Required for Conversion of existing Grid-Tied Solar Systems into Hybrid Solar Systems. (Note: lengths & size may vary on each site;) Brands Newage, Allied, Fast, Pakistan Cables or equivalent	Job	As per site requirement		
1.6	Installation and Transportation Charges as per site requirement to complete the project in all respect.	Job	01		
GRAND TOTAL OF QUOTED AMOUNT (RS.)					

Bidder Signature

FINANCIAL PROPOSAL - Part-6

Name of Bidder _____

DESIGN, SUPPLY, INSTALLATION, TESTING AND COMMISSIONING FOR CONVERSION OF EXISTING 10-KW GRID-TIED SOLAR SYSTEMS INTO HYBRID SOLAR SYSTEMS AT KHANNOTE RAILWAY STATION OVER KARACHI DIVISION.

1	Design, Supply, installation, testing and commissioning work for conversion of existing Grid-Tied solar systems into Hybrid solar system at Railway Stations with all allied accessories i.e., Hybrid inverter, additional protective equipment, including all civil and electrical works, wiring, cabling. (Complete in all respects). <u>NOTE: The bidder will fill out each BOQ separately as per mentioned System Capacity.</u>				
	Description	Unit	Qty	Amount (Rs.)	
				In Figures	In Words
1.1	Inverter Type: Three Phase HYBRID Inverter equipped with a built-in online monitoring system and Wi-Fi-enabled monitoring device (dongle), IP-65 with built in DC and AC Surge Protection Devices. 10 years warranty. Manufacturing Brand: Inverex, GoodWe, Huawei Solis, Sungow or Equivalent Tier-1	Each	As per System Capacity Requirement		
1.2	Batteries: Lithium-ion Battery, Nominal voltage: 48 V. Rated capacity: 100-AH. This includes battery cables and allied accessories. Warranty: 05 Years. Brands: Narada, Inverex, or equivalent reputed manufacturers.	Each	01		
1.3	Dust Proof Powder Coated Metallic Distribution Box, indoor/outdoor, appropriate housing space, as per site requirements complete in all respects, IP 54 or higher.	Each	01		
1.4	Additional Protective Devices Required for Conversion of existing Grid-Tied Solar Systems into Hybrid Solar Systems.: - Three Phase Four Pole 200-A MCCB for Mains Supply from Utility - Three phase Three/Four Pole MCBs for input side and output side of the inverter separately. - Three Phase Over/Under Voltage and Phase Sequence Protection Device on inverter input side and load side separately. - DC Two Pole Circuit breakers and Fuses for DC input to inverter and also between Battery/Batteries and Inverter - SPDTs, Three Phase Four Pole 150A Manual Change over Switch Brand for Circuit Breakers: Schneider, Terasaki or Equivalent.	Job	01		
1.5	Additional DC & AC Cables Required for Conversion of existing Grid-Tied Solar Systems into Hybrid Solar Systems. (Note: lengths & size may vary on each site;) Brands Newage, Allied, Fast, Pakistan Cables or equivalent	Job	As per site requirement		
1.6	Installation and Transportation Charges as per site requirement to complete the project in all respect.	Job	01		
GRAND TOTAL OF QUOTED AMOUNT (RS.)					

Bidder Signature _____

FINANCIAL PROPOSAL - Part-7

Name of Bidder _____

DESIGN, SUPPLY, INSTALLATION, TESTING AND COMMISSIONING FOR CONVERSION OF EXISTING 10-KW GRID-TIED SOLAR SYSTEMS INTO HYBRID SOLAR SYSTEMS AT ODERO LAL RAILWAY STATION OVER KARACHI DIVISION.

1	Design, Supply, installation, testing and commissioning work for conversion of existing Grid-Tied solar systems into Hybrid solar system at Railway Stations with all allied accessories i.e., Hybrid inverter, additional protective equipment, including all civil and electrical works, wiring, cabling. (Complete in all respects). NOTE: The bidder will fill out each BOQ separately as per mentioned System Capacity.				
	Description	Unit	Qty	Amount (Rs.)	
				In Figures	In Words
1.1	Inverter Type: Three Phase HYBRID Inverter equipped with a built-in online monitoring system and Wi-Fi-enabled monitoring device (dongle), IP-65 with built in DC and AC Surge Protection Devices. 10 years warranty. Manufacturing Brand: Inverex, GoodWe, Huawei Solis, Sungow or Equivalent Tier-1	Each	As per System Capacity Requirement		
1.2	Batteries: Lithium-ion Battery, Nominal voltage: 48 V. Rated capacity: 100-AH. This includes battery cables and allied accessories. Warranty: 05 Years. Brands: Narada, Inverex, or equivalent reputed manufacturers.	Each	01		
1.3	Dust Proof Powder Coated Metallic Distribution Box, indoor/outdoor, appropriate housing space, as per site requirements complete in all respects, IP 54 or higher.	Each	01		
1.4	Additional Protective Devices Required for Conversion of existing Grid-Tied Solar Systems into Hybrid Solar Systems.: - Three Phase Four Pole 200-A MCCB for Mains Supply from Utility - Three phase Three/Four Pole MCBs for input side and output side of the inverter separately. - Three Phase Over/Under Voltage and Phase Sequence Protection Device on inverter input side and load side separately. - DC Two Pole Circuit breakers and Fuses for DC input to inverter and also between Battery/Batteries and Inverter - SPDTs, Three Phase Four Pole 150A Manual Change over Switch Brand for Circuit Breakers: Schneider, Terasaki or Equivalent.	Job	01		
1.5	Additional DC & AC Cables Required for Conversion of existing Grid-Tied Solar Systems into Hybrid Solar Systems. (Note: lengths & size may vary on each site;) Brands Newage, Allied, Fast, Pakistan Cables or equivalent	Job	As per site requirement		
1.6	Installation and Transportation Charges as per site requirement to complete the project in all respect.	Job	01		
GRAND TOTAL OF QUOTED AMOUNT (RS.)					

Bidder Signature

FINANCIAL PROPOSAL - Part-8

Name of Bidder _____

DESIGN, SUPPLY, INSTALLATION, TESTING AND COMMISSIONING FOR CONVERSION OF EXISTING 10-KW GRID-TIED SOLAR SYSTEMS INTO HYBRID SOLAR SYSTEMS AT PALI JANI RAILWAY STATION OVER KARACHI DIVISION.

1	Design, Supply, installation, testing and commissioning work for conversion of existing Grid-Tied solar systems into Hybrid solar system at Railway Stations with all allied accessories i.e., Hybrid inverter, additional protective equipment, including all civil and electrical works, wiring, cabling. (Complete in all respects). NOTE: The bidder will fill out each BOQ separately as per mentioned System Capacity.				
	Description	Unit	Qty	Amount (Rs.)	
				In Figures	In Words
1.1	Inverter Type: Three Phase HYBRID Inverter equipped with a built-in online monitoring system and Wi-Fi-enabled monitoring device (dongle), IP-65 with built in DC and AC Surge Protection Devices. 10 years warranty. Manufacturing Brand: Inverex, GoodWe, Huawei Solis, Sungow or Equivalent Tier-1	Each	As per System Capacity Requirement		
1.2	Batteries: Lithium-ion Battery, Nominal voltage: 48 V. Rated capacity: 100-AH. This includes battery cables and allied accessories. Warranty: 05 Years. Brands: Narada, Inverex, or equivalent reputed manufacturers.	Each	01		
1.3	Dust Proof Powder Coated Metallic Distribution Box, indoor/outdoor, appropriate housing space, as per site requirements complete in all respects, IP 54 or higher.	Each	01		
1.4	Additional Protective Devices Required for Conversion of existing Grid-Tied Solar Systems into Hybrid Solar Systems.: - Three Phase Four Pole 200-A MCCB for Mains Supply from Utility - Three phase Three/Four Pole MCBs for input side and output side of the inverter separately. - Three Phase Over/Under Voltage and Phase Sequence Protection Device on inverter input side and load side separately. - DC Two Pole Circuit breakers and Fuses for DC input to inverter and also between Battery/Batteries and Inverter - SPDTs, Three Phase Four Pole 150A Manual Change over Switch Brand for Circuit Breakers: Schneider, Terasaki or Equivalent.	Job	01		
1.5	Additional DC & AC Cables Required for Conversion of existing Grid-Tied Solar Systems into Hybrid Solar Systems. (Note: lengths & size may vary on each site;) Brands Newage, Allied, Fast, Pakistan Cables or equivalent	Job	As per site requirement		
1.6	Installation and Transportation Charges as per site requirement to complete the project in all respect.	Job	01		
GRAND TOTAL OF QUOTED AMOUNT (RS.)					

Bidder Signature

FINANCIAL PROPOSAL - Part-9

Name of Bidder _____

DESIGN, SUPPLY, INSTALLATION, TESTING AND COMMISSIONING FOR CONVERSION OF EXISTING 10-KW GRID-TIED SOLAR SYSTEMS INTO HYBRID SOLAR SYSTEMS AT SINDH UNIVERSITY RAILWAY STATION OVER KARACHI DIVISION.

1	Design, Supply, installation, testing and commissioning work for conversion of existing Grid-Tied solar systems into Hybrid solar system at Railway Stations with all allied accessories i.e., Hybrid inverter, additional protective equipment, including all civil and electrical works, wiring, cabling. (Complete in all respects). NOTE: The bidder will fill out each BOQ separately as per mentioned System Capacity.				
	Description	Unit	Qty	Amount (Rs.)	
				In Figures	In Words
1.1	Inverter Type: Three Phase HYBRID Inverter equipped with a built-in online monitoring system and Wi-Fi-enabled monitoring device (dongle), IP-65 with built in DC and AC Surge Protection Devices. 10 years warranty. Manufacturing Brand: Inverex, GoodWe, Huawei Solis, Sungow or Equivalent Tier-1	Each	As per System Capacity Requirement		
1.2	Batteries: Lithium-ion Battery, Nominal voltage: 48 V. Rated capacity: 100-AH. This includes battery cables and allied accessories. Warranty: 05 Years. Brands: Narada, Inverex, or equivalent reputed manufacturers.	Each	01		
1.3	Dust Proof Powder Coated Metallic Distribution Box, indoor/outdoor, appropriate housing space, as per site requirements complete in all respects, IP 54 or higher.	Each	01		
1.4	Additional Protective Devices Required for Conversion of existing Grid-Tied Solar Systems into Hybrid Solar Systems.: - Three Phase Four Pole 200-A MCCB for Mains Supply from Utility - Three phase Three/Four Pole MCBs for input side and output side of the inverter separately. - Three Phase Over/Under Voltage and Phase Sequence Protection Device on inverter input side and load side separately. - DC Two Pole Circuit breakers and Fuses for DC input to inverter and also between Battery/Batteries and Inverter - SPDTs, Three Phase Four Pole 150A Manual Change over Switch Brand for Circuit Breakers: Schneider, Terasaki or Equivalent.	Job	01		
1.5	Additional DC & AC Cables Required for Conversion of existing Grid-Tied Solar Systems into Hybrid Solar Systems. (Note: lengths & size may vary on each site;) Brands Newage, Allied, Fast, Pakistan Cables or equivalent	Job	As per site requirement		
1.6	Installation and Transportation Charges as per site requirement to complete the project in all respect.	Job	01		
GRAND TOTAL OF QUOTED AMOUNT (RS.)					

Bidder Signature

FINANCIAL PROPOSAL - Part-10

Name of Bidder _____

DESIGN, SUPPLY, INSTALLATION, TESTING AND COMMISSIONING FOR CONVERSION OF EXISTING 10-KW GRID-TIED SOLAR SYSTEMS INTO HYBRID SOLAR SYSTEMS AT WAHAB SHAH RAILWAY STATION OVER KARACHI DIVISION.

1	Design, Supply, installation, testing and commissioning work for conversion of existing Grid-Tied solar systems into Hybrid solar system at Railway Stations with all allied accessories i.e., Hybrid inverter, additional protective equipment, including all civil and electrical works, wiring, cabling. (Complete in all respects). NOTE: The bidder will fill out each BOQ separately as per mentioned System Capacity.				
	Description	Unit	Qty	Amount (Rs.)	
				In Figures	In Words
1.1	Inverter Type: Three Phase HYBRID Inverter equipped with a built-in online monitoring system and Wi-Fi-enabled monitoring device (dongle), IP-65 with built in DC and AC Surge Protection Devices. 10 years warranty. Manufacturing Brand: Inverex, GoodWe, Huawei Solis, Sungow or Equivalent Tier-1	Each	As per System Capacity Requirement		
1.2	Batteries: Lithium-ion Battery, Nominal voltage: 48 V. Rated capacity: 100-AH. This includes battery cables and allied accessories. Warranty: 05 Years. Brands: Narada, Inverex, or equivalent reputed manufacturers.	Each	01		
1.3	Dust Proof Powder Coated Metallic Distribution Box, indoor/outdoor, appropriate housing space, as per site requirements complete in all respects, IP 54 or higher.	Each	01		
1.4	Additional Protective Devices Required for Conversion of existing Grid-Tied Solar Systems into Hybrid Solar Systems.: - Three Phase Four Pole 200-A MCCB for Mains Supply from Utility - Three phase Three/Four Pole MCBs for input side and output side of the inverter separately. - Three Phase Over/Under Voltage and Phase Sequence Protection Device on inverter input side and load side separately. - DC Two Pole Circuit breakers and Fuses for DC input to inverter and also between Battery/Batteries and Inverter - SPDTs, Three Phase Four Pole 150A Manual Change over Switch Brand for Circuit Breakers: Schneider, Terasaki or Equivalent.	Job	01		
1.5	Additional DC & AC Cables Required for Conversion of existing Grid-Tied Solar Systems into Hybrid Solar Systems. (Note: lengths & size may vary on each site;) Brands Newage, Allied, Fast, Pakistan Cables or equivalent	Job	As per site requirement		
1.6	Installation and Transportation Charges as per site requirement to complete the project in all respect.	Job	01		
GRAND TOTAL OF QUOTED AMOUNT (RS.)					

Bidder Signature

FINANCIAL PROPOSAL - Part-11

Name of Bidder _____

DESIGN, SUPPLY, INSTALLATION, TESTING AND COMMISSIONING FOR CONVERSION OF EXISTING 10-KW GRID-TIED SOLAR SYSTEMS INTO HYBRID SOLAR SYSTEMS AT RANPATHANI RAILWAY STATION OVER KARACHI DIVISION.

1	Design, Supply, installation, testing and commissioning work for conversion of existing Grid-Tied solar systems into Hybrid solar system at Railway Stations with all allied accessories i.e., Hybrid inverter, additional protective equipment, including all civil and electrical works, wiring, cabling. (Complete in all respects). NOTE: The bidder will fill out each BOQ separately as per mentioned System Capacity.				
	Description	Unit	Qty	Amount (Rs.)	
				In Figures	In Words
1.1	Inverter Type: Three Phase HYBRID Inverter equipped with a built-in online monitoring system and Wi-Fi-enabled monitoring device (dongle), IP-65 with built in DC and AC Surge Protection Devices. 10 years warranty. Manufacturing Brand: Inverex, GoodWe, Huawei Solis, Sungow or Equivalent Tier-1	Each	As per System Capacity requirement		
1.2	Batteries: Lithium-ion Battery, Nominal voltage: 48 V. Rated capacity: 100-AH. This includes battery cables and allied accessories. Warranty: 05 Years. Brands: Narada, Inverex, or equivalent reputed manufacturers.	Each	02		
1.3	Dust Proof Powder Coated Metallic Distribution Box, indoor/outdoor, appropriate housing space, as per site requirements complete in all respects, IP 54 or higher.	Each	01		
1.4	Additional Protective Devices Required for Conversion of existing Grid-Tied Solar Systems into Hybrid Solar Systems.: - Three Phase Four Pole 200-A MCCB for Mains Supply from Utility - Three phase Three/Four Pole MCBs for input side and output side of the inverter separately. - Three Phase Over/Under Voltage and Phase Sequence Protection Device on inverter input side and load side separately. - DC Two Pole Circuit breakers and Fuses for DC input to inverter and also between Battery/Batteries and Inverter - SPDTs, Three Phase Four Pole 150A Manual Change over Switch Brand for Circuit Breakers: Schneider, Terasaki or Equivalent.	Job	01		
1.5	Additional DC & AC Cables Required for Conversion of existing Grid-Tied Solar Systems into Hybrid Solar Systems. (Note: lengths & size may vary on each site;) Brands Newage, Allied, Fast, Pakistan Cables or equivalent	Job	As per site requirement		
1.6	Installation and Transportation Charges as per site requirement to complete the project in all respect.	Job	01		
TOTAL AMOUNT QUOTED FOR ONE STATION (RS.)					

Bidder Signature

FINANCIAL PROPOSAL - Part-12

Name of Bidder _____

DESIGN, SUPPLY, INSTALLATION, TESTING AND COMMISSIONING FOR CONVERSION OF EXISTING 10-KW GRID-TIED SOLAR SYSTEMS INTO HYBRID SOLAR SYSTEMS AT BOLARI RAILWAY STATION OVER KARACHI DIVISION.

1	Design, Supply, installation, testing and commissioning work for conversion of existing Grid-Tied solar systems into Hybrid solar system at Railway Stations with all allied accessories i.e., Hybrid inverter, additional protective equipment, including all civil and electrical works, wiring, cabling. (Complete in all respects). <u>NOTE:</u> The bidder will fill out each BOQ separately as per mentioned System Capacity.				
	Description	Unit	Qty	Amount (Rs.)	
				In Figures	In Words
1.1	Inverter Type: Three Phase HYBRID Inverter equipped with a built-in online monitoring system and Wi-Fi-enabled monitoring device (dongle), IP-65 with built in DC and AC Surge Protection Devices. 10 years warranty. Manufacturing Brand: Inverex, GoodWe, Huawei Solis, Sungow or Equivalent Tier-1	Each	As per System Capacity requirement		
1.2	Batteries: Lithium-ion Battery, Nominal voltage: 48 V. Rated capacity: 100-AH. This includes battery cables and allied accessories. Warranty: 05 Years. Brands: Narada, Inverex, or equivalent reputed manufacturers.	Each	02		
1.3	Dust Proof Powder Coated Metallic Distribution Box, indoor/outdoor, appropriate housing space, as per site requirements complete in all respects, IP 54 or higher.	Each	01		
1.4	Additional Protective Devices Required for Conversion of existing Grid-Tied Solar Systems into Hybrid Solar Systems.: - Three Phase Four Pole 200-A MCCB for Mains Supply from Utility - Three phase Three/Four Pole MCBs for input side and output side of the inverter separately. - Three Phase Over/Under Voltage and Phase Sequence Protection Device on inverter input side and load side separately. - DC Two Pole Circuit breakers and Fuses for DC input to inverter and also between Battery/Batteries and Inverter - SPDTs, Three Phase Four Pole 150A Manual Change over Switch Brand for Circuit Breakers: Schneider, Terasaki or Equivalent.	Job	01		
1.5	Additional DC & AC Cables Required for Conversion of existing Grid-Tied Solar Systems into Hybrid Solar Systems. (Note: lengths & size may vary on each site;) Brands Newage, Allied, Fast, Pakistan Cables or equivalent	Job	As per site requirement		
1.6	Installation and Transportation Charges as per site requirement to complete the project in all respect.	Job	01		
TOTAL AMOUNT QUOTED FOR ONE STATION (RS.)					

Bidder Signature

FINANCIAL PROPOSAL - Part-13

Name of Bidder _____

DESIGN, SUPPLY, INSTALLATION, TESTING AND COMMISSIONING FOR CONVERSION OF EXISTING 10-KW GRID-TIED SOLAR SYSTEMS INTO HYBRID SOLAR SYSTEMS AT BUDHAPUR RAILWAY STATION OVER KARACHI DIVISION.

1	Design, Supply, installation, testing and commissioning work for conversion of existing Grid-Tied solar systems into Hybrid solar system at Railway Stations with all allied accessories i.e., Hybrid inverter, additional protective equipment, including all civil and electrical works, wiring, cabling. (Complete in all respects). NOTE: The bidder will fill out each BOQ separately as per mentioned System Capacity.				
	Description	Unit	Qty	Amount (Rs.)	
				In Figures	In Words
1.1	Inverter Type: Three Phase HYBRID Inverter equipped with a built-in online monitoring system and Wi-Fi-enabled monitoring device (dongle), IP-65 with built in DC and AC Surge Protection Devices. 10 years warranty. Manufacturing Brand: Inverex, GoodWe, Huawei Solis, Sungow or Equivalent Tier-1	Each	As per System Capacity requirement		
1.2	Batteries: Lithium-ion Battery, Nominal voltage: 48 V. Rated capacity: 100-AH. This includes battery cables and allied accessories. Warranty: 05 Years. Brands: Narada, Inverex, or equivalent reputed manufacturers.	Each	02		
1.3	Dust Proof Powder Coated Metallic Distribution Box, indoor/outdoor, appropriate housing space, as per site requirements complete in all respects, IP 54 or higher.	Each	01		
1.4	Additional Protective Devices Required for Conversion of existing Grid-Tied Solar Systems into Hybrid Solar Systems.: - Three Phase Four Pole 200-A MCCB for Mains Supply from Utility - Three phase Three/Four Pole MCBs for input side and output side of the inverter separately. - Three Phase Over/Under Voltage and Phase Sequence Protection Device on inverter input side and load side separately. - DC Two Pole Circuit breakers and Fuses for DC input to inverter and also between Battery/Batteries and Inverter - SPDTs, Three Phase Four Pole 150A Manual Change over Switch Brand for Circuit Breakers: Schneider, Terasaki or Equivalent.	Job	01		
1.5	Additional DC & AC Cables Required for Conversion of existing Grid-Tied Solar Systems into Hybrid Solar Systems. (Note: lengths & size may vary on each site;) Brands Newage, Allied, Fast, Pakistan Cables or equivalent	Job	As per site requirement		
1.6	Installation and Transportation Charges as per site requirement to complete the project in all respect.	Job	01		
TOTAL AMOUNT QUOTED FOR ONE STATION (RS.)					

Bidder Signature

FINANCIAL PROPOSAL - Part-14

Name of Bidder _____

DESIGN, SUPPLY, INSTALLATION, TESTING AND COMMISSIONING FOR CONVERSION OF EXISTING 10-KW GRID-TIED SOLAR SYSTEMS INTO HYBRID SOLAR SYSTEMS AT SAN RAILWAY STATION OVER KARACHI DIVISION.

1	Design, Supply, installation, testing and commissioning work for conversion of existing Grid-Tied solar systems into Hybrid solar system at Railway Stations with all allied accessories i.e., Hybrid inverter, additional protective equipment, including all civil and electrical works, wiring, cabling. (Complete in all respects). NOTE: The bidder will fill out each BOQ separately as per mentioned System Capacity.				
	Description	Unit	Qty	Amount (Rs.)	
				In Figures	In Words
1.1	Inverter Type: Three Phase HYBRID Inverter equipped with a built-in online monitoring system and Wi-Fi-enabled monitoring device (dongle), IP-65 with built in DC and AC Surge Protection Devices. 10 years warranty. Manufacturing Brand: Inverex, GoodWe, Huawei Solis, Sungow or Equivalent Tier-1	Each	As per System Capacity requirement		
1.2	Batteries: Lithium-ion Battery, Nominal voltage: 48 V. Rated capacity: 100-AH. This includes battery cables and allied accessories. Warranty: 05 Years. Brands: Narada, Inverex, or equivalent reputed manufacturers.	Each	02		
1.3	Dust Proof Powder Coated Metallic Distribution Box, indoor/outdoor, appropriate housing space, as per site requirements complete in all respects, IP 54 or higher.	Each	01		
1.4	Additional Protective Devices Required for Conversion of existing Grid-Tied Solar Systems into Hybrid Solar Systems.: - Three Phase Four Pole 200-A MCCB for Mains Supply from Utility - Three phase Three/Four Pole MCBs for input side and output side of the inverter separately. - Three Phase Over/Under Voltage and Phase Sequence Protection Device on inverter input side and load side separately. - DC Two Pole Circuit breakers and Fuses for DC input to inverter and also between Battery/Batteries and Inverter - SPDTs, Three Phase Four Pole 150A Manual Change over Switch Brand for Circuit Breakers: Schneider, Terasaki or Equivalent.	Job	01		
1.5	Additional DC & AC Cables Required for Conversion of existing Grid-Tied Solar Systems into Hybrid Solar Systems. (Note: lengths & size may vary on each site;) Brands Newage, Allied, Fast, Pakistan Cables or equivalent	Job	As per site requirement		
1.6	Installation and Transportation Charges as per site requirement to complete the project in all respect.	Job	01		
TOTAL AMOUNT QUOTED FOR ONE STATION (RS.)					

Bidder Signature

FINANCIAL PROPOSAL - Part-15

Name of Bidder _____

DESIGN, SUPPLY, INSTALLATION, TESTING AND COMMISSIONING FOR CONVERSION OF EXISTING 15-KW GRID-TIED SOLAR SYSTEMS INTO HYBRID SOLAR SYSTEMS AT MALIR CITY RAILWAY STATION OVER KARACHI DIVISION.

1	Design, Supply, installation, testing and commissioning work for conversion of existing Grid-Tied solar systems into Hybrid solar system at Railway Stations with all allied accessories i.e., Hybrid inverter, additional protective equipment, including all civil and electrical works, wiring, cabling. (Complete in all respects). NOTE: The bidder will fill out each BOQ separately as per mentioned System Capacity.				
	Description	Unit	Qty	Amount (Rs.)	
				In Figures	In Words
1.1	Inverter Type: Three Phase HYBRID Inverter equipped with a built-in online monitoring system and Wi-Fi-enabled monitoring device (dongle), IP-65 with built in DC and AC Surge Protection Devices. 10 years warranty. Manufacturing Brand: Inverex, GoodWe, Huawei Solis, Sungow or Equivalent Tier-1	Each	As per System Capacity requirement		
1.2	Batteries: Lithium-ion Battery, Nominal voltage: 48 V. Rated capacity: 100-AH. This includes battery cables and allied accessories. Warranty: 05 Years. Brands: Narada, Inverex, or equivalent reputed manufacturers.	Each	01		
1.3	Dust Proof Powder Coated Metallic Distribution Box, indoor/outdoor, appropriate housing space, as per site requirements complete in all respects, IP 54 or higher.	Each	01		
1.4	Additional Protective Devices Required for Conversion of existing Grid-Tied Solar Systems into Hybrid Solar Systems.: - Three Phase Four Pole 200-A MCCB for Mains Supply from Utility - Three phase Three/Four Pole MCBs for input side and output side of the inverter separately. - Three Phase Over/Under Voltage and Phase Sequence Protection Device on inverter input side and load side separately. - DC Two Pole Circuit breakers and Fuses for DC input to inverter and also between Battery/Batteries and Inverter - SPDTs, Three Phase Four Pole 150A Manual Change over Switch Brand for Circuit Breakers: Schneider, Terasaki or Equivalent.	Job	01		
1.5	Additional DC & AC Cables Required for Conversion of existing Grid-Tied Solar Systems into Hybrid Solar Systems. (Note: lengths & size may vary on each site;) Brands Newage, Allied, Fast, Pakistan Cables or equivalent	Job	As per site requirement		
1.6	Installation and Transportation Charges as per site requirement to complete the project in all respect.	Job	01		
GRAND TOTAL OF QUOTED AMOUNT (RS.)					

Bidder Signature

FINANCIAL PROPOSAL - Part-16

Name of Bidder _____

DESIGN, SUPPLY, INSTALLATION, TESTING AND COMMISSIONING FOR CONVERSION OF EXISTING 15-KW GRID-TIED SOLAR SYSTEMS INTO HYBRID SOLAR SYSTEMS AT DHABEJI RAILWAY STATION OVER KARACHI DIVISION.

1	Design, Supply, installation, testing and commissioning work for conversion of existing Grid-Tied solar systems into Hybrid solar system at Railway Stations with all allied accessories i.e., Hybrid inverter, additional protective equipment, including all civil and electrical works, wiring, cabling. (Complete in all respects). NOTE: The bidder will fill out each BOQ separately as per mentioned System Capacity.				
	Description	Unit	Qty	Amount (Rs.)	
				In Figures	In Words
1.1	Inverter Type: Three Phase HYBRID Inverter equipped with a built-in online monitoring system and Wi-Fi-enabled monitoring device (dongle), IP-65 with built in DC and AC Surge Protection Devices. 10 years warranty. Manufacturing Brand: Inverex, GoodWe, Huawei Solis, Sungow or Equivalent Tier-1	Each	As per System Capacity requirement		
1.2	Batteries: Lithium-ion Battery, Nominal voltage: 48 V. Rated capacity: 100-AH. This includes battery cables and allied accessories. Warranty: 05 Years. Brands: Narada, Inverex, or equivalent reputed manufacturers.	Each	03		
1.3	Dust Proof Powder Coated Metallic Distribution Box, indoor/outdoor, appropriate housing space, as per site requirements complete in all respects, IP 54 or higher.	Each	01		
1.4	Additional Protective Devices Required for Conversion of existing Grid-Tied Solar Systems into Hybrid Solar Systems.: - Three Phase Four Pole 200-A MCCB for Mains Supply from Utility - Three phase Three/Four Pole MCBs for input side and output side of the inverter separately. - Three Phase Over/Under Voltage and Phase Sequence Protection Device on inverter input side and load side separately. - DC Two Pole Circuit breakers and Fuses for DC input to inverter and also between Battery/Batteries and Inverter - SPDTs, Three Phase Four Pole 150A Manual Change over Switch Brand for Circuit Breakers: Schneider, Terasaki or Equivalent.	Job	01		
1.5	Additional DC & AC Cables Required for Conversion of existing Grid-Tied Solar Systems into Hybrid Solar Systems. (Note: lengths & size may vary on each site;) Brands Newage, Allied, Fast, Pakistan Cables or equivalent	Job	As per site requirement		
1.6	Installation and Transportation Charges as per site requirement to complete the project in all respect.	Job	01		
GRAND TOTAL OF QUOTED AMOUNT (RS.)					

Bidder Signature

FINANCIAL PROPOSAL - Part-17

Name of Bidder _____

DESIGN, SUPPLY, INSTALLATION, TESTING AND COMMISSIONING FOR CONVERSION OF EXISTING 15-KW GRID-TIED SOLAR SYSTEMS INTO HYBRID SOLAR SYSTEMS AT JUMMA-GOTH RAILWAY STATION OVER KARACHI DIVISION.

1	Design, Supply, installation, testing and commissioning work for conversion of existing Grid-Tied solar systems into Hybrid solar system at Railway Stations with all allied accessories i.e., Hybrid inverter, additional protective equipment, including all civil and electrical works, wiring, cabling. (Complete in all respects). NOTE: The bidder will fill out each BOQ separately as per mentioned System Capacity.				
	Description	Unit	Qty	Amount (Rs.)	
				In Figures	In Words
1.1	Inverter Type: Three Phase HYBRID Inverter equipped with a built-in online monitoring system and Wi-Fi-enabled monitoring device (dongle), IP-65 with built in DC and AC Surge Protection Devices. 10 years warranty. Manufacturing Brand: Inverex, GoodWe, Huawei Solis, Sungow or Equivalent Tier-1	Each	As per System Capacity requirement		
1.2	Batteries: Lithium-ion Battery, Nominal voltage: 48 V. Rated capacity: 100-AH. This includes battery cables and allied accessories. Warranty: 05 Years. Brands: Narada, Inverex, or equivalent reputed manufacturers.	Each	04		
1.3	Dust Proof Powder Coated Metallic Distribution Box, indoor/outdoor, appropriate housing space, as per site requirements complete in all respects, IP 54 or higher.	Each	01		
1.4	Additional Protective Devices Required for Conversion of existing Grid-Tied Solar Systems into Hybrid Solar Systems.: - Three Phase Four Pole 200-A MCCB for Mains Supply from Utility - Three phase Three/Four Pole MCBs for input side and output side of the inverter separately. - Three Phase Over/Under Voltage and Phase Sequence Protection Device on inverter input side and load side separately. - DC Two Pole Circuit breakers and Fuses for DC input to inverter and also between Battery/Batteries and Inverter - SPDTs, Three Phase Four Pole 150A Manual Change over Switch Brand for Circuit Breakers: Schneider, Terasaki or Equivalent.	Job	01		
1.5	Additional DC & AC Cables Required for Conversion of existing Grid-Tied Solar Systems into Hybrid Solar Systems. (Note: lengths & size may vary on each site;) Brands Newage, Allied, Fast, Pakistan Cables or equivalent	Job	As per site requirement		
1.6	Installation and Transportation Charges as per site requirement to complete the project in all respect.	Job	01		
GRAND TOTAL OF QUOTED AMOUNT (RS.)					

Bidder Signature _____

FINANCIAL PROPOSAL - Part-18

Name of Bidder_____

DESIGN, SUPPLY, INSTALLATION, TESTING AND COMMISSIONING FOR CONVERSION OF EXISTING 20-KW GRID-TIED SOLAR SYSTEM INTO HYBRID SOLAR SYSTEM AT TANDO-ADAM RAILWAY STATION OVER KARACHI DIVISION.

1	Design, Supply, installation, testing and commissioning work for conversion of existing Grid-Tied solar systems into Hybrid solar system at Railway Stations with all allied accessories i.e., Hybrid inverter, additional protective equipment, including all civil and electrical works, wiring, cabling. (Complete in all respects). NOTE: The bidder will fill out each BOQ separately as per mentioned System Capacity.				
	Description	Unit	Qty	Amount (Rs.)	
				In Figures	In Words
1.1	Inverter Type: Three Phase HYBRID Inverter equipped with a built-in online monitoring system and Wi-Fi-enabled monitoring device (dongle), IP-65 with built in DC and AC Surge Protection Devices. 10 years warranty. Manufacturing Brand: Inverex, GoodWe, Huawei Solis, Sungow or Equivalent Tier-1	Each	As per System Capacity requirement		
1.2	Batteries: Lithium-ion Battery, Nominal voltage: 48 V. Rated capacity: 100-AH. This includes battery cables and allied accessories. Warranty: 05 Years. Brands: Narada, Inverex, or equivalent reputed manufacturers.	Each	06		
1.3	Dust Proof Powder Coated Metallic Distribution Box, indoor/outdoor, appropriate housing space, as per site requirements complete in all respects, IP 54 or higher.	Each	01		
1.4	Additional Protective Devices Required for Conversion of existing Grid-Tied Solar Systems into Hybrid Solar Systems.: - Three Phase Four Pole 200-A MCCB for Mains Supply from Utility - Three phase Three/Four Pole MCBs for input side and output side of the inverter separately. - Three Phase Over/Under Voltage and Phase Sequence Protection Device on inverter input side and load side separately. - DC Two Pole Circuit breakers and Fuses for DC input to inverter and also between Battery/Batteries and Inverter - SPDTs, Three Phase Four Pole 200A Manual Change over Switch Brand for Circuit Breakers: Schneider, Terasaki or Equivalent.	Job	01		
1.5	Additional DC & AC Cables Required for Conversion of existing Grid-Tied Solar Systems into Hybrid Solar Systems. (Note: lengths & size may vary on each site;) Brands Newage, Allied, Fast, Pakistan Cables or equivalent	Job	As per site requirement		
1.6	Installation and Transportation Charges as per site requirement to complete the project in all respect.	Job	01		
GRAND TOTAL OF QUOTED AMOUNT (RS.)					

Bidder Signature

FINANCIAL PROPOSAL - Part-19

Name of Bidder _____

DESIGN, SUPPLY, INSTALLATION, TESTING AND COMMISSIONING FOR CONVERSION OF EXISTING 25-KW GRID-TIED SOLAR SYSTEM INTO HYBRID SOLAR SYSTEM AT DRIGH-ROAD RAILWAY STATION OVER KARACHI DIVISION.

1	Design, Supply, installation, testing and commissioning work for conversion of existing Grid-Tied solar systems into Hybrid solar system at Railway Stations with all allied accessories i.e., Hybrid inverter, additional protective equipment, including all civil and electrical works, wiring, cabling. (Complete in all respects). NOTE: The bidder will fill out each BOQ separately as per mentioned System Capacity.				
	Description	Unit	Qty	Amount (Rs.)	
				In Figures	In Words
1.1	Inverter Type: Three Phase HYBRID Inverter equipped with a built-in online monitoring system and Wi-Fi-enabled monitoring device (dongle), IP-65 with built in DC and AC Surge Protection Devices. 10 years warranty. Manufacturing Brand: Inverex, GoodWe, Huawei Solis, Sungow or Equivalent Tier-1	Each	As per System Capacity requirement		
1.2	Batteries: Lithium-ion Battery, Nominal voltage: 48 V. Rated capacity: 100-AH. This includes battery cables and allied accessories. Warranty: 05 Years. Brands: Narada, Inverex, or equivalent reputed manufacturers.	Each	04		
1.3	Dust Proof Powder Coated Metallic Distribution Box, indoor/outdoor, appropriate housing space, as per site requirements complete in all respects, IP 54 or higher.	Each	01		
1.4	Additional Protective Devices Required for Conversion of existing Grid-Tied Solar Systems into Hybrid Solar Systems.: - Three Phase Four Pole 200-A MCCB for Mains Supply from Utility - Three phase Three/Four Pole MCBs for input side and output side of the inverter separately. - Three Phase Over/Under Voltage and Phase Sequence Protection Device on inverter input side and load side separately. - DC Two Pole Circuit breakers and Fuses for DC input to inverter and also between Battery/Batteries and Inverter - SPDTs, Three Phase Four Pole 200A Manual Change over Switch Brand for Circuit Breakers: Schneider, Terasaki or Equivalent.	Job	01		
1.5	Additional DC & AC Cables Required for Conversion of existing Grid-Tied Solar Systems into Hybrid Solar Systems. (Note: lengths & size may vary on each site;) Brands Newage, Allied, Fast, Pakistan Cables or equivalent	Job	As per site requirement		
1.6	Installation and Transportation Charges as per site requirement to complete the project in all respect.	Job	01		
GRAND TOTAL OF QUOTED AMOUNT (RS.)					

Bidder Signature

FINANCIAL PROPOSAL - Part-20

Name of Bidder_____

DESIGN, SUPPLY, INSTALLATION, TESTING AND COMMISSIONING FOR CONVERSION OF EXISTING 30-KW GRID-TIED SOLAR SYSTEM INTO HYBRID SOLAR SYSTEM AT KOTRI RAILWAY STATION OVER KARACHI DIVISION.

1	Design, Supply, installation, testing and commissioning work for conversion of existing Grid-Tied solar systems into Hybrid solar system at Railway Stations with all allied accessories i.e., Hybrid inverter, additional protective equipment, including all civil and electrical works, wiring, cabling. (Complete in all respects). NOTE: The bidder will fill out each BOQ separately as per mentioned System Capacity.				
	Description	Unit	Qty	Amount (Rs.)	
				In Figures	In Words
1.1	Inverter Type: Three Phase HYBRID Inverter equipped with a built-in online monitoring system and Wi-Fi-enabled monitoring device (dongle), IP-65 with built in DC and AC Surge Protection Devices. 10 years warranty. Manufacturing Brand: Inverex, GoodWe, Huawei Solis, Sungow or Equivalent Tier-1	Each	As per System Capacity requirement		
1.2	Batteries: Lithium-ion Battery, Nominal voltage: 48 V. Rated capacity: 100-AH. This includes battery cables and allied accessories. Warranty: 05 Years. Brands: Narada, Inverex, or equivalent reputed manufacturers.	Each	04		
1.3	Dust Proof Powder Coated Metallic Distribution Box, indoor/outdoor, appropriate housing space, as per site requirements complete in all respects, IP 54 or higher.	Each	01		
1.4	Additional Protective Devices Required for Conversion of existing Grid-Tied Solar Systems into Hybrid Solar Systems.: - Three Phase Four Pole 200-A MCCB for Mains Supply from Utility - Three phase Three/Four Pole MCBs for input side and output side of the inverter separately. - Three Phase Over/Under Voltage and Phase Sequence Protection Device on inverter input side and load side separately. - DC Two Pole Circuit breakers and Fuses for DC input to inverter and also between Battery/Batteries and Inverter - SPDTs, Three Phase Four Pole 200A Manual Change over Switch Brand for Circuit Breakers: Schneider, Terasaki or Equivalent.	Job	01		
1.5	Additional DC & AC Cables Required for Conversion of existing Grid-Tied Solar Systems into Hybrid Solar Systems. (Note: lengths & size may vary on each site;) Brands Newage, Allied, Fast, Pakistan Cables or equivalent	Job	As per site requirement		
1.6	Installation and Transportation Charges as per site requirement to complete the project in all respect.	Job	01		
GRAND TOTAL OF QUOTED AMOUNT (RS.)					

Bidder Signature

FINANCIAL PROPOSAL - Part-21

Name of Bidder _____

DESIGN, SUPPLY, INSTALLATION, TESTING AND COMMISSIONING FOR CONVERSION OF EXISTING 35-KW GRID-TIED SOLAR SYSTEM INTO HYBRID SOLAR SYSTEM AT BIN-QASIM RAILWAY STATION OVER KARACHI DIVISION.

1	Design, Supply, installation, testing and commissioning work for conversion of existing Grid-Tied solar systems into Hybrid solar system at Railway Stations with all allied accessories i.e., Hybrid inverter, additional protective equipment, including all civil and electrical works, wiring, cabling. (Complete in all respects). NOTE: The bidder will fill out each BOQ separately as per mentioned System Capacity.				
	Description	Unit	Qty	Amount (Rs.)	
				In Figures	In Words
1.1	Batteries: Lithium-ion Battery, Nominal voltage: 48 V. Rated capacity: 100-AH. This includes battery cables and allied accessories. Warranty: 05 Years. Brands: Narada, Inverex, or equivalent reputed manufacturers.	Each	04		
1.2	Dust Proof Powder Coated Metallic Distribution Box, indoor/outdoor, appropriate housing space, as per site requirements complete in all respects, IP 54 or higher.	Each	01		
1.3	Additional Protective Devices Required for Conversion of existing Grid-Tied Solar Systems into Hybrid Solar Systems.: - Three Phase Four Pole 200-A MCCB for Mains Supply from Utility - Three phase Three/Four Pole MCBs for input side and output side of the inverter separately. - Three Phase Over/Under Voltage and Phase Sequence Protection Device on inverter input side and load side separately. - DC Two Pole Circuit breakers and Fuses for DC input to inverter and also between Battery/Batteries and Inverter - SPDTs, Three Phase Four Pole 200A Manual Change over Switch Brand for Circuit Breakers: Schneider, Terasaki or Equivalent.	Job	01		
1.4	Additional DC & AC Cables Required for Conversion of existing Grid-Tied Solar Systems into Hybrid Solar Systems. (Note: lengths & size may vary on each site;) Brands Newage, Allied, Fast, Pakistan Cables or equivalent	Job	As per site requirement		
1.5	Installation and Transportation Charges as per site requirement to complete the project in all respect.	Job	01		
GRAND TOTAL OF QUOTED AMOUNT (RS.)					
Note: The Hybrid Inverter has already been installed at Bin Qasim Railway Station. Therefore, the scope under this BOQ (i.e FINANCIAL PROPOSAL - Part-21) is limited to the supply and installation of batteries and all associated equipment and works required to complete the conversion into a fully functional Hybrid Solar PV System.					

Bidder Signature