

Financial Comparative Statement For " Providing, Fixing & Commissioning of 2170 KW Capacity Solar Power System along with Net-Metering for Main Campus "
University of Sargodha.

Sr.No	Description		Estimate				Bids					
			Qty	Unit	Unit Rate	Amount	1		2		3	
							NRTC JV HKH.		Samber Energy Pvt Ltd		Nimir Energy Ltd	
							Rate	Amount	Rate	Amount	Rate	Amount
1	Solar Panel	Solar Panels Minimum of 550W or above, N-Type, Bi-Facial Tier- 1 A Grade TUV Certified, CE, IEC 61215, IEC 61730 and UL 1703 Certified. IP-68.Brands: Longi or Equivalent. NOTE: 12 years replacement,25 years performance Warranty as per Manufacturer Terms & Conditions.As approved by Engineer Incharge	2,170,000	Watt	60	130,200,000	70.90	153,853,000.00	94.00	203,980,000.00	60.00	130,200,000.00
2	Inverter	25 KW On-Grid Inverter, Pure sine wave, Three Phase, Efficiency > 98%. Brand: Growatt or Equivalent with LAN dongle. 5 years Warranty as per Manufacturer Terms & Conditions.	7	Nos.	440,000	3,080,000	724,531.80	5,071,722.60	550,000.00	3,850,000.00	410,000.00	2,870,000.00
		50 KW On-Grid Inverter, Pure sine wave, Three Phase, Efficiency > 98%. Brand: Growatt or Equivalent with LAN dongle. 5 years Warranty as per Manufacturer Terms & Conditions.	9	Nos.	815,000	7,335,000	1,269,798.00	11,428,182.00	950,000.00	8,550,000.00	525,000.00	4,725,000.00
		100KW On-Grid Inverter, Pure sine wave, Three Phase, Efficiency > 98%. Brand: Growatt or Equivalent with LAN dongle. 5 years Warranty as per Manufacturer Terms & Conditions.	17	Nos.	1,350,000	22,950,000	2,218,411.80	37,713,000.60	1,650,000.00	28,050,000.00	1,250,000.00	21,250,000.00
3	Frame	Solar Module Structure Fixed L2 - 2.8mm Aluminum C Shape section, Rafter (2.00" x 1" x 1/2" x 96") back leg (1.75" x 1" x 1/2" x 39") Tilt Angle 24°, Azimuth 180° Wind Speed = 145km/h, Roof Mounted, nuts, bolts, Washers (SS) etc. including Mounting Structure, fixtures complete in all respects along with ancillary civil work (cutting, Pec, rawal bolt etc.)	2,170,000	Per/Watt	9	19,530,000	8,664.50	18,801,965,000.00	25.00	54,250,000.00	10.00	21,700,000.00
4	AC/DC Cable	Single Core 6mm2 Stranded Copper Conductors, Flexible, Tin Coated / XLPO/XLPO Photovoltaic cable 1500 volt (DC) TUV Certified Brands (Fast or Equal) As approved by Engineer Incharge.	78,000	Rft	132	10,296,000	104.57	8,156,460.00	155.00	12,090,000.00	130.00	10,140,000.00
		4-Core 70mm2 Stranded Copper Conductors, (AC Cable) KEMA Certified Brands (Fast or Equal) As approved by Engineer Incharge.	250	Rft	3,200	800,000	4,979.10	1,244,775.00	6,000.00	1,500,000.00	2,815.00	703,750.00
		4-Core 35mm2 Stranded Copper Conductors, (AC Cable) KEMA Certified Brands (Fast or Equal) As approved by Engineer Incharge.	300	Rft	1,840	552,000	2,464.90	739,470.00	5,000.00	1,500,000.00	1,449.00	434,700.00
		4-Core 120mm2 Stranded Copper Conductors, (AC Cable) KEMA Certified Brands (Fast or Equal) As approved by Engineer Incharge.	150	Rft	5,400	810,000	7,693.48	1,154,022.00	8,000.00	1,200,000.00	4,933.00	739,950.00
		2-Core Pvc Insulated Copper Conductor (AC Cable) (3/0.029" / 1.5mm2) KEMA Gold Certified Brands (Fast or equal) As approved by Engineer Incharge.	2,206	Rft	68	150,008	104.57	230,681.42	40.00	88,240.00	64.00	141,184.00

Sr.No	Description	Estimate				Bids						
		Qty	Unit	Unit Rate	Amount	1		2		3		
						NRTC JV HKH.		Samber Energy Pvt Ltd		Nimir Energy Ltd		
						Rate	Amount	Rate	Amount	Rate	Amount	
5	Breaker / SPDs & Control	DC Circuit Breaker 20 Amp D.P, Schneider or Equivalent (Original) As approved by Engineer Incharge.	250	Nos.	3,700	925,000	8,216.34	2,054,085.00	6,000.00	1,500,000.00	3,000.00	750,000.00
		AC MCCB 3P 100 Amp Schneider or Equivalent (Original) As approved by Engineer Incharge.	6	Nos.	12,000	72,000	11,204.10	67,224.60	75,000.00	450,000.00	18,000.00	108,000.00
		AC MCCB 3P 250 Amp Schneider or Equivalent (Original) As approved by Engineer Incharge.	4	Nos.	38,000	152,000	20,167.38	80,669.52	210,000.00	840,000.00	30,000.00	120,000.00
		AC MCCB 3P 400 Amp Schneider or Equivalent (Original) As approved by Engineer Incharge.	2	Nos.	110,000	220,000	60,950.30	121,900.60	330,000.00	660,000.00	40,000.00	80,000.00
		DC SPDs 2P 1000 Volt Schneider or Equivalent (Original) As approved by Engineer Incharge.	250	Nos.	4,850	1,212,500	9,710.20	2,427,550.00	5,500.00	1,375,000.00	3,500.00	875,000.00
		AC SPDs 4P 60 KV Schneider or Equivalent (Original) As approved by Engineer Incharge.	33	Nos.	15,000	495,000	10,158.38	335,226.54	11,500.00	379,500.00	65,000.00	2,145,000.00
		Zero Export Device for inverters up to 100kW i/c CT's of required rating, Complete in all respect As approved by the Engineer Incharge.	33	Nos.	30,000	990,000	126,979.00	4,190,307.00	75,000.00	2,475,000.00	50,000.00	1,650,000.00
		PV Gen Set Controller	1	No.	400,000	400,000	2,278,167.00	2,278,167.00	650,000.00	650,000.00	1,500,000.00	1,500,000.00
6	Networking & Monitoring System	Networking 5 port Switch Gigabit (Tenda, D-link or equal) As approved by Engineer Incharge.	40	Nos.	5,000	200,000	27,636.78	1,105,471.20	6,500.00	260,000.00	15,000.00	600,000.00
		Communication Modules for Solar Inverters along with of licensed OEM monitoring software.	3	Nos.	185,000	555,000	224,082.00	672,246.00	75,000.00	225,000.00	250,000.00	750,000.00
		Network cable double sheathed out door CAT 6 (Copper) ,23 AWG (D-Link, Hikvision or equal) i/c 1x G.I Wire as approved by Engineer Incharge.	15,000	Rft	52	780,000	104.57	1,568,550.00	20.00	300,000.00	35.00	525,000.00
		2 U rack including PDU & Short Backup 600VA, UPS with built-in dry Battery	40	Nos.	24,900	996,000	32,865.36	1,314,614.40	38,000.00	1,520,000.00	30,000.00	1,200,000.00
		Computer i3 or Above Having minimum of 500 GB Memory (SSD), 8GB RAM, Keyboard, Optical Mouse,& 17" or above LED Display (DELL, HP or Equal) along with external display of Android 52" or above Display (TCL, Haier or Equivalent) with HDMI , VGA , USB ports etc.	1	No.	350,000	350,000	126,979.80	126,979.80	85,000.00	85,000.00	200,000.00	200,000.00
7	Distribution Board (Box)	Distribution board panel 415/240 volts made of 16 SWG M.S Sheet with appropriate sized angle iron frame enclosure, have a suitable sheet steel cover with built in locking arrangement powder coated of approved color,(3' x 6' x 10") Size Including Bus Bar 4 Pole Copper Strip Size 20",1x1/2",2/8" with Nut Bolts 3 x Indication lights 3 x Amp meter with CT's & 3x Volt Meter Complete in all respect approved by the Engineer.	2	Nos.	98,500	197,000	560,205.00	1,120,410.00	85,000.00	170,000.00	90,000.00	180,000.00
		DB Box 415/240 volts made of 16 SWG M.S Sheet with appropriate sized angle iron frame enclosure, have a suitable sheet steel cover with built in locking arrangement powder coated of approved color,(3'x3'x8") Size approved by the Engineer.	18	Nos.	34,250	616,500	97,102.00	1,747,836.00	65,000.00	1,170,000.00	90,000.00	1,620,000.00

	Description	Estimate				Bids						
		Qty	Unit	Unit Rate	Amount	1		2		3		
						NRTC JV HKH.		Samber Energy Pvt Ltd		Nimir Energy Ltd		
						Rate	Amount	Rate	Amount	Rate	Amount	
	Distribution Board (Box) Distribution board panel 415/240 volts made of 16 SWG M.S Sheet with appropriate sized angle iron frame enclosure, have a suitable sheet steel cover with built in locking arrangement powder coated of Approved color.(2'x3'x8") Size approved by the Engineer.	20	Nos.	22,800	456,000	82,163.40	1,643,268.00	25,000.00	500,000.00	90,000.00	1,800,000.00	
8	Earthing & Lightning Protection	Earthing Stranded Copper Conductor 10 mm ² Bare Conductor, Minimum of 90% Purity	45,000	Rft	125	5,625,000	164.33	7,394,850.00	265.00	11,925,000.00	130.00	5,850,000.00
		Earthing up to 3 ohm Including boring 40' or above , brass clamps,nut bolts, thimbles, Copper rod 1" dia 5' long minimum 90% purity, Earth chemical powder mixture bag Gi Pipe with Tee & Bend Plug. I/c 25mm2 50' Long Copper Conductor (Minimum 90% Purity) Complete in all respect as approved by Engineer Incharge.	105	Nos.	50,020	5,252,100	15,685.70	1,646,998.50	55,000.00	5,775,000.00	40,000.00	4,200,000.00
		Lightening Arrestors Minimum of 90% purity of Copper	75	Nos.	19,000	1,425,000	21,665.26	1,624,894.50	10,000.00	750,000.00	25,000.00	1,875,000.00
9	HDPE Pipe & Misc	PVC Flexible Pipe 1"i/d	50,000	Rft	13	650,000	74.69	3,734,500.00	19.00	950,000.00	150.00	7,500,000.00
		Cable Tray 18 SWG, Load Bearing, Rust Proof , Hot Dip Galvanized, Steel Structure along with hot Dip galvanized nuts, bolts, Washers etc. including Mounting Structure , fixtures, complete in all respects, Complete in all respect 2"x 2" Size	2,000	Rft	300	600,000	1,120.41	2,240,820.00	850.00	1,700,000.00	300.00	600,000.00
		Cable Tray 18 SWG, Load Bearing, Rust Proof , Hot Dip Galvanized, Steel Structure along with hot Dip galvanized nuts, bolts, Washers etc. including Mounting Structure, fixtures, complete in all respects, Complete in all respect 2"x 4" Size	1,000	Rft	550	550,000	1,419.90	1,419,900.00	1,050.00	1,050,000.00	500.00	500,000.00
		Cable Tray 18 SWG, Load Bearing, Rust Proof, Hot Dip Galvanized, Steel Structure along with hot Dip galvanized nuts, bolts, Washers etc. including Mounting Structure, fixtures. complete in all respects, Complete in all respect 2"x 6" Size	1,000	Rft	800	800,000	2,016.74	2,016,740.00	1,150.00	1,150,000.00	700.00	700,000.00
		Cable Tray 18 SWG, Load Bearing, Rust Proof , Hot Dip Galvanized, Steel Structure along with hot Dip galvanized nuts, bolts, Washers etc.including Mounting Structure, fixtures complete in all respects, Complete in all respect 2"x 8" Size	1,000	Rft	1,100.00	1,100,000	2,509.72	2,509,720.00	1,250.00	1,250,000.00	900.00	900,000.00
		MC 4 Connectors	4,050	Nos.	150.00	607,500	373.47	1,512,553.50	35.00	141,750.00	250.00	1,012,500.00
		Miscellaneous (PVC Cable Ties, Steel Nails, Nut Bolt washers etc. as approved by Engineer Incharge.	1	Job	60,000.00	60,000	2,987,760.00	2,987,760.00	500,000.00	500,000.00	2,000,000.00	2,000,000.00

Sr.No	Description	Estimate				Bids					
		Qty	Unit	Unit Rate	Amount	1		2		3	
						NRTC JV HKH.		Samber Energy Pvt Ltd		Nimir Energy Ltd	
						Rate	Amount	Rate	Amount	Rate	Amount
10	Net metering including cost of Bi-Directional Meter (NEPRA/WAPDA/FESCO approved Brands), Fees/Charges with Supply, Installation, Inspection / Tesing & Commissioning Complete in all respect.	1	Job	2,000,000.00	2,000,000	2,987,760.00	2,987,760.00	3,000,000.00	3,000,000.00	3,000,000.00	3,000,000.00
11	200 KVA Transformer 5th Amendment (New Model) With Company Inspection Certificates Complete in all respect. (PEL or equal WAPDA(FESCO) approved Brands)	1	No.	2,300,000.00	2,300,000	2,987,760.00	2,987,760.00	3,000,000.00	3,000,000.00	2,000,000.00	2,000,000.00
	Shifting of transformers, New H.T Pole, D sets, X arms, Conductor Insulators, P.G Clamps. etc. as per requirement as approved by the Engineer Incharge.	1	Job	302,992.00	302,992	-	-	100,000.00	100,000.00	2,000,000.00	2,000,000.00
11	Rigging Charges	2,170,000	Watt	0.25	542,500	2.99	6,488,300.00	1.00	2,170,000.00	3.00	6,510,000.00
	Electrical Installations Commissioning & Testing Charges	2,170,000	Watt	2.50	5,425,000	8.96	19,443,200.00	2.00	4,340,000.00	8.00	17,360,000.00
	Transportation Charges	2,170,000	Watt	1.00	2,170,000	2.99	6,488,300.00	1.00	2,170,000.00	3.00	6,510,000.00
Sub Total (A)					233,730,100	19,107,894,875.78		367,589,490.00		269,525,084.00	
Add Contractor Profit & Overheads @ 20%					46,746,020	-		-		-	
Total					280,476,120	19,107,894,875.78		367,589,490.00		269,525,084.00	
Add PRA Tax @ 16 % on Sub Total A					37,396,816	3,057,263,180.12		58,814,318.40		43,124,013.44	
Total					317,872,936	22,165,158,055.90		426,403,808.40		312,649,097.44	
						6.872.96	% Above	34.14	%Above	1.643	% Below

Note: 02 Tenders were issued, **03** Tenders were received and **03** tenders were found technically compliant. The bid offered by **M/S Nimir Energy Ltd.** is lowest that amounts to **Rs.312, 649, 097.44/-** against the Engineer's Estimate of **Rs.317, 872, 936/-** which is **1.643 % below** the Engineer's Estimate. The Solarization Project Committee recommends that the bid by **M/S Nimir Energy Ltd** be forwarded to the **Campus Construction Committee (CCC)** for acceptance of rates / award of work for the Project "**Providing, Fixing & Commissioning of 2170 KW Capacity Solar Power System along with Net-Metering for Main Campus**" University of Sargodha.

s/d
Assistant Engineer, Electrical Main Campus
Member / Secretary

s/d
Assistant Engineer, Mechanical
Member

s/d
Purchase Officer / Deputy Treasurer (Purchase)
Member

s/d
Dr. Waseem Aslam
Member

s/d
Project Director (Works)
Member

s/d
Additional Registrar- General
Member

s/d
Additional Treasurer -I
Member

s/d
Mr. Hassan Zaheer, Director P&D
Member

s/d
Dr. Rehana Ilyas
Director Implementation
Member

s/d
Dr. Haris Aziz,
Principal C.E.T
Member

s/d
Prof. Dr. Muhammad Usman Minhas
Principal College Of Pharmacy
Member

s/d
Prof Dr. Muhammad Athar Nadeem
Dean Faculty of Agriculture
Member

s/d
Prof Dr. Mian Ghulam Yasin, Pro Vice Chancellor
Convener

Financial Comparative Statement For " Providing, Fixing & Commissioning of 275 KW Capacity Solar Power System along with Net-Metering for College of Agriculture " University of Sargodha.

Sr. No	Description	Estimate				Bids									
		Qty	Unit	Unit Rate	Amount	1		2		3		4		5	
						NRTC JV HKH.		Samber Energy Pvt Ltd		Nimir Energy Ltd		Nanx Engineering		Brisk International Pvt Ltd	
Rate	Amount	Rate	Amount	Rate	Amount	Rate	Amount	Rate	Amount	Rate	Amount	Rate	Amount		
1	Solar Panel Solar Panels Minimum of 550W or above, N- Type, Bi- Facial Tier- 1 A Grade TUV Certified, CE, IEC 61215, IEC 61730 and UL 1703 Certified. IP-68. Brands: Longi or Equivalent. NOTE: 12 years replacement, 25 years performance Warranty as per Manufacturer Terms & Conditions. As approved by Engineer Incharge	275,000	Watt	60	16,500,000	70.90	19,497,500.00	94.00	25,850,000.00	60.00	16,500,000.00	55.20	15,180,000.00	71.7588	19,733,670.00
2	50 KW On-Grid Inverter, Pure sine wave, Three Phase, Efficiency > 98%. Brand: Growatt or Equivalent with LAN dongle. 5 years Warranty as per Manufacturer Terms & Conditions.	2	Nos.	815,000	1,630,000	1,269,798.00	2,539,596.00	850,000.00	1,700,000.00	525,000.00	1,050,000.00	900,000.00	1,800,000.00	988,800.00	1,977,600.00
	100KW On-Grid Inverter, Pure sine wave, Three Phase, Efficiency > 98%. Brand: Growatt or Equivalent with LAN dongle. 5 years Warranty as per Manufacturer Terms & Conditions.	2	Nos.	1,350,000	2,700,000	2,218,411.00	4,436,822.00	1,650,000.00	3,300,000.00	1,250,000.00	2,500,000.00	1,380,000.00	2,760,000.00	1,575,000.00	3,150,000.00
3	Solar Module Structure Fixed L2 - 2.8mm Aluminum C Shape section, Rafter (2.00" x 1" x 1/2" x 96") back leg (1.75" x 1" x 1/2" x 39") Tilt Angle 24°, Azimuth 180° Wind Speed = 145km/h, Roof Mounted, nuts, bolts, Washers (SS) etc. including Mounting Structure, fixtures complete in all respects along with ancillary civil work (cutting, pcc, rawal bolt etc.)	275,000	Per / Watt	9	2,475,000	8,664.50	2,382,737,500.00	25.00	6,875,000.00	10.00	2,750,000.00	18.00	4,950,000.00	13.70	3,767,500.00
4	Single Core 6mm2 Stranded Copper Conductors, Flexible, Tin Coated / XLPO/XLPO Photovoltaic cable 1500 volt (DC) TUV Certified Brands (Fast or Equal) As approved by Engineer Incharge.	10,000	Rft	132	1,320,000	104.57	1,045,700.00	145.00	1,450,000.00	130.00	1,300,000.00	114.00	1,140,000.00	131.70	1,317,000.00
	4-Core 70mm2 Stranded Copper Conductors, (AC Cable) KEMA Certified Brands (Fast or Equal) As approved by Engineer Incharge.	168	Rft	3,200	537,600	4,979.10	836,488.80	5,500.00	924,000.00	2,815.00	472,920.00	3,240.00	544,320.00	3,057.00	513,576.00
	4-Core 35mm2 Stranded Copper Conductors, (AC Cable) KEMA Certified Brands (Fast or Equal) As approved by Engineer Incharge.	200	Rft	1,840	368,000	2,464.90	492,980.00	5,000.00	1,000,000.00	1,449.00	289,800.00	1,608.00	321,600.00	1,622.00	324,400.00
	2-Core Pvc Insulated Copper Conductor (AC Cable) (3/0.029" / 1.5mm2) KEMA Gold Certified Brands (Fast or equal) As approved by Engineer Incharge.	592	Rft	68	40,256	104.57	61,905.44	200.00	118,400.00	64.00	37,888.00	90.00	53,280.00	65.50	38,776.00

	Description	Estimate				Bids									
		Qty	Unit	Unit Rate	Amount	1		2		3		4		5	
						NRTC JV HKH.		Samber Energy Pvt Ltd		Nimir Energy Ltd		Nanx Engineering		Brisk International Pvt Ltd	
						Rate	Amount	Rate	Amount	Rate	Amount	Rate	Amount	Rate	Amount
5	DC Circuit Breaker 20 Amp D.P Schneider or Equivalent (Original) As approved by Engineer Incharge.	35	Nos.	3,700	129,500	8,216.34	287,571.90	6,000.00	210,000.00	3,000.00	105,000.00	14,400.00	504,000.00	2,558.00	89,530.00
	AC MCCB 3P 100 Amp Schneider or Equivalent (Original) As approved by Engineer Incharge.	2	Nos.	12,000	24,000	11,204.10	22,408.20	75,000.00	150,000.00	18,000.00	36,000.00	66,000.00	132,000.00	68,220.00	136,440.00
	AC MCCB 3P 250 Amp Schneider or Equivalent (Original) As approved by Engineer Incharge.	2	Nos.	38,000	76,000	20,167.30	40,334.60	230,000.00	460,000.00	30,000.00	60,000.00	138,000.00	276,000.00	133,030.00	266,060.00
	AC MCCB 3P 400 Amp Schneider or Equivalent (Original) As approved by Engineer Incharge.	1	No.	110,000	110,000	60,950.30	60,950.30	280,000.00	280,000.00	40,000.00	40,000.00	19,200.00	19,200.00	201,500.00	201,500.00
	DC SPDs 2P 1000 Volt Schneider or Equivalent (Original) As approved by Engineer Incharge.	35	Nos.	4,850	169,750	9,710.22	339,857.70	5,000.00	175,000.00	4,000.00	140,000.00	66,000.00	2,310,000.00	3,582.00	125,370.00
	AC SPDs 4P 60 KV Schneider or Equivalent (Original) As approved by Engineer Incharge.	4	Nos.	15,000	60,000	10,158.38	40,633.52	75,000.00	300,000.00	65,000.00	260,000.00	134,550.00	538,200.00	82,110.00	328,440.00
	Zero Export Device For inverters up to 100kW including CT's of required rating, Complete in all respect as approved by the Engineer Incharge.	4	Nos.	30,000	120,000	126,979.80	507,919.20	75,000.00	300,000.00	50,000.00	200,000.00	99,450.00	397,800.00	153,496.00	613,984.00
PV Gen Set Controller	1	No.	400,000	400,000	784,287.00	784,287.00	650,000.00	650,000.00	1,000,000.00	1,000,000.00	643,500.00	643,500.00	768,625.00	768,625.00	
6	Networking 5 port Switch Gigabit (Tenda, D- link or equal) As approved by Engineer Incharge.	8	Nos.	5,000	40,000	27,636.78	221,094.24	7,000.00	56,000.00	15,000.00	120,000.00	117,000.00	936,000.00	4,093.00	32,744.00
	Communication Modules for Solar Inverters along with of licensed OEM monitoring software.	1	No.	185,000	185,000	224,082.00	224,082.00	75,000.00	75,000.00	250,000.00	250,000.00	117,000.00	117,000.00	94,547.00	94,547.00
	Networking cable double sheathed out door CAT 6 (Copper), 23 AWG (D-Link or equal) including 1x G.I Wire as approved by Engineer Incharge.	1,000	Rft	52	52,000	104.57	104,570.00	35.00	35,000.00	35.00	35,000.00	351.00	351,000.00	106.80	106,800.00
	2 U rack including PDU & Short Backup 600VA UPS with built-in dry Battery Complete in all respect.	8	Nos.	24,900	199,200	32,865.36	262,922.88	48,000.00	384,000.00	30,000.00	240,000.00	11,700.00	93,600.00	74,745.00	597,960.00
	Computer i3 or Above Having minimum of 500 GB Memory (SSD), 8GB RAM, Keyboard, Optical Mouse,& 17" or above LED Display (DELL, HP or Equal) along with external display of Android 52" or above Display (TCL, Haier or Equivalent) with HDMI , VGA , USB ports etc.	1	No.	350,000	350,000	126,979.80	126,979.80	75,000.00	75,000.00	200,000.00	200,000.00	292,500.00	292,500.00	213,560.00	213,560.00

	Description	Estimate				Bids									
		Qty	Unit	Unit Rate	Amount	1		2		3		4		5	
						NRTC JV HKH.		Samber Energy Pvt Ltd		Nimir Energy Ltd		Nanx Engineering		Brisk International Pvt Ltd	
						Rate	Amount	Rate	Amount	Rate	Amount	Rate	Amount	Rate	Amount
7	Distribution Board (Box) Distribution board panel 415/240 volts made of 16 SWG M.S Sheet with appropriate sized angle iron frame enclosure, have a suitable sheet steel cover with built in locking arrangement powder coated of approved color,(3' x 6' x 10") Size Including Bus Bar 4 Pole Copper Strip Size 20",1x1/2",2/8" with Nut Bolts 3 x Indication lights 3 x Amp meter with CT's & 3x Volt Meter Complete in all respect approved by the Engineer.	1	Nos.	98,500	98,500	560,205.00	560,205.00	120,000.00	120,000.00	90,000.00	90,000.00	87,750.00	87,750.00	153,496.00	153,496.00
		4	Nos.	34,250	137,000	97,102.20	388,408.80	95,000.00	380,000.00	90,000.00	360,000.00	760,501.00	3,042,004.00	76,748.00	306,992.00
		4	Nos.	22,800	91,200	82,163.40	328,653.60	88,000.00	352,000.00	90,000.00	360,000.00	64,350.00	257,400.00	66,515.00	266,060.00
8	Earthing & Lightening Protection Earthing Stranded Copper Conductor 10 mm ² Bare Conductor, 90% Purity	5,051	Rft	125	631,375	164.33	830,030.83	296.00	1,495,096.00	130.00	656,630.00	1,050.00	5,303,550.00	115.00	580,865.00
		15	Nos.	50,020	750,300	15,685.94	235,289.10	75,000.00	1,125,000.00	40,000.00	600,000.00	64,350.00	965,250.00	40,932.00	613,980.00
		4	Nos.	19,000	76,000	21,661.26	86,645.04	15,000.00	60,000.00	25,000.00	100,000.00	11,700.00	46,800.00	15,350.00	61,400.00
HDPE Pipe & Misc	PVC Flexible Pipe 1 1/4" d Cable Tray 18 SWG, Load Bearing, Rust Proof , Hot Dip Galvanized, Steel Structure along with hot Dip galvanized nuts, bolts, Washers etc. including Mounting Structure , fixtures, complete in all respects, Complete in all respect 2"x 2" Size	875	Rft	13	11,369	74.69	65,353.75	22.00	19,250.00	150.00	131,250.00	264.00	231,000.00	102.33	89,538.75
		1,000	Rft	300	300,000	1,120.41	1,120,410.00	750.00	750,000.00	300.00	300,000.00	351.00	351,000.00	767.50	767,500.00
		800	Rft	550	440,000	1,419.19	1,135,352.00	950.00	760,000.00	500.00	400,000.00	409.00	327,200.00	870.00	696,000.00

9	Description	Estimate				Bids										
		Qty	Unit	Unit Rate	Amount	1		2		3		4		5		
						NRTC JV HKH.		Samber Energy Pvt Ltd		Nimir Energy Ltd		Nanx Engineering		Brisk International Pvt Ltd		
				Rate	Amount	Rate	Amount	Rate	Amount	Rate	Amount	Rate	Amount			
HDPE Pipe & Misc	Cable Tray 18 SWG, Load Bearing, Rust Proof, Hot Dip Galvanized, Steel Structure along with hot Dip galvanized nuts, bolts, Washers etc. including Mounting Structure, fixtures. complete in all respects, Complete in all respect 2"x 6" Size	600	Rft	800	480,000	2,016.74	1,210,044.00	1,000.00	600,000.00	700.00	420,000.00	351.00	210,600.00	926.00	555,600.00	
	Cable Tray 18 SWG, Load Bearing, Rust Proof, Hot Dip Galvanized, Steel Structure along with hot Dip galvanized nuts, bolts, Washers etc. including Mounting Structure, fixtures complete in all respects, Complete in all respect 2"x 8" Size	150	Rft	1,100	165,000	2,509.72	376,458.00	1,200.00	180,000.00	900.00	135,000.00	292.00	43,800.00	1,228.00	184,200.00	
	MC 4 Connectors	520	Nos.	150	78,000	373.47	194,204.40	66.00	34,320.00	250.00	130,000.00	351.00	182,520.00	205.00	106,600.00	
	Miscellaneous (PVC Cable Ties, Steel Nails, Nut Bolt washers etc. as approved by Engineer Incharge.	1	Job	40,000.00	40,000	746,940.00	746,940.00	250,000.00	250,000.00	1,000,000.00	1,000,000.00	29,250.00	29,250.00	177,378.00	177,378.00	
10	Net Metering	Net metering including cost of Bi-Directional Meter NEPRA / WAPDA / FESCO approved Brands), Fees/Charges with Supply, Installation, Inspection / Tesing & Commissioning Complete In all respect.	1	Job	443,750.00	443,750	746,940.00	746,940.00	350,000.00	350,000.00	1,000,000.00	1,000,000.00	877,500.00	877,500.00	728,750.00	728,750.00
11	Installations	Rigging Charges	275,000	Watt	0.25	68,750	2.99	822,250.00	1.00	275,000.00	3.00	825,000.00	2.34	643,500.00	1.50	412,500.00
	Electrical Installations Commissioning & Testing Charges	275,000	Watt	2.50	687,500	8.96	2,464,000.00	1.00	275,000.00	10.00	2,750,000.00	4.68	1,287,000.00	1.75	481,250.00	
	Transportation Charges	275,000	Watt	1.00	275,000	2.99	822,250.00	1.00	275,000.00	3.00	825,000.00	2.34	643,500.00	1.50	412,500.00	
Sub Total (A)					32,260,050		2,426,805,538.10		51,668,066.00		37,669,488.00		47,889,624.00		40,992,691.75	
Add Profit & Overheads @ 20%					6,452,010		-		-		-		-		-	
Total					38,712,060		2,426,805,538.10		51,668,066.00		37,669,488.00		47,889,624.00		40,992,691.75	
Add PRA Tax @ 16 % on Sub Total A					5,161,608		388,288,886.10		8,266,890.56		6,027,118.08		7,662,339.84		6,558,830.68	
Total					43,873,668		2,815,094,424.20		59,934,956.56		43,696,606.08		55,551,963.84		47,551,522.43	
					6,316.36		% Above		36.61		% Above		0.403		% Below	

Note: 10 Tenders were issued, 06 Tenders were received and 05 tenders were found technically compliant. The bid offered by M/S Nimir Energy Ltd. is lowest that amounts to **Rs.43, 696, 606.08/-** against the engineer's estimate of **Rs.43, 873, 668/-** which is **0.403 % below** the Engineer's Estimate. The Solarization Project Committee recommends that the bid by M/S Nimir Energy Ltd. be forwarded to the Campus Construction Committee (CCC) for acceptance of rates / award of the work for the Project "**Providing, Fixing & Commissioning of 275 KW Capacity Solar Power System along with Net-Metering for College of Agriculture**" University of Sargodha.

s/d
Assistant Engineer, Electrical Main Campus
Member / Secretary

s/d
Assistant Engineer, Mechanical
Member

s/d
Purchase Officer / Deputy Treasurer (Purchase)
Member

s/d
Dr. Waseem Aslam Assistant Professor C.E.T
Member

s/d
Project Director (Works)
Member

s/d
Additional Registrar- General
Member

s/d
Additional Treasurer - I
Member

s/d
Mr. Hassan Zaheer, Director P&D
Member

s/d
Dr. Rehana Ilyas, Director Implementation
Member

s/d
Dr. Haris Aziz, Principal C.E.T
Member

s/d
Prof. Dr. Muhammad Usman Minhas
Principal College of Pharmacy
Member

s/d
Prof Dr. Muhammad Athar Nadeem
Dean Faculty of Agriculture
Member

s/d
Prof Dr. Mian Ghulam Yasin,
Pro Vice Chancellor
Convener

Financial Comparative Statement For " Providing, Fixing & Commissioning of 150 KW Capacity Solar Power System along With Net-Metering for Allama Iqbal Campus" University of Sargodha

S.No	Description	Estimate				Bids										
		Qty	Unit	Unit Rate	Amount	1		2		3		4		5		
						NRTC JV HKH.		Samber Energy Pvt Ltd		Nimir Energy Ltd		Nanx Engineering		Brisk International Pvt Ltd		
						Rate	Amount	Rate	Amount	Rate	Amount	Rate	Amount	Rate	Amount	
1	Solar Panel	Solar Panels Minimum of 550W or above, N-Type, Bi-Facial Tier- 1 A Grade TUV Certified, CE, IEC 61215, IEC 61730 and UL 1703 Certified. IP-68. Brands: Longi or Equivalent. NOTE: 12 years replacement, 25 years performance Warranty as per Manufacturer Terms & Conditions.As approved by Engineer Incharge.	150,000	Watt	60	9,000,000	70.90	10,635,000.00	94.00	14,100,000.00	60.00	9,000,000.00	53.82	8,073,000.00	72.103	10,815,450.00
2	Inverter	50KW On-Grid Inverter, Pure sine wave, Three Phase, Efficiency > 98%. Brand: Growatt or Equivalent with LAN dongle. 5 years Warranty as per Manufacturer Terms & Conditions.	1	No.	815,000	815,000	1,269,798.00	1,269,798.00	850,000.00	850,000.00	525,000.00	525,000.00	877,500.00	877,500.00	988,800.00	988,800.00
		100KW On-Grid Inverter, Pure sine wave, Three Phase, Efficiency > 98%. Brand: Growatt or Equivalent with LAN dongle. 5 years Warranty as per Manufacturer Terms & Conditions.	1	No.	1,350,000	1,350,000	2,218,411.80	2,218,411.80	1,650,000.00	1,650,000.00	1,250,000.00	1,250,000.00	1,345,500.00	1,345,500.00	1,575,000.00	1,575,000.00
3	Frame	Solar Module Structure Fixed L2 - 2.8mm Aluminum C Shape section, Rafter (2.00" x 1" x 1/2" x 96") back leg (1.75" x 1" x 1/2" x 39") Tilt Angle 24°, Azimuth 180° Wind Speed = 145km/h. Roof Mounted, nuts, bolts, Washers (SS) etc. including Mounting Structure, fixtures complete in all respects along with ancillary civil work (cutting, pec, rawal bolt etc.)	150,000	Per / Watt	9	1,350,000	8,664.50	1,299,675,000.00	25.00	3,750,000.00	10.00	1,500,000.00	17.55	2,632,500.00	14.50	2,175,000.00
4	AC/DC Cable	Single Core 6mm2 Stranded Copper Conductors, Flexible, Tin Coated / XLPO/XLPO Photovoltaic cable 1500 volt (DC) TUV Certified Brands (Fast or Equal) As approved by Engineer Incharge.	6,000	Rft	132	792,000	104.57	627,420.00	145.00	870,000.00	130.00	780,000.00	111.115	666,690.00	152.50	915,000.00
		4-Core 70mm2 Stranded Copper Conductors, (AC Cable) KEMA Certified Brands (Fast or Equal) As approved by Engineer Incharge.	100	Rft	3,200	320,000	4,979.10	497,910.00	5,500.00	550,000.00	2,815.00	281,500.00	3,159.00	315,900.00	3,190.00	319,000.00
		4-Core 35mm2 Stranded Copper Conductors, (AC Cable) KEMA Certified Brands (Fast or Equal) As approved by Engineer Incharge.	100	Rft	1,840	184,000	2,464.90	246,490.00	5,000.00	500,000.00	1,449.00	144,900.00	1,567.00	156,700.00	1,693.00	169,300.00
		2-Core Pvc Insulated Copper Conductor (AC Cable) (3/0.029" / 1.5mm2) KEMA Gold Certified Brands (Fast or equal) As approved by Engineer Incharge.	300	Rft	68	20,400	104.57	31,371.00	200.00	60,000.00	64.00	19,200.00	87.75	26,325.00	68.50	20,550.00
5	Breaker / SPDs & Control	DC Circuit Breaker 20 Amp D.P Schneider or Equivalent (Original) As approved by Engineer Incharge.	20	Nos.	3,700	74,000	8,216.34	164,326.80	6,000.00	120,000.00	3,000.00	60,000.00	14,040.00	280,800.00	2,670.00	53,400.00
		AC MCCB 3P 100 Amp Schneider or Equivalent (Original) As approved by Engineer Incharge.	2	Nos.	12,000	24,000	11,204.10	22,408.20	75,000.00	150,000.00	18,000.00	36,000.00	64,350.00	128,700.00	71,185.00	142,370.00
		AC MCCB 3P 250 Amp Schneider or Equivalent (Original) As approved by Engineer Incharge.	2	Nos.	38,000	76,000	20,167.38	40,334.76	180,000.00	360,000.00	30,000.00	60,000.00	134,550.00	269,100.00	138,814.00	277,628.00
		DC SPDs 2P 1000 Volt Schneider or Equivalent (Original) As approved by Engineer Incharge.	20	Nos.	4,850	97,000	9,710.22	194,204.40	5,000.00	100,000.00	4,000.00	80,000.00	18,720.00	374,400.00	3,737.00	74,740.00
Breaker / SPDs & Control		AC SPDs 4P 60 KV Schneider or Equivalent (Original) As approved by Engineer Incharge.	2	Nos.	15,000	30,000	10,158.38	20,316.76	75,000.00	150,000.00	65,000.00	130,000.00	64,350.00	128,700.00	85,680.00	171,360.00
		Zero Export Device For inverters up to 100kW including CT's of required rating. Complete in all respect as approved by the Engineer Incharge.	2	Nos.	30,000	60,000	126,979.80	253,959.60	75,000.00	150,000.00	50,000.00	100,000.00	134,550.00	269,100.00	160,170.00	320,340.00
		PV Gen Set Controller	1	No.	400,000	400,000	784,287.00	784,287.00	650,000.00	650,000.00	809,000.00	809,000.00	643,500.00	643,500.00	630,000.00	630,000.00

	Description	Estimate				Bids									
		Qty	Unit	Unit Rate	Amount	1		2		3		4		5	
						NRTC JV HKH.		Samber Energy Pvt Ltd		Nimir Energy Ltd		Nanx Engineering		Brisk International Pvt Ltd	
						Rate	Amount	Rate	Amount	Rate	Amount	Rate	Amount	Rate	Amount
6	Networking 5 port Switch Gigabit (Tenda, D-link or equal) As approved by Engineer Incharge.	1	No.	5,000	5,000	27,636.78	27,636.78	7,000.00	7,000.00	15,000.00	15,000.00	99,450.00	99,450.00	4,271.00	4,271.00
	Communication Modules for Solar Inverters along with of licensed OEM monitoring software.	1	No.	185,000	185,000	224,082.00	224,082.00	75,000.00	75,000.00	250,000.00	250,000.00	117,000.00	117,000.00	94,547.00	94,547.00
	Networking cable double sheathed out door CAT 6 (Copper), 23 AWG (D-Link or equal) including 1x G.I Wire as approved by Engineer Incharge.	500	Rft	52	26,000	104.57	52,285.00	35.00	17,500.00	35.00	17,500.00	526.00	263,000.00	175.00	87,500.00
	2 U rack including PDU & Short Backup 600VA UPS with built-in dry Battery Complete in all respect.	1	No.	24,900	24,900	32,865.36	32,865.36	48,000.00	48,000.00	30,000.00	30,000.00	7,605.00	7,605.00	74,762.00	74,762.00
	Computer i3 or Above Having minimum of 500 GB Memory (SSD), 8GB RAM, Keyboard, Optical Mouse, & 17" or above LED Display (DELL, HP or Equal) along with external display of Android 52" or above Display (TCL, Haier or Equivalent) with HDMI , VGA , USB ports etc.	1	No.	350,000	350,000	126,979.80	126,979.80	75,000.00	75,000.00	200,000.00	200,000.00	292,500.00	292,500.00	213,560.00	213,560.00
Distribution Box (DBs)	DB Box 415/240 volts made of 16 SWG M.S Sheet with appropriate sized angle iron frame enclosure, have a suitable sheet steel cover with built in locking arrangement powder coated of approved color.(3'x3'x8") Size approved by the Engineer.	1	No.	34,250	34,250	560,205.00	560,205.00	120,000.00	120,000.00	90,000.00	90,000.00	52,650.00	52,650.00	80,085.00	80,085.00
	Distribution board panel 415/240 volts made of 16 SWG M.S Sheet with appropriate sized angle iron frame enclosure, have a suitable sheet steel cover with built in locking arrangement powder coated of approved color,(2'x3'x8") Size approved by the Engineer.	2	Nos.	22,800	45,600	97,102.20	194,204.40	95,000.00	190,000.00	90,000.00	180,000.00	40,950.00	81,900.00	69,407.00	138,814.00
Earthing & Lightning Protection	Earthing Stranded Copper Conductor 10 mm ² Bare Conductor, 90% Purity	300	Rft	125	37,500	164.33	49,299.00	295.00	88,500.00	130.00	39,000.00	351.00	105,300.00	124.00	37,200.00
	Earthing up to 3 ohm Including boring 40' or above ,brass clamps,nut bolts, thimbles, Copper rod 1" dia 5' long minimum 90% purity, Earth chemical powder mixture bag Gi Pipe with Tee & Bend Plug. I/c 25mm2 50' Long Copper Conductor (Minimum 90% Purity) Complete in all respect as approved by Engineer Incharge.	6	Nos.	50,020	300,120	15,685.74	94,114.44	75,000.00	450,000.00	40,000.00	240,000.00	64,350.00	386,100.00	42,712.00	256,272.00
	Lightening Arrestors Minimum of 90% purity of Copper	1	No.	19,000	19,000	21,661.26	21,661.26	15,000.00	15,000.00	25,000.00	25,000.00	11,700.00	11,700.00	16,017.00	16,017.00
9 HDPE Pipe & Misc	PVC Flexible Pipe 1"/d	200	Rft	13	2,600	-	-	55.00	11,000.00	150.00	30,000.00	46.80	9,360.00	107.00	21,400.00
	Cable Tray 18 SWG, Load Bearing, Rust Proof , Hot Dip Galvanized, Steel Structure along with hot Dip galvanized nuts, bolts, Washers etc. including Mounting Structure , fixtures, complete in all respects, Complete in all respect 2"x 2" Size	100	Rft	300	30,000	74.69	7,469.00	950.00	95,000.00	300.00	30,000.00	187.20	18,720.00	801.00	80,100.00
	Cable Tray 18 SWG, Load Bearing, Rust Proof , Hot Dip Galvanized, Steel Structure along with hot Dip galvanized nuts, bolts, Washers etc. including Mounting Structure, fixtures, complete in all respects, Complete in all respect 2"x 4" Size	100	Rft	550	55,000	1,120.41	112,041.00	1,000.00	100,000.00	500.00	50,000.00	264.42	26,442.00	908.00	90,800.00
	Cable Tray 18 SWG, Load Bearing, Rust Proof, Hot Dip Galvanized, Steel Structure along with hot Dip galvanized nuts, bolts, Washers etc. including Mounting Structure, fixtures. complete in all respects, Complete in all respect 2"x 6" Size	100	Rft	800	80,000	1,419.19	141,919.00	1,150.00	115,000.00	700.00	70,000.00	351.00	35,100.00	966.00	96,600.00
	Cable Tray 18 SWG, Load Bearing, Rust Proof , Hot Dip Galvanized, Steel Structure along with hot Dip galvanized nuts, bolts, Washers etc.including Mounting Structure, fixtures complete in all respects, Complete in all respect 2"x 8" Size	300	Rft	1,100	330,000	2,509.72	752,916.00	1,250.00	375,000.00	900.00	270,000.00	409.00	122,700.00	1,281.40	384,420.00
	MC 4 Connectors	280	Nos.	150	42,000	373.47	104,571.60	65.00	18,200.00	250.00	70,000.00	351.00	98,280.00	215.00	60,200.00
	Miscellaneous (PVC Cable Ties, Steel Nails, Nut Bolt washers etc. as approved by Engineer Incharge.	1	Job	20,000	20,000	746,940.00	746,940.00	250,000.00	250,000.00	1,000,000.00	1,000,000.00	29,250.00	29,250.00	175,000.00	175,000.00

Description	Estimate				Bids									
	Qty	Unit	Unit Rate	Amount	1		2		3		4		5	
					NRTC JV HKH.		Samber Energy Pvt Ltd		Nimir Energy Ltd		Nanx Engineering		Brisk International Pvt Ltd	
					Rate	Amount	Rate	Amount	Rate	Amount	Rate	Amount	Rate	Amount
10 Net-Metering Net metering including cost of Bi-Directional Meter (NEPRA/WAPDA/FESCO approved Brands), Fees/Charges with Supply, Installation, Inspection / Tesing & Commissioning Complete in all respect.	1	Job	462,500	462,500	746,940.00	746,940.00	200,000.00	200,000.00	800,000.00	800,000.00	585,000.00	585,000.00	450,000.00	450,000.00
11 Installation Rigging Charges	150,000	Watt	0.25	37,500	2.99	448,500.00	1.00	150,000.00	3.00	450,000.00	2.34	351,000.00	1.80	270,000.00
Electrical Installations Commissioning & Testing Charges	150,000	Watt	2.50	375,000	8.96	1,344,000.00	1.00	150,000.00	10.00	1,500,000.00	3.51	526,500.00	3.00	450,000.00
Transportation Charges	150,000	Watt	1.00	150,000	2.99	448,500.00	1.00	150,000.00	3.00	450,000.00	2.34	351,000.00	3.00	450,000.00
Sub Total (A)				17,204,370	1,322,918,367.96		26,710,200.00		20,582,100.00		19,758,972.00		22,179,486.00	
Add Contractor Profit & Overheads @ 20%				3,440,874	-		-		-		-		-	
Total				20,645,244	1,322,918,367.96		26,710,200.00		20,582,100.00		19,758,972.00		22,179,486.00	
Add PRA Tax @ 16 % on Sub Total A				2,752,699	211,666,938.87		4,273,632.00		3,293,136.00		3,161,435.52		3,548,717.76	
Total				23,397,943	1,534,585,306.83		30,983,832.00		23,875,236.00		22,920,407.52		25,728,203.76	
					6,458.63 % Above		32.42 % Above		2.04 % Above		2.04 % Below		9.96 % Above	

Note: 10 Tenders were issued, 06 Tenders were received and 05 tenders were found technically compliant. The bid offered by **M/S Nanx Engineering Pvt. Ltd.** is lowest that amounts to **Rs.22, 920, 407.52/-** against the engineer's estimate of **Rs.23, 397, 943/-** which is **2.04 % below** the Engineer's Estimate. The Solarization Project Committee recommends that the bid by **M/S Nanx Engineering Pvt Ltd** be forwarded to the **Campus Construction Committee (CCC)** for acceptance of rates / award of the work for the Project "**Providing, Fixing & Commissioning of 150 KW Capacity Solar Power System along With Net-Metering for Allama Iqbal Campus**" University of Sargodha.

s/d
Assistant Engineer, Electrical Main Campus
Member / Secretary

s/d
Assistant Engineer, Mechanical
Member

s/d
Purchase Officer / Deputy Treasurer (Purchase)
Member

s/d
Dr. Waseem Aslam Assistant Professor C.E.T
Member

s/d
Project Director (Works)
Member

s/d
Additional Registrar- General
Member

s/d
Additional Treasurer-I
Member

s/d
Mr. Hassan Zaheer, Director P&D
Member

s/d
Dr. Rehana Ilyas, Director Implementation
Member

s/d
Dr. Haris Aziz, Principal C.E.T
Member

s/d
Prof. Dr. Muhammad Usman Minhas
Principal College of Pharmacy
Member

s/d
Prof Dr. Muhammad Athar Nadeem
Dean Faculty of Agriculture
Member

s/d
Prof Dr. Mian Ghulam Yasin,
Pro Vice Chancellor
Convener