

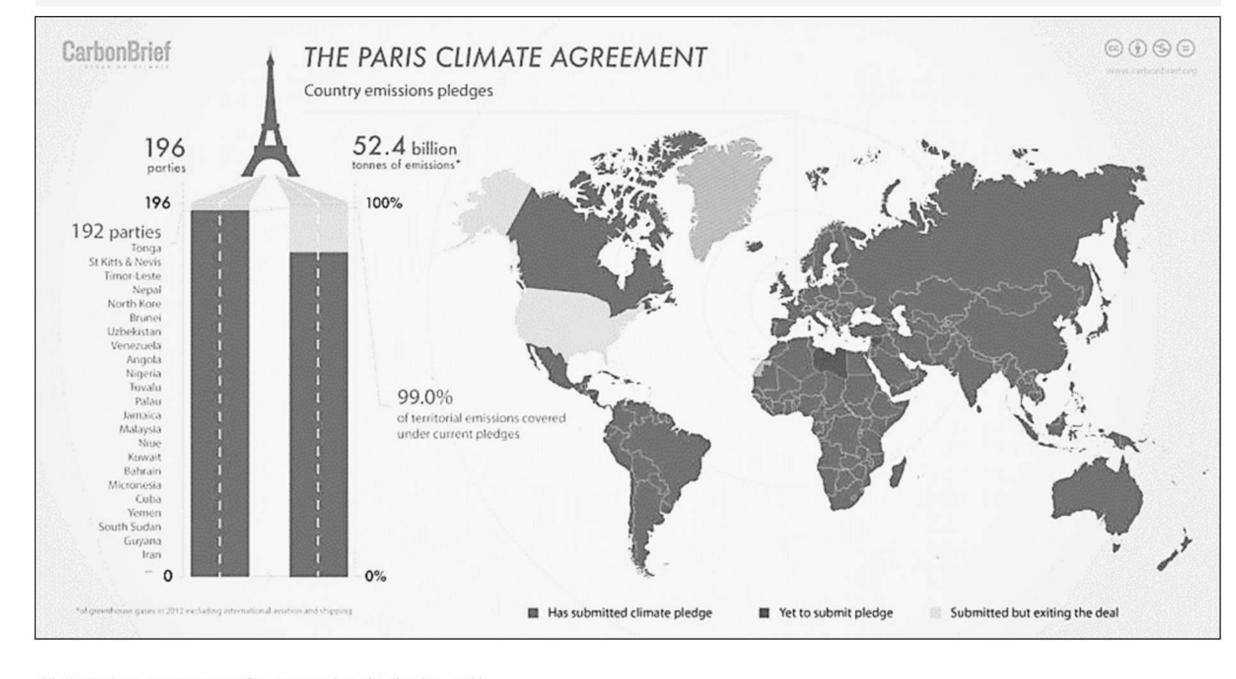
TECHNICAL AND FINANCIAL PROPOSAL FOR CONSTRUCTION OF 20, 25MW SOLAR PV PLANT, IRAQ

Date:14 April 2025

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# INTRODUCTION



#### **Environmental Benefits**

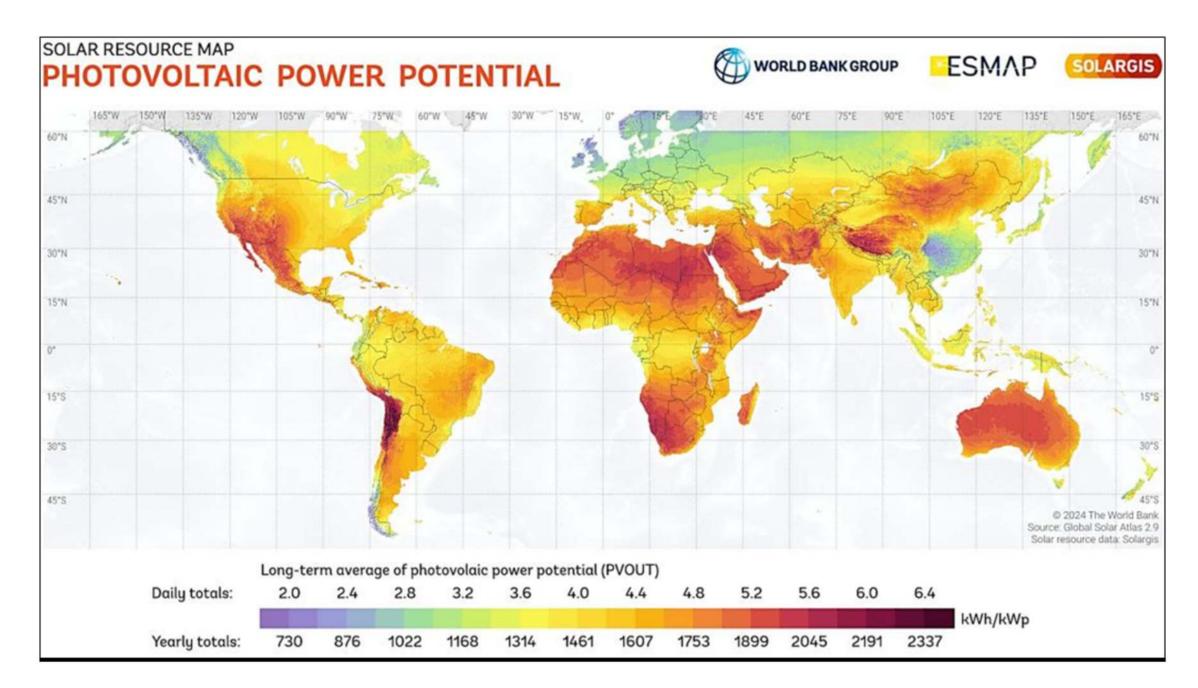
Climate change is a global emergency that goes beyond national borders. It is an issue that requires international cooperation and coordinated solutions at all levels.

To tackle climate change and its negative impacts, world leaders at the UN Climate Change Conference (COP21) in Paris reached a breakthrough on 12 December 2015: the historic Paris Agreement.

The Agreement includes commitments from all countries to reduce their emissions and work together to adapt to the impacts of climate change, and calls on countries to strengthen their commitments over time. The Agreement provides a pathway for developed nations to assist developing nations in their climate mitigation and adaptation efforts while creating a framework for the transparent monitoring and reporting of countries' climate goals.

Iraq aims to leverage international support to reduce its greenhouse gas emissions by 15 per cent by 2030, including by reducing methane emissions from its oil and gas, agriculture, and waste sectors. Iraq demonstrated its commitment for action by signing the Global Methane Pledge, a global effort to reduce methane emissions by at least 30 per cent from 2020 levels by 2030.

The detailed global data representing the solar resource and PV power output PVOUT calculated by SolarGIS[1], released via the Global Solar Atlas is provided by World Bank as a free service to support global scale-up of solar power. It makes it possible to evaluate or compare virtually the practical PV potential map or the power output achievable by a typical configuration of the utility scale PV system for any site, region, or country. Accordingly, Iraq with high average practical PV power potential, can be considered a country with one of the most generous conditions for PV.



Based on PVSyst[1] simulations of PV plant Performance, the estimated annual energy generation of 25MW solar PV plant in Iraq is 44,529,706kWh and is 35,646,136kWh for 20MW plant. By which, according to instructions of US Environmental Protection Agency[2], the estimated annual emission of 17,525 metric tons of CO2 equivalent can be mitigated by the 25MW plant.

#### **Grid-Connected Solar PV Plant**

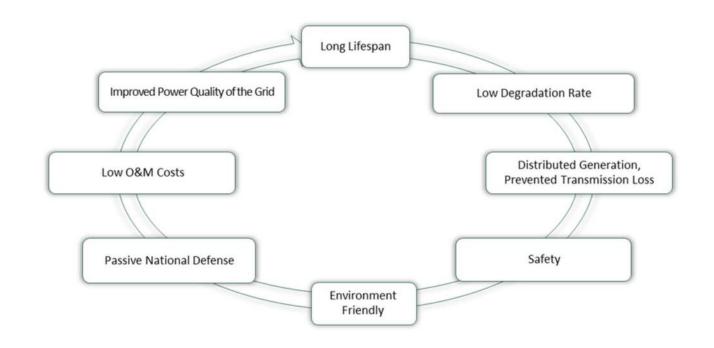
Today, most of solar PV systems are of Grid-connected type. Battery is not required in Grid-connected systems, because in the absence of solar insolation, the consumer's required energy is provided by the Grid. In the same time, the surplus energy generated by the PV plant is not wasted, being fed back into the Grid. On-Grid systems can produce electricity for a long time, without having to have too much O&M expenses. The use of PV systems as one of the distributed energy generation sources started in the 1990s.

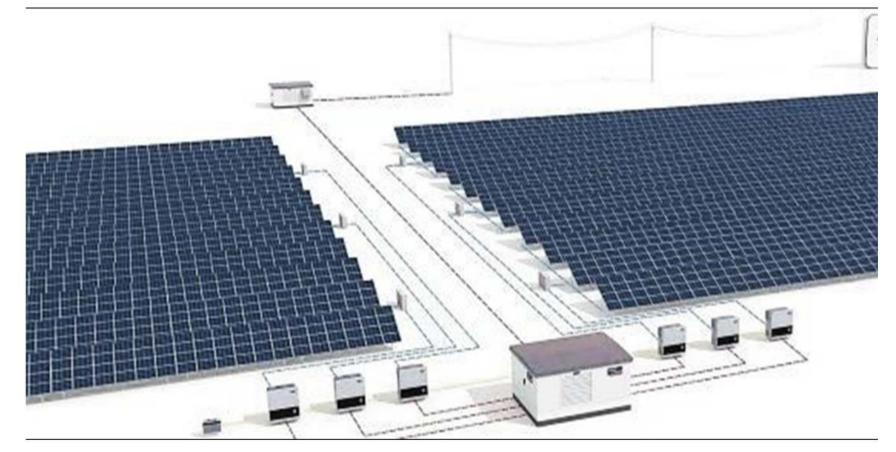
Utility-scale power plants are developed in large (megawatt) scale and therefore have lower levelized cost of electricity LCOE compared to distributed power generators. The photovoltaic power plant converts the solar energy into electricity. This conversion takes place in solar panels. The output voltage of the solar panels is of DC type which is converted into AC power by MPPT converter in inverter. The generated electricity is injected into the Grid by transformers.

Some of main advantages of solar PV plants are as follows:

<sup>[1]</sup>https://www.pvsyst.com

<sup>[1]</sup>https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator





#### Utility scale solar PV plant construction considerations:

- solar insolation
- Land requirements
- Distance to Access Points
- Distance to Transmission Line

- Site topographyGeotechnical specifications
- climatic fluctuations
- Land availability for future expansion plans



20MW PV plant constructed in Razavi Khorasan Province, Iran

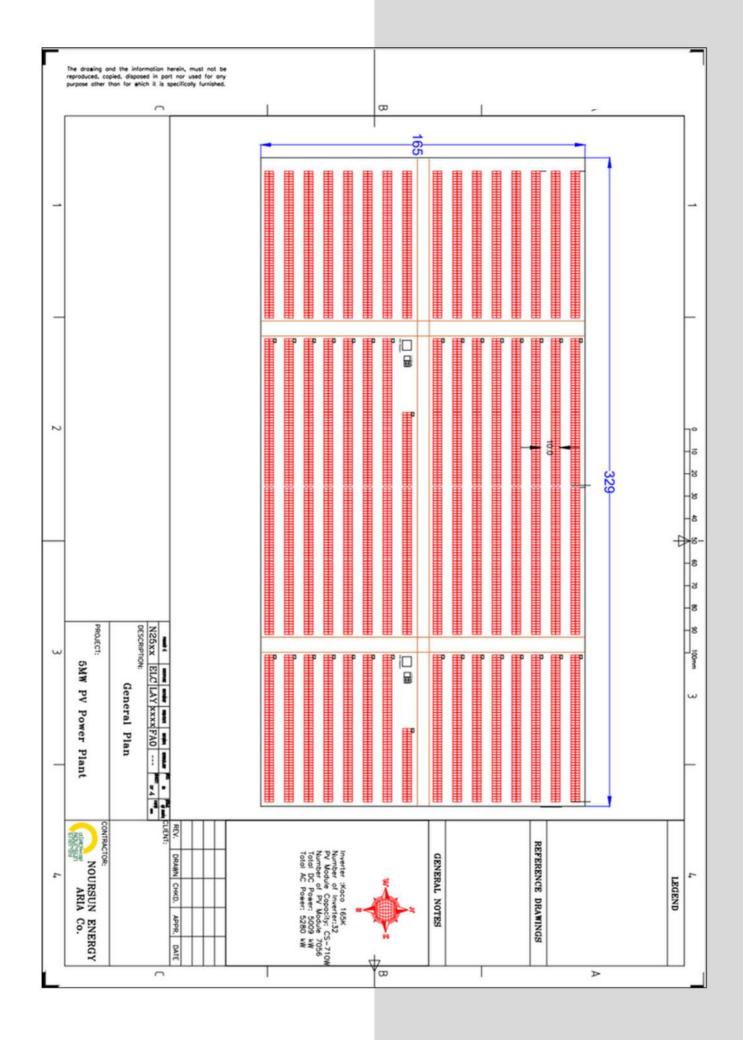


10MW PV plant constructed in Kerman Province, Iran

#### Project: 20, 25MW Solar PV plant

#### Site specifications

Construction site is supposed to be located in 32.38N. 44.186E geographical coordinates. The plants' capacity is 20MW and 25MW equipped with fixed 25° tilted mounting structure. PV plants are designed as integration of 5MW blocks of 54300 m2 area. Plot plan is as follows.

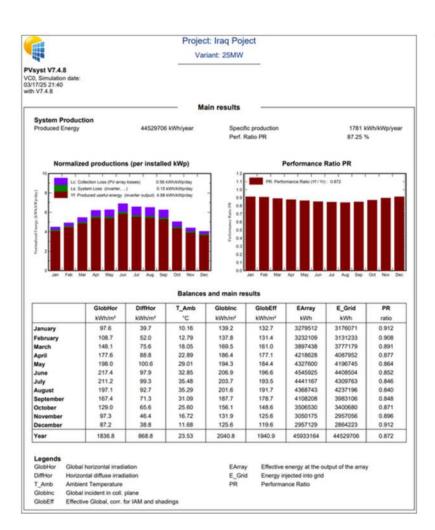


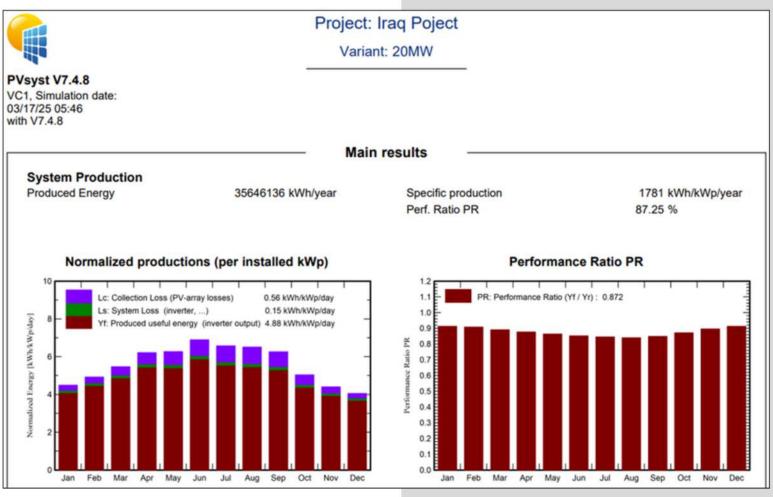
#### **Technical Spec**

Main material requirement and the power plant specifications are short-listed as follows:

#### **Annual Energy Generation**

The estimated specific production of PV plants, according to PVSyst simulation results (see figure below), is 1,781kWh/kWp. This corresponds to annual power generation capacity of 35,646,136kWh/Year for 20MW plant and 44,529,706kWh/Year for 25MW plant.





NO.	Item	unit	Qty.		
NO.	item	unit	20MW	25MW	
1	Solar module – Canadian solar CS7N-710TB-AG 1500V or any other brand from tier 1 as per request	pcs	28,196	35,224	
2	Solar inverter – KACO blueplanet 165 TL3 - INT	units	126	157	
3	Annual Energy generated per kW of installed capacity	kWh/kWp	1,7	'81	
4	Annual Energy generated per total installed capacity	kWh	35,646,136	44,529,706	
5	Minimum Land requirement per 5MW block	m2	543	300	

#### **Financial Analysis**

#### Investment

No	Itom Description	Catagory	USD		
INO	Item Description	Category	20MW	25MW	
PV Plant					
1	Solar Modules	Procurement	2,240,000	2,800,000	
2	KACO 165kW Inverter & LV Station (LV panel, Fire and Electrical Protection Device, DC/AC UPS, Battery, Internal Monitoring system ,)	Procurement	650,000	812,000	
4	Structure	Procurement	2,000,000	2,500,000	
5	Electrical Components	Procurement	2,720,000	3,400,000	
6	Electrical Installation (up to Yard Entrance)	Construction	600,000	750,000	
7	Mechanical Installation	Construction	600,000	750,000	
8	Engineering, Test & Commissioning	Engineering	400,000	500,000	
	TOTAL price (without Transformer & Grid Connection)* USD		9,210,000	11,512,000	

<sup>\*</sup>Price includes land preparation based on normal maximum 50cm land leveling.
\*Fencing price is included if concrete wall is required by customer the price will change.

#### **Annual O&M Expenses (20MW)**

1st 5-year	Item			
0	PV Module			
0	Inverter			
0	PV Structure			
27,200	Transformer, Switchgear and cabling			
38,600	Insurance			
1,300	Utility and Cleaning**			
71,700	Site Operators (HR)			
138,800	Total USD			

<sup>\*</sup>PV modules have 10-years and inverters have 5-years guarantee period \*\* water consumption of 15 liter/kW is assumed for PV plant cleaning

#### **Human Resource Expenses**

.NO	Position	Qty	Monthly payment	Annual payment			
1	Accountant	1	800	9600			
2	Electrical Technicia	1	800	9600			
3	Electrical Engineer	1	1200	14400			
4	Unskilled Labor	3	600	21600			
5	Security Guard	9	600	64800			
	Total USD						

<sup>[1]</sup> Greenhouse Gas Equivalencies Calculator, United States Environmental Protection Agency (EPA.gov)

#### Annual O&M Expenses (25MW)

1st 5-year	ltem			
0	PV Module			
0	Inverter			
0	PV Structure			
34,000	Transformer, Switchgear and cabling			
48,300	Insurance			
1,600	Utility and Cleaning**			
71,700	Site Operators (HR)			
155,600	Total USD			

<sup>\*</sup>PV modules have 10-years and inverters have 5-years guarantee period \*\* water consumption of 15 liter/kW is assumed for PV plant cleaning

#### **Environmental Benefits**

The offered 25MW PV plant, based on instructions of US Environmental Protection Agency for CO2 equivalent calculation, has environmental benefits as follows:

- Annual CO2 emission reduction of 17,525 metric tons
- 9,730 tons of coal saved
- 289,755 tree seedings grown for 10 years
- 700 garbage trucks of waste recycled instead of landfilled

#### **Construction Timeline**

#### Monthly Gantt chart of construction period

	Description			1	2	3	4	5	6	7	8	9
	Site m	obilization (land preparation, access road	.)									
			Invoice and contract									
		purchase	Order registration, pre-payment									
	procurement		Acceptance tests in supplier site									
		Transport and customs										
Plant construction		Construction site initiation										
rtant construction		Civil works (foundations, post, trenching ,	,)									
	Structures and cabling											
	installation	PV modules										
		inverters										
		Construction/correction of PCC and trans	Construction/correction of PCC and transition line									
	Monitoring system d	ystem deployment										
	PCC and transmissic	n line commissioning										
Grid connection Monitoring system commissioning												
	Inverter commission	ning										
	Meter seal											

#### **Technical Spec - PV module**





N-type Bifacial TOPCon Technology 690 W ~ 720 W CS7N-690 | 695 | 700 | 705 | 710 | 715 | 720TB-AG



#### MORE POWER



Module power up to 720 W Module efficiency up to 23.2 %



Up to 85% Power Bifaciality. more power from the back side



Excellent anti-LeTID & anti-PID performance. Low power degradation, high energy yield



Lower temperature coefficient (Pmax): -0.29%/°C, increases energy yield in hot climate



Lower LCOE & system cost

#### MORE RELIABLE



Tested up to ice ball of 35 mm diameter according to IEC 61215 standard



Minimizes micro-crack impacts



Heavy snow load up to 5400 Pa, wind load up to 2400 Pa\*



Enhanced Product Warranty on Materials and Workmanship\*



Linear Power Performance Warranty\*

#### 1st year power degradation no more than 1%

Subsequent annual power degradation no more than 0.4%

\*According to the applicable Canadian Solar Limited Warranty Statement.

#### **MANAGEMENT SYSTEM CERTIFICATES\***

ISO 9001: 2015 / Quality management system ISO 14001: 2015 / Standards for environmental management system ISO 45001: 2018 / International standards for occupational health & safety IEC 62941: 2019 / Photovoltaic module manufacturing quality system

#### **PRODUCT CERTIFICATES\***

IEC 61215 / IEC 61730 / CE / INMETRO / MCS / UKCA / CGC CEC listed (US California) / FSEC (US Florida) UL 61730 / IEC 61701 / IEC 62716 / IEC 60068-2-68 UNI 9177 Reaction to Fire: Class 1 / Take-e-way







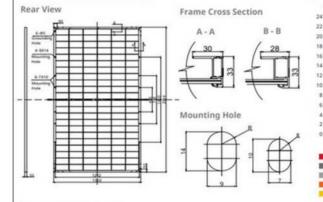
\* The specific certificates applicable to different module types and markets will vary, and therefore not all of the certifications listed herein will simultaneously apply to the products you order or use. Please contact your local Canadian Solar sales representative to confirm the specific certificates available for your Product and applicable in the regions in which the products will be used.

CSI Solar Co., Ltd. is committed to providing high quality solar photovoltaic modules, solar energy and battery storage solutions to customers. The company was recognized as the No. 1 module supplier for quality and performance/price ratio in the IHS Module Customer Insight Survey. Over the past 23 years, it has successfully delivered over 125 GW of premium-quality solar modules across

\* For detailed information, please refer to the Installation Manual

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#### **ENGINEERING DRAWING (mm)**



DA	TA   STC	r.					ELECTRICAL DAT	TA   NMC	T*			
	Nominal Max. Power (Pmax)	Opt. Operating Voltage (Vmp)	Opt. Operating Current (Imp)	Open Circuit Voltage (Voc)	Short Circuit Current (Isc)	Module Efficiency		Nominal Max. Power (Pmax)	Opt. Operating Voltage (Vmp)	Opt. Ope- rating Current (Imp)	Open Circuit Voltage (Voc)	Short Circuit Current (Isc)
-AG	690 W	39.6 V	17.43 A	47.5 V	18.39 A	22.2%	CS7N-690TB-AG	522 W	37.4 V	13.94 A	45.0 V	14.83 A
5%	725 W	39.6 V	18.30 A	47.5 V	19.31 A	23.3%	CS7N-695TB-AG	526 W	37.6 V	13.97 A	45.2 V	14.87 A
10%	759 W	39.6 V	19.17 A	47.5 V	20.23 A	24.4%	CS7N-700TB-AG	529 W	37.8 V	14.00 A	45.4 V	14.91 A
20%	828 W	39.6 V	20.92 A	47.5 V	22.07 A	26.7%	CS7N-705TB-AG	533 W	38.0 V	14.03 A	45.5 V	14.95 A
-AG	695 W	39.8 V	17.47 A	47.7 V	18.44 A	22.4%	CS7N-710TB-AG	537 W	38.2 V	14.06 A	45.7 V	14.99 A
5%	730 W	39.8 V	18.34 A	47.7 V	19.36 A	23.5%	CS7N-715TB-AG	541 W	38.4 V	14.09 A	45.9 V	15.03 A
10%	765 W	39.8 V	19.22 A	47.7 V	20.28 A	24.6%	CS7N-720TB-AG		38.6 V	14.12 A	46.1 V	15.07 A
20%	834 W	39.8 V	20.96 A	47.7 V	22.13 A	26.8%	* Under Nominal Mod					
-AG	700 W	40.0 V	17.51 A	47.9 V	18.49 A	22.5%	trum AM 1.5, ambient	temperatur	e 20°C, wind sp	peed 1 m/s.		
5%	735 W	40.0 V	18.39 A	47.9 V	19.41 A	23.7%						
10%	770 W	40.0 V	19.26 A	47.9 V	20.34 A	24.8%						
20%	840 W	40.0 V	21.01 A	47.9 V	22.19 A	27.0%	MECHANICAL D	ATA				
-AG	705 W	40.2 V	17.55 A	48.1 V	18.54 A	22.7%	Specification	Da	rta			
5%	740 W	40.2 V	18.43 A	48.1 V	19.47 A	23.8%	Cell Type	TC	PCon cells			
10%	776 W	40.2 V	19.31 A	48.1 V	20.39 A	25.0%	Cell Arrangemen	t 13	2 [2 x (11 x	6)]		
2096	846 W	40.2 V	21.06.4	48 1 V	22.25 A	27 2%	Dimensions	22	84 x 1303 x	33 mm /9	20×51 2	x 1 30 in)

Weight

Cable

Connector

Front Glass

\* Under Standard Test Conditions (STC) of irradiance of 1000 W/m², spectrum AM 1.5 and cell

ELECTRICAL

CS7N-690TB-

Bifacial Gain\*\*

CS7N-695TB-

CS7N-700TB-

CS7N-705TB-

temperature of 25°C.

\*\* Bifacial Gain: The additional gain from the back side compared to the power of the front side at the standard test condition. It depends on mounting (structure, height, tilt angle etc.) and albedo of the ground.

CS7N-710TB-AG 710 W 40.4 V 17.59 A 48.3 V 18.59 A 22.9%

CS7N-715TB-AG 715 W 40.6 V 17.63 A 48.5 V 18.64 A 23.0%

CS7N-720TB-AG 720 W 40.8 V 17.67 A 48.7 V 18.69 A 23.2%

5% 746 W 40.4 V 18.47 A 48.3 V 19.52 A 24.0%

20% 852 W 40.4 V 21.11 A 48.3 V 22.31 A 27.4%

5% 751 W 40.6 V 18.51 A 48.5 V 19.57 A 24.2%

10% 787 W 40.6 V 19.39 A 48.5 V 20.50 A 25.3%

20% 858 W 40.6 V 21.16 A 48.5 V 22.37 A 27.6%

5% 756 W 40.8 V 18.55 A 48.7 V 19.62 A 24.3%

20% 864 W 40.8 V 21.20 A 48.7 V 22.43 A 27.8%

10% 792 W 40.8 V 19.44 A 48.7 V 20.56 A 25.5% Per Pallet

10% 781 W 40.4 V 19.35 A 48.3 V 20.45 A 25.1%

#### **ELECTRICAL DATA**

operating remperature	-40 C - 703 C
Max. System Voltage	1500 V (IEC/UL)
Module Fire Performance	TYPE 29 (UL 61730) or CLASS C (IEC61730)
Max. Series Fuse Rating	35 A
Protection Class	Class II
Power Tolerance	0 - + 10 W
Power Bifaciality*	80 %
* Power Bifaciality = Pmax <sub>ne</sub> / Pm.	ax <sub>sue</sub> both Pmax <sub>see</sub> and Pmax <sub>sue</sub> are tested under STC, Bifaciality

\* The specifications and key features contained in this datasheet may deviate slightly from our acts all products due to the on-going innovation and product enhancement. CSI Solar Co., Ltd. reserve he right to make necessary adjustment to the information described herein at any time without

Please be kindly advised that PV modules should be handled and installed by qualified people who have professional skills and please carefully read the safety and installation instructions before using our PV modules.

#### Per Container (40' HQ) 594 pieces or 495 pieces (only for US & Canada) \* For detailed information, please contact your local Canadian Solar sales and technical

CS7N-695TB-AG / I-V CURVES

600 W/m<sup>2</sup>

5 10 15 20 25 30 35 40 45 50 55 5 10 15 20 25 30 35 40 45 50 55

#### **TEMPERATURE CHARACTERISTICS**

Specification	Data	
Temperature Coefficient (Pmax)	-0.29 % / °C	
Temperature Coefficient (Voc)	-0.25 % / °C	
Temperature Coefficient (Isc)	0.05 % / °C	
Nominal Module Operating Temperature	41 ± 3°C	

37.8 kg (83.3 lbs)

reflective coating

Cable Length 360 mm (14.2 in) (+) / 200 mm (7.9 in) (-) or (Including Connector) customized length\*

33 pieces

2.0 mm heat strengthened glass with anti-

2.0 mm heat strengthened glass

Anodized aluminium alloy

4.0 mm2 (IEC), 12 AWG (UL)

T6 or MC4-EVO2 or MC4-EVO2A

IP68, 3 bypass diodes

#### **PARTNER SECTION**

CSI Solar Co., Ltd. 199 Lushan Road, SND, Suzhou, Jiangsu, China, 215129, www.csisolar.com, support@csisolar.com

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#### **Technical Spec - Inverter**



#### Technical Data

DC input data	155 TL3	165 TL3		
Max. recommended PV generator power	232 500 W	247 500 W		
MPP range	875 - 1 300 V	960 - 1 300 V		
Operating range	875 - 1 450 V	960 - 1 450 V		
Rated DC voltage / start voltage	900 V / 1 000 V	1000 V / 1 100 V		
Max. no-load voltage	1 500 V	1 500 V		
Max. input current	183 A	183 A		
Max. short circuit current I <sub>screen</sub>	300 A	300 A		
Number of MPP tracker	1	1		
Connection per tracker	1-2	1-2		
AC output data				
Rated output	155 000 VA	165 000 VA		
Max. power	155 000 VA	165 000 VA		
Line voltage	600 V (3P+PE)	660 V (3P+PE)		
Voltage range (Ph-Ph)	480 - 690 V	480 - 760 V		
Rated frequency (range)	50 Hz / 60 Hz (45 - 65 Hz)	50 Hz / 60 Hz (45 – 65 Hz)		
Rated current	3 x 149.5 A	3×144.5A		
Max. current	3 x 152.0 A	3 x 152.0 A		
Reactive power / cos phi		om / 0,30 ind 0,30 cap.		
Max. total harmonic distortion (THD)	≤3%	≤3%		
Number of grid phases	3	3		
General data	,			
Max. efficiency	99.1 %	99.1 %		
Europ. efficiency	98.9 %	99.0 %		
CEC efficiency	98.9 %	99.0 %		
	< 10 W	< 10 W		
Standby consumption	- I de la constantina della co	- California de la calenda de		
Circuitry topology	transformerless	transformerless		
Mechanical data	LEDe	150-		
Display	LEDs	LEDs		
Control units	webserver, supports mobile devices	webserver, supports mobile devices		
Interfaces		RS485 (KACO-protocol), USB, optional: 4-DI		
Fault signalling relay	potential-free NOC max. 30 V / 1 A	potential-free NOC max. 30 V / 1 A		
DC connection		240 mm² (0.372 in²) Cu or Al		
AC connection		240 mm² (0.372 in²) Cu or Al		
Ambient temperature	-25 °C - +60 °C 1)	-25 °C - +60 °C 11		
Humidity	0 - 100 %	0 - 100 %		
Max. installation elevation (above MSL)	3000 m	3 000 m		
Min. distance from coast	500 m	500 m		
Cooling	temperature controlled fan	temperature controlled fan		
Protection class	IP66 / NEMA 4X	IP66 / NEMA 4X		
Noise emission	59.2 db (A)	59.2 db (A)		
H×W×D	719 x 699 x 460 mm	719 x 699 x 460 mm		
Weight	78.2 kg	78.2 kg		
Certifications				
Safety	IEC 62109-1/-2, EN 61000-6-1/-2/-4, EN 610 EN 55011 group 1, class A EN 62920 Emission class A / Immunity clas UL62109-1, UL1741, CSA-C22.2 No.107.1,	is A		
	CSA-C22.2 No.62109-1, CSA-C22.2 No.621			
Grid connection rule	overview see homepage / download area			

<sup>9</sup> Power derating at high ambient temperatures

S	XL
1-2	1-2
	V
Type 1 + 2	Type 1 + 2
0	0
0	0
0	0
0	0
	Type 1 + 2

standard = ✓ upgradeable = ○



Capacity: 20+20 MW

Location: Jovein, Sabzevar, Iran Solar Panels: Canadian Solar 660W

Inverters: Solis 250kW

Status: 20MW Connected to the Grid- 20MW under Construction





#### **▲ Project Reference**

Capacity: 100 MW Location: Yazd, Iran

Solar Panels: Trina Solar 665W Inverters: Kaco 165 kW Status: under Construction

Capacity: 10+2.5 MW

Location: Momtazan Cement, Kerman, Iran

Solar Panels: Canadian Solar 660W

Inverters: Solis 110 kW

Status: Connected to the Grid





# **▲ Project Reference**

Capacity: 5/3MW

Location: Delijan Cement, Isfahan, Iran

Solar Panels: Canadian Solar

Inverters: Solis

Status: Under Construction

Capacity: 1.2 MW

Location: Mashhad, Iran

Solar Panels: Canadian Solar 660W monofacial

Inverters: Solis 110kW

Status: Connected to the Grid, April 2024





### **▲ Project Reference**

Capacity: 10 MW

Location: Esfandqeh, Kerman, Iran

Solar Panels: Longi Solar 455W Inverters: Solis 110kW

Capacity: 2 MW

Location: Khormoj, Bushehr, Iran

Solar Panels: SHARP 330W Inverters: Sungrow 60kW

Status: Connected to the Grid





### **▲ Project Reference**

Capacity: 1.5 MW

Location: Shahrekord, Charmahal va Bakhtiari, Iran

Solar Panels: SHARP 315W Inverters: Fronius 20kW

Capacity: 10 MW

Location: Lamerd, Fars, Iran
Solar Panels: SHARP poly-c 320W
Inverters: Fronius 25kW

Status: Connected to the Grid

# **▶** Project Reference

Capacity: 2 MW

Location: Qale Ganj, Kerman, Iran

Solar Panels: SHARP 330W Inverters: Fronius 20kW





Capacity: 1 MW

Location: Bardsir, Kerman, Iran

Solar Panels: LG 330W Inverters: Fronius 27kW

Status: Connected to the Grid

### **▶** Project Reference

Capacity: 10 MW

Location: Khusf, Khorasan, Iran Solar Panels: SunTech 325W Inverters: Huawei 55kW





Capacity: 200kW
Location: Tehran, Iran
Solar Panels: Longi 455W
Inverters: Solis 110kW

Status: Connected to the Grid

#### **▶** Project Reference

Capacity: 120 kW

Location: Khoramdareh, Zanjan, Iran

Solar Panels: Longi 455W Inverters: Kaco 105kW





Capacity: 100 kW
Location: Parand, Iran
Solar Panels: Longi 455W
Inverters: Kaco 50kW

Status: Connected to the Grid

# **▶** Project Reference

Capacity: 150 KW
Location: Sirjan, Iran
Solar Panels: Longi 455W
Inverters: Kaco 50kW





Capacity: 200 kW
Location: Zanjan, Iran
Solar Panels: SHARP 320W
Inverters: Fronius 25kW

Status: Connected to the Grid





### **▲ Project Reference**

Capacity: 100 kW
Location: Birjand, Iran
Solar Panels: SHARP 320W
Inverters: Fronius 25kW

Capacity: 100 kW
Location: Yazd, Iran
Solar Panels: SHARP 320W
Inverters: Fronius 25kW

Status: Connected to the Grid





# **▲ Project Reference**

Capacity: 200 kW

Location: Hamedan, Iran
Solar Panels: SHARP 330W
Inverters: Fronius 25kW

Capacity: 20 kW
Location: Tehran, Iran
Solar Panels: SHARP 360W
Inverters: Fronius 20kW

Status: Connected to the Grid





# **▲ Project Reference**

Capacity: 30 kW

Location: Jam, Bushehr, Iran Solar Panels: Talesun 270W Inverters: Fronius 27kW

Capacity: 10 kW
Location: Tehran, Iran
Solar Panels: SHARP 330W

Inverters:

Status: Connected to the Grid

Fronius 5kW

# **▶** Project Reference

Capacity: 20 kW
Location: Tehran, Iran
Solar Panels: SHARP 330W
Inverters: Fronius 20kW





Capacity: 10 kW

Location: Damavand, Iran
Solar Panels: SHARP 270W
Inverters: Fronius 10kW

Status: Connected to the Grid

### **▶** Project Reference

Capacity: 20 kW

Location: Khoramdasht, Tehran, Iran

Solar Panels: SHARP 250W Inverters: Fronius 20kW





Capacity: 145 kW
Location: Shiraz, Iran
Solar Panels: CSUN 250W
Inverters: Eltek 5kW

Status: Connected to Diesel

# **▶** Project Reference

Capacity: 8 kW

Location: Ahvaz, Iran
Solar Panels: CSUN 250W
Inverters: SMA 8kW

Status: Connected to Diesel





Capacity: 1 kW

Location: Parand, Tehran, Iran

Solar Panels: CSUN 250W Inverters: Studer 1kW

Status: Connected to CCTV

# **▶** Project Reference

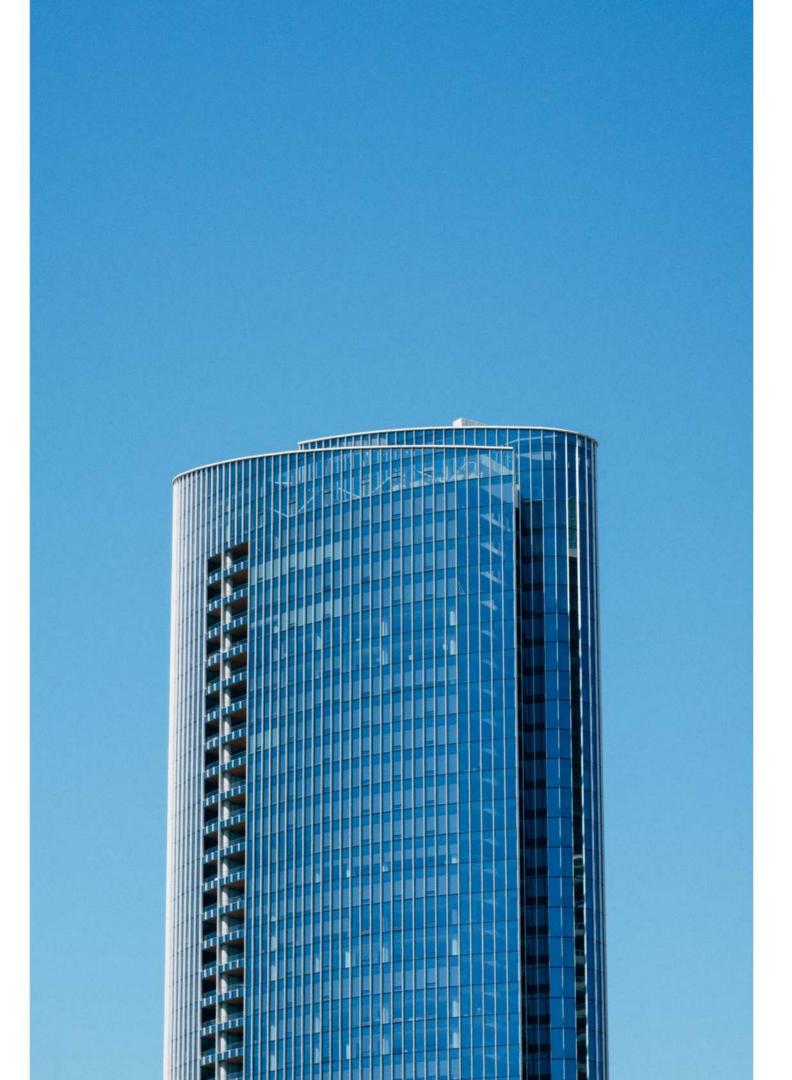
Capacity: 7 kW

Location: Jandaq, Semnan, Iran

Solar Panels: CSUN 250W Inverters: Studer 3kW Status: Connected to BTS







# **Contact Us**

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# THANKYOU