AL SHIRAWI solar

SOLAR PV PROPOSAL

الشيراوي سولار

ABOUT US

AL SHIRAWI SOLAR

Al Shirawi Group is one of the largest conglomerates in the Arabian Gulf with more than 50 years of trading experience in the region. Al Shirawi Solar was founded in 2016 to fulfill the group's desire to be part of the UAE's green sustainability program.

We specializes in the supply and installation of the latest Solar Photovoltaic Modules for maximizing the return of your investment. Our team consists of DEWA-certified, Dubai Shams approved engineers and solar experts, working to bring clean energy to Dubai.

With a total installed capacity of 27 MW spanning 300+ projects we can expertly advise the right solar solution for your facility.

COMMUNITIES WE'VE INSTALLED SOLAR PV

- Arabian Ranches
- Emirates Hills
- The Lakes
- Victory Heights
- The Villa
- Mudon
- The Meadows
- MBR District One
- Jumeirah Golf Estates
- Al Barsha Villas

OUR PARTNERS

هيئة كهرباء ومياه دبي
Dubai Electricity & Water Authority

بلدية دبي
DUBAI MUNICIPALITY

دائرة الأراضي والأملاك
Land Department

DUBAI PROPERTIES

EMAAR

NAKHEEL

DUBAI SPORTS CITY

SMA

Trinasolar

Fronius

ABB

LG Life's Good

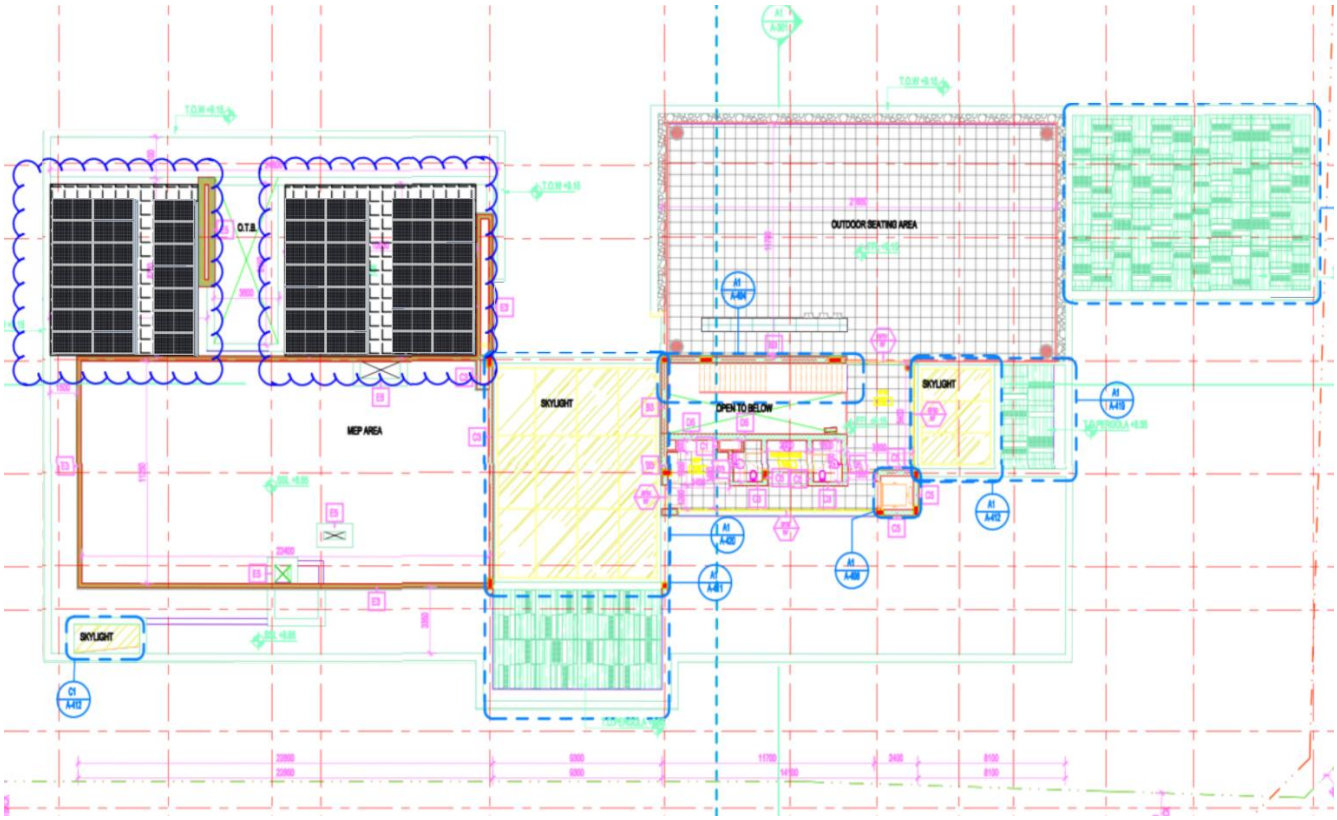
SHARP solar electricity

YOUR SOLAR PV PROPOSAL

ADDRESS OF INSTALLATION:

AL BARARI VILLA

SYSTEM SIZE: **26.71** kWp



Project Name: SHS-3016
Date: 18-Jan-2024

Offer No.: SHS-3016

AL SHIRAWI SOLAR
Al Shirawi Building, Airport Road, Garhoud, Dubai
P.O. Box 93
United Arab Emirates
Phone: 042821337

Contact Person
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Phone: 0529904452
E-Mail: simon.b@alshirawisolar.com

Inverter: 1 **PC Fronius 15 kW**
1 **PC Fronius 10 kW**

Module: 49 **PCS Tenka 545Wp**

SYSTEM OVERVIEW

System Data

Solar Electricity Generation	41,398.00	kWh Per year
Size of System	26.71	kWp
Date of Quote	18-Jan-24	
Typical System Life Span	25	Years

Economic Parameters

% Annual Yield	19.11	%
Total DEWA Savings for 25 Years	552,671	AED
Return on Investment	6.2	Years
Solar Electricity Production Cost	0.11	AED/kWh
Total Cost Per Watt	4.551	AED/Watt

Payment Overview

Cost Per kW Installed	4,551	AED/kWp
Total Cost	**121,570**	**AED**
Point of Sale 1st Payment	30,393	AED
After DEWA NOC	30,393	AED
Delivery and Commencement	30,393	AED
Balance On Completion	30,393	AED

Renumeration and Savings

1st Year Savings	AED19,126	10th Year Savings	AED21,263	19th Year Savings	AED23,639
2nd Year Savings	AED19,352	11th Year Savings	AED21,515	20th Year Savings	AED23,919
3rd Year Savings	AED19,581	12th Year Savings	AED21,770	21th Year Savings	AED24,202
4th Year Savings	AED19,813	13th Year Savings	AED22,027	22th Year Savings	AED24,489
5th Year Savings	AED20,048	14th Year Savings	AED22,288	23th Year Savings	AED24,779
6th Year Savings	AED20,285	15th Year Savings	AED22,552	24th Year Savings	AED25,072
7th Year Savings	AED20,525	16th Year Savings	AED22,819	25th Year Savings	AED25,369
8th Year Savings	AED20,768	17th Year Savings	AED23,089		
9th Year Savings	AED21,014	18th Year Savings	AED23,363		

DEWA Tariff

Energy Price you are paying from the Grid	0.46	AED/kWh
Inflation Rate for Energy Price in UAE	4.00	%/year
What you are currently using from DEWA Grid	75,000.00	kWh/year
% Savings that this solar system will give you	55.20	%

SYSTEM PRODUCTION

You Currently use

75,000.00 kWh

Your System will Produce

41,398 kWh/Year

Your Monthly Average Current Electric Bill

2,888 AED

Your Monthly Average New Electric Bill will be

1,294 AED

Your Monthly Bill Savings

1594 AED

Estimated Annual Savings

55.20 %

Estimated 25 Years Savings

552,671 AED

SOLAR PANELS

The Company

Tenka Solar is a leader in the production of high-tech and performance solar panels and in customer service.
The **high technology** and the **well-organized** and **performing logistics** make Tenka Solar a reference point for all the companies specializing in solar panel market.

We have quality products and innovative research. In fact, we provide the most efficient and reliable products.
Our ambition is to **distribute our products worldwide** and keep improving technologies to offer the best products to our customers.

Tenka Solar is a German Solar Panel company with Headquarters in Munich and production sites in Europe & China. Tenka Solar is a registered trademark and property of JY Capital, an investment company present worldwide, with distributors and subsidiaries and sales offices in Europe, America, and Asia dealing mainly with investments in renewable energy.

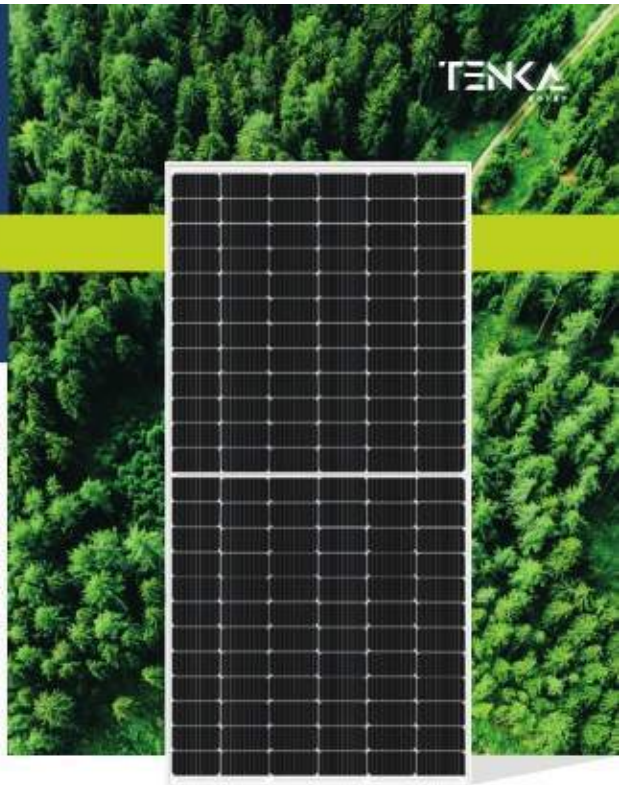
The high quality of Tenka Solar panels is ensured by a timely, accurate and consistent control of production standards, applied to the production cycle from the care of raw material sourcing to the verification of all raw materials used.

The ongoing technological and engineering updating of the **R&D department** of the group ensures high performance throughout their lifespan (25-years warranty and 90% of the power of the module for 10 years). Our products guarantee a certain and clear return on the customer's investments. We strive to achieve the goal through effective structures, efficient processes, systematic management of investments and continuous optimisation of costs. Such as, Tenka Solar is one of the largest industries and also one of the most profitable and innovative manufacturers. All Tenka Solar products are equipped with the most recognized **certifications** in the European and international markets, such as: TUV, CE, ISO, and IEC.

SOLAR PANELS

HALF CUT MODULE

525-545 Watt



KEY FEATURES

Our solar cells offer high conversion efficiency to ensure the highest quality.

Our high performing modules have an industry low tolerance of +5% (optional).

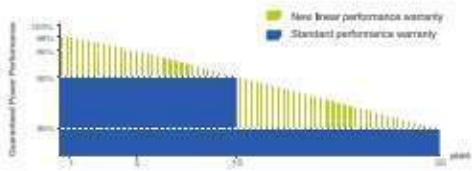
The modules can withstand high wind-pressure, snow loads and extreme temperatures.

Passed IEC 5400 Pa mechanical loading test
PID Resistance Available

QUALITY AND SAFETY

- Industry leading power output warranty
  15 years/90%,
  30 years/80%,
- 25-year warranty on materials & workmanship
- Fire Rating: Class 1

PREMIUM PERFORMANCE WARRENTY



APPLICATIONS

On-grid residential roof-tops

On-grid commercial - industrial roof-tops

Solar power plants

Off-grid systems

TENKA solar

WWW.TENKASOLAR.COM

ISO9001:2008 - ISO14001:2004 - OHSAS18001 certified factory - IEC61215 - IEC61730 certified products

SOLAR INVERTERS

FRONIUS SYMO

MAXIMUM FLEXIBILITY FOR THE APPLICATIONS OF TOMORROW.

With power categories ranging from 3.0 to 20.0 kW, the transformerless Fronius Symo is the three-phase inverter for every system size. Owing to the SuperFlex Design, the Fronius Symo is the perfect answer to irregularly shaped or different roof orientations. A WLAN or Ethernet internet connection as standard plus easy integration of third-party components make the Fronius Symo one of the most communicative inverters on the market. Furthermore, the meter interface permits dynamic feed-in management and a clear visualisation of consumption.

INTERFACE PROTECTION

INTERFACE PROTECTION

Grid feeding monitoring relay, CM range

Interface protection according to the DRRG (Distributed Renewable Resources Generators) standards of DEWA (Dubai Electricity & Water Authority)

Note: These operating and installation instructions cannot claim to contain all detailed information of all types of this product range and can even not consider every possible application of the products. All statements serve exclusively to describe the product and have not to be understood as contractually agreed characteristics. Further information and data is obtainable from the catalogues and data sheets of this product, from the local ABB sales organisations as well as on the ABB homepage www.abb.com. Subject to change without prior notice.

Designation of the protective functions according to DEWA

Device parameters	acc. to DEWA
Overvoltage >AV	Overvoltage average (59 AV)
Overvoltage >S1	Overvoltage (59 S1)
Undervoltage <S1	1st undervoltage (27 S1)
Undervoltage <S2	2nd undervoltage (27 S2)
Overfrequency >S1	1st overfrequency (81>S1)
Overfrequency >S2	2nd overfrequency (81>S2)
Underfrequency <S1	1st underfrequency (81<S1)
Underfrequency <S2	2nd underfrequency (81<S2)

CABLING

AC CABLES

DC CABLES

SOLAR CABLES

For Solar Panel Systems

CURRENT CARRYING CAPACITY OF PV CABLES

Conductor Size (mm2)	Current carrying capacity according to method of Installation		
	Single cable free in Air (A)	Single cable on a surface (A)	Two loaded cables touching, on a surface (A)
1.5	30	29	24
2.5	41	39	33
4	55	52	44
6	70	67	57
10	98	93	79
16	132	125	107
25	176	167	142
16	132	125	107
25	176	167	142
25	176	167	142
35	218	207	176
50	276	262	221
70	347	330	278
95	416	395	333
120	488	464	390
150	566	538	453
185	644	612	515
240	775	736	620

CURRENT RATING CONVERSION FACTORS FOR DIFFERENT AMBIENT TEMPERATURES:

Temperature in °C	Up to 60	70	80	90
Factor	1.00	0.92	0.84	0.75

BENDING RADIUS REQUIREMENTS

Overall diameter of cable (D)	Minimum Bending Radius (Fixed Installation)
D ≤ 12	3 D
D ≥ 12	4 D

MOUNTING STRUCTURE

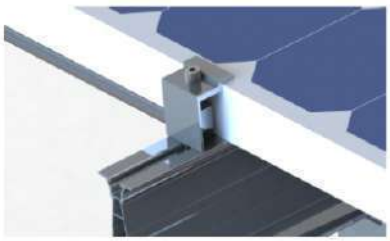
INSTALLATION

Project Site	Flat Roof
Orientation	Portrait and Landscape
Material	Aluminum 6005-T5 & SUS304
Standard	AS/NZS1170, MCS, JIS, SGS

Front struts are mounted on fixed bases with bolts on concrete foundation.

Mounted rear and diagonal struts.

Mounted girders with struts and braces.



Modules are fixed on rails with end clamps.

Mid clamps are used between panels to fix modules on the rails.

Modules are installed.

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PRICE MATCH GUARANTEE!

We are 100% assure with our quality of components and standard of workmanship. If you can find the same system, supplied and installed to the same standard, cheaper, we will pay you the difference *.

*T&C Apply

Terms & conditions:
1. Must be same brands of modules, inverter and switch gear.
2. Must include all aspects as per proposal submitted by Al Shirawi Solar LLC.

WARRANTIES AND GUARANTEES

SYSTEM PERFORMANCE

All of our residential solar system installations come with a limited warranty for any defects ("workmanship warranty"). The workmanship warranty period is 5 years from the date of completion of the installation.

Al Shirawi Solar LLC also guarantees two (2) solar system maintenance checks per year for the first five (5) years with daily system monitoring online.

PV MODULES

25-year product warranty and 30-year linearpower output warranty will be given for the Solar PV Modules.

MOUNTING STRUCTURE

10-year product warranty for the mounting structures including the fasteners.

INVERTER

The standard warranty for inverter/s covers the local parts and the repair material or replacement product for five (5) years.

WHAT HAPPENS NEXT?

Thank you for taking the time to read through this proposal, and for the opportunity to quote you for a solar PV system.

The next step is to carry out a full roof survey.
This will determine panel and inverter layouts, cable lengths and routes. We will then quote you our best price.

SERVICE INCLUSIONS:

- Pre-Construction Preliminary Services such as **Submission, Application, Approvals, Permits and NOCs** from authorities concerned; **DEWA, Dubai Municipality and DDA.**
- Wind load and Structural Approvals
- Tools and Access Equipment
- Construction Materials and Major Components such as Solar Panels and Inverters

EXCLUSIONS:

- Fronius Smart Meter (AED 1,800)
- MDB Modification (AED 2,500)
- Fixed access ladder/s (if not yet installed)
- Periodic panel cleaning (unless specified)

We look forward to completing a successful project for you and building a lasting relationship for years to come!

Al Shirawi Solar L.L.C

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