

# Towards Net Zero Energy:

## Solar PV in continuation with Net Zero Concept



### Intro

Net Zero Energy (NZE) concept is dictating the future of the built environment in the region due to its consistency with the region's orientation towards green economy, enhanced living conditions, and reduced Greenhouse Gas (GHG) emissions. Hence, Smart AE has pursued the quest towards providing its clients with one-stop shop NZE solutions by integrating top-of-the-line Solar PV (Photovoltaic) services with its well-established intelligent efficiency solutions.

Our Solar PV Services promises low-cost, worry-free solar generation for unutilised spaces of residential and commercial rooftops, while maintaining the same proficiency demonstrated by Smart AE in other areas.

Since the inception of Shams Program in 2015, Smart AE Solar has contributed to 4.9 MWp in-process construction and commissioned systems. Developing solar systems for over +40 buildings in the UAE, Smart AE has the required experience in meeting the challenges of complex designs, multiple-site installations, and local government regulations and standards.

### Why Solar?



#### SAVINGS

Lower electricity bills for the long term, utilising cloudy days and nights with net-metering from Shams Program.



#### SECURITY

Fix low rates as protection against rising utility costs - solar energy costs less than conventional electricity.



#### SUSTAINABILITY

Join the solar revolution and do something good for the environment while saving money.

### Why Smart AE Solar?



#### LOCAL EXPERTISE

Highly knowledgeable team to regulation and standards with local government authorities.



#### FINANCIAL

Zero down payment is possible to get started. Otherwise Smart AE has flexible payment models and structures to suite your needs.



#### WARRANTY

We continue to monitor energy production 24/7 to ensure optimal production, also offering guaranteed production - for the lifetime of the solar service agreement.



#### QUALITY STANDARDS

Our commitment to quality is at the top of our priority. Starting with our high procurement specs, to detailed rigorous method statements for installation & testing and commissioning.

### Financial Models

	EPC MODEL		LEASING MODEL	
	Option 1 Cash Purchase (EPC)	Option 2 Debt Financing (BOT - Fixed period)	Option 3 Debt Financing (PPA)	
Upfront Cost	Full payment	>= \$0	>= \$0	
Monthly Payment	One-time	Fixed	Varies	
Title Transfer	Immediate ownership	End of agreed period	End of agreed kWh usage	
Comprehensive Warranty	Yes	Yes	Yes	
Agreement Term <small>*Depending on local tariff and other factors</small>	<10 years	Set by customer (typically 10-15 years)	Depend on usage (kWh) (typically 15-20 years)	
Production Guarantee	Yes	Yes	No	
24/7 System Monitoring	Yes	Yes	Yes	

### Process

1

#### Contact Us

A few minutes with our experienced consultants is all it takes to begin

2

#### Get a Quote

Pick from different innovative models and finalise commercials

3

#### Installation & Commissioning

We will design a customised solar system to fit your needs

4

#### Regulatory Compliances

We will help you along the way ensuring all the necessary compliances are taken care of

5

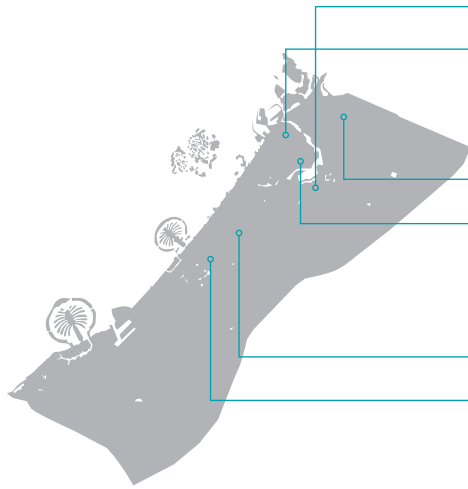
#### Monitoring & Maintenance

Turn on your new solar system and leave all the day to day operational work to us

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## Project References



**Al Hudaiba**  
System Size: 502 KWp  
Panel Qty: 1,827  
Annual Generation: 753 MWh

**Al Karama**  
System Size: 1,173 KWp  
Panel Qty: 4,268  
Annual Generation: 1,760 MWh

**Al Barsha**  
System Size: 249 KWp  
Panel Qty: 906  
Annual Generation: 374 MWh

**Ras Al Khor**  
System Size: 283 KWp  
Panel Qty: 866  
Annual Generation: 357 MWh

**Muhaisnah**  
System Size: 2,184 KWp  
Panel Qty: 7,936  
Annual Generation: 3,276 MWh

**Al Quoz**  
System Size: 480 KWp  
Panel Qty: 1,746  
Annual Generation: 720 MWh

### Results

**7.24M kWh**  
Actual Annual Generation

**3.22 M AED**  
Annual Savings

**3,164 Tonnes/year**  
CO<sub>2</sub> Emissions avoided

## Case Study

**Site Profile:** (G+3) Residential & Commercial building located in Al Karama  
**Completed:** January 2019  
**Client:** Wasl Properties  
**Smart AE Scope:** Full scope engineering, procurement, and construction (EPC) + O&M (5 years)

### ECM Implemented – Solar PV Rooftop System - Wasl R341

**71.5 kWp**  
System size

**260 nos**  
Panel Quantity

**107,682 kWh**  
Energy Consumption Baseline

### Results

**47,918 AED**  
Annual Cost Savings

**51.38 Tonnes/year**  
CO<sub>2</sub> Emissions avoided

**103,524 kWh**  
Annual Energy Generation

### Annual Energy Import from Grid

