Solar PV Information Evening

Ballyvaughan

2026-03-02

seai

Clare Local Development Company

CLARE ENERGY AGENCY

BURREN U3A

Agenda

1. Solar PV system components.
2. Sizing a PV system
3. The costs, the grants, the payback.
4. What to look for in a quote

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Solar PV system components

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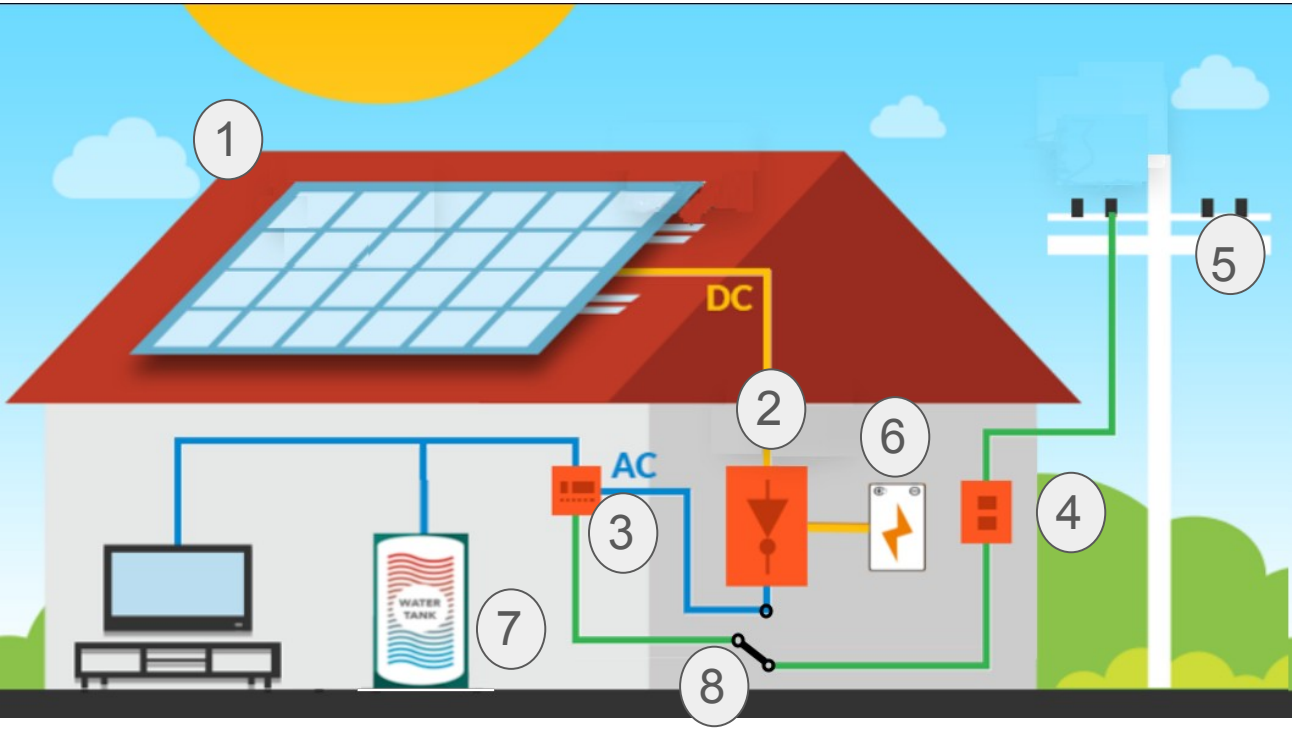
Overview of a Solar PV system



1. Panels
2. Inverter
3. Fuse Board
4. Smart Meter
5. Grid
6. Battery (optional)
7. Hot Water (optional)
8. Changeover (optional)

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Different options for PV Panels

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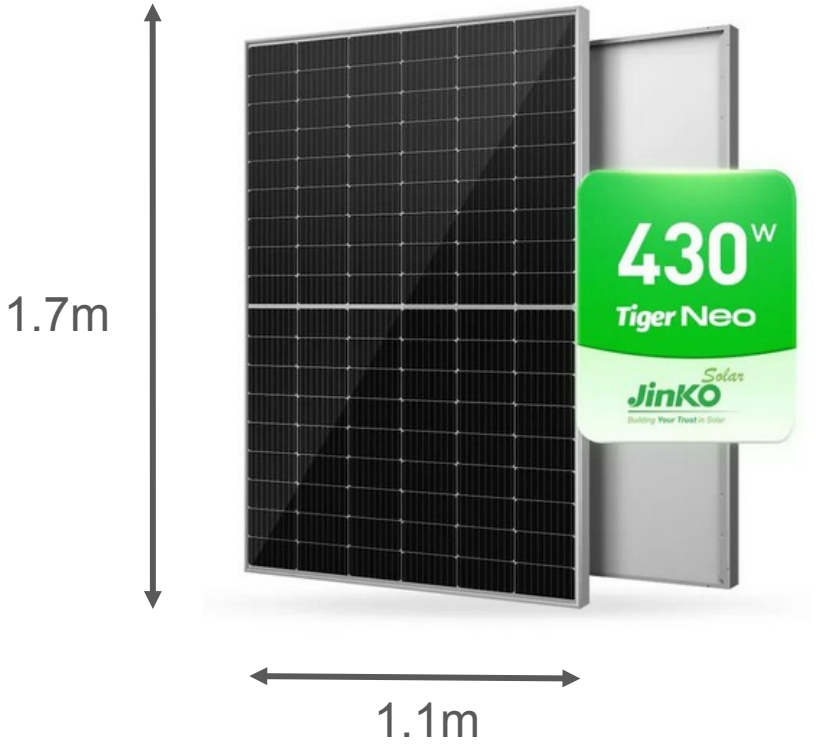
Solar PV Panels



- 12 panels will give a 5 kW system
- They will need ~25m² of roof
- And produce ~4500 kWh/yr

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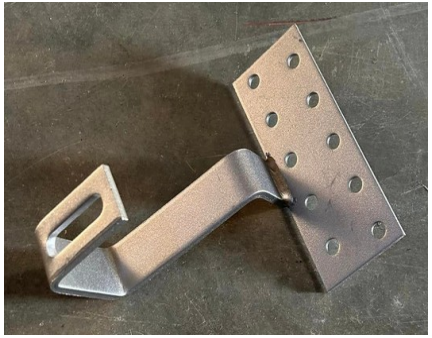
Solar PV Panels : Standard Roof mount

Flashing for slates



Roof hook for tiles

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Solar PV Panels : On a farm shed

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Ground mounted

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Where will you put the PV system ?

- For TAMS , the panels go either on a shed or on the ground (can't go on the roof of the house)

- For domestic (non-TAMS), panels go on the ground or on the roof
  - Leave 500mm from the outside of the gutter
  - Leave 200mm from everything else (velux,dormer etc.)

- Think about your utility room / garage / attic for inverter / battery but can also go outside or in the attic

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The Inverter

- The brains of the system
- About the size of a carry-on suitcase
- Installed on a wall either inside or outside
- Connects to the distribution board (fuses)
- Uploads data to a website and app

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The Battery

- Stores PV production until needed
- Increases % of your power you get to use
- Big as a carry-on suitcase (5 kWh)
- Installed close to the inverter
- Can supply power if grid is down
- Can be charged cheap at night

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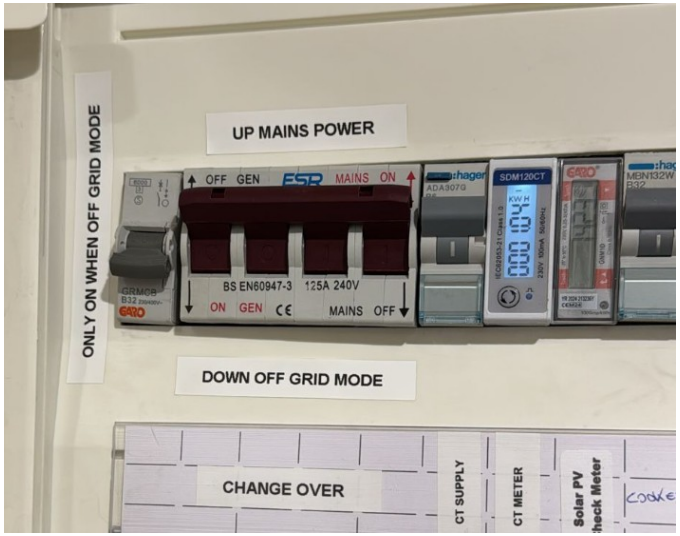
A changeover switch

- Allows full system to go off-grid if the grid goes down
- Panels/Battery keep on working
- Need to watch usage !!
- Needs some rewiring



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Sizing a PV system

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How big a PV system do you need/want ?

- Start with your usage, collect at least 12 months bills this chart
  - Ideally draw a monthly chart
  - If you have a smart meter, look at your supplier's website or www.esbnetworks.ie

- TAMS system sizes are based on your previous 12 months usage
  - Installer must do an energy survey for the application

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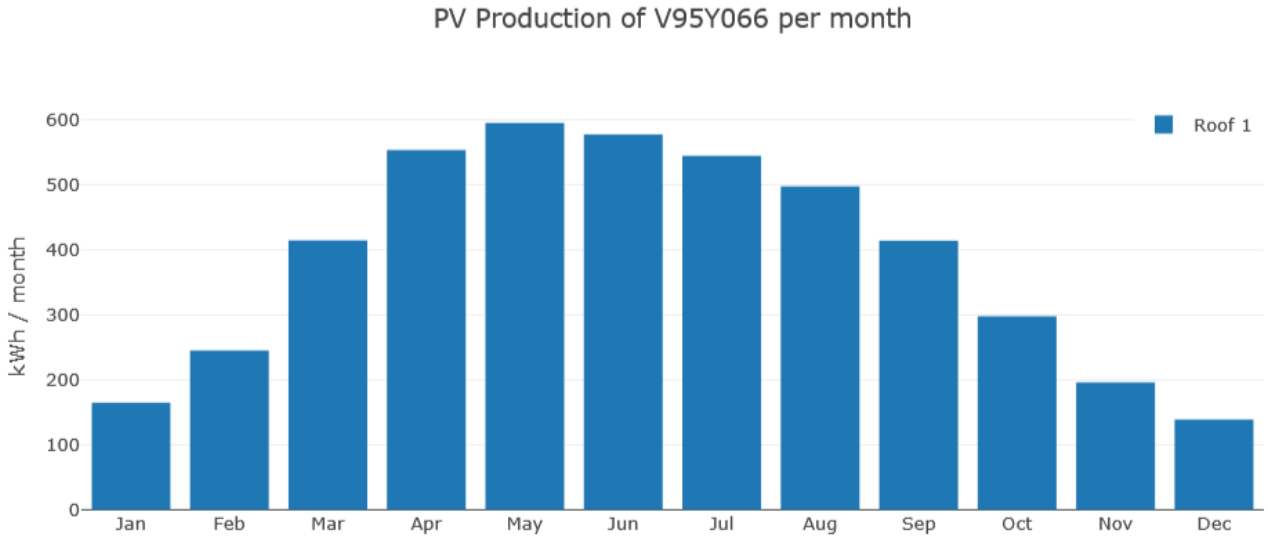
How much will you produce ?

Try the PV Output Calculation Tool

Eircode:	V95Y066
System Size:	5 kW
Roof Direction:	180°
Roof Slope:	35°
Annual Production:	**4642 kWh**

5 kW
4642 kWh/year



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The Costs, the Grants, the Payback

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The Costs

Main costs

- A 5 kW system, 5 kWh battery costs ~€11,000 (before grant)
- A 4 kW system, without a battery costs ~€7500 (before grant)
- BER post-installation ~€250

Options

- each kW more costs ~€900
- Each 5 kWh of battery costs ~€2200
- Extra cost for Changeover switch or Critical Load Socket

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Farm and Business Solar PV Grants

Farm grants

- 60% grant for PV systems (part of TAMS scheme)
- Can include the electricity usage of the home
- See the Dept.of Ag for full T&C's
- All forms, survey, installer list etc. is available here
- **Cannot be installed on the roof of the home**

Business grants

- See SEAI page
- A 20 kW system gets €6600

Solar PV System	Grant Value
1kWp*	€900
2kWp	€1,800
3kWp	€2,100
4kWp	€2,400
5kWp	€2,400
6kWp	€2,400
7kWp – 20kWp	€300/kWp
21kWp – 200kWp	€200/kWp
201kWp – 1000kWp	€150/kWp

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Who will give you money ???

Domestic grants

- See SEAI PV page for full details
  - €700/kW for the first 2kW
  - €200/kW extra up to 4kW
- Max grant of €1800
  - Apply @ https://mgen.seai.ie
- Must do a BER after the PV installation
  - No minimum BER required
- Any house built before 2021

Payment for Export

- Electric Ireland : 21c/kWh
- SSE Airtricity : 19.5c/kWh
- Energia : 24c / kWh
- Flogas : 20c/kWh
- Bord Gais : 18.5c/kWh
- Pinergy : 25c / kWh
- Yuno : 15.9c/kWh

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How to Calculate Payback

- How much will you produce ?
  - Let's assume a 5 kW system will produce 4500 kWh
- How much will you use / export ?
  - Let's assume 65% self-usage with a battery system
- How much does your electricity cost ?
  - Currently around €0.36/kWh
- How much can you sell electricity for ?
  - Lets assume €0.21c/kWh

Now go to the Payback Calculator

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Payback from a TAMS system

System size (kW)	System Cost (after grant)	Annual production (kWh)
5	4400	4500

Daytime Electricity Cost (€)	Feed in Tariff (€)	% of self-usage
0.36	0.20	65

Submit

Payback :	3.2 years
: Saving from self-usage :	€1053
: Earning from export :	€315
ROI :	31.1 %

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Payback from a domestic system

System size (kW)	System Cost (after grant)	Annual production (kWh)
5	9200	4500
Daytime Electricity Cost (€)	**Feed in Tariff (€)**	**% of self-usage**
0.36	0.20	65

Submit

Payback :	6.7 years
: Saving from self-usage :	€1053
: Earning from export :	€315
ROI :	14.9 %

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Getting and Understanding Quotes

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Who will give me a quote ?

- Look at the Clare Energy EnergyMap and find the installers closest to you
- All SEAI Registered installers (from SEAI website)
- Some regional installers below

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Writing a Request For Quote

- Eircode
- Photos of roof(s) or ground area(s) that you are considering.
  - If you have roof dimensions, all the better.
- A photo of the current fuse board.
- Your preference for inverter/battery location with photos of the area
- Electricity usage in kWh from the previous 12 months
- Required system size (allowing for future changes)
- Battery size if applicable.
- Specify if you want a Critical Load Socket or **Changeover Switch**

GIVING AS MUCH INFO AS POSSIBLE INCREASES THE LIKELIHOOD OF A QUICK, ACCURATE REPLY !!

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What to look for in a quote ?

- Brands for panels / inverter / battery
- Guarantee for panels / inverter / battery with option to extend
  - 25 year warranty for panels
  - 10 years minimum for inverter
  - 6000 cycles minimum for battery
- Are all civil works are included ?
- If outside, is a cover included ?
- Workmanship guarantee ? (Usually 2 years)
- Tidiness of quote and avoid all super discounts !

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This presentation

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