



Should we get Solar PV panels?

mike galvin, February 2026

Reasons to get Solar PV

- Solar PV offers a very good payback (5-6 years) for domestic customers due to
 - Ireland having the highest electricity prices in Europe and
 - system (particularly battery) and installation costs have fallen with availability of SEAI grants (max €1800), zero% VAT and increased competition/new entrants.
- Solar PV also allows domestic consumers contribute to decarbonisation/reduction of dependence on fossil fuels.
- Solar PV is most attractive to high users of electricity and bigger systems tend to offer a better payback.
- Solar PV improves your BER and the value of you house

Our (brief) Experience/Journey

- January 2022 – bought Nissan Leaf 40kWh
- March 2022 – Installed 7kWp E/W (8E + 10W x 390w) + Solis Inverter + 5kWh FoxESS battery
- May 2022 – bought Citroen eC4 50kWh
- 4 years To date, Generated 22MWh and drove 120,000kms
- Annual savings from Solar €1,950
- Annual Savings from EVs €3,500
- Solar PV system cost €11,100 in 2022 after grants, would cost <€8000 today (zero VAT etc)
- Solar PV & EVs are very compatible – V2H, bidirectional to come

Summary (detailed stats at end)

7kWp E/W (8E + 10W x 390w) + Solis Inverter + 5kWh FoxESS battery

	2022	2023	2024	2025
Generation kWh	5,304	5,339	5,275	5,531
Exported kWh	795	1,232	3,706	3,486
Import from Grid kWh	4,684	4,724	6,036	6,806
Purchased at EV rate			91%	91%

Solar PV – Steps to follow

- Step 1 - Do your research
- Step 2 - Quotations & Selecting an installer
- Step 3- After installation

Step 1 - Do your research

- What is our annual consumption (4200kWh is SEAI national average) – check your bills. Get your smart data from [Online account benefits & Registration | ESB Networks](#) and run it through www.energypal.ie or www.kilowatt.ie to understand your time of use (TOU).
- Will our future consumption increase - growing family, teenagers, EV (5.5km/kWh), heat pump?
- How do we heat hot water? This could be 1/3rd of our energy usage.
- Is our house/roof suitable? South facing is best for generation (~950kWh annually per kWp, East/West ~750kWh/kWp)
- Is ground mount an option, space available, southern orientation, no shadow etc?
- Aim should be for >10 panels (typically @440w) or >4kWp, this will qualify for max €1800 SEAI grant.

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 Download (CSV)

Step 1 - Do your research (cont'd)

- Use solar calculator (eg PV Watts) and apps (eg Sun's path) to understand variables
- Advice would be to max panels (probably to 20) at initial installation, cheaper and eliminate difficulty in matching future panels – aesthetically & compatibility
- Evaluate whether you need/want a house battery and hot water diverter – familiarise yourself with the pros and cons. Vast majority will recommend battery and costs have fallen significantly. Timer on immersion with smart EV tariff may be best
- If your area is subject to frequent power cuts, live rural or work from home, you may want to consider a changeover switch/gateway. This has become a more significant feature since Storm Éowyn
- As Solar PV and EVs are very compatible – economically & environmentally, consider adding an EV charger at the same time. A separate SEAI EV charger grant of €300 is available.
- If shading is an issue for you, familiarise yourself with pros and cons of solar optimisers.

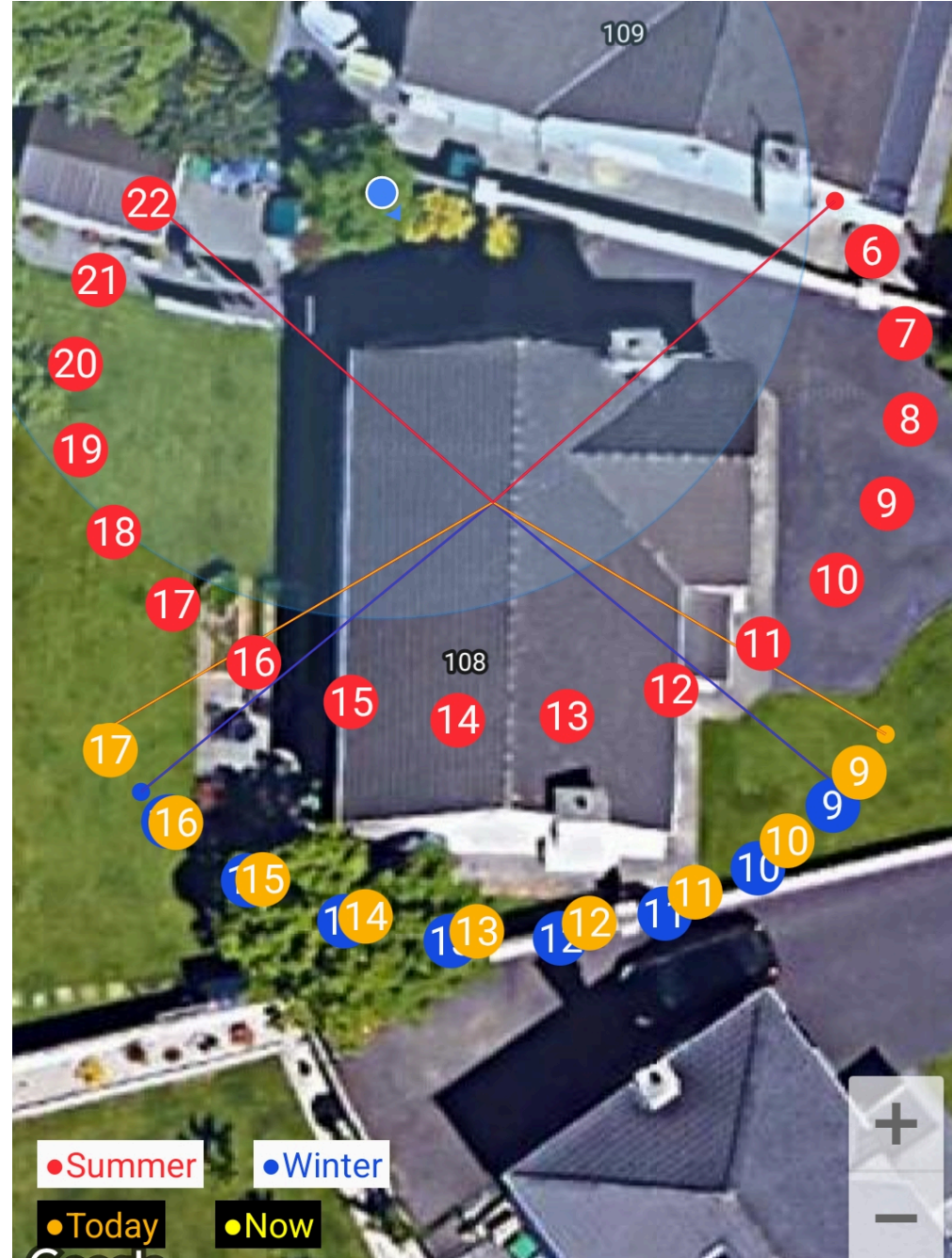
RESULTS

4,945 kWh/Year*

 [Print Results](#)

Month	Solar Radiation (kWh / m ² / day)	AC Energy (kWh)
January	0.44	78
February	0.92	159
March	1.97	386
April	3.46	648
May	4.23	816
June	4.08	753
July	3.80	722
August	3.02	577
September	2.53	468
October	1.16	221
November	0.46	79
December	0.23	38
Annual	2.19	4,945

Sun's Path



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Battery for Solar PV?

Everyone's circumstances & electricity usage pattern are different

Advantages

increases Self-use, ~50 > 75%
allows load/grid shifting x 365 & maximise export
Current EV/Boost 6-1c vs CEG/FIT ~18.5 -25c/kWh
lower electricity bills
Zero Vat @ initial installation
allows lead/plug feed/supply during power cut
"instant" readiness (subject to discharge rates)
battery prices have fallen, <€1300k/5kWh
compensates for lower production in Winter
nice to have full battery for early morning use
reduces solar anxiety
Works with Changeover switch/Gateway

Disadvantages

Additional Cost
need hybrid inverter (add. Cost)
Some inverters limit choice to (expensive) battery, e.g. Huawei
5kWh may be financially justifiable, smaller or larger maybe not
Need to know D.O.D (depth of discharge) 0/10/20%?
Need to know charge rate (2.8kW?) vs battery(5kWh?)/inverter(6KW?)
Can battery be charged in EV rate window (2-6am)?
Need to know discharge rate (3.6kW?) vs battery(5kWh?)/inverter(6KW?)
How long will battery last?
Future price decreases?
New/Change in technology? V2L/V2G (vehicle to grid)

February 2026

Shading may be an issue

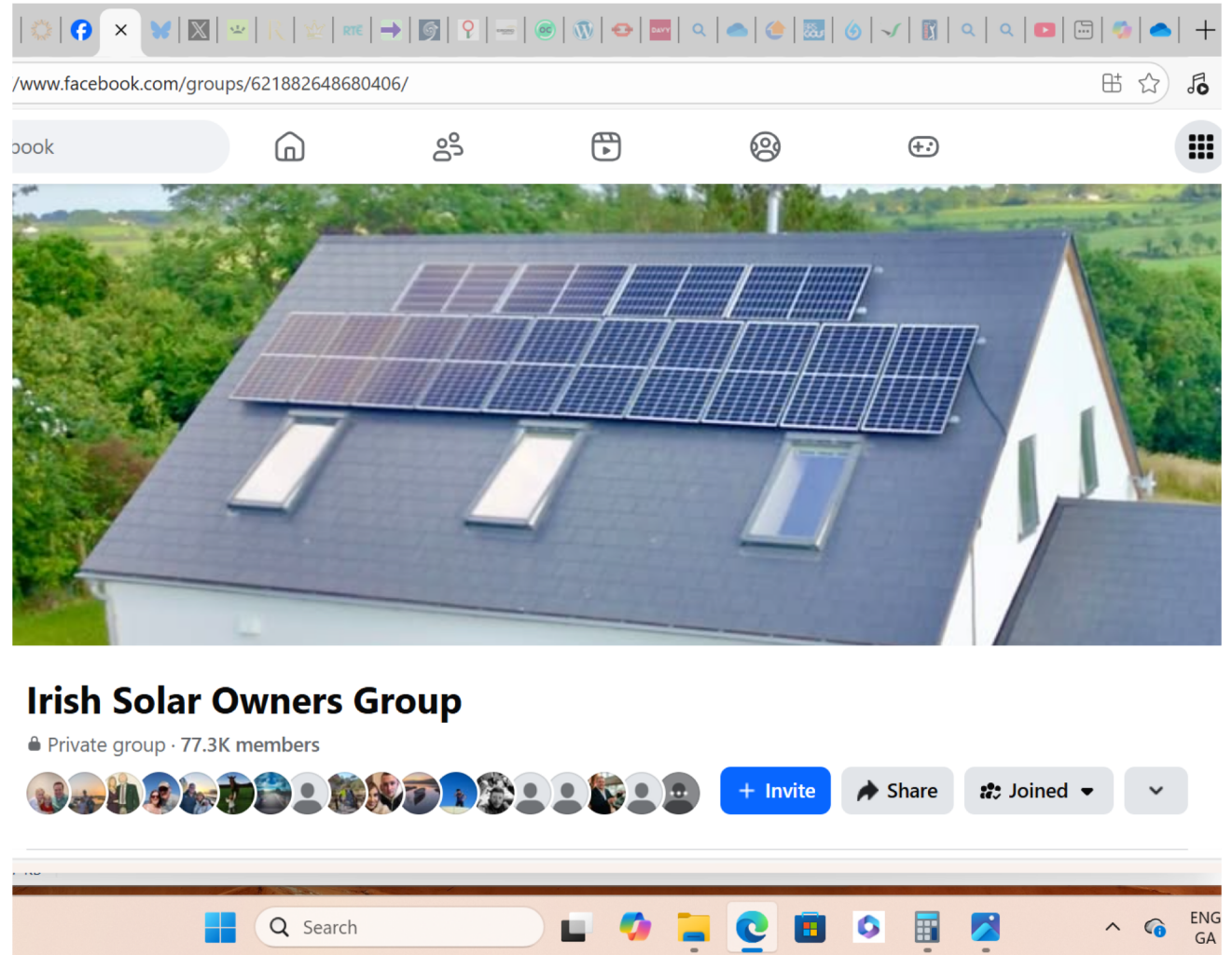
- Sources may include buildings, chimneys, trees and hills
- Impact varies during year
- Impact may be alleviated by optimisers, microinverters, bypass diodes
- Good resources on YouTube – "Gary Does Solar"

Step 2 - Quotations & Selecting an installer

- Look for quotes. Local, experienced is typically good. Beware sub-contractors. Go for a site visit.
- You will be faced with different approaches/proposals that involve different brand/size inverters. The inverter is the “brains” of the system. Some types will limit your battery choice (& more expensive?)
- Ask for quotation (i) without battery (ii) with battery on install and (iii) with battery installed at a future/later date
- Ask Irish Solar Owners Group to select best option – price isn’t always the main factor.
- Other factors that come into play are whether you pay installer net of grant (recommended), cost is inclusive of BER (recommended) and payment/deposit terms (50% deposit is not uncommon).
- Where will the inverter & battery be located? Attics (access, cold in winter, hot in summer) and garage/shed (cold in winter for battery) may not be ideal
- Agree T&Cs with chosen supplier and apply for SEAI grant. Agree date of installation.

SEARCH on Irish Solar Owners for experiences with prospective installers

- Poor advice, e.g. Batteries
- Price, excessive quotes, pushy
- Time sensitive discounts
- Follow up, paperwork, NC6
- Inexperienced installers



Step 3- After installation

- Have you got a smart meter? Start evaluating your best option for electricity supplier/tariff. The chosen tariff is critical to realise the financial benefits of Solar PV.
- Loadshifting/charging house battery at night on EV rate is a fundamental part of being a solar owner.
- Ensure NC6 has been sent to ESN by installer. Check with electricity supplier that you are eligible/receiving CEG/FIT microgeneration payment
- Focus on the data (app/laptop) to ensure the system is operating optimally.
- You'll learn a lot in first two weeks, and it may become addictive. Every day is a school day, and you'll typically change your mind and adapt to your new situation. Best of luck with it

Smart Meter Tariffs - Electricity Supplier Evaluation - January 2026

with particular relevance to Solar PV microgenerators & EV users (everyone's situation/usage pattern will be different)

rates @ **21/1/26**

7kWp e/w +5kWh battery Tralee	kWh		kWh
Annual House Demand	3,400	Solar Generation	5,550
Hot Water Diverter/iBoost (rather than Oil)	100	less Export to Grid	- 3,450
EVs	5,400	Purchase from Grid	6,800
Total Electricity Demand/Consumption	<u>8,900</u>	Total Generation & Supply	<u>8,900</u>

EV Smart Electricity units (based on historical usage and foreseen changes)

Day	450	7%
Night	100	1%
Peak	20	0%
EV /Boost 2/3/4hr	<u>6230</u>	<u>92%</u>
	6800	<u>100%</u>

	Bord Gáis EV Smart	Elect Irl Night Boost EV	Energia Smart Drive	Energia SD Plus	SSE Smart EV Charge	SSE Smart EV Max 6hr	Pinergy EV Drive Time	Flogas Smart EV Night Charge	Yuno EV Variable
	rates +VAT	rates +VAT	rates +VAT	rates +VAT	rates +VAT	rates +VAT	rates +VAT	rates +VAT	rates +VAT
Day	41.45	36.34	44.62	43.26	49.10	48.22	41.77	28.99	32.70
Night	31.26	17.92	44.62	26.65	27.57	48.22	41.77	22.51	32.70
Peak	57.81	36.34	44.62	56.76	58.50	48.22	41.77	37.39	32.70
EV from 2am(11pm SSE M	10.56	10.52	10.47	12.26	10.65	17.33	5.99	7.55	10.79
Discount	20%	16.0%	10.0%	10.0%	15.0%	30.0%	0.0%	0.0%	0.0%
CEG/FIT	18.50	19.50	18.50	18.50	19.50	19.50	25.00	18.50	15.89
Standing Charge Urban	364.59	328.58	265.01	236.62	334.74	357.23	283.47	348.80	334.10
Electricity Cost	887.24	844.11	906.62	996.47	923.72	1,354.51	611.27	630.81	858.61
Discount	- 177.45	- 135.06	- 90.66	- 99.65	- 138.56	- 406.35	-	-	-
Standing Charge Urban	364.59	328.58	265.01	236.62	334.74	357.23	283.47	348.80	334.10
CEG/FIT credit	- 638.25	- 672.75	- 638.25	- 638.25	- 672.75	- 672.75	- 862.50	- 638.25	- 548.21
Total Cost	<u>436.13</u>	<u>364.89</u>	<u>442.71</u>	<u>495.19</u>	<u>447.15</u>	<u>632.64</u>	<u>32.24</u>	<u>341.36</u>	<u>644.50</u>

Caveats

EV/Boost hours	3	2	4	4	3	6	3	3	4
Contract Duration mths	12	12	12	12	12	12	24	12	12
Rates operative/checked	1/12/25	21/1/26	21/1/26	21/1/26	21/1/26	21/1/26	21/1/26	21/1/26	21/1/26

<u>7kWp</u> <u>E/W</u> <u>Tralee</u>	Solar Generated kWh <u>First 12m</u>	Solar Generated kWh	Solar Generated kWh	Solar Generated kWh	<u>%</u> <u>change</u> <u>2025vs</u> <u>2024</u>	Average Daily kWh <u>2025</u>
<u>Month</u>	<u>2022</u>	<u>2023</u>	<u>2024</u>	<u>2025</u>	<u>2024</u>	<u>2025</u>
January	112(a)	112	125	118	-5.6%	3.8
February	212(a)	212	202	220	8.9%	7.9
March	535(a)	352	402	481	19.7%	15.5
April	687	655	621	727	17.1%	24.2
May	860	859	745	965	29.5%	31.1
June	719	866	888	712	-19.8%	23.7
July	754	699	759	763	0.5%	24.6
August	808	619	632	624	-1.3%	20.1
September	471	481	438	481	9.8%	16.0
October	267	268	272	227	-16.5%	7.3
November	127	142	114	133	16.7%	4.4
December	<u>99</u>	<u>74</u>	<u>76</u>	<u>80</u>	<u>5.3%</u>	<u>2.6</u>
<u>Full Year</u>	<u>5,651</u>	<u>5,339</u>	<u>5,274</u>	<u>5,531</u>	<u>4.9%</u>	<u>15.2</u>

7kWp E/W Tralee, 6kW Solis Inverter & 5kWh battery (installed 4/3/2022)

			<u>2025</u>	<u>2024</u>	<u>2023</u>	<u>2,022</u>
	kWh	kWh	kWh	kWh	kWh	kWh
	Solar	Grid	Total	Total	Total	Total
Generated Solar PV	5,531		5,531	5,275	5,339	5,304
Exported to Grid	- 3,486		- 3,486	- 3,706	- 1,232	- 795
Imported from Grid	<u>-</u>	<u>6,806</u>	<u>6,806</u>	<u>6,036</u>	<u>4,724</u>	<u>4,684</u>
Electricity Consumption	<u>2,045</u>	<u>6,806</u>	<u>8,851</u>	<u>7,605</u>	<u>8,831</u>	<u>9,193</u>
Zappi/EV charger	501	4,940	5,441	4,371	5,000	5,223
iBoost/Hot Water	-		-	95	519	396
House (Bal) inc Load shifting	<u>1,544</u>	<u>1,866</u>	<u>3,410</u>	<u>3,139</u>	<u>3,312</u>	<u>3,574</u>
	<u>2,045</u>	<u>6,806</u>	<u>8,851</u>	<u>7,605</u>	<u>8,831</u>	<u>9,193</u>

CO2 emissions savings

	kg	kg	kg	kg
Solar @226/kWh (EPA, 2024)	1,250	1,345	1,767	1,756
iBoost/Hot Water est vs OFCH	-	57	311	238
Nissan Leaf @123g/km (Nissan app)	2,240	2,154	2,354	3,019
Citroen eC4/Volvo EX30 @123g/km	<u>1,230</u>	<u>1,117</u>	<u>1,155</u>	<u>776</u>
	<u>4,720</u>	<u>4,674</u>	<u>5,588</u>	<u>5,788</u>

Smart EV tariff (Energia) from 13/9/23 to 21/11/25, 26 months

All other hours	1,228	9%
EV 4hr	<u>12,702</u>	<u>91%</u>
	<u>13,930</u>	<u>100%</u>

includes load/grid shifting ~1250kW per annum at EV rate

Benefits continued in 2025

Loadshift x 365, minimal solar for EVs & maximised export to avail of 2 x €400 tax exempt

Turned off iBoost/EDDI equiv - overheating water, using ~4kWh/day

Renewed with Energia in September 2025 for 3rd year with 24% discount, 4hr EV smart drive tariff