



Cutting Carbon, Cutting Bills 2025

The savings from displacement
of gas by wind and solar farms

February 2026



We have analysed the electricity produced by domestic wind and solar farms on the Island of Ireland – and estimated the savings unlocked by the displacement of gas

Context of our Study

- The wholesale price paid for electricity in the Single Electricity Market (SEM), the unified power system that spans Ireland and Northern Ireland, rose throughout 2024.
- This increase followed trends in global gas prices and highlights the exposure to volatile international commodities that Irish consumers face.
- Gas prices had climbed due to tight supply of liquified natural gas (LNG) and reduced domestic gas storage across Europe. Although this trend has since reversed, with a surplus of LNG supply this winter and tempered Asian demand, wholesale power prices in Ireland were still more than twice as high in 2025 as they were in 2019.
- Historically, Ireland and Northern Ireland have relied on fossil fuel-fired generation for electricity, resulting in the exposure of consumers to movements in the prices of imported commodities still experienced today.
- However, investment in renewable technologies has resulted in a steady increase in zero-carbon electricity over the last two decades, dominated by wind power. The SEM has among the highest penetration of renewable power in Europe, with 41% of Ireland's electricity supply being met by renewables in 2024¹.
- Wind and solar farms can displace gas-fired generation from the wholesale electricity market with the low-cost renewable power they produce, avoiding the cost of the gas, and the cost of credits for the carbon that would have been emitted.
- In this study we have explored the savings unlocked for consumers and operators across the SEM by this displacement in 2025, following an equivalent study carried out last year, which focussed on 2024².
- We have explored the holistic impact of renewable energy on the power bills of Irish electricity consumers in *Good for your Pocket*³, published in January 2025.

Methodology and Assumptions

- In our estimate of the gas and carbon savings for consumers and operators in the SEM, we have sourced and analysed historical data at an hourly granularity:
 - Outturn wind and solar generation data, from EirGrid⁴
 - Outturn electricity demand in Ireland and Northern Ireland, from EirGrid
 - Day-ahead wholesale NBP⁵ gas prices, from Argus
 - Traded daily EUA⁶ carbon prices, from Argus
- We have assumed an average higher heating value (HHV) efficiency of 49.1% for the gas-fired fleet across the SEM, consistent with the assumptions of EirGrid and SONI.
- We have assumed a marginal 'fuel' cost for wind and solar generation of 0 €/MWh.
- Based on these assumptions we have calculated the volume of gas and carbon credits that would be required to 'replace' the historical outturn wind and solar generation at an hourly granularity.
- We have allocated the fuel and carbon cost savings to Ireland and Northern Ireland on a demand-weighted basis, in line with the treatment of electricity cost components on consumer bills.
- Our methodology assumes that wind and solar power displace exclusively gas-fired generation. Although gas remains a dominant component of the SEM generation mix, other technologies may be displaced by wind and solar generation, resulting in different savings.

Notes: 5 National Balancing Point, a virtual trading hub for gas based in the United Kingdom; 6 European Union Allowances, carbon credits used within the EU Emissions Trading System (EU ETS).

Sources: 1 [Energy in Ireland 2025](#), Sustainable Energy Authority of Ireland (SEAI); 2 [Cutting Carbon, Cutting Bills 2024](#), Baringa; 3 [Good for your Pocket](#), Baringa; 4 [System and Renewable Data Reports](#), EirGrid.

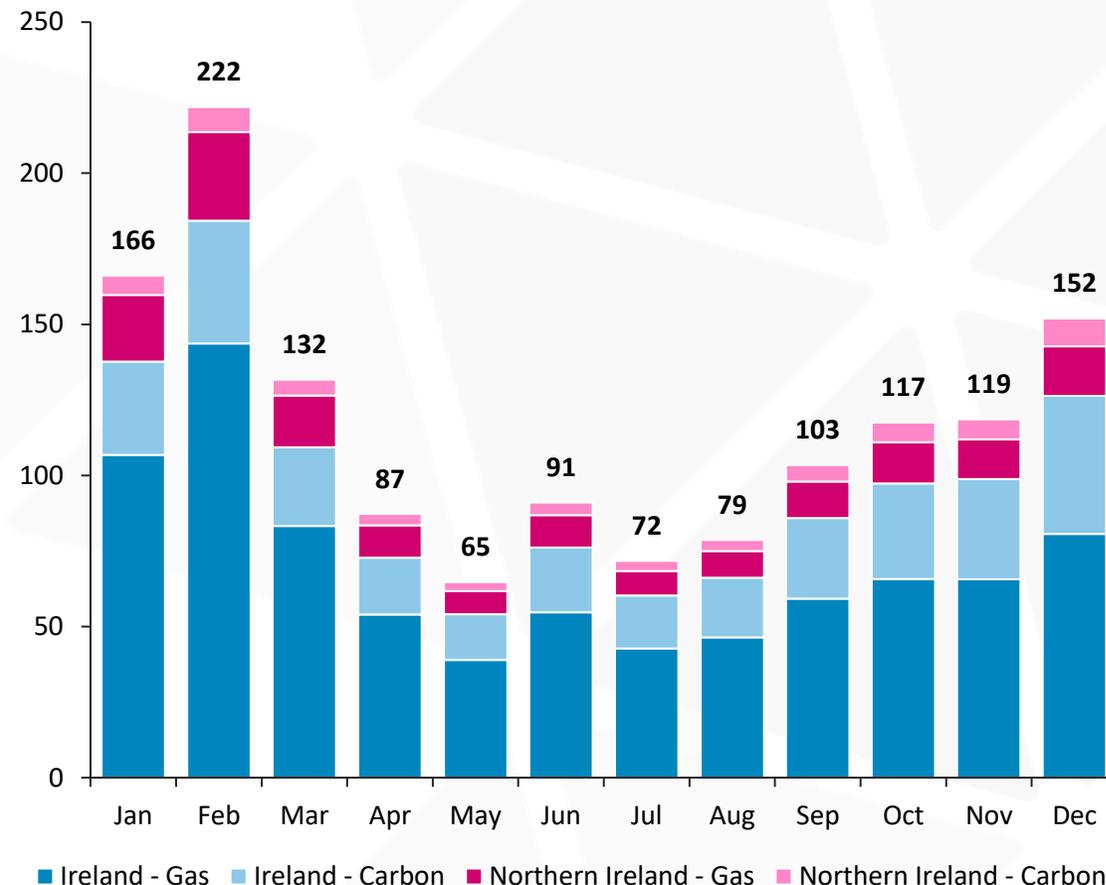
Wind farms in Ireland displaced €840 million worth of gas in 2025 – enough to heat every household across the country

Our Key Findings for Wind

- Our analysis reveals that a total of 13.8 terawatt-hours¹ (TWh) of wind generation² in the SEM displaced more than €1.4 billion worth of gas and carbon in 2025.
- More than 2.2 billion cubic meters (bcm) of gas was displaced by wind power in Ireland, enough to heat every home in the country for the year³, with avoided costs totaling more than €840 million.
- A further £145 million (€170 million) worth of gas was displaced in Northern Ireland⁴, more than 0.4 bcm in volume.
- The displacement of gas from the SEM generation mix drove a corresponding drop in carbon emissions of 4.3 and 0.9 million tonnes of CO₂ in Ireland and Northern Ireland respectively, equivalent to the annual energy-related emissions from 1.2 million households across the island⁵.
- In addition to the climate benefits, the displacement of CO₂ from the power sector also reduces costs, with €330 million and £55 million (€65 million) worth of carbon credits being saved in Ireland and Northern Ireland, respectively.
- February saw the highest monthly wind generation, at a time when gas prices were at their peak, with wind displacing €175 million worth of gas and €50 million worth of carbon credits across the SEM in a single month.
- The €1.4 billion of gas and carbon avoided in 2025 follows savings of €1.2 billion in 2024, €1.6 billion in 2023, and €2.6 billion in 2022, when commodity prices were at their highest.

Monthly Avoided Costs from Wind in 2025

€m, nominal

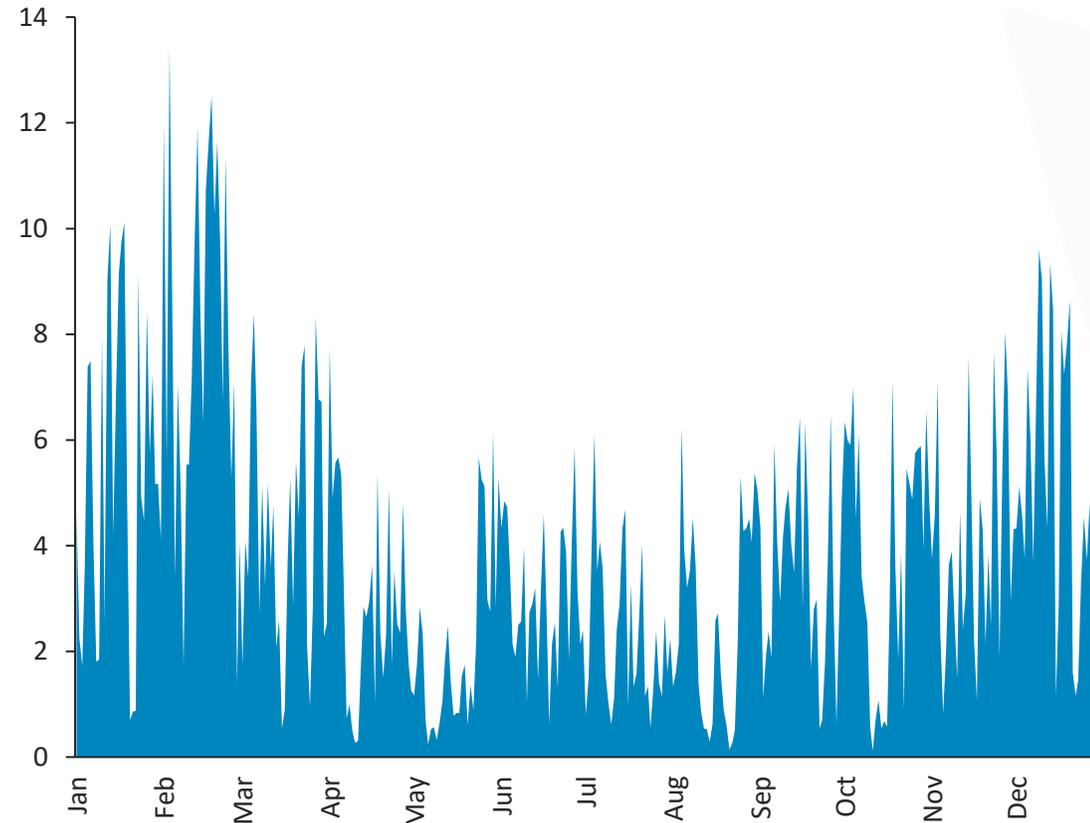


Notes: 1 A terawatt-hour is equal to 1,000 gigawatt-hours (GWh), 1,000,000 megawatt-hours (MWh), or 1,000,000,000 kilowatt-hours (kWh); 4 Northern Irish savings converted to euros for charts and overall 'SEM' figures. Sources: 2 [System and Renewable Data Reports](#), EirGrid; 3 [Policy Information – Gas](#), Department of Climate, Energy and the Environment (DCEE); 5 [Residential Energy Statistics](#), SEAI.

The cost of gas and carbon avoided by wind power totaled €1.4 billion across the island in 2025 – with up to €13 million being saved per day in February

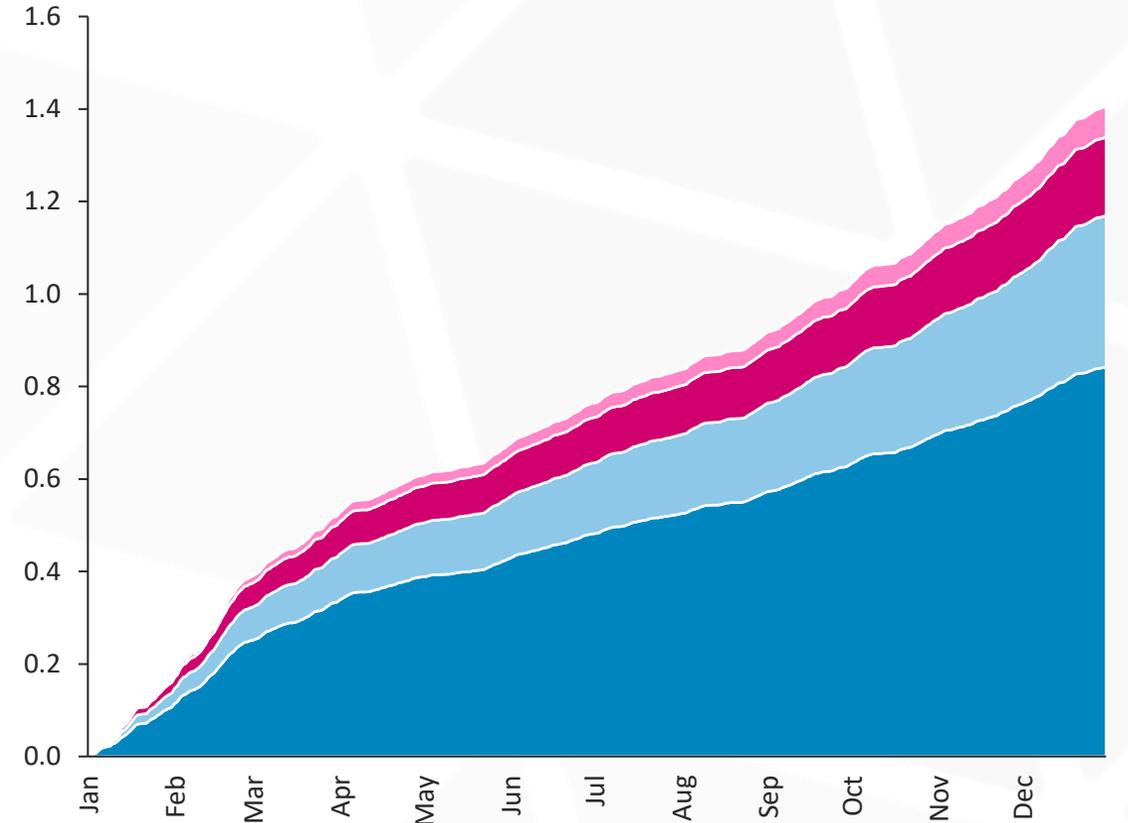
Daily Avoided Costs from Wind in 2025

€m, nominal



Cumulative Avoided Costs from Wind in 2025

€bn, nominal

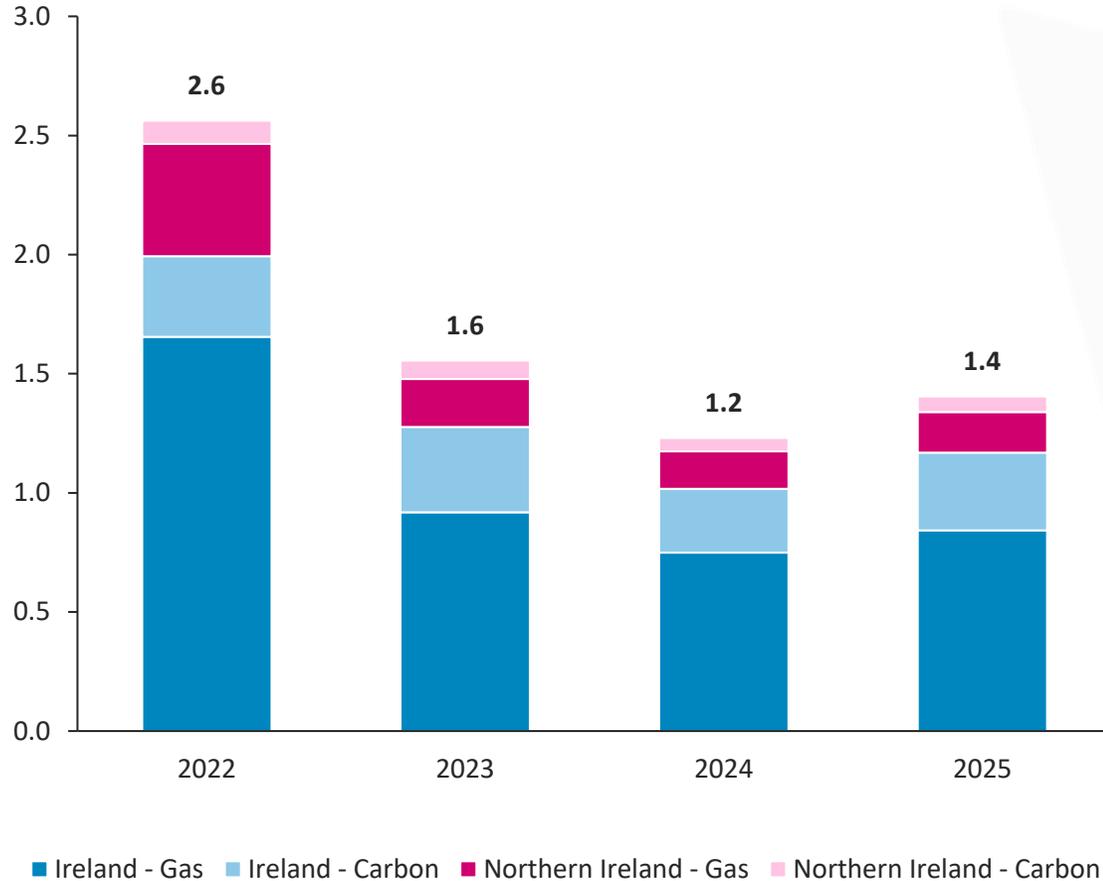


■ Ireland - Gas ■ Ireland - Carbon ■ Northern Ireland - Gas ■ Northern Ireland - Carbon

Wind power in Ireland and Northern Ireland has displaced a total of €6.7 billion worth of gas and carbon credits since 2022

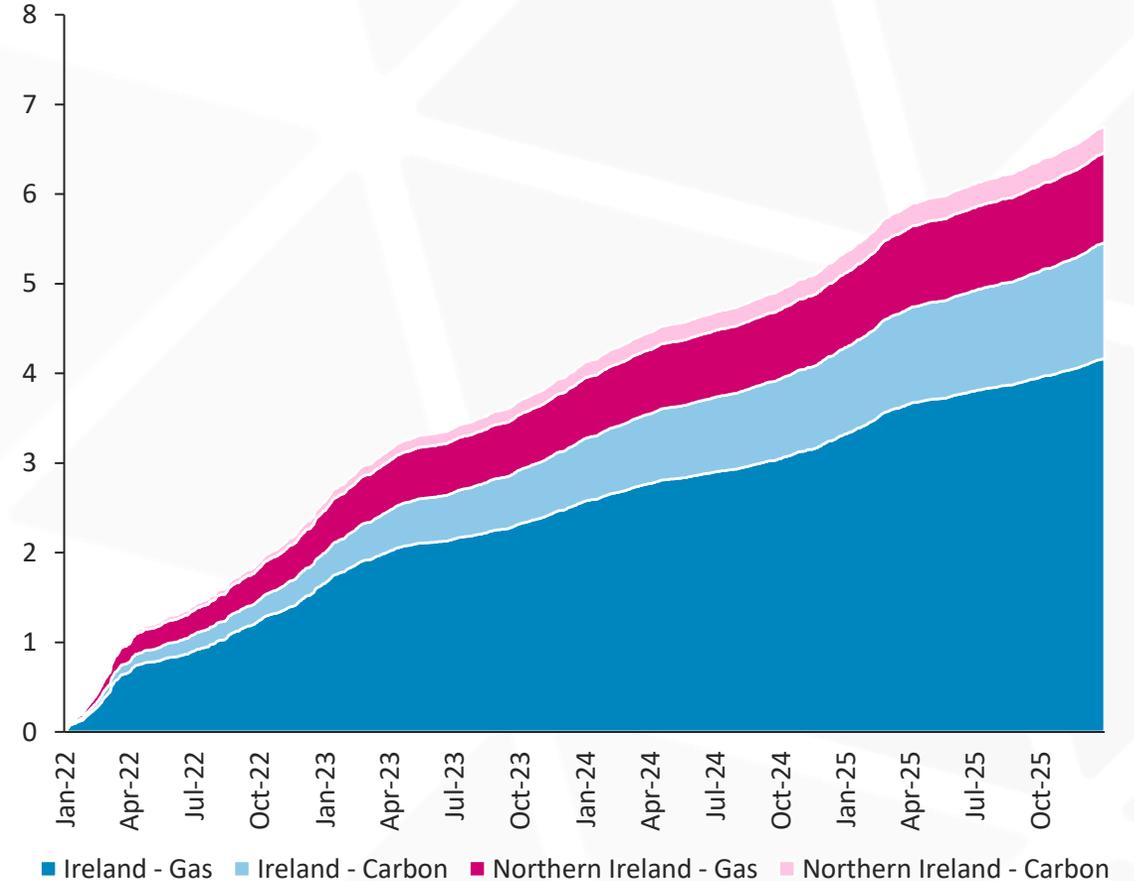
Annual Avoided Costs from Wind since 2022

€bn, nominal



Cumulative Avoided Costs from Wind since 2022

€bn, nominal



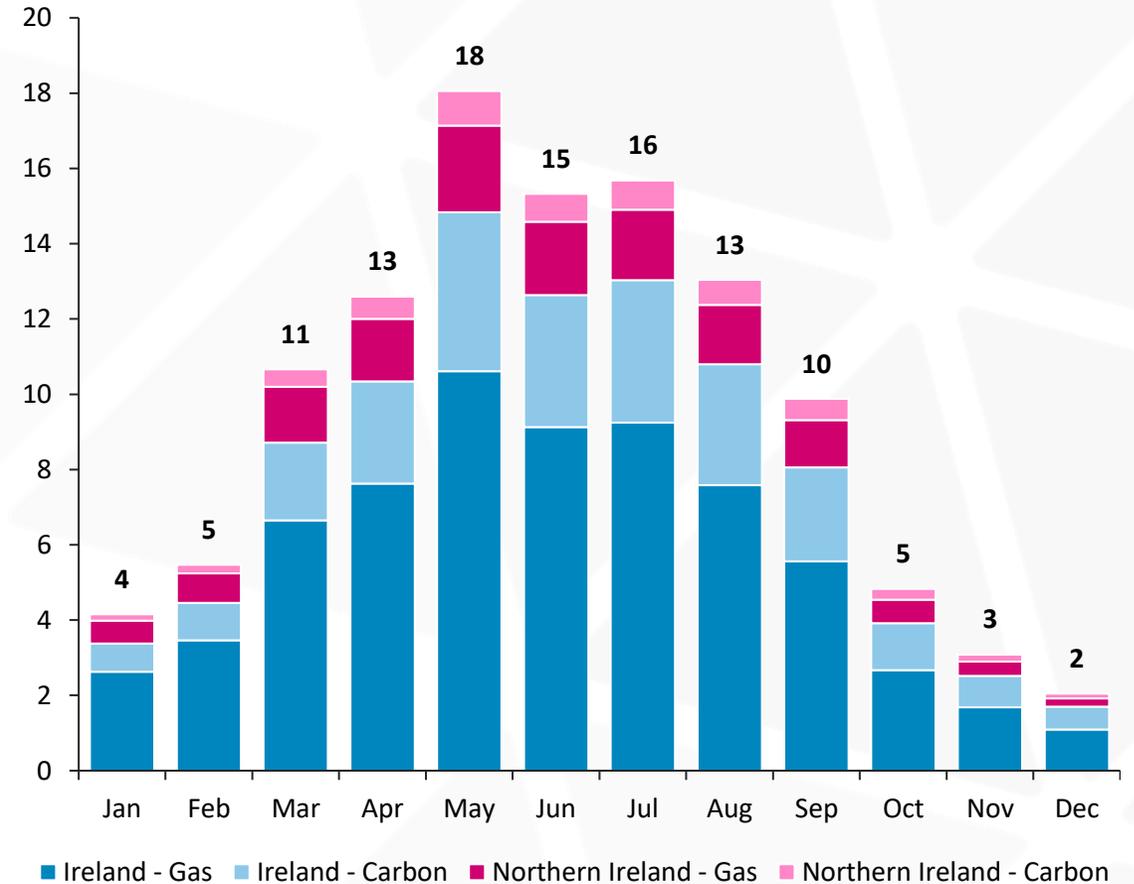
Solar farms displaced almost €115 million worth of gas and carbon from the SEM in 2025 – mostly in the summer months when wind generation was at its lowest

Our Key Findings for Solar

- Our analysis shows that 1.1 TWh of solar generation¹ in the SEM displaced more than €115 million worth of gas and carbon costs in 2025, around 8% of the costs avoided by wind.
- Solar power displaced almost 190 million cubic meters (mcm) of gas from the generation mix in Ireland, with avoided costs totaling almost €70 million.
- A further £13 million (€15 million) worth of gas was displaced in Northern Ireland², more than 40 mcm in volume.
- The displacement of gas brought a reduction in carbon emissions of 365 and 80 thousand tonnes of CO₂ in Ireland and Northern Ireland, respectively, valued at €25 million and €5 million (€6 million).
- May saw the peak of monthly solar generation, with total savings of €18 million realised across the SEM that month.
- Our analysis reveals that wind power delivered the greatest savings in the autumn and winter months, which saw the highest output from turbines across the island, with solar showing the opposite pattern, with savings rising in the sunnier summer months.
- Wind and solar farms therefore provided complementary seasonal benefits, driving relatively consistent overall savings across the year.

Monthly Avoided Costs from Solar in 2025

€m, nominal



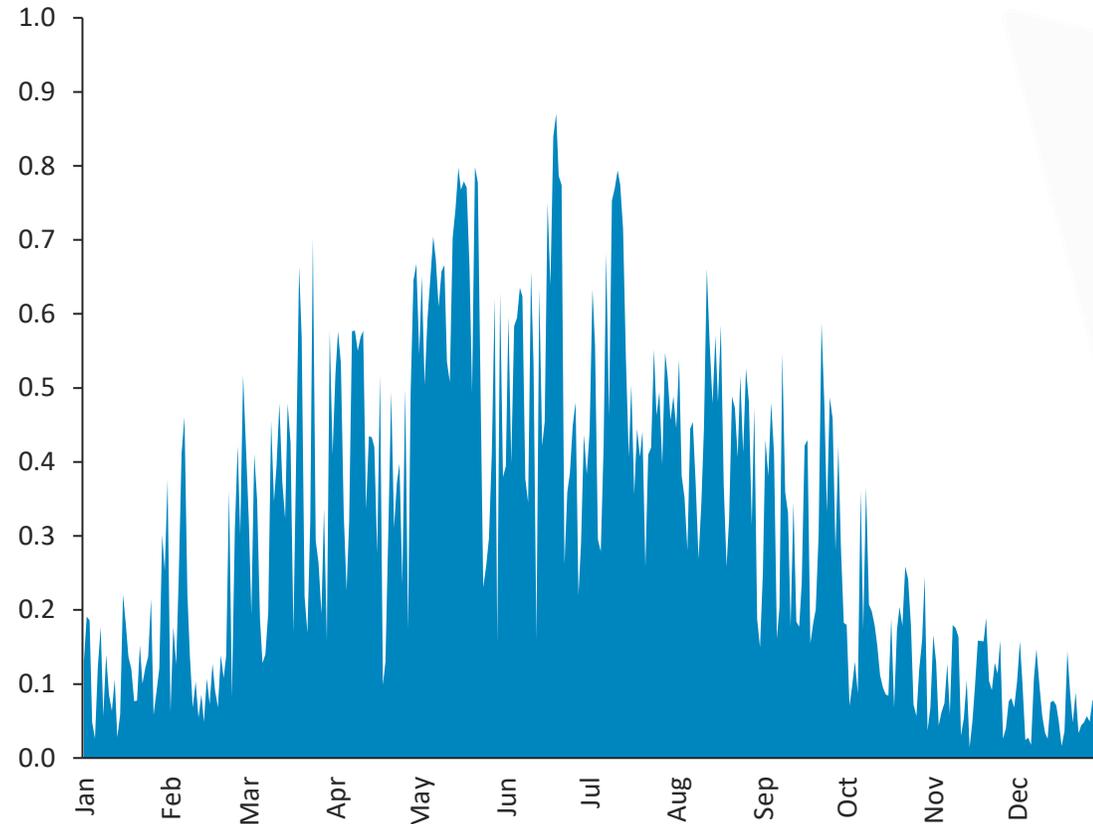
Note: 2 Northern Irish savings converted to euros for charts and overall 'SEM' figures.

Source: 1 [System and Renewable Data Reports](#), EirGrid.

Solar power reduced gas and carbon costs by an average of €16 million in each of the summer months of 2025

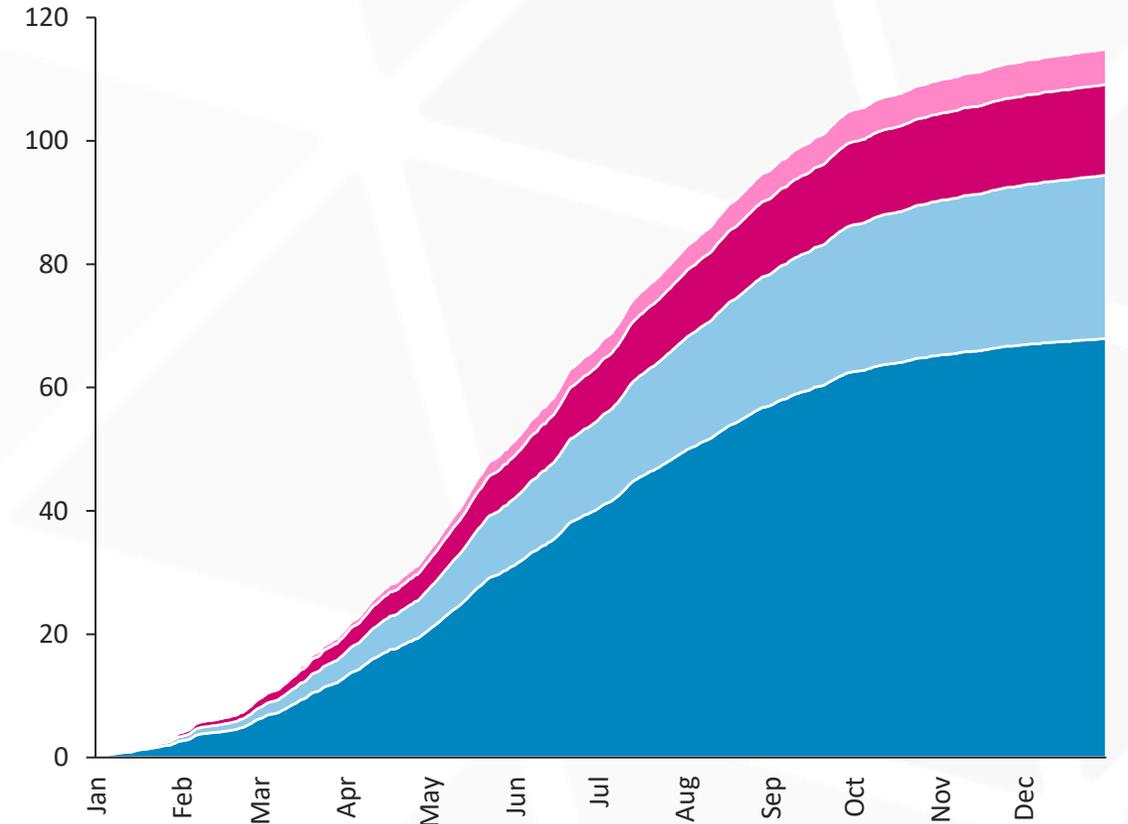
Daily Avoided Costs from Solar in 2025

€m, nominal



Cumulative Avoided Costs from Solar in 2025

€m, nominal

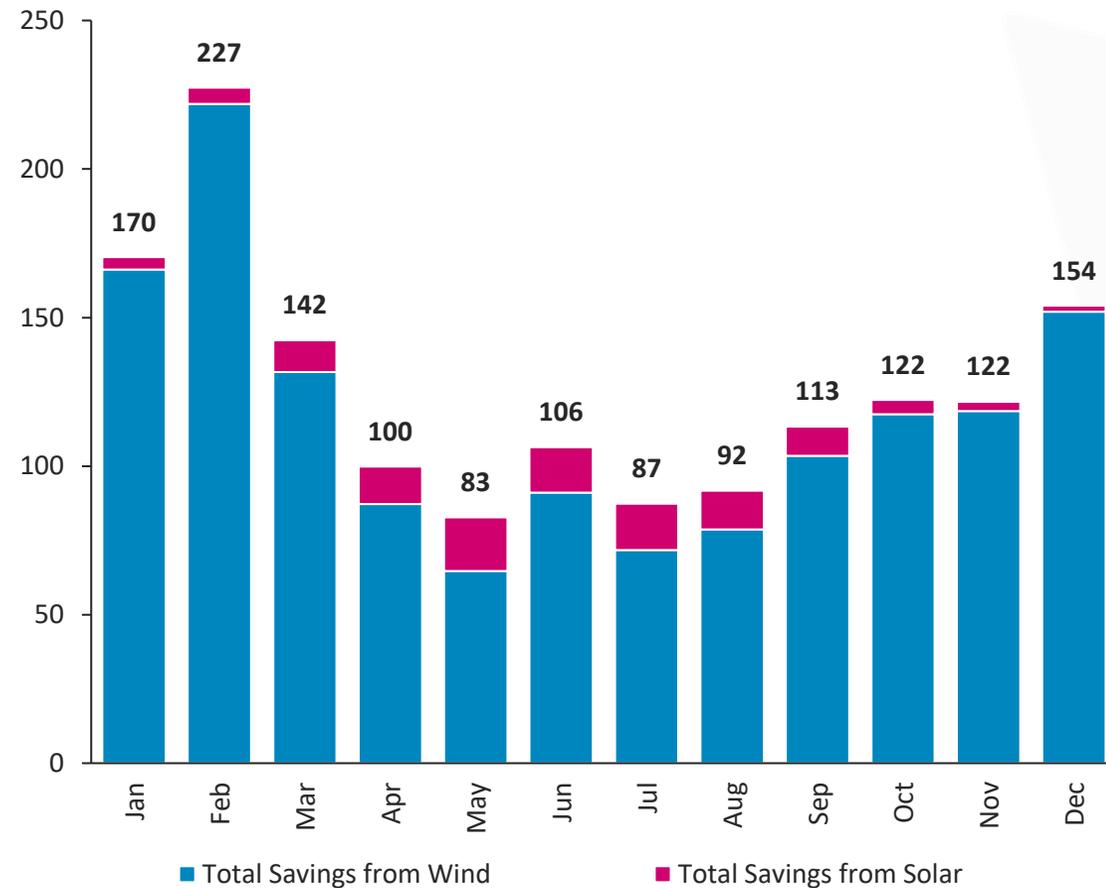


■ Ireland - Gas ■ Ireland - Carbon ■ Northern Ireland - Gas ■ Northern Ireland - Carbon

The combined generation from wind and solar farms across the island saved more than €1.5 billion of gas and carbon costs from consumers and operators

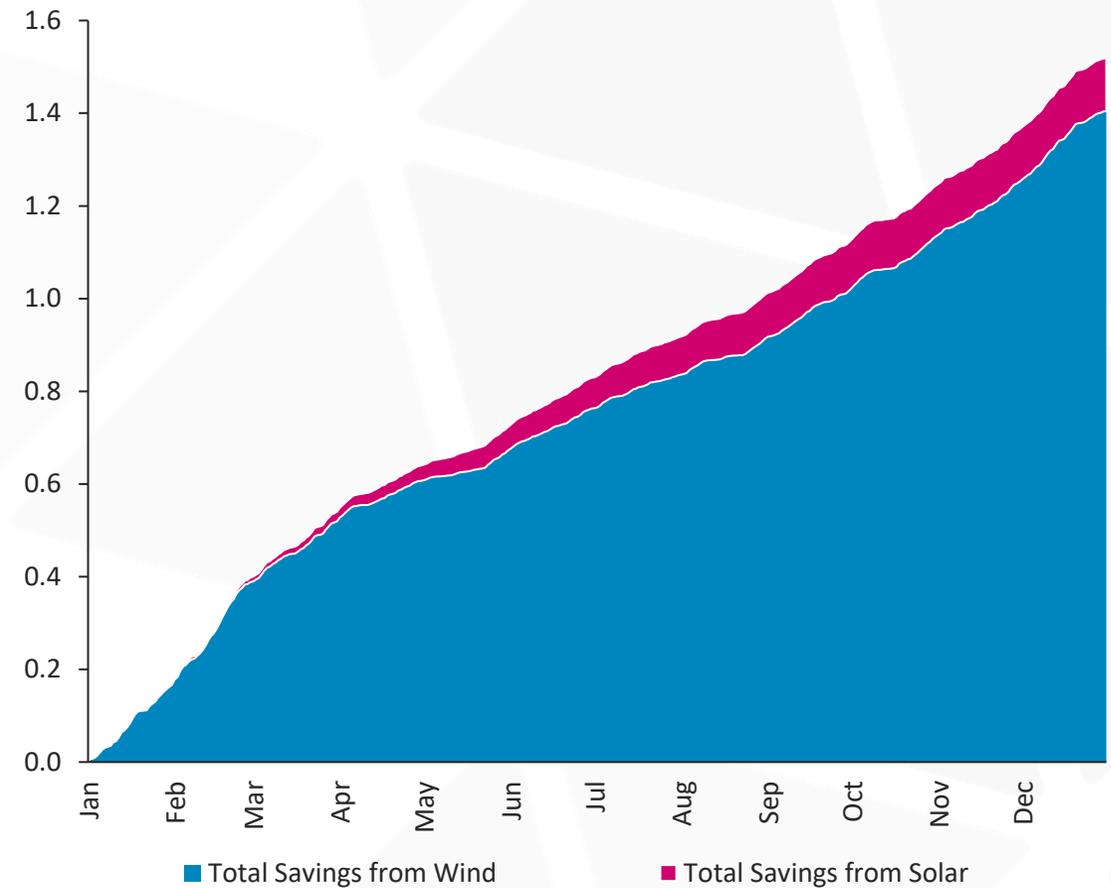
Monthly Avoided Costs from Wind and Solar in 2025

€m, nominal



Cumulative Avoided Costs from Wind and Solar in 2025

€bn, nominal



Cutting Carbon, Cutting Bills 2025

Tabulated Input Data and Results for Wind

Benefits of Wind Power in 2025 ¹	Unit	Jan-25	Feb-25	Mar-25	Apr-25	May-25	Jun-25	Jul-25	Aug-25	Sep-25	Oct-25	Nov-25	Dec-25	2025
Market Prices														
Day-ahead power price	€/MWh	168	141	132	111	108	95	100	96	95	101	123	108	115
NBP gas price	€/MWh	50	51	41	34	33	35	32	31	31	31	30	28	35
EUA carbon price	€/tCO ₂	78	78	70	65	71	73	71	72	76	79	81	85	75
Outturn Volumes														
Ireland demand	GWh	3,225	2,890	3,045	2,746	2,686	2,626	2,715	2,692	2,704	2,965	3,092	3,333	34,720
Northern Ireland demand	GWh	688	602	632	559	550	522	525	527	564	632	637	675	7,111
All-island wind generation	GWh	1,273	1,687	1,203	917	683	940	787	871	1,125	1,298	1,312	1,735	13,831
Avoided Costs in Ireland														
Value of displaced gas	€m	107	144	83	54	39	55	43	46	59	66	66	81	842
Value of displaced carbon	€m	31	41	26	19	15	21	18	20	27	32	33	46	328
Total avoided cost	€m	138	184	109	73	54	76	60	66	86	97	99	126	1,169
Avoided Costs in Northern Ireland														
Value of displaced gas	£m	19	24	14	9	6	9	7	8	10	12	12	14	145
Value of displaced carbon	£m	5	7	4	3	3	4	3	3	5	6	6	8	56
Total avoided cost	£m	24	31	19	12	9	13	10	11	15	18	17	22	201
Avoided Gas in Ireland														
Volume of displaced gas	bcm	0.20	0.27	0.19	0.15	0.11	0.15	0.13	0.14	0.18	0.21	0.21	0.28	2.22
Volume of displaced emissions	ktCO ₂	395	525	374	286	214	294	248	274	350	403	410	540	4,312
Avoided Gas in Northern Ireland														
Volume of displaced gas	bcm	0.04	0.06	0.04	0.03	0.02	0.03	0.02	0.03	0.04	0.04	0.04	0.06	0.45
Volume of displaced emissions	ktCO ₂	82	107	76	57	42	58	47	52	71	83	82	109	867

Note: 1 Figures rounded for presentational purposes.

Cutting Carbon, Cutting Bills 2025

Tabulated Input Data and Results for Solar

Benefits of Solar Power in 2025 ¹	Unit	Jan-25	Feb-25	Mar-25	Apr-25	May-25	Jun-25	Jul-25	Aug-25	Sep-25	Oct-25	Nov-25	Dec-25	2025
Market Prices														
Day-ahead power price	€/MWh	168	141	132	111	108	95	100	96	95	101	123	108	115
NBP gas price	€/MWh	50	51	41	34	33	35	32	31	31	31	30	28	35
EUA carbon price	€/tCO ₂	78	78	70	65	71	73	71	72	76	79	81	85	75
Outturn Volumes														
Ireland demand	GWh	3,225	2,890	3,045	2,746	2,686	2,626	2,715	2,692	2,704	2,965	3,092	3,333	34,720
Northern Ireland demand	GWh	688	602	632	559	550	522	525	527	564	632	637	675	7,111
All-island solar generation	GWh	31	43	96	135	194	156	171	144	107	52	34	23	1,187
Avoided Costs in Ireland														
Value of displaced gas	€m	2.6	3.5	6.6	7.6	10.6	9.1	9.2	7.6	5.6	2.7	1.7	1.1	68
Value of displaced carbon	€m	0.8	1.0	2.1	2.7	4.2	3.5	3.8	3.2	2.5	1.2	0.8	0.6	26
Total avoided cost	€m	3.4	4.5	8.7	10.3	14.8	12.6	13.0	10.8	8.1	3.9	2.5	1.7	94
Avoided Costs in Northern Ireland														
Value of displaced gas	£m	0.5	0.7	1.2	1.4	1.9	1.7	1.6	1.4	1.1	0.5	0.3	0.2	13
Value of displaced carbon	£m	0.1	0.2	0.4	0.5	0.8	0.6	0.7	0.6	0.5	0.3	0.2	0.1	5
Total avoided cost	£m	0.7	0.8	1.6	1.9	2.7	2.3	2.3	1.9	1.6	0.8	0.5	0.3	17
Avoided Gas in Ireland														
Volume of displaced gas	mcm	5	7	15	21	31	25	27	23	17	8	5	4	188
Volume of displaced emissions	ktCO ₂	10	13	30	42	60	48	53	45	33	16	10	7	366
Avoided Gas in Northern Ireland														
Volume of displaced gas	mcm	1	2	3	5	7	5	6	5	4	2	1	1	41
Volume of displaced emissions	ktCO ₂	2	3	7	9	13	10	11	9	7	4	2	1	79

Note: 1 Figures rounded for presentational purposes.

Contact



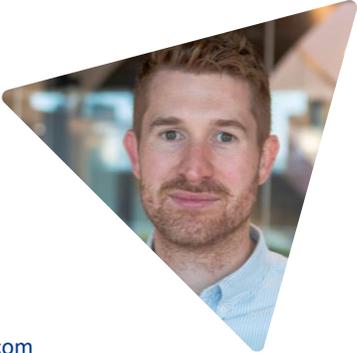
Connor Fraser
Senior Consultant

m +44 (0)7808 810 776
e connor.fraser@baringa.com



Alec Granville-Willett
Manager

m +44 (0)7948 687 254
e alec.granville-willett@baringa.com



Matthew Grant
Partner

m +44 (0)7878 755 644
e matthew.grant@baringa.com

Copyright

Copyright © Baringa Partners LLP 2026. All rights reserved.

No part of this document may be reproduced without the prior written permission of Baringa Partners LLP.

Limitation Statement

This document: (a) is proprietary to Baringa Partners LLP (“Baringa”) and should not be re-used for commercial purposes without Baringa’s consent; (b) shall not form part of any contract nor constitute acceptance or an offer capable of acceptance; (c) excludes all conditions and warranties whether express or implied by statute, law or otherwise; (d) places no responsibility or liability on Baringa or its group companies for any inaccuracy, incompleteness or error herein; and (e) the reliance upon its content shall be at user’s own risk and responsibility. If any of these terms is invalid or unenforceable, the continuation in full force and effect of the remainder will not be prejudiced.





Baringa

Cutting Carbon, Cutting Bills 2025 | The savings from displacement of gas by wind and solar farms