Solar PV in Ireland

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About

Power Capital Renewable Energy – established in 2011

Specialist in solar energy development and investment

Developed a range of photovoltaic projects including rooftop and ground mounted systems across,

Germany, the UK and Ireland
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Ireland's Energy Mix 2017

![Energy Mix Pie Chart](image-url)
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How solar PV works

The **PV Modules** converts daylight into direct current (DC) electricity by means of the Photoelectric effect. This DC is then fed into an **inverter**, that converts this DC into Alternating Current (AC).
Construction methods

Utility scale

PV utility-scale installations can be any of the following:

- Fixed
- Tracking
- Floating
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Construction methods

**Roof top**

PV roof top installations are generally either ballasted or fixed:

- **Flat roof**

- **Sloped roof**
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Construction methods

Key considerations in design

- Orientation & inclination
- Shading
- Equipment
- Live & Static loads and structural effects
- Condition of roof membrane
- Cable routes
- Health & Safety
- Planning permission
- Grid connection
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Global Solar market

In 2017 **99 GW** of PV systems were installed globally.
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European Solar market

FIGURE 7: SHARE OF SOLAR ELECTRICITY DEMAND COVERED BY SOLAR PV IN EUROPEAN COUNTRIES IN 2015

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Ireland’s late mover advantage

Unlike other countries, very little solar PV has been deployed in Ireland to date, due in part to the absence of direct support mechanisms such as REFITs, CFDs or PPAs.

Ireland has a ‘late mover advantage’:
- Advances made in the technology and cost reductions
- Planning and installation best practices
- Familiarity of financial institutions with the asset class
- Properly designed support mechanisms from the outset

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Business case for solar in Ireland

Why solar should be considered as an essential part of Ireland’s renewable energy mix:

- Rapid deployment to assist in meeting 2020 targets
- Over 6GW has applied for a grid connection
- Over 1GW has been submitted for planning permission
- Suitable irradiation levels
- Positives benefits vs cost
- Corporate Social Responsibility
- Positive public perception
- The UK has installed circa 14 GW since 2012
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Business case for solar in Ireland

Suitable irradiation levels

While it is commonly believed that the poor Irish weather limits the potential of solar power, the solar radiation in Wexford is 78% of the level enjoyed in France, and is equivalent to the levels found in the UK. Plus, the moderate temperatures contribute to increase the efficiency of the modules.
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Positives benefits vs costs

The cost of solar modules in Europe has fallen by circa 60% since 2011, standing currently at €0.30 > €0.35/W.

This contrasts heavily with energy prices in Ireland, which have increased by 27% in the same period.

Both trends are bound to continue in the following years, with grid parity on Solar PV expected no later than 2025.
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Positives benefits vs costs

Solar PV levelised costs in Ireland, 2017-2030

Irish electricity price projections, 2017-2030

Source: KPMG, SEAL, DECC
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Business case for solar in Ireland

Corporate Social Responsibility

Solar PV can help business address Corporate Social Responsibility requirements (CSR). The CSR agenda strongly differentiates companies from their competitors and is something we are seeing being imposed down their supply chain.

Regarding households, PV can help a new dwelling comply with the renewables requirement in Part L of the Building Regulations.

Home owners can feed back energy into the network and get paid for it by installing Solar PV on their roof.
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Business case for solar in Ireland

Positive public perception

Solar energy continues to grow in popularity due to:
- Limited or no Landscape Visual Impact
- Little or no noise pollution
- Compatibility with agricultural activity such as grazing
- Little or no concrete is used in solar farm construction.
- Land can be restored in often better condition with enhanced biodiversity
What has Power Capital been working on?

- Partnered with Encavis (Capital Stage AG)
- IPP Holding 1.6GW of Wind and Solar
- Flexible funding arrangement
- Experience in PPA’s
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What has Power Capital been working on?

- 180MW Pipeline
- 120MW with Planning Granted
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Thank you