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Commercial Solar PV Fit
Outs

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30 YEAR PERFORMANCE GUARANTEE

30 YEAR PRODUCT GUARANTEE

Case Study

St. Columba’s College,
Rathfarnham, Dublin 16.

Solar PV Case Study

St. Columba's College.

Location: Rathfarnham, Dublin 16
Client Type: Educational Institution
Sector: Sustainability & Renewable Energy
Work Completed: March 2024

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Project Overview

- 280 kWp solar PV system installed on the sports hall roof.
- 140 kWp south-facing, 140 kWp north-facing.
- Planning not required.
- Installation duration 3 weeks (inc. groundworks).
- Annual generation: 200,000 kWh (data from last 12 months)
- Yield: 714 kWh per kWp
- School annual electricity use: approx. 300,000 kWh
- Self-consumed: ~80% | Exported to grid: ~20%
- SEAI Grant Received: €54,600
- Estimated CO_2 savings: ~47 tonnes/year

Financial Summary

Item	Value
Import Tariff	€0.25/kWh
Export Tariff	€0.18/kWh
Self-Consumed Energy (160 MWh)	~€40,000 savings
Exported Energy (40 MWh)	~€7,200 revenue
Total Year Benefit	~€47,200
Payback	~4.5 Years

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Technical Highlights

- 3 x Solis 60 KVa Inverters
- 670 x Longi 420 Wp Solar modules
- K2 Mounting System
- Dual 100m cable runs (95 mm^2) & comms from solar plant room to ESB incoming
- Fully integrated G10 interface protection system
- Witness tested and 100% ESB compliant
- Grid Connected via Small Scale Gen Scheme (SSG)
- Real-time mobile monitoring app
- Live data integration with Building Management System (BMS)

Sustainability Impact

This solar project enables St. Columba's College to dramatically reduce its carbon footprint, create long-term energy savings, and serve as a real-life educational resource for students learning about renewable energy and sustainability.

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Live Monitoring & Education

- Solar performance can be viewed in real time via smartphone
- Data is fed directly into the school's energy dashboard
- Enhances learning in subjects like science, geography, and CSPE

Why It Matters for Your School or Business

- Lower energy bills from day one
- Reduced exposure to rising energy costs
- Environmental leadership and educational value
- Grant funding available to lower investment cost
- Proven, compliant, and scalable solar design

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Final Operational Notification - SSG

Details

This Operational Notification applies to Power Generation Modules [PGMs], which may be Synchronous Power Generation Modules [SPGMs] or Power Park Modules [PPMs], where Embedded Generation Interface Protection [EGIP] is owned by the customer and the operation of which, is witnessed by ESBN.

This Operational Notification applies only to Small Scale Generation (SSG).

Date of Final Operational Notification [FON]			23/01/2024	
Generator site name			St. Columba's College	
Generator site address			Rathfarnham, Dublin 16, D16 CH92	
Power Generation Facility Owner [PGFO]			St. Columba's College	
MPRN			10000030401	
Connection Agreement (CA) number			6007886977	
Synchronous Power Generation Module [SPGM]	1	Generator name or designation [if any]		
		Generator Type		
		Generator Size		kVA
	2	Generator name or designation [if any]		
		Generator Type		
		Generator Size		kVA
Power Park Module [PPM]	Generator Type		Solar	
	Total Installed Capacity (Embedded Generation)		140	kVA

Total Installed Inverter Capacity	120	kVA
Total MEC	120	kVA

FON Justification

It is hereby confirmed that in respect of the generator(s) above, the following requirements have been met:

1. NC5/NC8 form received and deemed to be technically complete
2. Detailed site layout provided
3. Detailed SLD with G10/EGIP relays, CT/VT locations and both primary and secondary CB locations, protection relay type, provided

Collectively, these are deemed to comprise and satisfy the Power Generation Module Document [PGMD] requirements as stipulated in Commission Regulation (EU) 2016/631 of 14 April 2016 establishing a network code on requirements for grid connection of generators (RfG).

It is further confirmed that satisfactory and complete operation of the Embedded Generation Interface Protection [EGIP], has been witnessed by ESB Networks.

ESBN Technical representative name	Jonathan O Rourke
Name of OEM/Agent/Supplier who carried out testing	Gary McKibben
Date of tests	22/11/2023

FON

On the basis of all of the above and undertakings that are implicit in the execution of the Connection Agreement, to comply with applicable Distribution Code requirements, it is hereby confirmed that it is in order for operation of the generators above to commence.

Issued on behalf of ESB Networks