

Invest NI Energy Efficiency Capital Grant Scheme

EECG Example Application



Overview

This document demonstrates how the section **Proposed projects** should be completed. The figures displayed within the application should align with those your Cost & Carbon Calculator.

Please note figures used are fictional and are used only as an example, any costs mentioned below are not taken from current market rates for the technology or electricity rates.

Project 1 - Solar PV System (Renewable Technology)

Main Objectives

We wish to install a 50kWp Solar System consisting of 119no. of 420W Panels & 1no. 40kW Inverter at a cost of £45,000 excl VAT. The aim of this installation is to make the business more energy efficient in its use of electricity. We plan to apply to NIE Networks for a Zero Export G99/NI connection, this will allow of us to utilize most of the energy generated onsite.

Our opening running hours are Monday to Friday 9am – 5pm, closed at the weekend.

We have our own premises with its own metered electricity connection and are currently paying business rates.

Energy Efficiency Solution

As per our supplier's project proposal document, the 50kWp PV system can generate approximately 40,000kWh of electricity per year, of this we will self-consume 35,000kWh. This results in a self-consumption rate of 87.5%.

Current Consumption

Our current consumption is 180,000kWh per year from mains electricity, this figure has been calculated using 12 months of electricity bills from the period May 2025 to May 2026. Our process onsite consists of robotic welders, CNC machines and electric forklifts & chargers and office equipment, all of which operates throughout the day consistently. The cost of this is $180,000\text{kWh} \times £0.25 = £45,000$. As included in the cost and carbon calculator attached, this creates 58.14 tonnes of CO₂/yr.

Future Consumption

Once the Solar PV System is operational, we will be able to consume 35,000kWh of generated electricity, resulting in our mains electricity usage reducing to $180,000\text{kWh} - 35,000\text{kWh} = 145,000\text{kWh}$. Costs reduce to $145,000\text{kWh} \times £0.25 = £36,250$ and carbon emissions reduce to 46.84 tCO₂/yr.

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Projected Savings

The project will generate significant savings for the company. Using the Invest NI Carbon Calculator we calculated that;

Electricity – (£45,000 – £36,250) = £8,750.

Carbon – (58.24 tCO₂/yr – 46.84 tCO₂/yr) = 11.31 tCO₂/yr or a 19.44% saving.

Payback is calculated to be 5.14 years.

Project 2 - LED Lighting (Energy Efficiency)

Main Objectives

We wish to upgrade our current Halogen bulb lights across the facility with new LED lights with a capital cost of £6,000 excl VAT. The aim of this installation is to make the business more energy efficient in its use of electricity. Our opening running hours are Monday to Friday 9am – 5pm, closed at the weekend.

We have our own premises with its own metered electricity connection and are currently paying business rates.

Energy Efficiency Solution

We currently have 60x Halogen light bulbs across the factory & office floor space, we have checked the rating of the existing bulbs, compared with the new LEDs and will be able to generate savings with the upgrade.

Current Consumption

Our current consumption from lighting is 7,438kWh per year which comes from mains electricity, this figure has been calculated using the existing light rating and running hours. We use the lights across the factory on average 8 hours a day and in the office 10 hours a day, with a 245 working days year.

Factory - 48x 65W Bulbs = 3,120W x (8hrs x 245) 1,960hrs / 1,000 = 6,115kWh

Office – 12x 45W Bulbs = 540W x (10hrs x 245) 2,450hrs / 1,000 = 1,323kWh

Electricity cost is £0.25 per unit, therefore 7438.2kWh x £0.25 = £1,859.55

With an annual carbon emission of 2.4 tCO₂/yr

Future Consumption

Running hours of the lights will remain the same and using the new ratings for the LEDs we have calculated that we will only use 3,850kWh of mains electricity.

Factory - 48x 35W LED = 1,680W x (8hrs x 245) 1,960hrs / 1,000 = 3,292kWh

Office – 12x 19W LED = 228W x (10hrs x 245) 2,450hrs / 1,000 = 558 kWh

Electricity cost is £0.25 per unit, therefore 3,850kWh x £0.25 = £962.50

With an annual carbon emission of 1.24 tCO₂/yr



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Projected Savings

The project will generate significant savings for the company. Using the Invest NI Carbon Calculator we calculated that annually we will save;

Electricity – ($£1,859.55 - £962.50$) = $£897.05$.

Carbon – ($2.4 \text{ tCO}_2/\text{yr} - 1.24 \text{ tCO}_2/\text{yr}$) = $1.16 \text{ tCO}_2/\text{yr}$ or a 48.24% saving.

Payback is calculated to be 6.69years.

