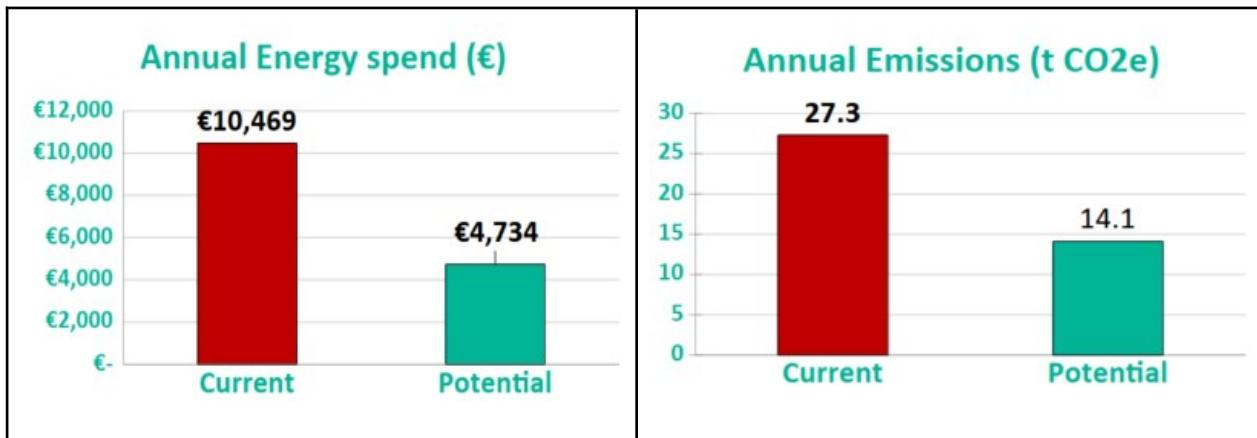


# For: Spanish Point Golf Club, Spanish Point, Co. Clare



	Current	Potential
<b>Energy management</b>	★★	★★★★★
<b>Building fabric</b>	★★★	★★★★
<b>Building services</b>	★★★	★★★★
<b>Manufacturing &amp; processing equipment</b>	★★	★★★★
<b>Manufacturing &amp; processing controls</b>	★	★★★
<b>Use of renewables</b>	★	★★★★

## Energy & Emissions



## Recommended actions

Description	Energy saved (€)	Emissions reduction (t CO2e per year)	Cost of Action (€)	Payback period (years)	First Steps
18 kW Solar PV system	€4,176	5.26	€19,000	4.6	<a href="#">* Request Quotes</a> <a href="#">* Apply to SEAI</a>
Cavity pumping of all external walls	€325	0.92	€2,100	6.5	<a href="#">* Engage with a Project Coordinator</a>
Improve attic insulation in all areas	€325	0.92	€3,150	9.7	<a href="#">* Engage with a Project Coordinator</a>
Pump the cavity in two internal walls	€162	0.46	€1,085	6.7	<a href="#">* Engage with a Project Coordinator</a>
Coal Stove to replace open fire	€520	6.27	€1,200	2.3	<a href="#">* Engage with a Project Coordinator</a>
Replace inefficient bar equipment	€496	0.56	€1,250	2.5	<a href="#">* Engage with LEO</a>
Improve electricity monitoring	€496	0.56	€375	0.8	<a href="#">* Engage with LEO</a>
<b>Total</b>	<b>€6,499.27</b>	<b>14.9 tCO2e</b>	<b>€28,160</b>	<b>NA</b>	

# Support Scheme for Energy Audits (SSEA)

## Energy Audit Report



## Contents

1	Site description.....	4
2	What fuels do you use?.....	5
2.1	Site energy consumption summary.....	6
3	Understanding your energy bills.....	6
3.1	Bills analysis summary.....	6
3.2	Monthly trends in energy use.....	7
3.3	Monthly trends summary.....	7
4	Electricity, heat and transport.....	8
4.1	Where is your money going.....	8
5	Energy Management.....	9
6	Electricity, heat and transport.....	10
6.1	Actions already taken.....	10
6.2	Recommended actions to save energy.....	10
	Renewable Energy – heating.....	10
	Renewable Energy – photovoltaics (solar).....	11
	Study of Solar PV suitability and sizing.....	11
6.3	Recommended actions.....	13
	Appendix A – Site tour checklist.....	15
	Appendix B – Benchmarking.....	16
	Appendix C – Energy Management matrix.....	17
	Appendix D – Renewable Heat Assessment.....	18
	Appendix E – Solar photovoltaic assessment.....	20
	Appendix F – Glossary of terms.....	21
	Appendix G – Completion of Works form.....	22

## Index of Tables

Table 1: Site Information.....	4
Table 2: Visit Information.....	4
Table 3: Energy consumption on-site.....	5
Table 4: Energy bills analysis.....	6
Table 5: Significant Electrical Energy Users.....	8
Table 6: Significant Thermal Energy users.....	8
Table 7: Significant Transport Energy User.....	8
Table 8: Energy management scores.....	9
Table 9: Actions already taken.....	10
Table 10: Impact of Renewable Heat.....	10
Table 11: Impact of Solar PV system.....	11
Table 12: Recommended Actions.....	14
Table 13: Site tour checklist.....	15
Table 14: Overall benchmarking.....	16
Table 15: Renewable Heat Assessment.....	18
Table 16: Suitability for biomass.....	19

## Table of Figures

Figure 1: Breakdown of costs, emissions and energy usage.....	5
Figure 2: Monthly trends in energy usage.....	7
Figure 3: Proposed location of Solar PV system.....	11
Figure 4: Potential production from 18 kW Solar PV system.....	12

## 1 Site description

This section provides an overview of your site and key information about the visit. A site tour checklist is provided in Appendix A.

Organisation name	Spanish Point Golf Club
Site address	Spanish Point
County	Co. Clare
Eircode	V95RP28
Useful floor area (m2)	286
No. of personnel working at site	2
Is shift work carried out onsite?	No
Size of company fleet (no. of vehicles)	0
Typical operating hours per year	3276
Sector	Other Service Activities - please specify in comments
Build date (estimate if necessary)	1980 - 1989
Facility owned or leased	Owned

Table 1: Site Information

SEAI Application ID	TBC
Site Visit Date	2025/05 TBC
MPRN Number	10008808969
GPRN Number	NA
Site Contact name	MERVIN HEHIR
Site Contact job title	GENERAL MANAGER
Energy Auditor name	Colm Garvey
Energy Auditor company	Clare Community Energy Agency
Comments	Community Golf Club

Table 2: Visit Information

## 2 What fuels do you use?

A breakdown of the different types of energy used at your site is shown below in Table 2a. The table below shows you where your business's energy comes from: the annual cost, how much you use in kilowatt hours (kWh) and how many tonnes of CO<sub>2</sub> emissions it generates each year. The information has been taken from your energy bills which is the most accurate source.

Reference Period: 01/2024-12/2024				
Energy source	Annual Cost (€)	Annual Use (kWh)	Annual Emissions (t CO <sub>2</sub> e)	Information source
Oil - Fuel Oil	€3,248.52	33558 kWh	9.2 tCO <sub>2</sub> e	Bill
Electricity – Grid	€6,180.87	17168 kWh	5.6 tCO <sub>2</sub> e	Bill
Coal	€1,039.50	36798 kWh	12.5 tCO <sub>2</sub> e	Bill
<b>Total</b>	<b>€10,468.89</b>	<b>87524 kWh</b>	<b>27.3 tCO<sub>2</sub>e</b>	

Table 3: Energy consumption on-site

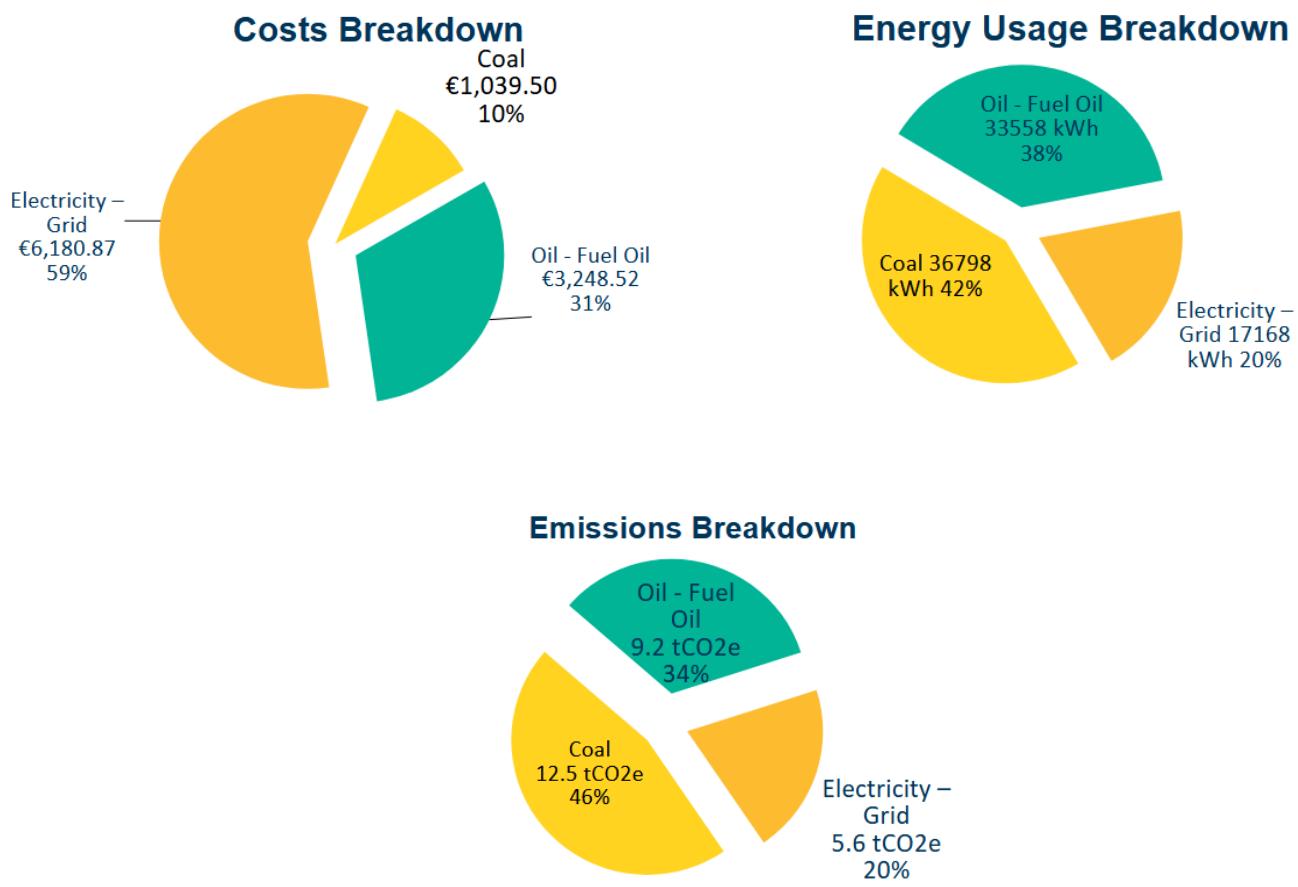


Figure 1: Breakdown of costs, emissions and energy usage

## 2.1 Site energy consumption summary

These graphs illustrate the information from the table above. You may find them useful when making your business case for investing in energy management measures.

## 3 Understanding your energy bills

The auditor analysed your energy bills to determine whether there are easy changes you can make to help you save money.

	Yes/No	Comments
Is the client on an appropriate tariff/tariffs?	Yes	24 hr rate with Bord Gais
Is max import capacity correct for client's requirements?	Yes	
Are there any other penalties?	No	
Comment on day/night/weekend profiles		24 hr rate suits the usage of the club i.e. no major variation on weekends during busiest season.
Comment on any trends or anomalies in the data		Data is good quality, all taken from actual or customer readings, i.e. no estimates
Has the client switched their electricity and/or gas contracts in the past 2 years?		Yes.
Any other comments		Should continue to review prices via brokers every 6 months

Table 4: Energy bills analysis

## 3.1 Bills analysis summary

- The club is very sensitive to energy use and the associated cost/emissions.
- All data is of good quality as the club has provided detailed bills, actual or customer for the full period.
- Cost / kWh has stabilised over the last 12 months ( around 26c/kWh ex VAT) so it would be recommended to review this on a 6 monthly basis.

### 3.2 Monthly trends in energy use

Your energy use changes over the course of the year, for example your use of diesel will be higher when floodlighting is used. Figure 2 shows the trends in use for Electricity, Oil & Coal.

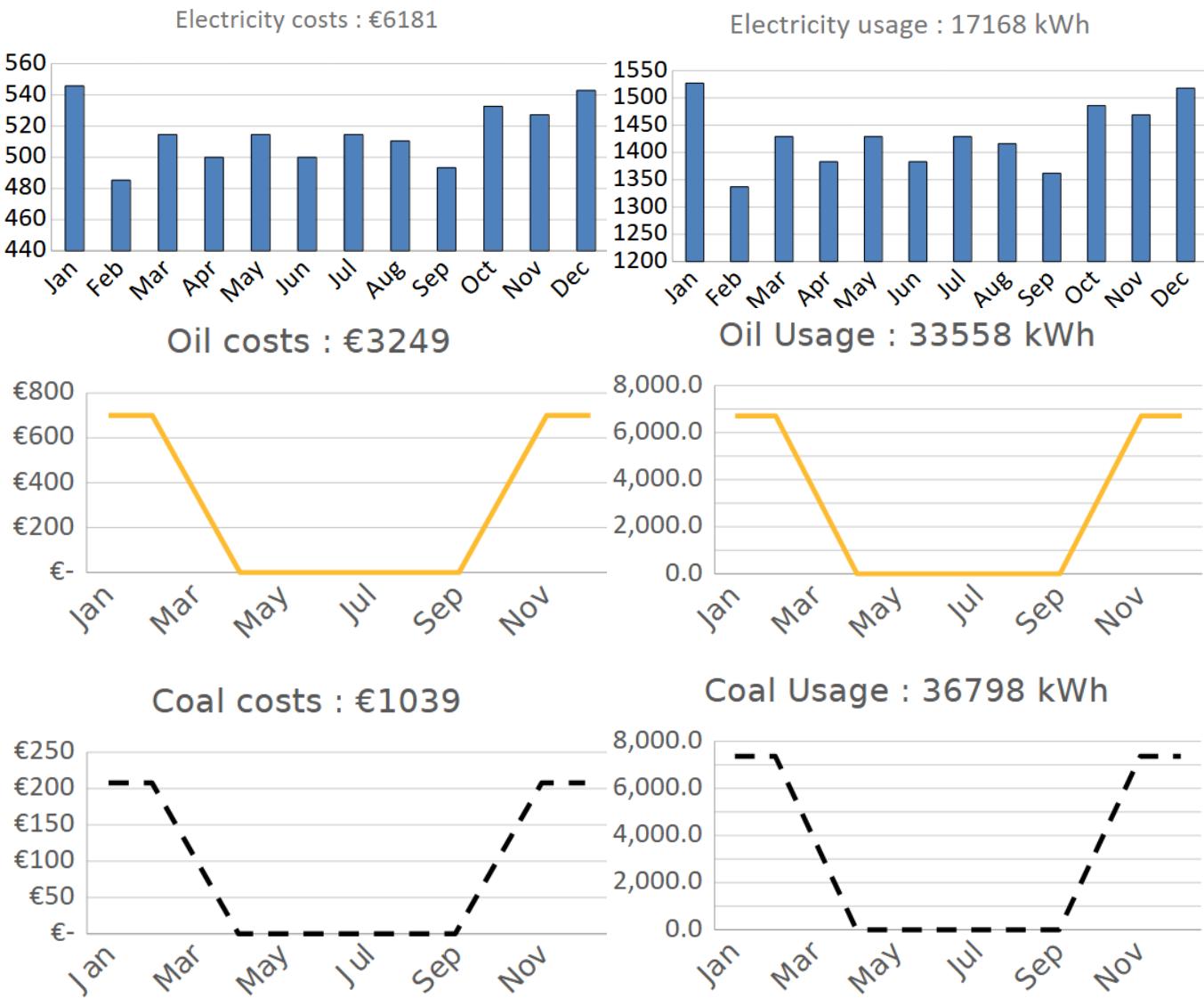


Figure 2: Monthly trends in energy usage

### 3.3 Monthly trends summary

- The electricity monthly usage figures are of good quality, i.e. no estimates, and track the expected usage levels in the club. The air-to-air heatpump in the Trackman section of the building increase electricity load in winter months as to be expected.
- The oil usage is managed manually according to level of business and conditions. The monthly figures are estimates based on overall annual usage.
- The coal usage is in an open fire which is lit according to conditions. The coal fire is often used for the visual appeal as much as the actual heat provided and as such may be used over summer months as well, depending on conditions. In the chart we have portrayed winter usage similarly to oil.

## 4 Electricity, heat and transport

The most significant electricity, thermal (heat) and transport energy users at your site have been identified and are listed below.

Energy User	Cost per yr (€)	Usage per yr (kWh)	Usage (% of total)	Emissions per yr (t CO2e)	Comments
Bar equipment	€2,781.39	7,726 kWh	45.0%	2.5 tCO2e	Coffee machine, dishwasher, ice machine, coolers etc.
Air to air heatpump	€1,545.22	4,292 kWh	25.0%	1.4 tCO2e	No detailed information is available per electricity user. Figures based on discussion with the management.
Lighting	€618.09	1,717 kWh	10.0%	0.6 tCO2e	As above
Supplementary hot water	€1,236.17	3,434 kWh	20.0%	1.1 tCO2e	As above
<b>Total</b>	<b>€6,180.87</b>	<b>17,168 kWh</b>	<b>100.00%</b>	<b>5.6 tCO2e</b>	

Table 5: Significant Electrical Energy Users

Energy User	Cost per yr (€)	Usage per yr (kWh)	Usage (% of total)	Emissions per yr (t CO2e)	Comments
Space Heating	€2,598.82	26,846 kWh	80.0%	6.2 tCO2e	No detailed breakdown available
Hot water requirements	€649.70	6,712 kWh	20.0%	1.5 tCO2e	As above
<b>Total</b>	<b>€3,248.52</b>	<b>33,558 kWh</b>	<b>100.00%</b>	<b>6.7 tCO2e</b>	

Table 6: Significant Thermal Energy users

Vehicle type	Number of vehicles	Fuel type	Fuel cost per yr (€)	Usage per yr (litres)	Usage per yr (kWh)	Emissions per yr (t CO2e )	Usage (% of total)
No vehicles							
Total	-		€	0	0	0	0%

Table 7: Significant Transport Energy User

### 4.1 Where is your money going

- The bar operations are clearly the higher cost activity in the club.
- A number of bar equipment items are nearing end of life and would be excellent candidates for replacement for more efficient models.

## 5 Energy Management

The aim of Energy Management is to reduce energy use and improve energy efficiency. A structured approach to energy management that includes every aspect of an organisation – including finance, human resources, maintenance, purchasing and planning – is more likely to achieve significant, long-term savings than an unstructured, ad hoc approach.

An “energy management diagnostic” was carried out at your site. The purpose of the diagnostic is to assess your organisation’s approach to energy management, looking at 6 aspects of energy management and ranking each on a scale from 0 – 4.

Aspect of Energy Management	Description	Your score
<b>Energy Policy</b>	Whether your business has an energy policy, and the level of commitment to it	1
<b>Organisation</b>	The extent to which energy management is supported by senior management	1
<b>Communication</b>	How, and how often, staff are informed about energy issues	2
<b>Information systems</b>	How your business monitors energy consumption	0
<b>Marketing</b>	How staff are made aware of the benefits of energy management	3
<b>Investment</b>	How your business makes decisions around investing in energy efficiency	4

*Table 8: Energy management scores*

To view the complete diagnostic showing the various levels, please refer to Appendix B.

## 6 Electricity, heat and transport

### 6.1 Actions already taken

In the years leading before this energy audit, a number of energy efficiency actions have already been taken in order to reduce energy usage in the club.

Completed actions	Estimated impact (kWh)	Comments
Attic insulation, 6 inches	NA, no reference	Focus on increasing efficiency
Oil boiler replaced in 2024	NA, no reference	Focus on increasing efficiency
Windows resealed and hinges revised in 2024	NA, no reference	Focus on increasing efficiency
Replaced radiators in bar area in 2024	NA, no reference	Focus on increasing efficiency

Table 9: Actions already taken

### 6.2 Recommended actions to save energy

Your Auditor reviewed potential actions that your organisation can take to improve energy efficiency and generate renewable energy at your facility (specifically, through heat pumps, biomass, and photovoltaics). A list of actions is provided in Table 6a. Many organisations are interested in opportunities for generating renewable energy. A summary of your facility's suitability for both renewable heating and renewable electricity (solar) is provided below and in Appendices D and E.

#### Renewable Energy – heating

SEAI's Support Scheme for Renewable Heat supports renewable heating in businesses by offering a grant for heat pumps and a tariff for biomass/biogas boilers and CHP. As part of this audit, the auditor assessed your facility's suitability for converting to renewable heat. A brief summary of this assessment is provided below. The complete renewable heat assessment tool may be found in Appendix D. Further information about the scheme may be found on the website<sup>1</sup> or by emailing [SSRH@seai.ie](mailto:SSRH@seai.ie)

Summary of facility's suitability for renewable heat: **SUITABLE**

Overall suitability of the facility for renewable heat.	If the recommended actions to upgrade the building fabric are carried out, then the club would be a good candidate for an air to water heatpump
---------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------

If facility is suitable for renewable heat:	
Estimated annual kWh savings	33558
Type of energy saved	Oil
Estimated emissions saved (tCO2e)	9.18

Table 10: Impact of Renewable Heat

<sup>1</sup> <https://www.seai.ie/business-and-public-sector/business-grants-and-supports/support-scheme-renewable-heat/>

## Renewable Energy – photovoltaics (solar)

Photovoltaics generate electricity using solar energy from the sun, providing a completely renewable, clean source of electrical energy. As part of this audit, the auditor assessed your facility's suitability for generating electricity from solar energy. A brief summary of this assessment is provided below. The complete photovoltaic assessment tool may be found in Appendix E.

Summary of facility's suitability for photovoltaics: **SUITABLE**

Overall suitability of the facility for expanded Solar PV system.	The golf club is an excellent candidate for an 18 kW Solar PV system.
-------------------------------------------------------------------	-----------------------------------------------------------------------

### Impact of solar PV:

If facility is suitable for expanded solar PV:	
Estimated annual kWh savings (only from PV)	10,800
Estimated emissions saved (tCO2e)	3.50

Table 11: Impact of Solar PV system

### Study of Solar PV suitability and sizing

- the area highlighted in yellow in Figure 3 would allow for a potential 18 kW Solar PV system.
- We would recommend an **18 kW system**, given the current usage of the club.
- Given the location/orientation of the roof this would produce **16790 kWh per year** ([taken from this online calculator](#))
- This is very close to the total electricity usage of the club currently.
- Recommendation summary
  - Solar PV System size : 18 kW
  - Battery size : 20 kWh
- Quotes for such a Solar PV system can be requested from any of the [registered SEAI installers](#).

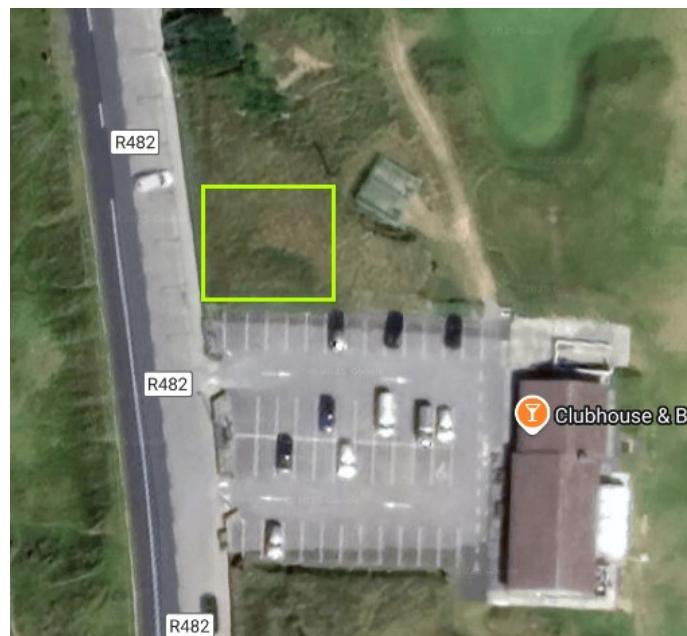


Figure 3: Proposed location of Solar PV system

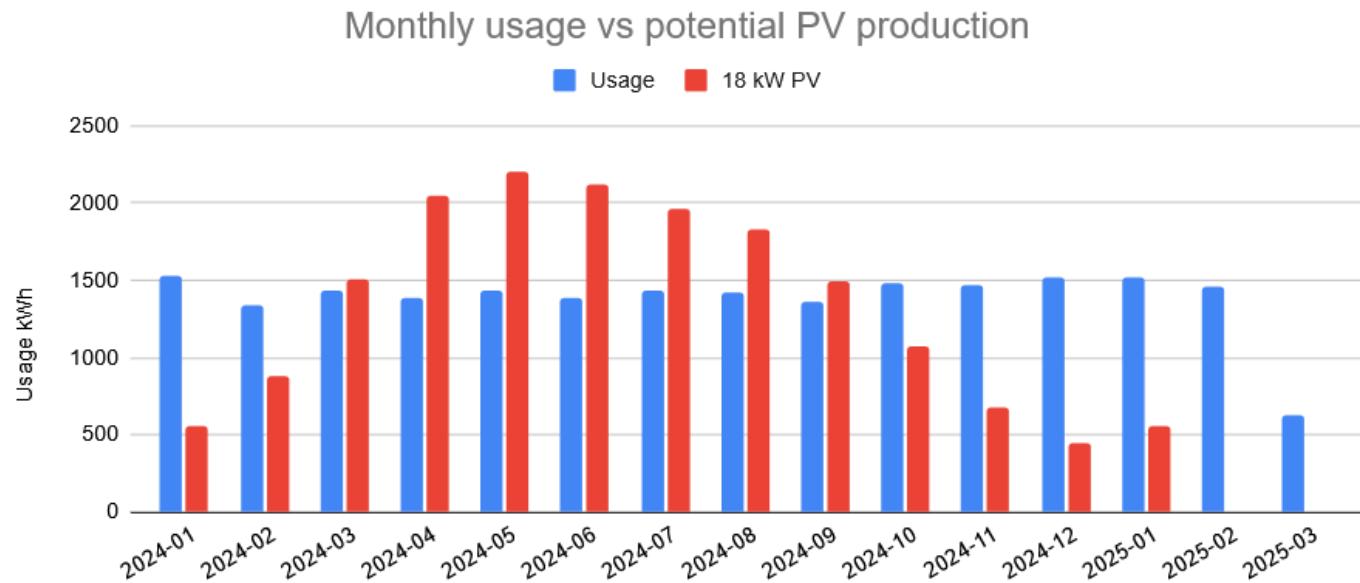


Figure 4: Potential production from 18 kW Solar PV system

### 6.3 Recommended actions

Your auditor has identified the top actions you should take to improve the energy efficiency of your site and save on your energy costs. These actions are listed in Table 6d below.

Description	Energy savings (kWh per yr)	Type of energy saved	Cost savings (€ per yr)	Emissions reduction (t CO <sub>2</sub> e per yr)	Estimated cost of action (€)	Payback period (years)	Potential supports	Comments / Additional info	First Steps
18 kW Solar PV system	16,200	Electricity – Grid	€4,176	5.26	€19,000	4.6	Microgeneration scheme	<ul style="list-style-type: none"> <li>* Assuming the system is an 18 kW of PV panels plus a 20 kWh battery system</li> <li>* Assuming a cost of ~€25k ex. Vat for a 18 kW system + 20kWh of batteries</li> <li>* Assuming an SEAI grant of €4200</li> <li>* Assuming that 65% of PV production is used in the club( saving ~29c/kWh)</li> <li>* Assume the remaining PV production is exported at 20c/kWh</li> </ul>	<a href="#">* Request Quotes</a> <a href="#">* Apply to SEAI</a>
Cavity pumping of all external walls	3,356	Oil - Fuel Oil	€325	0.92	€2,100	6.5	Community grant	<ul style="list-style-type: none"> <li>* Assuming a 10% reduction in kWh for heating</li> <li>* Assuming 200m<sup>2</sup> of cavity wall to be pumped @ €15/m<sup>2</sup></li> <li>* Assume 30% funding from Community Grant scheme as worst case</li> </ul>	<a href="#">* Engage with a Project Coordinator</a>
Improve attic insulation in all areas	3,356	Oil - Fuel Oil	€325	0.92	€3,150	9.7	Community grant	<ul style="list-style-type: none"> <li>* Assuming a 10% reduction in kWh for heating</li> <li>* Assuming 250 m<sup>2</sup> of attic to insulate @ €18/m<sup>2</sup></li> <li>* Sealing all zones of major heat loss to attic, particular focus on attic hatches and cable/lights entrance to attic</li> <li>* Assume 30% funding from Community Grant scheme as worst case</li> </ul>	<a href="#">* Engage with a Project Coordinator</a>

Pump the cavity in two internal walls	1678	Oil - Fuel Oil	€162	0.46	€1,085	6.7	Other - please specify in comments	<ul style="list-style-type: none"> <li>* Assuming a 5% reduction in kWh for heating</li> <li>* Minimum pumped cavity and 2" slab in lower meter of wall in attic</li> <li>* Assuming each wall is ~25 m<sup>2</sup> and 32m<sup>2</sup> of attic wall to slab</li> <li>* Assuming cost of €30/m<sup>2</sup> for slab or €15/m<sup>2</sup> for pumped cavity</li> <li>* Assume 30% funding from Community Grant scheme as worst case</li> </ul>	<a href="#">* Engage with a Project Coordinator</a>
Coal Stove to replace open fire	16,727	Coal	€473	5.70	€1,200	2.5	Other - please specify in comments	<ul style="list-style-type: none"> <li>* Assuming a 50% reduction in coal usage</li> <li>* Assuming a cost of €1200</li> </ul>	<a href="#">* Engage with a Project Coordinator</a>
Replace inefficient bar equipment	1,717	Electricity – Grid	€496	0.56	€1,250	2.5	Other - please specify in comments	<ul style="list-style-type: none"> <li>* Assuming a 10% reduction in electricity usage with more modern bar equipment</li> <li>* Assuming 75% grant from LEO</li> <li>* Assume cost of €5000 with actual cost of €1250</li> <li>* Target ice machine, glasswasher, dishwasher, kitchen fridge</li> </ul>	<a href="#">* Engage with LEO</a>
Improved electricity monitoring	1,717	Electricity – Grid	€496	0.56	€375	0.8	Other - please specify in comments	<ul style="list-style-type: none"> <li>* Assume a 10% reduction in electricity waste and identifying high-usage</li> <li>* Assume this fits with LEO grant, i.e. 75% up to €10k of grant</li> </ul>	

Table 12: Recommended Actions

## Appendix A – Site tour checklist

The table below shows which areas of your site the auditor checked on during the site visit.

	YES/NO/N/A	Observations & Comments
<b>Physical Condition of Building(s)</b>	YES	Good overall condition
<b>Insulation of Walls, Roofs</b>	Co. Clare	Actions required on external walls and attic
<b>Windows and external doors</b>	YES	All repalced within 10 years, some in 2024, all seals/hinges reviewed in 2024
<b>Space Heating</b>	YES	Oil boiler replaced in 2024
<b>Water Heating</b>	YES	Oil boiler replaced in 2024
<b>Heating Controls</b>	YES	Manual heating controls
<b>ICT &amp; office equipment</b>	YES	Minimal office equipment
<b>Ventilation &amp; Air Conditioning</b>	YES	None
<b>Lighting</b>	YES	All lighting would be a good candidate for replacement.
<b>Refrigeration &amp; Cooling</b>	N/A	A number of fridges, chillers, ice-machines would merit replacement
<b>Compressed air</b>	N/A	
<b>Pumps</b>	N/A	
<b>Industrial processes</b>	N/A	
<b>Transport</b>	N/A	
<b>Evidence of Energy Awareness (posters etc.)</b>	N/A	

Table 13: Site tour checklist

## Appendix B – Benchmarking

The table below provides a benchmark of your organisation performance against a range of energy performance metrics, with scores against each for your current and potential. The “potential” score is based on implementation of all the recommendations identified in this report.

	★ Very Poor	★★ Poor	★★★ Satisfactory	★★★★ Good	★★★★★ Excellent	Current score	Potential score
1. Energy Management	0 - 5	6 - 10	11 - 15	16 - 20	21 +	★★	★★★★
2. Building fabric for areas with space heating	Uninsulated, single glazing Typical of BER F-G	No or partial insulation, single or poor double glazing Typical of BER D-E	Minimal insulation and double glazing Typical of BER C-D	High levels of insulation and high performing glazing Typical of BER B	NZEB equivalent building fabric Typical of BER A-B	★★★	★★★★
3. Building services for areas with space heating	Low efficiency heating with minimal controls Very low efficiency lighting (T8s, T12s or incandescent) Typical of BER F-G	10+ year old oil or gas heating Low efficiency lighting (T5s or T8s) Typical of BER D-E	Modern <10 year old oil or gas heating with good heating controls/BEMs Efficient lighting (LEDs or high efficiency T5s) Typical of BER C-D	New <5 year old condensing heating with modern controls and zoning High efficiency lighting (LEDs) Typical of BER B	Significant (>60%) space heating supplied by renewable heat with advanced heating controls High efficiency lighting (LEDs) with controls Typical of BER A-B	★★★	★★★★
4. Significant energy using equipment for manufacturing, processing, production etc.	Low efficiency, older equipment Heavy dependence on fossil fuels in production Evidence of poor operational control and energy wastage	Some lower efficiency equipment in use Medium dependence on fossil fuels	Modern, but not best in class equipment Some dependence on fossil fuels	Modern, best in class equipment Strong use of monitoring and automation Minor dependence on fossil fuels	Modern, best in class, equipment Heavy use of advanced monitoring, automation and energy saving techniques Minimal dependence on fossil fuels	★★	★★★★
5. Control and monitoring For manufacturing, processing, production etc.	No evidence of control or monitoring of equipment	Minimal control or optimisation at a local, but not centralised, level	Good level of control and optimisation in place, ideally centralised Minimal level of data analytics and performance indicators such as weekly reports	Centralised control and optimisation Good level of data analytics and performance indicators	Modern, best in class, centralised monitoring and control Heavy use of data analytics and performance indicators	★	★★★
6. Use of renewable energy	Zero use of renewable energy throughout the facility	Minimal use of renewable energy through green electricity purchasing etc.	Some use of renewable energy such as green electricity purchasing, renewable heat or renewable electricity production	Significant use (25%+ of total energy) of renewable energy via renewable heat or renewable electricity production	Best in class use (50%+ of total energy) of renewable energy via renewable heat or renewable electricity production	★	★★★★★

Table 14: Overall benchmarking

## Appendix C – Energy Management matrix

The matrix below shows you how to interpret your Energy Management score. The Scores run from 0 to 4, where 4 is the best. Your facility was assessed according to the 6 aspects of energy management listed across the top. Use this matrix to see what you need to do to improve your Energy Management score.

Energy management: Definitions of scores						
	Energy Policy	Organising	Communication	Information Systems	Marketing	Investment
4	Top management are actively committed to energy policy, action plan and regular review.	Energy management fully integrated into management structure.	Formal and informal channels of communication regularly at all levels in the organisation.	Comprehensive system sets targets, monitors consumption, identifies faults and quantifies savings.	Routine marketing of the value of energy efficiency and CO <sub>2</sub> reduction internally and externally	Positive discrimination towards 'green' schemes; detailed appraisal, inc. energy, of all investment opportunities.
3	No active commitment from top management, but formal energy policy in place	Energy committee representing all users in place, chaired by a member of the managing board.	Energy committee used as main communication channel with direct contact with major users.	Routine M&T reports for individual users based on sub-metering.	Programme of staff awareness and regular publicity campaigns.	Same pay back criteria employed as for all other investment.
2	Energy manager or senior departmental manager have set an un-adopted energy policy.	Energy manager in post, reporting to ad-hoc committee	Contact with major users takes place through ad-hoc committee.	Monitoring and targeting reports based on supply meter data. Energy unit has ad-hoc involvement in budget setting.	Some ad-hoc staff awareness training.	Investment using short-term payback criteria only.
1	An unwritten set of guidelines	Energy management is a part-time responsibility along with other responsibilities	Informal energy communication contacts between a few users.	Cost reporting based on invoice data for internal use within technical department.	Informal contacts used to promote energy efficiency.	Only low cost measures taken.
0	No explicit policy	No energy management or delegation of responsibility for energy consumption	No contact with users.	No information system. No accounting for energy consumption.	No promotion of energy efficiency.	No investment in increasing energy efficiency in premises.

## Appendix D – Renewable Heat Assessment

	Result	Comments
Is the client using fossil fuel for heating purposes?	Y	
<b>Suitability for heat pump</b>		
Could a heat pump offer an alternative? e.g. does the facility have a steady low/medium heating requirement?	Y	
<ul style="list-style-type: none"> <li>o If yes for space heating: Is it likely that the building will achieve the required U values for a heat pump to operate effectively?</li> </ul>	Y	
<ul style="list-style-type: none"> <li>o If yes for space heating: What fabric and ventilation upgrades may be required? If "Other" please specify in Comments</li> </ul>	Y	Attic and wall insulation required as per recommended actions
Rank heat pump readiness for space heating:  1 – major upgrades required to all/most building elements, 2- major upgrades required to one building element, 3 – minor upgrades required to all/most building elements, 4 – minor upgrade required to one building element, 5 – heat pump ready	3	
<ul style="list-style-type: none"> <li>o If yes for process heating: Is it likely that a heat pump could deliver the heat requirement?</li> </ul>	NA	
Estimate of emissions reduction for heat pump conversion		

Table 15: Renewable Heat Assessment

Suitability for biomass		
Could biomass/biogas offer an alternative? i.e. does the facility have high peak loads?	N	The labour requirements render this unattractive for the club
o If yes, are there any space constraints, e.g. for the boiler/CHP unit, and the delivery and/or storage of fuel? If "other" please specify in comments	Y	No storage area available
o If yes, are there any local supply of waste biomass or local biomass enterprises that can provide fuel stock? Please specify in comments	N	
o If yes, are there dedicated maintenance personnel on site?	N	

Table 16: Suitability for biomass

## Appendix E – Solar photovoltaic assessment

Suitability for solar PV	Result	Comments
Does the client use electricity from non-renewable sources?	Y	Grid
Does the client appear to have a suitable roof for the installation of solar photovoltaic panels?  Consider size, tilt angle, orientation and shading.	N	
If the roof is not suitable, is there an alternative location available?	Y	They do however have sufficient ground area available
If solar PV is feasible, what is the client's estimated required power output?	18 kW	
Estimate the proportion of the client's electricity requirements that could be met through installing solar PV	97%	Based on current usage

## Appendix F – Glossary of terms

Term	Definition
<b>biogas</b>	Biogas is a form of renewable energy. Biogas is produced through the anaerobic digestion or fermentation of organic feedstocks including biomass, sewage and agricultural and municipal wastes. The biogas can then be burnt as a renewable fuel.
<b>biomass</b>	Biomass fuel is a form of renewable energy generated from burning organic material such as wood, poultry litter, and straw
<b>CHP</b>	Combined Heat and Power: an energy efficient way to generate electricity whilst capturing and using the heat that would otherwise be wasted.
<b>CO<sub>2</sub>e</b>	Carbon dioxide equivalent: a standard unit for measuring emissions by expressing the impact of all greenhouse gases (including carbon dioxide, methane and nitrous oxide) in terms of the amount of carbon dioxide that would create the same amount of atmospheric warming
<b>electricity imported</b>	Electricity that has been generated offsite for use at your facility
<b>energy efficiency</b>	Using less energy to perform the same task, i.e. reducing energy waste
<b>fossil fuel</b>	Carbon-based fuels from fossil hydrocarbon deposits, including coal, peat, oil, and natural gas. Fossil fuels produce carbon dioxide (CO <sub>2</sub> ) when burned, which is a greenhouse gas
<b>GPRN</b>	Gas Point Registration Number (GPRN): a unique reference number assigned to every gas point on the natural gas network. A gas point is a point where gas is taken from the gas network system, measured by a meter and consumed by an end user. Each individual gas point has its own GPRN. GPRNs have up to 7 digits.
<b>heat pump</b>	Electrical devices which convert energy from the air outside of your home into useful heat, in the same way a fridge extracts heat from its inside. Different types of heat pump draw heat from different sources: air, water or the ground.
<b>kWh</b>	Kilowatt hour: a unit of energy, equivalent to operating a 1,000 watt appliance running for one hour.
<b>LPG</b>	Liquefied Petroleum Gas is manufactured in oil refining, crude oil stabilisation and natural gas processing plants and consists of propane and/or butane gases. Typically used in boilers and for cooking.
<b>Maximum Import Capacity (MIC)</b>	The upper limit on the total electrical demand that a consumer can place on the network system.
<b>MPRN</b>	A Meter Point Reference Number (MPRN) is a unique 11-digit number assigned to every single electricity connection and meter in the country. Each individual meter has its own MPRN.
<b>natural gas</b>	Natural gas is a naturally occurring fossil fuel that is composed mainly of methane. It is piped through a national gas transmission & distribution network (in gaseous form, under pressure) directly to end users in the industrial, power generation, services and domestic sectors.
<b>renewable energy</b>	Energy from renewable non-fossil fuel sources, e.g. wind, solar (both solar thermal and solar photovoltaic) and geothermal energy, ambient energy, tide, wave and other ocean energy, hydropower, biomass, and biogas
<b>solar photovoltaics</b>	Also called “solar PV”, solar panels that generate electricity when exposed to sunlight
<b>thermal energy</b>	Thermal energy refers to all solid, liquid and gas fuels used for non-transport purposes. This includes both fossil and renewable fuels used in boilers, space & process heating systems, catering, fuel-based electricity generators (onsite), CHP and in all plant, equipment & other non-road mobile vehicles.

## Appendix G – Completion of Works form

### A. Audit Details

Business/Organisation Name	
Applicant SSEA ID	
Facility MPRN	
Facility Address	
Facility Eircode	

### B. Auditor declaration

By signing this Completion of Works, the undersigned states that:

- The Energy Audit carried out at the above Facility Address has been delivered according to the SSEA Terms and Conditions and SSEA Guidance for Auditors.
- The information provided in this Energy Audit is true and correct to the best of my knowledge.

Signed	
Date	
Name	
Date SSEA site visit was carried out	
Total cost of this SSEA Energy Audit, including the Voucher	

### C. Applicant declaration:

By signing this Completion of Works, the undersigned states on behalf of the Business/Organisation named above that:

- A visit to the above Facility Address was carried on the date referred to in Section B by the Auditor referred to in Section B for the purpose of completing an energy audit,
- I have received a copy of the SSEA Report from the Auditor,
- I understand the Report's findings, and
- I am satisfied with the site visit and with the quality of the Energy Audit Report

Signed	
Date	
Name	
<b>Title/Position in Business/Organisation*</b>	

\* Must be signed by a Director or Senior Manager (or equivalent level) of the business/ organisation referenced below.

NOTE: This Completion of Works form should be returned with all other completed documents relating to this application. If any form is incomplete or missing, then the request for payment will be returned.

### Notice for Applicants

Applicants please note:

This document was prepared by a Registered Energy Auditor and recommends practical ways that you can improve the energy performance of your business, using information gathered from an assessment of your business's current energy performance. Please seek professional advice before undertaking any energy upgrade works.

**Sustainable Energy Authority of Ireland**

SEAI is Ireland's national energy authority investing in, and delivering, appropriate, effective, and sustainable solutions to help Ireland's transition to a clean energy future. We work with the public, businesses, communities, and the Government to achieve this, through expertise, funding, educational programmes, policy advice, research and the development of new technologies.

SEAI is funded by the Government of Ireland through the Department Environment, Climate and Communications.

© Sustainable Energy Authority of Ireland

Reproduction of the contents is permissible provided the source is acknowledged.

**w:** [www.seai.ie](http://www.seai.ie)  
**e:** [info@seai.ie](mailto:info@seai.ie)  
**t:** 01 8082100



**Ríaltas na hÉireann**  
Government of Ireland