



**Louisburgh Sustainable
Energy Community**



**Energy Master Plan and
Register of Opportunities**



FINAL

18 JUNE 2019

Contents

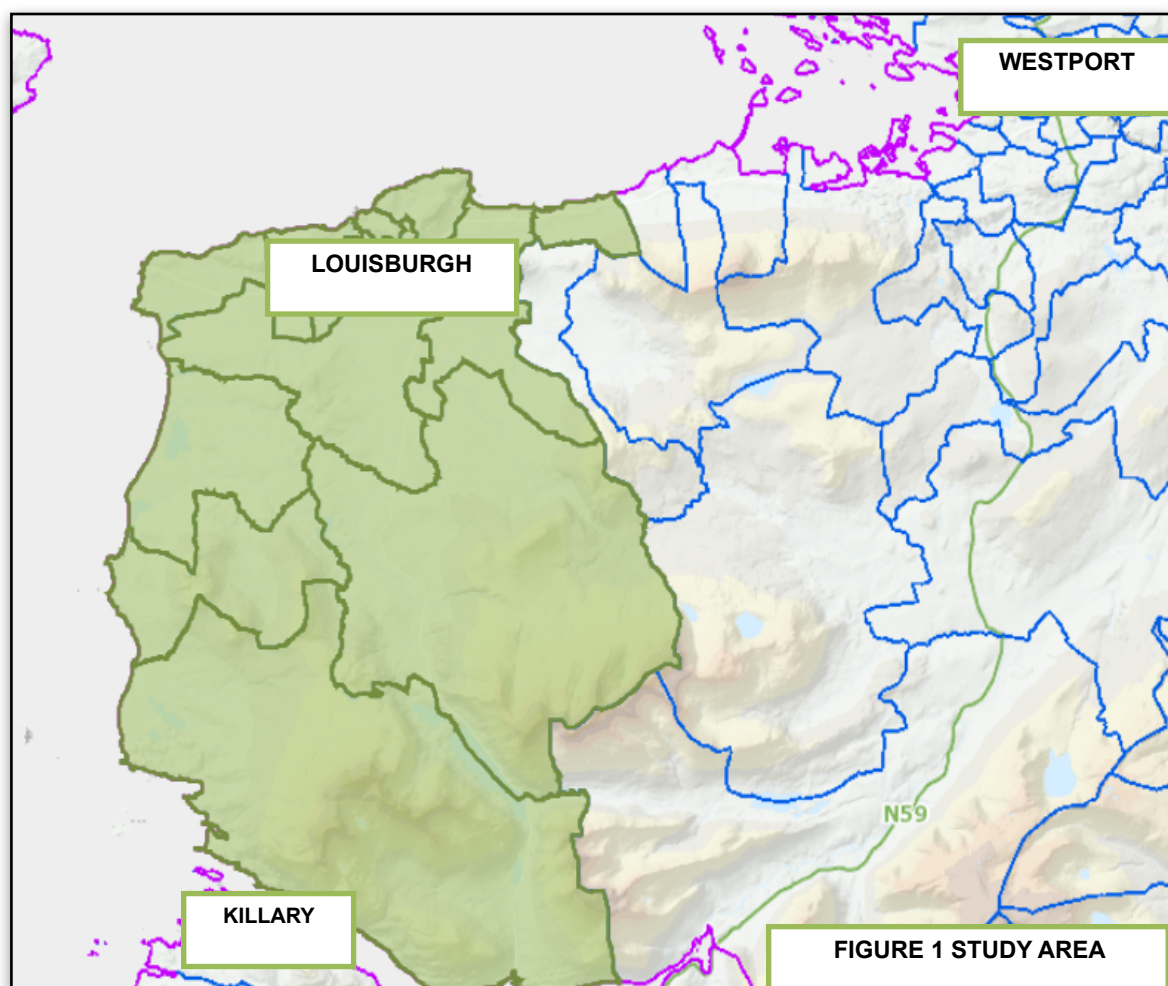
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1. Introduction

PlanEnergy was commissioned by Louisburgh Community Futures Sustainable Energy Community (Louisburgh SEC) to develop an Energy Master Plan for Louisburgh Co. Mayo. The EMP aims to support the Louisburgh SEC in achieving its stated aim of;

"improve the wealth and well being of the population of our Parish and reduce dependence on hydrocarbon generated energy by promoting energy saving schemes and by promoting the development of sustainable, renewable energy sources"

The Louisburgh SEC area covers the Electoral Districts of Kilsallagh, Louisburgh, Kilgeever, Emlagh Aillmore and Owennadournan / Bundorracha. It includes the town of Louisburgh and the half parish of Killeen/ Killadoon. The area is located in the south of Clew Bay, stretching from Lecanvey east of Louisburgh to Roonagh Ferry Port in the west and south to Killary Harbour. The study area is shown in Figure 1.



The Louisburgh SEC steering group contains representation from Louisburgh Community Futures and Killeen Community Council organisations together with representatives from local industry, Farming, GAA, Schools, Parochial Council, Parochial Hall Committee, Louisburgh Community Housing

Committee, Louisburgh Holiday Cottages and Killeen Group Water Scheme.

The Energy Master Plan (EMP) is intended to;

- establish a baseline of energy use across sectors;
- establish the fuel mix by sector and related CO2 emissions;
- establish a roadmap and action plan to increase low carbon adoption;
- provide a set of project tools for the long term use and adaptation by the SEC.

This report provides a written summary of the methods used, the energy baseline calculations by sector and a discussion of the recommendations captured by the Register of Opportunities.

2. Energy Master Plan

Energy use in any community is always changing. An Energy Master Plan (EMP) should be considered a picture in time of energy uses and sources. For the purpose of this EMP the information year is considered 2018 although some information from earlier and later sources is also used. The EMP uses available data and local knowledge to help create a picture of where and how energy is being used in the community. Calculations are made on the cost and carbon intensity of the energy used. The details of these calculations are set out below.

A step approach is used in Energy Master Plans as follows;

Step 1: EMP scoping

Step 2: Data collection planning

Step 3: Baseline energy data, data sourcing fieldwork and desk-based research.

Step 4: Register of Opportunities, identify project ideas

Step 5: Action plan

All of the data which has been collected or calculated is stored in the MS Excel file "Louisburgh EMP Baseline data FINAL 070619". This file is used to store the energy use, carbon and cost data for the following sectors; Residential, Commercial and Transport. A number of sub-sectors are also reported. The data is aggregated into a comprehensive baseline picture of energy used in Louisburgh insofar as the data is available. The file allows for future energy information to be inserted and the energy baseline to change over time.

The companion to this report is the Register of Opportunities (ROO), a toolbox which helps develop a list of local energy efficiency and renewable energy project ideas. It provides a methodology of evaluating new energy project ideas and helps to prepare them for future funding if they are suitable.

Both the EMP and ROO documents are expected to be used on an ongoing basis so that the SEC can track its progress over time. They are designed to be owned and edited by the Louisburgh SEC.

2.1 Methodology

The baseline energy study relies on a combination of data collected from public sources such as SEAI and Central Statistics Office and collected from private sources such as house owners, community facility managers and business owners during compilation of the EMP. Information was gathered through community events and property visits by energy professionals. The full list of sources used is provided below;

Public Data sources	
Source	Data used
SEAI	Conversion factors to calculate carbon emissions, total primary energy on a standardised basis. https://www.seai.ie/resources/seai-statistics/conversion-factors/
	Observed energy unit cost in domestic and non domestic sectors in January 2019. https://www.seai.ie/resources/seai-statistics/key-statistics/energy-data/#comp00005c0fcbea0000088e671a3
	Total Primary Energy Requirement (TPER) conversion https://www.seai.ie/energy-in-business/monitoring-and-reporting/FAQs
Central Statistics Office	Census 2016 population, dwelling information and transport data for 17 Small Areas https://www.cso.ie/en/census/census2016reports/census2016smallareapopulationstatistics/
EMP data collected Nov 2018 – May 2019	
Louisburgh SEC	Partial energy use data for Pastoral Centre, Louisburgh Church and Kileen Church, GAA Clubhouse, Killeen Community Centre Grainneuaile Centre.
PlanEnergy	Preliminary energy opportunities appraisal at 8 community premises; Order of Malta, Louisburgh Church, Kileen Church, Granuaile Centre, Killeen Community Centre, GAA Clubhouse, Killeen National School, Louisburgh Pastoral Centre
Brady Energy Consultants	5 No. domestic BER conducted as part of the EMP after a public awareness raising event in January 2019.
GET Solutions & Ermen Systems	Preliminary lighting and heating audit 1 SME premises

It was found that public buildings were relatively straightforward to access for surveys and energy data were available. By contrast it was extremely difficult to engage local businesses, agriculture and homes and engaging these sectors remains a significant opportunity for future activity for the SEC.

Full energy audits can cost several thousand Euro depending on the building type and scale. In order to maximise the impact of the EMP budget, full energy audits for public buildings were avoided in favour of rapid opportunity assessments. This is consistent with commercial building energy audit approaches as set out by the ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers). Where a premises is not spending significant sums on energy this is considered an appropriate level of audit.

The data collected during the survey period and retrieved from public sources was recorded in an MS excel spreadsheet “Louisburgh EMP Baseline data FINAL 070619”. Calculations were carried out to determine the following key information for Louisburgh;

- Total final energy consumption (TFC)
- Proportion of energy consumption by sector
- Carbon intensity of energy per sector
- Cost of energy use per sector

The key findings of the calculations performed are presented in the following sections. The Register of Opportunities (ROO) presents a database of energy efficiency and renewable energy project concepts and possibilities. These project ideas are evaluated to help the SEC make decisions on the level of priority each opportunity should be given.

2.2 Data availability

For national data collection purposes such as the Census, Ireland is divided into some 18,600 Small Areas each with 80 – 120 dwellings. Quite fine levels of data are available through Census 2016 in particular. This data was collected for the 16 Small Areas which are in the Louisburgh SEC area under the following headings;

- Theme 6 – Housing
- Theme 11- Commuting
- Theme 15 – Motor car availability

There remains an unknown and potentially significant volume of data in the local area regarding energy use in agriculture and business which could not be established with any certainty. SMEs in particular were reluctant to engage with energy surveyors and this mirrors the experience of the SEC itself. The expectation is that this data will become available with time and as the SEC becomes more established. Where estimation of energy use is required the standard factors used in Chartered Institution of Building Services Engineers (CIBSE) Guide F, Energy Efficiency in Buildings, 2016 are employed.

In general the quality of the energy data collected in the field was poor. In many cases the energy information relates to the annual expenditure rather than actual energy used. Where this has been the case a standard calculation using SEAI conversion factors has been performed to establish the kWh units of energy used and the carbon intensity of that energy.

Both Total Final Consumption (TFC) and Total Primary Energy Required (TPER) are calculated and reported. TFC is that energy volume consumed at the customer site whereas TPER is that volume of energy required to produce the energy which is delivered at the customer premises. SEAI standard conversion factors are used for these calculations.

SEAI holds data on the carbon intensity and unit cost of each unit of electricity or heat energy depending on the technology used and the volumes of energy consumed. This information is available for domestic and non-domestic sectors and for large and small users. It tracks actual market unit costs on a quarterly basis. The data used for this report was from December 2018.

3. Energy Baseline

3.1 Domestic Sector

The CSO Census 2016 recorded 1674 dwellings across the Small Areas covered by Louisburgh SEC. Of these 941 are fully or generally occupied and 733 are vacant. 528 of the vacant properties are holiday homes which are likely to be infrequently occupied. There are 205 permanently vacant dwellings in the Census 2016. The data presented in this report aims to provide useable community level guidance on how best to influence the use of energy in this sector.

SEAI energy data records that Irish homes use 4638 kWh of electricity and 13885 kWh of heat energy on average. Although each property is different and uses individual amounts of energy this is a good starting point for a community level analysis. A set of calculations on the proportional energy intensity based on the size of properties is performed in the EMP Baseline data excel spreadsheet. The EMP calculates the following baseline energy use information;

- The estimated annual volumes of electricity and heat being used in homes
- The total calculated annual community cost of electricity and heat being used
- The annual carbon intensity of the energy being used

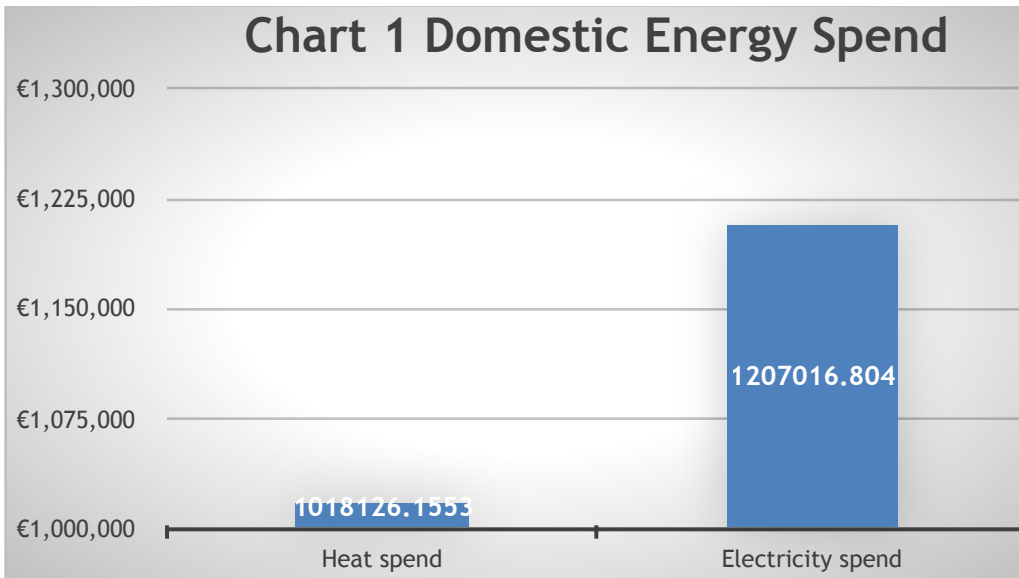
Once this baseline has been established it is possible to identify areas the SEC can target for improvements and target certain distinct activities or technologies.

3.1.1 Energy use and cost

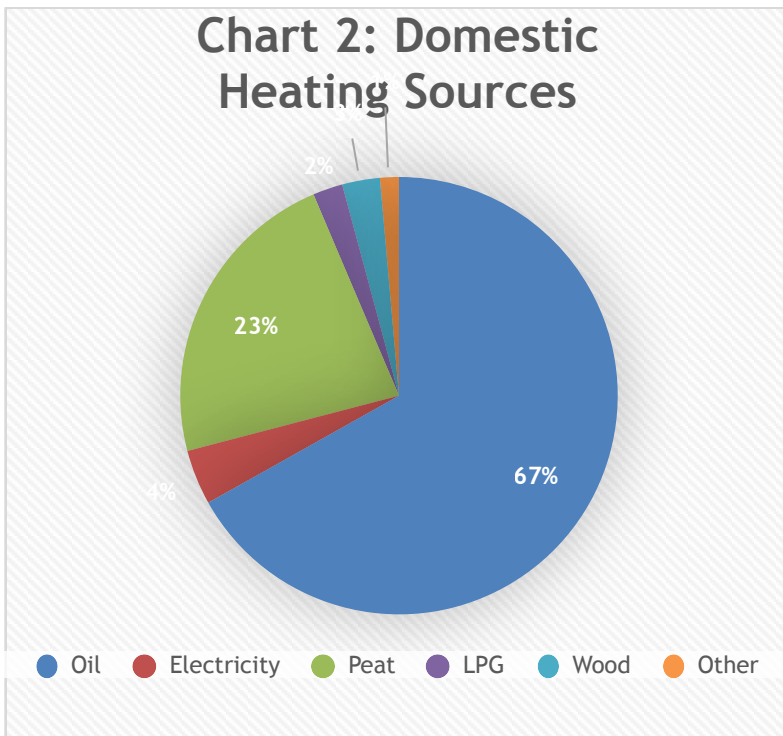
The calculations carried out indicate that the occupied dwellings are using ca. 5.7 million units of electricity (total final consumption or TFC) per year. The primary uses of electricity in a domestic setting are in lighting and for appliances. However, according to the available figures there are 35 homes which use electricity for their main source of heating. On the basis of SEAI's recorded electricity market prices, it is calculated that electricity is costing ca. €1.2m per year in the homes in Louisburgh.

Across a range of heating technologies, primarily oil and peat the dwellings are calculated as using 11.8 million units of heat energy (TFC). Space and water heating are the main uses of heat in this domestic context. This heat energy is calculated as costing ca. €1.0m per year.

In the domestic sector the occupied dwellings in Louisburgh SEC area are calculated as spending €2.2 million per year on energy. The proportion of expenditure on each of electricity and heat is shown in Chart 1 below.



With On average each home in the SEC area is likely to be spending in excess of €2300 per year across heating and electricity. The average heating cost in this location may actually be depressed by the number of homes using peat which may not have a direct financial cost. The proportion of properties using a range of heat technologies is shown in Chart 2 below.



A number of domestic BER surveys were undertaken in the study period. Six free BERs were used as raffle prizes at an Energy Open Day in January 2019 and five of the raffle winners took up the offer. The BERs were conducted in March 2019 and the certificates were issued in April 2019 to the homeowners. A number of high and medium impact recommendations from these BER surveys are apparent and could be applicable more widely in similar properties.

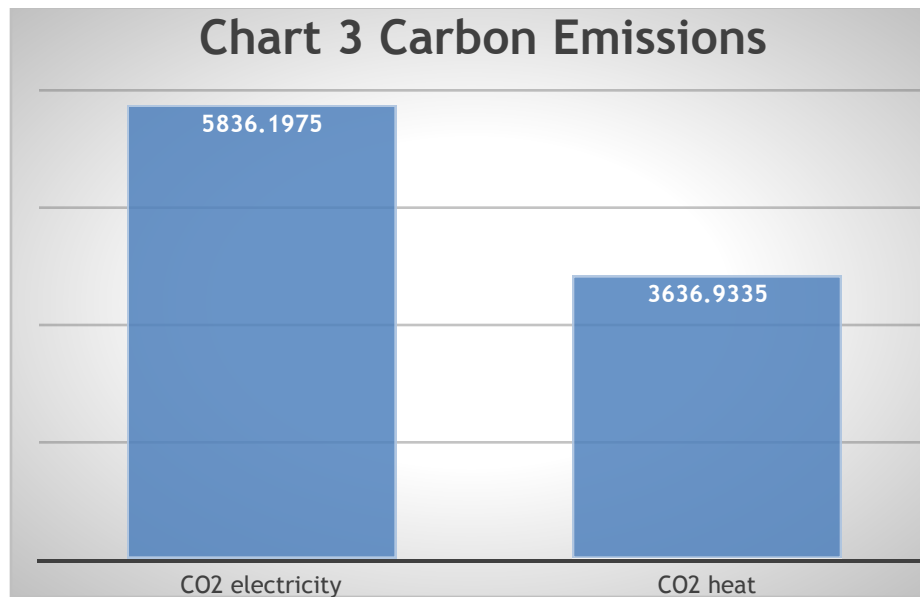
Property Type	BER	Recommendation	Cost	Impact
Detached bungalow ca. 1990's	D1	Chimney closure when not in use	Low	High
		Attic insulation	High	Medium
		Wall insulation	High	Medium
		Window replacement	High	Medium
		LED lighting	Low	Medium
		Low carbon heat	High	High
		Heating controls & zones	Low	Medium
Solar PV and/or thermal	High	High		
Terraced two storey ca. 1920's refurbished 2000's	A3	LED lighting	Low	Medium
		Solar PV and/or thermal	High	High
Detached bungalow ca. 1980's	D1	Chimney closure when not in use	Low	High
		Attic insulation	High	Medium
		Window replacement	High	Medium
		LED lighting	Low	Medium
		Low carbon heat	High	High
		Heating controls & zones	Low	Medium
		Solar PV and/or thermal	High	High
Detached dormer ca. 2000's	C1	Attic insulation	High	Medium
		Low carbon heat	High	High
		Heating controls & zones	Low	Medium
		Solar PV and/or thermal	High	High
Semi detached bungalow ca. 1950's	E1	Chimney closure when not in use	Low	High
		Attic insulation	High	Medium
		Wall insulation	High	High
		Window replacement	High	High
		LED lighting	Low	Medium
		Low carbon heat	High	High
		Heating controls & zones	Medium	Medium
		Solar PV and/or thermal	High	High

As expected the greatest opportunities have been identified in the properties with the lowest current BER. However even in relatively modern and refurbished dwellings there are opportunities for high impact actions such as low carbon heat through heat pumps and biomass and for increased insulation in attic spaces.

3.1.2 Carbon intensity

Calculation of carbon intensity is made using SEAI standard factors for each energy type. The CO2 emissions associated with energy use are calculated on the basis of TPER, the Total Primary Energy

Required. This is done so as to capture the full impact of the energy production and energy transmission associated losses. As a result, electricity in Ireland can often demonstrate much higher carbon intensity than other energy sources. In total the domestic sector in Louisburgh SEC area is responsible for some 9500 tonnes of CO2 emissions per year. The annual CO2 emissions associated with both heat and electricity in domestic properties are shown in Chart 3 below.



3.2 Non-Domestic Sector

Energy data was gathered where available and calculated in other circumstances and recorded in the EMP Baseline data excel spreadsheet. For the Baseline energy scenario the following information has been reported;

- The estimated annual volumes of electricity and heat being used in businesses and other non domestic premises
- The total calculated annual cost of electricity and heat being used in these premises
- The annual carbon intensity of the energy being used in the non domestic sector

A number of community organisations are represented in Louisburgh SEC and many of these are associated with premises in Louisburgh or Kileen. Energy Saving Opportunity surveys consistent with ASHRAE Level 1 were carried out on in March and May 2019 at 8 non-domestic properties located within the Louisburgh SEC area. The purpose of these surveys was to identify possible energy opportunities which would be worth pursuing in the short and medium term. The properties visited for surveys are community focal points and they are listed below.

Property	Location
----------	----------

Order of Malta	Bunowen Road, Clooncarrabaun
Louisburgh Church	3 Westport Rd, Clooncarrabaun, Louisburgh
Killeen Church	Cloonlaur, Louisburgh
Granuaile Centre	1-3 Church St, Clooncarrabaun
Killeen Community Centre	Cloonlaur, Louisburgh
GAA Clubhouse	Cahir, Louisburgh
Killeen National School	Killeen, Louisburgh
Pastoral Centre	Clooncarrabaun, Louisburgh

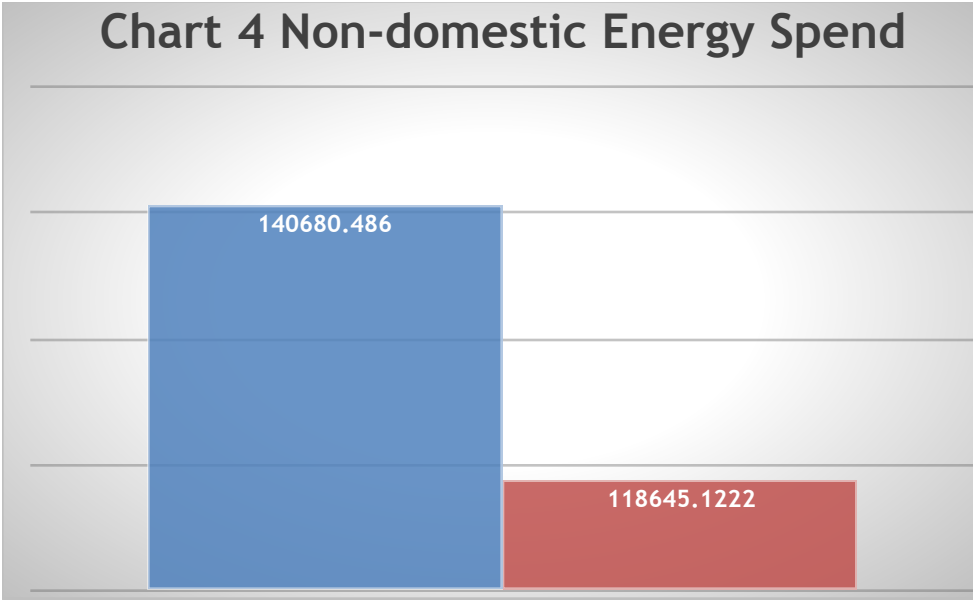
Energy use data was requested from a number of local businesses on a number of occasions and some data on energy expenditure was provided by a single site. A parallel desktop exercise was carried out into local businesses in Louisburgh and the surrounding area. Industry standard energy use factors from Chartered Institution of Building Services Engineers (CIBSE) Guide F, Energy Efficiency in Buildings were used to estimate energy usage on the basis of building sizes. The businesses for which energy data was provided and for which estimated energy usage was calculated are listed below. The full set of calculations for each property is presented in the EMP Baseline spreadsheet.

Energy data	
Nomadic displays	
Energy estimate	
Old Head Holiday Village	Duffys Pub
Old Head Caravan Park	Mings Chinese restaurant
Stauntons Pharmacy	Louisburgh 74
FM Auctioneers	West View Hotel
Bliss Hairdressers	Durkan's Gala Supermarket
Post office	McNamara Pub
Credit Union	The Derrylahan
Tia Café	Trading Post
Sancta Maria College	Louisburgh National School
Corrib oil	Cronins Pub
Gaffney Restaurant	Sammin Electrical
Bhun Abhan Pub	Durkans Butcher
Louisburgh Medical Centre	Louisburgh Surgery
Mescan Brewery	Roonagh Ferry Port
Delphi Lodge	Ocean Lodge Hotel
Glenkeen Farm	Louisburgh Holiday Cottages
P.Dans Pub	Louisburgh Water Treatment Plant
Delphi Adventure Centre	

3.2.1 Energy use and cost

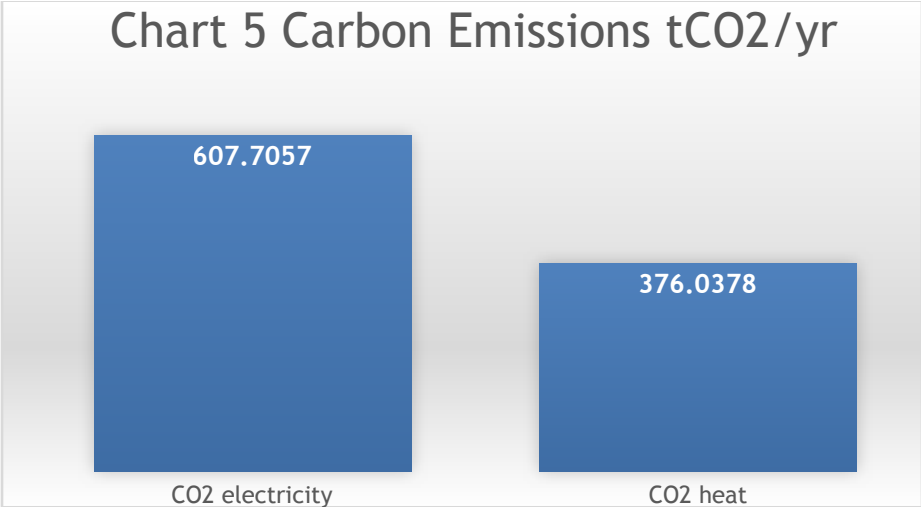
The calculations carried out indicate that the non-domestic premises are using ca. 0.65 million units of electricity (TFC) per year. The primary uses of electricity are likely to be lighting, refrigeration and air handling. On the basis of data collected from community public buildings and from SEAI's recorded electricity market prices in the non-domestic sector it is calculated that electricity is costing ca. €140,000 per year. Given the large gap in the data from businesses it is considered that these calculations may substantially underestimate the electricity usage and expenditure.

Data from community building and projections for businesses indicate that ca. 1.3 million units of heat energy (TFC) are accounted for annually. Space and water heating are expected to be the main uses of heat in this context. This heat energy is calculated as costing ca. €180,000 per year. The proportion of expenditure on each of electricity and heat is shown in Chart 4 below. Again it is considered that the absence of real data for the business sector may lead to an under estimate of the heating costs.



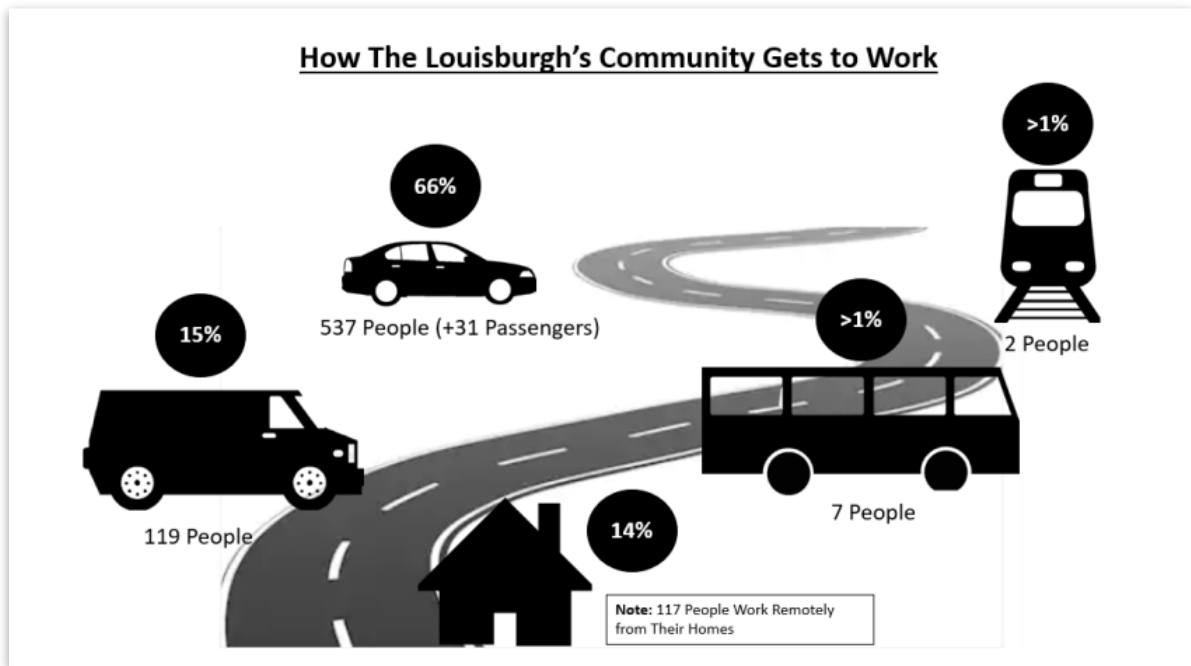
3.2.2 Carbon Intensity

Calculation of carbon intensity is made using SEAI standard factors for each energy type. The CO₂ emissions associated with energy use are calculated on the basis of TPER. The non-domestic sector in Louisburgh SEC area is responsible for some 613 tonnes of CO₂ emissions per year. The annual CO₂ emissions associated with both heat and electricity in the non-domestic sector premises are shown in Chart 5 below.

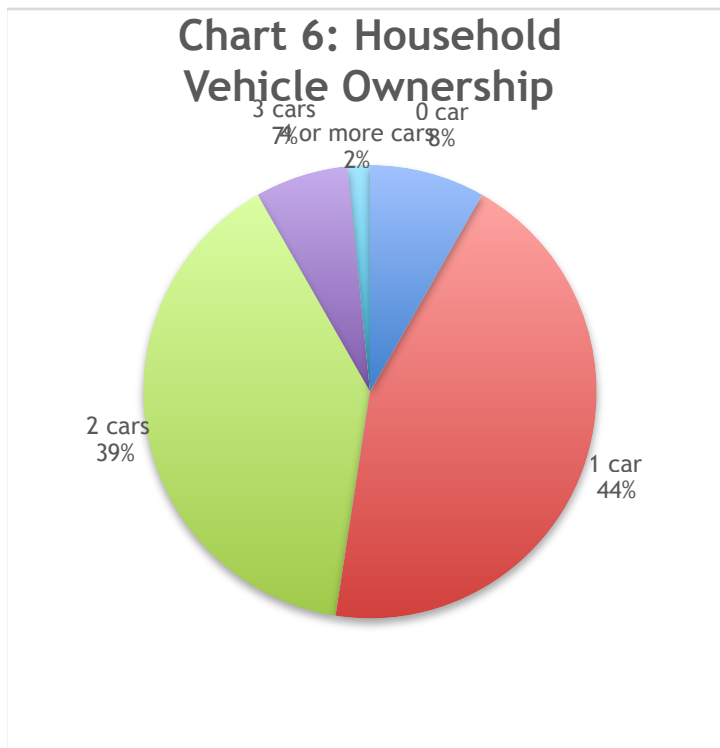


3.3 Transport

The available data on transport comes from Census 2016 and is presented below. It shows, as might be expected, that most people rely on driving. The graphic below gives a breakdown of how the community commutes to work on a daily basis.



According to CSO data over 91% of households in Louisburgh areas have at least one private car and 83% of households have 2 cars. This situation is shown in Chart 6 below. The total number of private cars in the study area at the time of the 2016 Census is 1320 and there is no reason to expect that it



has fallen up to 2018.

3.3.1 Energy use and cost

The fuel volumes and average spend costs have all been calculated from the comprehensive Automobile Association (AA) 2016 national car ownership survey. On the basis of 1320 vehicles traveling the average annual distance of 18,000km each the fuel demand is ca. 1.9 million litres. In 2018 prices according to SEAI databases this would have cost motorists ca. €2.33 million per year.

Given the remote location of the study area it is considered very unlikely that the national average distance travelled per private vehicle represents reality. In addition, while there is likely to be a substantial non-private vehicle energy activity the data is currently absent. It is expected that the expenditure on transportation has been underestimated.

3.2.2 Carbon Intensity

According to SEAI statistics on the carbon intensity of private vehicle use the CO₂ emissions of this energy use is calculated at ca. 4964 tCO₂ per annum.

3.4 Summary

A summary table of all energy consumption by type which can be attributed to the domestic, non-domestic and transport sectors in Louisburgh in 2018 is set out below. The emissions calculated as being associated with this consumption is presented along with the calculated annual cost. There is significant scope for improving the quality of the data which underpins these calculations.

	Usage (MWh)	Emissions (tCO₂)	Cost (€)
Transportation	19,246	4,964	€ 2,328,718
Thermal Fuel			
Residential	11,844	3,306	€ 1,018,126
Commercial	524	143	€ 62,954
Industrial	141	38	€ 10,996
Public Bldgs	585	160	€ 44,695
Electricity			
Residential	6,158	2,973	€ 1,207,017
Commercial	393	190	€ 88,887
Industrial	90	44	€ 20,478
Public Bldgs	158	76	€ 31,315
Totals	39,138	11,857	€ 4,813,186

4. Register of Opportunities

The Register of Opportunities (ROO) is presented as an excel workbook accompanying this EMP report. It is a live document which has been developed to help identify, evaluate and plan energy projects to deliver the Louisburgh SEC journey towards a lower carbon future. The SEC owns this document and is responsible for using, editing and improving the content in order to match its ambitions.

The ROO is set out as a series of sheets which require the user to work through in order to qualify an energy project. The PROJECT IDEAS tab outlines how to initially record potential projects in an organised manner so that they can be tested later. A section called IDEA TESTING includes a set of questions designed to test if a project is ready to be delivered. There are 4 non-technical questions with Yes/No answers. If all of the questions can be answered positively then the project could be delivered. This does not mean the project is a good quality or worthwhile project, it simply means that it could be delivered. The climate or energy value of the project is assessed in the following section.

Energy projects or awareness raising activities which are capable of being delivered are compared against each other to determine those which have the best energy impact for the cost of doing the work. A method of comparing projects is set out in the EVALUATION section. The assessment looks at the energy impact and the cost of the project as well as the time to pay back the cost and the complexity of doing the work. In this way the promoters can identify relatively easy projects which can have a substantial impact and are cost effective.

The next three sections of the ROO provide the detailed assessment of projects. Projects are categorised as BEHAVIOUR PROJECTS, EE PROJECTS or RE PROJECTS. A scoring system allows the projects to be compared with each other to help the SEC decide how to prioritise its work. Each individual project is assigned a new tab in the ROO. The project code is used to name the new tab, eg BE001 or EE001. The information to be recorded for each project should include the SEC leader for the project, the contact person for the premises where the project will happen as well as funding targets. Finally the number of energy credits allocated for the project should be recorded for each project. These factors can then be used to help measure overall progress for the SEC.

The ACTION PLAN section draws on the information logged in the previous sections. Responsibility for the project should be assigned and insofar as possible high level budget established and funding sources should be identified. less occupied buildings. The Action Plan is extracted and presented below.

LOUISBURGH SEC ACTION PLAN					
SHORT TERM 2019 - 2020					
Project Ref	Leader	Actions	Budget	Deadline	Funding/Support
BE001 Energy Clinic	RT	Build energy network in advance of event		May-19	SEAI SEC programme
		Schedule & host event. Venue and refreshements by MCC.	€500.	Sep-19	Mayo County Council
BE002 SME Grant Workshop	RT	Understand grant cycles of awarding bodies		May-19	SEAI SEC programme
		Secure speakers & host event. Venue and refreshements by MCC.	€500	Oct-19	Mayo County Council
BE003 Housholder Grant Workshop	RT	Understand grant types and availability		May-19	SEAI SEC programme
		Secure speakers & host event. Venue and refreshements by MCC.	€500	Sep-19	Mayo County Council
BE004 Home Energy Kits	RT	Understand Home Energy Kit		Aug-19	SEAI SEC programme
		Manage roll out through schools and record new project ideas		Sep-19	SEAI SEC programme
			€1,500		
EE001 Kileen School Attic insulation	JC	Choose 3 contractors from SEAI list & secure quotes for work; https://www.seai.ie/resources/find-a-registered-professional/		Jun-19	SEAI SEC programme
	JC	Secure documentation from contractors and customers and submit grant		Aug - Oct 2019	SEAI SEC programme
	JC	Support contractor delivery of project including inspections and claims	€5,000	Dec 2019 - May 2020	SEAI Communities Grant
EE002 LED lighting Louisburgh Church	JC	SEC source 1 quote from reputable contractor		Jun-19	SEAI SEC programme
	JC	Secure documentation from contractors and customers and submit grant application		Aug - Oct 2019	SEAI SEC programme
	JC	Support contractor delivery of project including inspections and grant claims	€12,500	Dec 2019 - May 2020	SEAI Communities Grant
EE003 LED lighting Kileen Church	JC	SEC source 1 quote from reputable contractor		Jun-19	SEAI SEC programme
	JC	Secure documentation from contractors and customers and submit grant application		Aug - Oct 2019	SEAI SEC programme
	JC	Support contractor delivery of project including inspections and grant claims	€5,000	Dec 2019 - May 2020	SEAI Communities Grant
EE004 LED lighting Kileen Community Centre	JC	SEC source 1 quote from reputable contractor		Jun-19	SEAI SEC programme
	JC	Secure documentation from contractors and customers and submit grant application		Aug - Oct 2019	SEAI SEC programme
	JC	Support contractor delivery of project including inspections and grant claims	5,000.00	Dec 2019 - May 2020	SEAI Communities Grant

EE005 LED lighting GAA Club	JC	SEC source 1 quote from reputable contractor		Jun-19	SEAI SEC programme
	JC	Secure documentation from contractors and customers and submit grant application	€ -	Aug - Oct 2019	SEAI SEC programme
	JC	Support contractor delivery of project including inspections and grant claims	€ 12,500.00	Dec 2019 - May 2020	SEAI Communities Grant
EE006 LED lighting Pastoral Centre	JC	SEC source 1 quote from reputable contractor		Jun-19	SEAI SEC programme
	JC	Secure documentation from contractors and customers and submit grant application	€ -	Aug - Oct 2019	SEAI SEC programme
	JC	Support contractor delivery of project including inspections and grant claims	€ -	Dec 2019 - May 2020	SEAI Communities Grant
EE007 LED lighting Granuaile Centre	JC	SEC source 1 quote from reputable contractor		Jun-19	SEAI SEC programme
	JC	Secure documentation from contractors and customers and submit grant application	€ -	Aug - Oct 2019	SEAI SEC programme
	JC	Support contractor delivery of project including inspections and grant claims	€ 4,000	Dec 2019 - May 2020	SEAI Communities Grant
EE008 LED street lighting	RT	Understand project scope & status		Aug-19	SEAI SEC programme
	JC	Grant application		Aug - Oct 2019	SEAI SEC programme
	JC	Project Delivery		Dec 2019 - May 2020	SEAI Communities Grant
EE009 Domestic Retrofit Projects x 5	JC	Understand Retrofit sceme and build external team		Sept - Nov 2019	SEAI SEC programme
	JC	From event BE003 inform interested householders of Deep Retrofit		Nov - Dec 2019	SEAI SEC programme
	JC	Compile grant application with contractor		Jan - Feb 2020	Deep Retrofit programme
	JC	Project Delivery, grant claim and payments	€ 150,000	Apr - Jul 2020	Deep Retrofit programme
EE010 SME LED lighting x 2	JC	Determine interest level at SME premises		May-19	SEAI SEC programme
	JC	SEC source 1 quote from reputable contractor		May-19	SEAI SEC programme
	JC	Secure documentation from contractors and customers and submit grant application		May-19	SME Lighting Grant
	JC	Support contractor delivery of project including inspections and grant claims	€15,000	July - Sept 2019	SME Lighting Grant
EE011 Heating Upgrade feasibility Granuaile & Kileen	RT	Agree scope of application with LEADER & energy expert		May-19	LEADER Analysis & Development fund
	RT	Submit and manage funding application	€ -	Jul-19	LEADER Analysis & Development fund

	JC	Award and manage study contract.	€4,000	Sep-19	LEADER Analysis & Development fund
			€ 213,000		
RE002 SME Solar PV	JC	Establish client premises interest levels		Jun - Aug 2020	SEAI SEC programme
	JC	SEC source 3 quote from registered installers		Sep-19	SEAI SEC programme
	JC	Grant application	€40,000	Nov-19	SEAI SEC programme
	JC	Project Delivery		Dec 2019 - May 2020	SEAI Communities Grant
			€40,000		
MEDIUM TERM 2020 - 2025					
Project Ref	Leader	Actions	Budget	Deadline	Target Funding
BE005 Agri Energy Awareness	RT	Build relationships with energy & agri advisers		Nov-19	SEAI SEC programme
		Host Agri Energy event in winter	€ 500.	Dec-19	IFA/Teagasc
BE006 Journey Sharing	RT	Promotion of sustainable transport		Nov-19	Dept Transport
		Schedule activity with Bike Week 2020		May-20	SEAI SEC programme
BE007 Energy Audit Programme	JC	Agree collaboration principles with MCC Climate Office & LEADER		Dec-19	SEAI SEC programme
	JC	From public events BE002 & BE005 and wider engagement determine list of possible audit premises and shortlist of appropriate auditors		Jan-20	SEAI SEC programme
	RT	Funding application LEADER €15k		Jan-20	LEADER/MCC
	JC	Conduct audits and advise premises owners. Log project ideas for next grant cycle.	€ 15,000	Feb-20	SEAI SEC programme
			€ 15,500		

APPENDIX 1 ENERGY BASELINE

APPENDIX 2 REGISTER OF OPPORTUNITIES