

COMHAIRLE CONTAE CHEATHARLACH CARLOW LOCAL AUTHORITY

COVENANT OF MAYORS
SUSTAINABLE ENERGY ACTION PLAN
2016 - 2020



Draft: March 2017

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FOREWORD BY CATHAOIRLEACH

“Our mission is to provide a framework that promotes and facilitates the development of community and sectoral energy programmes that include knowledge sharing, training and building and infrastructural projects designed to increase efficiency and reduce CO₂ emissions. This Sustainable Energy Action Plan (SEAP) is an all inclusive initiative in which multiple stakeholders collaborated and contributed and we are committed to achieving our targets and goals by fostering a partnership between the elected members and staff of Carlow Local Authority and all sectors of the community.

Carlow has invested approximately €10 million in Better Energy Communities (BEC) projects in the County since 2012, reducing CO₂ by approximately 3,288 tonnes. In a spirit of mutual trust, we will continue to work in an open, effective and participative way, to ensure that County Carlow becomes an environmentally sustainable county, which is economically, culturally and socially inclusive and vibrant and where Carlow Local Authority earns an exemplary reputation for innovative sustainability”.



Figure 1.1 Kilbrannish Looped Walk

CATHAOIRLEACH OF COUNTY CARLOW

CLLR JOHN MURPHY

Date: March 2017

1.0 Executive Summary

It is with a clear understanding of the global challenge that Climate Change poses and the critical role that local authorities play in sustainable development, that Carlow Local Authority made the decision to sign up to the Covenant of Mayors. The development of this Sustainable Energy Action Plan (SEAP) helps to form a key part of Carlow's road map to a sustainable future.

From an early stage Carlow Local Authority chose to make the SEAP an all inclusive process that invited participation and collaboration with all Stakeholders within the County, thus ensuring a more comprehensive approach to achieving reduced energy usage and emissions. The target set under the Covenant of Mayors is a 20% reduction in CO₂ by 2020, which it is expected each stakeholder group will help contribute to.

The baseline year selected was 2006, as this was a census year and so provided accurate and comprehensive energy data under the required sectors (Local Authority, Agriculture, Residential, Transport, Commercial, Community). With 2006 as the baseline year and 2020 as the deadline year for the SEAP, all energy efficiency initiatives completed between these years will be captured within the SEAP as each contributes to reaching the 20% target.

While Carlow Local Authority will make every effort to meet the SEAP targets, it is important to note that in the time period since 2006 (baseline year), the country has experienced an economic recession followed by a significant growth period. This period of growth has resulted in an increase in energy consumption and consequently CO₂ emissions, which creates a greater challenge in meeting the 20% reduction target.

The SEAP will be continuously managed and progress monitored to ensure obstacles are addressed and goals are achieved. It is the intention of the Local Authority to play an exemplary role in creating a sustainable future and to provide guidance and support to the various stakeholders and sectors in County Carlow.

2.0 Covenant of Mayors - Introduction

WHAT IS THE COVENANT OF MAYORS

Heralded as the “world’s biggest urban climate and energy initiative” by the E.U Commissioner Miguel Arias Cañete, the Covenant of Mayors is the mainstream European movement involving local and regional authorities in the fight against climate change. It is based on a voluntary commitment by signatories to meet and exceed the EU 20% CO₂ reduction targets, through increased energy efficiency and development of renewable energy sources.



CARLOW LOCAL AUTHORITY AND THE COVENANT OF MAYORS

Carlow Local Authority became a signatory of the Covenant of Mayors in July of 2015, committing itself to achieving excellence in sustainability across the county. The Covenant requires members to develop and implement a sustainable energy action plan (SEAP) for the county, which is monitored, evaluated & revised on an annual basis. Signatories are also committed to submitting an implementation report every two years outlining this evaluation, monitoring and verification process. The signatory can also share and disseminate knowledge and best practice on energy with other signatories from across the EU. The County Carlow Sustainable Energy Action Plan is a step-by-step plan on how we aim to reduce CO₂ emissions by more than the mandatory target of 20% by 2020, through increased energy efficiency.

“world’s biggest urban climate and energy initiative”

1.1 Objectives and Targets

A number of key objectives have been identified that will frame the compilation of SEAP actions:

- To reduce the per capita CO₂ emissions of County Carlow;
- Improve energy efficiency and value for money in energy spending across all sectors in the County;
- To increase the level of renewable energy produced in the county;
- Reduce the amount of energy imported by the County;
- Reduce the energy costs for businesses and to improve energy efficiency within the Commercial sector;



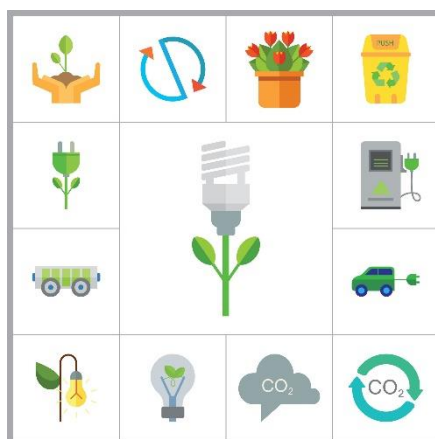
- Progress Carlow Local Authority's own energy projects / programmes and continue to communicate these experiences to inform best practice across all sectors;



- Reduce Transport (Public and Private) related CO₂ emissions;
- Improve quality of life and thermal comfort for residents in the County and help reduce the risk of fuel poverty;
- To increase the awareness and understanding, amongst stakeholders and the general public, of the objectives of the Carlow Local Authority SEAP.

1.2 Carlow Local Authority's Vision for the Future

The vision for the Carlow Sustainable Energy Action Plan is to reduce imported energy dependency across County Carlow, through increased energy efficiency and by promoting a more sustainable development pattern. The Local Authority is committed to acting as a focal point for the reduction of energy usage and the growth of renewable energy technologies and strategies throughout Carlow County.



The aim of the S.E.A.P is to reverse current energy trends across a variety of sectors, specifically transport, local authority, residential sector, agricultural, commercial and industrial. To successfully achieve this challenging task requires wide stakeholder and citizen participation, in conjunction with infrastructural and building improvements. The S.E.A.P aims to improve energy efficiency throughout the county, and contribute to a sustainable and on-going improvement in the quality of life of every citizen within the county.

1.3 SEAP Steering Committee

The Sustainable Energy Action Plan (SEAP) Steering Committee has been set up to develop an Action Plan that represents all of the County of Carlow and that delivers the objectives and targets set out in Section 1.1. Its members have been drawn from all sectors of the community and together they are guiding the SEAP in its development and implementation. The committee is chaired by Councillor John Murphy, Cathaoirleach, and is supported by the Transportation and Environment Directorate of the Local Authority as well as the local independent Carlow Kilkenny Wexford Energy Agency. The initial meeting of the steering committee, whose current members are listed below, took place in February 2016.

STEERING COMMITTEE MEMBERS

JOHN MURPHY

COUNCILLOR

CATHAOIRLEACH, CARLOW LOCAL AUTHORITY

DAN MCINERNEY

DEPUTY CHIEF EXECUTIVE

*TRANSPORTATION AND ENVIRONMENT, CARLOW
LOCAL AUTHORITY*

THOMAS KINSELLA

COUNCILLOR

CARLOW LOCAL AUTHORITY

ANNA BYRNE

SENIOR ENTERPRISE DEVELOPMENT OFFICER

CARLOW LOCAL AUTHORITY

CLARE O'SHEA

DEVELOPMENT OFFICER

CARLOW LOCAL AUTHORITY

MICHAEL O'BRIEN

SENIOR EXECUTIVE OFFICER

CARLOW LOCAL AUTHORITY

JOHN MULCAHY

LOCAL ENTERPRISE OFFICE

CARLOW LOCAL AUTHORITY

MICHAEL BRENNAN

SENIOR EXECUTIVE OFFICER

COMMUNITY, CARLOW LOCAL AUTHORITY

JANETTE O'BRIEN

ENVIRONMENTAL AWARENESS OFFICER

CARLOW LOCAL AUTHORITY



GEORGE HATTON

IRISH FARMERS ASSOCIATION

MICHAEL GRANT

BRIAN KEHOE TRANSPORT LTD.

PADDY BROWNE

TEAGASC

PETER MURPHY

CHAMBER OF COMMERCE

THOMAS KAKOULI

CARLOW INSTITUTE OF TECHNOLOGY

TURLOUGH O'BRIEN

TINTEAN HOUSING

ALEXANDRA HAMILTON

CARLOW KILKENNY ENERGY AGENCY

FIONA O'LOUGHLIN

CARLOW KILKENNY ENERGY AGENCY

1.4 Involvement with Key Stakeholders and Citizens

Carlow Local Authority has a long history of involvement with local communities and stakeholders.

THE LOCAL AUTHORITY STRIVES ON A CONTINUOUS BASIS

- Engage with the local communities and stakeholders
- Provide information and education relating to local, national and EU energy initiatives
- Identify potential funding sources
- Promote positive participation
- Ensure a forum for ongoing dialogue, collaboration and action

Below are some of the mechanisms through which the Local Authority develops and implements the various energy and environmental related initiatives in the County.



- **Carlow Monthly Local Authority Meetings** – these meetings are attended by elected County Councillors and senior officials. All Local Authority projects and policy documents are reviewed and discussed for resolution during these meetings.
- **Transportation, Environmental & Infrastructural (SPC)** - Strategic policy committees are a mechanism for reaching consensus and informed decision making of Local Authority policy, prior to adoption by full Council. The SPC for Transportation, Environment and Infrastructure which includes elected representatives and nominated sectoral interests, will ensure that the policy/action plan takes into consideration the views, issues and recommendations by those directly impacted by the actions proposed.

- **The Environmental Awareness Officer of Carlow Local Authority** – the role of the Environmental Awareness Officer is to inform and promote environmental awareness within the community
- **The Transportation, Environment & Water Services Office of Carlow Local Authority** – whose role and responsibilities influences the energy consumption associated with the delivery of these services
- **Steering Committee Members** - which represent stakeholders and individuals within County Carlow
- **Carlow Kilkenny Energy Agency** – the CKEA is an independent local energy agency specialising in Sustainable Energy practices, whose role it is, is to facilitate the development and monitoring of the Carlow Local Authority SEAP
- **Public Participation Network (PPN)** – this is a new network that ensures inclusion, diversity of views and collaboration between the local community and the Local Authority
- **Housing and Community Department of Carlow Local Authority** - which has very successfully sourced and administered SEAI grant funding for energy saving projects across a wide range of residential developments and community facilities in the region.
- **Energy Map Team** – this team works to include energy use and efficiency as a priority across all Local Authority operations and functions.

1.5 Public Participation Network

Carlow Local Authority, in collaboration with the Public Participation Network, put out a call to the communities of County Carlow for input to the SEAP. There were two public meetings held, on the 18th July in Carlow Town and the 21st July in Bagenalstown. During these meetings a clear outline of the Covenant of Mayors and the Sustainable Energy Action Plan was delivered and an invitation was made to the public to have their say and contribute to the SEAP. Unfortunately, despite good discussion at both of the public meetings, there were no actions received from the group for inclusion in the SEAP.

2.0 Legislation and Policy Background

This section sets out the legislation, policy and local strategies that underpins the County Carlow Sustainable Energy Action Plan (SEAP). Against this legislation and policy context, a series of 2020 energy targets have been established to inform SEAP actions required across all sectors.

2.1 EU / National Legislation and Policy Background

The targets identified for the SEAP are underpinned by legislation and policy at a European level; these EU targets have been adopted nationally and inform the development of energy policy at county level. The CO₂ emission targets set out a range of measures to ensure Ireland reaches its overall target (no more than a 13% increase in national greenhouse gas emissions from 1990 baseline levels by 2012) under the Kyoto Protocol. Key influencing policy / legislation documents are detailed as follows:



EU Energy Efficiency Directive 2012/27/EU

On 25th October 2012, the EU adopted the Directive 2012/27/EU on energy efficiency. This Directive establishes a common framework of measures for the promotion of energy efficiency within the European Union. This is in order to ensure the achievement of 20% headline target on energy efficiency by 2020 and to pave the way for further energy efficiency improvements beyond that date. It lays down rules designed to remove barriers in the energy market and overcome market failures that impede efficiency in the supply and use of energy, and provides for the establishment of indicative national energy efficiency targets for 2020.

EU Renewables Directive (ESD2009/28/EC)

The Renewables Directive mandates levels of renewable energy use within the European Union. The directive requires member countries to produce a pre-agreed proportion of energy consumption from renewable sources such that the EU as a whole shall obtain at least 20% of total energy from renewables by 2020.

The EU Climate and Energy Package (2007)

In March 2007, the EU's leaders endorsed an integrated approach to climate and energy policy which aims to combat climate change and increase the EU's energy security while strengthening its competitiveness. They committed Europe to transforming itself into a highly energy efficient, low carbon economy. A series of climate and energy targets to be met by 2020 were set; these are known as the "20-20-20" targets and are key to determining subsequent national policy.

These EU wide targets are as follows:

- A 20% reduction in EU greenhouse gas emissions from 1990 levels;
- Raising the share of EU energy consumption produced from renewable resources to 20%;
- A 20% improvement in the EU's energy efficiency.

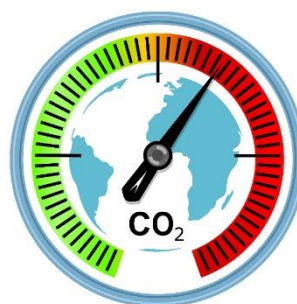
EU End User Efficiency and Energy Services Directive (ESD2006/32/EC)

This is a framework to ensure that when energy is finally consumed it is done so in a more efficient and economical way. This directive led to the development of the National Energy Efficiency Action Plan (NEEAP) 2009-2020.

Climate Action and Low Carbon Development Act (2015)

This is Ireland's first ever dedicated climate change law and it provides for the development of the following:

- Five yearly National Mitigation Plans that detail the policy measures necessary to reduce greenhouse gas emissions
- National Adaptation Framework, which details the national strategy for local authorities and various sectors in adapting and implementing the different mitigation measures designed to protect the State from the negative impacts of Climate Change
- Climate Change Advisory Council, which will advise the government on climate change matters.



Ireland's Transition to a Low Carbon Energy Future 2015-2030

The White Paper sets out a vision for transforming Ireland's fossil fuel-based energy sector into a clean, low carbon

system by 2050. The White Paper is a complete energy policy update and describes the actions and targets for the energy policy framework out to 2050, to support economic growth and meet the needs of all consumers. It sets a clear path for meeting the Government's goals of ensuring safe and secure energy supplies, promoting a sustainable energy future, and supporting competitiveness.

Its objective is to guide a transition to a low carbon energy system, which provides secure supplies of competitive and affordable energy to all citizens and businesses.

National Energy Efficiency Action Plan (NEEAP) 2014-2020

Ireland's 2014-2020 National Energy Efficiency Action Plan builds on the previous plans submitted to the European Commission in 2007 and 2009. Published in 2014, the updated plan outlines 57 measures towards achieving, a 20% reduction in energy demand (baseline 1990) across the whole of the economy through energy efficiency measures by 2020. Recognising that Government must lead by example, the public sector is committed to achieving a 33% reduction in energy use.

National Renewable Energy Action Plan (NREAP) 2010

Ireland's renewable energy target, under the Renewables Directive, is that 16% of national fuel energy shall be from renewable sources, as set out in the NREAP. This plan sets out Ireland's national trajectories for the share of energy from renewable sources to be consumed in transport, electricity, heating and cooling to 2020. Table 2.1 below illustrates Ireland's renewable 2020 targets, progress made (as of 2014) and the gap that remains.

Target	2020 (Target)	2014 (Actual)	Distance to Target
Renewable Energy (Overall)	16%	8.6%	7.4%
Renewable Electricity (RES-E)	40%	22.7%	17.3%
Renewable Heat (RES-H)	12%	6.6%	5.4%
Renewable Transport (RES-T)	10%	5.2%	4.8%
Energy Efficiency	20% saving	8-9% saving	11-12% saving

Table 2.1 Irelands' Renewable Energy Targets and Progression (2014)

COP 21 Summit Paris 2015

Ireland, as a Signatory to COP 21 Summit 'Paris Agreement' on Climate Change, has committed to limiting global temperature increases to 2°C. The review and submission of emission data is an obligation of the Paris agreement, however the setting of targets is determined by each nation. The agreement also recognises the key role of cities and local authorities in addressing climate change.

2.2 Regional/County Policy & Strategies

A number of regional and county policies and strategies also tackle a range of energy issues and objectives, as well as targeting EU targets into regional and local based plans and policies. These include the following;

Carlow County Development Plan 2015 – 2021

The County Development Plan establishes the strategic priorities for the County and, when adopted, is a contract between the Local Authority and the community to guide development throughout County Carlow.

It is the policy of Carlow Local Authority to encourage and facilitate the development of ‘green’ industries, including industries relating to renewable energy and energy-efficient technologies, waste recycling and energy conservation. Carlow Local Authority will promote and support businesses, industry and home owners interested in converting to renewable sources of energy.



Figure 2.2.1 Bagenalstown Viaduct

SPECIFICALLY THE LOCAL AUTHORITY WILL PROMOTE THE FOLLOWING;

- County Carlow as a low carbon county by 2020
- New buildings (state, commercial and domestic) designed with both comfort and minimum energy use in mind.
 - Using passive design techniques
 - Ensuring minimum artificial heating, cooling and lighting
 - Including renewable technologies such as solar energy
- Retro-fitting existing buildings with:
 - Passive design techniques
 - Minimum artificial heating, cooling and lighting
 - Solar panels for space and water heating;
- Renewable energy measures such as solar thermal / heat pumps / biomass boilers / stoves in state, commercial and domestic buildings;
- The installation of solar collectors, which can be particularly economical for space or water heating in large buildings.
 - Even in Ireland's variable climate, solar panels can provide around 60% of the hot water requirements for homes and buildings;
- Provision of education and awareness within all sectors of the need to reverse fossil fuel dependency, to mitigate the effects of peak oil and reduce carbon emissions, to mitigate the effects of climate change.

Carlow Local Economic & Community Plan 2016 – 2021

The plan aims to improve the well-being of the people and economy of County Carlow through enhanced strategic planning, targeting of resources and more meaningful impacts for local communities. It will provide the strategic framework for all publicly funded economic, local and community development programmes in the County with the objective of maximising the social, community, cultural, sporting and economic development of County Carlow on a regional level.

The Carlow Local Economic & Community Plan (LECP) recognises sustainable development and the need to mitigate the negative impact of climate change as one of its primary drivers. The LECP's commitment and targets, within its own framework and authority, are a clear

answer to the energy challenge. Figure 2.2.2 below illustrates the seven principles that Carlow Local Authority employ to ensure the effective delivery of their LECP.



Figure 2.2.2 The seven principles employed by Carlow Local Authority in the delivery of their LECP

The LECP states that by 2020, Greenhouse gas emissions in the non-trade sector will be reduced by 20% compared to 2005 levels. The share of renewables in final energy consumption is to increase to 16%. Also, energy efficiency, in terms of “Primary Energy” consumption will have increased to 20%.

The Carlow LECP states the aim to foster the adoption of energy efficiency technology in homes, businesses and communities. It also recognises that Carlow Local Authority is a signatory of the Covenant of Mayors, a European cooperation movement, and it endeavours to achieve the targets and objectives set out in the Carlow Sustainable Energy Action Plan.

SEAI’s Energy Management Action Plan (MAP):

Carlow Local Authority signed an agreement with SEAI’s Energy Management Action Plan (MAP), which is a clear commitment to reach public sector energy targets of the National Energy Efficiency Action Plan (NEEAP) 2014-2020. The programme aims to prioritise energy use and efficiency across all Local Authority operations and functions.

The Local Authority is committed to reducing their energy consumption by delivering low energy public services to the people of the county. This will not only reduce the significant cost of delivered services but also make those services more sustainable into the future, by

protecting the local authority from a potential rise on energy costs. Aiming to reduce energy consumption through energy efficiency is at the core of the Carlow Kilkenny Energy Agency's mission since 2002. The Carlow Kilkenny Energy Agency will support Carlow Local Authority in achieving this target in partnership with SEAI by mentoring best practice in the field of energy demand reduction.

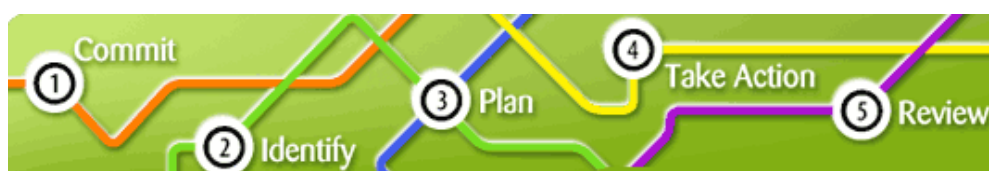


Figure 2.2.3 SEAI's MAP – an online guide for creating a best practice energy action plan

Carlow Local Authority as a Covenant of Mayors Signatory:

By becoming a Covenant of Mayors signatory, and developing and implementing the Sustainable Energy Action Plan for County Carlow, the Local Authority will have taken a major step towards reaching National and EU emission targets by 2020 and beyond. The Local Authority are taking an evidence based approach, using baseline data and ongoing monitoring and measuring, as the best way of reaching and exceeding their targets. Carlow Local Authority, Carlow Kilkenny Energy Agency and key community and commercial stakeholders, have together compiled a wide range of key actions, covering all sectors, to enable a more sustainable and energy efficient approach for Carlow, with the Local Authority being an exemplar throughout this action plan. Carlow Local Authority understands the philosophy of Think Globally, Act Locally and they recognise the important part that they play. Figure 2.2.4 below illustrates the Global Goals for Sustainable Development, related to Sustainable Energy, as developed by the United Nations.



Figure 2.2.4 The Global Goals for Sustainable Development

3.0 Collection of Data and Methodology

To calculate County Carlow's target energy consumption and CO₂ emissions for this Sustainable Energy Action Plan (SEAP), 2006 was chosen as the baseline year. This year was selected due to the availability of reliable CSO Census of Population data. Data was collated under various headings as follows; residential, local authority, transport, commercial and industry.

This SEAP has been developed using the data from the 2006 CSO Census of Population, together with energy data produced by the Sustainable Energy Authority of Ireland 2006 and Environmental Protection Agency (EPA).

3.1 Local Authority Data

The methodology used for the calculation of section 4.2 Local Authority - Total Primary Energy Consumption and CO₂ Emissions, was measured from 2009-2013 SEAI Energy MAP reporting for Carlow Local Authority and was compared to the national data set for Local Authorities, obtained from SEAI.

3.2 Residential Data

The methodology used for residential dwellings was to measure the Building Energy Ratings (BERs) published on the SEAI portal, County Carlow had a total of 7,404 BERs publishable for use in this SEAP. The energy performance is expressed as: (a) Primary energy use per unit floor area per year (kWh/m² /yr) represented on an A to G scale; and (b) Associated Carbon Dioxide (CO₂) emissions in kgCO₂/m² /yr. The BER data was then presented in the rating per dwelling under the category of Detached, Semi-Detached, Terraced and Apartment dwellings.

3.3 Transport Data

The national primary energy and CO₂ emissions in the transport sector is obtained from SEAI. From the data, new results are calculated by omitting the aviation industry and fuel tourism, as well as rail and public passenger services (which are included in the public sector). Calculation for Carlow's primary energy consumption and CO₂ emission, for

transport, is based on the average percentage of vehicles of different categories for Carlow and the State, which were obtained from the CSO Census 2006.

3.4 Commercial and Industrial Data

The methodology used in calculating the baseline energy and corresponding CO₂ data for the Commercial and Industrial Sector was consistent with that used for the previous sectors, i.e. the national figures (obtained from SEAI) were apportioned based on the population of the County.

4.0 County Carlow Baseline Emissions Inventory

The data used to compile the energy consumption of County Carlow was derived from national energy statistics and apportioned to the county according to demographics and economic indicators. The methodology applied is highlighted in Section 3 of this document.

4.1 County Carlow Energy Consumption, CO₂ Emissions and Targets

1,274 GWh of primary energy was consumed across County Carlow in 2006. As shown in Figure 4.1.1, oil was the largest energy fuel type consumed at 59% of total fuel, followed by Electricity at 20.51%, Natural Gas at 11.79% and Coal & Peat at 8.19%.

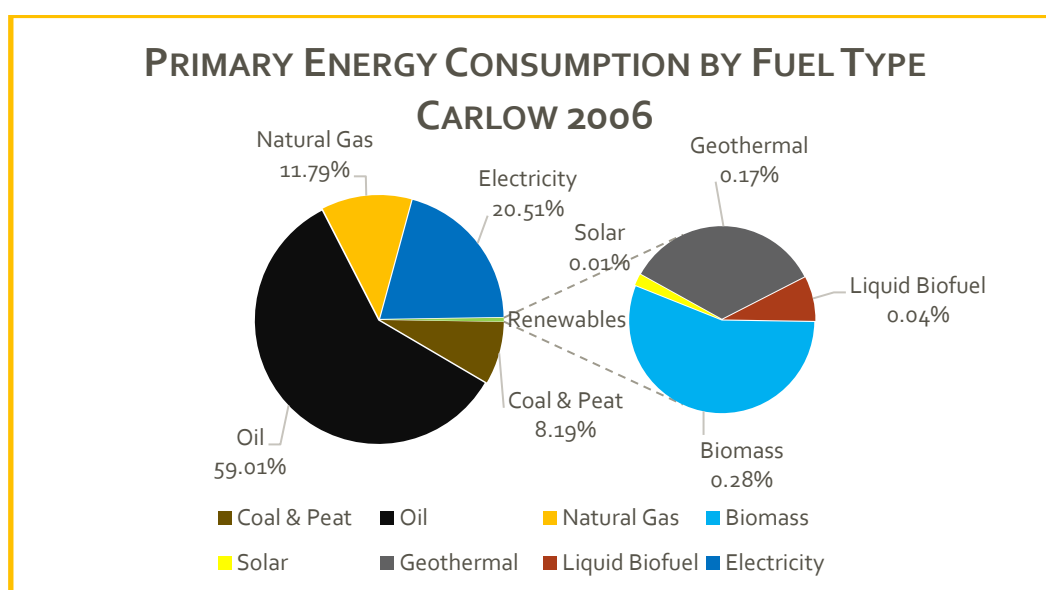


Figure 4.1.1: County Carlow Primary Total Energy Consumption by Fuel Type 2006

County Carlow emitted 308 Kilowatt Tonnes of Carbon Dioxide (CO₂) in 2006. Similar to primary energy consumption, and as shown in Figure 4.1.2, oil is also the largest emitter of CO₂, making up 56% of the total Carlow CO₂ emissions. However, due to the primary energy factor and losses in transmission of electricity, there is a significant increase in the percentage of emissions attributable to electricity, which emitted 31% of the total CO₂. Next you have Coal and Peat with 7% of the total CO₂ and finally Natural Gas with 6%.

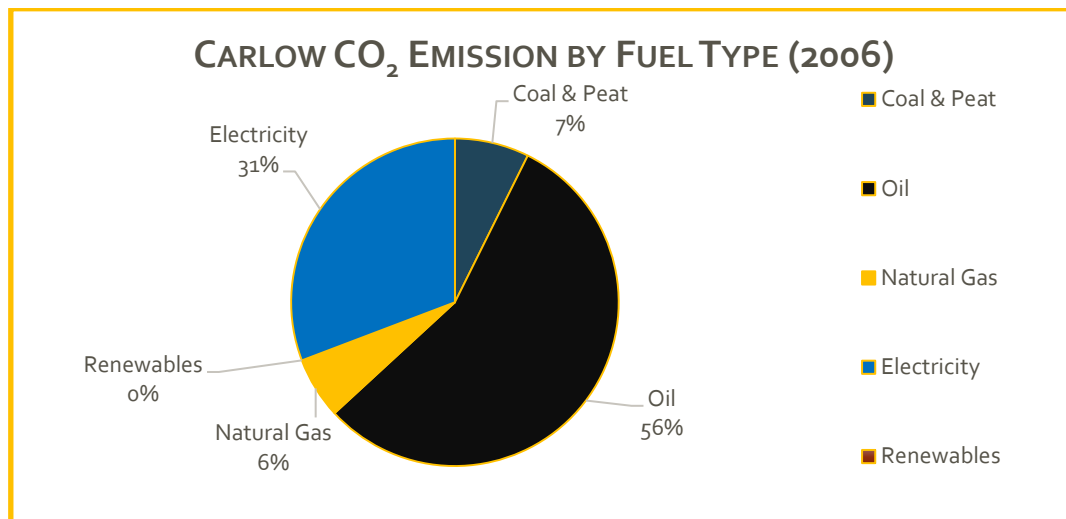


Figure 4.1.2: Carlow Total CO₂ Emissions by Fuel Type 2006

In comparing energy use across the sectors, Figure 4.1.3 shows that the transport sector is the largest user of energy with 49% of the total energy consumed. Residential is also a significant energy consumer at 38%, followed by Commercial at 11% and the Local Authority at 2%.

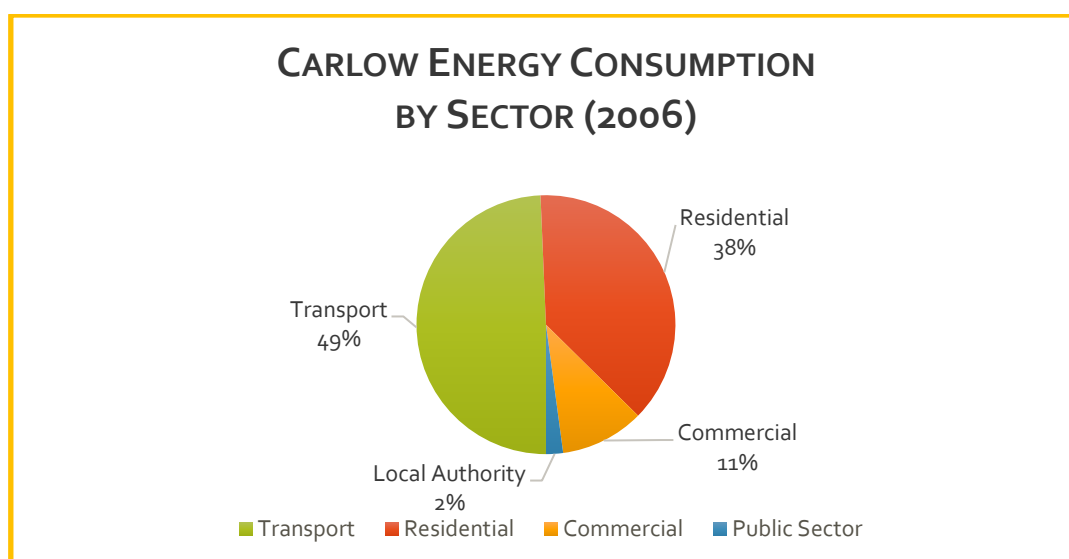


Figure 4.1.3: Carlow Total Energy Consumption by Sector 2006

However, in terms of CO₂ emissions and the sectors included in this SEAP, Transport has the highest proportion of emissions, amounting to 41% of the total CO₂ emitted per annum, as illustrated in Figure 4.1.4. This is followed by the Residential sector at 38%, the Commercial sector at 19% and finally the Local Authority at 2%.

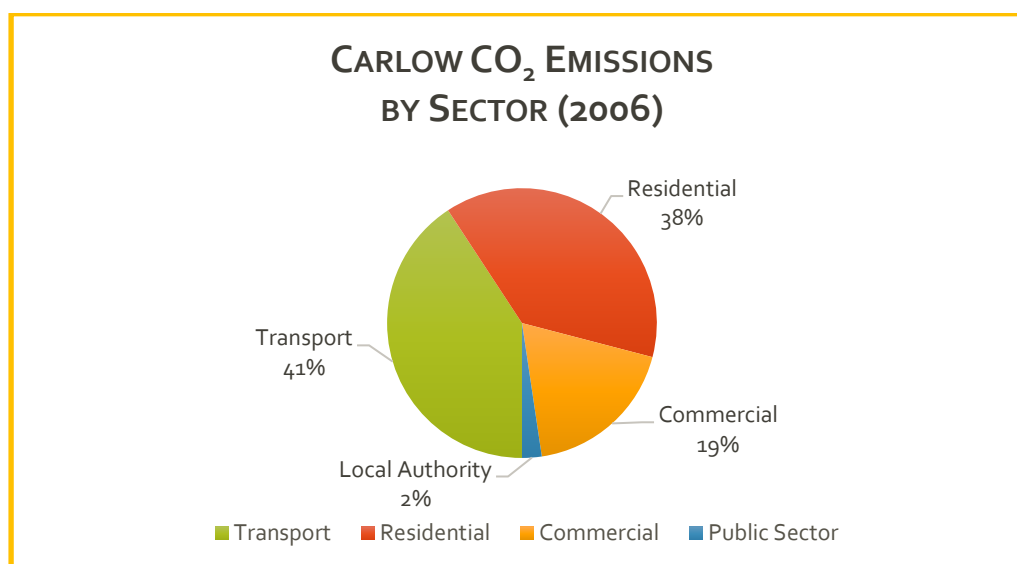


Figure 4.1.4: Carlow Total Energy CO₂ Emissions by Sector 2006

Table 4.1.1 below details the specific figures used to calculate the charts in Figures 4.1.3 and 4.1.4. These charts and tables represent the baseline figures for 2006, upon which the reduction targets for each sector are based.

CARLOW ENERGY CONSUMPTION AND EMISSION BY SECTOR				
SECTOR	ENERGY (GWH)	ENERGY (%)	CO ₂ (KTONNE)	CO ₂ (%)
Transport	628.48	49.3%	125.38	41%
Residential	485.09	38.1%	117.81	38%
Commercial	133.47	10.5%	57.16	19%
Local Authority	27.09	2.1%	7.24	2%

Table 1: Carlow Total Energy Consumption and CO₂ Emissions by Sector (2006)

The target for the Covenant of Mayors initiative is a minimum of 20% reduction in CO₂ emissions by 2020. Looking at each of the above sectors and their baseline energy consumption and subsequent CO₂ emissions, the specific targets for each sector can be easily calculated. These are detailed below in Table 4.1.2.

CARLOW ENERGY AND CO ₂ REDUCTION TARGETS BY SECTOR				
SECTOR	2006 CO ₂ EMISSIONS (kTONNES)	2020 CO ₂ EMISSIONS (kTONNES)	SAVINGS (kTONNES)	CO ₂ (%)
<i>Transport</i>	125.4	100.3	25.1	41%
<i>Residential</i>	117.8	94.2	23.6	38%
<i>Commercial</i>	57.2	45.7	11.4	19%
<i>Local Authority</i>	7.2	5.8	1.4	2%

Table 4.1.2 Carlow Energy and CO₂ Reduction Targets by Sector

Using energy consumption figures for Carlow in 2014, the CO₂ emissions were calculated and a glidepath illustrating the progress being made by County Carlow since 2006, towards its 2020 targets, has been developed. See Figure 4.1.5 below

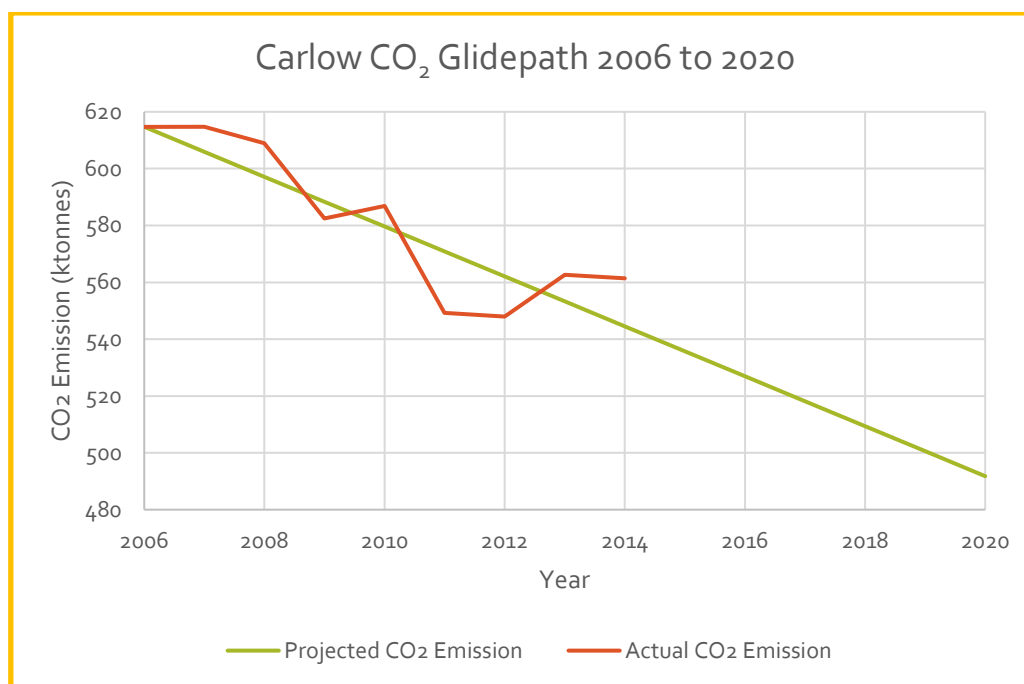


Figure 4.1.5 Carlow CO₂ Glidepath (2006 – 2020)

In order to meet the 2020 target (20% energy reduction on 2006 figures), Carlow must reduce its annual CO₂ emissions by 61.5 kTonnes. Breaking this down by Sector; Transport must reduce its annual CO₂ emissions by 25.1 kTonnes, Residential by 23.6 kTonnes, Commercial by 11.4 kTonnes and finally the Local Authority by 1.4 kTonnes.

4.2 Carlow Local Authority (Public Sector) - Total Primary Consumption and CO₂ Emissions

Since 1st January 2011 Public Sector bodies are required to report annually on their energy usage and actions taken to reduce consumption – in accordance with S.I. 426 of 2014 (and previously with S.I. 542 of 2009). The 2014 regulations transpose the Energy Efficiency Directive (Directive 2012/27/EU) into Irish Law. All Monitoring and Reporting (M&R) on Public Sector's energy consumption and CO₂ emissions will now be reported through the Sustainable Energy Authority of Ireland's M&R system.

Since 2014, with the removal of water services from the Local Authorities remit, the public sector energy's consumption is primarily made up of Public Lighting, Public Buildings and Transport. Public Lighting is the largest significant energy user (SEU), consuming 52% of the Total Primary Energy. The other SEU's are public buildings with a consumption of 32% of the Total Primary Energy, and finally Transport accounting for 16% of Total Primary Energy. These figures are illustrated in Figures 4.2.1 and 4.2.2 below.

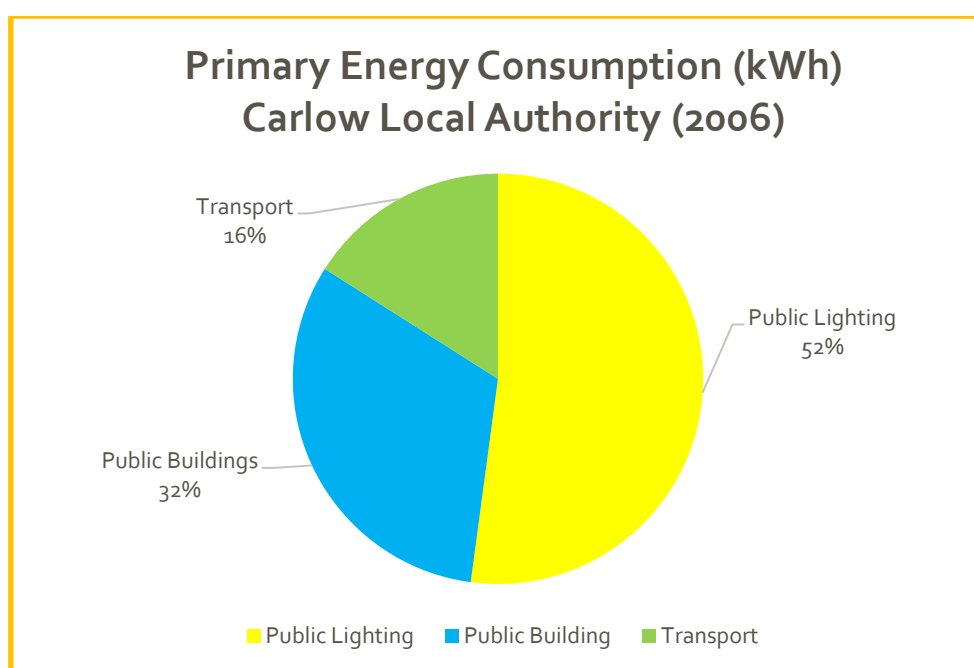


Figure 4.2.1: Primary Energy Consumption for Carlow Local Authority 2006

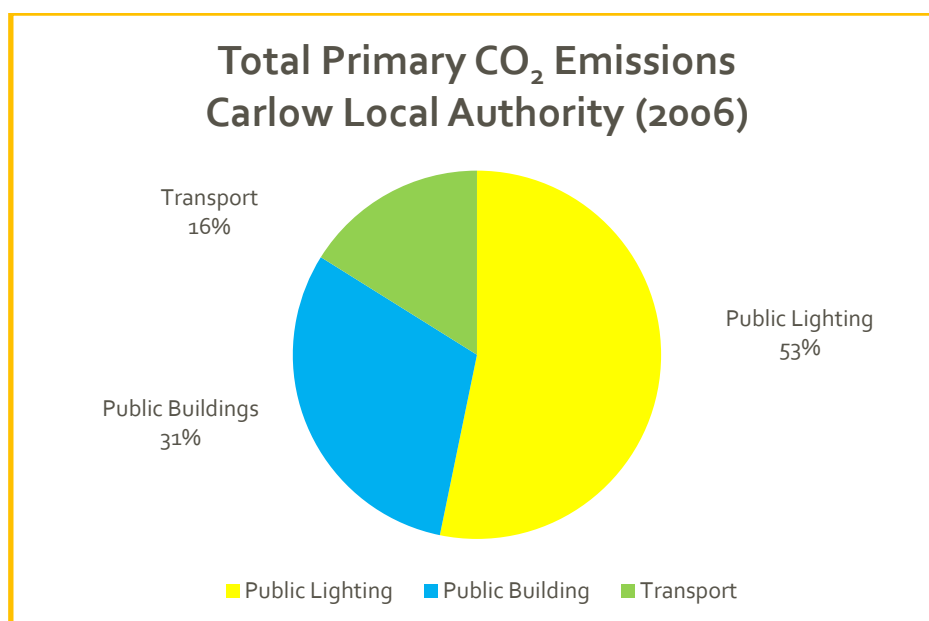


Figure 4.2.2: Total Primary CO₂ Emissions for Carlow Local Authority 2006

4.3 Residential Sector - Total Energy Consumption and CO₂ Emissions

Reviewing the census data for County Carlow, it specified that in 2006 there were 16,676 (CS0, 2006) private dwellings. A further breakdown of this data indicated the total number of each dwelling type in County Carlow in 2006, see Table 4.3.1.

2006 All Dwellings County Carlow	
<i>Semi-Detached House</i>	8793
<i>Detached House</i>	4379
<i>Terraced House</i>	2517
<i>Flat / Apartment</i>	931
<i>Bed – sit</i>	56

Table 4.3.1: CS0 2006, Total Dwellings and Type in County Carlow 2006

The Building Energy Rating, or BER, is an energy label with an accompanying advisory report for homes. The rating is a simple A to G scale. A-rated homes are the most energy efficient and will tend to have the lowest energy demand. The energy performance is expressed as: (a) primary energy use per unit floor area per year (kWh/m² /yr) represented on an A to G scale; and (b) Associated Carbon Dioxide (CO₂) emissions in kgCO₂/m² /yr.

Figures 4.3.1 and 4.3.2 highlight the BER ratings taken for dwellings in County Carlow, as provided by the SEAI. The number of BERs completed represents 44% of all dwellings in the county, which is a good sample representation. Each dwelling type has been colour coded in line with their respective BER standards.

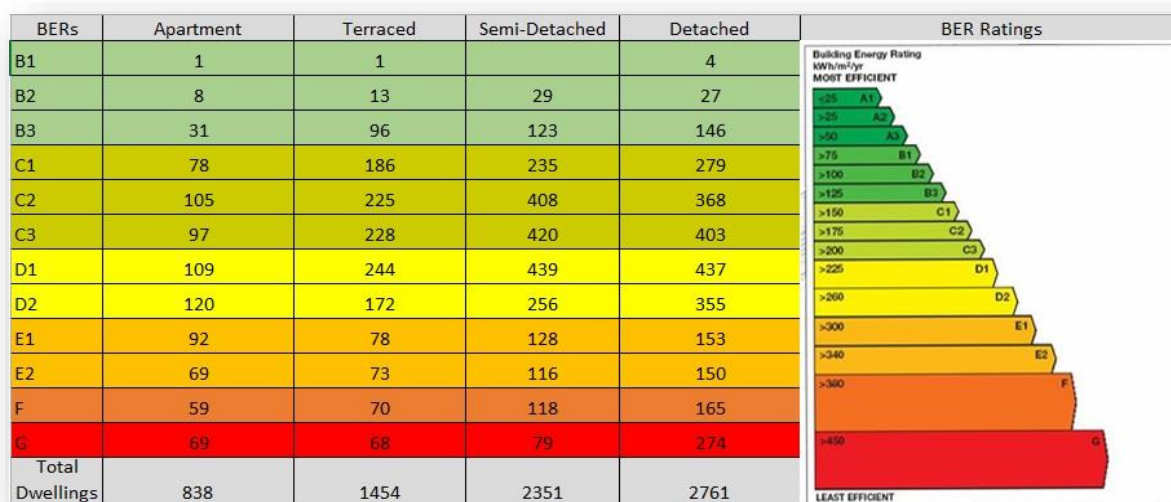


Figure 4.3.1: Average BER type, energy consumption (kWh) and energy emissions (CO₂) per year by dwelling-type for all dwellings in the County with a BER rating, 2006

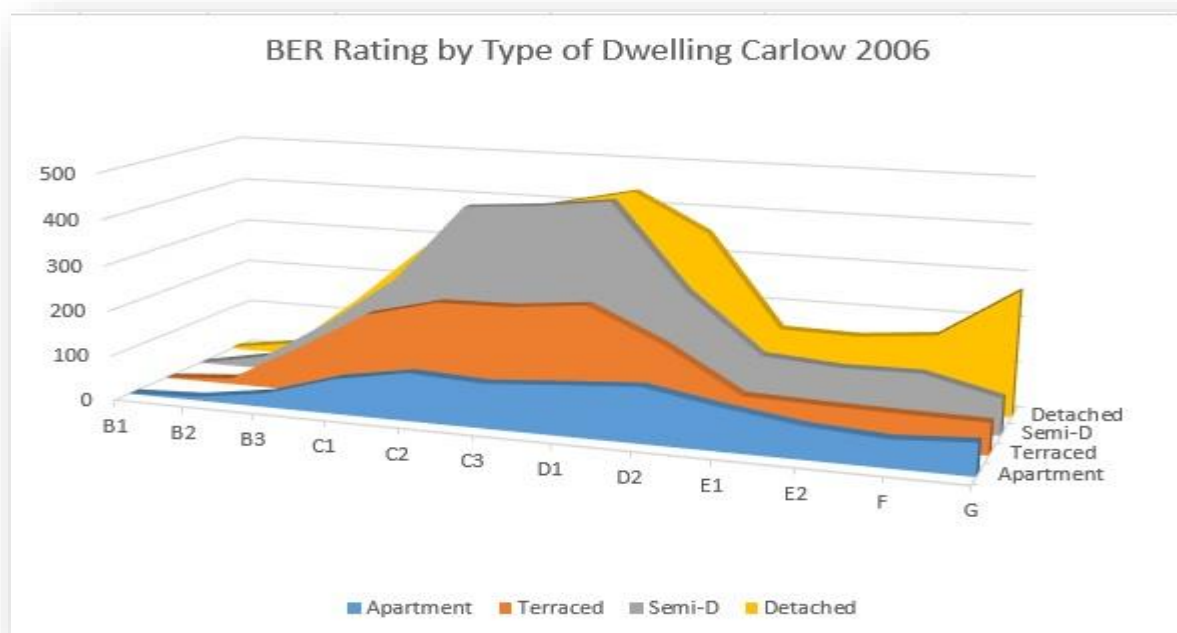


Figure 4.3.2: BER rating by dwelling-type for all dwellings in the County with a BER rating, 2006

4.5 Transport

The government launched the Electric Transport Program in 2008 to help Ireland meet its EU targets on carbon emissions. The background and function of the Programme is to promote and facilitate a shift to electric powered vehicles with the target set as 10% of the National Road Fleet to be electrically powered by 2020.

In the Private Sector Fleet Management Systems are also being explored and implemented as a best practice tool that facilitates companies in reducing their CO₂ emissions and reducing their costs through fuel efficiency and reduced vehicle wear and tear.

5.0 Sector Goals 2016 - 2020

5.1 Procurement

- Carlow Local Authority will implement National Green Procurement policies, including S.I. 151 of 2011
- Carlow Local Authority will promote best practice in Green Procurement throughout County Carlow.
 - The County Carlow Corporate Procurement Plan 2016-2018 also contains specific aims and goals in relation to Green Procurement.
- Carlow Local Authority will meet its needs for goods, services, works and utilities by choosing solutions that have a reduced environmental impact through the life cycle. Hence, 50% of all goods, services, and works have consideration of life cycle rather than price.

5.2 IT Facilities

IT facilities account for a significant proportion of the local authorities energy consumption & CO₂ emissions.

- Carlow County will remove inefficient server equipment and UPS systems from County Hall and install new energy efficient systems with self-contained cooling units. A heat recovery system will be implemented, utilising the heat from servers and supplying adjoining corridors.

- Similar projects can be utilised throughout all public buildings, depending on resources, following a detailed analysis on the buildings energy consumption.

5.3 Public Lighting

As of 2015 the Carlow County Development Plans states that all new street lighting should use LED bulbs. Efficiency improvement of public lighting to include:

- Combining all public lighting GMPN's and MPRN's into a master list
- Detailed analysis on the energy consumption of all public lighting
- Public Lighting – upgrade all 250W SONS to 100W LED, where lighting design allows.
- Compile documentation to enable completion of lighting efficiency improvement projects through ESCO / EPC projects



5.4 Residential Housing and Buildings Actions

- Carlow Local Authority will carry out a detailed analysis on the energy consumption of all Local Authority buildings, to identify significant energy users. The Carlow Kilkenny Energy Agency will carry out energy efficiency measures and identify potential renewable opportunities.
- Carlow Local Authority will ensure all future Local Authority domestic construction dwellings will be built to a BER rating \geq A3.
- For the purchase or leasing of a building, for its own use, all public bodies will ensure that the Building has a BER rating \geq A3
- All future Local Authority non-domestic construction dwellings to achieve a BER rating \geq A3
- All of County Carlow's public Libraries shall establish metering requirements to implement energy monitoring (electrical / non electrical) at all branches and implement

energy saving measures where necessary. The Libraries will set energy consumption targets for libraries with > 6 months energy consumption data collected.

- Carlow Local Authority will continue to support and promote the SEAI's Better Energy Homes scheme. Since its launch in March 2009 to 31st March 2016, County Carlow has had 2,792 residential applications, with 1,871 domestic houses being completed, with a total grant amount paid of €1,595,396
- Carlow Local Authority will continue to promote the SEAI's Better Energy Communities programme, which supports sustainable energy upgrades to existing buildings and facilities in the community sector. In December 2015, Minister for Energy Alex White, TD, announced €20 million in grant offers for local communities under the 2016 Better Energy Communities scheme. The scheme, which is administered by the Sustainable Energy Authority of Ireland (SEAI), has supported 260 community energy efficiency projects over the last four years. As a result over 12,000 homes and community buildings have received energy efficiency upgrades, supporting several hundred jobs each year.
- Minister White stated: "This funding will enable the Better Energy Communities programme to continue to reduce Ireland's carbon emissions, while improving living standards and quality of life for the people and communities it supports (*SEAI, December 2015*).

5.5 Fleet

To assist Ireland in meeting EU targets on carbon emissions, the Electric Transport Program 2008 was launched by the government in an attempt to help reduce greenhouse gas emissions. The target for the program is to see 10% of the National Road Fleet electrically powered by 2020. The shift to electric vehicles requires the installation of charging points across the Country and the provision for chargers in homes. Developing the infrastructure for alternatively fuelled vehicles will be a vital step in encouraging consumers to make more environmentally friendly transport choices.

- The Local Authority will promote and support the development of appropriate infrastructure to accommodate a change to electrically powered vehicles and to assist in achieving the 10% target for County Carlow.

6.0 Actions 2016 – 2020

6.1 Introduction

The actions included in this Sustainable Energy Action Plan are designed to address the energy challenge for the entire County of Carlow, having selected the baseline emissions inventory year of 2006 and identifying key energy targets to address the current gaps that the County faces in regards to meeting the 2020 targets. Carlow Local Authority, along with key stakeholders from across the community, have selected the actions within this document, to reduce CO₂ emissions, increase energy consumption savings and in general promote and implement a more energy efficient County.

The following summary table lists all actions submitted by the Carlow SEAP Steering Committee. The baseline year for the Carlow SEAP is 2006, therefore any energy initiative completed or in progress since 2006 is contributing to the 2020 CO₂ reduction targets for the County. The list of actions includes initiatives that are planned, in progress and complete.

Table 6.1 Summary of Stakeholder Actions in the Carlow SEAP

LOCAL AUTHORITY			
STAKEHOLDER	GOAL	ACTIONS	STATUS
Carlow Local Authority	Increase use of renewable energy	Carlow County Hall - Installation of 15-kW Solar PV	Complete
	Increase efficiency of heating system	Carlow County Hall - Installation of new condensing gas boiler	Complete
		Carlow Town Hall - Installation of new condensing gas boiler	Complete
	Increase efficiency of lighting	Carlow County Hall - LED retrofit installation with sensors	Planned
Carlow Local Authority	Increase efficiency of heating system	McGrath Hall, Bagenalstown - Installation of 2 x 18 kW air source heat pumps	Complete
McGrath Hall - Bagenalstown		McGrath Hall, Bagenalstown - Installation of TRV's, thermostats, new Heating Controls with time and temperature controls. One pipe heating system and controls used to zone the building	In Progress
Carlow Local Authority	Increase efficiency of heating system	Carlow Fire Station, Green Lane, Carlow - Retro-commission existing heating controls for greater zonal control. Upgrade/ Replace motorised valves on the heating system	Planned
Carlow Fire Station, Green Lane	Increase use of renewable energy	Carlow Fire Station, Green Lane, Carlow - Installation of Solar Water Heaters for domestic water and hot water preheat	Planned
	Increase efficiency of lighting	Carlow Fire Station, Green Lane, Carlow - Lighting upgrade 2014 T8 to LED	Complete

LOCAL AUTHORITY			
Stakeholder	Goal	Actions	Status
Carlow Local Authority Town Libraries Carlow, Tullow, Bagenalstown and Borris	Establish energy performance of town libraries	DEC Rating - Complete a Display Energy Certificate for each Library	In Progress
	Establish system for measuring and monitoring energy consumption	Energy Monitoring and Targeting - Establish metering requirements to implement energy monitoring at all branch libraries and implement where necessary.	In Progress
		Energy Monitoring and Targeting - Set energy consumption targets for libraries with > 6 months energy consumption data collected.	In Progress
		Pilot (suitable library to be selected) - Install fuel meter to fuel (LPG / Oil) tank. Record weekly fuel consumption	In Progress
Carlow Local Authority	Improve energy performance of social housing	New Oak Housing Estate, Carlow - (54 houses) Energy upgrade and retrofit, including fully integrated heating controls upgrade, external wall insulation, natural gas boiler service and roof insulation.	Complete
Carlow Local Authority	Improve energy performance of social housing	Carlow Local Authority Social Housing (25 houses) - Energy upgrade, measures to include Attic Insulation, Internal Dry lining, External Wall Insulation, Cavity Wall Insulation, Heating Controls, Air to Water Heat Pump with HC, High Efficiency Boiler and fully Integrated HC, and CFL Light Bulbs	Complete

LOCAL AUTHORITY			
Stakeholder	Goal	Actions	Status
Carlow Local Authority	Increase efficiency of IT system	Carlow County Buildings <i>Removal of inefficient server equipment and UPS system</i> <i>Installation of energy efficient system with self-contained cooling unit, removal of heat from servers and supply to adjoining corridor</i>	Complete
Carlow Local Authority	Improve lighting inventories to enable completion of lighting efficiency projects	Public Lighting - Efficiency improvement of public lighting: <i>Combine all public lighting GMPRN's and MPRN's into a master list and carry out detailed analysis on the energy consumption of all public lighting. Compile documentation to enable completion of lighting efficiency improvement projects through ESCO / EPC</i>	In Progress
Carlow Local Authority	Increase energy awareness of staff	Staff Training <i>Carry out facilities staff training and awareness for all public buildings</i> <i>Train Engineers on Utility Websites</i>	Planned
Carlow Local Authority	Increase green spaces within urban areas	Greening of Urban Areas <i>Carlow Local Authority will promote the practice of developing green spaces and planting native Irish trees in urban areas through initiatives such as National Tree Week. These green spaces will support biodiversity and act as CO₂ sinks, thereby reducing CO₂ levels.</i>	Ongoing

LOCAL AUTHORITY			
Stakeholder	Goal	Actions	Status
Carlow Local Authority	Reduce environmental impact of services	Green Procurement <i>Carlow Local Authority will meet its needs for goods, services, works and utilities by choosing solutions that have a reduced environmental impact through the life cycle. 50% of all goods, services, and works have consideration of life cycle rather than price.</i>	In Progress
Carlow Local Authority	Increase number of community energy related projects carried out	Community Awareness Programmes <i>Create awareness amongst Community Groups on sources of funding and grants for energy related projects</i>	In Progress
Carlow Local Authority	Incorporate Covenant of Mayors into Local Authority Policy and Development Documents	County Development Plan <i>County Development Plan to include reference to the Covenant of Mayors and 2030 targets</i>	In Progress
		Local Economic and Community Plan <i>LECP to include reference to the Covenant of Mayors and 2030 targets</i>	Complete
Carlow Local Authority	Increase number of renewable energy generation projects	Renewable Energy Projects Support <i>Support large scale renewable energy generation projects to support industries, which will provide cost effective energy</i>	In Progress

LOCAL AUTHORITY – LOCAL AGENDA 21

LOCAL AUTHORITY – LOCAL AGENDA 21			
STAKEHOLDER	GOAL	ACTIONS	STATUS
Carlow Local Authority	Increase energy awareness in community	Energy Awareness Programme <i>Deliver the Re-Cycle interactive “show & tell” programme, designed to build awareness of climate change, energy efficiency and sustainability</i>	Complete
Carlow Local Authority	Increase energy awareness in community	Pedal Power Lab <i>Introduce and demonstrate human/pedal power and create awareness of personal energy use</i>	Complete
Carlow Local Authority	Increase energy awareness in community	Energy Awareness Workshop <i>Deliver workshop on climate change to transition year students, facilitate peer-led conversations around the topic for climate change</i>	In Progress
Carlow Local Authority	Increase energy awareness in community	Energy Awareness Projects <i>Increase awareness in Community Groups and encourage participation in Energy Awareness projects</i>	Ongoing
Carlow Local Authority	Increase energy awareness in community	Green Schools Programme <i>To continue to support and promote long-term, whole-school action for the environment through the Green-Schools programme</i>	Ongoing

RESIDENTIAL SECTOR			
STAKEHOLDER	GOAL	ACTIONS	STATUS
Voluntary Housing	Improve energy performance of voluntary housing	Rahharc Oisín, Graiguecullen, Carlow, Tinteán Phádraig, Tullow, Co. Carlow (20 houses) <i>Measures include roof insulation, cavity wall insulation, full window replacement, external door replacement and solid fuel room heater (without back boilers). Replaced electric storage heaters with new heaters.</i>	Complete
	Improve energy performance of voluntary housing	Tinteán Risigh, Old Dublin Road, Carlow, Tinteán Coille, (32 houses) <i>Measures include roof insulation, cavity wall insulation, full window replacement, external door replacement, high efficiency gas boiler with entry level heating controls upgrade and solid fuel room heater (without back boilers)</i>	Complete
	Improve energy performance of voluntary housing	Tinteán, Co Carlow (5 houses) <i>Measures to include Attic Insulation, Cavity Wall Insulation, Full Window Replacement, External Door Replacement, and CFL Light Bulbs.</i>	In Progress
	Improve energy performance of voluntary housing	Hillview Drive, Rathnapish, Co.Carlow (1 house) <i>Fully integrated Heating Controls Upgrade</i>	Complete

RESIDENTIAL SECTOR			
STAKEHOLDER	GOAL	ACTIONS	STATUS
<i>Domestic Housing Sector (through Better Energy Communities Scheme)</i>	Improve energy performance of voluntary housing	<i>Domestic Houses throughout Co. Carlow (19 houses) Measures include roof insulation, cavity wall insulation, full window replacement, external door replacement, high efficiency gas boiler with entry level heating controls upgrade and solid fuel room heater</i>	<i>Complete</i>

TRANSPORT SECTOR			
STAKEHOLDER	GOAL	ACTIONS	STATUS
Private Transport Brian Kehoe Transport Ltd.	Increase fuel efficiency of fleet	Fleet Efficiency <i>Replacement of older, less fuel efficient vehicles with emphasis on introduction of automatic transmissions</i>	Complete Date: <i>Jan 2016</i>
	Increase efficiency of lighting	Replace exterior lighting with LED lamps <i>Replacement of exterior flood lighting units (4 x 70W Sodium units) by LED Units (4 x 12W)</i>	Complete Date: <i>April 2012</i>
	Increase efficiency of lighting	Replace halogen lamps with LED units <i>Replace 20 x 400W halogen highbay lamps in workshop with 20 x 100W LED units</i>	Complete Date: <i>November 2013</i>
	Increase efficiency of lighting	Replace fluorescent lighting with LED's <i>Replaced 21 x 72W fluorescent lighting panels with LED 42W units in offices, toilets and storage areas. Fitted proximity switches in storage and toilet areas</i>	Complete Date: <i>July 2016</i>
	Increase fuel efficiency of fleet	Improve fuel economy in HGV fleet <i>Subscription to Volvo 'Dynafleet' telematics system to monitor driver behaviour and to improve driver fuel efficiency. System gives weekly reports for vehicles and drivers with suggestions as to how individual drivers behaviour can be tweaked to produce fuel savings</i>	In Progress

COMMERCIAL / COMMUNITY SECTOR			
<i>DIVISION (AND OWNER)</i>	<i>GOAL</i>	<i>ACTIONS</i>	<i>STATUS</i>
<i>Bagenalstown Swimming Pool Committee</i>	Increase use of renewable energy	Bagenalstown Pool, Carlow - Installation of 5.2kW Solar PV <i>Installation of Geothermal (air source)</i>	Complete
<i>Ritz Centre Business Premise</i>	Increase use of renewable energy	Ritz Centre, Tullow Street, Carlow <i>Solar PV installation of 16kW panels, 100sq.m roof</i>	In Progress
	Increase efficiency of lighting	Ritz Centre, Tullow Street, Carlow <i>LED lighting retrofit</i>	In Progress
<i>Fairgreen Shopping Centre</i>	Increase use of renewable energy	Fairgreen Shopping Centre, Carlow <i>Installation of 20kW PV panels</i>	In Progress
	Increase efficiency of lighting	Fairgreen Shopping Centre, Carlow <i>Relacement of T8 fluorescent lighting with LED's</i>	Complete
<i>Visual Centre for Contemporary Art and The George Bernard Shaw Theatre</i>	Increase efficiency of lighting	Visual Centre, Carlow <i>LED lighting retrofit</i>	In Progress

7.0 Energy Monitoring and SEAP Review

Each Covenant of Mayors signatory commits to regular reporting on SEAP progress to the European Commission, for the evaluation, monitoring and verification of their respective Sustainable Energy Action Plans. This is to ensure that

- Full ownership of each SEAP is taken
- Challenges and Obstacles to the completion of an action are identified
- Corrective and Preventative Actions are put in place to address obstacles and challenges
- All necessary resources required for the completion of an action are identified
- All efforts are made to achieve the proposed SEAP

The Covenant of Mayors Offices has developed a formal reporting system so there is consistency amongst the signatories and clear guidance on what must be reported on.

Continuous reviewing of the Action Lists by each sector and within the Steering Committee will help to review progress, maintain focus and prompt support when and where needed.

Using relevant indicators, ongoing energy monitoring and recording against the 2006 baseline figures, will help to track progress being made and verify the energy savings and CO₂ reductions.

8.0 Funding and Training

8.1 EU Funding Programmes

The following is a list of funding programmes that are currently available, however it should be noted that this list is not exhaustive. A summary of the funding programmes is provided under each heading, with the option to find out more by clicking on ‘READ MORE’ at the end of the description (on soft copy files of this document). This will bring you to the relevant website that provides more detailed funding information and background.

FREE – Future Of Rural Energy In Europe - Rural areas represent 90% of all territory in the EU 27 and 56% of the population. They generate 43% of all economic value and support 55% of all employment. The communities are increasing, increasingly diverse and

increasingly mirror the spread of commerce and services seen in urban communities. Despite this, policy makers responsible for rural areas tend to focus only on agriculture – important, yes, to the economy and identity of rural communities but only a small (and shrinking) part of the story.

Rural communities face considerable challenges. Income per inhabitant ranges from 21% to 62% lower and, although the picture is not uniform across the EU, unemployment tends to be higher too, as does fuel poverty. They need help and support, therefore, particularly when it comes to energy choices. Support they are not currently receiving from Europe's regulators.

European Local Energy Assistance (ELENA) - ELENA is a European technical assistance facility providing grants to regions and local authorities in order to accelerate their investment programmes in the fields of energy and climate change.

[READ MORE](#)

Duration: Until exhaustion of funds | Amount: €30 Billion

Cohesion Fund - Financial arm of the EU Cohesion Policy aiming to reduce economic and social disparities amongst Member States of the European Union.

[READ MORE](#)

Duration: 2014-2020 | Amount: EU28 budget: €68.7 Billion

Council Of Europe Development Bank - A multilateral development bank focusing on social aspects amongst 43 Member States of the Council of Europe. Its scope of action includes various sectors directly contributing to strengthening social cohesion in Europe.

[READ MORE](#)

Duration: Ongoing | Amount: According to demand

European Agricultural Fund For Rural Development (EAFRD) - The European Agricultural Fund for Rural Development (EAFRD) is a funding mechanism under the Common Agricultural Policy (CAP). The rural development regulation aims to set clearly defined common priorities for rural development at the EU level.

[READ MORE](#)

Duration: 2014-2020 | Amount: €84.936 billion

Sustainable Energy Financing Facilities (SEFF) - Special credit facility supporting smaller companies to realise their investment efforts in sustainable energy.

[READ MORE](#)

Duration: Ongoing

European Investment Bank (EIB): Intermediated Loans - Intermediated loans are provided by the European Investment Bank to local banks with the condition of transferring them to small and medium-sized businesses. These loans can only be provided for certain purposes. Improving environmental sustainability of SMEs is one of these conditions, which includes supporting competitive and secure energy supply.

[READ MORE](#)

Duration: Ongoing

European Regional Development Fund (ERDF) - The ERDF aims to strengthen economic and social cohesion in the European Union by correcting imbalances between its regions.

[READ MORE](#)

Duration: 2014 – 2020

European Energy Efficiency Fund (EEEEf) - The European Energy Efficiency Fund (EEEEf) is a public-private partnership dedicated to mitigating climate change through energy efficiency measures and the use of renewable energy in the Member States of the European Union.

To reach its final beneficiaries, EEEF can pursue two types of investments; direct investments and investments into financial institutions.

[READ MORE](#)

Amount: Total budget (EU28): €146 million

Horizon 2020 - Horizon 2020 is the financial instrument implementing the Innovation Union, a Europe 2020 flagship initiative aimed at securing Europe's global competitiveness. One of the challenges which Horizon 2020 will address is secure, clean and efficient energy.

[READ MORE](#)

Duration: 2014 - 2020 | Amount: Global budget: €70,2 billion, including

Intelligent Energy Europe III - Intelligent Energy Europe III is a successor of Intelligent Energy Europe II, a programme aimed at helping organisations willing to improve energy sustainability. It supports energy efficiency and renewable energy policies with a view to reaching EU 2020 energy and climate targets.

[READ MORE](#)

Duration: 2014 - 2020

Interreg (2014 -2020) - The INTERREG EUROPE Programme is an EU programme that helps regions across Europe to work together, sharing their knowledge and experience.

[READ MORE](#)

Duration: 2014 - 2020 | Amount: ERDF €359 million

Connecting Europe Facility (CEF) - A programme for investing in EU infrastructure, energy and telecommunications.

[READ MORE](#)

Duration: 2014-2020 | Amount: €5.85 billion (energy infrastructure)

Life+ Programme - A financing instrument from the European Union for environmental and nature conservation projects in the EU.

[READ MORE](#)

Duration: 2014-2020 | Amount: (EU28): €3.46 billion (proposed)

8.2 National Funding Programmes

8.2.1 Better Energy Communities

The Better Energy Communities (BEC) scheme has to date provided €20 million in grant offers for local communities. The scheme, which is administered by the Sustainable Energy Authority of Ireland (SEAI), has supported 260 community energy efficiency projects over the last four years (2012 - 2015). As a result over 12,000 homes and community buildings have received energy efficiency upgrades, supporting several hundred jobs each year.

8.2.2 Better Energy Warmer Homes

This scheme administered by the Sustainable Energy Authority of Ireland (SEAI), is designed to encourage the elderly and vulnerable, making their homes more comfortable, healthier and more cost effective to run.

This scheme is available to homes which meet the following criteria:

- Owner occupied non-Local Authority homes;
- Constructed before 2006;
- The owner is in receipt of one of the following:
 - Fuel Allowance as part of the National Fuel Scheme;
 - Job Seekers Allowance for over six months and with children under 7 years of age;
 - Family Income Supplement;
 - In receipt of the "One Parent Family Payment";
- Landlords can avail of grants from the Better Energy Homes scheme if they have tenants in, or at risk of, energy poverty.

8.2.3 Better Energy Homes

The Better Energy Homes scheme is administered by the Sustainable Energy Authority of Ireland (SEAI), the programme provides assistance to homeowners to reduce energy use, costs and greenhouse gas and improve the energy efficiency of homes.

The energy efficiency works included with costs are as follows (see Table 8.2.3 below):

Measure	Energy Efficient Works	Increased Grant Value
<i>Insulation</i>	Attic	€300
	Cavity Wall Insulation	€300
	Internal Insulation (Dry Lining)Apartment (any) OR Mid-terrace House	€1,200
	Semi-detached OR End of Terrace	€1,800
	Detached House	€2,400
	External Wall Insulation (“The Wrap”)Apartment (any) OR Mid-terrace House	€2,250
	Semi-detached OR End of Terrace	€3,400
	Detached House	€4,500
<i>Heating System</i>	Heating Controls with Boiler (Oil or Gas) Upgrade	€700
	Heating Controls Upgrade only	€600
	Solar Heating	€1,200
<i>Bonus Grant</i>	For 3rd measure	€300
	For 4th measure	€100

Table 8.2.3 Summary of SEAI Better Energy Home Scheme

Note: Information detailed within this table, correct as of 01/05/2016

8.3 Applying for Funding

The previous sections summarise the various EU and National funding programmes available, but it should be noted that this list is not exhaustive as new funding programmes and projects are being developed as needs are identified and funds arise. As can be read in the summaries, many of these programmes have particular focus areas, such as the Sustainable Energy Financing Facilities (SEFF), which is a special credit facility supporting smaller companies to realise their investment efforts in sustainable energy. This helps to identify which programmes should be applied to for the different categories of actions. CKEA will be able to work with and advise the Local Authority in relation to this.

8.4 Energy Efficient Training Programmes

8.4.1 SME Energy Training

Three half-day workshops over 10-12 weeks. Structured tasks - to help the SME achieve savings during the programme. Expert phone and e-mail mentoring assistance: Participants are encouraged to ask questions between workshops to ensure savings are delivered. Tuition in SEAI's online tools and access to best practice sheets tailored to your sector.

http://www.seai.ie/Your_Business/Business_Training/SmallBusiness_Training/

8.4.2 Energy MAP Training

Energy MAP is the Energy Management Action Plan from SEAI. It is a structured programme aimed at companies with an energy spend above €100,000. Where companies adopt a structured approach to energy management, experience shows there is a clear sequence of events that brings the best result. SEAI have formalised these steps into five pillars of energy management.

http://www.seai.ie/Your_Business/Business_Training/EnergyMAP_Training/#sthash.0n4eiV67.dpuf

<http://www.dcenr.gov.ie/news-and-media/en-ie/Pages/PressRelease/Launch-of-%E2%82%AC70-million-Irish-Energy-Efficiency-Fund.aspx#>

http://www.seai.ie/Better_Energy_Financing/Project_Documents/Better-Energy-Financing-Scheme-Executive-Summary.pdf

http://www.seai.ie/Grants/Better_energy_homes/

http://www.seai.ie/Grants/Warmer_Homes_Scheme/

http://www.seai.ie/Grants/Better_Energy_Communities/

8.4.3 Public Sector ISO 50001 Energy Management Support Programme

Public sector organisations are now responding to higher energy saving expectations, and the challenge is to commit to a more strategic approach to energy management. SEAI can help your organisation achieve this through a Partnership Programme (for large organisations), and support you in meeting your obligations.

The Partnership Programme is the most comprehensive support package available from SEAI for large organisations, and is offered in return for commitment to energy management from your organisation. A Partnership is between your Public Sector Organisation and SEAI and offers a clear roadmap and defined support actions to help you achieve targeted energy savings.

http://www.seai.ie/Your_Business/Public_Sector/Partnerships/

8.4.4 Green Procurement

Public bodies should play an exemplary GPP role. To this end, they must first ensure their own procurement processes are in compliance with national environmental laws and guidelines. These guidelines help public bodies to secure significant economic, energy and environmental benefits in the medium and long term through the procurement of products, services and capital projects.

In addition to fulfilling an exemplary GPP role themselves, public bodies should encourage and, where appropriate, oblige their supply chain partners to do so. In terms of energy efficiency, for example, they can do this by raising awareness of energy efficient procurement among all of their suppliers and by encouraging, facilitating, monitoring and, where appropriate, compelling suppliers to use the energy efficient procurement framework.

Green Tenders adopts the indicative EU political target of 50% of GPP, where GPP means incorporating green criteria into the procurement contract. This target will apply in respect of both the number and the value of public procurement contracts concluded. The focus initially will be on the number, ensuring that as soon as possible, at least half of such contracts will include core GPP criteria – i.e., criteria that are suitable for use by any contracting authority, and address the key environmental impacts.

Green Tenders nominates eight product/service groups as priority groups for GPP. These are:

1. Construction
2. Energy
3. Transport
4. Food and catering services
5. Cleaning products and services
6. Paper
7. Uniforms and other textiles
8. ICT

In line with EU practice, these groups have been chosen on the basis of the following criteria: quantum of public expenditure; scope for environmental improvement; potential impact on suppliers; potential for setting an example to private or corporate consumers; political sensitivity; existence of relevant and easy-to-use criteria; market availability and economic efficiency.

<http://www.etenders.gov.ie/Media/Default/SiteContent/LegislationGuides/13.%20Green%20Tenders%20-%20An%20Action%20Plan%20on%20Green%20Public%20Procurement.pdf>

8.5 Conclusion

The development of this SEAP has given the Local Authority the opportunity to establish a valuable network of authorities, groups, agencies and individuals that combined can co-create a sustainable future.

Through ongoing monitoring and the contribution of expertise from each of the sectors, the SEAP will continue to evolve and grow and will endeavour to meet its current and future targets.