



Comhairle Contae Chiarraí

Kerry County Council

Covenant of Mayors

► **Sustainable Energy Action Plan, 2012 - 2020** ◀

January 2013

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PART 1 – FOREWORD BY MAYOR

A Chara

As Mayor of Kerry, I am delighted to present Kerry's first Sustainable Energy Action Plan 2012-2020 on behalf of Kerry County Council and the Town Councils of Tralee, Killarney and Listowel.

When Kerry County Council and the Town Councils became signatories of the Covenant of Mayors, we committed to joining forces with communities across the European Union in making our world a better place. The goal of the Covenant of Mayors is to achieve significant reductions in the amount of CO₂ produced and to reduce the level of greenhouse gas emissions by 2020.

Across the globe there is a greater awareness of the impact human life is having on our planet, and how our planet is reacting. The extreme weather events over the past number of years have surely raised major questions in relation to climate change and what can be done to improve the situation.

Now is the time for leadership, nationally and locally, in terms of reducing our dependence on fossil fuels, reducing our levels of emissions into the atmosphere and increasing the levels of renewable energy that can be produced locally.

The Kerry Sustainable Energy Plan 2012-2020 (SEAP) sets out a roadmap in this regard, giving clear objectives, a list of actions and targets to be reached. I must commend all those involved in drafting this plan for the clear manner in which it is set out.

Significantly, the SEAP points to significant economic benefits for the county of Kerry. Reducing the dependence of the county on imported fossil fuels generates opportunities for locally produced energy sources to be brought into the market.

Kerry County Council has long seen the advantages of more efficient and sustainable practices in the way we carry out our business and deliver our services.

Our in-house Energy Office is working with all sections of Kerry County Council and the Town Councils in identifying areas where efficiencies can be achieved.

Through projects like the hydroelectric dam at Lough Guitane, the installation of more efficient pumps at our pumping stations, and bringing our public buildings up to greater energy efficiency levels, we have significantly reduced our energy consumption.

These works have been recognised at national level by the Sustainable Energy Authority of Ireland (SEAI). Additionally, the work carried out by the Energy Office as part of the Mitchels-Boherbee Regeneration Project has been recognised by the SEAI as hugely significant.

This project has seen the construction of a hugely energy-efficient apartment complex in Moyderwell, heated by a District Heating System, which is fuelled by locally produced woodchip. This system is now also heating the refurbished Moyderwell Convent, Tralee Library, Moyderwell Primary School and over 100 houses in the Mitchels area. These houses, many built in the 1940s, have also been retrofitted with external insulation.

The work carried out has led to Tralee being selected as one of three Sustainable Energy Communities in Ireland, the others being Dublin City & Tallaght. The SEC Programme is an EU-wide programme, which seeks to replace the dependence on imported fossil fuels through the creation of energy saving projects.

In addition to the work being carried out by Kerry County Council and the Town Councils, combining this work with the efforts of the private sector is crucial. Recognising this, Kerry's Energy Action Team consists of representatives from the Local Authority, other public bodies and representatives from the private sector.

There is a general recognition that the work carried out under the umbrella of the Sustainable Energy Action Plan will contribute to a national, EU and global effort to reduce emissions and dependence on fossil fuels. But there is also recognition that it will benefit this county economically.

As Mayor of Kerry, I am delighted that Kerry County Council and the Town Councils of Tralee, Killarney and Listowel are signatories of the Covenant of Mayors.

It is vital that we lead the way for better communities. Working together in order to achieve the aims of the Sustainable Energy Plan will certainly lead to this.

Cllr Terry O'Brien
Mayor of Kerry



PART 2 – OVERLALL STRATEGY

2.1 Introduction

Kerry County Council (KCC) have successfully been accepted as a signatory to the Covenant of Mayors.

The application to the Covenant of Mayors by Kerry County Council has been signed by all the Kerry Local Authorities within the county namely, Tralee, Listowel and Killarney Town Councils.

As part of the covenant a Sustainable Energy Action Plan (SEAP) must be submitted within the first year following registration. This is followed by an annual evaluation report and opportunity to engage in dissemination of knowledge (two-way) and best practice.

In summary the SEAP shows how commitments will be reached within the time horizon of the plan (2020).

The plan builds upon the Baseline Emission Inventory (BEI) to identify opportunities for reaching the targets. It sets out actions and time lines for their implementation which will be used to inform short and longer term strategies.

The covenant of mayors is an initiative of the European Commission to achieve results beyond the set targets of a 20% reduction in green house gas emissions (GHG) by 2020.

This report follows the guidance document 'How to Develop a Sustainable Energy Action Plan'.

2.2 Objectives and Targets

The overarching objectives of this plan are;

- o to reduce the economic expenditure on energy for citizens, businesses and the local authority
- o to reduce the per capita CO₂ emissions
- o to reduce the dependence on imported fuel and highlight opportunities for locally based renewable energy sources
- o to increase the level of renewable energy produced in the county
- o to enhance the competitive and attractive nature of Kerry as a destination for business through modern and efficient energy infrastructure and pricing
- o to increase the knowledge and understanding of the objectives of the SEAP

2.3 Vision of the Future and Current Frameworks

Vision of the future.

The vision of this plan is to in the first instance to reduce energy dependency by energy conservation measures and then develop as far as is practical a self-sustaining region through a series of discrete yet ultimately mutually reinforcing actions.

The aim is to strive for the development of local energy sources meeting the identified and efficiently managed demand of the region thus reducing leakage from the local economy and contributing to a sustainable and on-going improvement in quality of life of every citizen of the region and beyond through replication.

Current Frameworks.

There are a number of local, regional, national and European wide plans, policies and legislation that impact on the objectives of the SEAP.

There are also a number of existing initiatives which will assist in the achievement of the objectives of this plan.

It is within the context of these (and future) plans and policies that the objectives of the SEAP are being advanced.

These framework documents include;

Local Dimension;

- Kerry County Development Plan
- Town Development Plans
- Local Area Plans

Selected Current Local Initiatives;

- Sustainable Energy Community Programme (Phase I and II)
- Energy Map (KCC)
- Transition Kerry

Regional and National Dimension;

- Regional Planning Guidelines
- Regional Bio-Energy Plan
- Regional Waste Management Plan
- National Development Plan
- National Spatial Strategy
- National Climate Change Strategy
- National Energy Efficiency Action Plan 2009-2020
- National Renewable Energy Action Plan

European Dimension;

- EU SEA Directive (2001/42/EC)
- Kyoto Protocol

- EU Directive (96/62/EC) (Air Quality Directive)
- EU Floods Directive (2007/60/EC)
- EU Habitats Directive (92/43/EEC)
- Energy Services Directive (2006/32/EC)
- Renewable Energy Directive (2009/28/EC)
- Energy Performance of Buildings Directive (2002/91/EC)

County Development Plan.

The County Development Plan 2009 -2015 consolidates the direction given by the above references into a coherent approach which has been adopted by the Kerry County Council after a consultative and collaborative approach.

The Plan highlights strategic issues that need to be addressed to facilitate the balanced develop of the county these include;

- Potential - it is defined as the capacity which an area possesses for development arising from its endowment of natural resources, population, labour, economic and social capital and location relative to markets
- Linkage - these are the means of moving people, goods, energy and information.
- Critical mass - it is defined as the size, concentration and characteristics of population that enable a range of facilities to be supported and which, in turn, can attract and support higher levels of economic activity
- Quality of life
- Urban design
- Sustainable employment opportunities
- Dispersed rural settlements
- Security of energy
- Reliance on renewable energy

These principles are summarised in section 2.9.1 of the Plan ... 'The principal aim of the County Development Plan is to provide for an improved quality of life for all the people in the county while regulating development in a sustainable manner. This can be achieved through the promotion of its social, cultural and employment opportunities, efficient transportation and infrastructure, sufficient housing and community facilities as well as a safe, healthy and clean environment which all contribute to a good quality of life'.

The Covenant of Mayors underpins this objective.

There is a specific section in the County Development Plan which addresses Renewable Energy.

Part of Section 7.4 of the Plan is reproduced here in order to outline the vision for renewable energy in the sustainable development of the county.

7.4 Renewable Energy

7.4.1 The promotion of renewable energy throughout the county is important both for economic and environmental reasons. Ireland in compliance with the Kyoto protocol and the provisions of a 'Burden Sharing Agreement' between E.U. member states aims to limit Greenhouse Gas emissions to 13% above 1990 levels in the period 2008 –2012. S.I. 666 (2006) requires A Building Energy Rating

Certificate for all new homes, while all new buildings greater than 1,000m² must ensure that consideration is given to the economic, environmental and technical feasibility of installing alternative renewable energy systems and that the uses of such systems has been taken into account, as far as practicable in the design of the building.

7.4.2 Environmentally, the harnessing of renewables for energy production releases no harmful greenhouse gases, reduces local air pollution and produces little or no waste. Economically, it will give rise to inward investment in terms of construction, operation and maintenance. It is also an indigenous natural resource that replaces imported fossil fuels, thereby reducing national fuel bills. It provides greater security of energy supply and reduces the potential for serious economic impacts due to external factors which might affect energy prices. In addition renewable energy can contribute to employment generation either directly in the renewables industry or indirectly in the supply industry. The use of renewable energy also decouples economic growth from environmental pollution.

7.4.3 Renewable energy comes from natural, inexhaustible sources such as the sun (solar), wind, falling water (hydro), oceans (wave), plants (biomass and bio-fuels) and the earth (geothermal heat pumps). Renewable energy can also be derived from a range of waste products including sewage sludge, municipal solid waste and agricultural waste.

7.4.4 Ireland, and specifically Kerry, is well positioned to develop and benefit from renewable energy. Ireland has one of the best wind energy resources, and growing climates for biomass, in Europe and an excellent climate for some solar energy technologies. The Council recognises the significant environmental and economic benefits associated with energy production from renewable resources.

<i>Objective No</i>	<i>General Renewable Energy</i>
	<i>It is an objective of the Council to:</i>
<i>NR 7-21</i>	<i>Facilitate renewable energy (a) Maximise the potential and promote the development of appropriate renewable energy projects throughout the County while having due regard to the need to protect the environment and the landscape and ensure the proper planning and sustainable development of the county. (b) Facilitate the preparation of a Renewable Energy Strategy for the county during the lifetime of the plan. (c) Facilitate the preparation of an Energy Conservation Strategy for the county during the lifetime of the plan</i>
<i>NR 7-22</i>	<i>Use of micro-renewable technologies: Facilitate and promote the use of micro-renewable technologies, where appropriate, through the planning application process.</i>
<i>NR 7-23</i>	<i>Infrastructure for facilitating wave energy Promote the utilisation and of wave energy by facilitating appropriate infrastructure for the harnessing and utilisation of same.</i>
<i>NR 7-24</i>	<i>Built Environment Support the integration of renewable energy and sustainable design into the built environment</i>

The commitment of the Kerry Local Authorities can be demonstrated by the development and support of a number of local initiatives which all contribute to the objectives as already outlined.

Specific examples are set out in section 4.2 of this plan.

2.4 Organisational and Financial Aspects

2.4.1 Coordination and Organisational Structures

The Sustainable Energy Communities has established a Steering Committee for the project.

The Steering Committee members are charged with the delivery of the Sustainable Energy Community Programme and are drawn from different organisations including community groups, industry and Local Government.

The SEC Steering Committee will guide and develop the SEAP and then lead in its implementation.

There is a particular emphasis on areas where opportunities exist for progress to be made on the objectives of the SEAP and that these can be used to provide models for replication elsewhere throughout the county.

Table 2.4.1 SEC Steering Committee members:

<i>Name</i>	<i>Organisation</i>	<i>Position</i>
Michael McMahon	Kerry County Council	Tralee Town Manager & Director of Services (Planning)
Oliver Ring	Kerry County Council	Director of Services (Environment, Water Services & Energy)
Michael Scannell	Tralee Town Council	Tralee Town Clerk
Frank Hayes	Kerry Group	Director of Corporate Affairs
Jack O'Leary	Malachy Walsh & Partners, Consulting Engineers	Director
Donal Hunt	IT Tralee	Estates Manager
Tom Shanahan	Teagasc	Manager
Eoin O'Donnell	FÁS	Assistant Manager
Kieran Ruttledge	Aquadome Tralee, Holiday Tralee	Manager
Denis Ogie Moran	Shannon Development	Regional Manager Kerry
Eamon O'Reilly	North and East Kerry Development Co.	CEO
Jerry Moloney	Enterprise Ireland	Regional Manager
Bob Casey	Tralee Chamber of Commerce & Industry	Chamber Member
Grace O'Donnell	Tralee Town Council/ Tralee Chamber of Commerce & Industry	Business Manager and Councillor
Michael Fitzgerald	HSE	CEO Kerry Area
Jerry Dwyer	Lee Strand Cooperative Creamery	Facilities Manager
Ciaran Nugent	Department of Agriculture	Department Inspector
Tomas Hayes	County Enterprise Board	Chief Executive Officer
Mike Barry	Saorgus Energy Ltd.	Director

The steering committee will meet quarterly to review the implementation of the actions.

It will also prepare the annual review.

The work of the committee will be supported by the Energy Advisor of Kerry County Council in the delivery of the stated objectives.

2.4.2 Staff Capacity

a) Energy Office of Kerry County Council and Kerry Energy Agency. The energy office has two full time technical staff with administrative support.

b) Kerry Local Authority - Energy Management Team

Energy MAP is an Energy Management Action Plan provided by the Sustainable Energy Authority of Ireland and its purpose is to provide organisations with a strategic approach to energy management. The National Energy Efficiency Action Plan 2009 -2020 outlines government commitment to achieving a 20% reduction in energy demand nationally through energy efficiency improvement by 2020. The 20% energy saving target equates to 31,925 GWhr. Recognising that the government must lead by example, the target set for the public sector to achieve is a 33% reduction by 2020. Energy MAP and other SEAI supports are expected to contribute 545GWhr energy savings towards the target of 31,925GWhr.

Kerry Local Authority: Energy Management Team

Energy MAP Manager: Oliver Ring

Energy MAP coordinators: Willie Moynihan
Adam Stack
Tom Sheehy

Department	EMT Representative
Environment	Micheál Ó Coileáin
Housing	Deirdre Sullivan
Water Services	John Kennelly
Roads and Transportation	Eamon Scanlan
Corporate Services	John Purcell
IT	Ray Norris
Fire Services Department	Derek Pyne
Libraries	Seamus Dowling
Tralee TC	Tim McSwiney
Killarney TC	Kieran O'Halloran
Listowel TC	Mike McEnergy

2.4.3 Involvement of stakeholders and citizens

Kerry County Council has a well established and time won record with regard to involving stakeholders and engaging with the citizens of the county.

Of particular note in the field of Energy and Environmental matters is the work undertaken by;

- o The Strategic Policy Committees of KCC. These are established as part of policy formulation framework for the local authority. Their membership includes elected representatives and nominated sectoral interests – this mechanism ensures that the policy formulation takes cognisance of the views and issues identified by those directly impacted by the actions proposed.
- o the Environmental Awareness Officer of Kerry County Council
- o the Energy Office of Kerry County Council
- o the Kerry Energy Agency

2.4.4 Budget

The budget for the plan is made up of time allocated to the delivery of the plan by those nominated above and in the time allocated to the project by the members of the steering committee.

It is estimated that at least 1,200 hours of time per annum will be dedicated to advancing the project objectives by the Energy Office of Kerry County Council (700) and time associated with actions under taken by the Energy Map Team (500).

A further 200 hours of time will be spent by the Steering Committee – 50 hours through meetings (4 No) and the balance by specific members of the committee in advancing the objectives within their own organisations.

2.4.5 Foreseen Financial Sources

Funding for activities identified in the SEAP will be sought from a number of sources including;

- Kerry County Council resources
- Government sponsored initiatives delivered through a variety of departments
- SEAI
- European Funding opportunities
 - Cohesion Policy
 - Interreg
 - Life
 - Competitiveness and Innovation Framework Programme
- National Development Plan

2.4.6 Planned Measures for Monitoring and Follow Up

The Baseline Emission Inventory as set out in Section 3 provides the base against which the outcome of actions can be measured.

Kerry Local Authorities, local organisations, community groups and interested parties have already undertaken initiatives and measures which are providing savings and benefits to citizens (see section 4.2 for some specific examples).

The main measure of performance will be against the BEI which itself may be further refined on foot of more data which may come to hand during the period of the plan.

The SEAP in its current form is a working document and a communication tool towards stakeholders.

The annual reports will outline works done and initiatives undertaken.

Within each discrete action a credible measure of performance will be included to monitor the effectiveness of that particular action. It will also point to how the action could be improved or modified to be more effective.

The individual measure of performance will be suited to the particular action in order to capture the required information for management and appraisal without incurring an unreasonable administrative or financial cost.

PART 3 - BASELINE FINAL ENERGY AND EMISSIONS INVENTORY

3.1 Introduction

The baseline year for County Kerry's final energy and emissions inventory was taken as 2008.

Final energy consumption was estimated on the basis of a comprehensive collection and analysis of data from a wide range of sources. Energy usage was derived as much as possible from localised data i.e. directly relevant to energy users in County Kerry. When such data was not available, energy usage was derived from national energy consumption statistics and apportioned to the county according to suitable demographic or economic indicators. The methodology applied for each sector is outlined in more detail in the following sections.

3.1.1 Residential.

The housing stock of the county was defined on the basis of the Irish Central Statistics Office (CSO)'s Population Census 2011 and subdivided according to 'year built on' categories to reflect varying thermal performance standards with the age of properties.

Only permanently occupied housing was considered (Co. Kerry has a large proportion of unoccupied houses—c.25%, a large number of them holiday homes).

The thermal energy usage was then established for each age group on the basis of an analysis of Building Energy Rating data provided by the Sustainable Energy Authority of Ireland (SEAI), with a sample of over 13,000 BERs.

Average thermal usage figures derived from this methodology were then compared with national statistics from SEAI and from the extensive monitoring of energy usage in a sample of 300 rural housing units in Tipperary under the EU SERVE1 project. This comparison showed a high level of correlation between the theoretical usage under the BER analysis and the monitored data.

3.1.2 Commercial Services.

The energy demand of commercial services in the county was established on the basis of a comprehensive analysis of demand in Tralee and Killarney, the two major towns in County Kerry.

Energy consumption for a sample of circa 5000 businesses was measured or estimated on the basis of floor area, business type, occupation patterns as well as energy usage indicators provided by SEAI in its Energy Mapping Tool.

An average thermal and electrical energy demand per business type was determined on the basis of this sample and applied to the remaining population of businesses. The full population of businesses was established according to the Rates Collection (local tax on commercial premises) data provided by the Local Authorities of the county.

3.1.3 Industry.

Industry energy usage was determined on the basis of usage data at national level taken from SEAI's annual energy balance for 2008 and apportioned according to the ratio between Kerry and national industry fuel and power input in the sector as a whole (data taken from the CSO).

¹ See <http://servecommunity.ie/> for details.

Unfortunately, statistics on the industrial sub-sectors were not available at a county level for anonymity reasons and it was therefore not possible to reflect the specificities of industrial activity in Kerry in energy usage terms.

3.1.4 Public Services.

Local authority energy usage data is collected on an annual basis for all the council activities for the purpose of monitoring the implementation of the National Energy Action Plan by which the public sector is committed to reduce its energy demand by 30% by 2020.

Energy usage data was also obtained for national public services such as the Health Service Executive, primary and secondary schools, as well as Tralee Institute of Technology (third level institution).

3.1.5 Agriculture

Agriculture energy usage was determined on the basis of usage at national level taken from SEAI's annual energy balance for 2008 and apportioned according to the ratio of Kerry versus national farmed area (as per the Agricultural Census 2010).

Specific energy usage data per agricultural system is not available, but on the whole the profile of agriculture in Kerry is somewhat similar to the national one (except for a lower share of tillage).

3.1.6 Transport.

Detailed statistics on the transport sector in Kerry were obtained from the CSO (2008) to establish a fairly accurate profile of the vehicle fleet in Kerry, the average number of km driven (or t.km for transport of goods) and average fuel usage per vehicle type.

Transport energy usage was distributed between the different sectors according to their main transport requirements e.g. residential (private cars), commercial services (goods transport), public services (goods transport and utilitarian vehicles such as waste collection), agriculture (machinery), industry (goods transport).

With regard to freight, it was assumed that 70% of freight is for the commercial services sector and 30% for the industrial sector.

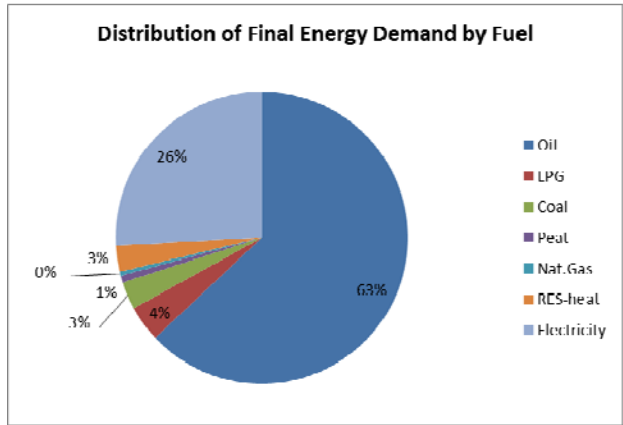
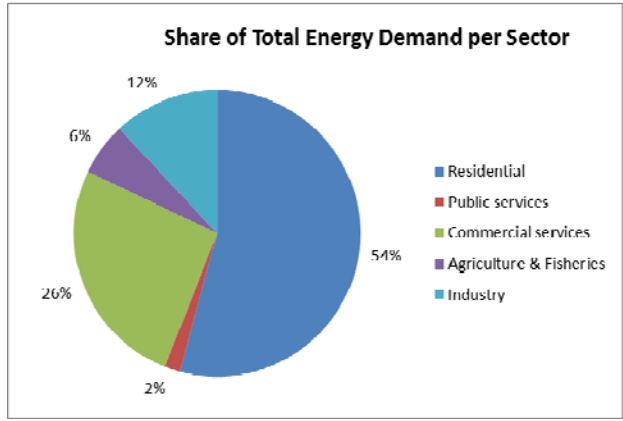
3.1.5 Final Energy Demand.

The table below presents the split between thermal energy use, electricity and transport for the main socio-economic sectors.

Annual energy usage (GWh/yr)	Total	Thermal							Electricity (thermal)	Electricity			Transport fuel	Total
		Oil	LPG	Coal	Peat	Nat.Gas	RES-heat	Total		Grid_e	Local RES-e			
Residential	1206.3	797.3	55.7	98.0	30.4	17.7	95.9	111.1	237.3	194.9	42.4	711.9	2155.5	
Public services	22.7	22.3	0.4				0.0		37.1	24.9	7.6	9.9	69.8	
Commercial services	336.2	80.2	102.4	1.5			0.9	151.2	364.1	298.9	65.1	338.5	1038.8	
Agriculture & Fisheries									35.0	28.7	6.3	202.1	237.1	
Industry	243.9	203.0		22.2			18.7		92.2	75.7	16.5	138.9	475.0	
Total	1809.1	1102.9	158.5	121.7	30.4		115.4	262.3	765.7	623.2	137.9	1401.5	3976.2	

The total final energy demand is estimated at close to 4 TWh/yr, with thermal energy being the highest demand after transport.

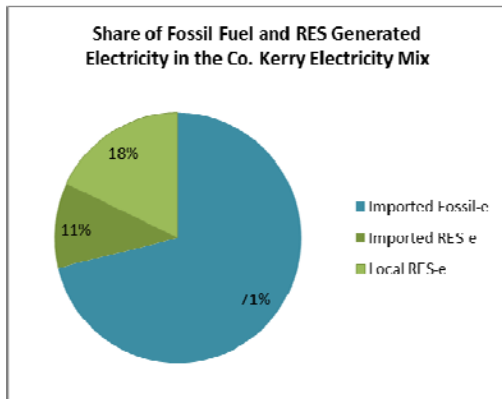
The following graphs show the share of the different sectors in the total demand, as well as the distribution between fuels.



The residential sector (households) is responsible for 54% of the total energy demand in the county, with the commercial services having a 26% share and industry another 12%. While agriculture is omnipresent in Kerry, it only represents 6% of the final energy demand.

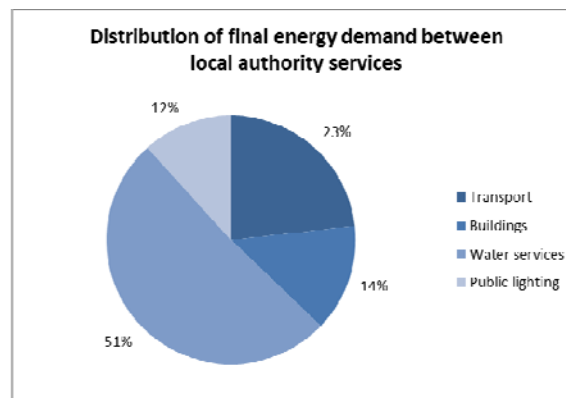
In terms of fuels, Kerry is highly dependent on oil (63%), showing its prime importance as a heating fuel (28% of total demand) and transport fuel (35%). Electricity represents about a quarter of the final energy usage.

The total installed capacity of wind energy was 163.6 MW in 2008, of which 53.3 MW are considered to contribute entirely to the local energy demand (<20 MW according to the SEAP guidelines). When adding hydropower, it is considered that local RES-e contributes to c.18% of the total electricity consumption. The national mix also include c.11% of renewable electricity. The carbon factor for the electricity mix in Kerry, considering the local RES-e contribution was determined at 0.47 kgCO₂/kWh in 2008 (compared to 0.55 kgCO₂/kWh at national level).



The local authority has a modest contribution to the overall energy consumption in the county – 1.1% of the total final energy demand. The table and graph below presents the distribution of energy demand per service.

Final energy demand - Local Authority (GWh/yr)			
	Fuels	Electricity	Total
Transport	9.94		9.94
Buildings	1.59	4.37	5.97
Water services		21.87	21.87
Public lighting		5.00	5.00
Total	11.53	31.24	42.77



3.2 Energy Related CO₂ Emissions in County Kerry

The following table presents the estimated energy-related CO₂ emissions for the different sectors of the county's economy and for the different fuels used.

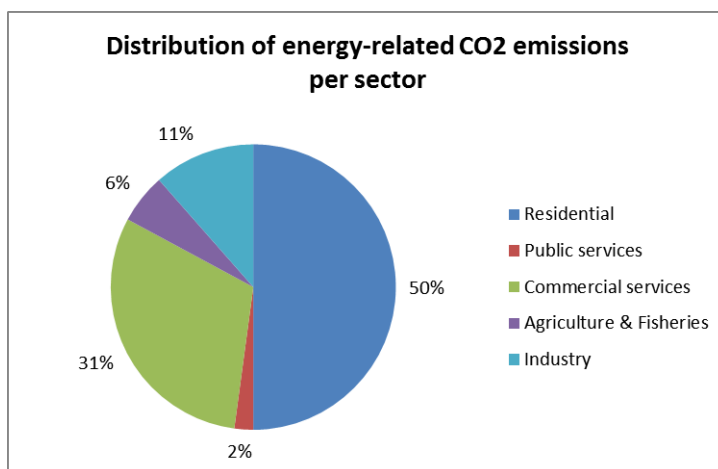
Annual energy-related CO ₂ emissions in Co. Kerry 2008 (,000 tCO ₂ /yr)								
	Oil	LPG	Coal	Peat	Nat. Gas	Electricity	Transport fuels	Total
Residential	204.9	12.8	33.4	11.1	3.6	164.5	182.4	612.7
Public services	5.9	0.1				17.5	2.6	26.1
Commercial services	21.2	23.5	0.5			243.2	88.2	376.5
Agriculture & Fisheries						16.5	52.7	69.2
Industry	53.6		7.6			43.5	36.2	140.9
Total	285.6	36.3	41.4	11.1	3.6	485.2	362.1	1225.4

Electricity is the main greenhouse gas emissions contributor in the county.

It accounts for the fact that the grid electricity in Ireland has a high primary energy to delivered energy factor (2.25 in 2008) and is generated by fossil fuels for a large part.

Transport is also a very substantial CO₂ contributor at 30% (considering a 5% penetration of biofuels in transport fuels). This can be explained by the remoteness and the largely rural nature of the county.

The graph below presents the distribution of emissions between these sectors. It emphasises the role of the residential sector and the commercial services in terms of greenhouse gas emissions.



PART 4 – PLANNED ACTIONS

4.1 Long Term Strategy 2012-2020

This plan makes reference to the strategic actions that the local authority intends to take in order to reach its commitments in 2020.

It outlines the long-term strategy and goals in areas such as:

- land-use planning and development control
- transport and mobility
- public procurement
- standards for new/renovated buildings, etc.

The precise strategies are detailed in the documents referenced in section 2.3, they include;

Local Dimension;

- Kerry County Development Plan
<http://www.kerrycoco.ie/en/allservices/planning/planspolicies/countydevelopmentplan/countydevelopmentplan2009-2015/>
- Town Development Plans (Tralee, Killarney and Listowel)
<http://www.traleetc.ie/planning/towndevelopmentplan/>
<http://www.kerrycoco.ie/en/allservices/planning/planspolicies/killarneytowndevelopmentplan2009-2015/thefile,7441,en.pdf>
<http://www.listoweltc.ie/planning/towndevelopmentplan/>
- Local Area Plans (countywide)

Regional Dimension;

- Regional Planning Guidelines
<http://www.swra.ie/index.cfm/page/regionalplanningguidelines>
- Regional Bio-Energy Plan
<http://www.swra.ie/contentFiles/pdfs/bioenergyplan.pdf>
- Regional Waste Management Plan
<http://www.managewaste.ie/WasteMgePlanNov2006.asp>

National Dimension;

- National Development Plan
- National Spatial Strategy
- National Climate Change Strategy
- National Energy Efficiency Action Plan 2009-2020
- National Renewable Energy Action Plan

4.2 Actions 2012-2020

There are a number of ongoing actions that are currently being undertaken. These will contribute to the objectives of the plan.

The actions are briefly detailed in the following sub-sections.

4.2.1 Energy Related Actions

District Heating

Tralee Town Council has taken a proactive approach in the use of renewable energy to cater for housing needs as is evident by the installation of a District Heat System for a recently completed social housing scheme at Rathass and for the Mitchel's Regeneration Project (phase 1 complete and phase 1A at pre construction stage).

Wood Fuel Supply

Considerable work has already been carried out in relation to the development of a countywide wood fuel supply chain. In June 2007, Meitheal Foraoise Chiarrai (Kerry Forestry Task Group) was established among growers, state agencies and rural development interests to develop the full potential of forestry. Arising from this group, the Kerry Farm Forestry Project (KFFP)/ Kerry Wood Energy Project(KWEP) was launched.

The work of this group has contributed to the establishment and continued improvement of a wood fuel supply chain in the county.

Work of the Energy Officer/Kerry Energy Agency

Improvement in efficiency in energy usage and management throughout the KLA's initially focussing on wastewater, water treatment, buildings, ICT and public lighting (including ESCO's).

Kerry Local Authorities have focused on reducing electricity consumption in high demand areas by in the first instance installing high efficiency motors, pumps and controls on new / upgrade projects.

The following is an outline of some of the projects undertaken to date:

Hydro Project.

Name: Lough Guitane Hydro

Status: Existing / Operational

Location: Lough Guitane, Killarney, Co. Kerry

Capacity: 250kW

Info: Installed October 2001. Electricity generated is used in nearby local authority pump house.

Energy generated Oct 2001 – Dec 2008: 6,632,922kWhr / €700,000 energy cost saving

Name: Lissardboola Hydro

Status: Planning permission granted; feasibility stage

Location: Lissardboola, Tralee (2.5km from Tralee town approx)

Capacity: 50kW proposed Heat Pump Utilization

Name: Motor Tax Office Heat Pump

Status: Existing / Operational

Location: County Buildings / Tralee Town

Info: Brine: Water heat pump / horizontal collector. Installed 1999. 6 flat plate collectors are also installed providing domestic hot water requirements.

Name: Killorglin Area Services Centre Heat Pump

Status: Existing / Operational

Location: Killorglin

Info: Water: Water heat pump.

Name: Castlesland Area Services Centre Heat Pump

Status: Existing / Operational

Location: Castlesland

Info: Water: Water heat pump. Installed in 2008 / this centre also incorporates: building control and energy management system / energy efficient lighting and controls

Name: Tralee Fire Station Wood Pellet Heating System

Status: Existing / Operational

Location: Tralee Town

Capacity: 150kW Wood Pellet Boiler

Info: Installed 2006

Name: Moyderwell District Heating System

Status: Existing / Operational

Capacity: 1MW Thermal

Info: Installed 2008 / currently provides heat to 42 apartments, 18 carbon neutral units, library and school.

Plans to extend the scheme to another 42 units.

Name: Tralee Fire Station Solar System

Status: Existing / Operational

Capacity: 15m² fl at plate collector

Info: Installed 2006

Land Fill Gas.

Name: Kerry Land Fill Gas

Location: Muingnaminnane, Tralee

Capacity: 1 MW

Info: Installed 2011

Info: Currently generating 320kW with plans for expansion.

Kerry Energy Agency's main goal is to maximise energy efficiency within the Councils operations and to develop renewable Energy Projects.

The Kerry Energy Agency was established in 1996. The work of the agency continues with a particular focus on actions with other similar agencies.

4.2.2 Procurement Related Actions

Kerry County Council will implement National Green Procurement Policies and promote best practice throughout the organisation.

Procurement will follow the template of the LA Quotes system within which KCC are a lead organisation.

4.2.3 Energy Awareness Actions

The Environmental Awareness Officer of KCC undertakes to heighten awareness of all environmental issues including energy usage and its implications. The work of the awareness officer is supported by the energy office.

The awareness initiatives include outreach activities and dissemination of information.

4.2.4 Housing and Building Actions

KCC will construct new local Authority houses to have an energy rating at least equal to A3.

KCC plan to continue to implement its activities in the retro fitting of existing housing stock with energy efficiency measures and to achieve a minimum target of an average energy rating of C1.

KCC will contribute to the elimination of the risk of fuel poverty through the support of community insulation schemes and energy efficiency technology installation.

4.2.5 Planning Related Actions

Reference has been made above to the commitment to renewable energy technologies within the County Development Plan. Guidance is given as to where such developments are encouraged.

The County Development Plan has imbedded within it the principles of sustainable development and is consistent with the strategic direction of the national and regional planning guidance.

4.2.6 Transport Related Actions

KCC are committed to procuring energy efficient vehicles and have installed a GPS system to improve fleet management in the authority.

Detailed development strategies are included within the County Development Plan (Section 8.2).

The refer in general to the improvement of transport routes, options and accessibility within the county thus contributing to more efficient travel, improving the commercial transport linkages and reducing impediments to development and supporting public transport initiatives.

4.2.7 Waste Management Actions

There will be a continued focus on improving the recycling, reuse and recover rates within the county.

Integrated Constructed Wetlands (ICW) have been built to treat foul effluent from municipal areas. A trial ICW is also been constructed to determine if it is feasible to effectively treat leachate from a municipal landfill.

PART 5 – ANNEXES

Annexe No 1 – Energy Map Team – Action Plan

Outline.

Energy MAP is an Energy Management Action Plan provided by the Sustainable Energy Authority of Ireland and its purpose is to provide organisations with a strategic approach to energy management.

The National Energy Efficiency Action Plan 2009 -2020 outlines government commitment to achieving a 20% reduction in energy demand nationally through energy efficiency improvement by 2020. The 20% energy saving target equates to 31,925 GWhr. Recognising that the government must lead by example, the target set for the public sector to achieve is a 33% reduction by 2020.

Energy MAP and other SEAI supports are expected to contribute 545GWhr energy savings towards the target of 31,925GWhr.

Action Schedule

Department / EMT Section	Energy Management Plan 2012	Status 09/10/2012
Environment 2012	Update DEC's for 8 KLA buildings with floor areas > 1000m2.	Completed
	Develop the implementation of the KLA Energy Management Action Plan	Ongoing
	Generate Energy Performance Indicator Spreadsheet for NKL	EPI generated based on billed data. Meter to be installed.
	The Transition Town Groups working with LA's will continue to run monthly meetings on energy related issues.	Monthly meetings ongoing
	Facilitate placement of 4 Energy Interns under SEAI Energy Management Intern Initiative. Interns to be placed in Tralee and Killamey. Placements to be completed in cooperation with Tralee and Killamey Town Councils	Completed and extended to 8 Internships
	Maintain Energy Performance Indicators at Waste Transfer Stations	Ongoing

Department / EMT Section	Energy Management Plan 2012	Status 09/10/2012
Water Service 2012	Replace power meters at Slugaire pump station for power monitoring and EPI generation	Completed
	Replace Lerrig pumps (x2) at Slugaire pump station with high efficiency pumps	On going. SEAI BEW Project
	Connection power meter at Listowel WWTP into Scada system for automatic power consumption trending and generation of reports	Completed
	Tariff examination: Examine West Kerry Airtricity connections. Change sites on GP tariff to GP NS where consumption is sufficient to generate cost savings	Completed
	Implement electricity sub metering at Caherciveen WWTP	Completed
	Installation of high efficiency pumps and motors (qty 2), pipework and associated valves and controls at Scarteen Park WW pump station	On going. SEAI BEW Project
	Reduction of flow booster sizing in oxidation ditch at Killarney WWTP.	Insufficient savings to justify completion
	Implement electricity sub metering at Lyracrumpane WTP	Completed
	Implement electricity sub metering at Brosna WTP	Partially complete
	Replace single glaze windows at Lyracrumpane WTP with low U value units	To be completed end October under SEAI BEW
	Install wall insulation at Lyracrumpane WTP	To be completed under SEAI BEW
	Install weather compensation heating control at Lyracrumpane WTP	SEAI BEW project - heat pump
	Partition Lyracrumpane WTP to maintain office space at higher temperature than pump galleries and other non-office	May be completed as part of BEW project
	Assess feasibility of utilizing water head at entry to Lissarbboola reservoir to reduce pumping energy requirements to Knockawaddra Reservoir	Electricity generation from excess head not financially viable
	Wire signals from 6 power meters at Lough Guitane WTP into Scada system to generate EPIs	Completed
	Wire signals from 6 power meters at Coolcorcoran PS into Scada system to generate EPIs	Completed
Undertake wastegas project at Tralee WWTP to return AD units into use and reduce volumes of organic fines sent to landfill	Project initiated July 2012	

Department / EMT Section	Energy Management Plan 2012	Status 09/10/2012
Corporate Service 2012	Implement an energy monitoring programme at Castleisland Area Services Centre (ASC)	Completed
	Implement an energy monitoring programme at Killorglin ASC	Completed
	Implement an energy monitoring programme at Caherciveen Area Office	Underway - to be completed Q4
	Improving COP of heat pump at Castleisland Area Services Centre. Finalize specification of works.	To be examined Q4
	Feasibility analysis of replacing oil boilers at County Buildings with high efficiency condensing gas boilers.	Contractor appointment 10/10/2012. Project underway under SEAI BEW
	Apply to SEAI for funding under SEAI Better Energy Communities programme to install CHP unit at County Buildings to provide electricity and heat	Application completed. Notification awaited from SEAI. CHP unit currently out to tender.
	Improve the energy efficiency of Kerry County Council Server Room facilities through installation of a data centre cube as designed by the Department of Public Expenditure and Reform (CMOD). The proposed data centre utilizes hot aisle / cold aisle containment to optimize air flow and associated energy consumption efficiencies and utilizes free air evaporative cooling to maintain temperatures between 19°C - 22°C. Apply to SEAI for funding under the Better Energy Workplaces Scheme 2012.	Project to be completed under SEAI BEW. Tendering underway. Preparatory site works commenced

Department / EMT Section	Energy Management Plan 2012	Status 09/10/2012
Fire Service 2012	Complete a Display Energy Certificate at Tralee Fire Station	Completed
	Complete a Display Energy Certificate for Castleisland Fire Station	To be completed
	Issue RFQ for wood pellet supply to Tralee Firestation	Current contract expires Q4 2012.
	Monitor overall energy consumption at Tralee Fire Station including assessment of wood pellet consumption and day / night electricity consumption monitoring at Tralee Fire Station	Completed. Instruction to change meter issued to electricity supplier. Annual saving €1,104.
	Initiate monthly recording of electricity in all fire stations	Commenced July 2012
	Improve efficiency of wood pellet boiler system at Tralee fire station	Data acquisition being progressed

Department / EMT Section	Energy Management Plan 2012	Status 09/10/2012
Housing 2012	Complete with other Kerry LAs and submit First Annual Social Housing Stock survey to DoECLG to establish baseline BER and/or year of construction for all Kerry Local Authorities' Housing Stock.	Completed
	Commence construction of 5 Single Rural Dwellings to achieve B3 rating.	Insufficient funding for 5 units
	Energy efficiency upgrading of housing at Iveragh Park Killorglin and Benmore Ballyduff	Underway

Department / EMT Section	Energy Management Plan 2012	Status 09/10/2012
IT 2012	Improve the energy efficiency of Kerry County Council Server Room facilities through installation of a data centre cube as designed by the Department of Public Expenditure and Reform (CMOD). The proposed data centre utilizes hot aisle / cold aisle containment to optimize air flow and associated energy consumption efficiencies and utilizes free air evaporative cooling to maintain temperatures between 19°C - 22°C. Apply to SEAI for funding under the Better Energy Workplaces Scheme 2012.	Project to be completed under SEAI BEW. Tendering underway. Preparatory site works commenced
	Automatic shutdown of computers	Resource dependant

Department / EMT Section	Energy Management Plan 2012	Status 09/10/2012
Libraries 2012	Install oil meter at Killarney Library and commence energy logging	Completed
	Maintain existing electrical energy monitoring system at 7 branch libraries	Ongoing
	Complete a Display Energy Certificate for Tralee Library	Completed
	Establish metering requirements to implement energy monitoring (electrical) at Kenmare library. Implement electrical energy monitoring.	To be completed
	Complete a Display Energy Certificate for Listowel Library	To be completed
	Implement energy monitoring (electrical) at Castleisland Library.	Initiated: to be completed
	Establish metering requirements to implement energy monitoring (non electrical) at all branch libraries and implement where possible.	Completed
	Set energy consumption targets for libraries with > 6 months energy consumption data collected.	Target / baseline reference is previous consumption
	Tralee Library to record a heat meter reading once per week	Ongoing since

Department / EMT Section	Energy Management Plan 2012	Status 09/10/2012
Roads and Transportation 2012	Efficiency improvement of public lighting: - Set up framework agreement for the completion of energy efficient public lighting projects - Apply for funding from SEAI under Better Energy Workplaces Scheme - Compile ESCO documents to enable completion of lighting efficiency improvement projects	Frame work has been set up with 11 companies. Funding offered received from SEAI - deadlines too short and so offered could not be accepted. ESCO document compilation underway.
	Complete Display Energy Certificate for machinery complex building for 2012.	Completed
	Monitor oil consumption of boilers for machinery yard offices and workshop	Ongoing
	Tender for establishment of a GPS Fleet Management system to enable generation of Energy Performance Indicators for KCC vehicles	Tender awarded
	Establish feasibility of lighting improvement at machinery yard and identify potential for energy saving.	To be completed
	Continue with fuel purchase mini tenders	Completed through LA quotes
	Record odometer readings on vehicles / plant weekly	Completed through fleet management system

Department / EMT Section	Energy Management Plan 2012	Status 09/10/2012
Tralee Town Council 2012	Ashe Hall Museum & Public Offices ; Approximately 2361m2 of building built 1925 with no upgrade to insulation or heating system efficiency. The building is entirely electrically heated and the lighting is extensive and of a very poor efficiency. A complete retrofit of heating services and lighting upgrade is required for this building.	BEW grant offered received for heating and glazing upgrade. Project underway
	Aquadome Tralee: draught proof the building, upgrade insulation, make substantial changes to the internal layout, upgrade the BMS, upgrade the heat recovery system and install energy saving technology	Will not be completed - matching LA funding not available
	Mulgrave Bridge pump station; This station was constructed in the 1990's and contains 4 nr 22kw pumps which are inefficient. It is proposed to replace with high efficiency new pumps	Tenders due back 11/10
	Foul Pumping Stations efficiency improvement projects: <ul style="list-style-type: none"> • Ashleigh Downs: 2 nr 5 kW foul pumps • Moyderwell: 2 nr 10 kW foul pumps • Denny St.: 2 nr 5 kW foul pumps • Castlemaine Rd.: 2 nr. 5 kW foul pumps • Cloghers: 3 nr. 10 kW foul pumps It is proposed to replace all pumps with high efficiency replacements	Tenders due back 11/10
	Machinery Yard, Rock St ; It is proposed to upgrade to led low bay lighting, 49W T 5 single fluorescents, all with ultrasonic/PIR occupancy sensors.	To commence shortly
	Town Hall ; Approximately 800m2 of building built 1984 with oil fired heating installed in 1984. Fabric of building has been improved but boiler is not efficient. It is proposed to upgrade the system to a high efficiency lpg powered system.	Boiler upgrade underway under SEAI BEW
	Connolly Park Bungalows ; 12 number social housing units each comprising 45m2.. The original units built circa 1975 and were subsequently fitted with electric storage heating in the 1990's. It is proposed to install air to air heating to the units.	Grant aiding not received
	Moyderwell Primary School ; Approximately 2304m2 school. Two extensions have been built on the site including a Gym and two storey teaching building. The school has been recently connected to the district heating system. The original building was built circa 1970 and has had no insulation improvement. The Lighting is of very poor standard and the heating controls have not been modernised for the two extensions. Insulation and building fabric improvement is envisaged. Lighting upgrade is required and heating controls are required.	LA funding not available
	Biomass Boiler Room Upgrade for extension of District Heating Scheme	Application has been made to SEAI for funding under Better Energy Communities Scheme

Department / EMT Section	Energy Management Plan 2012	Status 09/10/2012
KTC 2012	Completion of weekly fuel consumption reports for Killarney Town Council fleet.	Completed
	Set up energy log for Killarney Town Council Bank Building	Completed
	Continued monitoring of oil and electricity energy consumption at KTC Town Hall and Bank Building	Ongoing
	Update DEC for Town Hall and Bank Building	To be completed post upgrade
	Apply for funding for energy efficiency upgrade of Town Hall under SEAI BEW 2012 scheme and complete upgrade work (subject to financial approvals and grant aiding)	Completed
Energy efficiency upgrade at Town Hall Killarney: - Retrofit triple glazing at rear windows and replace glazing at front and side of building with double glazing. - Install 70mm approx internal insulation at front of building - Install 100mm approx external insulation at side and rear elevations - New heating system incorporating boiler replacement	Underway under SEAI BEW 2012. To be completed November 2012	

Department / EMT Section	Energy Management Plan 2012	Status 09/10/2012
Listowel Town Council 2012	Install oil meter in Town Council offices	Completed
	Assess existing oil boiler to determine if its efficiency and replace if required and if funding allows	To be completed
	Discuss with IT the possibility of shutting down all computers in LTC office at a pre-determined time (May not be feasible)	To be progressed through IT
	Improve fleet management system and fuel consumption reports by adding data to excel file	Fleet management system being extended from KCC to TCs
	Carry out BER assessments on at least 10 LTC owned properties during the year	Completed