



comhairle chontae na mí
meath county council

**Meath Local Authorities
Climate Change Strategy and Energy
Management Action Plan 2011-2012**

**Think Globally,
Act Locally**



Foreword

Ireland faces strong challenges over the course of the next few years relating to the sustainability of the economy, our natural environment, and the well-being of society. Failure to address these challenges will put at risk our ability to prosper both as a society and economy in the future. It is increasingly recognised that one of the major challenges is the whole area of Climate Change. Greenhouse gas emissions caused by humans are having a negative impact on the environment.

Climate Change is one of the most important issues that we as a Council have to tackle. Meath Local Authorities are committed to tackle the causes and effects of a changing climate while continuing to deliver excellence in our services to the wider community. Meath Local Authorities will lead the way by adapting our behaviour to reduce our greenhouse gas emissions, increase our energy efficiency, and promote sustainable development.

The aim of this strategy is to co-ordinate a wide range of objectives into one comprehensive document that can be used by Meath Local Authorities, and the wider community to reduce our emissions and impact on the environment. The Corporate Climate Change Strategy adopts an organisation-wide approach, encompassing the services being delivered by Meath County Council, Navan Town Council, Kells Town Council and Trim Town Council. The overall objective is to comply with, and exceed where possible, the targets from Central Government and other best international standards.

Meath Local Authorities commit to focus on implementing a range of measures across our key functional areas and will continue to make Meath a green place to live, work and visit.



Tom Dowling
County Manager



Cllr. Anne Dillon Gallagher
Cathaoirleach

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THE PARTICIPANTS

Environment & Water Services SPC Members:

- Cllr. Tommy Reilly (Chair)
- Cllr. Eoin Holmes
- Cllr. Seamus O'Neill
- Cllr. Ray Butler
- Cllr. Maria Murphy
- Cllr. Sirena Campbell
- Cllr. Wayne Harding
- Cllr. Sarah Reilly
- Andrea Carroll
- Suzanne Brady

Climate Change Steering Group:

- Tom Dowling, County Manager
- Brendan McGrath, Director of Services Environment & Water Services
- Fiona Lawless, Director of Services Finance & Information Technology
- Kevin Stewart, Director of Services Economic Development & Innovation, Corporate Services
- Tadgh McDonnell, Director of Services Planning, Community & Enterprise
- Eugene Cummins, Director of Services Transportation, Housing

Climate Change & Energy Management Working Group:

- Brendan McGrath, DoS Environment & Water Services (Sponsor)
- Lara Fagan, Energy Officer Environment (Coordinator)
- Gerry Lynn, Senior Engineer Environment
- Peter Brady, Environmental Awareness Officer
- Joe Fahy, Senior Engineer Housing
- Joe McGarvey, Senior Executive Engineer Water Services
- Fiona Fallon, Senior Executive Engineer Navan Area & Town Council
- Andrew Bagnall, Executive Engineer - Transportation (Machinery yard, smarter travel)

- Declan Gaffney, Assistant Engineer - Transportation (Public Lighting)
- Kathryn Hosey, Executive Planner - Planning
- Bernard Greene, Senior Executive Planner - Economic Development & Innovation
- Galen Doran, Executive Engineer - Housing
- Brendan Smith, Water & Wastewater Caretaker - Water Services
- Paul Cullivan Instrumentation Technician - Water Services (electrician)
- Jarlath Flanagan, Town Clerk - Kells Town Council & Area
- Michael Murtagh - Administrative Officer Finance
- Gavin Fitzpatrick, IS Analyst Developer Information Technology
- Claire King, Administrative Officer - Water Services.



1. INTRODUCTION

A key strategy in Meath Local Authorities Corporate Plan 2009 – 2014 is to protect, conserve and enhance a clean, safe and healthy environment for present and future generations. The Meath County Development Boards 'Le Cheile Strategy – An Integrated Strategy for Meath to 2012' reinforces this further. The goal of the 'Le Cheile Strategy' is to promote the sustainable development of County Meath through an integrated and socially inclusive approach that recognises the economic, social and cultural potential of the population, and the limits and opportunities provided by the county's environmental and other resources.

Mitigating and adapting to climate change is crucial to the future of our existence as a society and consequently this has been embedded into the ethos of the organisation. Meath Local Authorities through their Environment Strategic Policy Committee (SPC) has decided to prepare a Climate Change Strategy & Energy Management Action Plan which will initially focus on mitigation measures. The Strategy will recognise and balance our local needs with our national and international responsibilities and obligations. It is about making and implementing such changes, in a realistic, effective and lasting way. The aim of the Strategy is to clearly identify the solutions to the challenge of reducing energy related emissions and to outline the actions to be taken to meet the requirements as set out in the National Climate Change Strategy. The general approach that has been taken is to group the actions and measures which should be implemented in a similar fashion as that adopted in The National Climate Change Strategy (NCCS) 2007 – 2012. Meath Local Authorities Strategy will run for the period 2011 to 2012 in line with the NCCS.

Global Warming resulting from Climate Change is acknowledged as being the greatest long term challenge facing humanity and if not tackled it may have a dramatic adverse effect on people's lives. Climate change is likely to have major implications for the world's population and

for nature and biodiversity unless concentrated action is taken to reduce the creation of Greenhouse Gas (GHG) emissions.

There are six GHGs:

- Carbon dioxide (CO₂)
- Methane (CH₄)
- Nitrous oxide (NO₃)
- Hydroflourocarbons (HFCs),
- Perfluorocarbons (PFCs), and
- Sulphur hexafluoride (SF₆).



Meath's climate is changing due to the release of these gases into the atmosphere and it will continue to do so resulting in higher annual global temperatures, higher sea levels and changes to weather patterns leading to more extreme events with a risk of extended periods of drought and flooding. CO₂ is the prime GHG which is released into the atmosphere when fossil fuels combust. CO₂ has the biggest impact on climate change and therefore this strategy focuses primarily on the reduction of CO₂.

The possible impacts of Climate Change on Ireland and Meath include:

- Sea Level Rise (25% of population live in coastal areas)
- Extreme Weather Events (storms, flooding & heat waves)
- Increased River Flow in Winter and reduced River Flow in Summer

- Increased Water Shortages (East of Country)
- Change to Agricultural production (Weather patterns – different crops & farming practices – increased irrigation etc)
- Loss of biodiversity (Peatlands, flora and fauna)
- Change in distribution of Flora & Fauna (invasive species, non indigenous species etc).



There is a consensus that the cost of inaction, in terms of combating global warming and mitigating against its impacts, will have serious repercussions for the global economy. The widely publicised 2006 Stern Review on the 'Economics of Climate Change' highlighted compatibility between economic development and emissions cuts. Significantly, it noted 'that early and strong action to reduce greenhouse gas emissions to avoid the worst impacts of climate change could be limited to roughly 1% global GDP each year, while avoiding action could cost up to 20% of global GDP due to climate related impacts to the economy, society and environment'.

The Kyoto Protocol agreement of 1997 was ratified in 2005 by the EU, and sets out legally binding requirements, which signatories have to abide by otherwise they will be subject to fines. The EU agreed a target reduction of 8% in GHG

emissions, compared to 1990 levels, by the assessment period (2008-2012). As part of a burden sharing agreement, Ireland agreed a target of maintaining emissions to a 13% increase above 1990 levels during the assessment period. The Kyoto Protocol limits Ireland's total national emissions to an average of 62.8 million tonnes of CO₂eq per year in the period 2008 – 2012. This is 13 per cent above the baseline (1990) estimate.

A second, and different, set of legally binding targets applies under the EU Commission's Energy and Climate Package, agreed by EU Parliament and Council in December 2008, and requires Ireland to deliver a 20% reduction, relative to 2005 levels, in greenhouse gas emissions by 2020, and it is hoped that this target will increase to 30% if a global agreement can be reached on the Kyoto Protocol. Ireland's share of the reduction target has yet to be agreed while climate change target negotiations are ongoing. It should be noted that these initial targets are staging posts and further more significant reduction targets will be expected by 2050.

The implications of this package for Ireland are significant. The NCCS sets out a range of measures, to ensure Ireland reaches its initial target of 13% under the Kyoto Protocol. The Government's Strategy sets out the measures which Ireland will need to take in order to meet its commitments under the Kyoto Protocol by the assessment period 2008 - 2012. It recognises that the public sector is the biggest landowner, property owner and tenant in the State, and also owns the largest fleet of transport vehicles. The public sector also plays an important role in creating markets and supply chains for renewable technologies, through setting high standards of energy efficiency in its public procurement of goods and services. In light of this the public sector is required to have an exemplary role and demonstrate community leadership in Ireland's commitment to tackle Climate Change and meet the Kyoto Targets.

Chapter 9 of the NCCS states that the public sector should achieve a reduction in greenhouse

gas emissions equivalent to a 33% saving in energy use by 2020, this equates to approximately 3% reduction per annum up to 2020. Every public sector organisation will be required to adopt specific targets for reducing emissions and to measure and report progress in their Annual Reports.

Furthermore, the European Communities Energy End Use Efficiency & Energy Services Regulations 2009, which transposes the Energy End Use Efficiency & Energy Services Directive, 2006 (ESD) into Irish law requires that the public sector fulfil an 'exemplary role'. The public sector will aim to achieve targets using procurement, efficient buildings and energy management and the use of "financial instruments". In addition, to reporting annually from January 2011, the public sector must include a statement of actions which were taken and an assessment of the energy savings made for the preceding year.

In relation to Local Authorities, the NCCS suggests that Local Authorities like Meath can have a significant influence over emissions in their local areas, both directly in relation to reducing emissions through their own energy use and procurement activities, in raising awareness and in stimulating action in local communities and indirectly through the exercise of their housing, planning and other statutory functions. As a consequence Climate Change is a primary focus for Meath Local Authorities and we are being directed by the Department of the Environment, Heritage & Local Government and the Department of Energy to manage energy use, promote uptake of renewable energy technology and resources and consequently control GHG Emissions throughout our day to day operation.

Meath Local Authorities Strategy will initially focus on the mitigation of our emissions and therefore it will cover the operational and service areas under the direct influence of the Council, such as corporate buildings, housing and project buildings, pump stations, waste water & water treatment plants, transport fleet and waste management. The aim of Meath Local

Authorities Strategy will be to establish a process of managing our GHG emissions, by identifying and implementing cost effective measures to reduce emissions. In order to do this the Council needed to carry out an assessment of energy use following which a number of recommendations for energy savings can be made. Energy usage was measured through the use of the carbon management tool which is an on-line national tool developed by the County & City Managers Association (CCMA) in conjunction with the Environment Protection Agency (EPA) to calculate the councils carbon footprint, and thereafter key performance indicators will be set out to measure our performance.

Meath Local Authorities will lead by example to reduce its carbon footprint by reducing energy consumption across its buildings and services, and adapt and prepare the County for climate change through appropriate planning, investment and delivery of its services. The council will also communicate its climate change activities and achievements and raise local awareness. The ultimate aim for Meath Local Authorities will be to develop a countywide strategy.



The overall success of a Climate Change Strategy & Energy Management Action Plan relies on the co-operation and involvement of

everyone within the organisation including senior management, all staff, the Council and the Environment SPC. It is imperative for all staff to take on board energy efficiency and management in their day to day work. Furthermore the support of the elected members is essential to the success of the strategy.

2. PROCESS & DEVELOPMENT OF THE CLIMATE CHANGE STRATEGY:

The process and development of the Climate Change Strategy and Energy Management Action Plan is set out in Appendix I of this document.

A Climate Change Steering Group consisting of the Director of Service Environment & Water Services and a representative from each directorate that has a significant impact on energy use, plus finance was established. This grouping will steer energy management ensuring that:

- Climate Change is on the management agenda,
- Climate Change is embedded into Corporate policy/action plans/ operational plans & other plans etc,
- Resources both financial and human are allocated to energy management, and
- They adopt the Climate Change Strategy, as well as steering the implementation of the Action Plan.

A Climate Change Strategy working group was established as part of the process; it consists of staff members from across the entire organisation. It is essential that the team included representatives from all sectors and grades within the organisation, as the aim was to develop a strategy that is Specific, Measurable, Achievable, Realistic & Timely (SMART), which can be implemented across the whole organisation. Departments represented include: Environment, Water Services Roads and Transport, Economic Development, Corporate Services, Information Technology, Housing, Planning and Finance. Sixteen staff members of various grades (management, supervisors,

engineers, operator, maintenance personnel, administration staff, & technicians) have been chosen to form the working group. As well as having a mix of personnel, attention was given to ensuring that relevant staff chosen can make decisions and have an interest in area of Climate Change and Energy Management. The team engaged in Energy Map Training as part of the process (refer to Appendix II for details on Energy Map), during which actions for the climate change strategy were established.

The members of the Working Group will lead the changes / actions to be taken in their areas. The Steering group will ensure that the mechanisms are in place to allow for the implementation of the strategy.

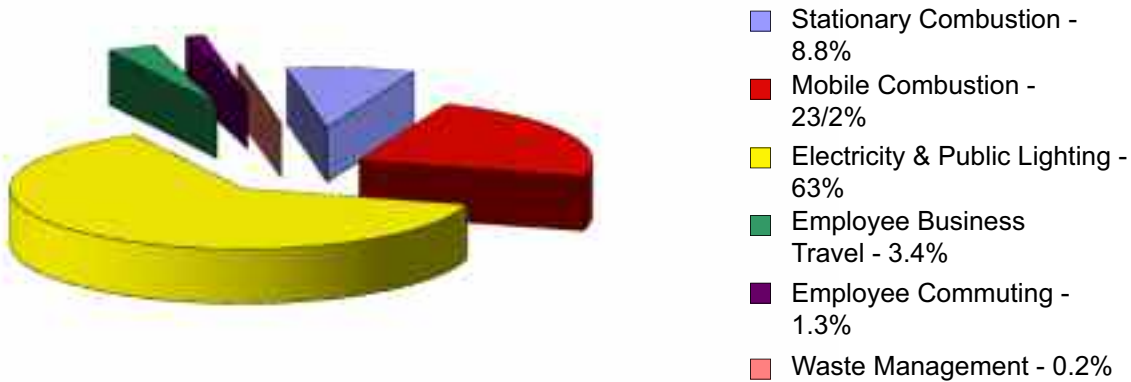
An Energy Co-ordinator will report between Climate Change Working Group and the Steering Group

The Climate Change Strategy will involve:

- Measuring MLA energy use.
- Signing up and participating in Energy Map Training
- Identifying specific actions / projects that can be taken to reduce our emissions
- Adopting specific targets for reducing emissions



Meath Local Authorities 2009 Emissions



- Producing an Energy Management Action Plan for the implementation of the specific actions / projects that are identified
- Implementation of the Actions
- Measuring progress against targets
- Reporting on progress annually, and
- Reviewing the Strategy annually

Authorities used the calendar year of 2009 as our baseline year. From this we can develop an action plan, identifying ways to reduce our carbon footprint, limit emissions from future activities, and thereafter we can measure what progress we make.

3. CURRENT CARBON FOOTPRINT:

A **carbon footprint** is a measure of the impact our activities have on the environment, and in particular climate change. It relates to the amount of greenhouse gases produced in our day-to-day lives through burning fossil fuels for electricity, heating and transportation etc. The carbon footprint is a measurement of all greenhouse gases we individually produce. CO₂ is recognised as the most important greenhouse gas, arising from human activity. Virtually all human activities cause the CO₂ emissions that lead to climate change and therefore the carbon footprint is reported in units of tonnes (or kg) of carbon dioxide equivalent.

Understanding and addressing the full range of Meath Local Authorities impact is crucial for the effects of climate change to be minimised. Quantifying our carbon footprint will help Meath Local Authorities to understand what our key emission sources are, how we contribute to global emissions, and what opportunities we have to reduce our emissions. Meath Local



The carbon management tool was used to calculate the Councils carbon footprint; it is an online tool which quantifies the equivalent carbon emissions following the entry of energy usage data.

In 2009, Meath Local Authorities carbon footprint was 23,860 tonnes of CO₂eq; this equates to approx 65 tonnes per day. Meath Local Authorities carbon number is in line with other local authorities of similar size. CO₂ is released by Meath Local Authorities resulting from our day to day operations when fossil fuels such as coal, oil and natural gas are burned for energy to heat and light corporate buildings and streets, power appliances and equipment which process, treat and pump water & waste water, and run machinery and fuel transport etc. 63% of the council's emissions (indirect) in 2009 resulted from our energy requirements for electricity and public lighting, 23% from our machinery and plant hire (mobile combustion), and 9% of our emissions resulted from on site fuel use (stationary combustion). Refer to Diagram 1 for the breakdown.

In 2004, Meath Local Authorities carbon footprint was calculated as 9,563 tonnes of CO₂eq. This figure, however, did not include public lighting, plant hire data, business travel, employee commuting or waste data as it was not available.

According to the National Energy Efficiency Action Plan - Maximising Ireland's Energy Efficiency (NEEAP) published in May 2009 Ireland's demand for energy has grown by 84% over the period 1990 – 2007, with usage increasing in every sector of the economy including the Public Sector which grew by 32%.

The latest data from the Environment Protection Agency indicate that emissions of greenhouse gases in Ireland in 2009 were 62.32 Mt CO₂eq. This represents a reduction of 7.9% (5.36 Mt CO₂eq) on emissions in 2008. The downturn in the economy has been attributed in part to the reduction. It is anticipated that Ireland will comply with Kyoto Protocol, however achieving the more stringent 2020 targets will require serious effort by all the stakeholders.

Meath Local Authorities aims to tackle climate change by reducing energy consumption and CO₂ emissions by 3% per annum, in line with the NCCS.

4. ACTIONS TO REDUCE CO₂ EMISSIONS

Meath Local Authorities will reduce its carbon footprint through reducing the amount of energy it uses, using the energy it has to use more efficiently and increasing the amount of renewable and low carbon energy used by the organisation.

The objectives of the Climate Change Strategy & Energy Management Action Plan are:

- To lead by example and set an exemplar role to the wider community
- To mitigate climate change by reducing the Meath Local Authorities carbon footprint
- To evaluate the energy performance of Meath Local Authorities operations.
- To identify opportunities for reducing energy costs, both financial and environmental.
- To estimate the potential savings, and where applicable, implementation cost, and
- To promote sustainable development.

In addition, a key objective of the Corporate Climate Change Strategy & Energy Management Action Plan is to complement existing initiatives and strategies in the county including the Corporate Plan, the County Development Plan, Northeast Region Waste Management Plan, and the Meath County Development Boards '*Le Cheile Strategy*'.

This will be achieved by a targeted reduction across the following areas in line with the NCCS:

- a) Energy Usage
- b) Transport
- c) Housing & Council Buildings
- d) Planning
- e) Procurement
- f) Waste Management
- g) Raising Awareness

(a) Energy Usage

Energy Efficiency is key to the Climate Change Strategy. Wasted energy or poorly managed energy provision particularly through heating, lighting and inefficient equipment, can result in high greenhouse gas emissions being



produced, loss of money and damage to the environment.

The following actions have already been taken by Meath Local Authorities to reduce energy usage:

- Unaccounted for water has been reduced from 65% in 2005 to 46% in 2009, this equates to approximately 10,000 m³ per day, equivalent to the amount of water required to supply Navan. This level has been maintained despite the introduction of additional water schemes on the system during the economic boom. The reductions in water leakage have resulted in savings in pumping costs.
- Over 4000 water meters have been installed in commercial premises throughout the County. Businesses pay for the amount of water they consume, this has resulted in reducing water wastage, and consequently savings in pumping costs.
- Computers in County Hall automatically shut down at 6.30 p.m. each evening.
- Park & Display parking meters in Navan, Trim and Kells are powered by solar power.

The following Actions are ongoing:

- Continue to monitor and measure the quality of our water to ensure we are providing an efficient, cost effective, responsive and reliable service to all our customers.
- Continue to provide the highest quality wastewater collection and treatment services in the most cost effective and environmentally sensitive manner.

- The Ferganstowns Anaerobic Digester is currently in the process of being upgraded, the methane generated from the process fuels the combined heat & power unit in the treatment plant thus reducing reliance on fossil fuels.
- All new non domestic developments are required to install a water meter under their conditions of planning permission. In addition, Meath Local Authorities have put in place procedures whereby no new water connection will be given to non domestic premises without a meter being installed.
- Currently in the process of virtualizing the Councils servers (removal of hard drive from computers to a central location) which will reduce the number of physical servers from 51 to 16, estimate savings of 224,000 kWh.
- Reducing the number of printers/faxes & scanners across 13 sites in the organization down from 357 pieces of electrical equipment to 38, in addition, to setting the default setting to double sided, which will result in savings on energy, toner usage and paper consumption.

Proposed Future Actions:

- Improvements to Water Services Infrastructure: the main energy users will be identified through audits and where potential energy savings are identified, improvements will be carried out to infrastructure, such as treatment plants, pumping equipment, and water mains, to include installation of variable speed drives, automated controls etc
- An Energy Efficient Design Review (EEDR) to be under taken at the proposed Oldcastle replacement Waste Water Treatment Plant, the recommendations of which will be incorporated into the design of the plant. Furthermore EEDR will become standard policy for all new projects
- To examine the viability and thereafter develop a co-ordinated strategy for the use of integrated constructed wetlands in sewage treatment particularly as an alternative in low population areas where sufficient lands of suitable topography and land is available, with a view to maximising

their usage over other forms of sewage treatment.

- To continue to identify leaks and replace defective watermains within the county as part of the Water Conservation project to reduce leakage and conserve drinking water
- Phase 1 of the Watermains Rehabilitation Project is to go to tender which will involve the upgrade of 14.285km of watermains. The estimated water savings approx 280 m³/day.
- Installing LEDs (Light Emitting Diodes) will become policy for all public lighting projects, in addition, to replacing old and damaged lights with LED's.
- A pilot scheme will be introduced to assess the potential for the use of renewable energy in our public lighting schemes.
- A pilot lighting management system will be rolled out to the Finance section of County Hall which will include motion sensors, and light detection to control the lighting requirements of the office.
- The Council will investigate the possibility of generating 5% of the Councils electrical requirements from renewable resources by 2012 (possible wind energy at Loughbracken & Crosskiel, & solar power)
- Roll out power management systems to all PC's and virtualisation of servers to area offices and other external offices within the Council
- Ensure energy efficient design is a key component in all new water service projects and upgrades and maximise opportunities for generation of heat and electricity from renewable energy sources
- Strive to achieve ISO 14001 accreditation, an environmental standard for our environment section initially, and thereafter roll out the accreditation across the organisation on a phased basis.
- Achieve a year on year improvement of 3% per annum in energy efficiency in line with the NCCS by 2020

Indicator

Total CO₂ emissions



b) Transport

Emissions from vehicles account for a significant proportion of CO₂ emissions. Meath Local Authorities will reduce CO₂ emissions by better utilisation of the Councils Vehicle Fleet, development of its own staff travel plan and through initiatives to encourage staff, and promote the use of sustainable alternatives for its own operations and the wider community.

The following actions have already been taken by Meath Local Authorities:

- All Council vehicles less than 5 years old can run on 5% bio-diesel mix.
- 2 No. quality bus corridors have been constructed in Dunshaughlin & Bracetown
- 2 No. Park and Ride facilities have been constructed at Pace (1200 car spaces) & Dunboyne (200 spaces) to coincide with the development of the train stations at both locations
- Smarter Travel Officer appointed for Meath Local Authorities
- Approx 4 km of dedicated cycle lanes have been constructed to date in the County

The following Actions are ongoing:

- Reduction of the age profile of the fleet, Meath County Council is currently purchasing vehicles (5 No. pickups and 2 No. Trucks), which will be capable of running on bio-diesel mixes of up to 30%, in addition, to meeting the requirements of *EU Directive 2009/33/EC* on the promotion of clean and energy efficient vehicles

- Navan Town Council has signed up to the Smarter Travel initiative - The aim is to create an extended pedestrian and cycle network, which responds to key desire lines and links residential districts to the town centre, schools, employment generators, shops and services, and green amenity areas. It is the overarching aspiration that all of the above quarters would be located within a 10 minute walk or cycle. NTC have made a bid to seek €17m funding to roll out various initiatives for smarter travel in the town
- Feasibility Study carried out which was funded by the Department of Transport under the Smarter Travel Initiative, for the development of a cycleway along the Boyne Valley between the towns of Trim, Navan and Drogheda, a distance of some 50 kilometres, the Dept. have requested the inclusion of Kilcock in this study.
- Consultants appointed to carry out a feasibility study on various options of Cycle and Footways running from Stamullen to Gormanstown College Gates
- Part VIII being prepared to Upgrade of Pedestrian & Cycling Facilities on Main Street, Enfield – resulting in 2,660m of new cycle track and 315m of new footway facilities being provided in Enfield , and
- Part VIII being prepared for facility in Navan (180 car spaces which incorporates bicycle racks and an electric charging point).
- emissions and contribute the causes of climate change.
- The proposed Development of the Drogheda Port will investigate the potential of installing cold ironing/shore to ship power supply from renewable resources. Cold Ironing is a method for reducing the carbon footprint from the shipping industry, it reduces the number of carbon emissions coming from the ship's exhaust
- Cycle lanes and pedestrian walkways will be provided in all new road projects to encourage bicycle instead of car usage.
- Develop a Council Travel policy which will be introduced to reduce the mileage travelled by Council employees & Councillors to and from work, and for travel undertaken as part of work. Introduce incentives to encourage greater use of public transport and zero emission transport options, for example, introduce an Employee Travel Pass Scheme, increase bicycle parking, promote the cycle to work scheme & purchase of bikes, provide showering facilities, introduce video conferencing, require car pooling for work related trips etc.
- Install facilities for cyclists and pedestrians at Corporate Buildings and in all of the towns and village centres and integrate facilities into all new streetscape projects.
- Investigate the viability of developing a public bicycle scheme similar to the Dublin city scheme that was launched in 2009.

Proposed future action:

- The most fuel efficient vehicles on the market will be purchased in line the requirements of EU Directive 2009/33/EC on the promotion of clean and energy efficient vehicles
- Pilot the use of electric vehicles in the Council Fleet (street cleaning in Town Council areas and urban areas). Assess cost benefits and CO₂ savings of fuel.
- Integrate sustainable travel into all relevant policies and practices
- Through Development Plans, local area plans and policies ensure that development is located where it is likely to maximise opportunities for cycling and walking and minimise dependence on the forms of transportation that produce harmful



Undertake a viability study to look at providing public bike stations at locations in Navan, Kells, Trim and Ashbourne with bikes available for general public use.

- Purchase bicycles for staff usage between Corporate Buildings in the urban centres
- Review the use of fuel cards by all outdoor staff, including litter wardens, dog wardens and traffic wardens.

Indicators

% increase in Cycle Lanes (Km of cycle lanes in the County)

c) Housing & Corporate Building

A key objective of the Meath Local Authorities strategy and action plan will be to reduce CO₂ emissions and water use in the Councils owned or managed buildings and housing stock and to increase the resilience of our buildings to the local impacts of Climate Change. In addition, to increasing the energy efficiency of our social housing stock and the resulting reduction in CO₂ emissions, there is compelling evidence that such measures alleviate fuel poverty and improve the comfort and health of the tenants.

The following actions have already been taken by the Meath Local Authorities to reduce energy usage:

- Abbey House Building (planning section) includes a building management system which monitors and controls energy usage (electricity and gas), high efficiency gas heating system operates the air conditioning system. Light detection system installed which is motion activated.
- A high energy efficient boiler with different controlled heating zones was installed in Solstice Arts Centre, it includes a building management system (BMS), and was designed to reduce reliance on central heating and move towards natural ventilation controlled manually and through the BMS
- Energy efficiency measures (including combined heat & power and light control systems, high performance insulation as well as building orientation and glazing to ensure high level of natural daylight while avoiding

internal glare) are in place in the new leisure centres at Navan and Trim.

- All new houses are constructed to a minimum C1 standard since the introduction of the 2008 Building Regulations.
- In 2009, Meath Local Authorities completed a 3 year programme which provided that central heating system (oil fired, gas fired or solid fuel) was installed in all our housing stock
- 6 technical members of staff have been trained and are qualified as BER assessors. All housing stock being upgraded used the DEAP software.

The following Actions are ongoing:

- Meath Local Authorities is participating in the East Border Region Group Energy Efficiency Sub Group who have obtained Interreg IVA funding from the EU for Energy Efficiency & Micro Generation project which focuses on Public Buildings
- Meath Local Authorities have a total housing stock of approx. 2800 units. Meath has begun a multi-annual rolling programme to upgrade its existing housing stock to C1 BER standard by the installation of central heating, wall & attic insulation; PVC. double-glazed windows etc. The initial programme is concentrating on vacant units, of which there is of the order of 80 to 100 throughout the county at any one time
- Meath Local Authorities has received funding to upgrade and retrofit 70 rural cottages. These houses will be upgraded individually to reach a C1 BER standard or higher, where achievable, by installing double glazing, insulation, central heating, etc.
- There is an annual allocation for expenditure on replacing Windows & Doors. The Council is currently developing a more focussed programme of planned maintenance where all the primary elements such as windows, doors, fascia & soffit, together with regular pre-planned maintenance of boilers, is fully implemented.

Proposed Future Action:

- Employ a facilities manager to look after the Councils Corporate Buildings
- Implement an Energy Audit programme on

Energy Usage in Corporate Buildings with the target to minimize CO₂ emissions by 10% in each building. All Corporate Buildings over 1000m² will be audited and Display Energy Certificates (DECs) displayed showing the energy rating. Follow up audits will be carried out every 5 years.

- Measures will be taken to maximise energy efficiency in Corporate buildings across the County. Meath Local Authorities will look to initially improve the energy efficiency of its own buildings before investing in renewable or low carbon energy.
- Investigate renewable energy options (solar and wind energy) and Combined Heat & Power for Corporate Buildings and Infrastructure.
- Investigate and evaluate the geothermal potential in County Meath with a view to identifying hotspots suitable for future utilisation as a heat source.
- Integrate energy efficiency lighting in all civic amenity sites, bottle banks and replace all damaged and redundant incandescent light bulbs with CFLs (Compact Fluorescent Lamps) and LEDs (Light Emitting Diodes) in Corporate Buildings
- The feasibility of harvesting rainwater in order to reduce pumping will be examined in Corporate Buildings.
- Promote water conservation within the Local Authority, in order to achieve this target Meath Local Authorities will implement a policy for the efficient use of water within Corporate Buildings and will include a requirement for water conservation measures in the design and furnishing of all new public buildings.
- Only purchase or lease buildings with a B3 rating from Jan 2012 and an A3 rating from Jan 2015
- Ensure energy efficient design is a key component in all construction projects and renovations, and include renewable energy technologies in all of our future building projects.
- With the economic downturn, and the surplus supply of houses currently on the market, there will not be a significant emphasis on new builds over the next few

years. Meath Local Authorities however, will use this opportunity to concentrate on upgrading our existing stock, and to ensure that we meet the challenge of building the type of communities suitable for our fast changing society and to ensure that people are happy to live in such communities, where all residents can participate and prosper.

- All new Local Authority housing will be designed and constructed to current building regulations, a minimum standard B1 BER rating will be set in contract docs, and ensure that renewable energy accounts for 10kWh/m² as per the requirements of the current building regulations
- The Council will investigate the setting of a minimum BER standard for housing units rented under the Residential Accommodation Scheme (RAS).
- Extensions or other improvements to the Council's existing housing stock will aim to achieve maximum energy efficiency.

Indicators:

% of houses retrofitted

% Corporate Buildings audited and DECs displayed.

d) Planning & Development:

One of the key objectives of the Climate Change Strategy is to promote sustainable development in County Meath; the planning system is the ideal tool through which we can work to address



issues relating to climate change. Use of the planning and building control powers to integrate energy performance improvements and resilience measures in the planning, design, and development of new and existing buildings.

Actions taken by Meath Local Authorities in order to promote sustainable development:

- The current County Development Plan contains an Energy Section – Chapter 4 integrates Sustainable Development and support for renewable energy into the plan
- Draft IFPLUT Plans (Integrated Framework Plans for Land-Use & Transportation) plans which include adequate provision of sustainable public transport (Park & Ride, Quality Bus Corridors, pedestrian & cycle lanes etc.) looking at existing and future transport requirements of the County and Region have been developed for Dunboyne & Pace. A Land-use Design & Framework Policy was published for Navan in 2009.
- The Council has published a guide on Rural Housing, which promotes sustainable development, it encourages new buildings which are sustainable in their siting, orientation, and promotes the use of passive solar design techniques, high energy efficiency, low impact construction methods to ensure that new developments minimise their environmental impacts and long term costs, thus offering a more sustainable development solution.
- In 2007 the first County Meath Heritage Plan 2007-2011 was adopted
- The Meath Biodiversity Plan 2008-2012, was adopted in 2010
- Through the 'Pride of Place Initiatives' an Urban Tree Planting Programme resulted in over 150 semi-mature trees being planted in 13 towns and villages throughout the county during 2006/2007
- Assistance was provided to develop the pathways and nature trails in Balrath Woods, the entrance area and the car parking facilities. An ecology plan and a woodland management plan was commissioned, which MLA's will provide assistance in implementing. School visits with an outdoor classroom area have been encouraged and

assistance has been given to the local community group in accessing funding for the provision of play equipment in the wood.

The following Actions are ongoing:

- The Fingal East Meath Flood Risk Assessment and Management Study (FEM FRAMS), a catchment-based flood risk assessment and management study of nineteen rivers and streams and their catchments, including the Broadmeadow River, the Ward River and their tributaries is now being undertaken to meet with the requirements of the EU Floods Directive which was introduced on the 26 November 2007. A Draft Flood Risk Management Plan (FRMP) is expected to be published in the winter of 2010
- A County Tree & Hedgerow Survey which will also look at Habitats is being undertaken at present, report due in the winter of 2010.
- A survey of the County's non designated wetlands and coastal areas is being undertaken at present.
- Each year during Tree Week the Council distribute 3,000 native trees to the public to encourage planting of native species, to date in excess of 10,000 saplings have been distributed.

Proposed Future Actions:

- The County Development Plan when reviewed will include mandatory objectives to promote sustainable land-use and transportation strategies to reduce energy demand, reduce greenhouse gas emissions and address the necessity for adaptation to climate change as required under the Planning and Development Amendment Act 2010. Local Area Plan will be reviewed to include these objectives.
- Ensure that Sustainable Urban Drainage Systems (SUDS) are incorporated into the design of all new developments to reduce the potential impact of surface water drainage discharges.
- A Wind Energy Strategy will be prepared in order to facilitate the development of wind energy infrastructure in the County.
- Plans will be put in place to enhance the

quantity and quality of green spaces/green infrastructure through measures including master planning, street level management and parks management. Ensure protected sites (SAC's, NHA's and SPA's) are maintained in good condition.

- Ensure that development is located where it is likely to help minimise the effects of climate change and address unavoidable effects, for e.g. development where it is likely to increase harmful emissions or the risk of flooding, encouraging development where it will make the best use of existing resources and that will be robust and capable of withstanding the effects of climate change.
- Introduce requirements demanding highest energy savings in planning permissions. Ensure that all new developments are constructed in accordance with the Building Regulations– Part L (Conservation of Fuel and Energy), develop a code for sustainable homes for all new domestic developments.
- Ensure planning applications for new buildings and built infrastructure incorporate design/measure features to improve energy efficiency, maximise natural daylight and require the use of renewable energy sources (Solar, heat exchange pumps, geothermal etc - min requirement to provide 10kWh/m² of the heating requirements is from a renewable source set out in the Building Regulations) which will minimise the impact and consider the vulnerability to current and future climate change.
- Develop a compulsory B1 standard or higher for all new housing, and for commercial developments in excess of 1000m³ during the review of the current plan
- Developers of housing and commercial schemes will be obliged to provide facilities for cyclists and pedestrians to integrate with exiting facilities.
- Where appropriate through policies and local area plans, include the requirement for developers to identify water saving measures they will undertake such as rainwater and grey water harvesting.
- Pre-Planning Meetings with Developers and Agents will be used to encourage sustainable building design and to promote energy

conservation and the use of renewable energy in new developments, and identify water saving measures that can be taken such as water metering, rainwater or grey water harvesting, and the incorporation of sustainable transportation in urban settings.

- Promote and encourage the development of the Counties Broadband infrastructure and wireless (for example WiMax) and other smart technology.
- Ensure that infrastructure is incorporated into future public and privately financed developments to enable and support renewable energy technology and other smart technology.
- Develop a plan to maintain, reclaim and invest in green/natural infrastructure (wetlands, hedgerows, forests etc) to support and enhance biodiversity and provide recreation.
- Set targets and allocate resources to ensure existing biodiversity is protected as part of the Councils existing activities and taken into account in all new developments
- Introduce a tree planting policy (carbon sequestration). Planting trees is one of the easiest ways to offset the local authority's carbon footprint and become carbon neutral. Trees absorb carbon dioxide to produce oxygen and wood, both of which are very



useful for humans and other animals. In addition to offsetting our CO₂ emissions, it will provide wildlife habitats, enhance the natural landscape, and increase our native tree species.

- Use of council owned lands for tree planting initiatives.
- Examine the viability of planting biomass forests (energy crops - willows, poplars and ash) on Council owned lands, the biomass can be used in applications such as district heating, electric power generating stations, alone or in combination with other fuels
- Encourage energy efficient, green technology and renewable energy companies into the County.

Indicator:

Hectares of Z9, Z11 & Z12 zoned land

e) Procurement:

Meath Local Authorities play an important role in creating markets and supply chains for renewable technologies, through setting high standards of energy efficiency in its public procurement of goods and services. When purchasing goods and services, it is possible to adopt environmental policies that account for impacts on climate change. It is necessary to purchase services in a more sustainable way by looking at factors such as service delivery options and contracts to encourage suppliers and contractors to operate environmentally sound and sustainable procurement policies.

Actions taken to date by Meath Local Authorities:

- Energy rating is an important part of the Council's procurement policy.
- Currently 54% of all Meath Local Authorities electrical consumption is powered by green energy from renewable sources, and
- Tender awarded for the maintenance of Councils Public Lighting which will include the replacement of mercury lighting with more energy efficient light sources (for example sodium based lamps)

Ongoing Action:

- IT are in the process of signing up to a National PC Procurement framework, all equipment has been evaluated for environmental impact, and
- Tenders include the requirement for energy efficiency.

Proposed Future Actions to be taken:

- Develop a Green Procurement Policy and staff user guide. The policy will set out key standards for the procurement of goods across all council departments.
- Inform principal contractors and suppliers regarding the Councils Commitment to tackle climate change and our Green Procurement Policy
- Ensure that minimum energy ratings for procurement of electrical equipment including light bulbs and fittings, targets to reduce 'product miles' and new environmental standards are considered when choosing future products and services.
- Tenders will be sought, for the supply of electricity to Meath Local Authorities main energy using facilities in the County.
- Investigate the potential of regional procurement, combining the buying power of MLA with other local authorities for shared services, such as electricity in line with the recommendations of the Report of the Local Government Efficiency Review Group.
- Switch to renewable energy for our own electricity supply as far as is practical within the established procurement process.
- Include in tender evaluation methodologies certain environmental /sustainable criteria wherever appropriate to encourage the adoption of more environmentally sustainable goods and services where feasible and affordable.
- Incorporate whole life cycle costing/embedded energy costs, the impacts of future climate change into tendering process.
- Preference should be given for suppliers who show a commitment to continuous environmental improvement, especially those who have met environmental standards, such as ISO14001.

- Encourage the use of recycled or re-usable products where feasible.
- A bill analysis exercise will be carried out on all Meath Local Authority electrical bills to identify if the Council is on the correct tariff, and to reduce/remove any penalties which have been incurred resulting from excess wattless charges, incorrect maximum import capacities etc.
- Examine the viability of entering into Energy Management Contracts for all Corporate Buildings.

Indicator:

% of electricity supplied from renewables



f) Waste Management

Meath Local Authorities will reduce the volume of waste generated by the activities and services and the associated carbon footprint from the operation of our waste facilities. Meath Local Authorities will continue to follow the EU waste hierarchy of prevention, re-use, recycling, and disposal. We will increase recycling and recovery rates and reduce the quantity of waste which is sent for disposal to landfill.

The following actions have already been taken by Meath Local Authorities:

- Approximately €12 million has been spent to date on remediation works at Basketstown landfill the former County landfill an un-engineered landfill site which included

capping the site, installation of a leachate management system and landfill gas management system. This work has resulted in landfill gas being flared, reducing the amount of greenhouse gases being emitted into the atmosphere. Improvements to the leachate management system have resulted in a reduction in the amount of leachate required to be transported off-site.

- Providing Waste infrastructure (currently 37 no. bottle banks & 3 no. civic amenity sites) in line with the Northeast Region Waste Management Plan, in order to reduce travel distances for members of the public.
- According to the 'National Waste Report' for 2008, 31% of household was recycled in the County compared to the national average which was 26%.
- In 2009, 25% of waste generated by Meath Local Authorities was recycled.

Ongoing Actions:

- Continue to provide additional bring banks especially in the larger urban areas, in order to reduce travel distances for members of the public, in line with the Northeast Region Waste Management Plan which envisaged that 1 bring bank be provided for every 500 households by 2015.
- Continue to expand the awareness campaign to the general public, business and staff in relation to waste prevention, re-use and recycling.
- Demonstrate our commitment to resource management through corporate actions and procurement processes, in particular the use of sustainable and environmental products and materials
- Review waste collection permits to ensure that the organic bin is rolled out in the larger urban centres to commercial and residential sectors in line with the National Biodegradable Waste Strategy, this will divert organics from landfill thereby reduce GHG emissions.
- Champion the principle of the '*polluter pays principle*' in relation to creating and managing waste. At the same time we will support the minimisation and recycling of commercial waste.

- Enforce producer responsibility regulations (packaging, WEEE, batteries etc) and waste legislation.
- Continue to roll out Anti-Litter campaigns and waste minimisation campaigns.

Proposed Future Action:

- Review the organisations current waste management practices with the view to implementing new practices to include tendering out the Councils own Waste Management Service in Corporate Buildings, and reducing the waste generated, increasing recycling rates, and possibly looking at composting of organic and green waste generated throughout the organisation.
- Monitor waste arising and composition in order to inform waste minimisation schemes and future targets; and support options for maximising the re-use and diversion of bulky items from disposal.
- Progress plans to construct a 4th civic amenity site in the Southeast of the County (Ashbourne/Ratoath area) in line with the Northeast Waste Management Plan.
- Ensure that waste collectors roll out the organic bin to domestic & commercial customers in accordance with the Northeast Region Waste Management Plan.
- Encourage the development of biological treatment facilities for organic waste, which will lead to a reduction of greenhouse gases in landfills.
- Develop and Implement a Strategy that maximises the carbon potential of waste sludge.
- Enforcement of the Food Waste Regulations, to ensure that commercial outlets are segregating their food waste from other sources
- Promote home composting for householders not provided with an organic bin collection.
- Encourage the public to change their purchasing and consuming habits and support the re-use events and centres to enable goods and materials to be re-used, repaired, and exchanged.
- Facilitate the re-use of redundant Council equipment; donate IT and electrical

equipment to schools, community groups and charities.

- Sign up to FreeTradelreland.ie a nationwide website dedicated to the free re-use of household and business items which will reduce waste generation, and actively promote the website to the wider community.
- The potential for the use of recycled materials in road reconstruction will be investigated.
- Adopt a Corporate Policy to reduce the unnecessary use of paper in the workplace by encouraging paperless meetings, and disseminating reports, memos etc via email, promote of electronic meetings for all Council Business using electronic solutions (for e.g. boardbook.)

Indicators:

% of waste recycled

%Tonnes of Organic Waste diverted from landfill (Methane Producing)



g) Raising Awareness:

Awareness is the most underrated energy saving initiative ever. Meath Local Authorities will build Civic Pride in the County by communicating how we are taking the lead on climate change, and how all staff members and stakeholders can reduce their carbon footprint and increase their adaptive capacity, 'Think Globally Act Locally.'

The following actions have already been taken by MLA:

- Green Schools Programme: Energy conservation is an important part of the Green Schools Programme, 20 out of the 97 schools who are actively participating in the programme have been awarded the energy flag to date, and another 12 are due by the end of 2010 or early 2011
- Meath Local Authorities have signed up to Energy Map Training, Energy Map is an Energy Management Action Plan delivered by Sustainable Energy Authority of Ireland (SEAI). It is a structured approach to energy management, which provides a step by step guide to creating a best practise action plan for the entire organisations.

Ongoing actions:

- An Energy Team will be established across the organisation to encourage the conservation of energy by Council Employees.
- The Council will continue to roll out the Green Schools programme throughout the county, and encourage participating schools to achieve flags for the energy and travel themes.

Proposed future action:

- Develop a Corporate Climate Change Policy.
- Embed Climate Change Strategic aims into the Councils corporate processes and engage all the key stakeholders.
- Ensure all members of staff with responsibility for delivering Climate Change or related strategy actions have access to adequate training and resources to enable them to deliver, monitor and review activities.
- Develop a Climate Change Communication Strategy. Set up regular reporting processes/channels to promote council initiatives and achievements (reduction in CO₂ and cost savings) and promote key climate change impacts and adaptation messages to staff members and the wider community. Identify best methods of communication for different messages/groups for e.g. events, workshops, campaigns, literature etc.
- Produce an internet based resource as an educational tool to raise awareness of climate change and provide clear

recommended actions regarding climate change mitigation and adaptation and our progress with the implementation of the Strategy & Action Plan for our staff members and the wider community.

- The Council will ensure that all members of staff are aware of the Councils Strategy & Action Plan and commit to supporting the strategic targets
- Include Climate Change & Energy Management as part of the Councils induction training to all new employees
- The Council will consider climate change issues in the development and review of all future council policies
- The Council will actively encourage and promote the setting up or expansion of green business projects.
- Promotional campaign through Council publications to raise awareness of smarter travel choices, targeting staff and the wider community.
- Install information stands and/or visual display units around Corporate Buildings which contain facts about energy efficient practices, renewable energy and suppliers.
- The Council will continue to encourage the public to use its online facilities in order to reduce travelling to County Hall and other offices.
- Explore joint activities to tackle Climate Change with neighbouring local authorities, public sector organisations and other private businesses.
- MLA will seek to bring together all aspects of the community in order to reduce energy use



and achieve energy efficiency and renewable energy targets

- Engage with community groups, promote and support their involvement in programmes and initiatives to reduce CO₂ emissions. MLA's will work with community groups removing the barriers to effective action.
- MLA will empower local communities to take action by providing communities with expert guidance on areas such as planning, building regulations, project management and financing projects.
- A pilot project will be run to increase awareness amongst occupants of local authority social housing and employees to increase their awareness of energy usage and the potential savings and environmental benefits of being energy efficient. The 'Be Your Own Energy Manager' initiative hosted on the Power of One website will be used to promote awareness. An Energy Efficient House and Community competition will be developed similar to the litter league operated under 'Pride of Place'.
- Develop a user friendly information pack for schools initially and then the wider community to enable students to monitor the schools water consumption. Look at the viability of offering schools who participated in the water conservation awareness campaign with hippo bags and water butts free of charge.
- Develop an awareness campaign for businesses to encourage changes in their environmental behaviours focussing on all environmental sectors, including climate change, air quality, water quality, waste, biodiversity and protection of natural resources, taking account of our global footprint.

Indicators:

% of schools participating in green schools programme with energy flag

% LA households and employees signed up to the Be Your Own Energy Manager



5. IMPLEMENTATION AND REVIEW

The Environment Section of Meath Local Authorities has developed this Strategy. Each Directorate made contributions via the Meath Local Authorities Climate Change and Energy Management Working Group that was set up during the Energy Map training programme, and through meetings held with various staff members in the directorates and areas which will be affected by Climate Change and the Energy Officer.

The Draft Climate Change Strategy was presented to the Environment Strategy Policy Committee in October 2010 and following its endorsement it was presented to the elected members of Meath Local Authorities in November 2010 for approval. When the Strategy was approved, it was circulated to Council employees, members of Environment SPC and other interested bodies. Many of the actions set out in the Strategy require very little funding, while others need some initial investment in facilities and infrastructure in order to obtain a return in energy savings in future years. In such cases, the level of investment will depend on the availability of financial resources.

While it will be the responsibility of each Directorate to implement the strategy, the Environment Section will be responsible for co-ordinating its implementation and reporting progress to the Climate Change Steering Group

and Senior Management. Each directorate will nominate a person who will report every second month to the Environment Section on the implementation of the plan. The Environment Section will then compile a progress report which will be presented to senior management on a quarterly basis.

Meath Local Authorities Climate Change Strategy has been developed in line with the NCCS. The Draft Climate Change Bill 2010 which is expected to become law in 2011 will make climate change a core national priority which will set a mandatory target for Ireland to reduce net emissions by an average of 3% per year until 2020 with a final target of at least 80% by 2050. In addition, the NCCS will be put on a statutory footing, operating on a five-year cycle. The first 2 strategies will run from 2011–15 and 2016–20.

Meath Local Authorities Strategy will be reviewed at the end of 2011 and will be adjusted, where necessary, to take account of changing circumstances and government policy. The Register of Opportunities developed as part of the Energy Map training will identify specific areas where energy efficient measures are to be achieved across the organisation. From this specific targets will be identified on a yearly basis which will include low cost and those requiring investment in order to achieve the 3% annual target. In order to assess the effectiveness of the Strategy, energy usage will be measured annually and a report will be submitted to the Environment SPC and to Meath County Council in April/May each year. In addition, Meath Local Authorities Annual report will include a section on Energy.

Meath Local Authorities will embrace suggestions and projects which are not covered under the plan subject to resources being available.

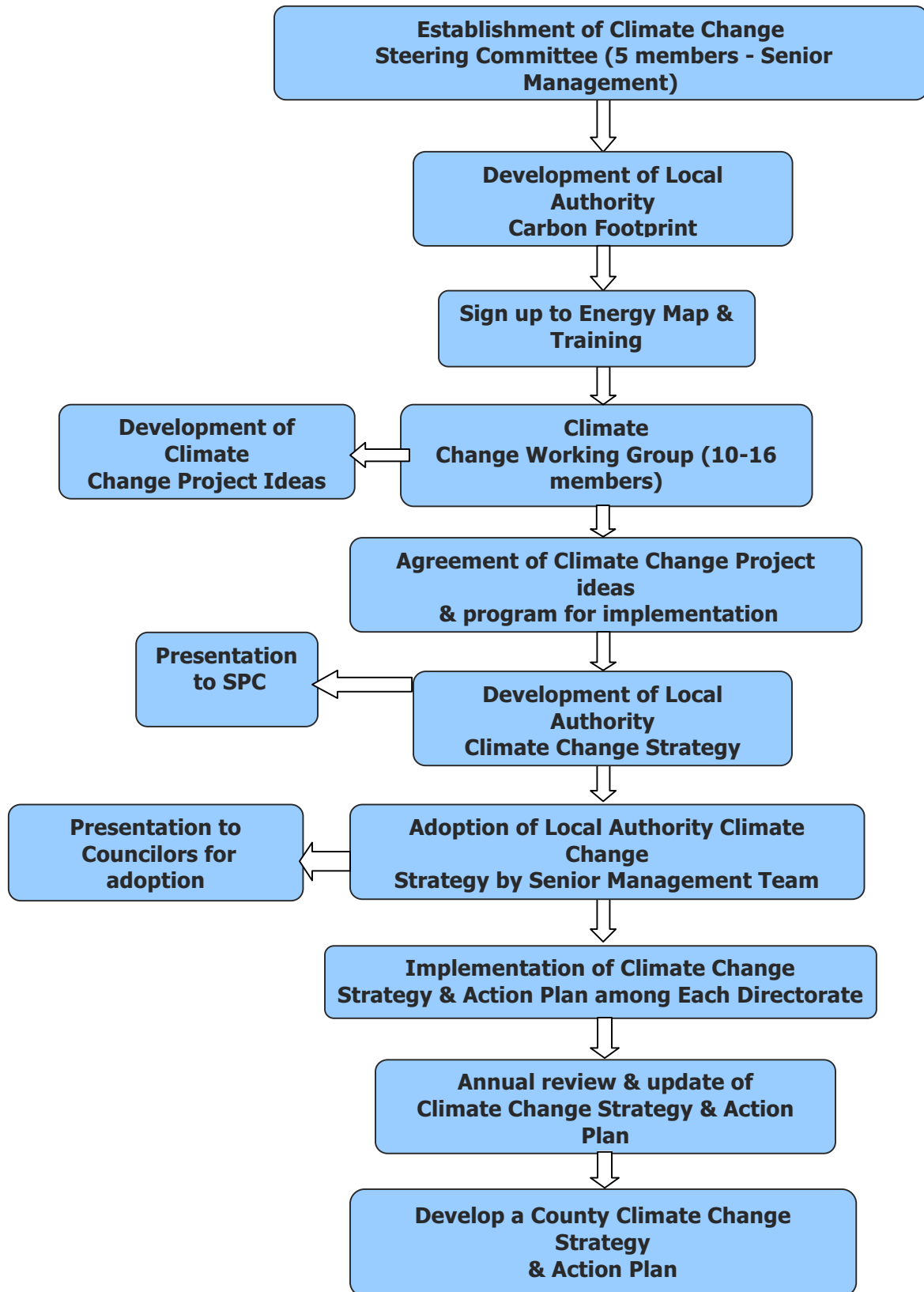
Table 1 (opposite) is a summary of the 11 Indicators which will be used to evaluate Meath Local Authorities progress in implementation of the Strategy & Action Plan.

No.	Indicator	Unit measured
1.	Total CO ₂ emissions	Tonnes of CO ₂
2.	Increase in Cycle Lane distance	Total Distance (km)
3.	LA retrofitted to achieve higher BER standard	% houses
4.	Corporate Buildings & DEC's displayed	No. of DEC's displayed
5.	Zoned Z9, Z11 & Z12 areas	Hectares
6.	MLA houses retro-fitted to achieve higher BER standard	% of houses
7.	Electricity supplied from renewables	% supplied
8.	Waste Recycled	% recycled
9.	Organic waste recovered	% diverted from landfill
10.	Schools participating in the Green Schools Programme with an energy flag	No. of Schools
11.	MLA Tenants & employees participating in 'Be your Own Energy Manager' programme	No. of households and employees

Table 1 – summary of indicators.

Appendix I

Process & Development of Climate Change Strategy



Appendix II

What is Energy Map

Sustainable Energy Authority Ireland (SEAI) was established in 2002 as Ireland's national energy authority. SEAI provides a range of services for support in achieving energy efficiency to the public sector, one of which is Energy Map Training. Energy MAP is the Energy Management Action Plan from . SEAI Energy Map is an online tool which provides a step by step guide to creating a best practise action plan for business. The 20 steps of Energy MAP are divided into five pillars of excellent energy management: Commit, Identify, Plan, Take Action and Review. The pillars are the main themes of energy management. Each pillar is made up of a number of steps. Some of the steps also have "guides" associated with them which provide more detailed information about how to complete that step.

Energy MAP was created for small and medium enterprises and the public sector. By providing such a support tool it is hoped that companies and the public sector will be in a position to implement best practice energy management strategies in their own sites.



The 5 pillars and 20 steps of Energy MAP

Commit

- Step 1: Senior Management Commitment
- Step 2: Appoint a Senior Manager to Energy Map
- Step 3: Appoint Energy Map co-ordinator
- Step 4: Establish an Energy Map Team
- Step 5: Establish on Energy Map Policy

Identify

- Step 6: Develop and overview total energy consumption
- Step 7: Survey Energy Use & Identify significant energy users
- Step 8: Identify key factors that influence energy consumption & performance indicator
- Step 9: Identify energy saving opportunities

Plan

- Step 10: Set objectives & targets
- Step 11: Establish Programme Plan
- Step 12: Formally allocate sufficient human, financial & systems resources

Take Action

- Step 13: Implement Programme Plan
- Step 14: Promote energy efficiency awareness & practices amongst employees
- Step 15: Train key personnel in energy efficient practices
- Step 16: Operate, maintain, purchase & design significant energy users efficiently.

Review

- Step 17: Continuously measure & monitor energy performance & check against targets
- Step 18: Identify & implement corrective & preventative action
- Step 19: Periodically review Energy Map & identify improvements
- Step 20: Management review of Energy Map

