

# Five Year Strategy



## Sustainable Energy Act, 2002

The President of Ireland signed the Sustainable Energy Act, 2002 into law in March 2002. This Act allowed the Minister of Public Enterprise, with the concurrence of the Minister for Finance and the Minister for Enterprise, Trade and Employment, to establish -

*“a body to be known as Fuinneamh Inmharthana Éireann — Údarás Fuinnimh Inmharthana na hÉireann or in the English language Sustainable Energy Ireland — The Sustainable Energy Authority of Ireland”*

The functions of the Sustainable Energy Ireland, as set out in the Act, are -

- (a) to promote and assist environmentally and economically sustainable production, supply and use of energy;
- (b) to promote and assist energy efficiency and renewable sources of energy;
- (c) to promote and assist the reduction of greenhouse gas emissions and transboundary air pollutants associated with the production, supply and use of energy;
- (d) to promote and assist the minimising of the impact on the environment of the production, supply and use of energy;
- (e) to promote and assist research, development and demonstration of technologies connected with the foregoing paragraphs of this subsection;
- (f) to provide advice, information and guidance -
  - (i) to the Minister and such other Ministers or bodies as the Minister may direct, and
  - (ii) to energy suppliers and users.

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# Foreword

Ireland spends over €7 billion per year on energy, most of which is imported. We depend on imported oil for almost all of our transport energy needs and most analysts are predicting increased price volatility.

It therefore makes sense to ensure we get as much benefit as possible from the energy we consume, and reduce our dependence on imports where there are viable and appropriate local alternatives. Consumption of fossil fuels is the main cause of air pollution and global warming.

The Kyoto Protocol, keystone of the United Nations climate change programme, sets targets for nations to limit or reduce their greenhouse gas emissions. As a signatory Ireland is determined to meet these new and challenging international obligations.

With the Sustainable Energy Act becoming law this year, Ireland now has a new national authority, Sustainable Energy Ireland, which has been established and tasked with steering the nation on a more sustainable development path.

The challenge is huge and complex. It will engage all sections of Irish society: the State, public institutions, the business world and individual citizens.

The Government's Green Paper on Sustainable Energy sets out how all sectors of the economy should act, and explains the priorities to be adopted by Sustainable Energy Ireland in order to deliver on the Government's objectives. We will focus on policy and market actions to limit CO<sub>2</sub> emissions from the production and use of energy. We will

promote and assist energy efficient practices in all sectors. We will also encourage alternative technologies, including renewable energy and combined heat and power (CHP).

The transformation of nations such as Ireland into modern economies has relied heavily on the exploitation of apparently abundant, affordable, and widely available, energy supplies. Such supplies are intrinsic to the operation of a modern service economy with needs for warmth and comfort, power and light, mobility, and communications.

But energy consumption carries a health warning for Ireland. No other sector of human activity has a greater capacity to cause long-term and lasting damage to our environment than current systems of energy production and use.

The climate change clock is ticking. To beat the clock we must waste no time in “mainstreaming” sustainable energy practices into all aspects of our lives.

The scale of the task facing Sustainable Energy Ireland, working with and through others, is formidable. It embraces all sectors that consume energy, including our homes, our transport, our industry, our public services, and our amenities. We have to develop, or buy, cleaner and more efficient systems. But they must be able to provide energy at prices that will allow Ireland to compete in the global market.

The operations and programmes for Sustainable Energy Ireland set out in this strategy document address priority actions identified in the Green Paper for the built

environment, industry, the public and services sectors, transport, and renewable energies. Our programmes are aimed at stimulating demand for sustainable energy products and services. Meanwhile, we will work with the energy supply side to match demand.

Prompt and high quality information, for consumers, for suppliers, and for policy makers, will be central to the effective working of sustainable energy programmes.

Good communications will be a powerful weapon to head off the risk of market failure. Much of the resources of Sustainable Energy Ireland will be employed to generate and transmit high quality information to key players in markets and to keep the public well informed.

Sustainable Energy Ireland will promote innovation within the energy sector. We must enable and foster the development of a dynamic, competitive and inventive market for renewables and energy conservation. We will encourage collaborative research, development and dissemination between the commercial sector and R&D communities in universities and elsewhere.

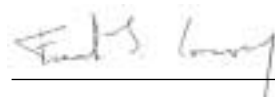
**To summarise:** *Sustainable Energy Ireland will work vigorously with all allied interests to enable Ireland meet its Kyoto Protocol commitments. We will apply a long-term approach to providing energy services for a competitive and prosperous society. We will strive to keep energy sustainability at the heart of public policy, business behaviour and private action.*

*That is our vision and our challenge.*



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David Taylor  
Chief Executive



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Frank Convery  
Chairperson

# Strategy for Energy Sustainability

## Energy Policy - Meeting the Challenges

### Policy Context

Sustainable Energy Ireland is charged with implementing, on behalf of Government, energy efficiency and renewable energy policies laid out in the following national and international publications:

#### National

*Department of Public Enterprise Statement of Strategy 2001–2004*

*National Development Plan 2000–2006*

*National Climate Change Strategy*

*Green Paper on Sustainable Energy*

#### International

*EU White Paper on Renewable Sources of Energy*

*EU Action Plan to Improve Energy Efficiency*

*Kyoto Protocol to the UN Framework Convention on Climate Change*

The role and remit of Sustainable Energy Ireland primarily relates to the second and third of these strategies. The fourth strategy is the responsibility of the Commission for Energy Regulation.

### Tackling Global Warming

As a first step towards tackling the threat of global warming, EU member states, in adopting the Kyoto Protocol, agreed to reduce emissions of greenhouse gases by 8% below 1990 levels during the “commitment period” (2008–2012).

As part of that target, Ireland is to limit its net greenhouse gas emissions to 13% above 1990 levels in the period 2008–2012. Given that by the year 2000 Ireland had already exceeded its allowable target, the challenge ahead is significant.

### Policy Objectives

The Department of Public Enterprise (now the Department of Communications, Marine & Natural Resources) set three principal energy policy objectives in its Statement of Strategy 2001–2004:

- to ensure security of supply
- to ensure environmentally sustainable energy production and consumption
- to develop a competitive supply industry

Four main strategies are being pursued to achieve those objectives:

- diversification of energy supplies
- increasing energy efficiency
- increasing capacity from renewables
- liberalisation of energy markets

### Meeting the Challenge

Ireland’s National Climate Change Strategy requires action to be shared equitably by all sectors, as early as possible and in a sustainable manner.

Under the Sustainable Energy Priority of the National Development Plan 2000–2006, Sustainable Energy Ireland is responsible for implementing the Energy Conservation measure and the Alternative Energy measure.

## Our Mission and Vision

Sustainable Energy Ireland, formerly the Irish Energy Centre, is Ireland's national energy agency.

**Our mission** *is to promote and assist the development of sustainable energy.*

We have a mandate to promote and assist environmentally and economically sustainable production, supply and use of energy, in support of Government policy, across all sectors of the economy.

**Our vision** *is that Ireland becomes a leader in embracing sustainable energy.*

Achieving the Sustainable Energy Ireland vision means enabling Ireland to meet its Kyoto Protocol commitments and, having done so, continuing to apply a long-term approach to providing energy services for a competitive and prosperous society.

Energy sustainability must be at the heart of public policy, business behaviour and private action.

## A New Energy Authority for Ireland

The establishment of Sustainable Energy Ireland as a statutory body with a Board appointed by the Minister for Communications, Marine & Natural Resources is the culmination of a process formally begun with publication in 1999 of the Government's Green Paper on Sustainable Energy.

The initiative builds on the achievements of the Irish Energy Centre, established in 1994, in promoting energy efficiency and renewable energy. It draws on the specialist national and international experience of that body and its predecessors in programme development and delivery.

Our establishment reflects at energy policy level a fundamental recognition of and commitment to the wider importance of sustainability as an intrinsic condition of national progress and quality of life. We must meet the needs of society, the economy and the environment.

This commitment has been given concrete expression in the €223 million funding provision for the Authority's operations and programmes under the Economic and Social Infrastructure Operational Programme of the National Development Plan 2000-2006. It has been further affirmed in the Government's Strategy for Sustainable Development and the National Climate Change Strategy.

## Our Remit

The agency is answerable through its board to the Minister for Communications, Marine & Natural Resources.

Our remit relates mainly to three areas:

- Improving energy efficiency;
- Advancing the development and competitive deployment of renewable sources of energy and combined heat and power (CHP); and
- Reducing the environmental impact of energy production and use, particularly in respect of greenhouse gas emissions.

Sustainable Energy Ireland is responsible for advising Government on policies and measures on sustainable energy; implementing programmes agreed by Government; and stimulating sustainable energy policies and actions by public bodies, the business sector, local communities and individual consumers.

## Focus and Approach

Our focus is on stimulating and enabling energy policy and market actions in all sectors, in pursuit of a more sustainable development path for Ireland. The challenge of improving the energy effectiveness of all sectors entails serial innovation in a long-term process of market transformation.

Our journey along this path requires a balanced approach towards meeting the policy goals of secure energy supplies, competitive energy services and environmental protection.

Our approach will be to work vigorously with all allied interests. Our programmes will support policy, enable technical, market-driven innovation and stimulate demand for sustainable energy products and services. Meanwhile, we will support the development of supply side capability to meet that demand.

## Working through People

The success of our strategy will be determined by how well Sustainable Energy Ireland partners with a wide range of stakeholders and meets their needs.

Four ingredients are critical to our success. They are:

### *Consensus with stakeholders –*

It is essential that the reasoning behind Sustainable Energy Ireland's mission and vision is widely understood and accepted, and that responsibility for the actions is undertaken by those engaged.

### *Political Leadership –*

the scale of transformation required is such that sustained political leadership, supported by policy makers, business leaders and consumers, will be vital.

### *Effective Structures and Networks –*

it is necessary that our structures reflect national intent and clarity of action, establish capacity to deliver, are fit for purpose and are sufficiently flexible to endure over time, particularly in forming effective networks.

### *Committed Staff and Stakeholders –*

the path to a sustainable energy economy will require effective education and development of key people in an understanding and commitment to the concepts and practice of sustainable development and sustainable energy, and their transmission to wider Irish society.

## Priority Tasks

We are set to deliver a range of funding and other targeted policy and market support programmes. We will address priority actions identified in national and international energy policy documents.

The programmes cover the built environment, industry, the public and commercial sectors, transport, and renewable energy.

Our policy advisory activities, sectoral programmes and accompanying operations are designed to encourage early innovation and leverage. We will be seeking the highest possible market uptake of sustainable energy practices in a manner that will have enduring economy-wide impact.

## Delivering National Targets

A number of targets were identified in the Green Paper on Sustainable Energy. We will implement a comprehensive range of programmes to meet those targets. A summary of the targets and associated programmes is shown below.

### Residential

#### National Target

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An improvement in energy efficiency consistent with GHG reduction targets

#### Programmes

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## Industry and Public Sector

#### National Target

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Promote best practice and prepare for climate change agreements

#### Programmes

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## Research and Development

#### National Target

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Increase the volume of R&D undertaken to assist in meeting the our other objectives

#### Programmes

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## Renewable Energies & CHP

Renewable Energy Information Office Page 16

#### National Target

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Increase electricity generation from renewable sources by 500 MW

#### Programmes

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Grid Reinforcement	Page 14
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#### National Target

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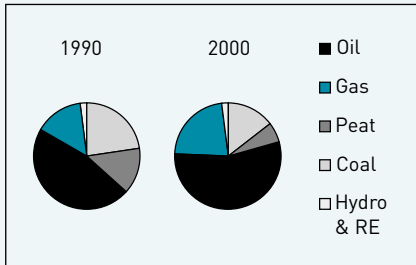
Increase heat and electricity generation from CHP and reduce emission by 0.25 MT CO<sub>2</sub>/yr below 2000 levels

#### Programmes

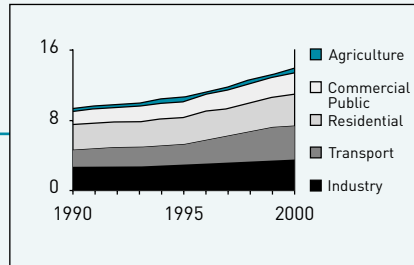
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CHP / District Heating	Page 15
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## Sustainable Energy- Indicators for Ireland

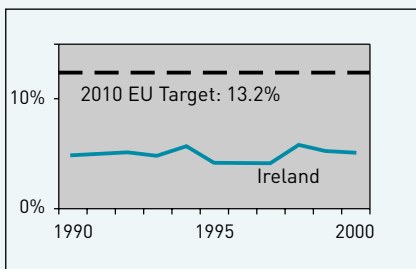


Total Primary Energy Requirement by source

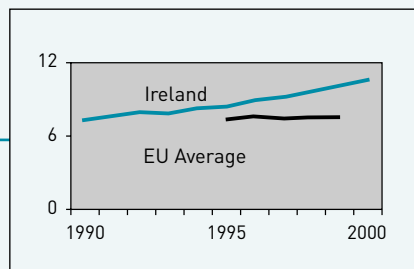


Primary Energy Requirement by sector [MTOE]

### The Current Situation

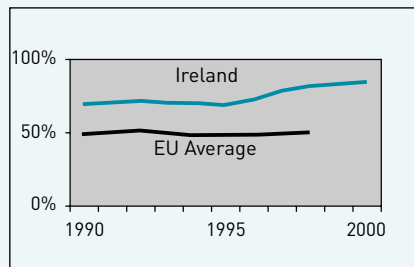


% of electricity from RE sources [2006: 12%]



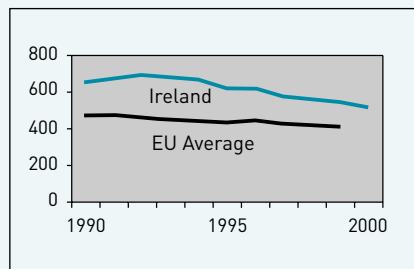
Lifestyle Efficiency [Total TCO<sub>2</sub>-equiv per capita]

### Policy Objective 1 Environment



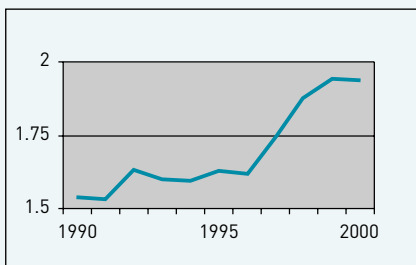
Security of Supply - Import Dependency

### Policy Objective 2 Security of Supply

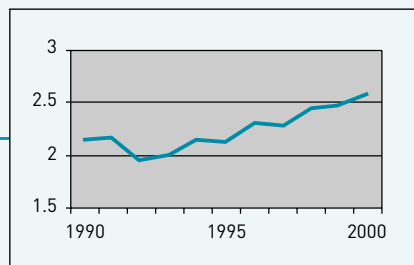


Economic Intensity [TCO<sub>2</sub>-equiv per €m GDP]

### Policy Objective 3 Competitiveness



Transport: Unit consumption per equivalent car [TOE per car-equivalent]

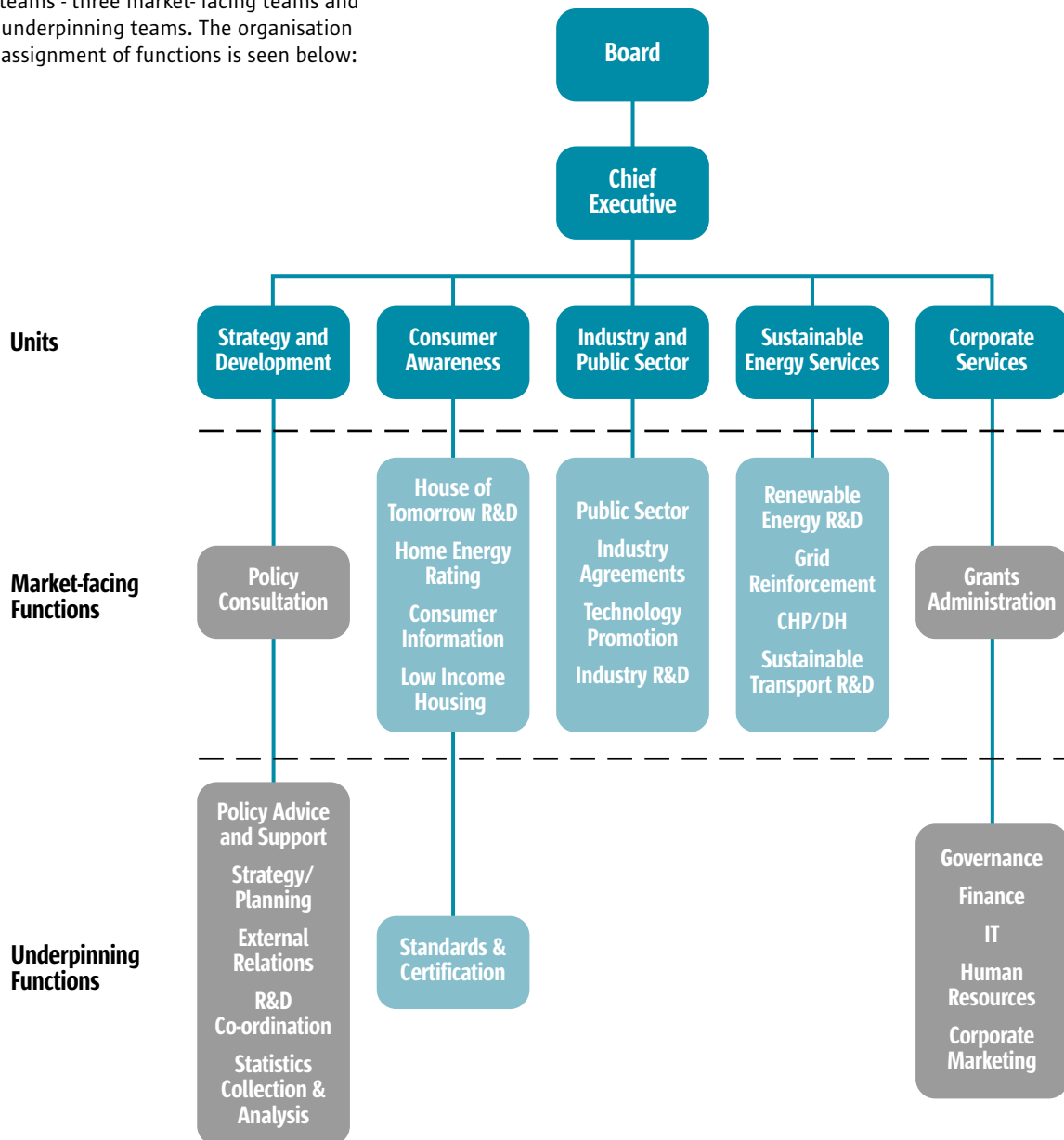


Residential Consumption [TOE / Dwelling]

### Sectoral Indicators

# Structured for Delivery

Sustainable Energy Ireland is structured into five teams - three market-facing teams and two underpinning teams. The organisation and assignment of functions is seen below:



# Key Programmes & Targets

## Consumer Awareness Programmes

### House of Tomorrow R&D

The residential sector accounts for almost 30% of Ireland's energy-related CO<sub>2</sub> emissions. From a Kyoto compliance perspective, the rate of new house building and the deficient energy performance of much of the existing housing stock present a major challenge.

The House of Tomorrow programme will fund projects researching, developing and demonstrating sustainable energy practices in Irish housing. Its main focus will be on stimulating widespread uptake of superior sustainable energy planning, design, specification and construction practices in both the new home building and home improvement markets. That includes contributing to workable least cost and effective solutions in the form of improved technologies, products, processes, practices and policies aimed at impacting on the housing market. Those solutions may also lead to new business opportunities for sustainable energy products and services in home and export markets.

A broad range of projects will be supported in the fields of:

- Research that will guide policy and identify deficiencies and barriers to energy performance improvements
- Model projects, for new build, refurbishment or retrofit, with the potential for market influence and replication
- R&D of products, systems and services
- Research and related actions to ensure the wider realisation of these benefits through improved standards and practices.

There is a budget of €21 million, aimed at engaging co-funding of €34 million.

NDP Target  
*130 Funded projects.*

### Home Energy Rating

There is a wide diversity in the energy quality of Irish housing across a stock of 1.3 million units. Pre-1980s housing is particularly inefficient. However, energy performance is not visible to vendors, buyers or tenants. There is a lack of awareness and no recognised objective measure of energy performance in the marketplace.

Sustainable Energy Ireland will develop and promote a comprehensive, nationally recognised, Home Energy Rating system with the aim of making energy efficiency explicit. It will be an increasingly important factor in house purchase and renovation decisions. Such a scheme will also aim to stimulate householders and investors to systematically identify the most effective means of improving the energy performance of their homes.

The programme will include developing the energy audit procedure and tools, building professional capacity and developing a national database. Information will be accompanied by promotional, financial and regulatory instruments as appropriate that will stimulate uptake of the rating procedure and investment in remedial actions. The programme will be guided by national requirements, international experience and the forthcoming EU Directive on Energy Performance of Buildings, which provides a framework for a calculation methodology.

There is a budget of €9 million, leveraging a further investment of €90 million investment in remedial actions.

NDP Target  
*100,000 homes rated.*

## Informing Consumers

Most personal energy consumption is in the home, accounting for over a quarter of national energy demand. While the fuel performance of Irish homes has improved in the last two decades, it remains significantly below best northern European practice. Growing use of household appliances has led to a steady rise in average domestic electricity consumption, thus increasing the level of energy consumption that householders can directly control.

Sustainable Energy Ireland's Consumer Information programme will encourage consumers to become members of a sustainable energy society. The programme will:

- Build awareness of sources of energy and the environmental impacts of energy use
- Motivate consumers to take personal responsibility for energy use in their daily lives
- Facilitate behavioural change by educating consumers on how to become more efficient
- Modify attitudes, values and beliefs, reinforcing behaviour in relation to sustainable energy
- Ensure effective communication of complementary consumer focussed programmes within Sustainable Energy Ireland

Key programme elements will include:

- Independent consumer advice, including the Energy Hotline
- Advertising, public relations and events
- Energy Awareness Week
- Schools programme
- Consumer behaviour initiatives

NDP Target

*A measurable evolution of consumer attitudes and markets in favour of more sustainable energy products and services.*

## Low Income Housing

Fuel poverty can be defined as the inability to heat the home to an adequate temperature owing to low income and poor, energy inefficient, housing and heating systems. It is estimated that over 220,000 households in Ireland experience some degree of fuel poverty, and approximately 62,000 of these households live in persistent fuel poverty.

The consequences, in addition to discomfort, can include poor physical and or mental health, increased debt and a decline in the physical state of the home.

Fuel poverty has four principal dimensions - household income, household priorities, energy efficiency and fuel price. Sustainable Energy Ireland has a specific remit in relation to energy efficiency, with an advisory role in relation to the impact of fuel price changes - whether arising from market forces or economic policies.

With a budget of €7.6 million, the Low Income Housing Programme will contribute to the establishment of a national plan of action to address fuel poverty in low-income households in Ireland. Sustainable Energy Ireland will implement a fund disbursement programme aimed at improving the energy efficiency of homes occupied by low-income householders, and increasing the capacity of organisations in Ireland to deliver such measures. The action will be supported by a targeted information and awareness-raising programme.

NDP Target

*Improved energy efficiency and comfort conditions in 18,000 homes.*

## Industry & Public Sector Programmes

### Public Sector

The Green Paper on Sustainable Energy proposed that the public sector should be an exemplar to other sectors in implementing energy efficiency best practice.

Public sector expenditure on energy is approximately €180 million each year (of which €115 million is used in buildings).

There is potential for significant savings among the 4,500 • 5,000 non-commercial public sector buildings (including hospitals, schools, universities, government departments and local authorities), many of which were constructed prior to 1980.

Another significant area to be addressed is the design and specification of new-build and refurbishment construction which, under the National Development Plan 2000 – 2006, is approximately €1.9 billion.

With a budget of €12.6 million, the Public Sector Programme activities are:

- Design Studies (€2 million) to highlight the opportunities for energy efficient solutions in the refurbishment and construction of public sector buildings;
- Model solutions (€9 million) to support investment in more energy efficient solutions, provide demonstration examples to the market, and help to promote good practice across all sectors.
- Energy management bureau operations (€1.6 million) to encourage the development of energy management service companies to provide off-site energy control and management for public sector buildings.

NDP Target

*100 design studies. 50 model solutions. 3 energy management bureaux.*

### Industry Agreements

The industrial sector has a total annual energy spend of €700 million, of which €240 million (35%) is for 80 large industrial sites. A further 1,200 sites have an estimated €200 million energy spend.

The relative cost of energy as a factor of production is generally low. For example, for about 95% of medium sized companies, energy costs represent less than 2% of total costs.

With a budget of over €6 million, the main programme activities are:

Develop the support networks:

- Develop the Self-Audit scheme of voluntary agreements with large enterprises
- Expand the support networks to include small and medium industry
- Prepare for negotiated agreements under the National Climate Change Strategy
- Develop energy management competence

Expand upon existing benchmarking:

- Develop a new Energy/Environment Award
- Develop energy benchmarking in conjunction with the development of negotiated agreements.

NDP Target

*Sustainable Energy Ireland network to cover 90 per cent of large industrial activity and 50 per cent of medium-sized industry.*

*Pilot implementation of 3 different types of negotiated agreements.*

## Technology Promotion

Industry, being profit driven, is disposed to take up energy saving techniques and technologies once they are proven and commercially demonstrated and available. Over the past two decades, industry has successfully reduced its energy use per unit of production by over 15%. Many opportunities still remain, particularly in SMEs where there is an absence of any significant cost drivers.

Energy saving projects are in competition with core business process-related projects and often lose out to the latter.

Among the technologies offering opportunities for increased energy savings are boiler systems, automatic control systems, compressed air, refrigeration, motive power & lighting.

With a budget of over €6 million, the main programme activities are:

- Stimulate uptake of best practice technologies within industry
- Encourage and support energy research, development and technology demonstration (RDD)

### NDP Target

*5 new capability packages, 2 new award schemes, and 10 training packages.*

## Industry & Commercial Sector R&D

The industrial and commercial sectors respectively account for 25% and 13% of Ireland's energy related CO<sub>2</sub> emissions. Due to the historical under-provision of R&D in the Irish energy economy there has been a failure to effectively exploit the possible energy savings from the full range of opportunities within these sectors.

This programme aims to address that failure by supporting the research, development, adaptation and demonstration of new energy efficient technologies, management systems and policy instruments, focussed on creating a least-cost path to achieving reduced CO<sub>2</sub> emissions from these competitive market sectors. It will also help to reveal and improve export opportunities for Irish developers and manufacturers of energy efficient equipment.

With a budget of €13 million, the programme is at an early stage of development, but it is anticipated that we will:

- Accelerate the uptake of more sustainable products, systems, practices and services in the Irish energy marketplace, both demand-side and supply-side
- Deliver solutions which enable barriers to market uptake to be overcome
- Establish and strengthen national capacity to access, develop and apply international class R&D in a way, which can best meet specific Irish needs on a continuing basis

### NDP Target

*50 funded projects engaging private sector investment of €19 million.*

## Sustainable Energy Services Programmes

### Renewable Energy R&D

Renewable energy can play a vital role in addressing the Government's three key energy policy objectives, namely, ensuring security of supply, competitiveness and protection of the environment.

The programme will address the need for information and education in order to raise the awareness, and the willingness, of all relevant players to engage in the market.

The focus of the programme is to stimulate the application and further deployment of renewable energies, particularly those close to market viability. That could include measures to stimulate the development of the technologies and produce implementation plans for those with economic potential.

We want to remove barriers to the deployment of renewables and help stimulate an Irish renewables industry.

The Renewable Energy Research, Development and Deployment programme, with a budget of €16 million, will give priority to supporting:

- Research aimed at developing policy options for enhanced deployment
- Research to define the market structure for renewable energy technologies with high penetration potential
- Research aimed at cost reduction, improved reliability and /or opening new markets
- Demonstration of non-technical innovation
- Feasibility studies for renewable energy projects
- Demonstration aimed at high risk, high reward projects
- Investigation into core areas, common to many renewable technologies, such as the electricity system, regulation, technical standards, fiscal and support measures, finance, markets, planning and policy

NDP Target

*Contribute towards achieving 500 MW additional capacity from renewable energy.*

### Grid Reinforcement

Ireland's electricity grid is unsuitable for the connection of large numbers of small to medium scale renewable and CHP electricity generators, sited mostly in remote areas. This presents a barrier to the further deployment of these technologies.

The programme will identify the regions in which further grid infrastructure investment will contribute most to the uptake of grid-connected renewables, with a particular focus on wind power. Our target will be to remove barriers to the deployment of renewable electricity generation in new areas and help stimulate growth of an Irish renewable electricity industry.

The main objectives are as follows:

- To remove a strong disincentive against being the first renewable project in areas with poor electricity infrastructure by sharing the cost of new infrastructure
- To reduce development and construction costs for renewable electricity projects
- To optimise the amount of electrical infrastructure and reduce associated planning difficulties
- To encourage replication and stimulate local involvement

Key activities are to:

- Develop a focussed grid infrastructure extension and reinforcement programme for renewables
- Examine the impact of wind-generated electricity, and the effects of interconnection, on the network
- Commit funds to upgrade the distribution and transmission network

A budget of €67 million is allocated to a Grid Upgrade Development Plan.

NDP Target

*260 MW additional clustered connection capacity.*

## CHP/District Heating

The further development of CHP and district heating schemes will play an important role in improving Ireland's energy efficiency and abating CO<sub>2</sub> emissions. This programme aims to address several of the many of the technical and financial barriers that exist, as well as addressing the lack of awareness and understanding of the technology.

Challenges to be addressed include:

- The absence of any heat distribution infrastructure (and the absence of a discrete commercial market for heat)
- The limitations of the existing gas grid
- Difficulties in financing CHP/DH developments
- Low population density
- The limited number of continuously operated heavy industries with power and heat loads suited to CHP

Sustainable Energy Ireland's key actions will be as follows:

- Identify and remove inappropriate barriers to development
- Assist the development of project financing and other market stimulation measures
- Conduct two feasibility studies and implement and monitor two demonstrations

With a budget of €5 million, the programme aims to build greater awareness of the impacts and benefits of CHP/DH technology, leading to increased willingness by financiers to support CHP developments and increased attractiveness of district heating schemes.

Target for 2010  
0.25 MT CO<sub>2</sub> savings.

## Sustainable Transport R&D

In terms of energy consumption, the transport sector is the most rapidly growing, and poses the biggest challenge to Europe in meeting the commitments it has made under the Kyoto Protocol to reduce emissions of greenhouse gases.

Transport accounts for 32% of Ireland's final energy demand and, under a 'business as usual' scenario, CO<sub>2</sub> emissions from transport are projected to grow by 150% between 1990 and 2010.

Factors influencing the growth of energy consumption in the transport sector are the growth in:

- Numbers of vehicles
- Average unit annual mileage
- Average engine size
- Congestion, leading to inefficient driving patterns

Sustainable Energy Ireland's Sustainable Transport R&D programme is at an early stage of development, but it is anticipated that we will:

- Provide an underpinning R&D programme supporting government policies
- Pilot a range of sustainable mobility plans
- Address lack of awareness of the cost of current means of transport and the alternatives
- Initiate a number of demonstration projects to evaluate alternative means of transport and alternative transportation fuels (e.g. bio diesel-powered buses)

NDP Target

*Recognising the need to implement the sustainable transport programme together with a range of partners and stakeholders, Sustainable Energy Ireland will, in due course, set appropriate targets for this programme.*

## Renewable Energy Information Office

In support of government policy for the wider deployment of renewable energy, including the target of 500MWe for renewable electricity by 2005, there is an important need to meet the growing information requirements of those involved in implementing and affected by these developments.

The Renewable Energy Information Office (REIO) is a national service of Sustainable Energy Ireland, established to promote the use of renewable energy resources and provide independent advice and information nationwide on financial, social and technical issues relating to renewable energy development. It facilitates the increased use of energy from renewable sources such as wind, solar, biomass, geothermal and hydropower.

The Renewable Energy Information Office:

- Provides the capacity to meet the specific needs of local authority planners and the wider public
- Ensures that the information needs of market and other actors, such as Local Energy Agencies and in particular resource owners, community groups, developers and the financial community, are met.

In order to achieve its objectives, the Office:

- Operates a helpdesk, informed by a comprehensive library of relevant materials and publications
- Publishes a regular newsletter, Energy Update, and a range of information brochures
- Maintains a database of relevant parties in Ireland who have a key role to play in the further growth of the renewable energy industry
- Organises conferences, workshops and information meetings on issues relevant to renewable energy
- Provides a priority advice service for local authority planners and decision makers
- Chairs and facilitates working groups to address obstacles to renewable energy development

NDP Target

*Contribute towards achieving 500 MWe additional capacity from renewable energy.*

# Other Core Functions

## Underpinning functions

Sustainable Energy Ireland's programme implementation responsibilities are underpinned by a number of key development, management and operational support functions, summarised here.

### Policy advice and support

Sustainable Energy Ireland is mandated to provide advice to Government on sustainable energy policies and measures. Informed and timely analysis will assist policy developers and decision makers by identifying, researching and evaluating potential policy interventions and energy technology scenarios.

Sustainable Energy Ireland will:

- Examine opportunities for economy-wide measures
- Deliver policy advice and support to Government Departments and Ministers
- Produce proposals and options to meet existing and potential Government policies and sustainable energy targets
- Examine the particular task implementation needs arising from the National Climate Change Strategy, such as negotiated agreements
- Provide briefings and related services to Government Departments and Ministers

### Statistics collection and analysis

We have a lead role in the development and maintenance of comprehensive national and sectoral statistics for energy production, transformation and end use. That is vital to meet international reporting obligations, inform policymakers and guide investment decisions. In particular, the establishment and promulgation of appropriate indicators for sustainable energy will allow effective benchmarking and tracking of performance trends over the Kyoto period.

Sustainable Energy Ireland will:

- Collect, process and publish energy statistics to support policy analysis and development in line with national needs and international obligations
- Conduct statistical and economic analyses of energy services and sustainable energy options so as to inform policy advice and underpin programme prioritisation
- Contribute to the development and promulgation of appropriate sustainability indicators, including participation in national and international working groups

## Standards and certification

Standards and related certification schemes in respect of products and services encourage uniformity and in so doing reduce transaction and investment costs. Accompanied by suitable branding and promotion, they can encourage consumer confidence and protection, facilitating purchase discrimination in favour of suppliers/retailers with superior energy efficient offerings. Thus they also tend to stimulate quality improvement and product innovation.

Sustainable Energy Ireland will:

- Contribute to the development of new and/or improved sustainable energy standards, particularly in consumer products and services
- Actively promote and support the adoption of energy standards, establish training and certification processes, stimulate consumer investment in specific measures and promote standards and certification as a point of differentiation

## Research & Development co-ordination

Sustainable Energy Ireland's support programmes for research, development and demonstration are diverse, multilayered and interface with other national and international programmes. Our RD&D co-ordination function enables the efficient and effective development and management of a portfolio of programme activities so as to achieve synergies, and to leverage external expertise and best practice. That includes representation, national contact point service and promotion of EU and other international RD&D support initiatives.

Sustainable Energy Ireland will:

- Ensure coherence across the RD&D sector teams in the development, implementation, appraisal and dissemination of results of its programmes
- Define, commission and manage research in direct support of its policy advisory work
- Provide support or representation to ensure integration with wider programmes, e.g. those of the EU and IEA

## External relations

The Authority is responsible for co-ordinating and liaising with relevant bodies on a regional, national and international basis in order to achieve most effective advancement of sustainable energy objectives. In particular, international collaboration enables the leveraging of existing knowledge within other organisations and the benchmarking of our programmes and activities against best practice abroad.

International representation from macro to specialist level is necessary to maximise focus, alignment and value from EU and other policies and programmes.

Sustainable Energy Ireland will:

- Provide, and ensure co-ordination of, international representation roles in the EU, International Energy Agency and other arenas (including policy and R&D co-ordination)
- Liaise with other national and local agencies, including CER, EPA and Local Energy Agencies
- Increase the awareness of the marketplace through its corporate marketing function

## Strategy, planning and reporting

Sustainable Energy Ireland's corporate planning function is responsible for:

- Preparing the multi-annual forward strategy
- Preparing annual plans, progress reviews, reports and publications
- Establishing and maintaining effective platforms for delivery, tracking and review across the organisation's portfolio of programmes and actions
- Leading the development of systems and tools that achieve value for money across the range of organisational activities

## Governance

Sustainable Energy Ireland will provide a formal coherent framework for organisational governance, management and operational control. In doing this we will:

- Develop internal systems, processes, procedures and control points that meet the accountability requirements of the Board and Government
- Consider approaches and responses to delegated authority under the legislation
- Support decision-making processes which are effective and represent value for money
- Work to ensure the maintenance of independence and transparency
- Ensure Human Resources and Information Technology best practice is adopted as standard

## Finance & Administration

Sustainable Energy Ireland's budget under the National Development Plan's (2000–2006) Sustainable Energy Priority is €223 million, comprising:

Energy Conservation	€156 million
Alternative/Renewable Energy	€67 million

In respect of this budget, the responsibilities of the finance and administration function include:

- Efficient and timely scheduling and allocation of funding
- Establishment, operation and maintenance of efficient administrative systems
- Meeting reporting obligations to relevant national and EU authorities

## Climate Change

### What is Climate Change?

Climate change is recognised as one of the most serious challenges facing humanity today. The threat is that our economic activities are leading to global warming, with potentially serious consequences for the earth's ecosystem, our economy and our way of Life.

### What part does energy use play?

Energy production and use account for over 80% of the man-made greenhouse gas emissions. In Ireland, 'business as usual' projections show Ireland's energy-related emissions rising by over 60% in the period from 1990 to 2010.

### What would the effects be?

The global effects could include: rising sea levels, depleted agriculture, increased health hazards, more turbulent weather, and substantial decreases in water resources.

### What action has been taken?

In 1992, the UN Earth Summit in Rio de Janeiro adopted the United Nations Framework Convention on Climate Change. That acknowledged the change in the Earth's climate, and that its adverse effects were a common concern of humankind. The Convention sets an "ultimate objective" of stabilizing atmospheric concentrations of greenhouse gases at safe levels.

In 1997, the Kyoto Protocol was adopted. It commits Annex 1 countries (OECD and Central European countries) to individual, legally-binding targets to limit or reduce their greenhouse gas emissions, adding up to a total cut of at least 5% from 1990 levels in the 'commitment period' 2008–2012.

### What is Ireland's target?

As part of the Kyoto Protocol, the European Union committed to a decrease of 8% below 1990 levels. Recognising Ireland's potential growth, the EU agreed to an Irish target of +13% increase above 1990 levels.

In 1990, Ireland's emissions of greenhouse gases were 53.7 million tonnes of CO<sub>2</sub>-equivalent. Ireland's 2010 target is 60.7 million tonnes. Emissions in 2000 were over 65 million tonnes and, without corrective action, could exceed 76 million tons by 2010. Ireland will therefore have to reduce its greenhouse gas emissions by over 15 million tonnes CO<sub>2</sub>-equivalent.

## Sustainable Development

### What is Sustainable Development?

The Bruntland Report defined it as development that meets the needs of the present without compromising the ability of future generations to meet their own needs.

The Irish Government policy is to ensure that economy and society in Ireland can develop to their full potential within a well-protected environment, without compromising the quality of that environment, and with responsibility towards present and future generations and the wider international community.

Sustainable Development in its widest sense entails improving the quality of life for all the world's people without increasing our burden on the earth beyond its carrying capacity.

### What are the components of Sustainable Development?

Sustainability rests on the three pillars of:

- Economy
- Environment
- Society

Sustainable development is not a new concept. Many societies, over the course of human history, have recognised the need to maintain a balance between economic, societal and environmental needs. What is new is the articulation of that need in the context of a global society. The different dimensions are intrinsically linked.

Sustainable development is dependent upon balancing the interplay of policies and their effective implementation to achieve economic, environmental and social needs.

### What role does energy play?

Human development and impact on the environment are closely linked. Economic growth and social development depend heavily on energy use. Ensuring growth while minimising the impacts of energy consumption remains a key challenge for sustainable development

The 1990 UN Earth Summit pointed out that much of the world's energy is produced in a manner that may not be sustainable, if overall demand were to increase substantially. It stated that energy needs to be produced and consumed in a manner that protects the atmosphere, human health and the environment.

Energy remains a strategic commodity, vital to all strands of sustainable development.



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*Sustainable Energy Ireland is funded by the Irish Government under the National Development Plan 2000-2006 with programmes part financed by the European Union*

