

**Public Procurement of
Energy Saving Technologies
in Europe
(PROST)**

Report on the Country Study for Ireland:

Current Public Sector Purchasing, Building, and Replacement Practices

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1. Executive summary

1.1 National targets and strategies

The Total Primary Energy Requirement in Ireland grew between 1980 and 1998 by 58 % and is projected to grow a further 37 % by 2010. Ireland will significantly exceed its Kyoto limit by 2010 unless radical steps are taken.

The Kyoto protocol sets a target for Ireland of a reduction GHG gases with 13% between 1990 and 2010. All energy-consuming sectors are showing dramatic energy related CO₂ growth, with the tertiary sector and transport sectors as the most significant contributors.

Ireland has, as a part of the EU target of the Kyoto protocol, agreed to limit the growth in greenhouse gas emissions by 13% above 1990 levels. Without the action set in out in the National Climate Change Strategy, net annual emissions in Ireland would increase by 37.3%.

Comhar – the National Sustainable Development Partnership – was established in early 1999. It is a forum for national consultation and dialogue on issues referring to Ireland's pursuit of sustainable development. Examples of issues that may be examined by Comhar are eco-labelling, eco-auditing policies and green procurement.

The Department of Public Enterprise presented the *Green Paper on Sustainable Energy* in 1999. It highlights strategies for improved generation, distribution and end use efficiency of energy and discusses a framework for reducing CO₂-emissions. One of the major features of the Green Paper is a budget of €156 million allocated to energy-related CO₂-abatement.

The *National Development Plan* (2000-2006) includes measures as strengthened activities of the Irish Energy Centre (see under 1.2 and 2.3.1) and support for Energy Efficient Houses and Public Sector Buildings. It sets out areas that will assist Ireland in complying the Kyoto obligations as a key priority.

1.2 Energy Efficiency in Public Sector

In 1991, the Department of Energy stated that savings to up to 20% were achievable in buildings that were directly under control of the Government Departments. A programme document was drawn up in 1994 and is continuously supported by the Irish Energy Centre (see below), which organises workshops and offers technical advice.

The *Building Energy Management Systems* (BEMS) was developed in the above-mentioned programme. The BEMS enables central monitoring of energy consumption in a number of public sector buildings. A high level of collected data an energy profile can be created where energy waste can be detected.

The main instrument of energy efficient policy in Ireland is the *Irish Energy Center* (IEC). Together with the energy utilities, it coordinates and implements national objectives and policies relating to energy efficiency and renewable energy sources. Examples of tasks of the IEC are to initiate cost-effective programmes to promote energy efficiency and to carry out research relating to consumption of energy

The *Local Energy Agencies* (LEA) provide information and advice on energy efficiency and alternative energy at a local level. The support relates to improved energy efficiency in water,

lighting and effluent services. It also concerns social and private housing, administration buildings, and integration of energy planning into the local planning process.

1.3 Energy efficiency in Public Procurement

Most of the Local Authorities has decentralized purchasing functions that are depending on the various activities. This applies also for Government Departments, where different units within the various departments award orders for products and services. Purchasing is generally centralized within the school sector as well (with exceptions for capital projects).

Four deep interviews were made with various actors connected to public procurement units at public agencies (see Appendix). The interviews, which are presented in chapter 3, show a variety of procedures and routines why it is difficult to distinguish any clear patterns. However, one might conclude that it seems to be a lack of incentives of energy efficient purchasing within county councils. Examples of perceived barriers for energy efficient purchasing are lack of knowledge and budget issues and benefits and incentives for energy efficiency are mentioned as some of the tools needed for energy efficient purchasing.

2. General Information on the Political, Legal, and Economic Framework for Energy-Efficient Public Purchasing

2.1 Administration structure and key purchasers

2.1.1 Local Government

Authorities within the local government sector are:

Local Authorities	Number of authorities
County Councils	29
City Councils	5
Borough Councils	5
Town Councils	75
Regional Assemblies	3
Regional Authorities	8

Most of the councils and corporations have decentralized purchasing functions, depending on the various activities, e.g. roads, sewerage and parks. In certain cases, for example Dublin City Council, major contracts are centralized.

The Regional Assemblies and Regional Authorities are established for the channelling of the EU structural Funds, which they are coordinating. Their procurements are limited and can be referred to office Equipment and stationery.¹

The local governments are responsible for a wide range of services, which are typically broken down in eight categories:

- Housing
- Planning
- Roads
- Water Supply and Sewerage
- Development Incentives and Controls
- Environmental Protection including rivers, lakes, air and noise
- Recreation facilities and amenities
- Agriculture, Education, Health and Welfare

2.1.2 Health Boards

The health sector in Ireland consists of the Department of Health and Children partnership with Health Boards, voluntary hospitals and specialist agencies (e.g. Beaumont Hospital and Dublin Dental Hospital Board).

There are eight health boards responsible for the administration of health services. They award many different contracts on behalf of the hospitals and clinics within their areas. Apart

¹ <http://www.go-source.com/flash/>

from the eight health boards the Hospital Procurement Services Group (HPSG) and the Healthcare Materials Management Board (HMMB) carry out centralized procurements.

HPSG is purchasing in behalf of 17 Voluntary Hospitals. HMMB is responsible for implementing policy and setting performance targets for healthcare procurement and material management. The primary objectives of HMMB are to ensure best practice materials management, compliance with regulations and monitoring of savings and performance targets.

As for the voluntary hospitals, they are no longer operating outside of the health boards.² While voluntary hospitals retain their operational autonomy, they are accountable for the public fund they receive, and their contract award procedures are regulated similarly to those of the health boards.

The procurement the health boards and HPSG is centralized. Key purchasers are the Regional Materials Managers of the health boards and the purchasing managers within the hospitals. Although there is a degree of decentralized purchasing carried out by different hospital departments, purchasing is mainly centralized within the health sector.

2.1.3 Government Departments

Key purchasers for Government Departments are Government Departments Office of Public Works (OPW) and Government Supplies Agency.

Purchasing is generally decentralized in Government Departments. Units within the various departments award orders for products and services.

The Office of Public Works is responsible for the maintenance and refurbishment of all Government Buildings. The Government Supplies Agency awards different contracts (including issues like stationery and furniture) used by the Departments.

2.1.4 Government Agencies

Government Departments have different agencies that are responsible for a variety of purchasing activities. In Ireland, there are over 70 agencies, such as Enterprise Ireland, Office of Public Works and Government Supplies Agency.

Key purchasers are purchasing managers within the agencies, which generally operate centralized procurement or through a dedicated Purchasing Department of the Finance Department.

2.1.5 Education

Ireland holds 3.300 primary schools, 751 Post-Primary Schools, seven Universities, 15 Institutes of Technology and eight Teacher Training Colleges.

The key purchasers are:

- The Department of Education & Science (Primary and Secondary Sections)
- The Boards of Management of the schools and the VEC Management

² Changing with the Health Act of 1999

- The Purchasing Managers in the Universities and the Finance Departments in the institutes

Purchasing is generally decentralized within the school sector. Exceptions are capital projects, which are managed by the Department of Education and Science.

Schools have a direct responsibility for their own procurement of supplies and services. The University sector has nominated Purchasing Managers, though there is a degree of purchasing carried out by the various departments.

In the Institutes of Technology, a key role in coordinating purchasing is played by the Finance Departments of the institutes.

2.2 National Targets for Energy Efficiency and/or Climate Protection in the Public Sector

2.2.1 National Climate Change Strategy

As a part of the EU target of the Kyoto protocol, Ireland has agreed to limit the growth in greenhouse gas emissions by 13% above 1990 levels. Without the action set in out in the National Climate Change Strategy, it is projected that net annual emissions in Ireland would increase by 37.3%. To meet the national target, reduction of emissions of 13.1 million tonnes (Mt) CO₂ equivalent on this projected figure will be required.

The main greenhouse gas is carbon dioxide, which is mainly arising from the burning of fossil fuel in transport, heating and electricity generation. Emissions of other greenhouse gases are proportionately higher than other countries. The emissions from the agriculture sector (the highest of all sectors) were 35% of all greenhouse gas emissions in 1990. The transport sector is forecasted to have the largest increase of emissions (by 180%) by 2010.

The *National Climate Change Strategy*, which was published in October 2000, provides a framework for achieving greenhouse gas emissions reductions. It is based on the fundamental principles of sustainable development, set out in *Sustainable Development: A Strategy for Ireland*, which was published in April 1997.

Examples of key measures in the National Climate Change Strategy are:

- Cross-sectoral market-based instruments, which include taxation and participation in the EU emissions trading scheme and in the international emissions trading
- Measures in the energy sector, including and expansion of renewable energy, supporting measures of ceasing of coal use and switching towards less carbon intensive fuels. An enhanced demand side management programme under the Irish Energy Centre is also included.
- In the built environment and residential sector measures include improved spatial and energy use planning and the revision of Building Regulations to reduce energy use in new housing by up to 20% in 2002, with further reductions in 2005.
- According to the Strategy, adjustment of a New House Grant will require that standards of energy efficiency are met and support for low energy project in all categories of housing.
- Energy rating for pre-1991 building stock will be introduced. As for local authority housing, schemes will address energy efficiency.
- Local Authorities are identified as having a cross-sectoral role, which includes partnership with Local Energy Agencies (see below under 2.6.1).

2.2.2. *Comhar – the National Sustainable Development Partnership*

Comhar – the National Sustainable Development Partnership – was established in early 1999 and its work programme is intended to run throughout 2002. It is the forum for national consultation and dialogue on all issues referring to Ireland’s pursuit of sustainable development. It is supposed to contribute to the development and policy in vital areas, provide forum for structured dialogue on issues of sustainability.

The 25 members of Comhar are drawn from a wide range of representative bodies across Irish economy and society, including people involved in environmental, economic and social interests.

One of the major work areas of Comhar is national policy and instruments. It refers to policy consultation and advice, but also means and instruments to implement policy and to ensure better integration of environmental and sustainability considerations in economic sectors. Examples of issues that may be examined by Comhar are eco-labelling, eco-auditing policies and green procurement.

2.2.3 *Green Paper on Sustainable Energy*

The Department of Public Enterprise presented the Green Paper on Sustainable Energy in 1999. It highlights strategies for improved generation, distribution and end use efficiency of energy. It also discusses a framework for reducing CO₂-emissions

The Kyoto protocol sets a target for Ireland of a reduction GHG gases with 13% between 1990 and 2010. The Green Paper forecasts that, unless radical steps are taken now, GHG emissions will increase twice the allocation. By 2010 GHG emissions will be seven million tonnes of CO₂ equivalent above the Irish limit.

Some of the major features of the Green Paper are:

- A budget of €156 million is allocated to energy-related CO₂-abatment by:

Strengthened Irish Energy Centre	€37 million
Research and Development	€51 million
Renewables/Combined heat and Power (CHP)	€47 million
Energy efficient homes/Public Sector Buildings	€25 million

- Proposal of focused measures targeted at various consumer sectors, designed to enhance energy awareness, expertise and practice. The targeted areas would be appliance purchasing, use of energy in the home, building insulation, heating systems, energy management in industry, the services sector and the public sector.
- Discussion of fuel switching from solid fuel and oil to natural gas and renewable energy sources and power generation.
- The Irish Centre will be strengthened and established as a separate statutory body

2.2.4 *National Development Plan 2000-2006*

The National Development Plan (NDP) includes measures as strengthened activities of the Irish Energy Centre³ and support for Energy Efficient Houses and Public Sector Buildings. It

³ see below under 2.3.1

sets out areas that will assist Ireland in complying the Kyoto obligations as a key priority. The NDP made a provision of approximately €185 million for the promotion of energy efficiency and renewable energy initiatives. The Irish Energy Centre has sub-divided the funding into the following categories:

Strengthening of the Centres activities:	€42.66 million
Built Environment	€ 29.46 million
Research and Development	€ 58.28 million
Renewables and Grid	€ 54.6 million

2.3 Policy Programmes on Energy Efficiency in Public Institutions

2.3.1 Irish Energy Centre

The Irish Energy Center (IEC) is considered as the main instrument of Ireland's energy efficient policy⁴. Together with the energy utilities, the IEC coordinates and implements national objectives and policies relating to energy energy efficiency and renewable energy sources. In the period of 1994-1999, the IEC has promoted a number of EU Energy Programmes.

Examples of tasks of the IEC are to initiate cost-effective programmes to promote energy efficiency, to carry out research relating to consumption of energy and to advise the Government and ministers on appropriate policies and measures to foster environmentally and economically sustainable use of energy

The Green Paper on Sustainable Energy outlined a new and increased role for the Irish Energy Centre in implementing government policy on energy efficiency and renewable energy. The National Climate Change Strategy added an extra dimension to the mandate of the Irish Energy Centre, by giving them a central role in the implementation of the Strategy.

2.3.2 State Buildings Programme

The energy consumption of Government Departments is about €9million a year. The Department of Energy stated in 1991, that savings to up to 20% were achievable in buildings that were directly under control of the Government Departments.

A programme document was drawn up in 1994 – the State Buildings Programme - which outlined the framework for the implementation of actions within public buildings. The programme is continuously supported by the Irish Energy Centre, which organises workshops and offers technical advice. The last ongoing development of the programme is the installation of a comprehensive Building Management System (see below).

The Public Sector Programme has continued the State building programme and developed a series of actions with the Departments of Defense, Science and Education. Public sector buildings have an estimated annual energy bill of €152 million.

⁴ International Energy Agency, Ireland 1999 Review

2.3.3 *Building Energy Management Systems*

The Building Energy Management Systems (BEMS) enables the Office of Public Works (see below under 2.7.2) to centrally monitor energy consumption in a number of public sector buildings. Thanks to a high level of collected data an energy profile can be created, where energy waste can be detected and eliminated. Energy efficient controls include the monitoring of correct operation field items and optimized start/stop of heating systems and lighting controls.

The installation of BEMS is the latest ongoing development of the State Building Programme. When the system is completed it will facilitate rapid collection and analysis of energy data relating to the 150 largest Government Department Buildings. Timely receipt and processing of the data will enable faster intervention in the event of abnormal energy consumption.

2.3.4 *Third level Colleges*

Currently, the annual energy bill for third level colleges is approximately €12.6 million and estimated to increase with considerably spending by the Department of Science and Education, due to new building construction of this sector. A programme of action has firstly targeted the design stage of new third level buildings, aimed at more effective and efficient building designs. Secondly, an introduction of a systematic and coordinated programme on energy efficiency actions to be undertaken in existing third level colleges was initiated.

To assess the area for potential savings, data from 21 colleges along with detailed audits at four colleges were used. The aim was to inform management of potential savings by comparing existing energy use to similar colleges in the UK.⁵

Energy indices are 253KWh/m² for Universities and 228kWh/m² for Institutes of Technology.

2.3.5 *Model Solutions Investment Support Scheme*

The Model Solutions Investment Support Scheme provides selective investment assistance to public sector organisations, which aim to include building energy efficiency technologies or energy saving solutions in new or existing buildings. The investment support underwrites the risk or compensates the additional costs for the energy saving features that are incorporated in public sector buildings.

Examples of solutions that the support will consider are solutions designed to achieve significantly improved building performance in accordance with commonly accepted norms. Support for implementing energy efficiency solutions will be available to up to 50% of the cost.

2.3.6 *Design Study Support Scheme*

Non-commercial public sector bodies will be provided financial support through the Design Study Support Scheme. The purpose of the Support is to enable public sector agencies to procure external professional expertise to examine and report on the technical feasibility of energy efficient design and technology solutions in new buildings and refurbishment projects.

⁵ www.irish-energy.ie

The main purpose of the Design Study Support Scheme is to stimulate public bodies to comprise improved energy efficiency design specification in new building construction and major refurbishment projects.

Ideally studies, which should be completed at the earliest stage of the design consultation process, should provide additional information on aspects on energy efficient design and technologies. The information would lead to an improvement in the buildings performance, which would be over and above that required by present building regulation standards.

2.3.7 Energy Awareness Week

Energy Awareness Week is co-coordinated by the Irish Energy Centre on behalf of the Minister of State. It is an important platform for promoting energy efficiency and associated behavioral change among homeowners and motorists. The Week has also become a platform for Irish businesses that develop, sell and produce energy efficient products.

During the period of the Energy Awareness Week campaign in 2000, consumer investment in specifically targeted energy efficient products increased by 680%. One example shows that unit sales of Compact Fluorescent Lamps increased from an average of 25.000 units to 325.000 units. The overall increase of consumer investment has resulted in an annual reduction in CO₂ emissions of 21.500 tonnes.⁶

2.3.8 Education

The Irish Energy Centre has developed two websites Smart E (for primary schools) and Energy Linked (for secondary schools). The websites (linked to www.irish-energy.ie) are aimed to provide user-friendly resources for teachers to bring energy issues into the classroom.

In Energy Linked, resources to five subject areas have been developed. These are Architectural Technology, Geography, Home Economics, Physics and Science. The web site is continually updated with additional information and materials.

2.3.9 Local authority housing

There exist a number of schemes to assist local authorities to improve substandard housing and upgrade the physical environment in certain older local authority housing estates. The Remedial Works Scheme was introduced in 1985. It enables local authorities to carry out major improvement works of their rented housing stock. 6.500 units have been improved since 1985.

An Estate Improvement Programme has been introduced in 1997, which will assist local authorities in tackling problems of severely rundown urban housing estates and flat complexes. The programme will help to eliminate or modify certain undesirable aspects of the design and layout of the estates and carry out improvements for the living environment of tenants.⁷

⁶ Department of Public Enterprise; Annual Report 2000, p. 34

⁷ Sustainable Development – A Strategy for Ireland, p.155

2.4 Laws and Regulations Governing Product Purchasing and Investments by Public Institutions

2.4.1 General Laws and Regulations

2.4.1.1 Procurement Regulations

Public Sector purchasers have to comply with either the Government or the EU rules when awarding contracts. Rules of advertising contracts, drawing up tender lists, issuing tenders etc have to be followed irrespective of the contracts value.⁸

Most of the public bodies have less formal rules for very small contracts (under £20.000 corresponding to approximately €33 000), where buyers only invite tenders to quote from known sources.

The national references to the EC Public Procurement Directives are:

- The Public Services Contracts Regulations, SI 173 of 1993
- The Public Supply Contracts Regulations, SI 292 of 1994
- The Public Works Contracts Regulations, SI 293 of 1994
- The Public Contracts (Amendments) Regulations, SI 378 of 1998 (Services), SI 379 of 1998 (Supplies), SI 380 of 1980 (Works)

The EC Thresholds, effective from January 2002, are:

Central Government (Government departments Supplies and Services)	€162.293
Local Government	€249.681
Utilities (Supplies and Services)	€499.362
Water, electricity, Urban Transport Ports and Airport Works	€6.242.028
Oil, Gas, Coal, Railway and Telecom Work	€5.000.000

2.4.1.2 The procurement process

In awarding contracts for supplies, works and services there are three different types of procedures known as: “open”, “restricted” and “negotiated”.

The *open procedure* is a routine procedure where any and every supplier who wishes to participate in a tender process is entitled to receive tender documents and to submit a tender. However, they may be invalidated unless they meet the set minimum of financial, economic and technical standards, set by the authority.

In a *restricted procedure*, only suppliers receiving tender invitations from the contracting authority may submit tenders. Selection for tender lists is based on fulfilling the quality standards of financial, economic and technical competence.

In the *negotiated procedure*, participation is limited to suppliers who are invited to negotiate the terms of a contract. This procedure can be used as a standard for non-EU contracts.

⁸ source to section 2.4.1: www.go-source.com

2.4.1.3 *Criteria in Awarding Contracts*

Where open or restricted procedures are used, neither public authorities nor utilities may negotiate the terms of a contract. If a contract award procedure has been initiated, the procedure must be followed up to the contract award stage or the process should be cancelled and a new process initiated.

The criteria for contract award should be stated in advance of a tendering and be included in the advertisement or in the contract document that are supplied to the tenderers. The contract award criteria may be either the *lowest price tender* or the *most economically advantageous tender*. Award criteria should include price, delivery, technical merit, quality and other criteria.

2.4.1.4 *The Government Contract Regulations*

The Department of Finance is responsible for policy-making for the public sector. The Irish Government Procurement Guidelines or “Green Book” promote policy and best practice in public procurement.

According to the Guidelines, competitive tendering is to be used for all procurements within the public sector, unless exceptional circumstances apply. The Green Book does not apply directly to commercial state bodies (e.g. the Electricity Supply Board), though they are required to observe the general principles of the guidelines and corporate governance rules.

2.4.1.5 *The HM Treasury note*

The HM Treasury note entitled “Environmental Issues in Purchasing” states that the value for money test (i.e. least life cycle cost divided by the quality of service provided) should be applied to products selected as a result of competitive tender. This applies whether or not any environmental conditions have been specified.

Tenders should be evaluated with consideration given to the environmental considerations if the environmental strategy affects a specification. If no environmental conditions are specified, purchasers should consider the relevant requirements of the environmental strategy.

2.4.2 *Special Energy Efficiency Recommendations for Public Buildings*

2.4.2.1 *The National Building Regulations*

The National Building Regulations came into force in June 1992. They detail the minimum legal requirements in relation to design and construction of new buildings and reconstruction of existing buildings.

The Building Regulations and the associated Technical Guidance Documents contain advice on how to meet energy conservation requirements. The Requirements were introduced in 1992 and insulation levels are since then estimated to have increased by up to 50%. Overall energy use in new buildings is estimated to have decreased by up to 20%.⁹

⁹ Sustainable Development – A Strategy for Ireland, p. 153

2.4.2.2 *Heat Energy Rating Software*

The Technical Guidance Documents Part L “Conservation of Fuel & Energy” enclosed with the Building Regulations has been revised and now includes guidance on a method of Heat Energy Rating (HER). It is a measure of the energy output for the appliance that provide space and water heating for standardized room temperatures, levels of hot water use and conditions of operation.

2.5 Energy Management in Public Institutions

2.5.1 *Local Energy Agencies*

Local Energy Agencies (LEA) provide information and advice on energy efficiency and alternative energy at a local level – for internal local authority functions as for the wider local community. The Irish Energy Centre supports the work of the agencies with material and technical assistance.

The assistance relates to improved energy efficiency in water, lighting and effluent services. It also concerns social and private housing, administration buildings, and integration of energy planning into the local planning process.¹⁰

The Energy Agencies are linked through the umbrella of the Association of Irish Energy Agencies (AIEA). Some of the represented agencies are the City of Dublin Energy Management Agency, Cork City Energy Agency, Kerry Energy Agency and Galway Energy Agency.¹¹

2.6 Co-operative Purchasing by Public Institutions

2.6.1 *The Irish Government Contracts Committee*

The Irish Government Contracts Committee (GCC) assists the Department of Finance in formulating overall policy on public procurement. The Committee is made up of senior officials in the higher spending Departments¹² and chaired by a Department of Finance representative.

The GCC may, in certain circumstances, also adjudicate on contracts awarded by Central Government Departments. This may be the case when competitive tendering has not been possible or when only one valid tender has been received. It may also happen when it is proposed to award a contract to a tenderer on other criteria than the lowest price.

2.6.2 *Office of Public Works*

The Office of Public Works (OPW) provides the government and the public sector with services in the areas of property, construction and procurement. Some of the issues for which the OPW is responsible are:

¹⁰ National Climate Change Strategy. P. 72

¹¹ Green Paper on Sustainable Energy, Chapter 13. pp 8-9

¹² e.g. Departments of Environment and Local Government, Health and Children, Defence, Education and Science, Office of Public Works

- Providing and maintaining buildings and property used by Government Departments.
- Designing and supervising the construction of new buildings
- The procurement of supplies and services in common use in Government Departments, e.g. office supplies, print, publications, uniforms, vehicles and furniture.

2.6.2.1 *Procurement units*

The OPW has a number of key business units operating individually. One example is the Government Supply Agency, which is involved in procurement of various goods, services and supplies, from office equipment to office furniture and motor vehicles. The annual procurement spend is approximately €45 million.

Other agencies within the OPW system are the Project Management Services, Property Management, Property Maintenance Services, Architectural Services and Engineering Services.

2.7 Key Statistical Data

2.7.1 *General Data*

Population amounts to 3,840,838 persons.

40% of the population resides within 97 km of Dublin.

The use of appliances in all buildings accounts for approximately 40 % of all energy use in Ireland.¹³

Current environment issues are water pollution (especially of lakes) from agricultural runoff.

The average economic growth in 1995-2000 was 9% (9.9% 2000).

Industry accounts for 38% of GDP (about 80% of exports), services 58% and agriculture 4 % (1999).

Industry employs 28 % of the labour force, services 64% and agriculture 8% (2000 estimates).

Of the total employees of 1.671 million persons in 2000, 4.6% were employed in the sector of public administration and defence, 14% in the education and health sector and 5.6% in other services.¹⁴

Electricity consumption 1999 was 18.414 billion kWh.¹⁵

2.7.2 *Public Sector Spend*

The annual spend by the Public Sector in Ireland is (including the utilities) €8.8 billion. The figure does not reflect the planned expenditure of €7.6 billion over the next five years on the National Development Plan (see under 2.2.4).¹⁶

¹³ National Climate Change Strategy, p.46

¹⁴ Department of Finance; Monthly Economic Bulletin, February 2002

¹⁵Data (excluding note 13) from Statistical Survey, CIA, The world factbook – Ireland

The annual spend of each sector is:

Sector	Spend (million)
Central Government	€3.100
Health Sector	€1.900
Education Sector	€761
Office of Public Works (including Government Supplies Agency)	€63
State Agencies	€444
Utilities	€2.500
Total	€8.768

2.7.3 Trends in energy use

Ireland will significantly exceed its Kyoto limit by 2010 on a business as usual basis. Energy related CO₂ emissions account for most growth and the gap between the Kyoto threshold and forecast growth amounts to 7 million tonnes. All energy-consuming sectors are showing dramatic energy related CO₂ growth, the tertiary sector¹⁷ and transport sectors being the most significant contributors. Non-energy related greenhouse gases are remaining relatively constant.¹⁸

The Total Primary Energy Requirement (TPER) represents a measure of all energy consumption in Ireland. Between 1980 and 1998 TPER grew by 58 % and is projected to grow a further 37 % by 2010.¹⁹

The tertiary sector has seen a substantial growth in energy demand consuming 124 % more energy in 1998 than in 1980. The energy demand of this sector is projected to grow a further 60 % by 2010.

Industry is the only sector, which shows a decrease in energy consumption during one period. The sector was consuming 20% less final energy in 1988 than in 1980. An increasing trend began again in 1993.

¹⁶ www.go-source.com

¹⁷ Tertiary sector consists of the public and private service sectors. It ranges from Government bodies to local authorities, hospitals to health centres and supermarkets to corner shops (Green Paper on Sustainable Energy, Glossary)

¹⁸ Green Paper on Sustainable Energy, Chapter 14, p. 3

¹⁹ Green Paper on Sustainable Energy, chapter 2, p. 2

3. Results from the interviews

3.1 Interviewed Partners and Institutions

Three telephone interviews and one written interview was made with the following institutions and partners.

Authority	Interviewed partner
<i>Local Government</i>	
Dublin City Council	Written interview with the procurement manager
Galway County Council	Environmental awareness officer at the procurement unit
Kerry County Council	Energy Manager
<i>Government Departments</i>	
Department of Education and Science	Building Service Engineer

3.2 General Information on Purchasing and Energy

3.2.1 Budget/decision responsibility and LCC criteria

At *Dublin City Council* the Department Budget Holders are responsible for buying products and making building investments and the Finance Department for buying energy. There is no known cost-effectiveness criteria applied for investments and product purchases.

At *Galway County Council*, the IT-officer has budget responsibility for IT goods (white goods are not involved in purchasing) and a housing engineer is responsible for O&M purchasing and replacing of components. Swimming halls are out leased and different area engineers within the county are responsible for buying energy. There are no known cost-effectiveness criteria for investments and product purchases.

At *Kerry County Council*, the individual departments make decisions of purchasing of products, building investments and O&M (for which each department report on the savings over time). As for energy purchasing the energy manager looks for alternative energy sources, which he recommends if they are cheaper (the price being the main issue). However, permission for alternative energy purchasing is required from the senior officer. Cost-effectiveness criteria (LCC) are applied all the time. Long time costs are depreciated over 10 years and sometimes longer in public buildings.

As for *the Department of Education and Science* the schools have budget/decision responsibility for buying products, energy, O&M and components. The Department of Education and Science make building investments and large investments (with the help of consultants).

3.2.2 *Accounting and financing*

At *Dublin City Council* departments within the organisation are charged for the energy used and saved costs are transferable to the next budget year. Energy costs that are saved through energy efficiency are referred to credit balance for the following year. A central administration has responsibility for split and fixed budgets of investments and running costs. Investments cannot be depreciated over a number of years and no internal or external credits are available for major investments in energy efficiency.

At *Galway County Council* energy costs can be distinguished from other costs but saved costs are not transferable to the next budget year. Saved costs are absorbed by the overall budget, and budgets are split centrally between investments and running costs. There are two funding sources: locally and governmental. The use of government funding is centralized while as for local funding, the split between permanent and operational costs are determined locally. Investments are fixed within one year's budget and no credits are available for investments in energy efficiency.

At *Kerry County Council* energy costs are referred to separate budgets but saved costs are not transferable to the next budget year. An energy manager function started two years ago and the council will in the near future get system where energy costs are referred to separate budgets. Saved energy costs will then be allocated in the future budgets. Investments can be depreciated over a number of years and credits are available from the Irish Energy Centre (for local authority buildings).

As for the *Department of Education and Science* some national schools are charged for the energy use and they generally procure energy locally. Saved costs are transferable to the next budget year for schools but not for the Department of Education and Science. Costs that are saved through energy efficiency are used on other items and budgets of departments are split by a central administration. The Department of Education and Science does not necessarily get the savings from schools back. Investments are fixed within one year's budget and limited credits are available from the annual budget (not a specific budget).

3.2.3 *Legal Framework and Motivation for Energy-Efficient Purchasing*

At the *Dublin City Council* no legal barriers for energy efficiency are mentioned and there are no incentives to do energy efficient investment/purchasing within the organisation. Neither *Kerry County Council* nor *Galway County Council* see legal impediments for energy efficient purchasing or has incentives for energy savings. The *Department of Education and Science* mentions pilot cases with energy monitoring work, rainwater recovery, ground heating and wind turbine of schools as incentives for energy efficient investments.

3.3 **Energy Management in Public Buildings**

3.3.1 *Responsibilities, Targets, Barriers*

At *Dublin City Council* the Finance Department is responsible for buying energy and Dublin City Council's Development Department is responsible for making investments in buildings. The Electrical Services Division has the responsibility for replacing components. Energy efficiency is a target set by Central Government. Barriers for energy efficient building management are financial, estimates of energy costs, perceived extra costs of energy efficiency, split incentives and conflicts of interests between units.

At *Galway County Council* energy engineer is in charge of appliances and specific buildings and a management team is responsible for building investments. A house engineer is responsible for O&M and components and an area manager manages the operational equipment. Energy efficiency is a target of its own and the main barrier for energy efficient building management is lack of knowledge – people are not aware of the benefits with energy efficiency.

At *Kerry County Council* the energy officer is responsible for buying energy and the individual departments are responsible for O&M, investments and replacement. For high amount investments permission is required from a higher level. Energy efficiency is a target through the national policy of the Irish Energy Centre. A barrier for energy efficient building management is lack of knowledge and energy efficiency is often perceived as additional costs with no benefits.

At the *Department of Education and Science* there is no central purchasing (schools are responsible, see above). Energy efficiency is seen as a target of its own and barriers for energy efficiency are partly financial. There is also a lack of knowledge for end users. Teachers cannot always manage complicated computer systems, why simpler systems would cause less operational problems. There is a need for trained persons.

3.3.2 *Elements of Energy and Investment Management*

At *Dublin City Council* there is no known energy management unit or support for energy efficient building management by any national or regional institution. *Galway County Council* mentions Galway Energy Agency, which provides a part of the funding. National or regional programmes provide support only for private householders and industrial buildings.

At *Kerry County Council* there is an energy management unit within the organisation, which realizes benchmarking, energy monitoring, energy audits, training and information etc. for other units. As for support by national programmes, the Irish Energy Centre support 50% of the additional costs for energy efficiency equipment. Consultants are employed to carry out building investments and energy efficiency is implemented in the evaluation.

At the *Department of Education and Science* there is no energy management unit, but the organisation is involved with the schemes of the Irish Energy Centre, which is seen as a superb organisation. There is no cooperative purchasing for building equipment or any general internal standards or energy performance contracting.

3.4 **Barriers and needs for energy efficiency**

In order to promote energy efficient purchasing and building management *Galway County Council* would need more knowledge and emphasis from central government. At the moment there is no benefit to energy efficiency and no incentives. Product information is also useful and case studies (if applicable to yourself).

Kerry County Council would need more information on case studies – what savings have been achieved – for energy efficient purchasing and building management. Awareness and knowledge are key factors Product information and case studies would be of help as information on energy from other countries (for example; what does Swedish purchasers pay for heat pumps?).

Barriers for energy efficiency at the *Department of Education and Science* are budget issues (the problem of not being able to carry costs forward over years).

4. Public internal performance contracting (PICO)

PICO is generally not known in Ireland although other forms of third party financing exist. At the *Dublin City Council* there is technical and economic expertise for investments projects and possibilities of the creation of revolving funds. The same applies for *Galway County Council*. The *Department of Education and Science* would be interested to learn more about the PICO instrument and to participate in a pilot project.

5. Success Stories and Good Examples of Energy Efficiency in Public Institutions

5.1 Department of Defense

The Department of Defense is implementing a programme of activities that aim to increase the level of energy efficiency throughout the Army and Naval building stock. A central part of this programme will be the establishment of one Army Naval barracks as a demonstration site and the training of six army engineers in energy systems, including auditing techniques and boiler operation.

Investment in simpler technologies such as basic time controls, installation of pre-insulated hot water cylinders and attic insulation in older barracks has been initiated. A complete review of boiler control systems including optimizers and weather compensators is planned.

5.2 BEMS at the University College Dublin

University College Dublin (UCD) is the largest third level institution in Ireland with 13,700 full time students, 2,100 part time students and 6,000 attending courses at night. The total building floor area is 200 000 square meters (excluding student residence) and a total annual energy bill of £1.4 million.

UCD has during the past 12 years been involved in the development of the Building Energy Management System. The system has achieved energy cost savings of £350,000 per year and has reduced the College's overall energy bill from almost 5 % of total expenditure in 1983 to 1.7% in 1995.

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Appendix

Interviewed partners and institutions

Local Government

Dublin City Council	Written interview with the procurement manager
Galway County Council	Environmental awareness officer at the procurement unit
Kerry County Council	Energy Manager

Government Departments

Department of Education and Science	Building Service Engineer
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