

Sustainable Energy Action Plans

Dublin Seminar 19th October 2006



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Cover picture: Dublin under Rapid Development, Dick Gleeson



Agenda

Date:	19 th October 2006, 10:00am - 1:00pm
Location:	Training Room, Block 3, Floor 1, Civic Offices, Dublin
Chairperson:	Dr. Gerry Wardell Director CODEMA
Speakers:	Raphael Kelly Department of Communications, Marine and Natural Resources Dick Gleeson Dublin City Planner Poul Weiss COWI, Denmark Åke Iverfeldt IVL Swedish Environmental Research Institute, Sweden Jon Andersson Energy Agency Skåne, Sweden Pernille Kernel City of Hillerød, Denmark Joe Hayden CODEMA, Ireland
Contact:	Joe Hayden CODEMA joehayden@codema.ie www.codema.ie
Report:	Sabine Kranzl CODEMA



Overview

The Dublin Seminar on Sustainable Energy Action Plans was the first step in the development of an Action Plan on Energy for Dublin. Experts, stakeholders and decisions makers from Dublin and partners from Denmark, Sweden and Estonia attended the Seminar.

Gerry Wardell, the director of CODEMA, introduced CODEMA as the City of Dublin Energy Management Agency founded in 1997 as a limited company, on the initiative of Dublin City Council.

CODEMA's aim is to contribute to the economic, social and environmental sustainability of Dublin. The professional team has expertise in the fields of energy efficiency and renewable energy and is now developing the Action Plan on Energy for Dublin. As a first step, CODEMA organized and moderated the Dublin Seminar on Sustainable Energy Action Plans, which is the subject of this report.

Raphael Kelly, Head of Energy Efficiency Unit in the Department of Communications, Marine and Natural Resources, pointed out the priorities of the Irish energy policy. Dick Gleeson, Dublin City Planner, presented ongoing sustainable urban developments in Dublin and Poul Weiss, an expert on district heating, explained the current installation of a district heating network in Poolbeg and the Docklands.

Finally partners of CODEMA from Sweden and Denmark gave an overview of sustainable construction in general and action plans on energy for two Scandinavian cities.



Fig.2: Experts, stakeholders and decisions makers from Dublin and partners from Denmark, Sweden and Estonia attended the Seminar.

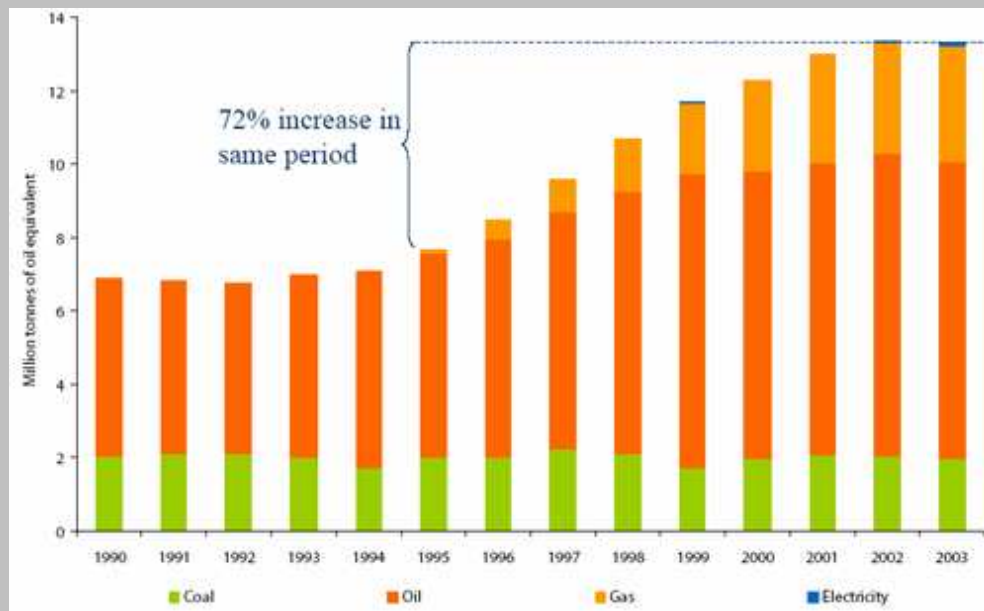


Fig. 3: Increase of the Energy imported between 1990 and 2003, DCMNR

Irish Context

Irish Energy Policy

Raphael Kelly, Head of Energy Efficiency Unit, Department of Communications, Marine and Natural Resources

Raphael Kelly presented the energy situation, the energy policy and current developments in Ireland.

The annual energy consumption in Ireland is 14 Mtoe in the value of 8 billion euros and emits 42 MT of CO₂-emissions. Fossil fuels (oil, gas, coal) have a share of nearly 90%. The energy policy is driven by international and national developments. The European Union's policy and its targets regarding renewable energy, energy efficiency and biofuels are as relevant for Ireland as the Kyoto agreement. The EU directive on the Energy Performance of Buildings is of great importance as well. It aims to improve the energy efficiency of buildings. The directive has already been implemented into Irish law and the regulations come into force between 2007 and 2009.

Over the last decades Ireland has set up a number of national strategies in order to face the upcoming challenges and new bodies such as the Environmental Protection Agency (EPA), local energy agencies (AIEA), the Commission for Energy Regulation (CER) and Sustainable Energy Ireland (SEI) have been created.

The establishment of an all-island electricity market and the Green Paper "Towards a Sustainable Energy Future for Ireland" are current and significant developments. The energy policy is primarily focusing on security of supply, environmental sustainability and economic competitiveness.

One of the actions is the ongoing energy efficiency campaign "Power of One" that is promoting energy efficiency to the public. (<http://www.powerofone.it>)

Sustainable City Development in Dublin

Dick Gleeson, Dublin City Planner

Dick Gleeson explained how sustainable development can be realised and gave many examples of sustainable urban developments in Dublin.

Sustainable development takes economic, social, cultural, environmental and urban issues into consideration and there are many criteria for a “good city” such as good neighbourhood, good economy, public transport, good education and health system, environmental responsibility, etc.

In Dublin there are a number of significant developments such as the connection of the northern and southern city centre, Temple Bar, International Financial Services Centre IFSC, O’Connell Street and the LUAS. Furthermore, there is a framework programme for Heuston train station planning to connect the train station to the cultural institutions in the surrounding area and thus to integrate the new

development into old structures and public space. A vision has been formulated for the city centre retail core with the target to enhance and strengthen Dublin city centre as the premier shopping destination in the region and the state, to connect both centres and to create walking routes off from the popular main roads in both centres. Other projects are being designed for the industrial area Poolbeg peninsula in Ringsend and for the North Fringe.

There are framework plans for areas such as Heuston Gateway, Grangegorman and Poolbeg that can interface with the Action Plan on Energy in Dublin. Furthermore, the Action Plan on Energy will provide a framework for development issues such as water heating, space heating, construction materials, waste, bio diversity and movement.

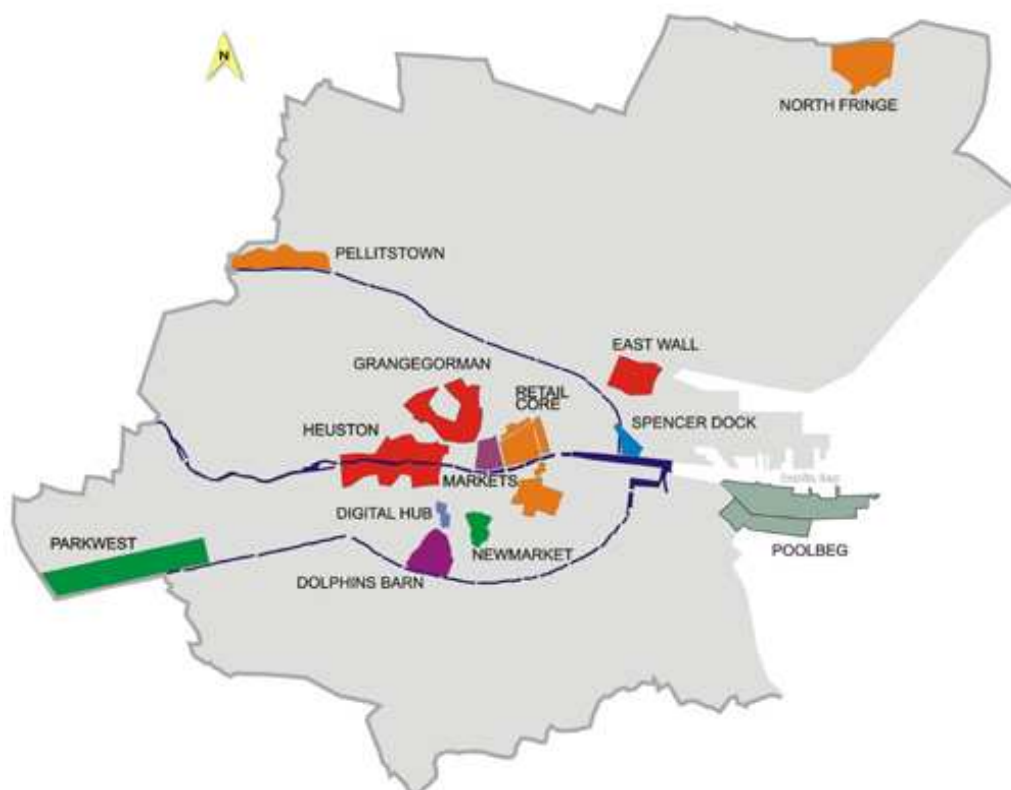


Fig. 4: Framework Plan Areas in Dublin, Dick Gleeson

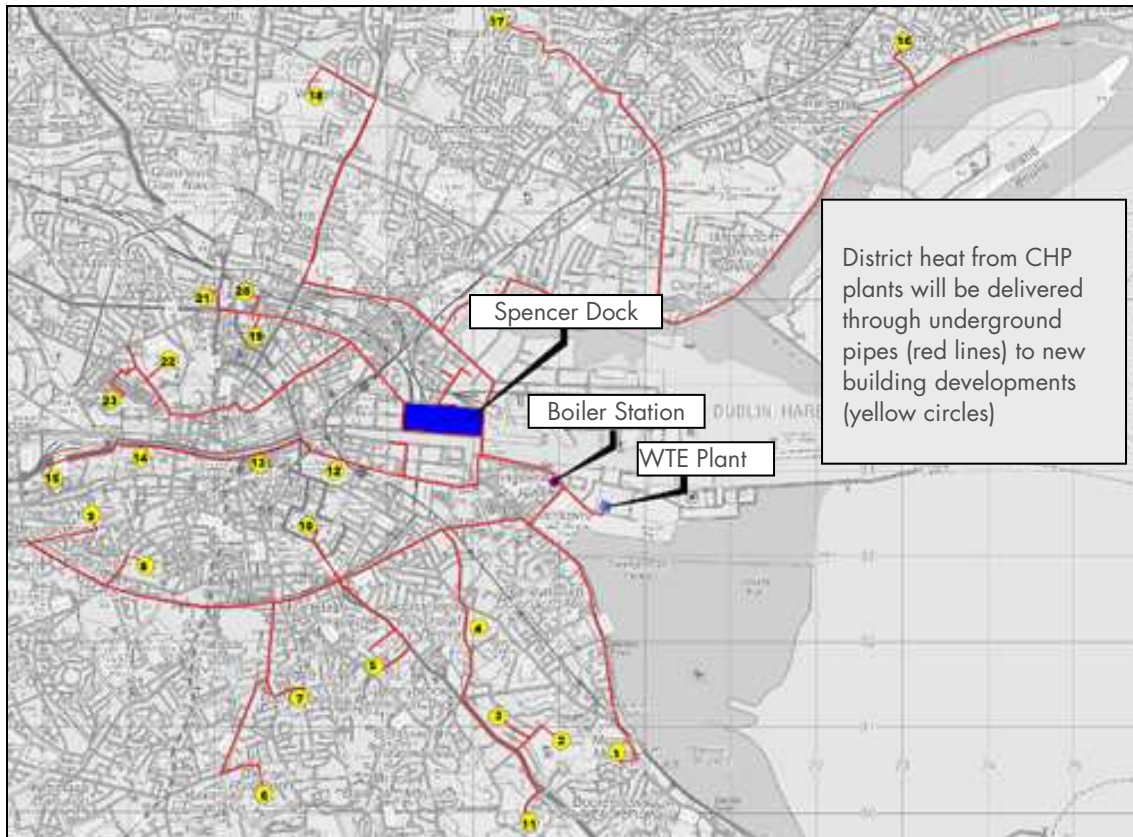


Fig. 5: Development of the District Heating Network, COWI/RPS Consultants

Dublin District Heating Project

Poul Weiss, COWI, Denmark

RPS Consulting Engineers and COWI an international consultancy company within engineering, environmental science and economics have been assisting Dublin City Council with the development of district heating in Dublin since 2001. The district heating plan presents a main part of the Action Plan on Energy for Dublin.

The advantages of a district heating system are

- high efficiency
- simplicity of the system
- flexibility regarding the energy source.

In the first phase the district heating system will supply the area at Spencer Dock and during the first two years gas-fired boilers will supply the heat. Later the planned waste to energy (WTE) facility at Poolbeg will provide the base load.

The plant will be a combined heat and power (CHP) plant which means that heat and power are generated simultaneously. CHP plants allow a more efficient energy use than conventional plants reaching an efficiency of 70-90% compared with 50% for the best conventional plants.

Preliminary and detailed feasibility studies have been completed, technical principles have been defined and the connections to the first house are being prepared at Spencer Dock. The Liffey service tunnel will be used for the crossing of the river.

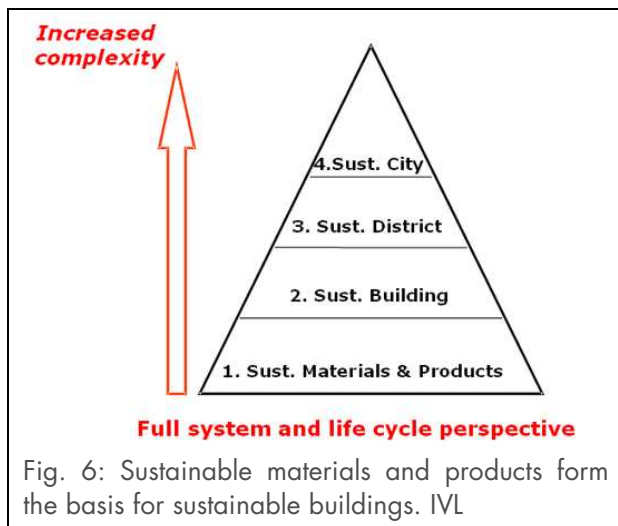
The pipe network and the heat exchanger installation in large commercial buildings as well as domestic installations are being implemented with proven technology based on the experience and knowledge of the experts at COWI.

European Context

Sustainable Construction

Åke Iverfeldt, IVL Swedish Environmental Research Institute, Sweden

Åke Iverfeldt presented the Swedish Environmental Research Institute IVL as an organisation that was founded on the initiative of the Swedish government and Swedish business. IVL develops concepts supporting the development of a sustainable society. Åke Iverfeldt gave an overview of international developments regarding energy and sustainability and the approach developed by IVL.

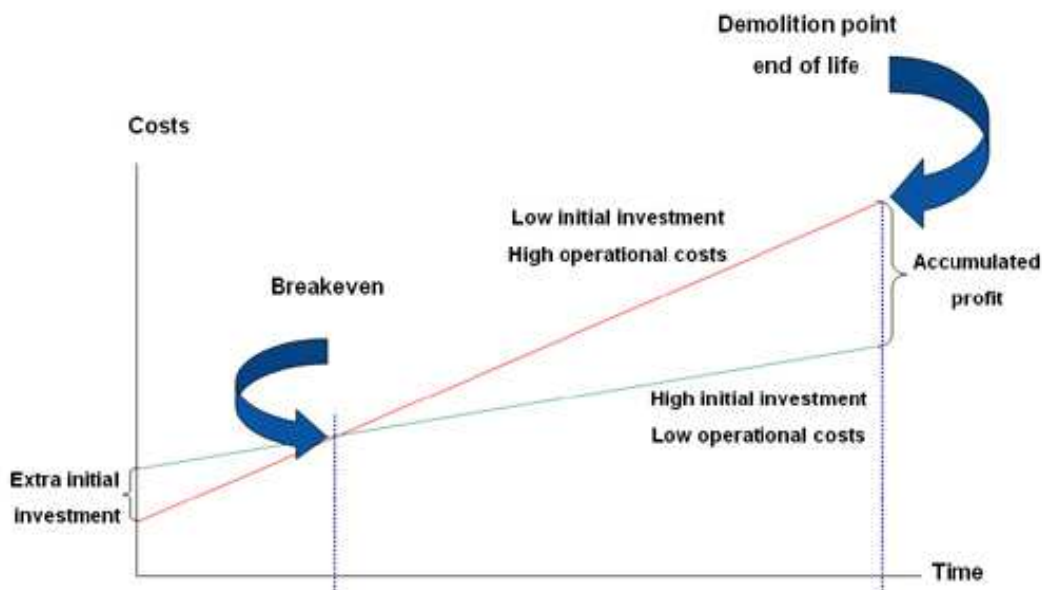


In Europe 80% of the population lives in cities and the building sector consumes 42% of the total energy use. The building stock contains a 20% saving potential of the total energy use as stated by the European Commission in the paper "Towards a European strategy for the security of energy supply" (2000).

Energy efficiency and renewable energy are two of the criteria for the development of a sustainable city. But a sustainable city can only be realised if buildings are constructed with sustainable materials and products and if the whole life-cycle is taken into account. To consider the life-cycle of a building means that the costs and environmental effects of the building over its whole life time (planning, construction, operation, demolition) are assessed.

Planning a city in a sustainable manner requires that its buildings, streets and squares are designed with regard to sun and wind and that renewable energy sources and appropriate technology are used.

IVL coordinates a national program for demonstration of energy efficient buildings and it is estimated that there will be more than 700 dwellings of passive house standard all over Sweden by 2008.



Action Plan on Energy for Dublin

Joe Hayden, CODEMA

Dublin is facing rapid development and new challenges have to be met. As a response the Action Plan on Energy for Dublin is being developed by Dublin City Council in association with CODEMA. It aims to contribute to Dublin's economy, help to eradicate fuel poverty and reduce the city's contribution to climate change.

The Action Plan on Energy for Dublin will include a review of fiscal incentives and control instruments as well as a review of current energy use in Dublin. Furthermore, the possibilities for more sustainable energy use and a greater proportion of renewable energy in Dublin will be investigated.

Relevant experts, stakeholders and decision makers are welcome to participate and their input is considered as being of great value. The development of this Action Plan is supported by the European Commission within the programme "Intelligent Energy Europe"

Closing

The chairperson Gerry Wardell thanked the speakers for their presentations, Dublin City Council for facilitating the seminar and all participants for their valuable contribution and closed the seminar at 1pm.

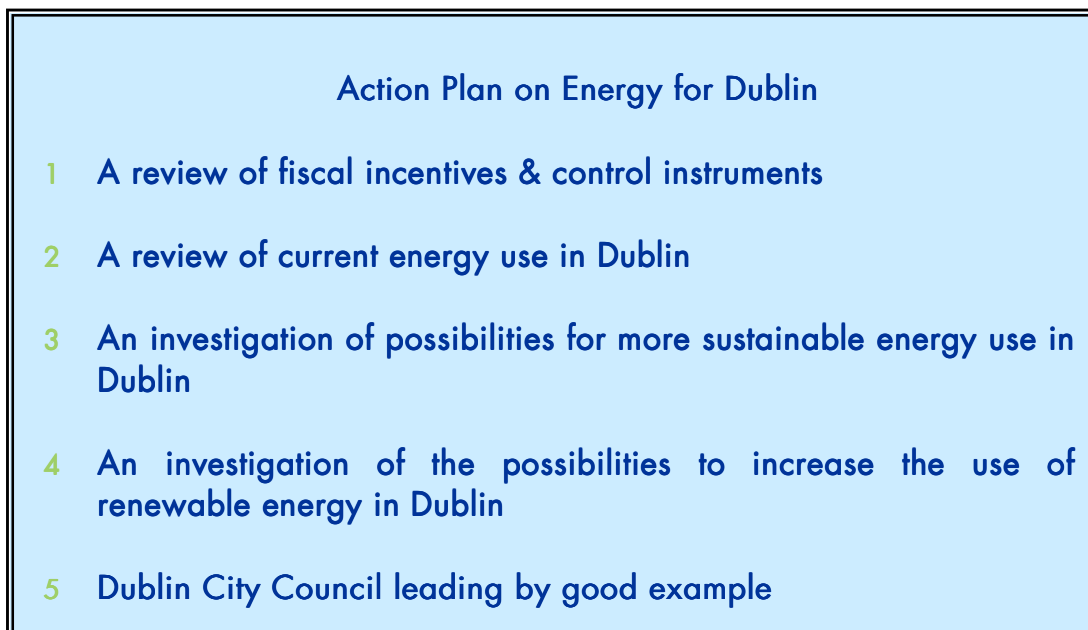


Fig. 10: Proposed Chapter Headings for Dublin's Action Plan on Energy

Attendees:

	Name	Organisation
Chairperson:	Gerry Wardell	CODEMA
Speakers:		
1	Raphael Kelly	DCMNR
2	Dick Gleeson	DCC
3	Poul Weiss	COWI
4	Åke Iverfeldt	IVL Sweden
5	Jon Andersson	Energyagency Skåne, Sweden
6	Pernille Kernel	Hillerod Municipality
7	Joe Hayden	CODEMA
CODEMA:		
1	Edel Giltenane	CODEMA
2	Emma Heskin	CODEMA
3	Sabine Kranzl	CODEMA
Attendees:		
1	Anne Lillis	RPA Railway Procurement Agency
2	Carol Finlay	Dublin City Development Board
3	Charles Roarty	Energy Action
4	Ciarán Butler	RPS Consulting Engineers
5	Davie Philip	Cultivate
6	Desmond Fahey	Chamber of commerce
7	Elaine Heffernan	Dublin Docklands
8	Emer O'Siochru	FEASTA
9	Eoin Kenny	Eoin Kenny Associates
10	Ivana Kildsgaard	IVL Sweden
11	Jeanette Andersson	IVL Sweden
12	Jens Lunding	Hillerod Municipality
13	Johanna Ekne	City of Malmö, Sweden
14	John Harrington	Real Eyes
15	John Henry	Dublin Transportation Office
16	John Walsh	RPS Consulting Engineers
17	Kathy Quinn	DCC
18	Madis Korvits	City of Tallinn, Estonia
19	Margaret Coyle	DCC
20	Mark Holohan	Bord Gáis
21	Michael Philips	DCC
22	Mickael Donelly	Second Hand
23	Olivier Gaillot	RPS Consulting Engineers
24	Peder Vejsig Pedersen	Cenergia, Denmark
25	Per-Arne Nilsson	City of Malmö, Sweden
26	Peter Foldbjerg	Cenergia, Denmark
27	Raymond O'Sullivan	Dublin Institute of Technology
28	Roland Zinkernagel	City of Malmö, Sweden
29	Sarah Neary	DOEHLG
30	Tara Haughian	Second Nature
31	Teresa Lavin	Institute of Public Health
32	Tor Fossum	City of Malmö, Sweden



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