



Energy Policy

Dundalk Institute of Technology

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Part A – Energy Policy

Declaration of Commitment

As part of its environmental strategy, the Institute is committed to responsible energy management and will practice energy efficiency throughout all its premises, plant and equipment, wherever it is cost-effective to do so and when there are adequate human and financial resources available. This statement is also reflected in the Institute's Environmental Policy.

The Senior Management Commitment forms Appendix G

Policy

The Policy of the Institute is to control energy consumption in order to:

- avoid unnecessary expenditure;
- protect the environment, and;
- prolong the useful life of fossil fuels.

Objectives

The Institute's long term objectives are to:

- buy fuels at the most economic cost;
- burn and use fossil fuels as efficiently as practicable enabling future generations more time to research alternative energy sources;
- reduce the amount of pollution, particularly CO₂ emissions, caused by its energy consumption;
- reduce, wherever possible, our dependence on fossil fuels through the use of ambient and renewable energy;
- reduce the loss of energy from its buildings to the minimum practical level.

Accountability

- Development Office to encourage Executive Board to make available sufficient funds to meet the requirements of the Energy Policy;
- The Estates Office to ensure:
 - that information and advice is available on all aspects of energy management;
 - that all energy supplies demonstrate good value for money;
 - that energy awareness is encouraged in all staff and students;
 - that all aspects of energy waste are investigated and rectified if avoidable;
- Staff and students to be made aware of the cost of energy directly under their control to encourage good housekeeping practice.

See [Appendix A](#) for good housekeeping practice.

Review Procedures

- The Energy Policy is due for review every three years.

Part B – Energy Management

Overview

Energy management at DkIT is coordinated by the Estates Office of Dundalk Institute of Technology. The main duties are to follow the responsibilities that are set out in the DkIT Energy Policy and to fulfil the requirements of legal obligations and regulations that concern energy and the use thereof.

DkIT uses energy for space heating, lighting, motive power, transport, facilities, IT services, and various other activities associated with education.

As part of the Energy Policy a commitment has been made by senior management to engage in meaningful energy management. The Estates Office is carrying out the required duties in all aspects relating to energy management.

The Estates Office will liaise with other departments to establish and encourage the use of energy management in their operations.

DkIT made a decision to utilise the SEAI developed “Energy Map” process as a tool for energy management. This tool and all associated documents are recognised as a useful standard, allow a comparison and evaluation of the effectivity of the energy management at DkIT.

Resources

The resources for energy management require mainly an allocation of time by existing staff to deliver and administer the requirements that are set out in the Energy Policy. In addition it might require financial means to deliver projects that might benefit DkIT in terms of energy consumption or replacement of fossil fuel with renewable energy sources.

The allocation of time is as follows:

Role	Position	Time	Duties
Senior Management	President	3hrs/year	Commit to Energy Policy and Review Energy Performance
Energy Champion	Vice President of Strategic Planning, Communications and Development	12hrs/year	Allocate Resources to Energy Management, Review Energy Performance
Energy Manager	Assistant Buildings Officer	4hrs/week	Drive Energy Management, Collect Data, Analyse Data, Issue Reports
Environmental/Green Committee	4-5 Members of Staff	2hrs/month	Input and Communication to and from Staff and Students

The annual review of Energy Management and evaluation of effectiveness is carried out by the Estates Manager with the help of the Energy Manager.

Output

The main reason for the energy management at DkIT is stated in the Energy Policy. As a result the following Documents are produced:

Document	Content
Annual Energy Report	Outlines the use/production of energy at DkIT. The report forms part of the management report
Display Energy Certificates, DEC	Requirement arising out of EU regulation. It reports on energy consumption of specific buildings on campus.
SEAI M&R Scorecard	Evaluation of energy performance of DkIT in comparison to other public bodies.
List Of Savings Opportunities	A list of items/works that will return maximum energy savings for DkIT.
Diagnosis of Energy Management	A report about the effectiveness of energy management at DkIT
Data Sheets	Collected data about energy consumption, production and environmental impact of DkIT

Part C – Building Parameters

General

Buildings are serviced during normal operating hours from 8.45am to 6.00pm, Monday to Friday.

All buildings, hot water supplies and lighting are fully operational in this period.

Outside these core hours services are available on request for evening classes and events.

The Institute will not heat or cool individual rooms within the main academic buildings, outside the stated academic day. See also [Appendix E](#)

The heating Season, from 1st October to 1st May inclusive, may be extended during May and September if there are periods of 3 consecutive days, or more, where the outside day time temperature does not rise above 15°C. However if internal temperatures are below the legal minimum, we will endeavour to provide supplementary heating.

Classroom and Lecture hall ventilation is switched to a reduced schedule when Students are away.

All Services will be switched off when the institute is closed such as Public Holidays.

Winter Conditions

The Institute endeavors to maintain a comfort level temperature of between 18°C and 21°C throughout all areas. The minimum temperature requirement as set by the Health and Safety at Work Act is 16°C.

Past experience in running the buildings has revealed quite large variations in temperature due to the structured form of the buildings, that is, extensive glazing and concrete framing. People should bear this in mind when evaluating their feeling of comfort if moving around the Institute. See [Appendix B](#) for definition of comfort levels which depend on many variable conditions. Some of these the Institute has no control over.

Note: - Electric Heaters, other than those issued by the Estates Office are prohibited for use throughout ALL Institute Properties. See [Appendix D](#) for details.

Please refer to the "Guide to the Safety, Health & Welfare at work (General Applications) Regulations 2007 Section 7: Room Temperature" attached [Appendix B](#).

Summer Conditions

Except where a process requires controlled conditions, DkIT has a **Non Air Conditioning Policy**.

Please refer to the "Guide to the Safety, Health & Welfare at work (General Applications) Regulations 2007 Section 7: Room Temperature" attached Appendix B.

See [Appendix C](#) for arrangements relating to the cost of installation, maintenance and running of air conditioning plant.

Appendix A

Good Housekeeping Practice

Small savings you can make, individually, add up collectively to large savings in energy. Remember there are over 5,000 people here and approximately 10% of energy could be saved by thoughtful use of facilities. This does not mean you have to sit in cold dark offices or accommodation. When energy is needed, use it, however when not required turn it off or reduce to low level.

The following suggestions are ways to achieve this ideal:

- Try to plan your day if using a computer. Don't leave the computer on all day when the system is perhaps only used for an hour. This is 'avoidable waste';
- Lighting is another area overlooked and needs attention. Try and use natural day light whenever possible;
- Doors and windows, during the heating season, come into the above category;
- Turn off the radiators when leaving your room for any prolonged time;
- Water too is an energy source:
 - energy is required to process and distribute to taps;
 - hot water requires heating;
- Use water wisely;
- Notification should be given to the Estates Office when arranged events or outside hour classes are cancelled so that services can be switched off.

Everyone can help. Example: Turning off day-lit stairs and corridor lights in full sunshine.

Appendix B

Thermal Comfort Conditions

The technical definition can be difficult to understand so we will try to describe it in 'lay person language' with examples.

In most areas of the Institute we only control one internal climatic condition, namely air temperature in winter. There are many other factors which go to make up the sensation of thermal comfort or in our case a person's feeling of warmth as follows:

- air temperature;
- radiant temperature due to the temperature of surrounding surfaces;
- air movement;
- humidity;
- together with personal factors such as clothing and activity.

Many attempts have been made to devise indices which combine the above variables. Dry bulb air temperature (we use this) has long been used as a convenient measure of warmth, but it can sometimes be misleading. Of the many indices around the most commonly encountered are equivalent temperature, effective temperature, globe temperature and resultant temperature.

Four measurements are required to evaluate the thermal environment:

- Air temperature (which we control in winter);
- Mean radiant temperature (not directly controlled), but is present from working radiators, sunshine, lights, machines, surface temperature etc.;
- Wet bulb temperature (to determine humidity not directly controlled);
- Air speed (only controlled where ventilation equipment in use).

From the above it will be apparent the Estates Office will have great difficulty in satisfying everyone's needs as we only effectively control one input.

From various research by Learned Societies a comfort scale has been devised to indicate a measure of perceived feeling of warmth:-

Hot ↔ Warm ↔ Slightly Warm ↔ Neutral ↔ Slightly Cool ↔ Cool ↔ Cold
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This scale is used in a voting system analysis to determine a neutral temperature at which the majority of people feel neither too warm nor too cold.

For sedentary occupations the majority of people will be satisfied in rooms where the resultant temperature is between 18°C and 23°C when the air speed is 0.1 metre/second (i.e. normally still air).

Staff can obtain a temperature monitor, from the Estates Office. Submit a maintenance request via the Estates Web page.

Appendix C

Comfort Cooling (Air Conditioning)

In general this Institution will not install air conditioning. The supply of fresh air for oxygen replenishment, dissipation of body odours and high temperature limitation will be accomplished by natural ventilation. This will result in high summer time temperatures on approximately 23 working days per year in some rooms.

Deviations to the above principle will occur in the following circumstances:

Ventilation

Mechanical ventilation has been provided to fulfill the following criteria:

- to provide sufficient air for oxygen replenishment and dissipation of body odours where this cannot be accomplished by natural ventilation;
- to remove stale, hot or noxious fumes from toilets, cooking canopies, fume cupboards or the like.

Air Conditioning

Full space temperature controls and possibly humidity control has been provided to fulfill the following criteria:

- Where the combined effects of the heat input from people, lights and machinery cause the room temperatures to rise more than 5°C above the ambient temperature;
- Where processes are wholly dependent upon close temperature control;
- Subject to the Estates Office approval and where Department or Sections are prepared to pay the cost of installing, maintaining and the electrical consumption over the whole life of the system.

Portable Comfort Cooling Units (Portable AC units)

The advice regarding the air conditioning policy also extends to portable units, unless sanctioned by the Estates Office.

Please refer to the "Guide to the Safety, Health & Welfare at work (General Applications) Regulations 2007 Section 7: Room Temperature" attached Appendix B.

Appendix D

Electric Heaters

The Institute does not support the acquisition or use of supplementary heaters, of what ever energy source. Such items can only be provided by the Estates Office in the event of an emergency or mechanical failure of the heating system or as agreed following approved requests from the Estates Office.

Note: Your Health and Safety - Unauthorised electrical items used on campus, increases the risk to you and fellow members of the Institute community. As unauthorised heaters cannot be safety checked by us and unnecessarily overload electrical circuits, it is imperative all heaters are issued only by the Estates Office.

The Institute has a duty under the Electricity at Work Regulation to ensure all electrical appliances and circuits are safe to use. This is achieved by regular planned maintenance and testing of all recorded equipment and systems. The Institute cannot be responsible for the checking of electrical equipment which is the personal property of staff and students.

Did you know? Electrical energy creates most CO₂

The generation and consumption of electrical energy is the worst culprit for emission of CO₂ to the atmosphere.

Electric heating is used reluctantly throughout the Institute.

Appendix E

Advice regarding building planning, extension of the teaching day and evening room use

Heating energy demand is caused to rise as a consequence of keeping seminar/study rooms heated later in the day which are located around large buildings.

Energy saving could be made by reviewing this situation through consultation and subsequent alterations to some heating pipe work where economic to do so. Security access would also require assessment.

Energy use should also be considered when making the following decisions:

- Teaching time table;
- Room use and position in buildings;
- Room moves;
- New building layout;
- Access requirements for researchers.

Appendix F

Tungsten Lamps

The Institute will endeavour to phase out the use of Tungsten lamps and Halogen spot lights as soon as reasonably practicable within its maintenance activities.

The use of this type of lamp will not be permitted within building refurbishments and new build.

Appendix G

Senior Management Commitment

The Senior Management of Dundalk Institute of Technology is aware that its business activities impact upon the environment and is committed to ensuring these activities have the least possible detrimental effect.

We are committed to this Energy Management Policy and to:

- Complying fully with all relevant legal requirements, codes of practice and regulations;
- Assessing the environmental impacts of our operations, continuously seeking to reduce these impacts and improving our resource efficiency through reduction of energy, water use and waste;
- Promoting environmental and energy awareness in our employees through participation and training;
- Working with our suppliers to make more environmentally sensitive choices;
- Monitoring our progress to ensure ongoing improvements in our environmental performance;
- Communicate this policy to stakeholders and the public and work with our neighbours to reduce the impact of our operations;
- Make available the necessary resources to fulfill the above.

These commitments will be carried out in line with our environmental policy.

Signed: President Dundalk Institute of Technology

Date:

Appendix H

Energy Management Diagram

