

OVERVIEW

Within each local government organisation, there are a number of separate management or operational groups with specialist roles. Each group can potentially contribute to the organisational objective of improving energy efficiency and reducing greenhouse gas emissions. Indeed, failure to gain active involvement of key groups can undermine success.

Initially, it may not be obvious how some Council operations influence greenhouse gas emissions—for example, a legal officer who drafts leases and contracts is not obviously using large amounts of energy. But the clauses in those leases and contracts can have long-term effects on levels of greenhouse gas emissions generated by the activities covered.

This section includes a series of information sheets for operational groups found in most local government organisations. Each sheet contains ideas to help you identify major influences on greenhouse gas emissions, and develop appropriate measures that can be incorporated into your energy management strategies and action plan.

Your CCP™ Australia team leader may find it useful to supply each operational group with the relevant sheet, then negotiate appropriate performance indicators and reporting procedures, so that the group can play an appropriate role in Council's pursuit of greenhouse emission reductions.

For each operational group, you'll find:

- a summary of ways the group may influence patterns of energy use and greenhouse gas emissions, along with initial priorities (note that although issues such as vehicle use and the effects of Council activities on energy consumption in the local community are outside the scope of this workbook, they are included for the sake of completeness when considering priorities);
- discussion of particular opportunities and problems the group may face in developing and implementing measures;
- references to strategy sheets in section 3 and energy sheets in section 4 of this workbook, designed to help you improve energy efficiency and reduce greenhouse gas emissions in Council operations (and often cut your operating costs, too);
- examples of possible indicators the group might use to track its greenhouse impacts and report to management and the CCP™ Australia team leader.

What if Council services are contracted out?

This workbook assumes that, where Council services are delivered by contractors, the greenhouse gas emissions generated by these contractors are to be included in Council's inventory of emissions. After all, Council pays for energy used by contractors as part of the negotiated contract. And contractors are acting as agents of Council when they carry out activities. If this approach were not adopted, the picture of Council's performance would be distorted, as emissions would be reduced by contracting out more services, or increased if previously contracted services were brought in-house.

Council operations

The table below shows the operational groups covered in this section of the workbook, and the roles they play that are relevant to managing energy use and greenhouse gas emissions. While the precise terminology and organisational structure may differ from Council to Council, groups with similar functions exist in most local government organisations.

Council operations	Info sheet	Roles relevant to managing energy use and greenhouse gas emissions
Financial management	C1	Budgets, managing contracts, financial policy
Information systems	C2	Information technology, communication systems, office equipment
Corporate support	C3	Human resource management, councillor support, governancecommunity and corporate relations, legal support, catering/hospitality
Strategic planning	C4	Long-term planning spanning economic, environmental and social issues, and covering urban development, transport and economic development
Property and facilities management	C5	Purchase, lease, sale of properties; property management; operation and maintenance of buildings
Environmental services	C6	Waste management, environmental policy, management of natural environment, air and water quality, hazardous sites
Parks and gardens	C7	Developing and managing parks
Statutory planning and building approvals	C8	Development and building approvals, management of inspections etc.
Health	C9	Community health services, hygiene inspections
Community services	C10	Services for youth, aged, disabled, cultural groups; festivals, transport, grant schemes
Community facilities	C11	Recreational facilities, libraries, childcare centres
Project management	C12	Design and construction of new facilities, major refurbishments and infrastructure
Infrastructure	C13	Planning, design, construction and maintenance of roads, stormwater, sewerage systems, etc.
Technical support	C14	General construction and maintenance
Vehicle management	C15	Purchase, operation, maintenance and resale of vehicles and mobile equipment (although transport energy issues are not considered in this workbook)
All groups—office energy use	C16	Using office equipment, using lighting and heating/cooling energy, using kitchen facilities

FINANCIAL MANAGEMENT

Budgets, managing contracts, financial policy

Financial management creates a framework within which all Council operations are carried out. The budget priorities and guidelines set, the purchasing guidelines established, the cost-benefit criteria applied, and the contractual arrangements negotiated, all influence the kinds of buildings and equipment selected, and the behaviour of staff and contractors.

A particular challenge for financial management groups is the development of practical and effective mechanisms to facilitate increased up-front investment costs where future savings are increased. Most Councils treat investment funds separately from recurrent funds, which means they fail to implement many cost-effective energy efficiency measures.

Activity	Priority	Relevant information sheets
Preparing and supervising purchasing guidelines	1	S4. Purchasing policies
Preparing and supervising leases, contracts, etc	1	S5. Leases and service contracts S6. Working with contractors
Developing and implementing financial policy	1	S2. Monitoring and reporting S3. Financial evaluation
Office energy use—see sheet C16	3	

Possible indicators

- Relevant policies, guidelines and procedures include consideration of energy efficiency
- Proportion of new investments, purchases that meet environmental/energy criteria
- Expenditure on energy saving actions relative to expenditure on energy bills

Manly Council has joined the SEDA Energy Smart Councils program. Their involvement has included a firm commitment to implement within five years all energy efficiency improvements with a return on investment of 20 per cent or greater, in at least 75 per cent of all Council facilities. In exchange, SEDA is helping the Council with practical advice and assistance, including the services of a part-time energy manager.

Part of the Manly strategy includes reinvesting energy savings for a period of five years, adding further savings each year to those already accruing from the actions already implemented. The 1997/98 year is used as a benchmark in determining the savings for re-investment.

According to the Council, the SEDA program is 'very attractive', and the reinvestment initiative is 'great, now that energy prices are rising again'.

For further information: Skye Addison, Conservation Officer Manly Council, ph 02 9976 1602; or Ms Ronlyn Duncan, Project Leader, Energy Efficiency, SEDA, ph 02 9291 5284.

INFORMATION SYSTEMS

Information technology, communications systems, office equipment

Information systems can consume substantial amounts of energy and resources. But using them effectively can save much greater amounts of energy and resources, by influencing transport energy consumption and the efficiency of resource use.

The extent to which information flow and data storage occur in electronic form influences factors such as:

- the floor area required for document storage, which tends to be within airconditioned spaces;
- ease of access to information, the need for re-typing documents and the energy used for these activities;
- paper use, and the resource and energy consumption associated with it; printing activity, for example, consumes energy and toner or ink, and involves investment in equipment.

Information technology staff can influence energy use through:

- the specifications they establish for new IT equipment and software, including networks;
- the design and operation of computer centres and their associated airconditioning; these facilities are often very energy-intensive;
- the extent to which they ensure that energy-saving features such as low-power 'sleep' modes are utilised. This involves specifying appropriate systems, making sure features are enabled, and training staff to use them

Activity	Priority	Relevant information sheets
Developing purchasing specifications for equipment and software	1	S4. Purchasing policies E10. Office equipment
Design and operation of computer centre	1	E5. Heating and cooling buildings E7. Lighting E10. Office equipment
Staff training in energy-efficient computer operation	2	E10. Office equipment
Installation and maintenance of information systems and equipment	1	S5. Leases and contracts E10. Office equipment
Office energy use—see sheet C16	3	

Possible indicators

- Energy consumption and *Energy Star* compliance of new desktop computers purchased
- Energy consumption of computer centre (including airconditioning)
- Percentage of desktop computers with *Energy Star* features enabled during random checks
- Percentage of computers left on outside working hours (apart from those with essential functions)

Example: Energy-efficient monitors for Moreland City Council

In Moreland City Council's new civic centre, client service staff use energy-efficient liquid crystal flat-screen computer monitors, and separate printers and photocopiers are being replaced by integrated multi-purpose digital machines.

The new monitors save more than 80 per cent on running costs. Although their high purchase cost meant the value of this energy saving alone was not enough to make them cost-effective, they save desk space and create a more open and inviting client–staff interface. For the Council, these benefits have justified the extra cost, and the increase in energy efficiency has meant a significant reduction in greenhouse gas emissions.

The networked multi-purpose printer/copier/fax/scanners replace several separate items of equipment, thus saving space and avoiding the energy wasted by keeping several items of equipment on standby.

CORPORATE SUPPORT

Human resource management, councillor support, governance, community and corporate relations, legal support, catering/hospitality

Much of the corporate support function is office-based, so direct energy use by this area of activity is typical of many offices. See sheet C16 *Office energy use*.

Some corporate support activities may be fairly energy-intensive. For example, catering/hospitality often requires very energy-intensive commercial catering equipment, and the equipment used to provide coffee and tea at meetings often consumes surprisingly large amounts of energy.

Special events can also use large amounts of energy, depending on the venues and types of activities chosen. Events also provide an opportunity for Council to make a strong public statement about global warming, and investment in some measures that would not normally be considered cost-effective can be justified on educational or promotional grounds.

Policies applied by corporate support groups can influence the culture of the organisation, and the level of priority given to environmental issues.

For example, human resources groups can include performance on energy efficiency and greenhouse issues in job descriptions. And performance indicators that work against energy efficiency improvements can be modified: for example, if a staff member's performance contract is based on the number of permits approved, this may discourage thorough scrutiny of the energy aspects of applications.

Activity	Priority	Relevant information sheets
Catering/hospitality	1	S4. Purchasing policies S5. Leases and contracts E12. Refrigeration E13. Cooking and catering E14. Hot water
Special events	2	E7. Lighting E19. Standby generation E21. Renewable energy
Office energy use—see sheet C16	3	

Possible indicators

- Energy efficiency of catering equipment
- Energy consumption per meal supplied by Meals on Wheels service
- Use of renewable energy at special events

STRATEGIC PLANNING

Long-term planning spanning economic, environmental and social issues, covering urban development, transport and economic development

The nature of this group's role means that the decisions it makes and the policies and guidelines it develops will significantly influence Council's future energy efficiency and greenhouse gas emissions. For example, decisions about where Council activities will be located will affect transport requirements of staff and their clients. And policies, specifications, guidelines and priorities developed to influence building design and equipment selection are major factors affecting ongoing energy use.

The priority placed on environmental factors, and the reflection of this prioritisation in budget allocations, also influence the extent of investment in projects to improve energy efficiency and reduce greenhouse emissions.

In addition, through the incorporation of Council's long-term plans into development policies and guidelines, this area of activity strongly influences long-term trends in greenhouse gas emissions associated with local businesses and community activity.

In terms of direct energy use, the strategic planning function is largely office-based and the issues are typical of many offices. See sheet C16 *Office energy use*.

Activity	Priority	Relevant information sheets
Policy development and implementation	1	All strategy sheets E1. Developing an energy efficiency program
Office energy use—see sheet C16	3	

Possible indicators

- Trend in Council greenhouse gas emissions and energy use
- Regular reports made to senior management and Council of performance on greenhouse emissions and energy use

PROPERTY AND FACILITIES MANAGEMENT

Purchase, lease and sale of properties; property management; operation and maintenance of buildings

The property and facilities management function has an important influence on greenhouse gas emissions from Council operations in ways which include:

- selection of facilities: location influences travel activity, while factors such as the energy-efficiency of buildings leased, constructed and/or operated influence emissions due to heating/cooling and lighting;
- lease agreements: conditions such as energy performance targets can be included;
- maintenance practices: standard of maintenance practices, including the extent to which energy management is integrated into practices;
- refurbishment programs which offer opportunities to incorporate energy upgrades.

The office-based operations of the property management group also use energy directly. See sheet C16 *Office energy use*.

Activity	Priority	Relevant information sheets
Setting criteria for the selection and development of facilities	1	All Strategy sheets
Preparation and negotiation of contracts, leases etc	1	S5. Leases and contracts E3. Negotiating energy contracts
Building maintenance	1	S7. Building design and specification E1. Developing an energy efficiency program E2. Energy audits E5. Heating and cooling buildings E7. Lighting and E8. Office lighting E11. Motors, drives, lifts, pumps
Office energy use—see sheet C16	3	

Possible indicators

- Energy use per square metre and per employee for new and refurbished facilities compared with existing ones
- Trends in energy use per square metre of facilities being managed
- Inclusion of appropriate clauses in leases and contracts

ENVIRONMENTAL SERVICES

Waste management, environmental policy, management of natural environment, air and water quality, hazardous sites

The environmental services group plays a key role in determining the scale of greenhouse gas emissions associated with Council activities, as well as the potential for sinks. This group may also influence community and business emissions through programs and policies such as promotion of recycling and composting, or tree-planting.

Significant activities may include:

- input to Council's environmental policy and environmental management system, including the CCP™ program and activities such as in-house energy-saving programs, paper recycling, etc.
- management of municipal wastes: recycling, minimising the amount of material landfilled, promotion of composting, production of energy from wastes (including landfill gas utilisation) can all have significant effects on greenhouse emissions; only energy from waste is addressed in detail in this workbook;
- management of natural environment: such activities as tree-planting programs or re-forestation of cleared areas, which may involve significant energy use for vehicles and equipment;
- air quality programs: strategies for reducing air pollution may impact on local car usage, use of fuelwood, etc, as well as influencing Council decisions on fuel selection and vehicle types;
- The office-based operations of environmental services staff also use energy directly. See sheet C16 *Office energy use*.

Activity	Priority	Relevant information sheets
Policy development	1	All Strategy sheets
Energy from waste	1	E21. Renewable energy E20. Cogeneration E18. Sewage and water treatment
Office energy use—see also sheet C16	3	

Possible indicators

- Quantity of energy used by environmental services staff
- Quantity of energy generated from wastes
- Council operational greenhouse gas emissions

PARKS AND GARDENS

Developing and managing parks and gardens

Staff developing and maintaining parks and gardens can influence greenhouse gas emissions in a number of significant ways:

- selection and operation of equipment and vehicles (type of fuel used, fuel-efficiency, maintenance, efficiency of operation);
- management of buildings in parks, such as the lighting of toilet blocks;
- tree and vegetation planting strategies, which not only affect the size of carbon sinks, but may affect building energy consumption by sheltering buildings from sun or wind or affecting the amount of daylight available to windows.

The office-based operations of parks and gardens staff also use energy directly; see sheet C16 *Office energy use*. Vehicle use may also be an issue, as parks and gardens staff use trucks, mowers, mulchers and other motorised equipment. Although fleet management is covered in sheet C15, strategies for reducing greenhouse gas emissions through improving the efficiency of vehicle use are beyond the scope of this workbook.

Activity	Priority	Relevant information sheets
Equipment selection	1	S4. Purchasing policies
Energy management in buildings and facilities	2	E1. Developing an energy efficiency program E7. Lighting E15. Depots
Management of green and other organic wastes	1	E19. Cogeneration E20. Renewable energy E18. Sewage and water treatment
Office energy use—see sheet C16	3	
Vehicle use is also a priority for this area of Council operations. The AGO is currently developing specific modules to address this issue.		

Possible indicators

- Energy use by park buildings and facilities
- Energy use by motorised equipment and vehicles
- Quantity of green waste used for energy production

STATUTORY PLANNING AND BUILDING APPROVALS

Development and building approvals, management of inspections

Most of the direct greenhouse gas emissions from the statutory planning unit are likely to result from the use of office space and facilities (see sheet C16), and travel to sites for inspections (see sheet C15). Where this unit makes input into policy development and is involved in specific Council building projects, it may influence Council’s emissions for many years ahead.

Much of the greenhouse impact of this unit results from its effects on the development of sites in the community, and from the construction and operation of the buildings and facilities it approves and inspects.

Staff can place emphasis on compliance with energy efficiency regulations in the Building Code of Australia and Council's energy and greenhouse policies, as well as providing advice and encouragement for applicants. The extent to which Council policies and requirements create a context within which planning and building staff can encourage good environmental performance also influences outcomes.

Activity	Priority	Relevant information sheets
Policy input	1	S7. Building design and specification
Application of energy-efficiency skills when advising applicants and approving proposals	1	E5. Heating and cooling buildings E6. Energy efficiency & the building envelope
Office energy use—see also sheet C16	3	

Vehicle use is also a priority for this area of Council operations. The AGO is currently developing specific modules to address this issue.

Possible indicators

- Percentage of planning and building applications exceeding minimum requirements regarding energy issues
- Level of provision of advisory materials on energy issues (e.g. number of brochures produced and distributed)

Example: The City of Adelaide is participating in the development of Specification SA 7.1 (minimum energy efficiency requirements for residential buildings); this will significantly reduce greenhouse gas emissions throughout South Australia. For further information Mr Jack Mazek, Program Coordinator Cities for Climate Protection, City of Adelaide, ph 08 8203 7209.

HEALTH SERVICES

Community health services, hygiene inspections

The facilities operated by health staff, such as health centres, often have significant energy requirements, especially for heating and lighting. Where these facilities are used intermittently, management for energy efficiency is often difficult.

The way Council provides health services may also influence community greenhouse gas emissions, depending on how far clients have to travel and what transport modes they use. In some cases, provision of Council transport such as a community bus may increase Council's own operational greenhouse gas emissions, but will reduce total emissions by avoiding use of less-efficient vehicles.

The office-based operations of health services use energy directly (see sheet C16 *Office energy use*). Health staff can also use significant amounts of transport fuel as they visit clients, attend local health centres and carry out inspections and consultations.

Activity	Priority	Relevant information sheets
Building management	1	E5. Heating and cooling buildings E7. Lighting E14. Hot water
Office energy use—see also sheet C16	3	
Vehicle use is also a priority for this area of Council operations. The AGO is currently developing specific modules to address this issue.		

Possible indicators

- Energy consumed in buildings used by health staff (per staff member, or per client serviced)

COMMUNITY SERVICES

Services for youth, aged, disabled, cultural groups; festivals, transport, grants

Councils provide or contract many services to individuals and groups throughout their community, in some cases from dedicated facilities (libraries, recreation centres, childcare centres, etc.) and in others, such as Meals on Wheels or home help, purely as services.

Those involved in developing strategies for the provision of services influence future energy use and greenhouse gas emissions through the procedures and levels of activity planned. Taking greenhouse and energy issues into account when evaluating options for program delivery could provide useful insights into ways of minimising energy use.

Apart from energy used in the facilities themselves (see sheet C11 *Community facilities*), most greenhouse gas emissions directly associated with community services are likely to result from office energy use (see sheet C16) and staff transport.

In managing activities such as festivals and community events, hiring out Council facilities, or providing grants to community groups, there is scope to encourage the reduction of greenhouse emissions within the community; for example, targets for recycling and energy performance may be included in arrangements with sporting groups using community facilities, or in contracts with festival organisers. Also, staff may be able to advise and assist users of these services to save energy, cut costs and reduce greenhouse emissions.

Activity	Priority	Relevant information sheets
Arrangements with contractors providing Council services	1	S5. Leases and contracts S6. Working with contractors
Input to development of new services, and policies and strategies for implementation	1	S2. Monitoring and reporting S3. Financial evaluation of projects
Catering services such as Meals on Wheels	1	E12. Refrigeration E13. Cooking and catering E14. Hot water
Use of community facilities	1	C11. Community facilities
Office energy use—see sheet C16	3	
Vehicle use is also a priority for this area of Council operations. The AGO is currently developing specific modules to address this issue.		

Possible indicators

- Energy use and greenhouse gas emissions associated with delivery of each service
- Lifecycle energy and greenhouse gas emissions assessed as part of the comparative evaluation of options for delivery of community services during their development
- Proportion of service delivery staff trained in energy-efficient practices

COMMUNITY FACILITIES

Recreation centres, libraries, youth centres, childcare centres, etc.

Some of these facilities, such as swimming centres, are extremely energy-intensive, making them costly to operate and responsible for high levels of greenhouse gas emissions. In other cases, the facilities operate for long hours and comfortable conditions are a high priority; again, this results in significant greenhouse gas emissions and high costs.

The selection of buildings, design of facilities, selection of equipment within facilities and patterns of operation can all impact on energy efficiency and levels of greenhouse gas emissions. The input of ideas, requirements and expectations by policymakers, managers and service delivery staff can therefore have long-term implications for energy use and greenhouse gas emissions. Operational procedures are also important factors.

Location can affect the level of emissions associated with client travel. Although beyond the scope of this workbook, this can be a significant contributor to the local community's greenhouse gas emissions.

The office-based activities of community facilities staff also use energy directly. See sheet C16 *Office energy use*.

Activity	Priority	Relevant information sheets
Input to design of facilities	1	S7. Building design and specification Depending on facilities being designed: E12. Refrigeration E13. Cooking/catering E17. Swimming pools/recreational facilities
Purchase of equipment and contracting services	1	S4. Purchasing policies S5. Leases and contracts S6. Working with contractors
Operational procedures	1	E1. Developing an energy efficiency program
Facilities management (in conjunction with facilities management group)	2	E5. Heating and cooling buildings E7. Lighting Depending on facilities managed: E12. Refrigeration E13. Cooking and catering E14. Hot water E17. Swimming pools/recreational facilities
Office energy use—see also sheet C16	3	

Possible indicators

- Energy efficiency features incorporated into new facilities, as indicated by estimated energy consumption
- Energy consumption of each facility—actual, trend, and compared with similar facilities

PROJECT MANAGEMENT

Managing the design and construction of new facilities, major refurbishments and infrastructure

When Council facilities are being designed, constructed, commissioned or refurbished, the way the project is managed can play a crucial role in influencing long-term levels of greenhouse gas emissions from the facilities.

Major projects involve very complex processes, and many of the participants have limited perspectives on overall project objectives. Good project management can ensure that appropriate emphasis is placed on energy efficiency and greenhouse issues throughout the various stages of the project, in contractual arrangements, in supervision of performance, and in monitoring of outcomes.

Project management staff also contribute to Council greenhouse gas emissions through their travel and office-based activity.

Activity	Priority	Relevant information sheets
Managing major projects	1	S2. Monitoring and reporting S3. Financial evaluation S5. Leases and contracts S6. Working with contractors S7. Building design and specification For specialist facilities: E17. Swimming pools/recreational facilities E18. Sewage and water treatment plants E16. Libraries E15. Depots
Office energy use—see sheet C16	3	
Vehicle use is also a priority for project management staff. The AGO is currently developing specific modules to address this issue.		

Possible indicators

- Energy efficiency targets set for all major projects
- Energy performance targets achieved in practice
- Number of projects that formally address energy efficiency
- Adoption of an energy management strategy by Council

INFRASTRUCTURE

Planning, design, construction and maintenance of roads, stormwater and sewerage systems, etc.

Where infrastructure involves ongoing use of energy—for lighting, pumping or other activities—it can be a major issue from both cost and greenhouse perspectives. For example, street lighting may comprise more than half the total electricity bill for many Councils, and moving large volumes of water may require substantial amounts of energy for pumping.

Much of the physical infrastructure of a city or shire needs modest amounts of energy for its maintenance and upkeep. However, large amounts of energy and resources are incorporated into the infrastructure itself—the roads, drains, sewers, etc. Council staff can reduce the energy (and thus the greenhouse gas emissions) embodied in infrastructure by specifying appropriate materials, designing to minimise material requirements, recycling, etc.

Providing infrastructure also has significant greenhouse implications for the local community. For example, standards of road surfacing can influence car fuel consumption, as can traffic calming strategies.

Activity	Priority	Relevant information sheets
Infrastructure development	1	All Strategy sheets E1. Developing an energy efficiency program E2. Energy audits E9. Street lighting E18. Water supply & sewage treatment
Infrastructure management	1	S5. Leases and contracts S6. Working with contractors E2. Energy audits E9. Street lighting E15. Depots
Office energy use—see sheet C16	3	
Vehicle use is also a priority for this area of Council operations. The AGO is currently developing specific modules to address this issue.		

Possible indicators

- Energy targets set for new infrastructure projects, and achieved in practice
- Energy use by key infrastructure—trends and performance relative to targets and comparable infrastructure

TECHNICAL SUPPORT

General construction and maintenance

Technical support units play a critical role in ensuring that equipment and buildings operate correctly. Monitoring and maintenance are major areas for potential energy waste or improvements in energy efficiency.

Technical staff may also be called upon to provide expert input to policy issues, including purchasing guidelines and building specifications.

Technical support groups may operate large workshops and depots, which are significant energy consumers. They also contribute to Council greenhouse gas emissions through their travel and office-based activity.

Activity	Priority	Relevant information sheets
Input to policy issues	1	S3. Financial evaluation S4. Purchasing policies S5. Leases and contracts S6. Working with contractors S7. Building design and specification
Energy management	1	E1. Developing an energy efficiency program E3. Negotiating energy contracts E5. Heating and cooling buildings E7. Lighting E11. Motors, drives, pumps and fans E14. Hot water E15. Depots E17. Swimming pools and recreation centres E18. Water supply and sewage treatment E19. Standby generation E20. Cogeneration E21. Renewable energy
Office energy use—see sheet C16	3	
Vehicle use is also a priority for this area of Council operations. The AGO is currently developing specific modules to address this issue.		

Possible indicators

- Percentage of Council facilities where suitable energy management, monitoring and reporting systems are in place
- Energy use of significant buildings and equipment—trends and relative to benchmarks

VEHICLE MANAGEMENT

Purchase, operation, maintenance and resale of vehicles and mobile equipment

Although transport energy is beyond the scope of this workbook, Council's vehicle fleet is a major source of greenhouse gas emissions, as well as a major operating expense, so this sheet is included for the sake of completeness. Vehicle management may influence Council's operational greenhouse gas emissions in a variety of ways, including:

- the types and models of vehicles selected;
- provision or encouragement of other modes of travel such as bicycles and public transport;
- extent of use of alternative fuels with lower greenhouse impacts (although duration of ownership may influence the scope for higher capital costs of LPG, CNG or diesel to be recovered from fuel savings);
- policies relating to vehicle use;
- monitoring and maintenance programs;
- energy use in buildings where vehicles are maintained or stored.

The office-based operations of the vehicle management unit also use energy.

Activity	Priority	Relevant information sheets
Vehicle selection	1	S3. Financial evaluation S4. Purchasing policies S5. Leases and contracts
Operation and maintenance	2	E1. Developing an energy efficiency program E15. Depots
Office energy use—see also sheet C16	3	

Possible indicators

- Energy consumption in buildings used for vehicle garaging and maintenance

OFFICE ENERGY USE

Using office equipment, lights, kitchen facilities, etc.

While heating and cooling might comprise up to two-thirds of greenhouse gas emissions in an office, equipment used or controlled by occupants is responsible for the rest. This includes lighting, computers and other office equipment, boiling water units and so on. In some buildings, occupants also control heating and cooling systems.

Office energy use can lead to annual energy costs of up to \$35 per square metre and between 50 and 500 kilograms of greenhouse gas emissions per year.

As a building occupant you can play an important role in saving energy, including:

- alerting building managers to problems and faults;
- switching off lights and equipment that are not needed;
- seeking training in energy efficiency issues relevant to your work.

Activity	Priority	Relevant information sheets
Using office equipment	1	E10. Office equipment
Using lights and airconditioning	1	E5. Heating and cooling buildings E7. Lighting
Using kitchen and coffee/tea-making facilities	3	E10. Office equipment E12. Refrigeration

Possible indicators

- Percentage of staff trained in energy-efficient office management practices
- Percentage of computers left on outside working hours in each operational unit
- Percentage of lights left on outside working hours in each operational unit