

Unofficial translation of the original Danish circular:  
“Cirkulære om energieffektivisering i statens institutioner”

## **Circular on improving energy efficiency in Danish state institutions** (to all state institutions)

Pursuant to Section 13 (2, 3), Section 14 (3) and Section 19 (1) in Act no. 450 of 31 May 2000 on the Promotion of Savings in Energy Consumption, and Section 9 and 14 in Act no. 485 of 12 June 1996 to Promote Energy and Water Savings in Buildings, as amended under Section 24 in Act no. 450 of 31 May 2000, the following is laid down:

### *Purpose*

#### **Section 1**

The purpose of the circular is to limit the state’s consumption of energy and water by promoting energy-efficient behaviour and procurement in state institutions, as well as ensuring the energy-efficient operation and maintenance of buildings that are owned or rented by the state.

### *Area of application*

#### **Section 2**

The circular applies to all ministries, authorities and other state institutions.

(2) On request from an individual ministerial area of responsibility, the Danish Energy Authority may exempt state institutions from the provisions of this circular.

(3) State institutions that administer the legislation through which operational subsidies are granted to privately-owned institutions shall attempt wherever possible to put in place the provisions of the circular and have them implemented in these institutions.

#### **Section 3**

The circular covers all forms of consumption of electricity, heating and water associated with a state institution, including both energy and water consumption in connection with the operation and maintenance of buildings, and energy and water consumption associated with other activities associated with the institution.

(2) The circular does not apply to energy consumption for transport purposes.

### *Energy-efficient behaviour and procurement*

#### **Section 4**

State institutions shall demonstrate energy-efficient behaviour with a view to reduce the institutions’ total energy consumption.

#### **Section 5**

State institutions shall purchase energy-efficient products unless they can demonstrate that such products do not meet the essential requirements in regard to function, quality, environment and cost effectiveness.

(2) The following product categories are considered to be energy efficient:

1) Products that fulfil the requirements of the procurement guidelines laid down by the Danish Electricity Saving Trust.

2) Energy label class A products that conform to the European Union energy labelling directive for household appliances and their combinations. However, A+ or A++ applies to refrigeration cabinets (fridges/freezers).

3) Products adopted by the electricity, natural gas and district heating supply companies, or other approved lists of energy-efficient products, as referred to on the website of the Danish Electricity Saving Trust.

4) Products included in other schemes covering the visibility of energy-efficient products, as referred to on the website of the Danish Electricity Saving Trust.

## **Section 6**

All ministries must nominate a coordinating contact person responsible for energy. This contact person will be responsible for the implementation of the provisions in the circular, namely:

1) To ensure that an overall target is formulated covering the trend in energy consumption within the ministerial area of responsibility in the short and long term.

2) To ensure the coordinated purchasing of energy-efficient products so that the possibilities of obtaining cost-effective prices for these products can be utilised within the ministerial area of responsibility.

3) To ensure that coordinated purchasing of energy-efficient products is incorporated in the common procurement policy which, in regard to the Circular on procurement in the state sector, will form part of the strategy for improving efficiency within the ministerial area of responsibility.

4) To ensure that awareness of energy-efficient behaviour is disseminated throughout the ministerial area of responsibility.

(2) All ministries shall advise the Danish Energy Authority of the name of the coordinating contact person responsible for energy in the ministerial area of responsibility, as well as publishing the name on the Ministry's website.

## **Section 7**

All state institutions shall have a person responsible for energy who will work together with the coordinating contact person responsible for energy in the ministerial area of responsibility. This contact person will be responsible for the implementation of the provisions in the circular, including the requirement to monitor the trends in the institution's heating, electricity and water consumption: for example on [www.se-elforbrug.sparel.dk](http://www.se-elforbrug.sparel.dk), or through frequent readings of heating, electricity and water meters.

### ***Reporting and visibility of energy consumption***

## **Section 8**

To allow the Danish Energy Authority to monitor the trend in energy consumption in the state sector, all state institutions shall report their total energy and water consumption on an annual financial basis, calculated per building on the basis of the actual amount of consumption over the elapsed financial year split between electricity, heating and water.

(2) The information reported, as mentioned in (1) above, shall be submitted to the Danish Palaces and Properties Agency's Information System of the Public Estates (see Circular on information system for management of state properties).

(3) The annual report shall be submitted no later than 1 June following the year in question. The Danish Energy Authority will circulate more detailed guidelines and instructions for completing the report.

(4) The Danish Energy Authority may, following negotiations with ministries that have their own approved building services, allow reporting under individual guidelines for the institutions so covered.

## **Section 9**

State institutions with electricity consumption of in excess of 100,000 kWh per year shall render their electricity consumption visible by registering their consumption on the Internet at the [www.se-elforbrug.sparel.dk](http://www.se-elforbrug.sparel.dk) website.

### *Energy-efficient buildings*

## **Section 10**

State institutions that own buildings shall implement financially-viable energy-saving schemes as recommended by the energy labelling of buildings, and subject to their having a payback period of under 5 years, unless it can be documented that there are particular circumstances that negate the projects' implementation.

(2) Energy-saving projects covered by (1) above shall be implemented within a four-year period following the drawing up of the appropriate energy labelling. Energy-saving projects recommended under an energy labelling scheme, which were current at the time of this circular's coming into force, shall however be implemented no later than four years after the date of this circular's implementation.

## **Section 11**

State institutions that either own or rent, or in some other way have responsibility for the operation and maintenance of buildings (including the technical plant in buildings) shall ensure that operation, maintenance and conversions shall take place in an energy-efficient manner taking into account the investment and operational costs.

(2) New technical plant and installations shall be energy-efficient and equipped with meters for recording of significant shared consumption of electricity, heating and water, unless it can be demonstrated that it is not possible or feasible to connect a meter. Furthermore, new technical plant and installations shall be so constructed to facilitate energy-efficient operation (see (1) above).

## **Section 12**

State institutions, either in their own right or on behalf of other state institutions, that enter, extend or re-negotiate a leasing contract in respect of privately-owned buildings or parts of privately-owned buildings shall, on entering, extending or re-negotiating a leasing contract, ensure that energy-saving projects and energy-efficient operation and maintenance of the buildings are implemented to the fullest extent possible as described in Section 10 and Section 11 above.

## **Section 13**

Where a building is only part owned by the state, it is incumbent on the appropriate state institution to enter into negotiations with the building's other owners in order to implement the provisions covered by Sections 10 to 12 above.

## **Section 14**

Where a state owner of a building enters into an agreement on the administration of the maintenance of a building, it shall ensure in connection with this agreement that it fulfils its obligations under Sections 10 to 13. Existing agreements on the maintenance of buildings shall be amended as soon as possible to comply with the provisions.

## **Section 15**

Buildings and tenancies of less than 1,000 m<sup>2</sup> that are used solely for dwelling purposes are exempt from the provisions covered by Sections 8 to 14.

(2) Temporary tenancies that are used solely for dwelling purposes are exempt from the provisions covered by Sections 8 to 14.

(3) The Danish Energy Authority can, on request, exempt buildings and tenancies with negligible energy consumption from the provisions covered by Sections 8 to 14.

### *Publication of energy reports*

#### **Section 16**

State institutions that have energy labelling of buildings in place shall publish the report on their websites.

(2) State institutions that have had a consultancy report compiled by an electricity, natural gas or district heating supply company shall publish the report on their website.

### *Commencement*

#### **Section 17**

This circular shall enter into force on 27 April 2005.

(2) This circular replaces the Circular on improving energy efficiency in Danish state institutions, no. 25 of 7 February 1995.

(3) This circular does not apply to the Faroe Islands and Greenland.

The Danish Ministry of Transport and Energy, 19 April 2005.

Flemming Hansen

Ib Larsen

### Guidance notes to the Circular

#### **Guidance notes to the Circular on improving the energy efficiency in Danish state institutions, 19 April 2005.**

##### **Preamble**

The guidance notes comprise the whole circular with the exception of Section 10, which is the subject of separate guidance notes. In addition, supplementary guidance notes will be issued in regard to reporting of energy and water consumption.

The circular replaces the previous Circular on improving energy efficiency in Danish state institutions, no. 25 of 7 February 1995.

The guidance notes elaborate the provisions in the circular and provide more specific instructions regarding the implementation of the individual sections described in the circular.

As a supplement to the guidance notes the Danish Energy Authority together with the Danish Electricity Saving Trust, amongst others, will prepare a number of brochures featuring good advice and recommendations on how the individual ministries and state institutions can fulfil the required effort to promote energy-efficient behaviour and procurement, as well as the energy-efficient maintenance of buildings in the state sector.

The individual ministerial areas of responsibility and institutions are responsible for implementing the provisions of the circular based on the principles of self-management within the state sector. To what extent this is achieved in a satisfactory manner may be subject to control by the Danish National Audit Office. Ministries and institutions must be able to document that they fulfil the obligations in the circular as the occasion arises.

The Danish Energy Authority will thus not supervise the ministries and institutions' compliance with the circular, but will solely monitor the trends in energy and water consumption with a view to being able to fine-tune the input in the energy-savings area.

##### **Notes on the sections in the circular**

###### *Purpose*

###### **Section 1**

The purpose of the circular is to limit the state's consumption of energy and water, thereby reducing energy consumption and minimising the impact on the environment. In addition, the purpose is to contribute demonstrable cost and management efficiencies within the state sector in regard to the operation of buildings that are owned or rented by the state, as well as the procurement of energy-efficient products and appliances.

###### *Area of application*

###### **Section 2**

Basically, all state institutions are covered by the circular. State institutions comprise all the ministries, authorities and other state institutions that fall under a Ministry's organisation and area of responsibility.

Irrespective of the circular's requirements for the individual institutions, the Ministry is basically responsible for coordinating the compliance with the circular within the specific ministerial area of responsibility. Thus, it is also the Ministry's responsibility to include all the authorities and other institutions within the ministerial area of responsibility.

Exceptions to the provisions of the circular include:

- Companies that are incorporated under civil law such as limited liability companies, private companies and partnerships
- Companies that are incorporated on an independent public basis (so-called independent public companies). However, in this connection, individual institutions need to take legal advice to determine the legal status of a particular company.

### **Section 3**

The circular deals with all types of consumption of electricity, heating (oil, gas, district heating, etc.) and water associated with state institutions. These cover energy and water consumption connected to the operation of buildings, appliances and installations in buildings, and appliances and equipment associated with institutions (e.g. outdoor lighting or water used in gardens).

Energy consumption for transport purposes is not covered by the provisions of the circular. Fuel used in vehicles is also exempt, irrespective of whether these are ultimately powered by electricity or other types of fuel.

### ***Energy-efficient behaviour and procurement***

#### **Section 4**

The circular imposes an obligation that requires all state institutions to demonstrate energy-efficient behaviour with a view to reducing the institutions' total energy consumption. Energy-efficient behaviour implies that ministries, institutions and employees shall demonstrate common sense when using energy-consuming appliances and installations on a daily basis, and contribute to avoiding unnecessary consumption of resources of electricity, heating and water.

For example, unnecessary consumption of resources can include:

- lights that remain on at night, or at other times when not in use
- ventilation installations that over-ventilate or operate when ventilation is unnecessary
- office equipment that is always on, resulting in unnecessary power consumption and thus also needless standby consumption
- poor layout of server room (for example the layout and location of the server room requires the cooling function to be inappropriately large).

Energy-efficient behaviour requires knowledge on the energy consumption of appliances and what can be done to reduce this overhead. The coordinating person responsible for energy consumption in the Ministry and the person responsible for energy consumption in the individual institutions must contribute to the dissemination of the necessary knowledge and motivation within the ministerial area of responsibility (see notes to Section 6 and Section 7).

The Danish Electricity Saving Trust, electricity, natural gas, and district heating supply companies offer good advice on energy-efficient behaviour, and provide useful information on their respective websites. Consultancy reports from the electricity, natural gas, and district heating supply companies offer free energy advice and also contain practical information on limiting energy consumption through behaviour, etc. (see also notes to Section 11 on energy-efficient operation).

## **Section 5**

Institutions shall purchase energy-efficient products. Energy-efficient products are:

1. Products that fulfil the requirements specified in the Danish Electricity Saving Trust's procurement guidelines.
2. Energy label class A products that conform to the European Union energy labelling directive for household appliances (A+ or A++ for refrigeration equipment such as fridges/freezers and their combinations).
3. Products adopted by the electricity, natural gas and district heating supply companies, or other approved lists of energy-efficient products, as referred to on the website of the Danish Electricity Saving Trust [www.sparel.dk](http://www.sparel.dk).
4. Products included in other schemes covering the visibility of energy-efficient products, as referred to on the website of the Danish Electricity Saving Trust [www.sparel.dk](http://www.sparel.dk).

### ***The Danish Electricity Saving Trust***

The Trust's website [www.sparel.dk](http://www.sparel.dk) features information on energy-efficient products and tools for their selection. In addition to featuring the Trusts' own procurement guidelines, the website refers to all other useful tools and schemes for choosing energy-efficient products. For example it also refers to the Danish Environmental Protection Agency's environmental guidelines that contain good advice on procurement in relation to energy and environmental considerations.

The website will be updated on an ongoing basis with information on new schemes, for example in relation to new voluntary low energy labelling that is expected to be introduced by the electricity supply companies, the Danish Electricity Saving Trust and the Danish Energy Authority in autumn 2005.

State institutions can obtain more good purchasing advice from the Danish Electricity Saving Trust's A-club, which can be found at the [www.a-klubben.dk](http://www.a-klubben.dk) website. This provides advice and guidance on meeting procurement requirements, both in relation to smaller purchases that do not require to be put out to tender, and large-scale procurement for which tenders are required. The website also provides background information on electrical appliances and equipment with more detailed procurement requirements, together with good advice that can be used both before and after the purchase.

It is recommended that all state institutions enter a partnership agreement with the Danish Electricity Saving Trust and become members of the A-club. Apart from receiving good advice on procurement, A-club members are invited to participate in different electricity-saving projects.

Furthermore, The Danish Electricity Saving Trust provides assistance with improving ventilation installations and lighting systems, and with displaying the institution's electricity consumption on the Internet.

### ***National Procurement Ltd – Denmark (SKI)***

SKI has favourable framework agreements for many products, including IT equipment (computers, printers, photocopiers, etc.), lighting, large equipment for kitchens and furniture (e.g. adjustable-height desks that often incorporate standby consumption). Information covering computers and screens shows which products are energy efficient within the framework agreements, so it is possible to choose an energy-efficient product at a cost-effective price. Equivalent information covered by the framework agreements will soon be available for energy-efficient products such as photo-

copiers, printers and large equipment for kitchens. SKI generally attempts to incorporate requirements for energy efficiency in the framework agreements for all power-consuming equipment. Further information can be obtained at [www.ski.dk](http://www.ski.dk).

### ***General guidelines on procurement policy***

Guidance in relation to procurement in the state sector can be found in the Danish Ministry of Finance's 'Circular on procurement in the state sector', no. 9608 of 20 December 2002 with the related 'Guidelines on procurement in the state sector', as well as the publication entitled 'Effective conduct of tasks in the state sector', published in October 2003 (Chapter 5, 'Guidelines for procurement policies').

### ***Exceptions to the requirements covering energy-efficient procurement***

The obligation to purchase energy-efficient products may be waived under exceptional circumstances, providing that there is a specific reason for not choosing an energy-efficient product.

For example, there may be circumstances where:

- it is not possible to source energy-efficient products that fulfil a particular institution's specific requirements in terms of function (e.g. products used by handicapped persons or old-age pensioners), specific product-quality considerations (particular requirements in terms of durability, etc.), or other specific requirements,
- energy-efficient products that contribute to significant environmental problems that are not judged to be outweighed by the environmental benefits obtained in terms of lower power consumption,
- additional expenses incurred in procuring the products which cannot be covered by the energy expenses saved over a period of 1½ to 2 years for equipment with a lifespan exceeding 6 years, or saved over a period of four years for other power-saving products with a lifespan of 20 years or more.

If questioned institutions must be able to justify why they have not chosen an energy-efficient product.

## **Section 6**

Within each ministerial area of responsibility a so-called coordinating contact person responsible for energy (Ministerial Energy Coordinator, hereinafter referred to as MEK) shall be appointed. This person has the daily responsibility for the implementation of the provisions of the circular within the overall ministerial area of responsibility with reference to the Ministry's senior management.

The MEK shall contribute to ensuring that energy-saving efforts are a central platform in a Ministry, and shall work to ensure that energy-efficient behaviour becomes integrated in the Ministry's and institutions' administration and routines, in partnership with those responsible for energy in the institutions under the Ministry and with other relevant key persons in the Ministry (e.g. persons with responsibility for coordinating purchases).

The MEK shall prepare an overall short- and long-term target covering the trends in energy and water consumption for the overall ministerial area of responsibility. The target should initially take account of the Ministry's and institutions' current consumption split between electricity, heating and water, the energy-efficient condition of buildings, installations and appliances, as well as an evaluation of the savings potential for the individual institutions/buildings (e.g. through benchmarking comparisons of key figures for energy consumption in equivalent institutions/buildings). A

starting point could be an energy-consumption saving of 1% per annum. The energy consumption of many ministries/institutions and related trends therein can be viewed on the <http://eis.teknologisk.dk> website.

The MEK shall, in collaboration with persons responsible for purchasing, ensure that the Ministry coordinates the procurement of energy-efficient products with a view to obtaining the most cost-effective prices. Furthermore, the MEC shall take the initiative in ensuring that procurement is incorporated within the general purchasing policy for the ministerial area of responsibility, which shall be formulated according to the Danish Ministry of Finance's strategy on improving efficiency within the ministerial area of responsibility ('Effective conduct of tasks in the state sector', Ministry of Finance, October 2003).

The MEK shall organise and coordinate the work concerning energy-efficient behaviour within the ministerial area of responsibility and disseminate knowledge to those responsible for energy in the individual institutions and to all staff members in the ministries and institutions. For example, the communication work may consist of taking the initiative for a brochure/handbook featuring good advice for colleagues, targeted behavioural campaigns, study courses or information and knowledge exchange groups for those responsible for energy in the individual institutions, etc.

The MEK shall, together with the persons responsible for energy in the Ministry's institutions, monitor the trends in energy and water consumption in relation to the target set by the Ministry, and assess the need to fine-tune the saving effort in order to achieve the target.

The MEK shall send information on the name of the coordinating contact person responsible for energy in the Ministry to the Danish Energy Authority and shall publish the name on the Ministry's website.

## **Section 7**

In order to support the coordinating contact person responsible for energy, an energy responsible person (hereinafter referred to as an EP) will be appointed for every authority, research organisation and similar bodies, falling under the ministerial area of responsibility. The EP will collaborate with the Ministry's coordinating contact person responsible for energy on the implementation of the circular.

The EP shall monitor the trends in energy and water consumption in the individual state institutions by means of frequent readings of energy and water meters as required. A good tool for following the trend in electricity consumption is available on the Danish Electricity Saving Trust [www.se-elforbrug.sparel.dk](http://www.se-elforbrug.sparel.dk) website. Electricity consumption for customers that consume in excess of 100,000 kWh can also be monitored on the websites of the electricity supply companies. High-volume users of heating supplies often also have the possibility for monitoring the heat consumption on the website of the heating supply company.

If in connection with following-up the energy consumption he/she becomes aware of abnormal or inappropriate patterns of consumption (e.g. excessive consumption at night, at weekends or during holiday periods), the EP shall bring the facts to the attention of the person responsible for the operation of the building, or the installation or plant in question. Good advice on reducing energy consumption is available from, for example, the electricity, natural gas and district heating supply companies and from the Danish Electricity Saving Trust.

By monitoring the energy consumption in the institution and with local knowledge of the institution's layout and routines, etc, the individual EP accumulates knowledge and experience that greatly contribute to the overall effort for improving the efficiency of energy consumption within the ministerial area of responsibility. EPs can therefore form an important network that can be utilised on an ongoing basis to help the coordinating contact person responsible for energy to solve tasks by formulating energy saving targets, energy-efficient purchases and promoting energy-efficient behaviour and operation.

In some circumstances it may be appropriate to merge the role of the Ministry's coordinating contact person responsible for energy with that of the person responsible for energy in the individual institution. For example, this could apply to a small institution where, for resource-based reasons, it may not be feasible to appoint a person responsible for energy.

### *Reporting and visibility of energy consumption*

#### **Section 8**

All state institutions shall provide information on an annual financial basis on the institution's total energy and water consumption split between electricity, heating and water. The annual report shall be submitted no later than 1 June following the year in question.

The information shall be reported to the Danish Palaces and Properties Agency's Information System of the Public Estates (hereinafter referred to as SE) on its [www.statsejendomme.dk](http://www.statsejendomme.dk) website. SE features information on state properties and their sizes. From 2006, SE will be expanded to allow the option to report information on energy and water consumption.

The 'Circular on information systems for the management of state properties', no. 24 of 13 March 2003, is the applicable document covering reporting to the SE. Amongst other things, the circular prescribes that every Ministry has an obligation to appoint a so-called SE contact person with responsibility for, and access to the reporting information. The SE contact person may delegate responsibility and access rights in connection with the reporting of the required information.

It is therefore recommended that the coordinating contact person responsible for energy and possibly others with energy responsibilities gets in touch with the Ministry's SE contact person with a view to agreeing the actual planning and division of responsibilities in connection with the reporting function.

The Danish Energy Authority will distribute separate guidelines before 1 January 2006 on the reporting of information to the SE on energy and water consumption.

The reporting of electricity consumption can take place automatically for those institutions that have carried out ongoing registration of electricity consumption for more than one year via the Danish Electricity Saving Trust's [www.se-elforbrug.sparel.dk](http://www.se-elforbrug.sparel.dk) website.

The Danish Energy Authority monitors the overall trend in state sector consumption on the basis of the institutions' annual reporting of electricity, heating and water consumption.

Ministries and institutions are similarly expected to monitor the trends in energy and water consumption, and compare the consumption trends with the formulated targets, and where necessary fine-tune their efforts in order to achieve the target. As mentioned in the preamble, the individual

ministries have the responsibility for implementing and fulfilling the provisions of the circular based on the principle of self-management within the state-sector.

### **Section 9**

State institutions with electricity consumption of in excess of 100,000 kWh per year shall render their electricity consumption visible on the [www.se-elforbrug.sparel.dk](http://www.se-elforbrug.sparel.dk) website administered by the Danish Electricity Saving Trust.

The service is free for institutions with electricity consumption of in excess of 100,000 kWh per year, and it only requires the institution to give the Danish Electricity Saving Trust permission to collect the information from the electricity supply cable in order to register larger consumers' electricity consumption via remote monitoring.

State institutions with electricity consumption of less than 100,000 kWh per year can obtain similar benefits by installing a special electricity meter system with the assistance of the Danish Electricity Saving Trust (see more on [www.se-elforbrug.sparel.dk](http://www.se-elforbrug.sparel.dk)).

Institutions linked to the system can monitor their electricity consumption at [www.se-elforbrug.sparel.dk](http://www.se-elforbrug.sparel.dk) on an hour-by-hour basis for each meter connected. This means that it is both possible to monitor ones own consumption and also to make comparisons with the electricity consumption of other similar institutions. This can be a useful tool for identifying potential savings.

The website is also a useful tool for making consumption trends visible and publicising savings made by the institution's staff in connection with the behaviour-influencing campaigns, etc.

### ***Energy-efficient buildings***

#### **Section 10**

The Danish Energy Authority will distribute special guidelines concerning the implementation of financially-viable energy-saving schemes as recommended in the energy labelling for buildings, and which have a payback period of under 5 years.

However, it needs to be clarified that the requirement concerning the implementation of financially-viable energy savings with a payback period of up to 5 years only applies to savings initiatives in the energy plan that are worth implementing immediately.

#### **Section 11**

State institutions that are responsible for the operation and maintenance of buildings (including the technical plant in buildings) shall ensure that operation, maintenance and conversions shall take place in an energy- and cost-effective manner.

This implies that institutions shall ensure that:

- existing installations and equipment function optimally in energy terms per the conditions specified, and that their output (e.g. heating and ventilation) is configured to meet the demands at any given time,
- the possibility of making energy-efficient improvements to installations and equipment is constantly assessed, and that financially-beneficial initiatives are implemented,
- when carrying out maintenance and conversions of installations, they choose energy-efficient solutions, subject to the fact that these are financially-viable in terms of investment and operational costs,

- new technical plant that consumes large amounts of power is fitted with meters for separate reading of the energy consumed.

The Ministry's coordinating contact person responsible for energy and the institutions' staff responsible for energy should incorporate these points in their work.

Individual institution's efforts should be tailored appropriately to the Ministry's targets for energy savings.

It is recommended that energy-saving efforts (in terms of electricity, heating and water) are based on the following courses of action:

- Keep track of consumption and monitor the trends.
- Compare the institution's consumption with other similar institutions so as to assess the savings potential.
- Identify relevant areas that have significant and cost-effective savings potential.
- Produce a plan for implementation of initiatives.

Different instruments and tools for helping state institutions can be sourced primarily through the Danish Electricity Saving Trust, the electricity, natural gas and district heating supply companies, as well as from the Danish Energy Management Scheme (ELO) for large buildings. Although changes in the ELO scheme are scheduled to come into force from 1 January 2006, it is expected that the new regulations will be able to be used in a similar way.

Data relating to energy consumption in Ministries and institutions can be found at the <http://eis.teknologisk.dk> website, which also provides users with the opportunity of viewing key figures for energy and water consumption for the individual institutions and to compare the key figures for buildings (benchmarking).

### ***The Danish Electricity Saving Trust***

In terms of electricity savings, the Danish Electricity Saving Trust offers a range of useful tools for implementing electricity savings at an operational level. According to the Trust, approximately 80% of the electricity consumed in public sector office buildings (including state buildings) is used to power IT equipment, server room, ventilation and lighting. It is recommended that state institutions should make use of the Trust's tools in a threefold process:

1. Institutions register with "see your electricity consumption", thereby enabling every institution to monitor its electricity consumption ([www.se-elforbrug.sparel.dk](http://www.se-elforbrug.sparel.dk)). Institutions with electricity consumption of in excess of 100,000 kWh per year shall register as per Section 9 above.
2. A so-called benchmark of the institution's own electricity consumption is created. This shows how energy efficient the institution is compared with other state institutions and similar bodies ([www.se-elforbrug.sparel.dk](http://www.se-elforbrug.sparel.dk)).
3. Use the good advice on electricity consumption presented on the Trust's websites ([www.it.sparel.dk](http://www.it.sparel.dk), [www.serverrum.sparel.dk](http://www.serverrum.sparel.dk), [www.ventilation.sparel.dk](http://www.ventilation.sparel.dk) and [www.belysning.sparel.dk](http://www.belysning.sparel.dk)). Advice includes specific electricity consumption for IT equipment, server room, ventilation and lighting.

The [www.se-elforbrug.sparel.dk](http://www.se-elforbrug.sparel.dk) website also offers the option to display electricity consumption split between IT equipment, server room, ventilation, lighting and miscellaneous consumption.

However, if detailed information is required for each category a meter has to be fitted to each type of equipment.

An initially straightforward way of keeping track of split consumption is to simply switch off the appliance/equipment concerned at night (i.e. IT equipment first night, and ventilation second night, etc.) and then check the day's electricity consumption at [www.se-elforbrug.sparel.dk](http://www.se-elforbrug.sparel.dk) the following morning. This a relatively easy way of finding out where the greatest savings potential can be achieved in the institution in comparison with the equivalent split consumption of other similar institutions.

### ***Electricity, gas and district heating distribution and supply companies***

Electricity supply companies offer free energy consultancy, including in many instances an offer to have an energy consultant go through the institution's installations, etc. Further information is available from the electricity supply companies' trade association ELFOR (Danish Power Distribution) by applying to the secretariat, and on the secretariat's [www.elfor.dk](http://www.elfor.dk) website, and from the individual electricity supply companies.

The Electricity supply companies' [www.Energiguiden.dk](http://www.Energiguiden.dk) website features good advice on saving energy and water, both inspiration on how working with energy and water saving can be approached, and specific advice on saving electricity, heating and water. Information on energy-efficient pumps, ventilators and motors is also available on the following websites: [www.sparepumpe.dk](http://www.sparepumpe.dk), [www.spareventilator.dk](http://www.spareventilator.dk) and [www.sparemotor.dk](http://www.sparemotor.dk).

Gas and district heating distribution and supply companies also offer free energy consultancy. Further information can be obtained from the institution's heating company and from the Danish District Heating Association ([www.danskfjernvarme.dk](http://www.danskfjernvarme.dk)), or from the Danish Gas Technology Centre ([www.dgc.dk](http://www.dgc.dk)). The Danish District Heating Association's website provides information on the names of heating supply companies in the different areas.

Wherever possible, ministries and institutions should seek recommendations from the electricity, gas and district heating supply companies' consultants on improving the energy-efficiency effort and implementing cost-effective projects with a payback period of less than 5 years.

Furthermore, institutions are advised to contact the supply companies to obtain energy advice before undertaking renovations or conversions.

Additional information on the electricity and gas supply companies' offers can be found on the [www.energiselskaberne.dk](http://www.energiselskaberne.dk) website. The site provides users with the names and addresses of the relevant supply companies based on the state institution's postcode inputted into the system. The site also provides other links to relevant websites featuring advice on energy saving provided by energy companies.

### ***Danish Energy Management Scheme for large buildings (ELO)***

Under the current regulations, all state properties in excess of 1,500 m<sup>2</sup> shall be energy labelled on a regular basis<sup>1</sup>. Energy labelling consists of an energy label (with an assessment of the building's energy-efficient condition based on a scale from A to M, where A is the highest rating), and an energy plan that contains an overview of opportunities for financially-viable energy-saving of electric-

---

<sup>1</sup> A bill has been introduced to reduce the threshold for energy labelling to 1,000 m<sup>2</sup> (bill no. L-136).

ity, heating and water. Further information is available on the [www.energiledelsesordningen.dk](http://www.energiledelsesordningen.dk) website.

The energy plan contains both savings suggestions that require substantial investment in plant and also initiatives that by their nature cover improvements in the day-to-day operation, as well as initiatives geared to smaller conversions. In addition, the energy plan contains recommendations that involve changes in energy-related behaviour. Thus it is important that the recommendations in the energy plan are incorporated in every aspect of the savings work.

Although changes in the ELO scheme are scheduled to come into force from 1 January 2006, it is expected that the new regulations will be able to be used in a similar way.

It is also envisaged that buildings not exceeding 1,500 m<sup>2</sup> can apply for energy consultancy advice from the supply companies used by individual state institutions. They may also have an ELO report prepared, even though there is no legal obligation to do so.

A considerable amount of knowledge on the allocation of energy consumption covering different end uses (e.g. lighting, ventilation, canteen operation) is a good starting point for assessing the savings potential. The circular therefore requires that new energy-consuming plant and installations must be fitted with separate meters to cover significant split consumption (e.g. electricity consumption that is expected to be 10,000 kWh per year or more). For a start, meters should be used that can be read remotely, thereby making it possible to display the consumption on the Internet.

Separate meters are especially relevant for electricity consumption, which is typically split across several end uses. For heat consumption, it can for example be relevant to install separate meters for domestic hot water or for selected parts of a building.

### **Sections 12, 13, 14 and 15**

No comments.

### ***Publication of energy reports***

#### **Section 16**

All state institutions that have energy labelling in place shall publish reports on their websites.

In circumstance where an institution has to rent, and the owner has energy labelling of the property in place, the renting institution's website shall:

- if possible create a link to the energy labelling on the owner's website,
- or, if possible, publicly display the energy label.

Institutions that do not have their own website shall publicize the energy label by other means.

Institutions that have had an energy consultancy report compiled by their supply company shall publish the report together with the energy label.

*Translated by Robin Worrall*