

2009

The Danish Electricity Saving Trust

Electricity Savings Action Plan



ELSPAREFONDEN



The Energy Saving Label

Since its launch in 2006 the Energy Saving Label has been used on a wide range of products including: A-rated energy saving bulbs, fridges, freezers, washing machines, tumble dryers, circulator pumps, computers and monitors, AutoPowerOff plug banks, wireless devices, power supplies, and air-to-air heat pumps. The use of the label is being constantly expanded to cover other product groups.

Design

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on behalf of the Danish Electricity Saving Trust

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0.1

Summary

United Nations Climate Change Conference in Copenhagen

To coincide with the United Nations Climate Change Conference (COP15), the Danish Electricity Saving Trust will use the growing interest in climate change to publicise new concepts and initiatives for limiting electricity consumption, including a wireless concept which makes it possible to control appliances in the home using a mobile telephone.



Vision

The 2007 Electricity Savings Action Plan of the Danish Electricity Saving Trust (Elsparefonden, hereinafter referred to as 'the Trust') was the first occasion when the Trust outlined its comprehensive vision for halting the growth in electricity consumption in households and the public sector by 2009 at the latest.

Simply stated, the electricity consumption curve must be broken, with consumption falling there-

after. This vision is a direct extension of the political goals which state that Danish energy consumption must decrease to a lower level, with significant reductions in both fuel consumption and the impact on the environment, as well as improving the security of supply.

The current financial crisis will damp down the sale of electrical equipment for a time, and this will underpin the Trust's vision of the electricity consumption curve being broken in the short term. However, it is very important for the Trust

that the consumption curve is broken once and for all, even in circumstances where the economy continues to grow.

The Trust's work and results are closely linked to the prevailing current terms of reference as well as trends in the economy, prices, taxes, and bans. This means that the Trust must be flexible and responsive in order to react quickly to a changing world.

Use of market relevant tools and initiatives

The 2009 Action Plan focuses on how the Trust will realise its vision that 'the upward electricity consumption curve must be broken'.

Various players are involved in promoting the use of energy more efficiently. The vision that electricity consumption in households and the public sector must be broken in 2009 requires that there is close interplay between the different energy savings players and initiatives. This means that the tools and initiatives should support each other in order to ensure electricity savings over both the short and long term.

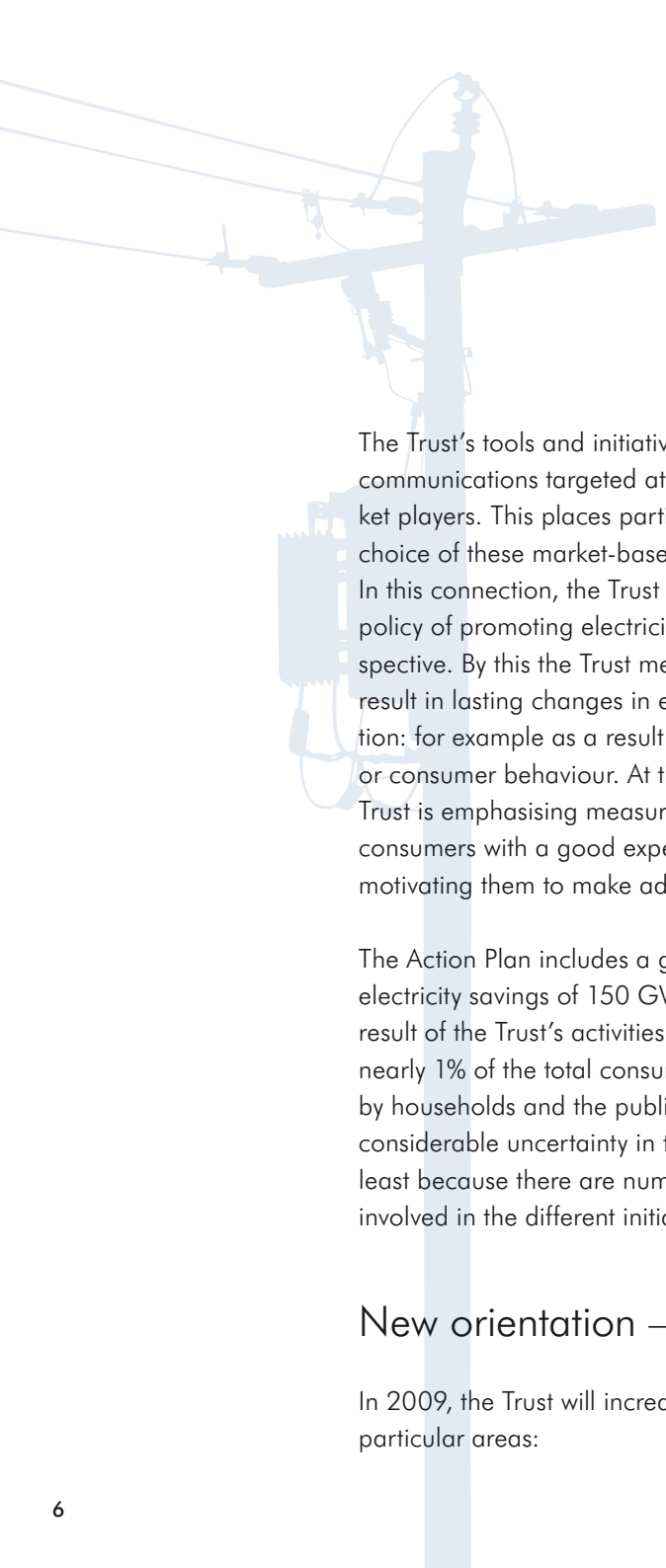
VISION – 'the electricity consumption curve must be broken'

The vision for the Danish electrical equipment market in 2009 is characterised by the fact that:

- › Most consumers¹ know how much electricity they use, and are aware of the most obvious savings opportunities
- › Denmark has a more intelligent approach to the use of electricity, where energy saving equipment and better usage patterns limit unnecessary consumption
- › The most energy efficient appliances find their way onto the Danish market
- › Most consumers¹ consistently choose to buy energy efficient appliances and equipment

These developments should arrest the present increase in electricity consumption, breaking the upward electricity consumption curve by 2009 at the latest.

¹ In this context, the word 'consumers' applies to consumers in both the household and public sectors.



The Trust's tools and initiatives primarily involve communications targeted at consumers and market players. This places particular demands on the choice of these market-based tools and initiatives. In this connection, the Trust has formulated a policy of promoting electricity savings with perspective. By this the Trust means savings which result in lasting changes in electricity consumption: for example as a result of changes in supply or consumer behaviour. At the same time, the Trust is emphasising measures which provide consumers with a good experience, thereby motivating them to make additional savings.

The Action Plan includes a general target for electricity savings of 150 GWh/year as a direct result of the Trust's activities. This is equivalent to nearly 1% of the total consumption of electricity by households and the public sector. There is considerable uncertainty in this connection, not least because there are numerous players involved in the different initiatives.

New orientation – new angles

In 2009, the Trust will increasingly focus on three particular areas:

- › Virtual tools and initiatives
- › Climate angle and the United Nations Climate Change Conference
- › International exposure and ambitions

Today, the general public and authorities expect individual advice based on their actual circumstances. However, providing advice on a personal basis is very expensive. This is the reason why the Trust is giving high priority to web-based tools, where users can get advice based on their individual circumstances and needs.

A very great advantage of these types of virtual tools is that the individual and extremely low overheads can be spread across new users, including offering the services to partners in other countries.

As a result of the growing interest and concern about the environment by politicians and the general public, the Trust will additionally focus on the link between electricity and climate, as well as the opportunities presented in 2009 by the United Nations Climate Change Conference.

Most electrical appliances and equipment are traded on the international market. This means that

the Trust's ability to influence, and its success in doing so, is largely connected to the fact that the Trust is known and respected. Consequently, the Trust has international ambitions to be a leader in selected areas. This is to ensure the maximum impact for the Trust's activities, paving the way for work sharing with relevant players in, and outside, Denmark.

Areas of initiative

The Action Plan is built round two elements – permanent information campaigns, and marketing initiatives – both of which are designed to ensure that households and the public sector are well informed about possible ways to save electricity, regardless of whether these involve the use of existing equipment, or new purchases.

In respect of households and the public sector the Trust's efforts are split into advice about purchasing (e.g. the Energy Saving Label and Purchasing Guidelines) and operating equipment on a daily basis. For both customer groups, there are established concepts for those wishing to take the lead and act as role models. These include Curve Breaker Agreements for the public sector and

other large consumers as well as Klub1000 for households.

In a new departure, the Trust is consolidating the direct overheads for campaigns (e.g. media costs) and the ongoing expansion of information, advice and guidelines at www.elsparefonden.dk (Danish) and www.savingtrust.dk (English). These activities are being drawn together to ensure continuity, cohesion and economies of scale in communication terms, particularly in relation to web communication and TV advertising.

The five special areas of initiative are an important supplement to the fixed activities. These involve areas and projects which can be developed in the long term into core tools and initiatives for the Trust within a few years. Development projects like these will ensure that the Trust can continue to provide consumers with relevant advice and offers.

The Trust's strategy and areas of initiative are described in subsequent sections of the Action Plan.

Electricity savings and energy policy goals

Electricity is the energy form in Denmark which is linked to the consumption of most fuel, and the highest specific CO² emissions. The electricity sector accounts for ca 40% of the country's total CO² emissions.

Seen in an international context, the Danish electricity sector has a high specific level of CO² emissions per kWh of electricity generated – despite the fact that wind turbines produce nearly 20% of the electricity generated, and that Danish power stations are energy efficient. The reason for the high level of CO² emissions is that half the electricity in Denmark is produced by coal.

Consequently, electricity savings are the key to reducing Denmark's emissions of greenhouse gases and research shows that it is cheaper to fulfil climate targets via electricity savings than investing in actual electricity production.

But electricity savings are not simply for the benefit of the climate and the economy. Lower consumption of electricity is also essential for Denmark to be able to live up to its binding targets in terms of:

1. a reduction in fuel consumption
2. increasing energy efficiency, and
3. a greater share of renewable energy

This is why, in both the short and long term, saving electricity is one of the key elements in the combined policies covering energy and the environment. In addition, improving efficiency is one of the tools which can be used to stimulate economic growth in companies and society.

0.2

Introduction



Notebook computers

Replacing work stations with notebook computers can reduce electricity consumption by up to 90%. The Trust is developing and prioritising new tools and initiatives with the help of front-runners, voluntary agreements, benchmarks and by making electricity consumption and savings visible.

The Action Plan sets out the overall priorities for the Trust's activities in 2009 and subsequent years. The Action Plan is built partly round permanent information and marketing campaigns targeted at households and the public sector, and partly round a number of special areas of initiative.

The Danish Electricity Saving Trust is an independent institution led by a Board appointed by the Danish Ministry of Climate and Energy. The Trust was established in 1997 with the purpose of promoting electricity savings in the household and public sectors.

The Danish Electricity Trust Saving Bill states that the Trust's efforts must be directed at households and the public sector. The business and commercial sectors do not contribute financially to the Trust. The political agreement on the supply of natural gas and energy saving of 29 May 2001 states, however, that the Trust's tools and initiatives can be offered to business and commerce where these are construed as spin-off effects of initiatives directed at the public sector or households. However, the Trust may not offer direct subsidies to the business and commercial sectors.

Funding situation

The Trust is financed by a Special Electricity Savings Charge of DKK 0.006/kWh payable by households and the public sector. In respect of the 2009 Danish Budget, the Trust has DKK 93.5 million at its disposal from the proceeds of the charge. The total sum available in 2009 has been reduced by DKK 6 million as a result of a change in the accounting method.

Prioritisation of electricity savings projects

According to the Electricity Trust Saving Bill the objective of the Danish Electricity Saving Trust is 'to promote savings in electricity consumption in homes and public institutions in accordance with environmental and economic considerations.'

Following its establishment in 1997, the Trust's primary task was to encourage conversions from electric heating to district heating or natural gas. In the intervening period, and in compliance with its legal obligations, the Trust has developed and prioritised new tools and initiatives which benefit

the economy, and result in greater savings per Danish kroner spent on these initiatives (cf. 2004 Evaluation of Danish Electricity Saving Trust).

The Trust allocates funds on the following basis:

1. Activities targeted at households – DKK 20 million
2. Activities targeted at the public sector – DKK 20 million
3. Mass communication and web promotion – DKK 33 million
4. Special areas of initiative and development projects – DKK 8 million
5. General activities – DKK 3 million
6. Secretariat overheads – DKK 9 million
7. Contingency – DKK 0.5 million

0.3

Vision 2009



Curve Breaker

Curve Breaker Agreements have already reduced electricity consumption in many public sector organisations and private companies. The Trust's goal is to conclude even more of these agreements in 2009.

Over the last 10 years (1998-2007), electricity consumption in households has risen slightly by 1.6%, but public sector electricity consumption has risen by 12%. Last year however, partly as a result of the very mild winter in 2007, consumption by households fell by 2%. Consumption by the Public sector continued to rise by ca 1.3% from 2006 to 2007.

However, the above-mentioned developments in energy consumption are characterised by two contrasting trends.

On one hand, we are purchasing electrical appliances which are generally more energy efficient, such as flat screens and portable computers, energy saving bulbs, A-rated pumps and A++ and A+ large appliances – all of which use significantly less power than the equipment they replace.

On the *other* hand, the volume of electrical appliances in homes and offices is growing. Consumer electronics, computers, office equipment and air conditioners are selling in record numbers. At the same time, equipment is used for longer, and these days many appliances use standby power.

VISION – ‘the upward electricity consumption curve must be broken’

The vision for the Danish electrical equipment market in 2009 is characterised by the fact that:

- › Most consumers² know how much electricity they use, and are aware of the most obvious savings opportunities
- › Denmark has a more intelligent approach to the use of electricity, with energy saving equipment and better usage patterns limiting unnecessary consumption
- › The most energy efficient appliances should find their way onto the Danish market
- › Most consumers² should consistently choose to buy energy efficient appliances and equipment

These developments should arrest the present increase in electricity consumption, breaking the upward electricity consumption curve by 2009 at the latest.

Computers and TVs are examples of electronic aids which use a lot of power, and also consume a not insignificant amount of standby power. New types of electrical appliances are also appearing on the market. These could be categorised as luxury appliances and include products such as patio heaters, plug and pour beer chillers, Quooker tap water boilers, and similar devices.

In technology terms, there is no doubt that the impact of the growing number of appliances can be neutralised through improvements in energy ef-

iciency. Household electricity consumption would be halved tomorrow if all current equipment was exchanged for the best products on the market.

In addition, there is considerable potential for saving power through the use of more intelligent control systems. Equally, the growth in public sector electricity consumption can only be arrested by consistent purchasing of energy efficient PCs and office equipment, and through the more efficient operation and maintenance of technical plant.

² In this context, the word ‘consumers’ applies to consumers in both the household and public sectors.

Electricity savings with and without perspective

There are important environmental benefits of saving power. But there are different ways of achieving these savings. Here in the Trust we divide electricity savings into two groups – those with perspective and those without.

Electricity savings *with* perspective provide lasting benefits. These can include new technologies which dramatically improve energy efficiency. But they can also include consumers' positive experiences of saving electricity which sow the seeds for behavioural changes and new markets for energy efficient products.

Conversely, electricity savings *without* perspective can be obstacles to future electricity savings. These can be savings which consumers regret and thus develop a general dislike for. The same applies to 'paper savings' and initiatives, which would occur anyway, and are therefore not real. Finally, the Trust's experience is that fixed subsidy schemes hinder development because they signal that something does not add up financially.

The overall vision for the Trust's ability to influence the supply of, and demand for, energy efficient appliances and solutions, i.e. by stimulating both the market as well as the energy savings activities of other authorities and the electricity supply companies, is formulated in the Vision section on page 11.

If the vision of breaking the trend and achieving a subsequent fall in electricity consumption is to become a reality, then greater and more effective efforts are required from many players. The target groups which ultimately decide electricity consumption are those with the financial or marketing power – producers, retailers and consumers, together with government authorities and opinion formers.

The Trust aims to achieve electricity savings in households and the public sector. The term 'energy efficient' is used in a number of contexts in the Action Plan as a commonly used term. In addition, in a number of cases, there is a direct correlation between saving heat and electricity, for example in ventilation equipment, boilers and central heating plants, as well as systems in which heat is directly or indirectly based on electricity.

0.4

The Trust's goals



Communication

The Trust's www.elsparefonden.dk and www.savingtrust.dk websites are at the centre of the information activities covering households and the public sector. The websites should be perceived as a natural place to get information and guidance about using, and saving, electricity.

150 GWh/year or 1% in the period 2008-2009

As previously mentioned the Trust is one of many players which needs to ensure that the vision becomes a reality. The Trust has set a target for how its own activities can lead to new annual electricity savings of 150 GWh/year in the period 2007-2009. This is equivalent to nearly 1% of the electricity consumed by households and the public sector. In relation to the Trust's total funding this equates to DKK 0.1 (10 Danish øre) per kWh saved over the lifetime of projects. This is a fraction of the cost of producing one kWh of electricity.

The total of new permanent savings in the period mentioned above is 450 GWh, split between households (300 GWh) and the public sector and the new special areas of initiative (150 GWh).

The new goal is double the amount set for the Trust in relation to the Remarks in the Danish Electricity Trust Saving Bill which estimated annual savings of 75 GWh/year.

This more stringent target is closely connected with a change in strategy which involves the Trust moving from stand-alone areas of initiative and subsidies to massive and comprehensive communication and marketing campaigns directed at the household and public sectors.

Target for activities directed at households

A comprehensive information campaign with continuous activities in relation to households is expected to produce annual electricity savings of 100 GWh/year in 2009 and subsequent years.

Funds totalling DKK 20 million will be spent on these campaign activities (excluding media and web costs) as well as building up a knowledge base.

Target for activities directed at the public sector

A considerable strengthening of efforts directed at the public sector in 2007-2009 and the years

ahead anticipates annual electricity savings of 25 GWh/year in the first year, rising to 50 GWh/year in 2009.

Funds totalling DKK 20 million will be spent on a number of campaign activities, as well as running and further developing the Trust's Customer Advice service.

Overall funding for mass media and web communication

In a new departure, the Trust is consolidating the direct overheads for campaigns (e.g. media costs) and the ongoing expansion of information, advice and guidelines on www.elsparefonden.dk (Danish) and www.savingtrust.dk (English). These activities are being drawn together to ensure continuity, cohesion and economies of scale in communication terms, particularly in relation to web communication and TV advertising.

Funds totalling DKK 33 million will be spent on commissioning costs, web development, PR and other areas.

Special areas of initiative

As an important supplement to the general activities mentioned above, the Trust has identified five special areas of initiative involving development projects on which it will spend DKK 8 million in 2009. These areas offer great potential, and in the years ahead they can be developed into important initiatives in relation to the target groups mentioned above. Projects of this sort are never completely risk free in terms of their impact over the short and long term. These relate to areas where the Trust has opportunities to significantly influence market developments by paving the way for completely new savings opportunities, or conversely, by limiting or advising against new and energy inefficient products which are about to be launched on the market.

The five special areas of initiative are:

- › Quantum leap technologies
- › Changing markets
- › New construction
- › Energy saving equipment and energy management
- › New business concepts for energy savings

0.5

The Trust's strategy 2007-2009



Energy labelling

From 1998 to 2007 the share of A-labelled large appliances has risen from 10% to ca 90%. The Trust's strategy is to influence the market in the direction of more energy efficient products and solutions, which are environmentally friendly and save consumers money.

In 2007, the Trust adopted a new strategy where, as mentioned previously, the primary activity involves implementing communication and marketing campaigns targeted at the household and public sectors. These key activities will ensure:

- › That consumers and the public sector are knowledgeable about electricity consumption and savings opportunities
- › Improvements in energy efficient behaviour associated with electrical appliances and installations
- › The purchase and recommending of products based on the simple, safe and cheap concept

As part of this strategy the Trust has formulated the following communication goal:

This communication goal is an essential precondition if the Trust is to meet the designated electricity savings targets in the short and long term.

The Trust's interventions in the market are based on a push-pull strategy. The key elements are to involve and deal with both the supply side and consumers. The goal of the Trust's activities is to promote the development and greater use of energy efficient products and systems. This policy aims to create so-called win-win solutions, in which suppliers can see the financial advantage of complying with requirements concerning quality, price and impartial information in order to benefit from the Trust's information and campaign activities, and its offers and 'endorsements' of energy efficient products.

The Trust's strategy is to influence the market in the direction of more energy efficient products and solutions. The strategy is illustrated in Figure 0.1:

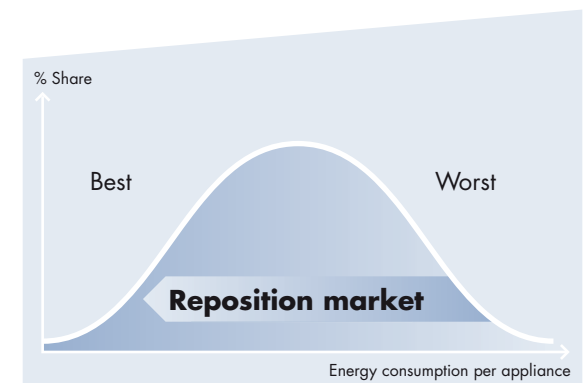


Figure 0.1 Influencing the market

Communication goal 2009

In 2009, the Trust wants to be known by consumers³ as the experts in, and the guarantors for, energy efficient consumer behaviour. At the same time the Trust should be a natural and respected partner for retailers, as well as for producers and suppliers of electrical appliances and systems.

³In this context, the word 'consumers' applies to consumers in both the household and public sectors.

Influencing the market involves helping front-runners and the use of benchmarks, voluntary agreements, Purchasing Guidelines, making electricity consumption visible and other measures, as illustrated in Figure 0.2.

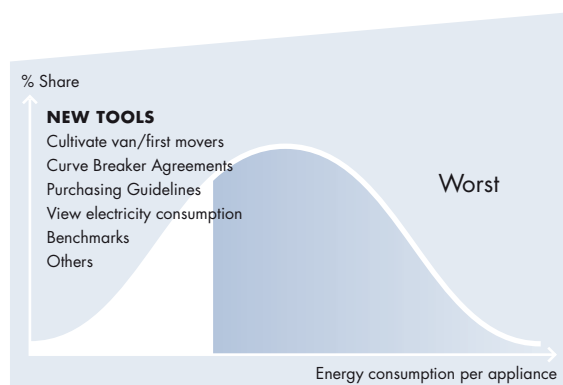


Figure 0.2 New tools and initiatives

The 'new' tools are important supplements to the more 'traditional tools' such as legislation, bans, factual information, and other similar measures, as illustrated in Figure 0.3.

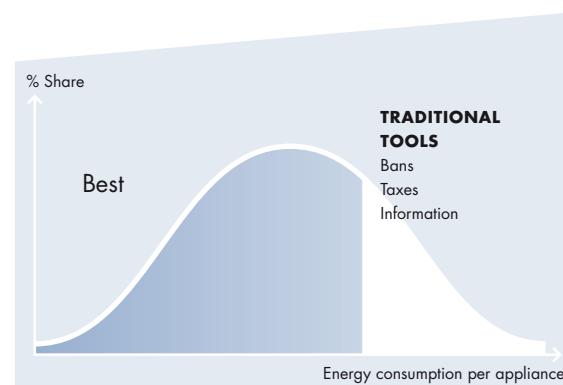


Figure 0.3 Traditional tools

The Trust therefore focuses primarily on 'new' tools and initiatives but also relies on 'traditional' tools in activities directed at the three target groups:

- › **PRIVATE HOUSEHOLDS**
Private households (householders) comprise all private consumers.
- › **PUBLIC SECTOR**
The public sector comprises politicians, public sector decision-makers and those working at governmental, regional and municipal levels.
- › **OTHER KEY PLAYERS**
Key players comprise producers, importers, wholesalers, retailers, suppliers of services (installers, electricians, etc.) within areas related to electrical appliances and systems. The target group also includes other players such as opinion formers, or those that influence end-users in some other way. These can include energy companies, architects, advisers, trendsetters, knowledge providers and other specialists. Key players operate as individuals, stand-alone companies and at sector level.

Terms of reference for the Trust's work

The terms of reference for the Trust's work are determined nationally and internationally.

At a national level, Danish legislation and political agreements are important foundations for the Trust's work. However, the Trust is also an important player which can both support such legislative and agreement-based initiatives and, in a number of situations, it can also create the opportunities for such initiatives. One example of this is a recent political agreement for a more stringent energy effort by government departments and ministries. Amongst other features, the agreement stipulates that individual ministries commit themselves to implement specific savings targets within their areas of responsibility, and publicise their efforts. This new initiative has been inspired on many fronts by the Trust's Curve Breaker Agreements with public sector institutions. These agreements will also form an important basis for the Trust's activities targeted at government in 2009.

The August 2006 agreement between the Danish government and the electricity, natural gas, district heating and oil distribution companies included concrete and ambitious savings targets, which the energy supply companies are obliged to achieve. Thus, the energy supply companies are becoming ever more active in playing their part to encourage savings by customers. The Trust is continually in touch with the energy companies and their trade associations, with a view to coordinating, and collaborating on, specific electricity savings campaigns and other initiatives.

In 2009, the Trust also intends to expand its relations with trade organisations which are active players in terms of electricity savings. For example, ties with organisations such as the Danish Consumer Council, Local Government Denmark (KL), the Danish Regions, the Confederation of Danish Industry (DI) and others will be strengthened in 2009.

The terms of reference for the Trust's work are also determined by international developments, especially EU initiatives. The Trust is therefore particularly focused on taking advantage of international energy efficiency schemes and contributing to the international efforts to reduce the consumption of electricity (see Section 4).

Targets/key indicators

The key issue relating to the Trust's activities in 2009 is the achievement of the projected electricity savings goals. As mentioned previously, the projected savings for the household and public sectors will be achieved via a massive information and marketing effort. Nevertheless, the Trust is not able to control or dictate how customers use electricity. Success depends entirely on the Trust's ability to influence those who really decide how much electricity is used – the supply side which produces and markets electrical equipment, and consumers who buy and use these products.

Whether information and marketing efforts lead to real electricity savings depends therefore on a number of related activities, each of which must succeed, namely:

- › that the Trust offers relevant advice, recommendations and tools to the household and public sectors
- › that the Trust's communications not only reach consumers but are also comprehensive, topical, well informed, and specific
- › that the supply side enters into voluntary agreements with the Trust and actively supports the Trust's communication of knowledge and know-how as one element in the marketing of energy efficient products, and through the use of the Energy Saving Label.

To a large extent, the Trust's future activities will depend on whether the Trust's communication targets are successfully achieved.

A monitoring system was therefore established in 2007 to ensure that the Trust's communication of knowledge and know-how contribute to a growing awareness of the Trust and its Customer Advice service, the Energy Saving Label and benchmarks, the websites, as well as assessing

the professional coverage and relevance of the Trust's information and other activities directed at households and the public sector.

In connection with an evaluation of the Trust's activities, a nationwide representative survey of adults over 18 years of age was made in June 2008. Similarly, a survey was carried out in December 2007 and January 2008 covering staff responsible for energy and purchasing in government departments, the regions and municipalities. These two surveys form the basis for establishing a number of targets for the outcome of the Trust's efforts covering households and the public sector.

In future, the Trust will commission research at least once a year in order to monitor the progress of fulfilling the targets covering these two groups.

Targets

The following targets apply in 2009 and will need to be fulfilled by the end of the year. Research will be carried out at the beginning of 2010 to establish whether these targets have been achieved. A number of common targets have been established for the two groups, as well as specific targets covering the household and public sectors.

Targets for households

- › 40% awareness of the benchmark for household electricity consumption with 15% personally able to state that the benchmark for consumption is 1,000 kWh per person per year
- › 70% of those surveyed know how much electricity they use in their household
- › 100,000 registered users of My Home
- › 25,000 Klub1000 members

Targets for the public sector

- › Curve Breaker Agreements concluded covering electricity consumption of at least 500 GWh/year, including making agreements with an additional 15 municipalities, five ministries and one region in 2009
- › 70% awareness of the Purchasing Guidelines
- › 50% awareness of the Interior Layout Guidelines

Awareness of the Energy Saving Label

- › Households: 80%
- › Public sector: 80%

Awareness of the Trust

- › Households: 90%
- › Public sector: 90%

Considering the Trust and its tools as rather, or decidedly, important for achieving the savings targets

- › Households: 60%
- › Public sector: 85%

The Trust's Danish website:

www.elsparefonden.dk

- › 80,000 visitors/month at www.elsparefonden.dk
- › Households: 60% of users satisfied or very satisfied with the content found on www.elsparefonden.dk
- › Public sector: 60% of users satisfied or very satisfied with the content found on www.elsparefonden.dk

This monitoring system will continue and be expanded in 2009. The results will form the basis of the framework for setting specific targets and key indicators for the different elements of the total information and marketing campaigns. In relation to the larger campaign activities, it is absolutely vital that the Trust can measure whether communication campaigns are working or not on an ongoing basis. This feedback can clearly indicate which activities the Trust needs to initiate in order to meet the targets set.

The targets set above assume that no significant changes are made to the Trust's terms of reference, including funding, social changes and other unforeseen developments. As mentioned above, the Trust's funding has decreased which may mean that the communication targets described may be harder to achieve, mostly because some media commissioning may be given less priority.

General activities

As described above, the Trust's external activities are divided into four areas – households, the public sector, virtual tools, and special areas of initiative and development projects. In addition the Trust undertakes a range of tasks, which cannot unequivocally be connected to the above development and campaign activities, but conversely are a precondition for the Trust's work. These include putting projects and legal assistance out to tender, evaluations, general information activities, and shared management functions.

In 2009, total expenses covering these different basic functions amount to DKK 3 million.

Secretariat

According to the Danish Electricity Trust Saving Bill, the board of directors is required to establish an independent secretariat. The Secretariat operates from its own offices in Copenhagen, where some of the other connected consultancy functions are also located.

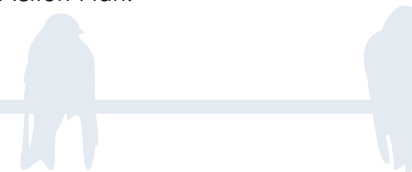
The Trust's board of directors has decided that the Trust will not accept unsolicited applications of financial support. The Trust's Secretariat has been given the task of developing proposals into initiatives and subsequently taking responsibility for their implementation. This places considerable demands on the Secretariat to be innovative and to have close contact with market players. At the same time, the Secretariat should be geared to implement a range of large-scale information activities and projects.

The Secretariat has a number of external consultants attached to it, as well as three service units and Secretariat functions, which have been located either wholly or partly in the same building as the Secretariat from autumn 2007.

The organisational structure selected with its small Secretariat, which delegates a large number of functions, not only provides the Trust with great flexibility but also allows it to draw on expertise as required.

The Danish government's Budget for the Trust in 2009 amounts to DKK 93.5 million, of which DKK 9 million is earmarked for salaries (DKK 7 million) and running costs (DKK 2 million) of the Secretariat. The latter covers office rental and associated maintenance overheads, energy consumption, bookkeeping and accounting costs, IT and telephone expenses.

The Trust's strategy and areas of initiative covering households, the public sector and large consumers, as well as other key players are described in greater detail in the following sections of the Action Plan.





1.0

Households



My Home

My Home is an interactive web portal offering consumers the opportunity to calculate their household energy consumption, receive advice on possible savings, and control and monitor their indoor environments by managing their energy consumption appropriately. The target for My Home is 100,000 users by the end of 2009.

Households

Introduction

This section outlines the characteristics of the market for electricity consumption in relation to the behaviour patterns of households and consumers; figures on the breakdown of electricity consumption in relation to end-use; as well as the potential for saving electricity.

Danish household electricity consumption is shown in Table 1.1.

Electricity consumed by households has remained relatively constant for the last 10 years (1997-2006), despite an increasing number of electrical devices. Although the rise in electricity consumption is characterised by rising consumption by electrical appliances within product areas such as TVs, PCs and electronics, consumption by other equipment, large domestic appliances for example, has been falling.

Scope: 2.48 million homes (detached houses, flats and farms) and 227,000 holiday and second homes.

5.43 million inhabitants: 1.21 million children, 905,000 old-age pensioners and a workforce of ca 2.759 million (2005).

Consumption: 8.8 TWh/year excluding electric heating*, split between permanent residences (8.5 TWh/year) and holiday and second homes (0.3 TWh/year).

9.7 TWh/year including electric heating*, of which electric heating in permanent residences (0.7 TWh/year) and holiday and second homes (0.4 TWh/year).

Consumption has remained relatively constant for a decade (1998-2007). Consumption has thus only risen by 1.6% during this period, with a reduction of 2% in 2007, which was primarily due to the mild winter that year.

Breakdown of end-use (ex electric heating)

28% IT/electronics

18% Fridges/freezers

18% Laundry/dishwashing

13% Lighting

9% Water heating, etc.**

9% Food preparation

5% Miscellaneous

Standby consumption of ca 1,140 GWh/year.

Annual electricity bill: ca DKK 20 billion at a price of DKK 2.0/kWh (incl. Danish VAT)

Source: Statistics Denmark, Danish Electricity Supply Statistics (2007) and 'ELMODEL-bolig' (ELMODEL-home)

* Electricity consumption by electric radiators and heat pumps.

** Electricity consumption by oil/gas-fired boilers, electric water heaters and circulator pumps.

Although appliances are increasingly more efficient within product categories which have been around the longest in households (e.g. large domestic appliances), electricity consumption both in terms of operation and standby is not always taken into consideration in new products within the IT and entertainment sectors. The first type of products also has a longer lifetime of 10-15 years, whereas IT and entertainment equipment is typically replaced after 2-5 years.

Danish consumers do not see themselves as purchasers of electrical equipment, but rather as purchasers of appliances with a secondary effect – namely the consumption of electricity. In some cases, following sustained advertising and publicity campaigns, consumers become aware of how much electricity they use, and allow this to influence their choice. Typically this applies to equipment such as large domestic appliances (fridges, washing machines, etc.) so long as the equipment's primary function is not compromised by lower power consumption. By comparison, it appears that electricity consumption is a secondary consideration when purchasing TVs, DVDs and other home entertainment systems. Typically, consumers take the attitude that, with the

exception of large domestic appliances, electricity consumption is not a significant factor when buying an appliance.

Nonetheless, many Danes give the impression that they occasionally, or even frequently take into consideration the amount of power they use in their homes, and would be interested in reducing their power consumption to some extent.

- › 86% completely or partly agree that electricity consumption should be less (not just limiting the increase)
- › 82% believe that they have reduced their electricity consumption
- › 60% believe that they can save even more than they have done previously
- › 64% declare that they either completely, or partly, agree that on a daily basis they do not give much consideration to how much power they use⁴

One barrier which prevents consumers' behaviour being reflected in their attitudes is that they generally do not know whether they have a small or a large electricity bill. It is of course very difficult for consumers to behave in a financially rational way if they have no knowledge of their consumption patterns or savings opportunities.

However, research commissioned by the Trust revealed that consumers' knowledge about their electricity consumption was increasing. The research showed that in 2006 30% of consumers were aware of how high their consumption was. Similar research in August 2007 revealed some improvement with 46% of consumers confirming that they knew how much electricity they used in their homes. In 2008, the equivalent figure was nearly 60%, which shows an increasing awareness about electricity consumption.

Another barrier is that the choice of electrical equipment is enormous, and generally speaking consumers do not have the time and energy to analyse and compare products, or research the best price offers in the market.

These different situations need to be reflected in the Trust's strategy in relation to electricity savings activities directed at Danish households, in order to make it simple and easy to act in an energy efficient way.

Potential savings

The estimated potential electricity saving by households is shown in Table 1.2⁵. The 'current' electricity savings potential is defined as the savings potential which already exists, but which for various reasons has not been achieved. This can include potential savings which could be achieved over a repayment horizon of 0-4 years. The long-term electricity savings potential is defined as the potential which can be achieved through intensive research and development efforts over the longer term covering the years up to 2015. The long-term electricity savings percentages do not include savings which could be considered financially viable in the short term. In order to present a complete picture, these should be added to the short-term 'current' potential savings.

Potential short-term and long-term individual and total electricity savings are shown in Figure 1.1.

As shown in Table 1.2 and Figure 1.1, the areas with by far the greatest total potential electricity savings are IT/electronics, laundry/dishwashing and lighting.

| Households End-uses | Potential savings GWh/year ⁶ and in % ⁵ | |
|-----------------------------|---|----------------------|
| | Short-term 'current' potential | Long-term potential |
| IT/electronics | 739 (30%) | 1232 (50%) |
| Fridges/freezers | 79 (5%) | 396 (25%) |
| Laundry/dishwashing | 238 (15%) | 950 (60%) |
| Lighting | 400 (35%) | 458 (40%) |
| Water heating (ex electric) | 198 (25%) | 396 (50%) |
| Food preparation | 79 (10%) | 277 (35%) |
| Miscellaneous | 133 (30%) | 220 (50%) |
| Total | 1,866 (21.2%) | 3,929 (44.6%) |

As the table shows, there are significant short-term potential savings of ca 1.87 TWh/year (21.2% of the total of 8.8 TWh/year), and long-term potential savings of 3.93 TWh/year (44.6% of the total 8.8 TWh/year).

Table 1.2

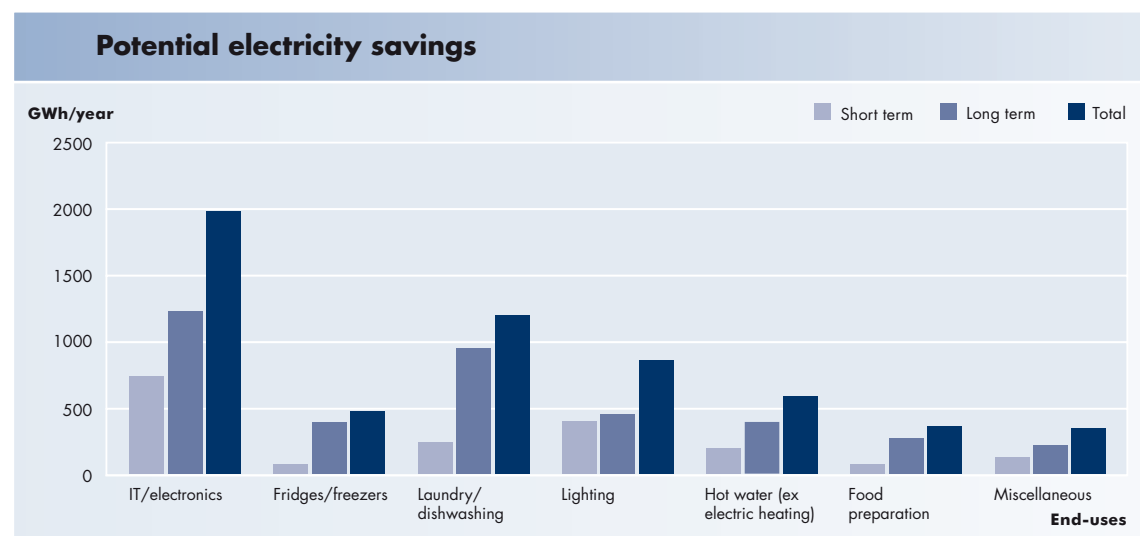


Figure 1.1

⁵ Cf. Assessment of potential energy savings in households, and the business and public sectors, Birch & Krogboe A/S, November 2004. ⁶ Based on the allocation of electricity consumption by end-uses in the household sector.

The Trust's strategy and activities in relation to households

The goal in relation to the Trust's vision and strategy for 2007-2009 is that the Trust's activities aimed at households should produce annual electricity savings of 100 GWh/year in the period covered. These activities should simultaneously make the market for energy efficient products transparent by: recommending energy efficient products, promoting price competition, increasing product choice and information about the offers, as well as ensuring the quality of the products.

The communication goal for the household segment involves the Trust becoming the preferred adviser for consumers by communicating insights on electricity savings and offering expert advice and guidelines in connection with the purchase and operation of electrical equipment.

PUSH-PULL STRATEGY AND KEY PLAYERS

The Trust works with the market on the basis of a push-pull strategy. On one hand, the Trust attempts to persuade producers and retailers to

promote their ranges of energy efficient products. On the other hand, the Trust attempts to stimulate demand through information activities directed at consumers in order to influence their purchasing patterns.

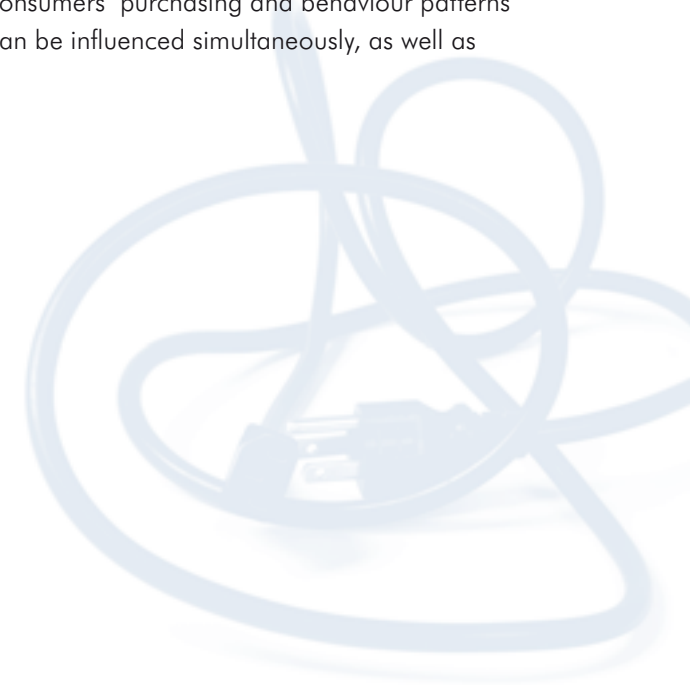
The Trust's communication goal of being the preferred adviser for consumers will be successful if consumers are aware of the Trust's offers and tools, including the Energy Savings Label and the websites at www.elsparefonden.dk (Danish) and www.savingtrust.dk (English). The Trust's different information activities will help ensure that this happens.

A position of being the preferred adviser for consumers increases the opportunities for concluding voluntary agreements with producers and retailers. Voluntary agreements involve partners as active fellow players in the campaigns, where the participants use the Trust's messages in their own communications.

The Trust is continuing the campaign-oriented partnerships with the supply side, including producers and retailers, which will be supported by generally ongoing and close collaborations before

the introduction and marketing of energy efficient equipment and products.

Collaborations with the supply side also include other key players which influence consumers' purchasing and behaviour patterns. These key players also include groups such as researchers, journalists and other opinion formers who have no commercial interest in what consumers purchase. The Trust wishes to collaborate, for example, with housing associations where many consumers' purchasing and behaviour patterns can be influenced simultaneously, as well as



influencing individuals who are seen as front-runners and sources of inspiration for others.

Sector-wide activities

The key platforms for communicating with households are:

- › Energy Saving Label, which ensures that consumers can easily find energy electrically efficient products when they go shopping
- › www.elsparefonfen.dk (Danish) and www.savingtrust.dk (English)
- › Individual web applications such as 'My Home' which offers consumers the opportunity to calculate their household energy consumption, receive advice on possible savings, and control and monitor their indoor environments by managing their energy consumption appropriately.
- › Information campaigns

Advice from the Trust should not just cover electricity consumption, but should describe all the areas prioritised by consumers: quality, ease of purchase and price. It should be simple, safe and cheap for consumers to choose the most energy efficient products, and consumers should always have information about other purchasing parameters.

The information campaigns should increasingly target the individual electricity consumption segments. The Trust will acquire additional expertise in these segments through research and surveys.

INFORMATION TAILORED TO INDIVIDUAL CONSUMERS AND FRONT-RUNNERS

The Trust also wishes to use individual information in relation to consumers. The Trust has therefore introduced several types of dialogue-based marketing to consumers.

Klub1000 is an online club for electricity users which will motivate consumers to act more in relation to their own individual electricity consumption based on meter readings and other information. New activities and marketing will be introduced for Klub1000 so as to retain existing members and attract new ones. In this respect it is important to get members' feedback about the sort of activities they would like to see in Klub1000. Membership numbers have not, however, grown at the same rate as when Klub1000 was launched in 2007. The aim is to recruit a further 4,000 new members to Klub1000 in 2009, bringing total membership to 25,000.

My Home is a self-help tool which offers consumers the opportunity to calculate their household energy consumption, receive advice on possible savings, and control and monitor their indoor environments by managing their energy consumption appropriately. The target for My Home is 100,000 users by the end of 2009.

Because Klub1000 and My Home focus on different core activities, independent profiles will be developed for both Klub1000 and My Home.

Additional tools can be developed based on ongoing collection of data and research into consumers' motives and behaviour in relation to electricity savings. Closer cooperation and the exchange of experiences with other information providers in the market, including the electricity sector, consumer organisations, and others will also contribute to this process.

1,000 KWH PER PERSON PER YEAR BENCHMARK

The Trust has created a benchmark of 1,000 kWh per person per year for sensible consumption of electricity. The purpose of the benchmark is to provide consumers with a tool for estimating their consumption, thereby putting them in a position

to identify obvious savings opportunities. Research has shown that the uptake by consumers of the benchmark is rather slow. In 2008, less than 20% of consumers were aware of the benchmark, indicating that massive publicity about the benchmark will be necessary in the next couple of years.

ENERGY SAVING LABEL

The Trust's Energy Saving Label is typically used on the 20% most electrically efficient products within an individual product category. Since its launch in 2006 the Energy Saving Label has been used on a wide range of products including: A-rated energy saving bulbs, fridges, freezers, washing machines, tumble dryers, circulator pumps, computers and monitors, AutoPowerOff plug banks, wireless devices, power supplies, and air-to-air heat pumps.

The use of the Energy Saving Label will be further expanded to cover other product groups, and in 2009 the label will be introduced for digital decoders, photocopiers and printers, geothermal heat pumps, servers, TV equipment, natural gas and oil-fired boilers, and dishwashers.

Consumers have taken to the Energy Saving Label. A survey undertaken in the first half of 2008⁷ showed that 80% of consumers were aware of the Energy Saving Label. Of those knowing the label, 48% considered the label to be very or extremely trustworthy, with 34% attributing some credibility to it.

The Energy Saving Label's high credibility also increases the interest taken by retailers and stores in using the label. This means that more and more stores are participating in the labelling scheme. In a new departure, retail chains have concluded voluntary agreements only to sell products carrying the Energy Saving Label.

The Energy Saving Label is administered by a Secretariat which ensures that the label is used consistently and correctly. Products are also subjected to ongoing testing to ensure that they fulfil the declared energy efficiency. In addition, stores are checked for their correct use of the Energy Saving Label in respect of in-store material, promotional flyers, newspaper advertising, and on the products stocked.

WWW.ELSPAREFONDEN. DK

WWW.SAVINGTRUST.DK

The Trust's www.elsparefonden.dk (Danish) and www.savingtrust.dk (English) websites play a central role in the information activities. The websites should be experienced as natural and satisfactory platforms for consumers wishing to get advice and guidance on electricity consumption and energy savings. The Trust is cooperating with selected partners and authorities to expand its knowledge and know-how about electricity savings to other key websites, not least in relation to children and young people.

The content on the Trust's websites needs to be supported by product and price overviews together with recommended products and user-friendly self-help systems. The key self-help tool is My Home which offers consumers the opportunity to calculate their household energy consumption, receive advice on possible savings, and control and monitor their indoor environments by managing their energy consumption appropriately. My Home is being constantly developed and aims to have 100,000 users by the end of 2009.

New products and concepts

The Trust will focus on new products, markets and technologies, and will keep up with developments in the market, thereby enabling it to influence product development in relation to minimising the power used in operational and standby modes. The testing of new, ready-to-market products will also play its part in both guiding consumers and placing energy consumption on the agendas of both producers and retailers.

IT and entertainment systems account for a large proportion of the electricity used by households, and sales of these devices are growing fast. This is why the Trust is particularly focusing on this area, especially in relation to TVs and digital decoders. The Trust has an ongoing collaboration with the Danish Consumer Electronics Association in respect of recommending electrically efficient TVs and digital decoders.

Another important area involves the Trust being at the forefront of development of electrical products in relation to the imminent digitalisation of the TV market and the increasing numbers of integrated products, where it is hard to identify the actual amount of power used.

Many household electrical products require professional delivery and installation. In this situation it can be difficult to see through the complexity, thereby making it difficult to consciously choose energy efficient solutions. The Trust will therefore extend its excellent experiences of fixed price agreements with the plumbing trade for the installation of central heating systems to other types of professional services, and build a bridge between purchasing and installation. This could take the form of fixed price agreements for delivering and installing products and services, supplier listings, and other measures.

Amongst other initiatives, the Trust has concluded an agreement with the Municipality of Frederikshavn in Jutland on the use of My Home as a digital platform for keeping in touch with local residents about energy advice and research. One element involves setting up a 'marketplace', where residents can receive offers from local tradesmen and service providers. The Trust would like to expand this concept to other municipalities and players.

Research shows that children and young people have a major influence on the choice of appliances in households, particularly IT and consumer

electronics. The Trust therefore intends to focus more on this target group through strategic collaborations with players that are involved with, and appeal to this group. These include forums for children and young people, or different types of media which appeal to the target groups. In this connection, the Trust is considering a specific plan aimed at schoolchildren in 2009.

Voluntary agreements and product campaigns

The Trust is continuing to work on ongoing campaign objectives and voluntary agreements with different trades within large appliances, A-rated energy saving bulbs, computers and monitors, circulator pumps and other products.

This applies to all voluntary agreements and campaigns in order for these to pave the way for a new generation of energy efficient products, including activities to consolidate the outcomes in relation to previous campaign efforts. The effectiveness of the agreements requires monitoring in relation to the market share for electrically efficient products, changes in consumer behaviour, the range of products offered by

producers and retailers, maintaining the focus of the trade associations on energy efficient products, as well as working to ensure that the price differential between energy efficient and energy inefficient products is reduced.

One area on which the Trust would like to focus more is consumer behaviour, where the Trust's communication is otherwise generally often targeted at purchasing habits (e.g. through the Energy Saving Label).

In connection with laundry there is considerable savings potential in laundry habits, for example how consumers use their washing machines. In particular the possibility to wash clothes at low temperature, using a so-called cold wash, offers new and exciting potential, not least because previously there had been a very successful campaign which focused on reducing the temperature of traditional hot washes from 90° to 60° C.

Laundry habits are also linked to drying habits and the use of tumble dryers, which in turn are linked to the indoor environment. There are also a number of other issues in play in connection with laundry habits. These include retaining the colour

of clothes, fabric wear, house dust mites and allergies, bacteria growth in machines, washing powder quality, as well as environmental consequences. Although these areas are not directly connected to electricity savings, the consequences influence consumers' laundry habits to a significant extent.

Summary of activities in 2009

Sector-wide activities

- › Expanding the push-pull strategy to include non-commercial key players which influence consumers' purchasing and behaviour habits.
- › The Energy Saving Label must be marketed and used widely across numerous product groups. The use of the label will be progressively expanded to product groups within large domestic appliances, consumer electronics, entertainment, energy saving equipment, and electrical equipment for heating and cooling.
- › Consumer-oriented information, including My Home and Klub1000.
- › Increased awareness of the 1000 kWh per person per year benchmark for sensible consumption of electricity in Danish households.
- › Increased focus on evaluating outcomes as part of a wider information initiative and ongoing marketing effort in which communication campaigns play a prominent part.
- › Generally ongoing and close collaboration with producers and retailers before the introduction and marketing of energy efficient equipment and products.
- › Consumer research for mapping information

requirements in relation to energy saving behaviour in connection with the purchase and use of electrical equipment.

- › Continuing efforts in relation to holiday and second homes with targeted information and campaigns relating to requirements which apply particularly to holiday and second home areas. The introduction of control and monitoring in My Home provides holiday and second home owners with unique possibilities. A special electricity savings pack for owners who rent out holiday and second homes will be launched in the spring.
- › Ongoing expansion of both websites at www.elsparefonden.dk (Danish) and www.savingtrust.dk (English) in terms of information, product lists and self-help systems for analysing consumers' own electricity consumption.
- › Strategic collaboration with other knowledge providers.

New products and concepts

- › Projects and campaigns to create market transparency for new products and technologies in areas where consumers find it particularly hard to obtain information about power consumption, including IT and entertainment equipment in relation to the imminent digitalisation of the TV market and the introduction of integrated products.

- › Introduction of product lists for TVs.
- › Testing of ready-to-market products.
- › Initiatives aimed at children and young people including strategic partnerships with players appealing to this target group.
- › Based on experiences gained from electric heating conversion schemes, the Trust has considerable know-how of fixed price agreements with the plumbing trade for the installation of complete central heating systems. The Trust will update these price agreements so that it can offer advice to consumers on current plumbing prices covering the cost of conversions to central and district heating systems, gas and oil-fired boilers, biomass boilers, heat pump systems and others.
- › Offer of service and other concepts in relation to fixed price agreements for delivery and installation, supplier listings, etc.

Voluntary agreements and product campaigns

- › Follow-up activities on voluntary agreements with manufacturers and wholesalers in respect of A-rated circulator pumps.
- › Voluntary agreements with manufacturers and wholesalers in relation to the marketing of energy efficient heat pumps and further development of

a product list to highlight the most energy efficient heat pump systems on the market.

- › Follow-up activities in relation to agreements covering recommended A-rated energy saving bulbs in order to maintain and develop the partnership with retailers and producers with a view to increasing the availability and market share of recommended A-rated bulbs and other electrically efficient light sources such as LEDs.
- › Follow-up activities to maintain the penetration of A++ rated fridges and freezers, including efforts to reduce the price differential between A, A+ and A++ cabinets.
- › Activities in relation to washing machines with the focus on laundry habits.
- › Continuation of the cooperation with the IT trade in relation to electrically efficient computers and monitors.
- › Activities covering further introduction of AutoPowerOff plug banks to reduce standby consumption in relation to PC and TV equipment.

2.0

The public sector and large consumers



Tools

The Trust introduced five new online tools for energy efficient purchasing in 2008. These will be consolidated in 2009 when the Trust will focus on helping public sector institutions to prioritise the purchase of energy efficient products.

Introduction

Electricity consumption in the Danish public sector is shown in Table 2.1.

The public sector is a major consumer and purchaser of a range of standard electrical appliances used in offices and workplaces, teaching establishments, hospitals, day care and residential homes. Additionally, the public sector makes use of systems which consume significant amounts of electricity such as IT and office equipment, lighting, ventilation and pumping as shown in Table 2.1.

The public sector

| | |
|---------------------|--|
| Scope: | Administration, teaching, hospitals, day care and residential institutions, suppliers, etc. |
| Consumption: | 4.49 TWh/year excluding electric heating – consumption is growing (nearly 1% per year in the last 10 years) partly as a result of increased use of IT and office equipment. Electricity used in ca 50 million m ² of space. |
| | Breakdown of end-use: |
| | 25% Lighting |
| | 25% IT/electronics |
| | 18% Ventilation and special fans |
| | 13% Pump systems |
| | 5% Motors |
| | 3% Electric heating |
| | 2% Cooling/refrigeration |
| | 2% Process heating |
| | 2% Air compression |
| | 5% Miscellaneous |

Annual electricity bill: nearly DKK 7 billion at a price of DKK 1.6/kWh (ex Danish VAT)

Source: Assessment of potential energy savings in households, and the business and public sectors, Birch & Krogboe A/S, November 2004; Danish Electricity Supply Statistics 2007; and others.

Electricity consumption in the public sector has risen by nearly 1% over the past 10 years; the reason for this is presumed to be because more IT and office equipment has been installed in offices. Public sector institutions typically have base consumption (i.e. consumption irrespective of whether anyone is physically working in an office or not) of 60% of the total power used. This suggests that some equipment is left running unnecessarily at night, and that there are considerable opportunities for saving energy by switching off, or reducing the power to equipment and systems at night and at weekends.

The public sector mostly uses standardised appliances and equipment. This opens up opportunities for saving considerable amounts of electricity in the long term – possibly as much as 50% of certain types of end-usage.

Potential savings

The estimated potential electricity savings in the public sector, both now and in the future, is shown in Table 2.2⁸. The stated potential under 'current' potential is the return which could be achieved over a repayment horizon of 0-4 years, subject of course to good financial management. The potential for long-term savings is defined as the potential which can be achieved through intensive research and development efforts over the longer term covering the years up to 2015. The long-term energy savings percentages do not include savings which could be considered financially viable in the short term. In order to present a complete picture, these need to be added to the 'current' potential.

In September 2008, the Danish Energy Authority commissioned an evaluation of the potential to save electricity by government departments and ministries⁹. The survey revealed potential savings of 23% over a repayment horizon of up to 4 years, and 27% over a repayment period of up to six years.

Potential current and long-term individual and total electricity savings are shown in Figure 2.1.

As shown in Table 2.2 and Figure 2.1, the areas with by far the greatest total potential savings (ca 80% of the total 'current' potential in GWh/year) are lighting, ventilation and IT/electronics (including PCs, server rooms, photocopiers, fax machines, etc.).

A number of studies and comparisons show that electricity savings are difficult to achieve, mostly because public sector institutions do not always act in a financially rational way. Some of the reasons are poorly defined work and competence demarcation, a large number of involved parties, and the public sector's unique funding structure. To this should be added the fact that electricity consumption and associated taxes do not always feature high on the list of priorities.

There is no denying that there are a number of barriers to the implementation of electricity savings in the public sector. For this reason, more intensive efforts need to be directed at the public

sector to realise the vision of 'breaking the upward electricity consumption curve'. Persuading the public sector to save energy is a challenging task and requires the use of a number of communication and campaign initiatives, as well as PR and direct client contact over an extended period.

| Public Sector End-uses | Potential savings GWh/year ¹⁰ and in % ⁸ | |
|---------------------------|--|---------------------|
| | Short-term 'current' potential | Long-term potential |
| Lighting | 393 (35%) | 561 (50%) |
| IT/electronics | 337 (30%) | 561 (50%) |
| Ventilation/fans | 283 (35%) | 202 (25%) |
| Pump systems | 58 (10%) | 146 (25%) |
| Motors | 45 (20%) | 45 (20%) |
| Cooling/refrigeration | 22 (25%) | 22 (25%) |
| Process/electric heating | 22 (10%) | 33 (15%) |
| Air compression | 31 (35%) | 18 (20%) |
| Miscellaneous | 79 (35%) | 90 (40%) |
| Total | 1,270 (28%) | 1,678 (37%) |

As the table shows, there are significant short-term potential savings of ca 1.27 TWh/year (28% of the total of 4.49 TWh/year), and long-term potential savings of 1.68 TWh/year (37% of the total 4.49 TWh/year).

Table 2.2

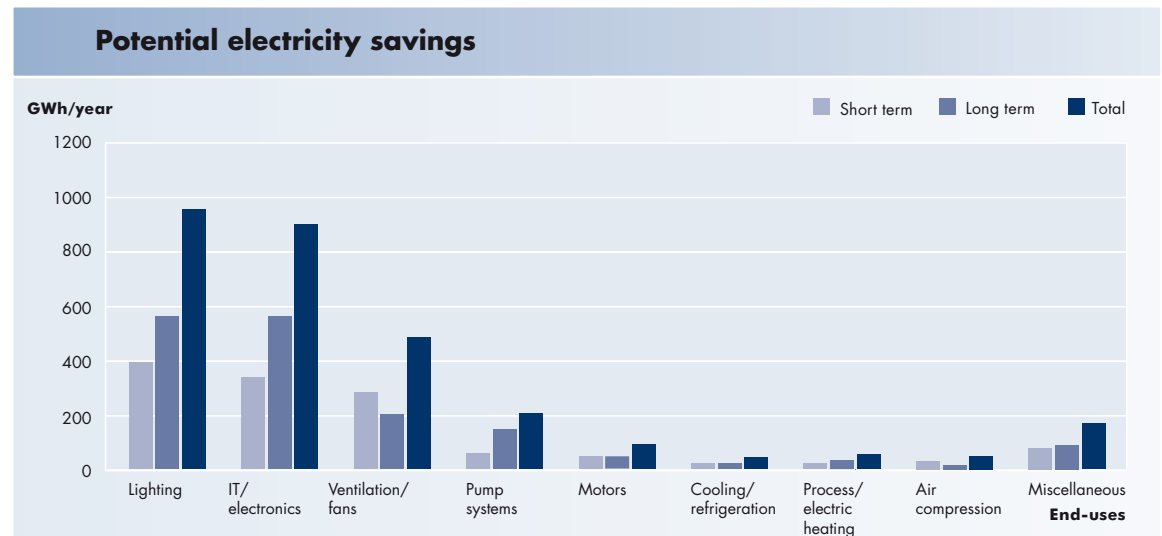


Figure 2.1

¹⁰ Based on the allocation of electricity consumption by end-uses in the public sector.

The Trust's strategy in relation to the public sector

As shown in Table 2.2, there is a significant 'current' potential saving in the public sector of ca 1.27 TWh/year, which equates to ca DKK 2 billion a year for financially viable electricity savings projects. Of this DKK 2 billion, it has been calculated that energy efficient purchasing can lead to savings of DKK 700-800 million per year (ca 500 GWh/year), with the remainder (ca 750 GWh/year) being achieved through the improved operation and replacement, or renovation, of technical plant and equipment.

The Trust's strategy in relation to the public sector and large consumers rests on two main elements:

- › Introduction of energy efficient purchasing
- › Savings through improved operation and replacement, or renovation, of technical plant and equipment

These two main areas of initiative are underpinned by a number of sector-wide activities and by the Customer Advice service. In addition, the Danish government's initiative from September 2008 for a more stringent energy effort by government

departments and ministries, and the agreement concluded between the Danish Ministry of Transport and Energy and Local Government Denmark (KL) on improving the energy efficiency in municipalities are important foundations for the Trust's activities in the sector.

The Danish government's latest initiative described above comprises a number of activities including amendments to the Circular on improved energy efficiency in government buildings at national level (2005), strengthening professional advice to government institutions, and changes to the frameworks covering investment and maintenance. The latter will pave the way for implementing energy savings with a repayment horizon of up to 15-20 years.

Introduction of energy efficient purchasing

PURCHASING CAMPAIGNS

In 2006, the Trust launched a campaign targeted at purchasing managers in the public sector. The project showed that purchasing managers in the public sector focus far too much on the initial cost,

and too little on the total cost. The Trust's goal, therefore, is that all important standard framework agreements in the purchasing area, and purchasing carried out in the public sector, should lay down requirements for energy consumption when purchasing electrical equipment, and that these requirements should be based on the Trust's Purchasing Guidelines.

In the middle of 2007, the Trust initiated a new purchasing campaign targeted at purchasing managers in the public sector and decentralised purchasing staff in the municipalities. The campaign comprised the development of a number of purchasing tools (savings potential calculators, analysis tools, TCO calculators, and process guides, etc.) for use by purchasing managers and decentralised purchasing staff with a view to making it easier for them to implement energy saving purchasing policies in their organisations. These new purchasing tools will be consolidated in 2009 with the focus on purchasers (both purchasing managers and decentralised purchasing staff) placing greater emphasis on the total lifetime costs when purchasing on a daily basis, and in connection with tenders for the supply of equipment. In 2009, equivalent activities will be implemented for IT

managers and operation staff responsible for purchasing. Finally, activities will be initiated targeted at suppliers of equipment to the public sector with a view to making sure that they understand and support the measures mentioned above.

The Trust will also continue working together with SKI (National Procurement Ltd – Denmark) in a range of areas including contacts with suppliers to the public sector, and by having the Trust's Purchasing Guidelines incorporated into SKI's framework contracts.

PURCHASING GUIDELINES

Every year the Trust sends its Purchasing Guidelines to all public sector purchasing staff. The requirements set out in the guidelines are based on international energy labelling schemes such as the compulsory EU energy label, the EU's Code of Conduct and Energy Star. Individuals responsible for purchasing can be assured that there are enough electrical appliances to choose from, and that the appliances which fulfil the requirements are the most energy efficient. In relation to the Circular on improved energy efficiency in government buildings at national level (2005), one require-

ment is that government institutions, for example, purchase energy efficient products in accordance with the Trust's Purchasing Guidelines. The Danish municipalities have also committed themselves to purchase energy efficient products. The Trust's Purchasing Guidelines, which are updated and distributed annually, will therefore play an ever more central role in purchasing by the public sector.

Savings through improved operation and replacement, or renovation, of technical plant and equipment

CURVE BREAKER AGREEMENTS

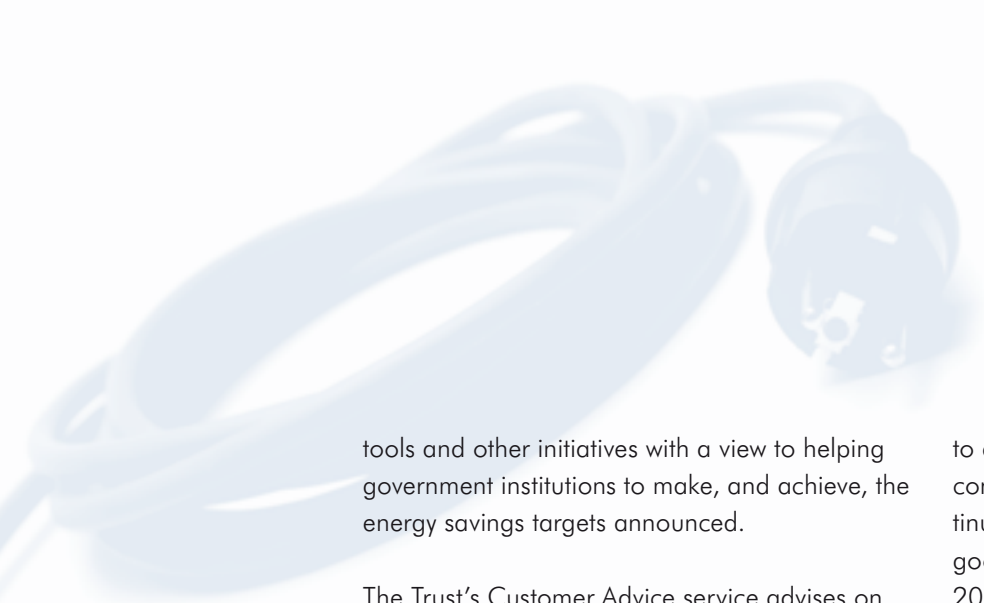
Early in 2007 the Trust developed a new type of binding partnership agreement, which was offered to ministries, government agencies, municipalities and regions, institutions and large consumers.

The underlying philosophy of these binding partnership agreements is that individual ministries, government agencies, municipalities and institutions can see the point of being involved in efforts to do something about the climate – including working towards breaking the electricity consumption curve. These so-called Curve Breaker Agreements stipulate, amongst other things, that the

parties commit themselves to a reduction, and that this is publicised on the Trust's website.

By the end of 2008, around 90 Curve Breaker Agreements were concluded, with committed reductions of more than 15 GWh/year. Apart from the 35 municipalities and a number of ministries, a number of larger commercial companies have signed agreements with the Trust to reduce their electricity consumption. It is therefore very satisfactory that there has been so much interest in collaborating with the Trust.

Completing new Curve Breaker Agreements, as well as helping organisations which have concluded agreements, will take high priority in 2009. In particular, the Trust will follow-up the Danish government's initiative for a more stringent energy effort by government departments and ministries. In this connection, the Trust can support and provide information on the requirements and guidelines in the new Circular which come into force in 2009. For example, the Trust can highlight the efforts of individual ministries, the amount of energy used by government, and energy efficiency via the Trust's website. Finally, the Trust can contribute with guidelines, information material, web



tools and other initiatives with a view to helping government institutions to make, and achieve, the energy savings targets announced.

The Trust's Customer Advice service advises on the standard solutions and offers made available by the Trust. Amongst other services, these include the above-mentioned purchasing tools and the solutions and offers in respect of lighting, ventilation, server rooms, computers and monitors and other products.

LIGHTING AND VENTILATION

Efforts to reduce electricity used by lighting are based on voluntary agreements with the lighting trades. Building-up and, in particular, expanding the Trust's efforts will continue in 2009. Lighting control in the form of daylight and movement sensors is an obvious way of reducing the amount of energy used by lighting systems. In 2008, work with the supply side was intensified, and together with suppliers and installers of lighting systems the Trust held mini seminars to raise the awareness of, and interest in, more efficient lighting and control systems. Research has shown that especially lighting control and adjustment of systems can cause major problems in practice. This can lead

to disappointed users and unnecessary energy consumption. For this reason, the Trust will continue its work of publicising the possibilities for good efficient lighting and control systems during 2009.

The Trust's overviews of energy efficient lighting and control systems for various types of premises and rooms with considerable potential electricity savings will be expanded in 2009. Overviews are both relevant in relation to new construction, in which lighting is covered by the Danish BR08 energy framework, and when renovating standard systems with better and more energy efficient lighting. These overviews will be marketed in 2009 together with an increased use of demonstration schools and offices, which will be showcased as the way forward on the Trust's website and used for marketing purposes.

The Trust has developed a diagnostic tool which can calculate whether it is worth investing in new energy saving lighting systems. Users can calculate their electricity bill over the next 10 years and can compare it with the new energy saving alternatives. Diagnostic tools are used to 'diagnose' a lighting system; the overviews provide examples of

'effective medicine'; and demonstration premises and rooms provide examples of 'patients' who are doing well having taken some of the 'medicine' prescribed. The marketing of this concept will be intensified in 2009.

In 2009, the Trust will re-visit the marketing of its offer relating to ventilation in the form of a new and more wide-ranging scheme with offers of ventilation checks ('Vent-tjek') based on a maximum standard price, as well as an electricity meter which will monitor and publicise electricity consumption for all public sector ventilation installations. The Trust's offer is flexible in as much as the 'Vent-tjek' can be replaced by the mandatory ventilation check-up, if systems are covered in this way, or where customers prefer to do so.

In 2008, the Trust introduced an administratively simple scheme, in which ventilation companies and the Danish Secretariat (TI) had more incentive to use the Trust's scheme. Agreements were also reached with the suppliers of electricity meters and data logging companies, on a cheaper and more flexible scheme for supplying and installing the meters which transfer the data to the Trust's 'Vent' website.

This new, more wide-ranging, and simplified 'Vent-tjek' scheme covering all types of premises was extensively marketed in 2008 when, as mentioned above, it was also tailored to the new mandatory ventilation check-up. This has allowed the Trust's efforts to be targeted with a view to publicising and achieving future potential electricity savings.

SERVER ROOMS, COMPUTERS, MONITORS AND PERIPHERALS

Planning and operation of server rooms is an area in which energy efficiency is considerably more in focus. The market is characterised by producers and suppliers that increasingly market themselves in terms of energy saving solutions. The greatest challenge in this area involves helping public sector institutions to publicise their electricity consumption, thereby providing concrete figures for cost and savings opportunities.

In 2009, the Trust introduced an energy index for electricity consumption in server rooms. This model will play a key role in the Trust's efforts to publicise electricity consumption in server rooms, to establish targets for saving electricity, and to conclude voluntary agreements.

Early in 2009, the Trust is launching guidelines for energy efficient operation of server rooms. The guidelines will expand the Trust's information activities in the area, which already comprises guidelines for planning energy efficient server rooms. The guidelines are being finalised through a process which involves producers and other parties interested in the market in order to create the best possible backing and focus for the guidelines.

Considerable savings can be achieved if all electrical equipment with energy saving settings is installed correctly, and not changed by end-users subsequently. Electrical equipment falling into this category includes photocopiers, multifunction machines, computers, monitors, peripherals, coffee makers and other vending machines. On some devices without energy saving settings it is possible to install, or attach, energy saving equipment which ensures that the device is switched off automatically, or reverts to standby (AutoPowerOff plug banks, computer network software, clock timers, etc.). The Trust expects to follow-up its 2008 campaign in a partnership with IT producers and the IT trade in Denmark with a view to ensuring that electrical equipment is supplied with information on how the equipment can be configured in

the most energy efficient way. The aim is also to ensure that service engineers working on photocopiers, for example, tell customers about the settings and leave information on the premises.

OFFICES, SCHOOLS, DAY CARE AND OTHER INSTITUTIONS

In 2008, the Trust launched a major campaign aimed at schools in Denmark. The campaign addressed several target groups including politicians and senior management in the municipalities, school leaders and boards of directors, as well as teaching staff and pupils. The campaign is scheduled to run until the end of 2009. The Trust is also planning to run a campaign targeted at other specific end-users such as offices, day care institutions and others. Although the target group is relatively homogeneous in terms of the structures and services provided, there are nonetheless considerable differences in key consumption figures (kWh/m², kWh/person).

In addition, the Trust will generally market its different offers (e.g. recommended lists, self-check systems, benchmarks and expert advice) to those responsible for energy in the public sector, purchasing managers and administrative decisionmakers.

Sector-wide activities

Experience shows that electricity savings only take place when, for example, all decision-makers in the municipalities are both committed and involved. Through PR and marketing activities in 2009, the Trust will therefore be putting improvements in energy efficiency and energy efficient purchasing high on the agenda in the public debate at both the national and regional level, and on the agendas of the relevant parties such as Local Government Denmark (KL), the Danish Ministry of Finance and the Danish Regions.

The Energy Saving Label is also an important tool in the public sector because it will make it much easier for individual purchasing staff to buy energy efficient products. The Trust will therefore work to ensure that the label is displayed on public sector purchasing portals and in catalogues covering a broad range of electrical equipment.

Voluntary agreements concluded with producers are important foundations for the Trust's information campaigns, recommended lists and labelling activities. In 2009, the Trust plans to strengthen its ties with Danish producers, importers, suppliers

and others with a view to concluding additional voluntary agreements in order to meet its target of having voluntary agreements covering a broad range of products. This will also ensure the required awareness and the necessary synergy through the use of a recognised label. These voluntary agreements will be supported by professional marketing campaigns on the Trust's side.

In 2007, the Trust published a completely new Interior Layout Guidelines ('Indretningsvejledning') which was distributed to Danish architects and consulting engineers in the construction industry, as well as to senior managers (potential clients of buildings) in the public sector. It is extremely important to factor in energy efficiency as early as possible in the planning phase because, once construction has started, it is very expensive to alter elements which have a considerable impact on energy efficiency. The Interior Layout Guidelines will be updated again in 2009 and supplemented with good advice on how important it is throughout the construction phase to ensure the optimisation of a building's electricity and energy consumption.

In 2008, the Trust launched its re-designed web-

sites which now feature special areas covering the public sector and large consumers. In 2009, the Trust will also expand the websites with the intention of supporting its work to promote energy savings in the public sector and by large consumers. This will be achieved, for example, through greater transparency about electricity consumption and savings opportunities, the creation of a new marketplace for services (see Section 3), and support for the work of the Customer Advice service in helping to conclude Curve Breaker Agreements. General information and guidelines found on the website will also be expanded.

Customer Advice service

In 2006, the Trust established the new Customer Advice service with a view to strengthening contact with public sector institutions. The service will also play an important role in 2009 in connection with the implementation of Curve Breaker Agreements mentioned above, marketing and campaign activities, together with the realisation of energy savings. The activities of the Customer Advice service partly cover outreach functions and partly the running of the Call Centre.

In 2008, the Customer Advice service concentrated its efforts on concluding new Curve Breaker Agreements. These activities will continue in 2009 and will include, as mentioned previously, a follow-up to the Danish government's latest initiative for a more stringent energy effort by government departments and ministries. In addition, Customer Advice will focus on the regions, including the consumption of electricity in hospitals.

Customer Advice will follow up on Curve Breaker Agreements which have been concluded by providing coaching and support in connection with the implementation of the activities agreed.

Customer Advice also runs the Call Centre. This services the Trust's local access number, which is also the primary number and switchboard for the Trust and the other secretariats. Customer Advice answers questions and offers advice and guidance about the Trust's offers, as well as how to use the Trust's self-help systems.

Summary of activities in 2009

In 2009, the Trust will implement a number of marketing and campaign activities. These include:

- › Continuation of purchasing campaigns targeted at public sector purchasers, supplemented with a number of activities targeted at decentralised purchasing staff, IT managers, operation and maintenance staff, and suppliers.
 - › Updating and sending Purchasing Guidelines to all those responsible for purchasing in the public sector.
 - › Completing new Curve Breaker Agreements, as well as helping organisations which have concluded agreements.
 - › Special efforts at government level such as following up on the government's new initiative, as well as at regional level.
 - › Marketing of new offers in connection with lighting and ventilation check-ups including, in particular, following up on concluded Curve Breaker Agreements.
 - › Greater coverage of key ratios for server rooms and marketing of energy efficient solutions.
 - › Campaigns targeted at specific end-users such as sixth-form colleges, larger schools, offices, day care institutions, and others.
- › PR and marketing activities with a view to putting improvements in energy efficiency and energy efficient purchasing high on the agenda in the public debate.
 - › Ongoing expansion of www.elsparefonden.dk (Danish) and www.savingtrust.dk (English) websites to allow the Trust to target communication to the public sector.
 - › Use of the Trust's Energy Saving Label on public sector purchasing portals and purchasing catalogues.
 - › Strengthening contacts with Danish producers, importers, suppliers and others with a view to concluding voluntary agreements based on the goal that there should be voluntary agreements covering a broad range of products.

Apart from the activities mentioned above, the Trust is also involved in a number of ongoing projects. These include participating in exhibitions and conferences, the operation of data secretariats and customer databases, stock control and distribution, publication of newsletters and other activities.

3.0

Special areas of initiative and development projects

New light

The Trust has identified quantum leap technologies as one of five special areas of initiative. One example is LEDs, which have considerable potential in terms of improving energy efficiency. LEDs can already provide 4-5 times more light per watt than incandescent bulbs.



Introduction

As an important supplement to the general activities described in Sections 1 and 2, the Trust has identified five special areas of initiative. These are areas and development projects which offer great potential, and which can be developed into important initiatives in relation to the above mentioned target groups in the years ahead. There are also areas where the outcomes are considerably more uncertain: in short, development projects with great potential, but also significant risks. These projects are therefore being crystallised and discussed individually by the Trust's board before being launched in 2009. The overall framework and background for the activities are described below.

The five areas are characterised as initiatives where the Trust has opportunities to significantly influence market developments by paving the way for completely new energy savings, or where conversely it can limit, or advise against, new and energy inefficient products which are about to be launched on the market.

The five special areas of initiative are:

- › Quantum leap technologies
- › Changing markets
- › New construction
- › Energy saving equipment and energy management
- › New business concepts for energy savings

Quantum leap technologies

Today, we are witnessing technologies within areas such as lighting, IT and pumps which can ensure a very high level of energy efficiency. A-rated energy saving bulbs and LEDs provide 4-5 times more light per watt than incandescent bulbs, and even greater improvements in energy efficiency can be obtained by IT and mobile equipment.

These quantum leap technologies naturally open up a whole range of new possibilities to significantly reduce total electricity consumption. The combination of significant potential energy savings and falling prices on new equipment can make the accelerated replacement of existing equipment a realistic option, although these types

of market developments are extremely difficult to predict.

The Trust will particularly focus on these new technologies and areas. To ensure that consumers know about the new technological possibilities, the Trust will support and speed up its ongoing market developments via campaigns and development projects.

A coordinated effort over several years in close partnership with key players can ensure that relevant products are 'ready to roll', with tests and demonstration projects ensuring quality and communication of knowledge and know-how.

In relation to lighting, the Trust is working on an overall concept which will encourage realignment, where energy saving bulbs and LEDs set the tone in the coming year, with incandescent bulbs becoming obsolete as a result of EU legislation, and halogen bulbs being consigned to a niche market.

LEDs have an enormous electricity saving potential in the long term, but are still not fully competitive in the wider marketplace. However, even today there are several niche markets in which

requirements for a long life cycle or specialist lighting needs are important.

In addition, there are enormous potential electricity savings in the operation of thousands of servers which distribute computer services to staff in the public sector and elsewhere. Currently, awareness of the potential is rather low, and those responsible for individual units rarely have the opportunity to notice the extremely significant costs involved in terms of the amount of electricity consumed.

Typically, meter readings in these facilities do not exist, but if they did they would easily provide an indication of how great a share of running a building was accounted for by server room operations. This omission is a significant barrier for managers in the public sector in terms of identifying unnecessary energy costs, and establishing requirements for energy efficiency in server rooms.

Apart from servers, server rooms are equipped with various types of equipment which contribute to the delivery of server services. Operators therefore depend on UPS systems, a large number of peripherals, and not least cooling equipment,

which account for around 30% of total consumption. When calculating the energy efficiency of a server room, it is not simply enough to estimate the efficiency of individual servers. Instead, total energy consumption should be related to the services supplied by the servers.

Currently, no single method exists for measuring the energy efficiency for the whole server room. The Trust's vision therefore involves developing such a tool in partnership with the industry. The aim is to arrive at an internationally recognised method – an energy index for server rooms, and simple tools which can be used across all platforms.

Changing markets

TV and entertainment, IT and consumer electronics account for the greatest changes in electricity consumption and equipment. New products and standards are constantly being launched with many devices only marketed for a year or less before they are replaced by new models.

Many producers utilise the new technological

opportunities and incorporate experiences from the mobile world to ensure low energy consumption and management. Other producers are so busy launching their products on the market that they forget to focus on electricity consumption in the design phase. From a technological perspective, new products such as DAB radios and digital decoders are a retrograde development in terms of energy efficiency and standby consumption. At a European level, there is currently considerable focus on eliminating the least energy efficient products from the market by implementing energy efficiency requirements within the framework of the EU Eco-design Directive.

In a turbulent market, in which consumers find it difficult to obtain an overview of products in terms of quality, functionality and electricity consumption, there is a particular need for information campaigns provided by a non-commercial operator. In this situation the Trust's role can be to ensure that consumers have a basic knowledge about new products, and understand important quality aspects which influence the actual offers, with warnings about low quality products and recommendations of products which conform to consumer relevant standards.

Consumer electronics and IT operate in a low current universe where the number of power supplies and chargers is rocketing. Price differences on power supplies are very narrow but power losses vary between 20% and 50%. In 2007, the Trust launched a campaign centred on efficient power supplies. In 2009, the Trust will continue its work to help the market by running individual campaign activities. Apart from the focus on energy efficiency, voluntary agreements will pave the way for standardised power supplies which can be used on a sector-wide basis, irrespective of the producer. The mobile industry's initiative on the subject could be an important step in this direction. Another proposal is the installation of low voltage networks in homes and offices, which would minimise the need for power supplies.

On 2008, the Trust launched the first studies of development trends within these changing markets. These markets need to be further identified, and the development trends described, in the coming years.

New construction

For the first time, new construction regulations in Denmark include electricity consumption in the total energy framework. This means that electricity is factored into the calculation for fixed installations, where electricity is weighted at factor 2.5. These more stringent energy regulations will result in considerable savings of heat and electricity. This means that new homes and offices must now choose energy efficient heating and ventilation systems, circulator pumps, and equipment. The new requirements also mean that there will be an increasing focus on the energy management of heating, ventilation, and lighting systems.

On an annual basis, new construction accounts for ca 1% of the total housing stock. Despite the limited share of the total stock of buildings accounted for by new construction, this activity, and the regulations governing it, has considerable potential to influence existing building practices. Once architects, entrepreneurs and craftsmen become used to, and accept, the new building methods, these practices can rub off on existing construction techniques. The important point is that new solutions should be a success and are

accepted as sensible guidelines, as opposed to being viewed as unfair, thereby ensuring the construction of excellent buildings with a healthy indoor environment and low energy consumption.

Good information on energy efficient solutions and pooling examples can contribute to greater knowledge and know-how, demonstrating that it is neither difficult nor expensive to exceed the actual regulations. Simultaneously, it is important that all parties involved in the construction of buildings become aware that buildings of the future consume just as much energy in the building process as the electrical equipment placed by consumers in the buildings. This means that a building cannot be viewed in isolation, in as much that a future-proofed energy label should relate to the interplay between the building, appliances and equipment, and end-users.

The Trust will support this development with expertise, demonstration projects and recommendations, not least of all in relation to electrical equipment, energy management and the technological options available in the medium-term future. The Trust's involvement in 'Bolig+' (House+) is an example of a project showing how it is

possible to build an energy neutral house incorporating a number of qualities in terms of design, flexibility and indoor environment.

Energy saving equipment and energy management

Hitherto, the Trust's message has been that when consumers purchase electrical appliances they are also deciding their future electricity consumption. However, it is equally important that consumers use appliances and other equipment sensibly, irrespective of whether this equipment is old or new.

For example, electric lighting should only be switched on when there is insufficient natural light or when people are in the room. This equally applies to a number of other services such as heating and the indoor environment, as well as IT and office equipment. The key point is that our needs should be the determining factor, because as we all know these vary depending on the day, month or time of year.

Efficient management of heating, the indoor environment and lighting can result in extremely large

savings of energy, including those achieved by eliminating standby in existing equipment. Simultaneously, this can pave the way for other functions such as home surveillance and home control and monitoring.

In 2008, the Trust launched its 'My Home – The intelligent home'. This not only allows consumers to analyse and calculate their household electricity consumption but also paves the way for a market for energy saving equipment which can help manage demand and limit the amount of electricity wasted. This concept can also support the work on flexible electricity consumption, where consumption is shifted to times when electricity is cheap and less environmentally polluting.

The Trust's initiative is one of the first concrete examples of Green IT, where IT is used to minimise wasted electricity in other sectors. Despite the fact that we humans place a great amount of emphasis on our homes, and spend considerable sums on them, it is precisely this area in which standardisation and digital description are the least developed.

The 'intelligent house', and the way we can con-

trol various systems in our buildings and homes based on actual needs and climate, has been much discussed over the past 25 years. These systems could pave the way for a range of other products relevant to consumers, such as surveillance, control and monitoring, entertainment and other systems. These technical aids can help alert the 'inattentive' and inspire the 'observant' users of equipment.

In order to promote the establishment of an actual market for equipment for controlling and monitoring energy equipment in buildings and homes, the Trust has taken the initiative for an open Green IT concept in terms of the digital description of homes. The purpose is to make it possible to access energy surveys, remote metering, advice, and control and monitoring without necessarily requiring a visit by a consultant. The basic idea is that customers can analyse their energy consumption themselves and then transfer this digital description to an expert as necessary. At the same time, standardised floorplans, photos, descriptions of appliances, and other features can be used in a number of other contexts such as for surveillance, real estate sales, insurance and other services.

The concept of a standard description of buildings, energy equipment, consumption patterns and energy and indoor climate metering can also pave the way for a whole new concept for energy labelling of homes, where home owners can supply a raft of basic information, and experts are used in areas which require specialist expertise, for example in a house with particularly high energy consumption, poor indoor climate, or similar.

In the most advanced form the My Home concept also includes a common standard for wireless communication within the home. The basic idea is that users should be able to combine different third-party products, allowing them to expand their system one step at a time as their requirements, and the supply of products, grow.

New business concepts for energy savings

The public sector can reduce its collective electricity bill by ca DKK 2 billion (see Section 2), without any deterioration in comfort or the indoor environment. It is simply a question of improved

management of lighting, ventilation and IT systems by investing in equipment, the cost of which will be recouped within a very few years.

In a new departure, the Trust will attempt to establish a market for services to the public sector, including consulting and advisory services. The market for these types of services can be confusing for a public sector institution, which has no professional experience of where to get help to identify and implement energy savings. For this reason the Trust is planning to establish a marketplace on its website, or in partnership with other key players in the sector, where it will be possible to see which advisers and other service providers are specialists within the different professional areas. The marketplace needs to be open to both private advisers and suppliers such as energy advisers working for the electricity supply companies. However, one requirement is that participants will have to make their references and CVs publically available, which will allow prospective clients to choose the right adviser for a given task.

With a dedicated marketplace and associated criteria similar to experiences gained from energy efficient products in Denmark

(www.hvidevarepriser.dk etc.), the Trust can play a very active role in developing the market and profiling companies and offers which are particularly attractive to customers. An important element of the concept is an ongoing satisfaction survey, which is publicised on the Trust's website.

- › The marketplace will ensure that the public sector has the best possible infrastructure for choosing assistance in connection with advisory tasks and achieving energy saving measures, with the overall aim that an increasing share of potential energy savings can be realised, and
- › The promotion of a market development with particular focus on new types of offers and agreements and greater competition in terms of quality, service and price.

The Trust's activities in the areas of open standards to make electricity consumption visible, energy labelling and remote control are important preconditions for new business concepts, where tenderers can immediately identify savings opportunities and can set up cost-effective remote monitoring and control.

4.0

International exposure

Purchasing

Every year the Trust sends its Purchasing Guidelines to all public sector purchasing staff. The requirements set out in the guidelines are based on international energy labelling schemes such as the compulsory EU energy label, the EU's Code of Conduct and Energy Star.



In as much that electrical appliances and equipment are often sold across international markets, it is increasingly important that the Trust is known and recognised both in Europe and internationally. The Trust can influence the outside world only if it is known and respected.

In this context, the Trust has international ambitions to be a leader in selected areas. This is to ensure the maximum impact for the Trust's activities, paving the way for work sharing with relevant players in and outside Denmark.

The terms of reference for the Trust's work are also determined by international developments, especially EU initiatives. The Trust is therefore particularly focused on taking advantage of international schemes on energy efficiency and contributing to international efforts to reduce the consumption of electricity.

The Trust has adopted internationally recognised benchmarks in its efforts to promote energy efficient products. For example, the Trust uses energy efficiency criteria from the EU Code of Conduct, Energy Star, and the European Quality Charter for CFLs.

However, the Trust is not simply a user of international schemes and regulations. The Trust also places great emphasis on participating in the development of international guidelines for energy efficiency and, by example, contributing to a more efficient and innovative savings effort at an international level.

At a European level, there is currently considerable focus on eliminating the least energy efficient products from the market by implementing energy efficiency requirements within the framework of the EU Eco-design Directive for energy using products. In order to create a dynamic market for energy efficient products it is necessary both to remove the worst products from the market and promote the best. The Trust's contribution, which particularly focuses on promoting the most energy efficient products, is therefore an extremely important supplement to future Eco-design requirements.

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The Danish Electricity Saving Trust

The Danish Electricity Saving Trust is an independent institution led by a Board appointed by the Danish Ministry of Climate and Energy. The Trust was established in 1997 with the purpose of promoting electricity savings in the household and public sectors. The Trust is financed by a Special Electricity Savings Charge of DKK 0.006/kWh payable by households and the public sector. The total annual proceeds amount to ca DKK 90 million.



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