

Enova's Results and Activities Report 2008



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Enova – a driving force for progressive energy solutions

- Owned by the Norwegian Ministry of Petroleum and Energy
- Manages the Energy Fund
 - Managed approx. NOK 1 500 million in 2008
 - Anticipates that budget will gradually increase in years to come
 - Budget 2009: approx. NOK 2 200 million
(Stated in the Letter of Assignment for 2009 from the MPE)
- Established in 2001
- Located in Trondheim
- 45 employees

Primary objective

Promote long-term, environmentally friendly restructuring of energy consumption and energy generation

Performance targets

- 18 TWh of added renewable energy generation and energy conserved by the end of 2011
 - Including 3 TWh of wind power and 4 TWh of renewable water-borne heating
- Working target: 40 TWh by 2020

An even stronger driving force

The Government recently presented an economic stimulus package which represents a significant boost in Norway's contribution towards ensuring sustainable development. Enova has received additional funding as part of this economic stimulus package so that we can redouble our efforts to serve the community through both energy-efficiency measures and the development of new projects aimed at generating renewable energy. More public funding also means more responsibility. We are prepared to accept this responsibility, and I am confident that a highly competent Enova organisation will be able to deliver.

In the turmoil of the financial crisis, people all across-the-board, both in the public and private sectors as well as individual households, are developing more awareness of their own energy consumption. Business and industry can no longer rely on topline growth, and will be searching for ways to cut costs. Energy consumption will be scrutinized and, with stimulus provided by Enova and others, both society and shareholders will see the benefit of greater awareness.

The results of our work in 2008 also demonstrate that the projects supported by Enova are not immune to the effects of the financial crisis. The general uncertainty regarding the future and the effects of the crisis create challenges for all projects, both those already under contract and new projects. We saw the effects of this in several of our areas in the second half of 2008.

Enova entered into contracts in 2008 with a total expected energy result of 2.15 TWh in reduced energy consumption and generated renewable energy. In total, environmentally friendly energy projects representing 11.6 TWh have received support through 2008.

One of the results of the financial crisis is a more deliberate awareness of energy consumption in the public sector, in business and industry, and in private households. Enova recently launched the "Snu strømmen!" campaign (in English: "Reverse the Current!") with the objective of inspiring everyone in Norway, both households and the public and private sectors, to join in a national all-out effort to reduce energy consumption. We have already noted considerable interest in the information about easy-to-implement measures. As regards housing, the Government has indicated its goal of introducing the passive house standard as a requirement in 2020. All this, with ample room for technological development and innovation, will contribute to achieving the necessary energy-efficiency.

Alongside energy-efficiency measures, Enova's main commitment is to the development of renewable energy generation. The percentage of non-renewable energy we use for heating is still too high. But there are bright spots. In many places around Norway, we see acceleration in the development of renewable water-based heat production, both district heating and in smaller local heating plants. Enova-sponsored measures triggered significant growth in this area in 2008.

The field of renewable power generation represents significant challenges. Our target of contracting 3 TWh by 2010 stands firm, but the actual implementation may be affected by the anxiety in the financial market, energy prices and other framework conditions. We maintain a close dialogue with the industry and we are prepared to do whatever we can to develop a sustainable industry based on onshore wind power under Norwegian conditions. Over the longer term, we must also achieve the necessary technological development to tap our enormous offshore potential.

Enova's mission is to be a driving force. We must contribute in part by creating an understanding that energy restructuring is an important part of the solution to the climate crisis, and we must work together with public and private stakeholders to make sure that the change actually occurs. Therefore, we will work diligently and purposefully to create the necessary alliances and meeting places where, together, we can create the future.

We all have to help contribute in reducing the energy consumption. We will continue to work on providing a sound technical foundation for making better energy decisions and, not least, employ the Energy Fund to make financial contributions towards implementing the necessary changes.

Our commitment to renewable energy generation is a long-term effort. Energy-efficiency measures can be implemented here and now, and improving energy-efficiency is the most effective climate measure in a global context. Today's energy consumption is not sustainable, and we will all have to use energy more efficiently in the future. The kilowatt hour never used is the most eco-friendly.



Nils K. Nakstad

Nils Kristian Nakstad
Managing Director

An energy-efficient, sustainable future

When the Storting (Norwegian Parliament) decided to establish the Energy Fund and Enova, the intention was to establish effective policy instruments to promote an environmentally friendly restructuring of energy consumption and energy generation in Norway. Since Enova was founded in 2001, national and international focus on energy has grown substantially. The understanding of the importance of responsible energy consumption and new renewable energy generation as part of the solution to the climate challenges continues to grow.

Increased focus on contributing to solutions to the climate challenges and the importance of bringing about lasting changes are also emphasised in the agreement between the Ministry of Petroleum and Energy (MPE) and Enova. The agreement states that Enova's primary objective is to promote environmentally friendly restructuring of energy consumption and generation through a long-term commitment to developing the markets for effective and eco-friendly energy solutions that contribute to reinforcing the reliability of supply and reducing emissions of greenhouse gases.

Energy-efficient buildings are the key

The most effective way to increase security of supply over time is to build new buildings that need as little energy as possible and through renovation contribute to reducing energy requirements in existing buildings.

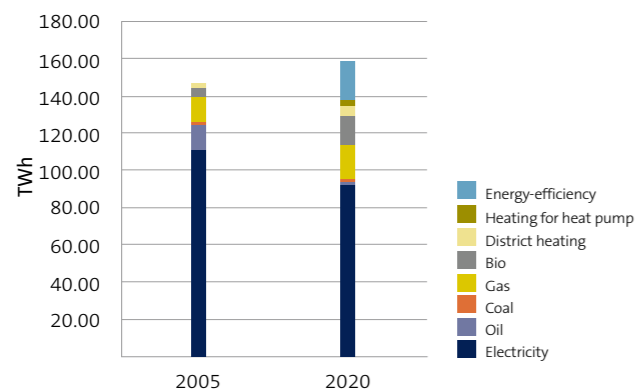


Figure 1: Energy consumption for stationary purposes in 2005 by energy source, as well as projections for 2020. (Based on analyses conducted by IFE, commissioned by Enova in 2007.)

This will be particularly important if Norway endorses the EU's Renewables Directive. In a European perspective, buildings in Norway are of a relatively high standard; both residences, other private buildings and public buildings. Norwegian households are relatively frugal in terms of energy use, illustrated by the fact that house-

hold energy consumption has remained stable in recent years. On the other hand, Enova's own statistics for energy use in commercial buildings show rising energy consumption in spite of stricter regulatory requirements.

Enova has conducted studies showing that, if we can work together with the market and other agents of policy to reduce energy needs in new buildings down to the passive level, Norway can continue to experience growth in its economy without triggering an increased need for energy. This also demands that we help reduce short and medium term needs for energy in existing buildings by implementing sensible energy-efficiency measures, e.g. in connection with renovation, and that we make more use of water-based heating from renewable energy sources from local heating plants and district heating. The potential is particularly significant in commercial and public buildings.

The industrial sector, led by power-intensive industries, accounts for a substantial portion of total energy consumption in Norway. Although there is a fairly high focus on energy consumption in the power-intensive industries and many steps have been taken to make production processes more energy-efficient, there is still a considerable potential for more efficient use of energy, recovery of heat from waste heat and power generation.

Projections commissioned by Enova (see Figure 1) show that, if we implement the good projects in buildings and in industry, Norway will have a significant power surplus in normal years, even with partial electrification of the Norwegian Shelf.

From energy nation to renewable energy nation

By making a long-term commitment to technological development in the field of renewable marine power generation, Norway can maintain its status as an important energy nation, even after our oil and gas production declines.

Norway is blessed with substantial unexploited resources for renewable power generation; from mini and micro hydropower plants to floating offshore wind power parks. Nevertheless, the challenges that accompany exploitation of this potential are considerable, both as regards resources on land and at sea. As regards land-based renewable power generation, the access to potential production sites is restricted in part by environmental and preservation considerations, while the technology has at least some commercial

profitability. On the other hand, power generation at sea is not at all hampered by access to production sites, but the technology is far from being profitable.

Enova's range of opportunities

Enova's role is to contribute to triggering the market changes in energy consumption and generation that society wants but which, for various reasons, are not carried out. Out of an overall technical potential, there will always be some projects that are not economically rational, and others that are commercially

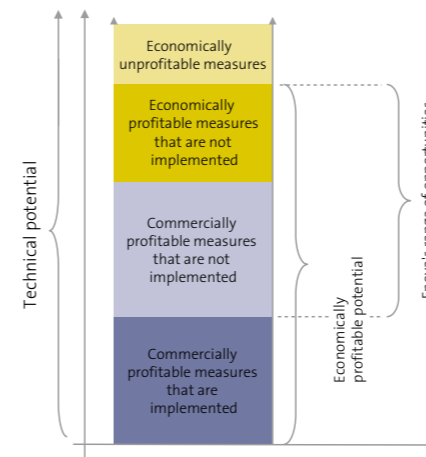


Figure 2: Schematic diagram showing the difference between technical, economic and commercial potential, and what Enova can achieve.

profitable and will therefore be implemented in any event. Enova does not focus on these areas. Enova focuses on areas that are economic profitable, but where changes are not implemented due to commercial or other reasons. This is illustrated in Figure 2.

The financial crisis creates uncertainty but also opportunities

There is a great deal of uncertainty regarding the consequences of the financial crisis for medium and longterm demand for energy, and the opportunities for energy-efficiency measures and more generation of renewable power. Sluggish economic growth will dampen the underlying factors that normally boost demand for energy. This has already contributed to lower prices for oil and electricity.

Falling energy prices, along with reduced quota prices for CO₂, contribute to making projects aimed at increased generation of renewable energy and

energy-efficiency measures less profitable. Mounting uncertainty regarding the future and tighter access to capital make it generally difficult to find financing for new projects. On the other hand, the economic situation can also mean lower costs for essential input factors in the projects, which will in turn improve profitability.

The immediate effect of the financial crisis on energy-efficiency measures and renewable power efforts is a near standstill in investment decisions in general, and for the energy industry in particular. This could mean significant challenges for Enova as regards the short-term results that can be achieved.

For Norway, the financial crisis will probably mean lower emissions of greenhouse gases due to less economic activity, at least over the short term. This will make it easier to achieve both national and international emission targets.

From permanent support to lasting change

At the core of Enova's work lies the ambition to develop viable markets for efficient, environmentally friendly solutions for both new generation and energy consumption. In order to do this in a manner that is cost-effective, we must achieve a conscious and critical use of policy instruments and close cooperation with other agents of policy, but even more important is comprehensive cooperation with the market.

The challenges linked to increasing the use of energy-efficient solutions and renewable power generation can be split into two main categories: No viable alternative or the alternative is not utilised. For Enova it is critical to be aware of whether the factors hindering progressive solutions are related to the supply or demand side. What both situations have in common is the fact that, when the market catches up with what society wants, there should no longer be a need for public funding.

Creating opportunities

In many areas, the desired energy solutions still have quite a way to go before they are commercially competitive. Both the need for public funding and how such funding is organised depend on how far the relevant technology has progressed. A factor shared by all policy instruments, including Enova's, is the goal of bringing technology costs down until the technology is competitive on commercial terms.

Strong policy instruments are needed for high-cost, immature technologies. Enova has good experience in promoting pilot projects and early introduction of new

technology by providing investment support. The lifetime of pilot projects is often too short for operating subsidies to suffice. Technology support is relevant for different types of projects with varying degrees of maturity.

Exploiting the opportunities

While technological development creates opportunities and society in general sets the framework, it is individual people, both in their private lives and at work, who determine whether these opportunities are exploited. Most studies of potential and scenario analyses assume that the end-users of energy are rational, financial stakeholders with access to all the information. However, these same studies point out that much of the energy-efficiency potential is not realised, even though it would appear to be profitable. The explanation lies in the fact that the end-users, whether in households, the private or public sectors, include more variables in their decisions than the models take into account. Some examples are:

- Indirect costs: Typically costs associated with obtaining the necessary information and competence
- Society's attitudes: What does the world around you think about the choices you make – for example, does the exterior part of a heat pump show a willingness to take responsibility for the global climate, or is it merely a sign of bad taste?
- Our own attitudes / own motivation: The value of being first, even though the technology is often expensive and maybe even not very good.

In order to help ensure that the good solutions are actually put to use and to bring about lasting change, Enova must be aware of where the barriers lie.

Enova on its way – results for 2008

During 2008, Enova provided support to 159 projects that have committed to delivering a total of 2 149 GWh through reduced energy consumption and increased access to renewable heating or power. Together with the results from 2001 to 2007, this represents 11 587 GWh, and an important step towards achieving the long-term targets.

In the energy consumption area, contracts were signed in 2008 for a total of 961 GWh, whereof 537 GWh in industry and 424 GWh in the built environment. A total

Main goals stated in the agreement with the MPE:

- More efficient use of energy
- Increased use of energy carriers other than electricity, natural gas and oil for heating
- Increased generation from renewable energy sources

of NOK 305 million was granted in investment support, consisting of NOK 146 million to industry and NOK 159 million to the built environment. During the period 2001 – 2008, Enova has entered into contracts that in total have an anticipated energy result of 5 836 GWh energy consumption.

During 2008, funding was provided for 81 heating projects slated to deliver a total of 840 GWh. Contracts for 3 259 GWh have been signed for 2001-2008 as a whole. Enova is well on its way to achieving the specific target of 4 TWh increased access to heating by the end of 2010. In the field of renewable power generation, two contracts were signed for a total anticipated energy result of 279 GWh. The total for the period from 2001 to 2008 is contracts for 1 381 GWh of wind power production. This means that we still have a way to go to reach the target of 3 TWh of wind power by the end of 2010. This is a challenging but still achievable target.

The overall result for 2008 is slightly below our ambition at the beginning of the year. The main reason for this is a higher increase than expected in the cost of measures, particularly for renewable power, which for Enova in turn leads to lower energy results per NOK spent.

From result to effect

Since the beginning, Enova has maintained strong focus on policy instruments that have triggered new generation of renewable power and heating, and more efficient use of energy. Enova has succeeded in this endeavour. However, Enova needs to stretch even further to achieve the ambitious goals that are embedded in our objective and in the working target of 40 TWh by 2020 in the agreement with the MPE.

Having a long-term goal to develop lasting markets for good energy solutions along with more specific, short-

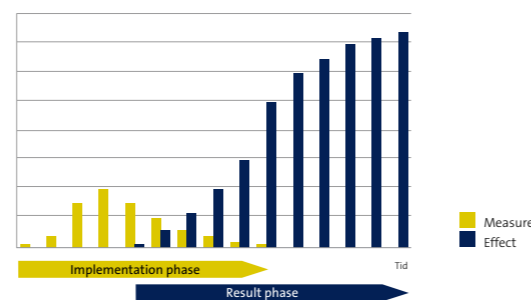


Figure 3: Schematic diagram for policy instruments with a direct link between measure and effect (e.g. information, development of technology and training).

term performance targets, entails certain challenges. This is because it is not necessarily so that the policy instruments that deliver well on the long-term targets will also deliver on the short-term targets. For Enova this means a risk of ending up in a situation where

short-term goals will have to yield to the long-term goals embedded in Enova's objective.

Enova's primary objective is:

- to promote environmentally friendly restructuring of energy consumption and generation. Energy restructuring is a long-term commitment to developing the market for efficient, environmentally friendly energy solutions that help reinforce the reliability of energy supply and reduce emissions of greenhouse gases.

It is important for Enova to demonstrate that our policy instruments have an impact, and that they are cost-effective. For the policy instruments (programs) where there is a one-to-one relationship between the party receiving support and the party delivering the energy result, Enova reports the contractual (anticipated) energy results, and can subsequently directly measure the project to see how much is actually realised.

Main goals stated in the agreement with the MPE:

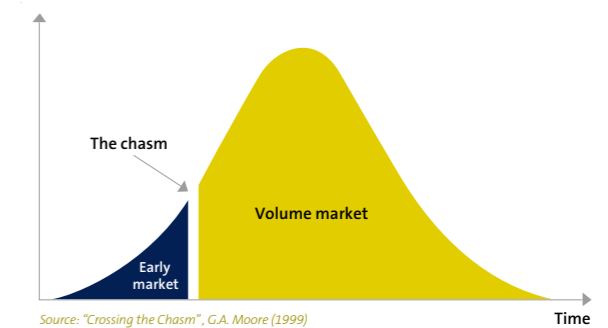
- Introduction and development of new technologies and solutions in the energy market
- Well-functioning markets for efficient and environmentally friendly energy solutions
- Enhanced knowledge in the society at large about the opportunities for using efficient, environmentally friendly energy solutions

Other methods are needed to document the effect of policy instruments that do not have this direct link between support and energy results; such as market surveillance and estimating the effects on a more aggregate level. Measuring the effect of these types of policy instruments takes time, both because changing markets per se takes time and because the applicable methods of measuring depend on the existence of relevant data and statistics; which also take time to gather. (Illustrated in Figures 3 and 4.) Therefore, it is important for Enova to be patient as regards to when we can expect to measure the effect of more indirect policy instruments, and to develop good indicators and activity goals that can provide guidance for managing the instruments along the way.

Climate effects

The projects that Enova's policy instruments help trigger are beneficial for the climate, either directly through phasing out oil boilers or more indirectly by reducing energy consumption and increasing access to renewable energy.

Phasing out fossil energy carriers such as oil has a direct effect on the emissions of greenhouse gases in Norway and thus contributes to improving our national climate balance. Projects that received support from Enova in 2008 are expected to lead to a reduction in oil consumption of 48 517 tonnes, while the total reduction for the period 2001 – 2008 as a whole is 279 288 tonnes. This is equivalent to reduced CO₂ emissions of about 1.1 million tonnes per year.



Source: "Crossing the Chasm", G.A. Moore (1999)

Figure 4: Examples of energy behaviour: Investment in technology.

The climate effect of Enova's other measures is linked to replacing the need for power generated from fossil energy sources such as coal and gas, either through reduced energy consumption or increased access to renewable power. The assumptions used as a basis for alternative power supply have a significant impact on the estimated CO₂ reductions. If one assumes that this power is replaced by gas power, the projects that have received funding from Enova through 2008 will contribute to a reduction in CO₂ emissions of 3.8 million tonnes per year.

In addition to the uncertainty surrounding alternative power supply, there is also some uncertainty about the climate effect of increased access to power generation based on renewable energy sources within a quota regime. One objection is that increased access to renewable energy within a quota system will only contribute to reducing the price of climate quotas, rather than contributing to reduced emissions – the entire quota will be used.

The quota system is not static, but is subject to development influenced by international obligations, level of political ambition and costs. A higher share of renewable power through increased generation or reduced consumption will make it less costly, and thus easier, to implement the necessary expansions and restrictions in the quota regimes.

New technology

New technological solutions are important in order to develop the market for renewable energy, and to reach Norway's goals for reduced climate emissions at a faster pace. Enova contributes by providing support for pilot projects and introducing new technology to the market through a program aimed at professional consumers and developers. A technology that has received support through this program can subsequently trigger additional funding through other Enova programs if the technology is later put to large-scale use. Therefore, this is an important program for Enova even though it does not initially trigger many kWh of results.

In 2008, Enova received 27 applications to the New Technology program, of which 14 were connected to the joint effort by the Research Council of Norway and Innovation Norway. A total of ten projects have received commitments of support totaling NOK 46 million from Enova in 2008. In addition to this, the Research Council of Norway made a commitment to support two projects under the joint effort. Only minor changes have been made to the program in 2008. The number of projects receiving support is steady compared with previous years, while the number of applications has declined. Funding has been provided for both energy-efficiency and new energy generation projects. As regards energy-efficiency, both projects aimed at the industrial sector and the building market have received support. As regards applications for support for new energy generation, there were also a number of applications in 2008 linked to demonstration of new renewable marine power generation. The funding awarded in 2008 covers a broad range as regards type of technology, and the granted amount varies significantly. On one end of the scale, NOK 98 000 was awarded for the testing of LED fixtures in streetlights, while at the other end, nearly NOK 35 million went to support demonstration of carbo-thermal aluminium production. For a complete summary of awards, please refer to the project list at the back of this report.

Projects that receive support from the technology programs will often spend quite a long time on development and testing before Enova sees the results from the provided support. The technology programs provide support for market introduction, and implementation of new energy technology is often both time-consuming and resource-intensive. It will probably take 2-3 years before Enova can report experience from most of the projects that received funding in 2008. In recent years, however, Enova has seen an increasing flow of results from realised projects, and we see a positive shift in the market's interest in applying new energy technologies.

Enova's experience is that companies see the market opportunities to a higher degree now than earlier, and more and more often we see that pilot projects are realised through the development of full-scale facilities. This gives reason to hope for increased opportunities for commercialisation of new energy technology in the markets in the years to come. The following are just a few examples of technologies that are well on their way to success after receiving support from Enova.

In 2007, the company Single Phase Power received investment support to develop a pilot facility for a mini power plant converting waste heat into energy. The plant was completed in 2007 with such good results that the company is now in contact with potential partners for realisation of a full-scale demonstration plant in Norway.

Another company that has confidence in the market opportunities for its project is Nordisk Energikontroll. The company received funding in 2007 to build a pilot facility for new heat pump technology. The preliminary results indicate that this technology can contribute to reducing energy consumption in large commercial buildings and housing cooperatives by more than 30 per cent, and the facility has proven to be very profitable.

The company ChapDrive is behind a major investment that could aid long-term development of the market for renewable power generation in Norway. In 2008, the company received NOK 5.4 million in support to establish a demonstration project for technology that can help make windmills cheaper and more reliable. After a successful field test on a small wind turbine in 2007, ChapDrive is now converting a larger wind turbine that will be tested during the first half of 2009.

As part of its program work for 2008, Enova commissioned a study of the potential for biogas in Norway. The study documented a potential for biogas of approx. 6 TWh. Enova is now evaluating its role in contributing to more use of biogas in Norway.

The scope of the applications for new demonstration projects has been, and continues to be, lower than Enova's expectations and aspirations. Anxiety in the financial market and the economics in general have led to increasing challenges for financing new demonstration projects. To address this challenge, Enova will change the program structure for technology support in 2009 and raise the maximum level of funding for demonstration projects from 30 to 50 per cent.

Renewable power

Wind power will provide an important contribution towards addressing the global climate challenges. The total world demand for power will continue to rise, which means it is very important to ensure that the future development in power generation is based on renewable energy sources. In 2008, Enova established a new wind power program that will be continued in 2009 and 2010. Enova's goal is to contribute to achieving the national target of 3 TWh of wind power by the end of 2010. Support provided by Enova will also help promote development of the wind power market in Norway.



In the 2008 application round, Enova received applications from six developers with a total of 18 alternative developments. Enova decided to award support to two wind power parks: Høg Jæren Vindpark in Rogaland County and Mehuken Vindpark Stage II in Sogn og Fjordane County. Starting from 2011, these wind power parks will generate environmentally friendly power totaling 229 and 50 GWh, respectively.

Enova wishes to develop the market for wind power in Norway through a close dialogue with developers, trade organisations and other relevant authorities. The criteria for applying for funding through Enova's wind power program were drawn up in cooperation with the sector. The experience Enova gained in the 2008 round of applications will be emphasised in program implementation in 2009. Enova's intention is to make sure that the financial support it offers gives the developer sufficient profitability to ensure that the wind power park is actually built.

The 2008 application round also gave valuable experience in relation to the profitability of the parks. Both climatic factors and location are crucial. In addition, the major developers have opportunities to invest in wind power in other countries. In that sense Enova's wind power program competes with the subsidy schemes available in other countries. Enova must meet this challenge by offering the developers long-term, predictable framework conditions which make it attractive to build more wind power in Norway in the years to come.

By the end of 2008, Enova had granted support to 1.4 TWh of wind power, leaving 1.6 TWh remaining until our target is achieved. We will reach this goal through the next application rounds in 2009 and 2010. Enova believes that wind power in Norway can account for a much larger percentage of Norwegian power generation than is the case today. The technical potential for land-based wind power is estimated at about 15 TWh in 2020. Enova's work in the next two years will lay the foundation for this, and we will accomplish our objective by supporting the best projects. This will allow Enova, in cooperation with the sector, to prove that wind power is a competitive and efficient environment friendly technology.

Heating

One of Enova's most important goals is to contribute to increasing the percentage of heating obtained from renewable energy sources. Renewable heating from district and local heating plants must be the preferred form of heating in the future. This means converting from using oil and electricity to energy sources such as bio-energy, waste heat and heat pumps. Through the Energy Fund, Enova will help be a catalyst for 4 TWh of water-based heating based on renewable energy sources, waste heat and heat pumps by 2010.

A precondition for using renewable heating is that the buildings must be equipped with water-based heating units. Therefore, one of our most important challenges is making sure that more and more new buildings are constructed with such units in place.

At the end of 2008, Enova had signed contracts for 3.3 TWh of new renewable heat-energy, distributed among energy sources as shown in Figure 5. This means that Enova is well-positioned to achieve the target of 4 TWh by 2010.

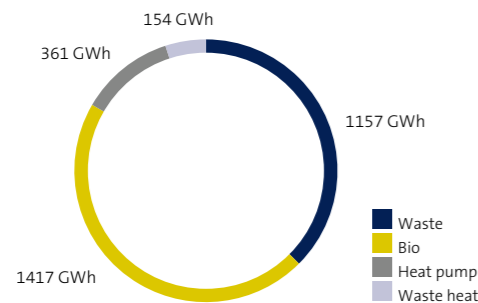


Figure 5: Renewable energy supplies from heating distributed by energy source, for projects that have received support during the period 2001 – 2008.

If renewable heating is to gain a strong foothold in the market, it is important that we continue working to ensure that the sector becomes competitive. The sector must secure the right expertise, work to reduce costs and disseminate information so that consumers become familiar with the products and services offered.

The changing heating market

Enova's goal is to contribute to ensuring that the heating sector in Norway can gradually become self-sufficient and competitive vis-à-vis other energy suppliers in the

market. So far, Enova has supported the development of 2.8 TWh of district heating in Norway.

From a starting point of 10 –20 district heating plants in 2002, district heating is now being established in 120 cities and towns throughout Norway. Enova feels that the market is changing. Adding on and increasing the density of existing district heating systems in the major cities is now commercially profitable, and is being carried out without support from Enova. However, public funding will still be needed for a few years in new neighborhoods, new development areas and less densely populated areas. Development of local heating plants is still just on the starting line, and for a country such as Norway whose population is spread along the full extent of its long and narrow geography, there is a significant potential that has not been released. Enova will continue to work to phase out oil and electricity for heating purposes, in favour of new, renewable energy sources.

In 2008, Enova revised its heating programs and established three different support programs adapted to market needs. A market campaign was launched to draw attention to the effort to replace old oil heating plants, as well as Enova's new programs for support to local energy plants. Enova wants to promote new knowledge about renewable heating and in 2008 the company conducted a survey of competence in water-based heating systems in the sector. The study concluded that more expertise is needed along the entire value chain, from plumbers to building owners. Enova has focused on initiating and ensuring efficient implementation of the new heating programs in 2008, while simultaneously developing new information and market-specific measures for 2009. Figure 6 shows how the 2008 energy results are distributed among the three programs.

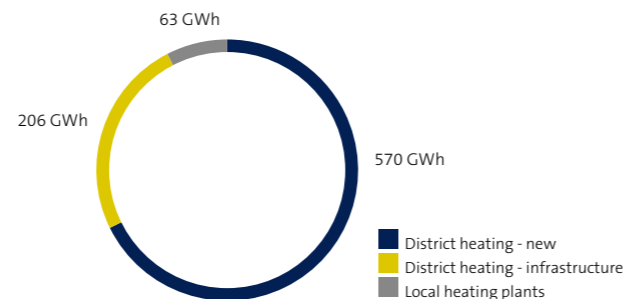


Figure 6: Energy result distributed between Enova's three heating programs in 2008.

Programs for district heating infrastructure and for establishing new district heating

In many cases, district heating is a prerequisite for efficient exploitation of renewable energy sources for large-scale heating, for example, exploiting the heat from waste incineration and utilisation of residual products from forestry and the wood processing industry. Increased demand for comfort and use of ventilation for cooling purposes in buildings also entail a growing need for district cooling.

In addition to costly investments, district heating also faces challenges associated with many different framework conditions, such as the new Planning and Building Act and development of low-energy and passive houses. Development of district heating must be coordinated with and dimensioned according to the overall plans for new development areas and municipal zoning plans, in addition to the existing built environment. One of the main challenges for district heating is to get building facilities started that have marginal short-term profitability, but which are profitable over the long term. By providing investment support to new establishment and expansion of infrastructure, district heating is accessible at an earlier point in time, so that the market is less vulnerable to the uncertainty associated with long-term customer hook-ups. This makes it possible to stay ahead of the development, and to be ready to deliver whenever new customers want to connect to the supply system.

Support has been provided to 33 new facilities and 10 extensions of existing facilities in 2008. These facilities have a total capacity of 926 GWh, with 777 GWh coming from renewable energy.

Program for local heating plants

Studies of potential carried out in 2007 showed that Norway has a significant potential for conversion from electricity and oil to renewable energy sources in existing water-based heating plants, beyond that which can be connected to district heating plants. If we assume that water-based heating is installed in connection with new construction and renovation of buildings, these studies show that it may be profitable to develop local heating plants based on renewable energy sources equivalent to 7.5 TWh by 2020. In order to develop this market and release this potential, Enova set up a separate program for local heating plants in 2008. Previously, local heating plants were only supported in those cases where the developer was able to build plants that could deliver energy equivalent to 0.5 GWh or more, which excluded a substantial percentage of these types of plants.

There are many small enterprises with many different angles in the local heating plant market. A positive development of the market for local heating plants presumes a development of the supplier side; i.e., suppliers with the necessary equipment and services, as well as fuel and ready heat. Therefore, the program for local heating plants also targets the supplier side, so that when suppliers are trying to sell plants and ready heat, they know what financial support may be available to the buyer.

During 2008, support was provided to 37 plants under the Local heating plant program. These plants have a total capacity of 76 GWh, where renewable energy supplies account for 63 GWh.

Industry

Total energy consumption in Norwegian industry in 2007 amounted to around 80 TWh. In the last couple of years, Enova has seen a steady decline in industrial energy consumption. At the same time, energy costs have continued to rise, making energy an increasingly important factor in the companies' framework conditions. Through its Industry area, Enova works to help Norwegian industry strengthen its competitiveness through environmentally friendly and efficient energy consumption. Enova's ambition is to contribute to making Norwegian industry the most energy efficient industry in the world, both in terms of specific energy consumption and use of renewable energy.



The work at improving energy-efficiency and energy recovery in industry has contributed with a total contractual energy result of 537 GWh in 2008, distributed as shown in Figure 7. This is somewhat lower than in

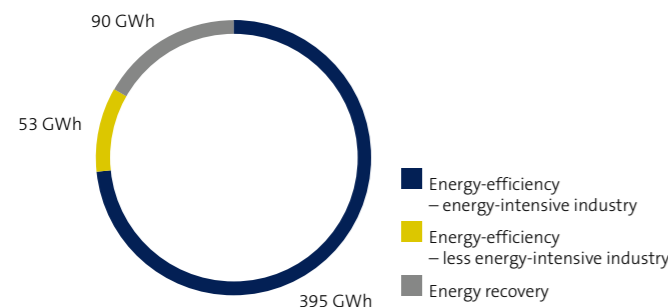


Figure 7: Contracted energy result in 2008 distributed between energy efficiency and energy recovery. (No new energy results from energy conversion projects were contracted in 2008.)

previous years, a fact that can be attributed to temporarily reduced staff capacity in Enova. We have addressed this challenge by increasing our capacity in this area from late 2008/early 2009.

The "Energy Consumption – Industry" program allows all companies with projects that have a positive energy result of more than 0.5 GWh to apply for investment subsidies. Support is granted for energy efficient solutions, energy recovery measures and conversion to renewable energy sources. Incorporating energy management activities into the projects is another aspect that is valued. This means that the projects must have the firm support of the company's management, and that the investment is weighed against other potential energy-related investments in the company or the group. In order to achieve this, it is best to sign larger contracts whenever possible. For example, it may be advantageous to sign a contract with a group, rather than with an individual company in the group. In addition to providing larger aggregate results, the companies and the external advisors achieve useful cooperation and exchange of experience. Another way to achieve economies of scale is to group smaller projects within a company into one larger project.

In 2008 we have seen a trend toward more applications from smaller energy consumers. This is a positive and desirable trend, which we hope to further reinforce in the years to come. The energy-intensive industry sector still has a number of major projects on the table, both in the form of submitted applications and projects in progress.

Since 2001, a total of nearly 3.4 TWh (corrected for interrupted and finalised and reported projects) has been contracted within Enova's programs aimed at industry. This accounts for nearly 30 per cent of the total contractual results for Enova during the period.

Different projects will have different costs, depending on the nature of the measures. We see a considerable difference between improving energy-efficiency, energy recovery and conversion. We also see that project costs rise year by year, and we note that small companies have higher project costs, relatively speaking, than larger companies which have substantial economies of scale. Enova attempts to take all of this into account when considering the applications.

In 2008, Enova has made major commitments to industrial projects, in addition to a large number of projects on a smaller scale. The granted amounts range

from NOK 140 000 to NOK 45 million, with contractual energy results on the order of 508 000 kWh to 108 million kWh. Projects with 175 GWh in energy results have also been concluded in 2008. All in all, we have received final reports for 771 GWh in the industry programs since 2001.

A study of potential was initiated in 2008 to map available waste heat in the industry. The study reveals the various potentials and technologies in this field which Enova should pursue in its activities in the future.

Enova wants to have a good dialogue with the trade organisations and close market contact with the players in the industry. In 2008, an agreement on cooperation was signed with 'NHO Mat og drikke', a trade organisation for the food industry in Norway. Close cooperation has also taken place with the Federation of Norwegian Industries (Norsk Industri), based on an agreement Enova signed with Norsk Industri in 2007, which has resulted in several concrete measures that will be implemented during 2009.

In November 2008, an industry conference attended by around 130 participants was held in Trondheim. This conference is fast becoming a natural and inspiring meeting place for both industry players and advisors.

The Industry field faces challenges that are common to the energy consumption area as a whole. Prosperity in certain sectors leads to little interest in energy-efficiency, e.g. in the aluminium industry, while sectors experiencing challenging competition and market conditions, particularly wood processing, have greater focus on all cost elements. Towards the end of the year, the financial

crisis also began to have an impact on Enova's projects in the industrial sector. Projects that have received funding commitments are requesting postponements and there is now a wait-and-see attitude towards new investments in many sectors.

In the coming year, we will work to reinforce the "Energy Consumption – Industry" program, defining and communicating the criteria for receiving subsidies, as well as our solutions for portfolio projects, even clearer.

Enova has a challenge to deal with when it comes to creating market-wide changes in smaller industrial companies. This is because our program is adapted to fit larger projects. Therefore, one of our objectives is to develop standardized funding schemes for smaller projects, and target these schemes at stakeholders currently outside our program portfolio.

In order to best tailor our activities to the potentials that exist, a study will be conducted to determine the potential for improving energy-efficiency and energy restructuring in both power-intensive and other industries. The goal is to reveal how Enova can make the best possible contribution and, in pursuance of this goal, which policy instruments must be in place.

Energy-intensive industry accounts for 80 per cent of the energy consumed in the industrial sector. The greatest potential can be extracted here. However, to reach that stage, technology shifts in core processes will be a fundamental requirement. Close cooperation with Enova's program for New Technology could help spur these developments.

The built environment

The Norwegian building sector has a significant energy-efficiency potential. In existing buildings alone, the energy-efficiency improvement potential is estimated to be near 10 TWh. Moreover, there has been an increase in energy consumption in new commercial buildings in recent years. Enova's role is to contribute to releasing the potential in this sector by adapting to a constantly changing market situation.

In 2008, energy-efficiency measures and conversion to renewable energy carriers in the built environment contributed to a contractual energy result of 424 GWh, distributed as shown in Figure 8. Total support amounted to NOK 159 million.

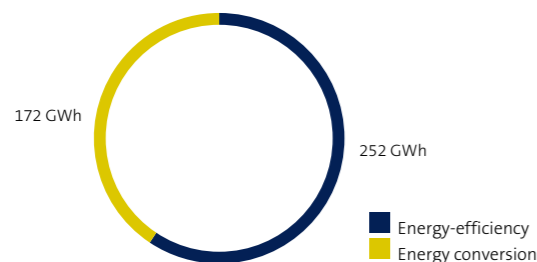


Figure 8: Contracted energy result in 2008, distributed between energy efficiency and energy conversion.

The potential is large. Commercial buildings and homes comprise an area of about 385 million m², and annual new construction contributes about 35 000 homes and about 3 million m² in commercial buildings. Total energy consumption in Norwegian buildings is equivalent to about 70 TWh of electricity and 20 TWh of other energy carriers. According to Enova's building statistics, a reduction of 10 per cent, or nearly 10 TWh, is equivalent to reducing the average specific energy consumption for a commercial building from 270 kWh per m² to 243 kWh per m².

Enova will help the market improve energy performance in buildings. This is just one of many qualities of a building but, in today's market, it is not an element that carries much weight in the decision processes. Therefore, Enova's primary challenge is to increase focus on energy consumption in the planning, construction and operation phases. Enova's overall program services for the building sector help boost profitability in efficiency and conversion projects, enhance knowledge on the part of the industry players, draw attention to energy consumption in buildings and contribute to the application of new and better solutions. In 2008, this has led to a reduction in the demand for energy, more use of renewable energy for heating and implementation of new solutions, in part through prototype projects. This has all been triggered by the use of investment support and intensified efforts aimed at prototype projects and work surrounding the passive house concept.

The unique role of the municipality as owner, operator and planning authority has been addressed through implementation of energy seminars and reviews of municipal energy and climate plans. Enova has also emphasised generation and

communication of knowledge, e.g. through Enova's buildings statistics, Enova's own building conference and the Passivhus Norden 2008 conference. Moreover, Enova has actively employed the planned tightening of energy requirements in technical regulations and the attention surrounding the planned energy labeling program as part of its market work.

Enova has entered into a collaborative effort with the Federation of Norwegian Construction Industries (BNL), the Directorate of Public Construction and Property (Statsbygg), the Norwegian Water Resources and Energy Administration (NVE), the National Office of Building Technology and Administration and the Norwegian State Housing Bank (Husbanken) on a Low-Energy Program for residential and commercial buildings. The program's participants hope to achieve the common goal of reducing energy needs in all types of buildings. In 2009, the program will focus on raising competence in relation to new regulatory requirements and preparing the sector for development towards a passive house level in 2020.

During 2008, the market has turned from an economic boom, characterised by intense focus on the turnover rate in the sale of buildings and rented area, over to an economic slump. What holds true regardless of the market situation, is that the party that bears the costs during the operation phase often has no chance of exerting influence on the decision-maker in the planning phase. Reducing energy needs will often be ignored in favour of other considerations during the planning phase.

There is also a clear trend towards larger developers who increasingly make use of total procurement and construction solutions. One of the consequences of this trend is that advisers who previously were often connected to the owner, are in the current situation often linked to the contractor. These forms of contracting do not lend themselves to safeguarding energy considerations, and investment in energy-efficient solutions is even considered risky. On this background, Enova has worked in 2008 to sign agreements with major developers in which they commit themselves to increasing energy performance in the projects they are involved in.

2009 is expected to unfold somewhat differently than we have seen in recent years. Activity in the market is waning. At the same time, there is considerable focus on the coming energy labeling scheme and the more stringent energy requirements in technical regulations that will apply from 1 August 2009. This gives Enova an opportunity to help decisionmakers view investment costs in context with operating costs over a lifetime perspective. The uncertainty linked to business trends in the market is reflected in the risk associated with target figures for next year's energy results. New construction activity will be reduced, but will partly be offset by more activity in renovations, modifications and additions. In the months to come, Enova will reinforce its focus on buildings with energy needs at the low-energy and passive house level. This effort will take place through our own programs aimed at passive house and prototype projects, and our investment support programs will also gradually adopt a more ambitious focus.

Municipalities

2008 was the year when Norwegian municipalities truly entered the playing field as regards work on climate-friendly energy restructuring. Enova's program for "Municipal energy and climate planning" is intended to motivate and enable the municipalities to contribute to climate-friendly energy restructuring. Only a very few municipalities have hired their own energy experts, and the extraordinary work of developing an energy and climate plan provides the opportunity to bring in external expertise that can help give the municipality good management tools. In 2008, the number of applications for support from this program more than doubled, and more than half of all Norwegian municipalities have now applied to Enova for such funding.



Enova feels it is important that an energy and climate plan is a long-term strategy for the municipality's energy and climate work. The plan must be integrated in the ordinary municipal planning and management system. Broad-based support increases the chance that the plan will lead to action and realisation of good energy and climate projects. On this background, Enova has approached municipal managers to inform them about Enova's subsidy programs, we have prepared and distributed a guide showing how to proceed with the energy and climate planning process, and we have held a series of courses on these same topics. At the end of 2008, these courses had attracted participants from as many as 306 municipalities. This means that 71 per cent of all Norwegian municipalities have gained enhanced knowledge about how to get started and how to carry out the work of preparing energy and climate plans.

An evaluation of the courses showed that the municipalities wanted more follow-up from Enova. Therefore, the first series of courses was followed with a number of regional courses in practical energy and climate work, with emphasis on helping the municipalities to take the step from planning to action. During the fall of 2008, a total of 102 municipalities in Central and Eastern Norway had taken part in these courses. Throughout the winter of 2009, more such seminars will be held, also in other parts of the country.

Energy and climate plans in all municipalities by 2010

The Government intends to introduce a requirement that all municipalities prepare an energy and climate plan by 2010. This requirement will further highlight the importance of Enova's efforts to assist the municipalities with support and guidance. During 2009, Enova will develop additional programs for the municipalities, aimed at stimulating action and implementation of energy measures. This will take place in part through further development of the subsidy program, more cooperation with other public stakeholders and a dedicated program for model municipalities. As the municipalities identify potential energy and climate measures through their planning work, we also see an increase in applications to Enova's other programs. Improving energy-efficiency in residential and commercial buildings, exploiting waste heat from industry and an increased commitment to district heating and phasing out oil boilers are all examples of this.

An important step to support the municipalities in their climate work is the agreement on cooperation between Enova and the Norwegian Association of Local and Regional Authorities (KS), signed in 2008. This agreement will lead to a number of concrete measures that will make it easier for the municipalities to implement the right measures to benefit the climate. One of the very first actions will be the opening of an internet portal in early 2009 to provide an overview of the status of energy and climate planning work in the municipalities.

In the years to come, the municipalities will be crucial players in the work to achieve climate-friendly energy restructuring in Norway. Enova's work with the municipalities has contributed to rapid development of the municipalities' knowledge and prioritisation of energy and climate measures. Given the enthusiasm and willingness to make a commitment that the municipalities have exhibited in their climate work, it is essential that Enova also continue its work to support and guide the municipalities so that plans are implemented and the climate work is accomplished in the most efficient way possible.

Households

Stationary energy consumption in Norwegian households is quite composite; a result of our high standard of living and the modern lifestyle that characterises life in Norway today. Through its long-term work, Enova will contribute to making this energy consumption much more efficient. Our goal is more homes that have low heating needs, more households applying the most energy-efficient technology and, not least, that we who live in these homes change our energy habits to avoid waste. The supply of energy to households must, to the greatest possible extent, be based on renewable energy sources.

Energy challenges

There are about 2 million households in Norway. This is a highly composite group in terms of where we live, the kind of housing we live in, and what kind of people live in these households, both as regards age and family situation, education, employment, how we like to spend our spare time, financial standing, etc.

The stationary energy consumption in the households reflects this complexity. Although the majority of consumption goes to basic needs such as indoor heating, hot water, cooling/freezing and preparing food, we see a steadily increasing diversity in energy-intensive equipment and devices in our households. Equipment used for IT, communication and entertainment pervades our homes, along with a multitude of small devices used for various functions. All together, Norwegian households represent stationary energy consumption of about 45 TWh, of which about 35 TWh is electricity, see Figure 9. Households thus

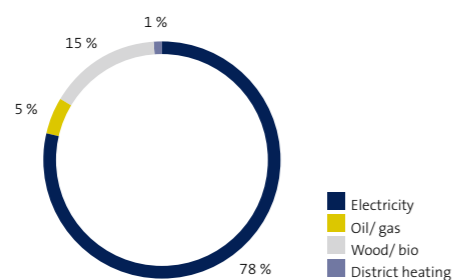


Figure 9: Stationary energy consumption by energy source in Norwegian Households in 2007 (source: Statistics Norway).

account for one-third of the Norwegian consumption of electricity. This relatively high use of electricity is one of the most important characteristics of Norwegian households, and is largely a result of the unique Norwegian system of heating based on electricity. Enova's analyses show, however, that there is a great potential for energy-efficiency and restructuring in this sector. The Households unit differs in many ways from Enova's other market areas.

The breadth and complexity of the energy consumption, the many small stakeholders in the target group and the lack of obvious arenas for direct dialogue with the target group mean that energy restructuring in the households must be achieved in part using different policy instruments than in other areas of energy consumption.

Knowledge basis for measures targeting households

In 2008, Enova has continued its work to establish a common knowledge platform for the work targeting households. This work has gained particular inspiration from participation in various international fora on the topics of energy behaviour, from developing a strategy for the Households Area up to 2008, and the work on Enova's passive house strategy in 2008. The objective of this work is to develop more comprehensive knowledge about energy behaviour in the households, illustrated by questions such as what main types of energy behaviour are most relevant, as well as which mechanisms control the various types of energy behavior. Investment behaviour, buying behaviour and habit are important types of behavior that impact energy consumption. This knowledge is of great value when developing and revising programs and measures, as well as in connection with evaluating the effects of our policy instruments.

We have also identified a simple framework model for consumption and generation of energy that provides strategic main guidelines for the work aimed at households. The model provides advice about energy consumption in households based on the following principles: (i) The Home: Reduce the need for energy supply with the aid of "passive" measures such as weatherising, sealing leakages and replacing windows. (ii) The Technology: Equip the home with energy-efficient solutions and technology (lighting, refrigerator, shower, etc.). (iii) The People: adopt habits when using energy-related equipment to avoid wasting energy (turn off, lower the temperature, etc.). Principles (i), (ii) and (iii) relate to the efficiency of energy consumption. Principle (iv) relates to energy generation, and it states that when the need for energy that remains after measures under Principles (i) to (iii) have been implemented, such energy shall come from renewable sources, and that heating should not be based on electricity. Heat pumps, wood and other bio-based heating are examples of measures under Principle (iv) that can be implemented at the household level.

An important consequence of this model is that it contributes to greater focus on improving energy-efficiency. In Norway, we have a long-standing tradition of addressing the prospect of tight power markets with measures to

increase supply, while measures aimed at reducing the demand for energy through more efficient use have not received the same attention. Based on our frame model for consumption and generation of energy, we will now contribute to boosting the status of and highlighting measures to promote efficient energy consumption. One of the mottos in Enova's upcoming "Snu strømmen" campaign is illustrative of this fact: "Conserving electricity is the most important thing you can do for the climate."

"The Enova model"

Investment in energy-related technology is a key type of energy behaviour within our framework model. Enova is an important instrument for spreading socially desirable energy technology among our households. Many promising technologies that could have had a potential in the mass market often seem to get mired down after being applied by a smaller "specially interested" segment. Based on energy policy, market and technical criteria, it is Enova's task to help these desired technologies make the transition to the mass market. This assistance will be provided for a limited period of time, which means that the relevant technology must be competitive without assistance in a long-term perspective. The support scheme "Enova Supports" (Enova Støtter) is our most important tool in this phase of the market work. We also have products with different energy qualities for mature market technologies. Here too, our goal is to support the best products in energy terms, although we do not want to use financial subsidies in this mature market. This is where "Enova Recommends" (Enova Anbefaler) comes in – a labeling system which works closely with manufacturers and retailers to promote the best energy products within a product category. These two market instruments, the Subsidy Scheme and Enova Recommends, are supported by a wide range of instruments based on information and communication. Some examples of this are Enova Home (Enova Hjemme), Ask Enova (Enova Svarer), the magazine called Sphere (Sfære), participation in trade fairs, prototype projects, etc. We also have the Rainmakers, our concept specially aimed at children. You will find a more detailed presentation of some

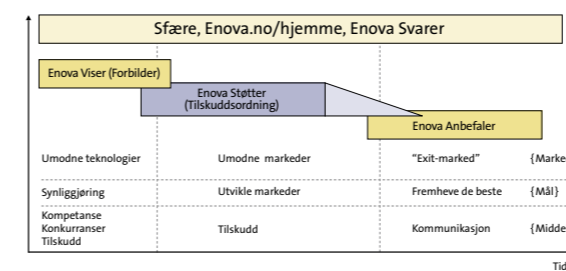


Figure 10: The Enova model.

of our programs below. The Enova model is summarized in Figure 10.



A new effort – Enova Recommends

Enova Recommends is a program designed to promote the products in a mature market which have the most favourable energy and climate qualities. Using our own label, advertising at relevant sales outlets and supported by PR and marketing campaigns, the purpose of this policy instrument is to influence the purchase decisions made in households towards choosing the best product in terms of energy.

Windows were the first product targeted under Enova Recommends. The main criterion for earning the Enova Recommends label was that windows had to have a U-value of 1.0 or lower. This criterion is tougher than the current building regulations requirement and before Enova Recommends was launched, there was only one window manufacturer in Norway who could deliver this quality. Enova Recommends challenged the window industry, and the industry rose to the challenge in a very positive way. Now, at the end of 2008, around 15 Norwegian manufacturers can deliver windows which meet the Enova Recommends quality standards. The market and energy effect of the measure will be documented during 2009.

Insulation will be the next product field under Enova Recommends. Here, Enova's recommendation will probably not relate to the insulation product itself, but to the best technical solutions for weatherizing and sealing homes. We see that both of these initial products under the Enova Recommends umbrella are key components in the strategy to reduce the need for heating in homes, ref. Principle (i) in Enova's frame model. So far, the focus on improving energy-efficiency is clear in Enova Recommends.

Continuation of the subsidy program for households

The subsidy program for households, Enova Supports, is an important strategic instrument in the Enova Model. However, the subsidy scheme is not part of the management of the Energy Fund as the means for the scheme are allocated directly via the fiscal budget. In 2008, the scheme received an additional NOK 71 million. Including the funds transferred from 2007, Enova has had nearly NOK 100 million available in 2008.

The subsidy scheme provides subsidies for pellet stoves, pellet boilers, air/water heat pumps, liquid/water heat pumps and central management systems. Solar collectors

were included in the scheme starting from August 2008. At the end of 2008, 29 878 applications had been recorded since the scheme was introduced in 2006. So far, subsidies have been paid to 8 006 households. 7 121 households had continuing subsidy commitments at the beginning of 2009. The average implementation rate is about 40 per cent. There were more applications in 2008 than in 2007 and in the second half of 2008, the number of applications received was double the number received in the same period in 2007.

The activity in 2008 confirms a continued good trend for air/water heat pumps. This type of product seems to have achieved a market breakthrough. Together with high implementation rates for liquid/water heat pumps, this confirms the trend we have seen toward installation of more water-based heating in Norwegian homes. Water-based heating is a means for achieving more flexible heating solutions and in the long term, facilitating integration of bio-based solutions, solar collectors and geo-thermal heating. Six per cent of the applicants want to replace heating alternatives based on oil and gas. This is somewhat higher than the percentage of household stationary heating consumption based on oil and gas.

Children and youngsters
Enova continued to pursue development of its "Rainmakers" program in 2008, as part of its commitment to children and young people. The concept has been widely communicated through various channels including TV, special events, the internet and the primary and lower secondary schools. Gallup polls show that among children in the age 9-12 target group, knowledge about the Rainmakers has grown to 55 per cent, compared with 46 per cent in 2007.

Fifteen courses and lectures have been held about this concept for 350 participants in 157 primary and lower secondary schools. An evaluation was performed in the wake of a pilot project for developing the curriculum in the intermediate grade in 11 schools, with very good results. The survey showed that nearly 80 per cent of the teachers asked had worked with Rainmaker activities, and of these, nearly all of the teachers said that they were satisfied/very satisfied with the curriculum. 90 per cent of the teachers said that the Rainmaker concept had a significant teaching effect. Fifty Rainmaker schools were registered in 2008, which is a healthy increase compared with previous years and illustrates the importance of establishing support for this work in the school system.

Another new record was set during the Rainmakers' Energy Friends Day (Vennergidag), when 5 326 participants from 57 schools flocked to the host city of Stavanger and neighboring municipalities to take part in the event.

A dedicated website was set up for teachers in 2008 (www.regnmakerne.no/larer) where teachers can read more about the concept and order materials, reports and

other relevant subject matter. A revised edition of the main Rainmakers website was launched in the spring of 2008, with the objective of better and broader communication with the target group.

Since autumn 2008, the Rainmakers have been visible on the national television networks NRK1 and NRK Super through the program titled 'Hut i Heita' (What in the World) and the children's reality series, Energikampen (The Energy Match). The Barnevakten (Childminder) organisation selected Energy Match as the year's best family program, which shows that energy and climate are important, relevant topics for both children and adults.

Promotion and communication Enova.no/hjemme

In connection with an adjustment of Enova's brand architecture in 2008, Enova's consumer website www.minenergi.no was renamed www.enova.no/hjemme. This website provides lots of good tips and advice about how to conserve electricity and how to heat your home sensibly, as well as easy access to the application centre for the Subsidy Scheme, the Ask Enova service, and the Enova Recommends website.

New this year was the introduction of a live chat option as a supplement to the telephone-based answer service available by ringing the toll-free number 800 49 003. Ask Enova logged a total of 28 578 inquiries in 2008, with 810 of these transactions taking place through the chat function.

A dedicated campaign website was also established in 2008 to provide detailed information about the Enova Recommends concept. By accessing the www.enovaanbefaler.no website, consumers can find an overview of relevant products and manufacturers within the specified criteria, which will make it easier for the consumer to identify the most energy-efficient solutions.

The internet statistics for the various websites show that www.enova.no/hjemme had 623 138 hits in 2008, while the comparable figure for www.enovaanbefaler.no was 202 072. A project was initiated in late 2008 for the purpose of renovating the www.enova.no/hjemme website. This work will be completed by the summer of 2009.

Sfære (Sphere)

Enova's Households division distributed a new free magazine in 2008 to a large number of households throughout the country. This magazine, called "Sfære" (Sphere), is intended to be a source of motivation, not least for homeowners who are renovating their homes, and who have traditionally obtained inspiration and practical solutions from glossy periodicals and advertising from suppliers. The magazine contains reports, interviews and brief articles about energy-efficient solutions, all presented in an attractive modern way. Two issues of the magazine were published in 2008, with an additional two issues planned for 2009.

Communication

Knowledge of Enova has increased substantially in 2008. This is important both in terms of creating attention for Enova's subsidy schemes and to promote knowledge about Enova as a driving force for efficient energy consumption and new energy generation in Norway. The Climate compromise reached in the Storting (Norwegian Parliament) in 2008 entails further emphasis on Enova's national role of actively promoting energy solutions that will contribute towards solving our climate challenges. Therefore, during 2008, Enova's Communications division has adjusted the company's communications strategy to fit these new requirements and tasks. One of these tasks has been to prepare a major national campaign for more efficient energy consumption. Much of the resources expended in the second half of 2008 were used to develop the "Snu strømmen" campaign launched by the Minister of Petroleum and Energy in early January 2009.



Enova's communications activities take place in many arenas. The primary objective is to view communication as an integrated part of the company's core strategy. These communications activities are intended to help Enova to achieve its goals, which means that this work is both extremely varied and is aimed at several different target groups e.g. through building alliances, PR and publicity, public affairs and marketing. New communications challenges and, not least, a more fragmented media market undergoing explosive development, mean that Enova must continuously emphasise integrated communications and coordinate its means to achieve the greatest possible effect.

The strategic guidelines for the communications efforts in 2008 have focused on highlighting "Best practice" – the good Enova stories. This has been done by writing articles which we have distributed via print and the internet, as well as active courting of both the specialist media and relevant news media. Highlighting Enova's strong technical competence through feature articles, debate submissions and interviews has also been important, along with participating at meetings and conferences all over Norway. We have also prioritized developing and maintaining our relationships with important partners. New alliances have been made with companies and organisations for the purpose of cooperating on common objectives. Enova has also drawn up a communications strategy for the 2009 – 2011 contract period. This strategy addresses Enova's new challenges and sets goals for the communication efforts.

PR/Press contact

"Guidelines for handling the media" were adopted during the first half of 2008. These guidelines determine responsibility, authority and roles in connection with media contact.

The 2008 annual summary of media coverage shows more than 2 800 reports distributed over 270 different media sources. The regional media dominate in coverage of Enova; around 40 per cent of the coverage is obtained from this sector. As regards content, 33 per cent of the coverage is linked to energy generation and 31 per cent to energy consumption. Many major stories circulated in the media in 2008, topped by stories about billion-kroner (billion-NOK) investments in renewable energy, the campaign to get rid of old oil boilers, wind power subsidies, phasing out incandescent light bulbs, the working environment issue in Enova, coverage of Enova's program targeting municipalities and presentation of Enova's 2007-results.

Public affairs

It is important for Enova to systematically develop relationships with customers and other important stakeholders. We have worked throughout 2008 to reinforce this area of our activities.

Publicity

A "Brand Strategy and Architecture" was established for Enova in 2008. Prior to this, the Enova brand has been somewhat unclear, in part due to the many different products and services that have been promoted in different ways using various names, brands and logos. A "company brand strategy" was adopted to improve this situation, with a strong primary Enova brand and

two secondary brands: "Enova At Home" and "Enova Business". Products and services are grouped in a logical fashion under these categories, with names and graphics that provide clear visual connections between the primary brand and secondary brands. Examples include Ask Enova, Enova Recommends, Enova Supports, Enova Stories and Enova Rainmakers. A graphic profile manual was also prepared for Enova in 2008.

The Internet

Enova's website was extensively revamped in 2008. Starting in April, the website was divided into three main channels: enova.no/naring for enterprises in the private and public sectors, enova.no/hjemme for households and regnmakerne.no for children and youth. In addition to these main channels, Enova has established the campaign website enovaanbefaler.no (Enova Recommends), and also has responsibility for the information website fornybar.no (for renewable energy).

Enova attributes great importance to reaching its various target groups via the internet, and work takes place continuously to further develop the websites in terms of content, accessibility and service level. The regnmakerne.no website was renovated and relaunched in 2008 and a process has been initiated to enhance the content on enova.no/hjemme. This work will be completed in the first half of 2009.

In the 2008 annual quality assessment of the (Norwegian) Agency for Public Management and eGovernment (DIFI), Enova's websites were awarded a three-star overall rating, where the strongest qualities were deemed to be accessibility and user customization.

Analyses, measurements and evaluations

Image surveys reveal an increase in general knowledge about Enova during 2008. Much of this increase can be explained by the considerable coverage Enova has received in the media over the past year.

PR barometer Society

As in 2007, a survey was also conducted in 2008 of how journalists perceive Enova's service, image and the overall quality of their interaction with contacts in the company. The survey showed that Enova generally scored well when compared with other public enterprises.

Barriers

Enova's primary customer groups have good knowledge and understanding of the company and, even though the trend is positive, we are working actively to spread more extensive knowledge about Enova, both among the general public and in corporate Norway as a whole.

One of the challenges we face in communications is that Enova largely remains a passive player in all types of coverage by the press, and far too seldom emerges as a very energetic and prominent stakeholder.

To fortify its image as a strong, professional stakeholder, Enova will work more proactively to seek out and confirm its position as an outstanding knowledge-provider and participant in debates on issues involving energy expertise.

Clear, unambiguous, enthusiastic and consistent communication about Enova's role and responsibilities will lay the groundwork and provide important support for our market organisation, whose task is to achieve results both in the professional markets, and in the household market in particular.

Other results and activities

International cooperation

Since 2003, Enova has been the steward of the EU's non-technological program Intelligent Energy Europe, on behalf of the Ministry of Petroleum and Energy (MPE). Starting from 2007, this program was incorporated as one of three programs under the Competitiveness and Innovation Framework Programme (CIP), thus embarking upon its second period, which will run until 2013. The purpose of the program is to remove/reduce cultural, institutional, economic, social and legal barriers which impede or restrict progress in improving energy-efficiency and use of renewable energy. The overarching objective is to support the EU's goals as regards supply reliability, sustainable development and competitiveness.

Energy. Enova's national contact point (NCP) also took part in the IEE's meetings in the program committee, and at the EU's information day in Brussels. Norway was also represented at a workshop arranged by the EU for the national contact points in March.

It was announced in 2008 that the EU's Work Programme would allow for "Market Replication Projects" to commensurate with a slight increase in the budget. However, this was not actually implemented and the Commission has worked with the program committee to identify various models to introduce this policy instrument. The details in relation to the 2009 announcement were not yet clarified at year-end. The program areas "Energy Efficient Products" and "Sustainable Communities" were not open in 2008.

Applications for support

The EU announced a Call for Proposals 2008 on March 12th, with an application deadline of June 26th. The national application deadlines were set at May 5th for pre-project support and June 2nd for national co-financing. After the EU increased its project support to 75 per cent starting from 2007, Enova can now provide support amounting to up to 25 per cent of the Norwegian partner's share of the project. Norwegian partners can also apply for subsidies of up to NOK 50 000 for preparation of the draft project proposal.

Three applications for pre-project support were received. One of these projects did not meet the program criteria. The total funding commitments for pre-project support amounted to NOK 80 000.

Nine projects applied for national co-financing, and all were approved. However, some of the projects received less funding than applied for. The total funding commitments for 2008 amounted to NOK 3 053 916 kroner.

At present, there is no complete overview of which of these applications will receive EU funds. However, we have heard that negotiations have been initiated with one project, and that several projects have been turned down. A final overview will be published on the Commission's website as soon as the results are available.

More information about IEE II is available on Enova's website.



Part of Enova's management of IEE II entails providing information about and marketing the program to Norwegian stakeholders in the form of annual national information meetings, participation in the EU's program committee for national contact points and the EU Commission's information meetings. Enova is also responsible for following up results and reporting on Norwegian participation to the MPE, as well as for administering the national subsidy schemes under the sub-programs SAVE (energy-efficiency) and ALTENER (renewable energy).

A national information meeting attended by previous project partners as well as new interested parties was held in April 2008 at the Ministry of Petroleum and

Natural gas

Under a separate assignment from the MPE, Enova has entered into agreements with developers of transport and storage facilities for natural gas. This scheme has been organised in accordance with the guidelines that apply for "Public Service Obligations" (PSO). A contract was signed for one new project in 2008, which could provide a basis for gas sales equivalent to 1 500 GWh per year when the facility is fully operational. A total of NOK 45 million has been allocated, which is close to the entire disposable amount.

Enova manages funds appropriated via the fiscal budget which are earmarked for the support scheme for natural gas infrastructure. As part of this task, Enova has developed a general template for designing terminal and storage facilities for LNG, in keeping with the above-mentioned service obligations and adapted to Norwegian conditions.

Following clarification and description of the relevant service obligations, Enova carried out the first public announcement of the scheme in 2004. An evaluation of the scheme was initiated after completion of the tender process and negotiation of agreements in 2005. The results and conclusions of this evaluation were incorporated in the ongoing work. Following the announcement in 2008, Enova received bids from a total of five different bidders with six different projects. The number of projects in recent years has remained fairly steady.

The subsidy program for households

Since 2006, Enova has managed a subsidy program for alternative heating and electricity conservation in households.

This program receives earmarked allocations from the fiscal budget, and is thus not part of the Energy Fund.

Pursuant to the regulations adopted by the MPE for management of this scheme and the terms in the fiscal budget, the goal of this scheme is to facilitate more domestic use of natural gas, with particular emphasis on natural gas applications as a beneficial climate measure. Conversion from heavier fuels in industry, shipping and transport are priority market areas.

The initial financial framework for 2008 was approximately NOK 30 million. Unforeseen obstacles led to the cancellation of an agreement signed in 2007, thus making available about NOK 16 million and bringing the total 2008 framework to about NOK 46 million.

Following an evaluation of the projects in relation to the stipulated criteria for prioritisation, an agreement was signed in 2008 with Nordic LNG AS for a terminal and storage facility near the town of Fredrikstad. This will be the largest facility built in Norway to date, with storage capacity of 10 000 m³ and the ability to cover consumption equivalent to 1 500 GWh when running at full capacity. If the entire capacity is utilised for conversion from heavy oil in the industry, this will reduce CO₂ emissions by up to 100 000 tonnes per year, or a reduction of nearly 25 per cent. In practice, the actual reduction will probably be somewhat less, as we cannot expect that all of the gas sales will replace heavy oil.

As the subsidy program is an important strategic policy instrument in the Households Area, we have provided a description of the program in the chapter on Households and energy consumption.

Enova's guidelines for risk management, ethics and HSE

Risk management in Enova

An all-important requirement in the rules for financial management in the Norwegian State is that all management, follow-up, control and administration must be adapted to the distinctive character of the enterprise, as well as risk and essentiality. The letter of award to Enova SF for 2008 also states that Enova shall establish prudent risk management and internal control, and ensure that this functions in a satisfactory manner.

Enova has responded to this by establishing a dedicated governance area which encompasses the Risk Manager function. The Risk Manager is tasked with leading the risk management processes in the organisation, and is responsible for implementing risk management and internal control as an integral part of this good governance.

Enova's risk management is based on the Norwegian Government Agency for Financial Management's model, with focus on three main risk areas:

1. Risk of not achieving the goals
2. Risk of laws and regulations being breached
3. Risk of irregularities

Systematic risk management systems were established during 2008 for the market areas Energy Consumption and Energy Generation. This system will be expanded to cover the remaining departments in the years to come, as well as for Enova SF as a whole. Several projects were also implemented in 2008 where the main focus was to reduce Enova's risk exposure within the above-mentioned categories. Enova intends to focus on these areas also in 2009.

Ethical guidelines in Enova

Ethical guidelines for Enova were drawn up in 2008 by means of a process entailing broad-based involvement and support in the organisation. This work has included identifying dilemmas associated with various ethical problems. Enova's board of directors formally adopted the guidelines in June 2008.

The ethical guidelines are intended to assist all Enova employees in increasing awareness of ethical issues. The group responsible for preparing the report has devoted itself to highlighting questions and items that fall under these ethical dilemmas, rather than proclaiming absolute rights and wrongs. Together with Enova's values, these ethical guidelines are an overarching source and direction for everything we do.

Health, Safety and Environment in Enova

An overall plan was drawn up in 2008 to ensure a good and stable working environment in Enova. A number of activities have been carried out under this plan.

Staff and support functions were gathered in a single department to ensure enhanced focus and greater capacity. New employees have been recruited to the department. The HR function has been reinforced through greater visibility in the organisation and greater priority has been assigned to the work in this area.

Cooperation agreements with the employees have been formalised during 2008, in a joint effort with the trade unions represented in Enova. Cooperation between management and the employees has been strengthened as part of these agreements.

An HSE manual has been prepared for Enova.

The cooperation agreement with the Company Health Service has been expanded, providing for more active participation by the health service in the company's HSE work.

A Working Environment Committee (AMU) was established in Enova in the fall of 2008. The AMU is composed of three employee representatives, three employer representatives and one observer from the Company Health Service.

Results – history and targets

At the end of 2008, Enova had made contractual commitments for the period 2001 – 2008 for a total energy result of 11 589 GWh. According to its agreement with the MPE, Enova has a primary performance target of 18 TWh by the end of 2011. There are also technology-specific performance targets for 2010 of 3 TWh in wind power and increased access to water-based heating from renewable energy sources, heat pumps and waste heat of 4 TWh. Enova is doing well in relation to this interim target for heating, with contracts equivalent to 3 259 GWh at the end of 2008, but is somewhat further from reaching the interim target for wind power, where at the end of 2008 there is a contractual energy result of 1 381 GWh. The targets and accumulated energy results are shown in Figure 11.

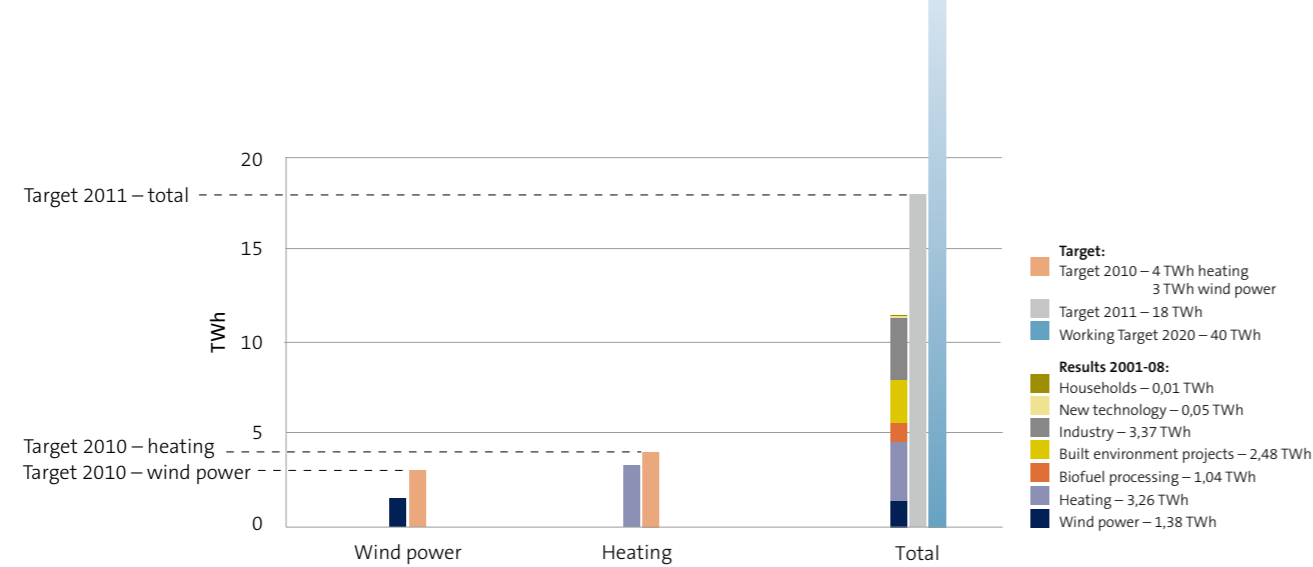


Figure 11: Contractual energy targets and accumulated contractual energy results by areas. ¹

The areas making the greatest contributions to the energy results vary from year to year. The development in the heating area has been very positive in recent years, ref. Figure 12, with the area contributing with 840 GWh of a total energy result for new approved projects of 2 149 GWh in 2008.

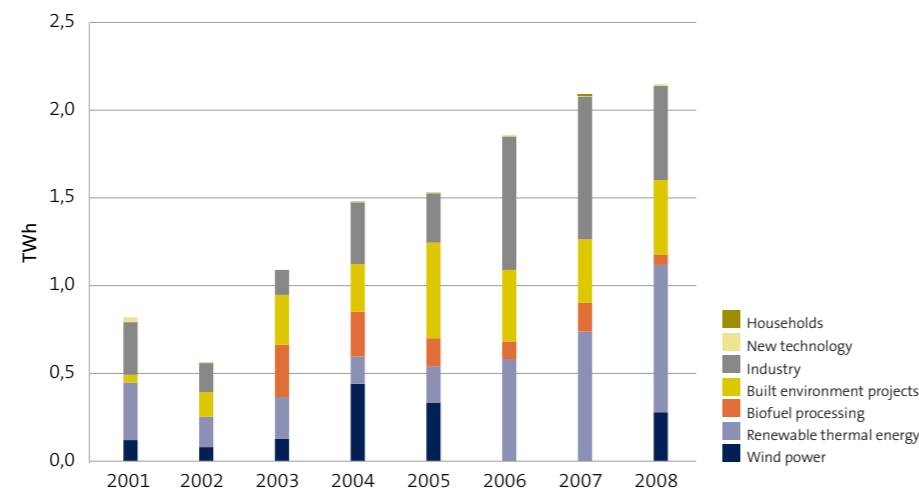


Figure 12: Expected energy result from contracts signed in the period 2001 to 2008, by year the contract was signed. The figures have been corrected to reflect suspended and cancelled projects.

There is good stability in the expected energy results from contracts in the Buildings Unit (BBA) in recent years. In this area, Enova contracted for a total contractual energy result of 424 GWh in 2008. Industry is another very important profit area, although the 2008 result - 537 GWh – was somewhat lower than previously.

New contracts were signed during 2008 with a total contractual energy result of 2 154 GWh. During this same period, signed contracts equivalent to 644 GWh were cancelled. This means that the aggregate expected energy result had a net increase of 1510 GWh from 2007 to 2008. Figure 13 shows the net contributions to accumulated energy results for the years 2006, 2007 and 2008.

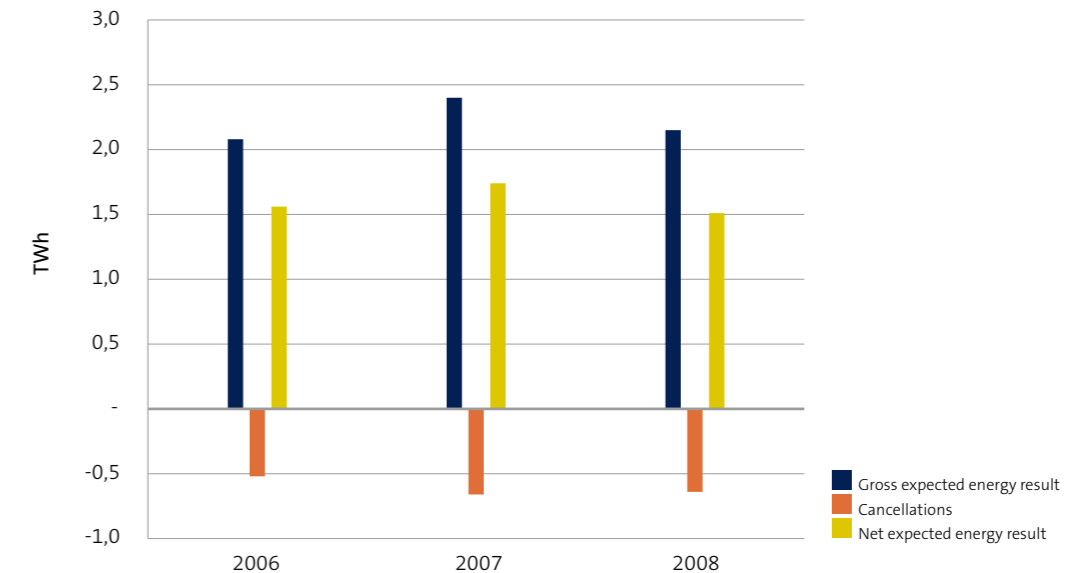


Figure 13: Comparison of gross expected energy result, energy results that have been cancelled during the respective years, as well as the resulting new expected energy result. The net expected energy result is the same as the net annual contribution to accumulated expected energy results.

While the number of new contracts signed depends on disposable resources and Enova's efforts, Enova can exert little influence on the number of cancelled and suspended projects after the commitment has been made. The total GWh cancelled in 2008 was high due to cancellation of two major wind power projects totaling 451 GWh, which were contracted in 2004 and 2007, respectively, ref. Figure 14. One of the requirements stipulated by Enova is that its support must trigger the implementation of projects that would not otherwise have been carried out while at the same time, the projects must be cost-effective. It is therefore only to be expected that a certain percentage of the projects receive support that is marginally inadequate, and are therefore cancelled.

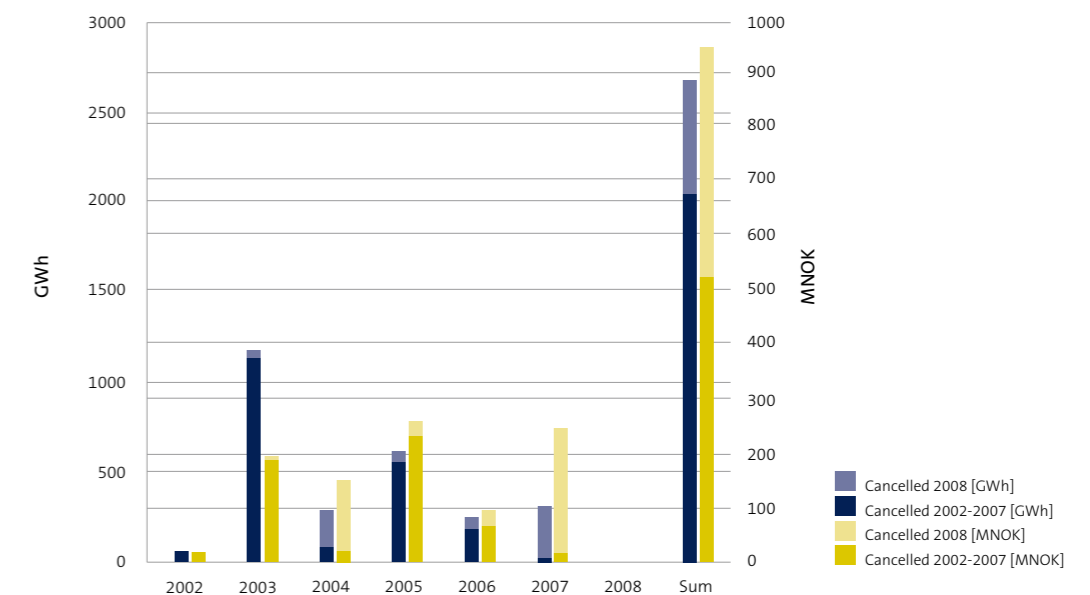


Figure 14: Suspended and cancelled projects distributed by year of original contract. Cancellations and suspended projects that were registered during 2008 are clearly indicated. ²

¹ Enova's management of the Energy Fund is governed by an agreement with the Ministry of Petroleum and Energy. Performance targets and work goals for the period 1 June 2008 to 31 December 2011 are laid down in this agreement.

² The figure shows GWh and MNOK for all suspended/cancelled projects. There may, in addition, be audits of projects that result in changes in energy targets and approved amounts. This means that the figures cannot be compared directly from year to year.

Contractual energy results are the expected energy results when the projects are approved. These estimates are revised when the project period comes to a close (final report submitted). Table 1 shows contractual energy results and final corrected energy results reported for projects that have been completed. At the end of 2008, about 35 per cent of the projects supported by Enova were completed, equivalent to 4.1 TWh. Final reports totaling 481 GWh were submitted in 2008. In aggregate terms, the deviation between expected energy result when the contract was signed (contractual) and at the end of the project (final reported) is small.

	GWh/year					Contractual corrected for final reported result
	2001-2005 ³	2006	2007	2008	Contractual	
Wind power	1 115	0	0	279	1 393	1 381
Renewable thermal energy	1 141	570	739	840	3 289	3 259
Biofuel processing	713	100	163	60	1 035	1 038
Built environment projects	1 279	396	362	424	2 461	2 478
Industry	1 202 ⁴	759	814	537	3 312	3 368
New technology	65	7	5	11	87	53
Households	0	0	10	0	10	10
Contractual	5514	1832	2093	2 149	11 589	
Contractual corrected for final reported result	5 486	1 859	2 094	2 149		11 587

Table 1: Contractual energy result in GWh distributed by areas and year, before and after correction for final reported energy results in completed projects.^{5,6,7}

The fact that the deviation is small indicates that the projects are largely implemented as planned, in terms of the energy result. If projects undergo significant change during the project period, Enova conducts a re-evaluation of the project. In such cases the original project could be cancelled, and a new application must be made for the new, revised project.

Figure 15 shows the percentage of the project portfolio that has been completed for the respective years. As expected, the percentage of completed projects increases with the projects' age. In most projects, a certain amount of time passes from when the contract is signed between Enova and the project owner until the investment decision is made and ground is broken (project start). There is a risk during this period that changes might occur in the content, cost and results that have been used as a basis in the project application, which could possibly result in the postponement or cancellation of projects. Another factor is the duration of the project period, which can extend over several years.

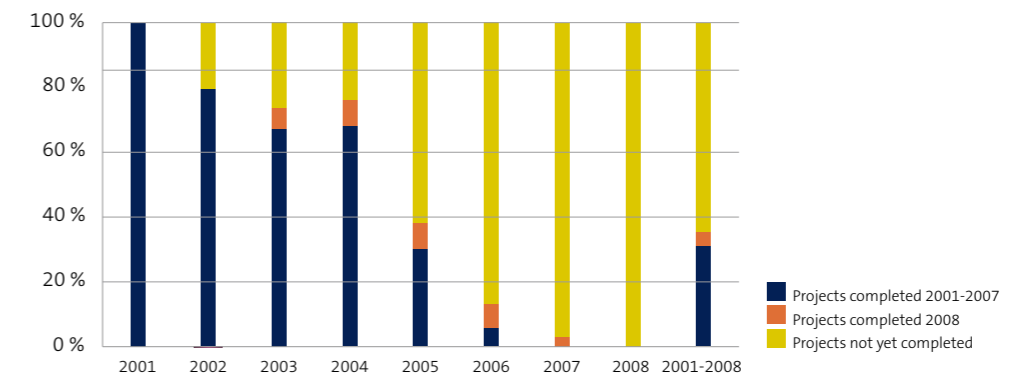


Figure 15: Percentage of completed projects (final reports received) at the end of 2008, by year of original contract. The percentage of final reports registered during 2008 is indicated separately.^{8,9}

It is emphasised that the percentage of reports where final reports have been received will also be affected by cancellations. Cancellations will reduce the number of active projects (the total) in the respective years, affecting the percentage of closed projects out of the total to vary independently from the number of projects completed.

³ The projects from 2001 were supported by the Norwegian Water Resources and Energy Administration (NVE), and have subsequently been followed up by Enova. Enova's agreement with the MPE specifies that Enova can count the projects' results. In 2002, Enova commissioned an external report to assess the energy results for 2001 according to the guidelines that apply for Enova's projects. This work was performed by Econ and Stavanger revisjon (audit). Enova will not conduct any further audits of the projects, and they will therefore be tallied together with the final reported results, even though final reports have not been registered for these projects in Enova's database in a similar manner as is done for projects supported by Enova.

⁴ Of this, 152 GWh relates to industry projects not formalised in contracts.

⁵ The year refers to the year a project is contracted, and does not necessarily indicate when the project results will be realised in the form of kWh.

⁶ Due to rounding, the total sums will not necessarily concur with the total for the respective year.

⁷ Contractual results for the individual year will change from year to year due to cancelled/suspended projects and other changes. This means that the figures in the table are not necessary the same as reported in Enova's result report for 2007.

⁸ The year refers to the year a project is contracted, and does not necessarily indicate when the project results will be realised in the form of kWh.
⁹ The results from the NVE projects in 2001 are included in this figure, even though these projects are included in Enova's project database in the same manner as subsequent projects.

Management of funds

In 2008 Enova had NOK 2 020 million available for allocation. Up until 2008, the surcharge on the grid tariff was the primary source of revenue for the Energy Fund, amounting to a total contribution of NOK 723 million in 2008. 2008 also marked the first time funds were added to the Energy Fund from the return on the basic capital, equivalent to NOK 399 million.

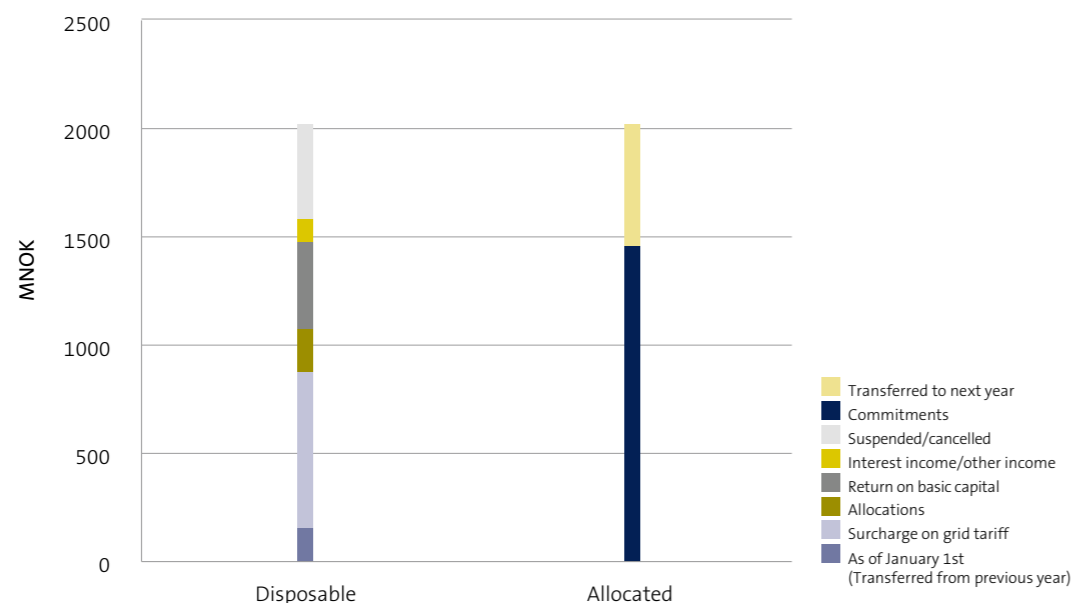


Figure 16: Financial framework and utilization of the Energy Fund in 2008.

Figure 16 illustrates that the funds from projects that have been suspended or cancelled amounted to NOK 437 million in 2008. Since Enova disburses funds in arrears as a percentage of the project's accrued costs, the funds allocated to projects that eventually get cancelled have not been disbursed, and can instead be made available for new projects. Enova will transfer NOK 561 million from 2008 to 2009. The option provided by the Energy Fund to transfer unappropriated amounts to subsequent years gives Enova the flexibility to utilise market trends, such as the falling costs of measures, to generate the greatest possible energy results over time. Table 2 shows the allocation of the resources in the Energy Fund and contractual energy results at the end of 2008, by area and year. The basis for this table is the year the funds were actually made available, not the year when the framework was awarded. Consequently, the value will change to reflect cancellations and transfers of funds between years.

	2002		2003		2004		2005		2006		2007		2008		Total	
	MNOK	GWh	MNOK	GWh	MNOK	GWh	MNOK	GWh	MNOK	GWh	MNOK	GWh	MNOK	GWh	MNOK	GWh
Wind power	35	80	27	124	186	454	137	337	-	-	-	-	445	279	830	1 273
Heating	49	166	36	240	77	215	76	192	301	570	316	739	436	840	1 292	2 961
Biofuel processing	-	-	9	295	14	255	7	162	4	100	5	163	3	60	41	1 035
Built environment projects	47	140	54	259	69	257	123	556	122	396	126	362	159	424	699	2 394
Industry	20	177	17	104	57	343	44	278	165	759	200	814	146	537	649	3 012
New technology	19	1	-	-	9	35	2	1	7	7	72	5	52	11	161	59
Children/young people and households	-	-	12	-	12	-	14	-	36	-	46	10	60	-	180	10
Municipalities program	-	-	-	-	-	-	2	-	6	-	6	-	16	-	30	-
Training	10	-	16	23	6	-	2	-	0	-	-	-	-	-	35	23
Information/communication	113	-	40	-	26	-	48	-	19	-	22	-	46	-	314	-
International activities	7	-	7	-	7	-	14	-	14	-	9	-	7	-	64	-
Analysis	7	-	7	-	6	-	6	-	10	-	13	-	12	-	62	-
Administration fees	42	-	36	-	41	-	45	-	47	-	61	-	75	-	347	-
Total	350	563	260	1 045	509	1 560	519	1 525	731	1 832	876	2 093	1 458	2 149	4 703	10 769

Table 2: Aggregate energy results and allocation of funds from the Energy Fund 2002-2008, corrected to reflect cancelled and suspended projects as of 31 December 2008. (NVE projects from 2001 are not included in this table.)

Enova processed about 350 applications during 2008, with fairly substantial variations in number between the various market areas. The heating area and the program for municipalities stand out among the ordinary subsidy programs in terms of the number of applications in 2008. The number of incoming applications was very high, with a clear increase compared to previous years. Table 3 shows the number of applications approved or rejected in 2008.

Main area	No. of applications processed in 2008	Projects approved for funding (%)	MNOK ^{10,11}
Wind power	7	29	445
Thermal energy	118	69	436
Biofuel processing	3	33	3
Built environment projects	46	89	159
Industry	25	96	146
New technology ¹²	27	37	52
Municipalities program	118	100	16
Total	344	81	1 257

Table 3: Overview of number of applications processed (i.e. final decision to award or reject), percentage of projects approved for support, and funds allocated to programs accepting applications.

Many applications have been processed in the heating unit this year. Nevertheless, heating and wind power account for a relatively small number of the projects approved for support, which confirms the considerable competition for funding within these areas. On the other hand, industry and BBA have granted subsidies to most of the processed applications (96 per cent and 90 per cent, respectively). This reflects i.e. that the number of applications in these market areas is largely dependent on active marketing from Enova, of which the best projects are further refined for applications.

¹⁰ Total funds utilised by area, including administration costs associated with the programs (in addition to Enova's administration fees).

¹¹ Approved support is adjusted to reflect cancelled projects.

¹² 15 of the 17 processed applications were for the joint effort with the Research Council of Norway and Innovation Norway. Six of these 15 applications were approved; four by Enova and two by the Research Council of Norway. Subsidies from the Research Council of Norway are not included in the NOK 52 million. Six of the remaining 12 processed applications for Enova's own technology program were approved for funding.

Cost-effectiveness

Enova's overall support level per kWh in 2008 is substantially higher than the average in previous years. The main reason for this lies in the increased cost of support associated with wind power, which raises the average. The project lifetime cost of support in 2008 for heating and energy consumption, ref. Table 4 and Figure 17, was 2.6 øre/kWh and 3.2 øre/kWh respectively, while the wind power projects had a cost of support amounting to 8 øre/kWh.

	Lifetime	2002-2005		2006 ¹³		2007		2008		2002-2008	
		Øre/kWh Divided by annual contractual result	Øre/kWh Adjusted for lifetime	Øre/kWh Divided by annual contractual result	Øre/kWh Adjusted for lifetime	Øre/kWh Divided by annual contractual result	Øre/kWh Adjusted for lifetime	Øre/kWh Divided by annual contractual result	Øre/kWh Adjusted for lifetime	Øre/kWh Divided by annual contractual result	Øre/kWh Adjusted for lifetime
Wind power	20 år	39	1,9	-	-	-	-	160	8,0	65	3,3
Heating	20 år	29	1,5	53	2,6	43	2,1	52	2,6	44	2,2
Energy consumption	10 år	20	2,0	25	2,5	28	2,8	32	3,2	25	2,5
Total	Weighted average	27	1,8	34	2,6	34	2,4	57	3,7	36	2,5

Table 4: Level of support – by annual contractual result, as well as subsidies by overall energy result measured over lifetime. The results are corrected to reflect cancelled projects.^{14,15,16,17}

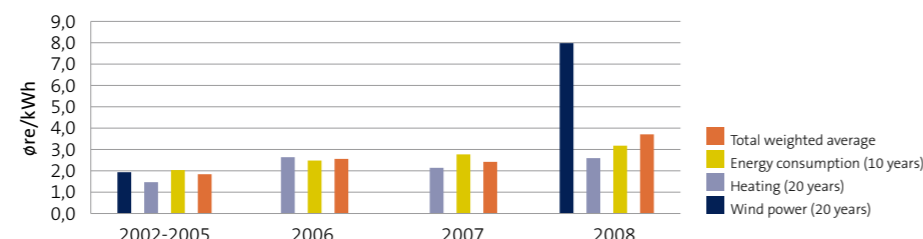


Figure 17: Development in support level distributed by overall energy result measured over lifetime, and broken down into wind power, heating and energy consumption, as well as total weighted average for the three areas.

The support level for wind power was a great deal higher in 2008 than in previous years, as much as 420 per cent above the average for the period 2001 to 2005. This is primarily due to the sharp growth in investment costs for this technology.

The growth in the support level for energy consumption projects has been steadier, but still significant. The 2008 support level for energy consumption projects, measured in øre/kWh over the lifetime, was 60 per cent higher than the average for the 2001 – 2005 period. The larger support level here can in part be attributed to higher project costs without a comparable growth in revenue potential. Another explanation is that Enova may have already processed the most cost-effective projects in previous years.

As regards the heating area, Table 4 per se does not indicate a growth trend in the need for support because, more than other areas, the heating area has made changes in its program portfolio, which means that the cost figures are not directly comparable from year to year. Even so, Enova has received clear signals of a growing need for subsidies as new district heating is developed in less densely populated areas with heating needs.

Climate impact

Enova's objective states that it shall contribute toward reducing greenhouse gas emissions. The climate impact of Enova's measures can be divided into two main groups: direct emission reduction through less use of fossil fuel and indirect emission reduction through reduced consumption or increased generation of electricity from renewable energy sources.

It is reasonable to expect that the impact on fuel oil consumption will vary between different program areas. Projects within energy consumption areas target both heating and consumption, specifically of electricity. Generally speaking, reduction of fuel oil consumption will therefore be less per kWh in results from these areas than from the renewable heat area. District heating and local power plants will satisfy both new and existing heating needs. In some cases, the heat can replace electrical heating, while in other cases fuel oil or other types of energy are replaced. In many cases, the customer may have had different alternatives for heating prior to the transition to renewable heating, which would have meant that fuel oil consumption varied from year to year. To estimate the effect on fuel oil consumption, it is estimated that about one-half of the contractual energy result from the heating area replaces oil. It turns out that each kWh of the industry result may have led to a reduction in fuel oil consumption of 30-40 per cent. Projects in the built environment unit are expected to yield a proportionally smaller reduction in fuel oil consumption of just more than 10 per cent.

Table 5 shows the estimated annual reduction in fuel oil consumption in Norway as a result of projects supported by Enova. For the period 2001 to 2008, Enova has helped fund projects which in total are expected to reduce consumption of fuel oil by 279 288 tonnes. In 2008, Enova supported projects which are expected to yield a total reduction in fuel oil consumption of 48 517 tonnes, which is somewhat lower than for previous years and a direct result of fewer projects in the industry area.

Reduced consumption of fuel oil	2006	2007	2008	2001-2008
Total tonnes of oil	56 047	65 763	48 517	279 288

Table 5: Reduction in annual fuel oil consumption as a result of Enova's projects.^{18,19}

An evaluation of the overall climate impact of Enova's activities relies entirely on how Enova's projects are distributed in terms of energy carriers and the assumptions made for covering the demand for electricity. This is illustrated in Table 6 below in that the expected reduction of CO₂ emissions varies from 0.6 to 10 million tonnes for the period 2001 to 2008, depending on the assumptions that form the basis for the estimate. If we assume that the energy demand will be met by gas power, and that the heating and energy consumption projects contribute to reduced use of both electricity and oil, the effect of all of the projects supported by Enova is estimated at 3.8 million tonnes of CO₂.

	Million tonnes of CO ₂ per year			
	2008	2001-2008		
Reduced electricity consumption replaces:	45% oil and 55% electricity	Only electricity	45% oil and 55% electricity	Only oil
Electricity by sources:				
Coal power	1,5	10,0	7,6	4,6
Gas power	0,8	3,9	3,8	3,8
Gas power with carbon capture	0,4	0,6	1,8	3,3

Table 6: Reduction of annual CO₂ emissions as a result of Enova's projects.^{20,21,22}

¹³ Since 2006, relevant training costs have been included in the respective areas. This could cause an elevation in the cost level beginning with 2006.
¹⁴ The year refers to the year a project is contracted, and does not necessarily indicate when the project results will be realised in the form of kWh.
¹⁵ Lifetime is weighted in relation to the results.
¹⁶ The lifetime-adjusted support amount per kWh is calculated by dividing the total support to an area by the contractual result multiplied by lifetime. The actual impact of this support on the project's cash flow will depend on elements such as the discount factor.
¹⁷ There were no wind power projects in 2006. In 2008, two wind power projects contracted in 2004 and 2007 were cancelled. Consequently, the values in this table for the period 2002-2007 have changed significantly compared with last year's wind power reporting.

¹⁸ The year refers to the year a project is contracted, and does not necessarily indicate when the project results will be realised in the form of reduced fuel oil consumption.
¹⁹ The estimate for reduced fuel oil consumption is based on a gross result from the industry and BBA areas, while the result for renewable heating is stated as a net figure. The reduction in gross fuel oil consumption will thus depend on the expected efficiency, here assumed to be 85 per cent in the heating area. Lower efficiency will result in a greater reduction in fuel oil consumption.
²⁰ The case of 45 per cent oil and 55 per cent electricity is based on the same distribution of oil/electricity as in Table 3, but also takes into account the use of other non-renewable energy sources.
²¹ The year refers to the year a project is contracted, and does not necessarily indicate when the project results will be realised in the form of reduced CO₂.
²² Emissions from conventional gas power plants vary depending on factors such as other technology and heat utilization. These calculations assume an emission coefficient for gas power equivalent to 378 kg CO₂/MWh, source: "National Climate Measures Analysis" (Civitas 2005). Gas power plants equipped with carbon capture technology will also have emissions, and these are estimated at 15 per cent of the emissions associated with conventional gas power plants. These emission percentages are obtained from the US Department of Energy. The Norwegian Petroleum Industry Association reports CO₂ emissions from oil heating at 331 kg CO₂/MWh in the industry sector, and 378 kg CO₂/MWh in other sectors. An average figure of 355 kg CO₂/MWh has been used here.

Based on the average cost of support for Enova's projects and an estimated reduction of CO₂ emissions, this equates to a cost of measures of NOK 76 per tonne of CO₂, if we assume alternative power supply from gas power without carbon capture. The costs of measures using different assumptions as regards alternative power supply are shown in Figure 18. For purposes of comparison, the price of CO₂ quotas in the EU's emissions trading market in late January/early February 2009 was around NOK 85 – 90 per tonne of CO₂ for emissions in December 2012.

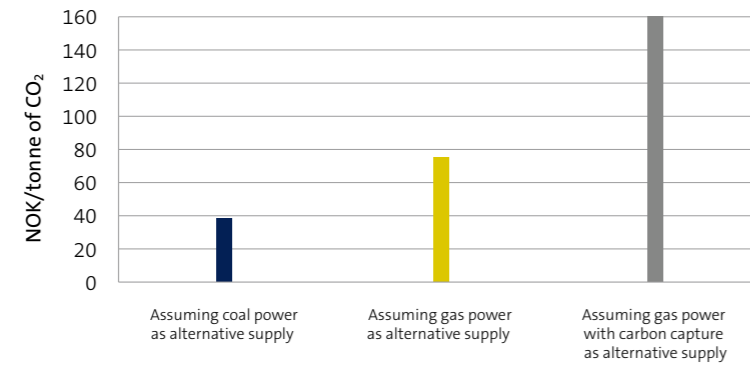


Figure 18: Cost of measures for reduced CO₂ emissions as a consequence of Enova's projects in the period 2001-2008. The three different results depend on the assumptions used as a basis for the alternative supply of generated electricity. The calculation is also based on previously achieved CO₂ emission reductions as a result of Enova's projects (ref. Table 6), and an average support level of 2.5 øre/kWh (adjusted for lifetime, ref. Table 4).

Results at the area level

Wind power

Contractual	GWh	MNOK allocated	MNOK disbursed
2002	80	35	35
2003	124	27	27
2004	454	186	186
2005	337	137	117
2006	0	0	0
2007	0	0	0
2008	279	445	0
Originally contracted	1 393 ²³	830	365
Corrected for final reporting	1381		

Table 7: Contractual energy results and funds allocated to wind power.^{24,25}

Heating

Contractual	GWh	MNOK allocated	MNOK disbursed
2002	166	49	49
2003	240	36	32
2004	215	77	53
2005	192	76	52
2006	570	301	128
2007	739	316	68
2008	840 ²⁶	436	16
Originally contracted	3 289 ²⁷	1 292	398
Corrected for final reporting	3 259		

Table 8: Contractual energy results in the form of renewable heat supply and funds allocated within the Heating area.²⁵

Biofuel processing

Contractual	GWh	MNOK allocated	MNOK disbursed
2002	0	0	0
2003	295	9	5
2004	255	14	14
2005	162	7	7
2006	100	4	4
2007	162	5	3
2008	60	3	2
Originally contracted	1 035	41	35
Corrected for final reporting	1 038		

Table 9: Contractual energy results and funds allocated to biofuel processing.²⁵

²³ This includes 120 GWh from NVE's projects beginning with 2001.

²⁴ The net contractual energy result is somewhat lower than reported in 2007. The explanation is that two wind power contracts from 2004 and 2007 were cancelled in 2008. The net contractual energy result from these projects was somewhat larger than the total new contractual energy result for the wind power program in 2008.

²⁵ The NOK amounts in Tables 7, 8 and 9 are corrected for any potential adjustments after the final reporting. The year refers to the year a project is contracted, and does not necessarily indicate when the project results will be realised in the form of kWh.

²⁶ Pursuant to the agreement with the MPE for management of the resources in the Energy Fund, the renewable heat supplied by the heating projects shall be included in the reporting of Enova's energy results. In 2008, a total renewable energy supply of 840 GWh was contracted, which in total constitutes an increase of 1 002 GWh in the total developed district heating capacity.

²⁷ This includes 328 GWh from NVE's projects from 2001.

New technology

Contractual	GWh	MNOK allocated	MNOK disbursed
2002	1	19	19
2003	0	0	0
2004	35	9	8
2005	1	2	2
2006	7	7	6
2007	5	72	6
2008	11	52	5
Originally contracted	87 ²⁸	161	46
Corrected for final reporting	53		

Table 10: Contractual energy results and funds allocated within the New Technology area.²⁹**The Built Environment**

Contractual	GWh	MNOK allocated	MNOK disbursed
2002	140	47	45
2003	282	58	53
2004	257	69	47
2005	556	123	69
2006	396	122	37
2007	362	126	8
2008	424	159	7
Originally contracted	2 461 ³⁰	703	266
Corrected for final reporting	2 468		

Table 11: Contractual energy results and funds allocated within the Built Environment area.²⁹**Industry**

Contractual	GWh	MNOK allocated	MNOK disbursed
2002	177	20	20
2003	104	17	17
2004	343	57	53
2005	278	44	27
2006	759	165	42
2007	814	200	30
2008	537	146	3
Originally contracted	3 312 ³¹	649	192
Corrected for final reporting	3 368		

Table 12: Contractual energy results and funds allocated within the Industry area.²⁹²⁸ This includes 28 GWh from NVE's projects from 2001.²⁹ The NOK amounts in Tables 10, 11 and 12 are corrected for any potential adjustments after the final reporting. The year refers to the year a project is contracted, and does not necessarily indicate when the project results will be realised in the form of kWh.³⁰ This includes 44 GWh from NVE's projects from 2001.³¹ This includes 300 GWh from NVE's projects from 2001.

Activities at the area level

Activity goals and goal achievement

Information and advice are important parts of the marketing work performed in all of Enova's areas. Households is an example of an area where information and advice are key activities. This is also a priority and a crucial task in those areas where results cannot be measured directly in the form of contractual energy results.

Enova offers nationwide information and advisory services, with both short-term and long-term goals. It is important to establish appropriate goals and good indicators in the work to develop and adapt services for the market, which can in turn ensure that we stay abreast of any potential need for corrections. This is one of Enova's focus areas, and we are working diligently to enhance our efforts.

As part of this work, ambitious activity goals were proposed in the action plan for the Households area at the beginning of 2008. These goals reflected Enova's objectives for activities in the areas listed below. Activity goals and results are compiled in Table 13.

Activity	Performance indicators	Activity goals	Result	Comments regarding deviations
Ask Enova	Number of inquiries	40 000	28 578	Deviations are a result of a number of factors, of which the most significant are less focus on energy-efficient solutions due to the relatively lower than expected cost of electricity through the year, as well as less turnover in the housing market in the year's last six months.
Logistics centre	Number of distributions	200 000	1 154 682	A strong positive deviation was achieved by establishing a new magazine for households (Sfære). Two editions were published in 2008.
Trade fairs	Number of visitors	200 000	185 255	Slightly lower visits recorded at 20 "Gjør din bolig bedre" (Improve your home) trade fairs, as well as the "Byggmessa" exhibition (building fair) in Trondheim.
The subsidy scheme	Number of subsidies disbursed	6 000	3 317	The target was set with the assumption that resources would be allocated from the Energy Fund at the beginning of the year. However, the funds were not actually allocated until the revised national budget was adopted in May 2008. This restricted the activity.

Table 13: Activity goals and results in 2008 for selected activities, including comments regarding deviations from goals.

Households

	2003	2004	2005	2006	2007	2008
Distributed material, number	n/a	124 000	137 156	262 000	218 410	149 026
Visitors to trade fairs/exhibitions	40 000	250 000	250 000	160 000	250 000	170 374
Number of hits per day, enova.no/hjemme	n/a	n/a	n/a	n/a	1 260	2 489
Campaigns	3	4	4	2 ³²	2 ³²	2 ³²
Number of applications for the subsidy scheme	n/a	n/a	n/a	15 238	5 956	8 684
Disbursed for projects under the subsidy scheme	n/a	n/a	n/a	0	4 692	3 317
Number of schoolchildren at the Rainmakers' Energy Friends Day	n/a	4 000, Oslo	4 000, Trondheim	4 500, Bergen	3 500, Kristiansand	5 500, Stavanger
Number of viewers per broadcast of the Energy Match	250 000	340 000	270 000	263 000	329 000	279 000
	-350 000	-560 000	-330 000	-413 300	-492 000	-472 000

Table 14: Overview of activities in the Households area.

³² In 2006 – 2008, only figures from the Households area are included

Municipalities

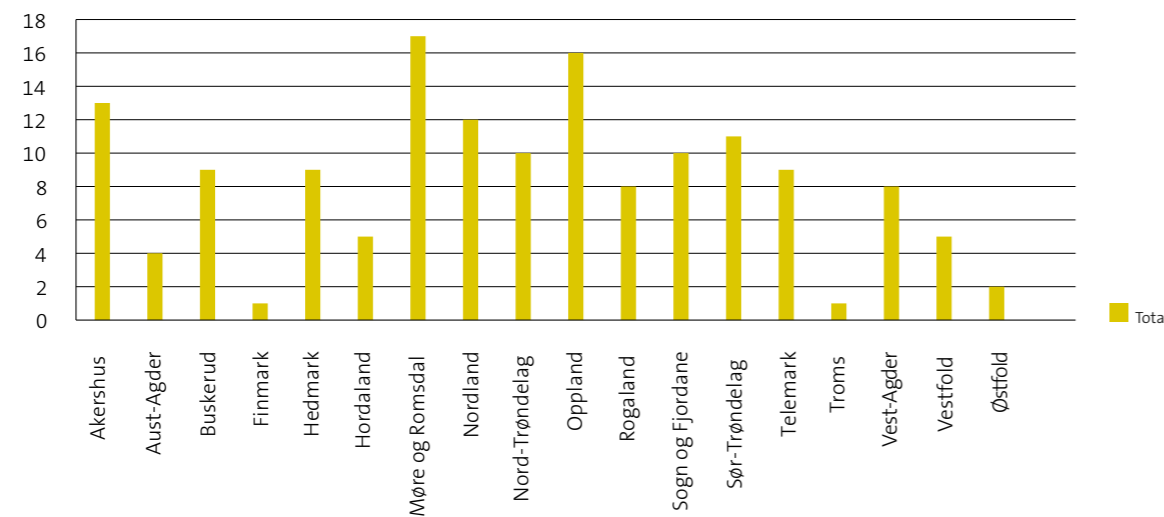


Figure 19: Overview (by county) of number of municipalities that have applied for support through the program "Municipal Energy and Climate Planning" in 2008. (In total there are 430 municipalities in Norway.)

Communication

	2003	2004	2005	2006	2007	2008
Articles about Enova	n/a	675	657	2463	2971	2815
Campaigns	3	4	4	4	4	3
Inquiries to/from Ask Enova ("Enova Svarer")	55500	35000	22000	33000	26635	28578
Press releases	n/a	n/a	23	26	23	27

Table 15: Overview of activities in the Communication area.

Other results and activities

International

Sub-program	Applicant	Name of project	NOK awarded
SAVE	SINTEF Byggforsk	NorthPass	30 000
ALTENER	NEPAS	Benchmarking of District Systems	50 000

Table 16: Approved applications for pre-project support within the International area.

Delprogram	Søker	Prosjektnavn	NOK awarded
SAVE	SINTEF Byggforsk	NorthPass	400 000
SAVE	SINTEF Byggforsk	Activating Thermal Mass For Energy Efficient Buildings	350 000
SAVE	Norsk Enøk og Energi AS	LOCALEE II	300 000
ALTENER	Norsk Enøk og Energi AS	PROMETHEUS II	200 000
ALTENER	Norsk Enøk og Energi AS	AgryMas	300 000
Integrated Initiatives	Oslo University College	Post Carbon Urban Building Complexes	787 500
		Complexes	
SAVE	Norwegian University of Science and Technology	IDES-EDU	187 392
SAVE	Norwegian University of Science and Technology	Ben PLUS	129 024
SAVE	Sintef Byggforsk	Promoting European Passive Office Buildings	400 000

Table 17: Approved applications for national co-financing within the International area.

Natural gas

Year	Capacity GWh ³³	Contractual GWh ³⁴	MNOK allocated
2004	685	405	29
2005	680	545	24
2006	400	175	10
2007	770	770	40
2008	1500	1500	45
Originally contracted	4035	3395	148
Corrected for final report	4035		

Table 18: Contractual energy results and funds allocated during the period 2004-2008 within the support scheme for natural gas infrastructure. Funds for this scheme are appropriated via the fiscal budget, and are consequently not part of the Energy Fund. The figures have been corrected to reflect cancellations and final reported results.

³³ Capacity is the facility's normal technical capacity

³⁴ Contractual is the expected annual gas sales 5 years after the facility was commissioned

Projects that received funding in 2008

A complete list of all projects that received support in 2008 is provided at the back of the Norwegian edition of Enova's Results and Activities Report 2008. See www.enova.no/publikasjonsoversikt

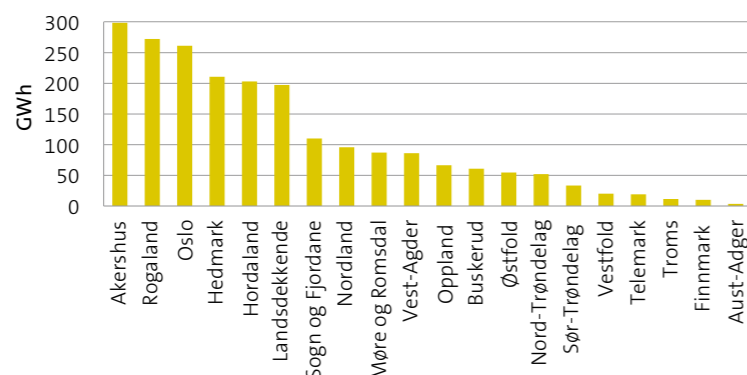


Figure 20: Overview of contractual energy results in 2008 by county.

SID	Project description	Applicants	Funds awarded [NOK]	Energy result [kWh]
08/611	Høg Jæren Vindpark (windmill park)	Jæren Energi AS	351 922 000	228 600 000
08/511	District heating Lillestrøm, Skjetten and Strømmen	Akershus Fjernvarme AS	73 100 000	137 800 000
08/649	Reduced energy consumption/increased production	Sør-Norge Aluminium AS	25 000 000	108 000 000
08/457	Electricity and steam generation at waste incineration facility, Hamar	Hamar Regionen Fjernvarme AS	33 000 000	97 000 000
08/597	EGE 2010 – enhanced thermal energy exploitation from waste incineration	City of Oslo	29 800 000	96 000 000
08/833	Thermal power station in Mo Industripark	MIP Energigjenvinning AS	45 000 000	89 900 000
08/81	Energy-efficiency portfolio Moelven	Moelven Industrier ASA	14 400 000	70 000 000
07/773	Energy reduction/energy restructuring in Amfi Eiendom's shopping centres	Amfi Eiendom ASA	21 770 000	68 850 000
08/238	Energy-efficiency measures at Boliden Odde	Boliden Odde AS	13 400 000	67 000 000
08/369	District heating Kristiansand	Agder Energi Varme AS	34 000 000	63 000 000

Table 19: Top 10 projects – highest contractual energy results approved in 2008 (within the Energy Fund).

SID	Project description	Applicants	Funds awarded [NOK]	Energy result [kWh]
08/611	Høg Jæren Vindpark (windmill park)	Jæren Energi AS	351 922 000	228 600 000
08/621	Mehuken Windmill Park Stage II	Kvalheim Kraft AS	92 879 953	50 100 000
08/511	District heating Lillestrøm, Skjetten and Strømmen	Akershus Fjernvarme AS	73 100 000	137 800 000
08/833	Thermal power station in Mo Industripark	MIP Energigjenvinning AS	45 000 000	89 900 000
08/323	District heating, new areas in Oslo	Hafslund Fjernvarme AS	45 000 000	52 431 314
08/130	District heating Lørenskog	Bio Varme Akershus AS	34 900 000	48 000 000
08/293	Demonstration of carbo-thermal aluminium production	Elkem Headquarters	34 791 000	6 224 400
08/369	District heating Kristiansand	Agder Energi Varme AS	34 000 000	63 000 000
08/457	Electricity and steam generation at waste incineration facility, Hamar	Hamar Regionen Fjernvarme AS	33 000 000	97 000 000
08/597	GE 2010 – enhanced thermal energy exploitation from waste incineration	City of Oslo	29 800 000	96 000 000

Table 20: Top 10 projects - highest amount of funding approved in 2008 (within the Energy Fund).

Definitions and explanations of terminology

Contractual energy result

Funding awarded to projects is linked to an expected energy result, which is part of the contractual basis between the recipient and Enova. Failure to achieve the result will result in a corresponding reduction of funding. The contractual energy result is the energy result the parties expect to realize, as determined on the contract date.

Cost-effectiveness

One of the purposes of establishing Enova was to bring about a more cost-effective commitment to renewable energy and efficient energy consumption. Enova prioritises projects according to the required funding in relation to the energy result (NOK/kWh), given the project's lifetime and the goals set forth in the agreement with the MPE. The projects that apply for support from Enova are evaluated in a three-step process. The first step is an assessment of the technical energy merits of the project, followed by an assessment of the project economy and need for funding. Finally, Enova's costs related to the project (the support amount) are weighed against the energy result (kWh). Projects that do not deliver an adequate energy result in relation to the funding will not succeed in the competition for funds.

the Energy Fund

Support to promote environmentally friendly restructuring of energy consumption and energy generation in the form of more production from renewable energy sources, increased access to thermal energy and reduced energy consumption is provided via the Government's Energy Fund.

The Energy Fund is financed in part by a surcharge on the tariff for tapping power from the distribution grid. As of July 1st 2004, the surcharge is NOK 0,01 per kWh, which amounts to a total of about NOK 740 million per year. Starting from 2008, the Energy Fund will also receive the return on the Basic Fund for renewable energy and energy-efficiency. The Basic Fund received NOK 10 billion via the 2007 fiscal budget, and the goals set for Enova assume that the Basic Fund will receive an additional NOK 10 billion in 2009, and again in 2012. In 2008, the Energy Fund received the return on the Basic Fund totaling NOK 399 million. The Energy Fund also receives funds through commitments and additional grants via the fiscal budget.

The legal framework for the Energy Fund is laid down in the Act relating to the Amendment of the Act of June 29th 1990 No. 60 relating to generation, conversion, transmission, trading, distribution and use of energy, etc. (the Energy Act), Section 4-4, cf. Odelsting Proposition No. 35 (2000-2001) and Recommendation to the Odelsting No. 59 (2000-2001). In 2006, the Ministry of Petroleum and Energy (MPE) conducted an evaluation of Enova SF and the Energy Fund, which was submitted to the Storting in Storting Proposition No. 69 (2006-2007). This will be incorporated in the basis for the current agreement with the MPE for the period June 1st 2008 to December 31st 2011. The Ministry of Petroleum and Energy determines the articles of association for the Energy Fund.

Energy restructuring

The contract between the MPE and Enova stipulates use of the Energy Fund to promote environmentally friendly restructuring of energy consumption and generation. This means that Enova's job is to enact measures aimed at making energy consumption less dependent on a single source of energy, as well as to promote switching of energy sources from non-renewables to renewables.

Energy results

One of the main objectives of the Energy Fund is to contribute to energy results, either through reduced energy consumption or more environmentally friendly energy generation. This is an important part of Enova's agreement with the MPE. Two different terms are used in this report to describe energy results: contractual and realized.

Free-rider

Enova defines free-riders as those who receive support for projects that the recipient would have implemented in any event, e.g. cases where the support of the Energy Fund was not needed to trigger the project. See also the definition of triggering effect.

Final reported energy result

All projects with energy results submit final reports on the completion date for the project. The final reported energy result is an updated forecast for realized results upon completion of the project. Enova evaluates the energy results reported by the projects to determine whether they are reasonable.

Indirect effects

While the contractual energy result is a direct consequence of the support provided by Enova, the ripple effects are the spin-off effects of this support. Ripple effects may fall under many different categories, such as additional investments that become profitable as a result of the initial project, market changes towards reduced costs, etc.

Indicator

An indicator is a method of quantifying something that is difficult to measure directly. In an energy-efficiency context, indicators are often linked to intensity factors that drive the need for energy, such as kWh per m², kWh per refrigerator per year, kWh per tonne of steel manufactured, etc. Other types of indicators can include market shares for new, energy-efficient solutions, the percentage of renewable energy, etc.

Lifetime

An important consideration in connection with new generation of energy and reduced energy consumption is how long the results will be beneficial. In this context, we can differentiate between technical lifetime and economic lifetime. Technical lifetime relates to how long the equipment can remain in operation with normal maintenance, while economic lifetime is linked to how much time will pass before it is more profitable to replace the equipment with new and improved technology. Enova uses economic lifetime as its basis, which is also reflected in Enova's investment analysis. Not only is project lifetime an important parameter when evaluating the need for support, it also indicates how long the benefits from the energy result provided by the project will last. The project lifetime multiplied by annual energy result (years*kWh) indicates the project's total lifetime energy result. Similarly, the lifetime energy cost can be calculated using the following equation $NOK / (year * kWh)$.

Program

Enova has elected to organise its activities in the form of programs. A program is a policy instrument aimed at one or more specific target groups, with firm application deadlines and criteria. This arrangement has been chosen to direct the use of policy instruments and to facilitate prioritization between projects that are relatively similar.

Program Coordinator

Enova outsources some of the initial application processing to free up internal capacity and ensure timely processing. These external resources are referred to as Enova's program coordinators.

Realized result

In contrast to the contractual result and the final reported energy result, the realized energy result is not based on expectations, nor is it an estimate as such. The realized energy result is based on a review/audit of the energy results actually achieved by the projects. In practice, it can be difficult to quantify realized results, and the challenges presented may differ between energy generation and energy consumption. There may be significant time gaps between completion of the projects and reporting of the realized results. The realized result of Enova's activities includes the ripple effects of the support provided.

Other renewable energy

For the purposes of this publication, other renewable energy means renewable energy other than wind power or thermal energy.

Renewable energy

Enova's definition of renewable energy is based on the definition used in the EU's directive on the promotion of use of energy from renewable sources (2001/77/EC). The directive defines renewable energy as renewable, non-fossil energy sources (wind, solar, geothermal, wave, tidal, hydropower, biomass, landfill gas, sewage treatment plant gas and biogases). Biomass is further defined as biodegradable fractions of products, waste and residues from agriculture (including vegetal and animal substances), forestry and related industries, as well as the biodegradable fractions of industrial and municipal waste.

Triggering effect

As a steward of public funds, it is important for Enova to ensure that the funds it controls are employed in the best way possible. This principle is also confirmed in the agreement between Enova and the MPE. Subsidies provided by the Energy Fund are to contribute to ensuring realisation of projects that would not otherwise have been implemented. Enova's allocation of funds is intended to trigger projects that contribute to reduced energy consumption or increased energy generation. Projects that have low costs per produced or reduced kWh will often be profitable without assistance, and should therefore not receive support from the Energy Fund. The support is also considered to have a triggering effect if it accelerates the implementation of a project, or if the scope of the project is expanded beyond what would otherwise have been the case.

Consultation submissions and publications prepared in 2008

Enova has submitted consultation statements in the following areas:

Draft amendment of the regulations relating to technical and financial reporting, income framework for power grid activities and tariffs

EU Commission's draft directive amending the Emissions Trading Directive

Comments regarding the EU Commission's draft directive to promote use of renewable energy sources

Draft amendment of the regulations relating to emission quotas

Power line and wind power projects in Namdalen and at Fosen

Evaluations:

Internal evaluation:

Enova SF – New IT architecture

Evaluation of current application architecture and recommended future architecture.

Enova (2008)

Reports, studies and other publications:

Study of potential for biogas in Norway
Enova (2008)

(Conducted by Østfoldforskning and the Norwegian University of Life Sciences (UMB))

Feasibility study for land-based wind power 2015 and 2025
Enova in cooperation with NVE (2008)

European Wind Farm Project Costs. History and Projections.
Enova (2008)
(Conducted by Garrad Hassan and Partners Ltd, UK)

Enova's industriaktiviteter med resultater fra 2007
Enova's industry activities with results, 2007 (Norwegian only)
Enova (2008)

Enova's byggstatistikk 2007
Enova's building statistics 2007 (Norwegian only)
Enova (2008)

Enova Anbefaler – 3-lags lavenergivinduer
Enova Recommends – Triple-glazed low-energy windows (Norwegian only)
Enova (2008)

Veileder - Kommunal energi- og klimaplanlegging (2-2008)
Enova (2008)

Municipal energy and climate planning
Enova (2008)

Veileder for energieffektiv belysning i yrkesbygg
Energy-efficient lighting in non-residential buildings (Norwegian only)
Enova (2008)

Veileder for glassfasader
Glass facades (Norwegian only)
Enova (2008)

Kjøpsveileder for solfanger
Buying guide – solar collectors (Norwegian only)
Enova (2008)

Enova's Activities and Results Report 2007 – Norwegian and English
Enova (2008)

Magasinet Sfære nr. 1 og 2
Sphere magazine, editions 1 and 2 (Norwegian only)
Enova (2008)

4 programbrosjyrer
4 program brochures (Norwegian only)
Enova (2008)

Etiske retningslinjer
Ethical guidelines (Norwegian only)
Enova (2008)

Enova's profilmanual
Enova's graphic profile manual (Norwegian only)
Enova (2008)

Enova SF is owned by the Ministry of Petroleum and Energy and was established for the purpose of initiating and promoting an environmentally friendly restructuring of energy consumption and energy generation in Norway. Enova's objective is to make it easier for households, businesses and the public sector to choose simple, energy-efficient and environmentally friendly solutions.

More information about Enova may be obtained by visiting our website at www.enova.no, or by contacting Ask Enova, our telephone/web-based help line: "Enova Svarer" tel. 08049 svarer@enova.no

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