

Description of used incentives in BFR 2002-2006 and qualitative assessment of their impact

Report on evaluation of existing incentives in BioFuel Region

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Summary

This report summarizes activities about incentives in the BioFuel Region, BFR, during the period between the 1st of January 2006 and 30 October 2008. In addition to the activities within the BEST project several other BFR activities falls within this category and are included into this report. This report also summaries a recent evaluation about free parking as an incentive done by the Umeå School of Business, USBE at Umeå University. A discussion about how efficient the different incentives have been is also included into the report.

Activities performed within the BEST-projects are for example:

- Information and educational activities towards political and administrative systems in order to prolong and/or enlarge national and local incentives.
- Information campaign towards the public sector concerning Green procurement.
- Produce a "ten-minute-guide" on how and why public officials can carry out public "green" procurement of clean vehicles.
- Produce materials for information and education.
- Production and distribution of the newspaper "BioFuel Region".
- Close cooperation with adult educational organizations.
- Tour within the BioFuel Region with Al Gore's movie "An inconvenient Truth".
- Persuade all members to write a "Statement of Intent" to clarify the intentions with the membership in BFR.
- Continued work on free parking (definition of Clean Vehicles, etc.)
- Introduction of flexi fuel pumps and ethanol on the market in sparsely populated areas.

Three key groups are targeted with the following goals:

- 50 percent of upper-secondary students will have had direct contact with the BioFuel Region before the end of 2009. Halfway through the year of 2008 this number is approximately 45 percent.
- 85 percent of residents will have had direct contact with the BioFuel Region before the end of 2009. Halfway through the year of 2008 this number is approximately 75 percent.
- 80 percent of key decision-makers will have been contacted before the end of 2009. Halfway through the year of 2008 this number is approximately 60 percent.

The major findings are that incentives could play a quite important role and that national and local/regional incentives can strengthen each other. Incentives, can also, particularly, play a role in the implementing phase, until then the market goes by itself. Another conclusion is that it is difficult to evaluate how efficient different incentives are. The researchers at Umeå University have shown that security and road holding properties are factors with most impact when choosing between different alternatives. Environmental aspects are just semi-important when buying new cars.

Introduction

The goal of the BioFuel Region is to become a world-leading region for the transition of the transport sector to biofuels. This will create new jobs and a leading source of expertise. The goal is to replace petrol and diesel with renewable fuels (ethanol, biogas, and FT diesel) using raw materials from forests and farming. BFR's members should serve as a good example for others.

Within the public sector in Sweden today, there are clean vehicles for most needs. Sweden together with Brazil and the United States are world leading in the sale of clean vehicles. The government in Sweden has decided that 85 percent of the new vehicles purchased or leased by state authorities are to be clean vehicles. In 2008, in the BioFuel Region, BFR, about 30 percent of the new car purchases are clean vehicles.

The BFR-work, and as follow the BEST-projects, is organized in relatively independent groups, which are closely connected within different areas of the BioFuel developmental chain, that is to say raw materials, production, distribution, vehicles, laws and regulations, and consumer information. Several work groups have been formed, with in total, approximately 150 participants.

The transition to a sustainable transport sector is achieved through three strategies:

1. Minimize transports.
2. More efficient vehicles and driving manners.
3. A fast transition to renewable fuels.

Different incentives can be used to facilitate transition in the three strategies. Incentives can also be used to stimulate more environmental friendly alternatives of vehicles, travels etc. Furthermore, incentives can lead to development by mobilising, involving, and activating as many potential development forces as possible in the region.

Incentives can be both "soft" and "hard". For example at national level, hard incentives (or governing tools) as taxes, laws, eco car subsidies or fees can be used. At regional or local level incentives as free parking, ethanol ambassadors, information campaigns or training of, employees are more common. To get most result out of the incentives, probably a mix of them has to be used.

Today, in the BFR area, 16 (of 22) local authorities are signing up for a "Statement of Intent" on what their intention with their membership in BFR is. Eight of the authorities have already signed up, five of them have just started the work of their statement of intent, and three of them are still in progress to start. The BFR organization thinks that just that statement can be a strong incentive at local level since it bases on the local authorities own values.

The result in this report is based upon four interviews; an evaluation and a couple of BEST-reports. We have tried to answer the following questions for all activities:

1. What was the objective with the incentive activity?
2. What was the main key-message(s) to the target group within the activity?
3. Was the activity successful?
4. What lessons have been learnt? How efficient was the activity to get the message(s) across and influence the target group?
5. How has this incentive contributed to the over-all aim of mobilising, committing and activating the target group?

An evaluation of free parking permission as incentive is also included. Free parking for clean vehicles is used to mobilize, involve and to activate development forces within the region for an increased adaptation to biofuels. The free parking is investigated in Härnösand, Skellefteå, Sundsvall, Umeå and Örnsköldsvik and on the county councils' parkings in Västerbotten and Västernorrland.

Main goal of BioFuel Region incentives

The objective in Work Package 5 (WP5), Incentives, is to contribute to the overall objective in BEST by strengthening the incentives for an ethanol fuel market in the EC.

How to do it:

- Direct contact with key decision makers and on some places close collaboration with local governments to stimulate the development of effective incentives and incentives schemes.
- Direct contact with students, as well in upper-secondary as for adult students.
- Study, implementation and evaluation of incentives, as they are and how they could be.

The three goals for the main target groups are:

Goal 1: 50 percent of upper-secondary students will have had direct contact with the BFR (2009).

Upper-secondary schools – teachers and students in upper-secondary schools that have been involved in BFR's School Group.

Goal 2: 85 percent of the citizens will have had direct contact with the BFR (2008).

Citizens – all citizens in the BFR member municipalities.

Goal 3: 80 percent of key decision-makers will have been contacted (2009).

Key decision-makers – mainly politicians and higher civil servants, such as administrative managers in the member municipalities and counties.

Activities to reach the goals

To reach the goals, different activities are performed, or are going to be performed. How to follow up the goals above will differ in manner. To reach 85 percent of the citizens is difficult since there are about 490 000 inhabitants in the region. To reach 80 percent of the decisions-makers is easier to follow up since there are approximately about 500 decisions-makers in the region. The number of upper-secondary students is about 20 000 in the region and the reach half of them will be done within this period.

Example of activities within the BEST-project:

- Information and educational activities towards political and administrative systems in order to prolong and/or enlarge national and local incentives.
- Information campaign towards the public sector concerning Green procurement.
- Produce a "ten-minute-guide" on how and why public officials can carry out public "green" procurement of clean vehicles.
- Produce materials for information and education.
- Production and distribution of the newspaper "BioFuel Region"
- Close cooperation with adult educational organizations.
- Tour BioFuel Region with Al Gore's movie "An inconvenient Truth".
- Persuade all members to write a "Statement of Intent" to clarify the intentions with the membership in BFR.
- Continued work on free parking.
- Introduction of flexi fuel pumps and ethanol on the market in sparsely populated areas.

Incentive activities

The activities in WP5 are divided into six categories. Two of categories are technical character, flexi fuel pumps and free parking places. Four of the categorised activities are about increasing knowledge within selected target groups, for example by information activities, conferences, training activities and production of study materiel.

Fuel station agreements

This project aimed to introduce flexible ethanol pumps at the fuel stations in the BFR area and thereby develop a market for alternative fuels. The project started in 2005, and was included in BEST 2006. The fuel station agreement is shown in appendix 1 (in Swedish). The reason the project started already in 2005 was that there was hardly no ethanol pumps in this region. The flexible pumps in the project also have the advantage that they can mix various quantities of ethanol and petrol, depending on the costumer's desire.

Today, 74 ethanol pumps, including six flexible ethanol pumps, are installed in the BFR region. Due to European laws that do not permit other qualities and mixes than E85, the major numbers of the installed pumps are non-flexible E85-pumps. There is also a Swedish law that went into effect 1st of January 2006 which demand that fuel stations that distribute higher volumes have to provide renewable fuels. The legislation has contributed to the many pumps containing renewable fuels and totally, in Sweden, there are more than 1100 fuel stations that sell renewable fuels.

The project

Three of six flexible pumps in BFR region have been installed within the BEST-project. Most of these pumps have been installed t smaller fuel stations located in sparsely populated areas.

The flexible pumps in BFR are installed at the following locations:

1. Granö Tourism, Tegsnäset.
2. OKQ8, Husum.
3. OKQ8, Örnköldsvik.
4. OKQ8, Domsjö.
5. Bilisten, Bygdeå.
6. JS Bil, Lunde.

The fuel stations that have got the flexible pump by BFR also got 20 m³ of ethanol for free. Lena Nordgren, project manager in BFR, says that all fuel stations are very pleased that the flexible pumps are installed - it would have been too expensive to finance the flexi fuel pump by them. Lena Nordgren also thinks that the personnel groups at the fuel stations are pleased to get informed about clean vehicles and renewable fuels and also to take part in the external spreading of information to customers. All of the fuel stations invited, except one, took part in the project.

Two special information activities have taken place within the BEST-project. In one week in 2007 all six fuel stations were supported by personnel from the BFR organization whom informed both residents and personnel groups about clean vehicles and biofuels. In late November 2008 one weekend is allocated to a similar information activity there six fuel stations participated.

Overall results

The sale of ethanol in Sweden has increased since 2006 and a survey shows that over 90 percent of the flexi fuel car owners fill their cars with E85. Also the selling of clean vehicles has increased in 2008 and for the moment about 30 percent of the new car sales in Sweden are clean vehicles. Of these, 70 percent are flexi fuel cars (E85).

Lena Nordgren thinks that the flexi fuel cars will be an alternative in future. But later on, there will be even more renewable alternatives. For the BFR area, for example FT-diesel, DME and biogas are coming alternatives. An important aspect in the region is to include the industry and particularly all paper and pulp mills along the Bothnia coast. About E85 and the flexi fuel technology she says that “it works here and now and in the future there will be a mixture of many different fuels”.

As an answer to the partly intensive debate in media about the origin of the ethanol she state that an origin certification is now taking place. Twice a year, audits are done, and from August 2008 there is a system that traces the origin of the ethanol all back to the habitat (see www.sustainableethanol.com).

Lena Nordgren says that it is difficult to grade the value of this incentive. In sparsely populated areas it can be a powerful incentive. Today, this kind of incentives is not necessary since the market goes by itself. But, if doing this kind of incentive-project again or in another region, it should be targeted to the sparsely populated areas.

Results from the fuel station OKQ8, Örnsköldsvik

The incentive of fuel station agreements has influenced OKQ8 Örnsköldsvik and the fuel station keeper says that “due to the fuel station agreement we could afford an investment in ethanol fuel. Without the incentive we had probably not invested in ethanol fuel, due to high costs“. The fuel station keeper addressed the fact that all the investments in the OKQ8 station were due to own initiatives at their own fuel station and that the company has been rather reluctant to the investment in the first place.

Considering the fact that the incentive may have changed people’s attitudes towards biofuels, the fuel station keeper answered that the environment is not the first factor for people when considering people’s fuel choices. Regarding whether the investment of fuel stations agreements can be used as an incentive or inspiration to the public, the fuel station keeper answered that it was hard to answer the question with a yes or a no; instead he thought that the investment needed to be developed further. He addressed for example that it is hard for smaller fuel stations to make investments in ethanol fuels, “the requested volumes among the customers of smaller fuel stations is often too small to initiate an investment in ethanol fuels”.

Results from the fuel station of Granö Tourism, Tegsnäset

For Granö Tourism, Tegsnäset the fuel station agreement was a brilliant opportunity to invest in biofuels. The fuel station keeper says that without the incentive they had probably not invested in ethanol fuel, due to economical circumstances. The incentive has resulted in an installation of a flexi fuel pump, which otherwise is an additional cost for a small fuel station.

Regarding whether the incentive have resulted in a possible attitude change towards biofuels among the fuel stations customers, the fuel station keeper says that “people in general are uncertain and suspicious towards ethanol”. But he sees a trend that more and more customers at his fuel station were trying ethanol fuel and also that more people were buying ethanol cars. The fuel stations investment in ethanol fuel had been running in two years and that during the second year it had been an approximately thirty percents increase in the amount sold ethanol fuel in comparison with the first year.

Regarding whether the investment of fuel stations agreements can be used as an incentive or inspiration to the public, the fuel station keeper tells that “it was a good inspiration source”. He also addresses that he used to encourage interested customers to read about the development of biofuels on for example the internet.

Ethanol-ambassadors

According to Pär Wennberg, the marketing director and the local manager of Ford retailer in Umeå, was the ethanol ambassador incentive initially initiated by Ford. The purpose of the project was to recruit a certain number of people that were willing to promote flexi fuel cars. The chosen stakeholders were offered a price reduction of ethanol cars and a reward when flexi fuel cars were sold. He says that it is important to have ambassadors, i.e. someone that “promotes a product and an activity”.

Considering whether Pär Wennberg have seen an attitude change among his target groups towards flexi fuel (ethanol) cars and biofuels since the introduction of the incentive of ethanol ambassadors, he expressed that there was an increased environmental consciousness among his target groups. However, the ethanol ambassador initiative is probably not the main cause of the change in attitudes. More important for the increased demand for flexi fuel cars were the role of media and the introduction of the eco car subsidy.

Regarding whether the incentive of ethanol ambassadors is a good incentive or an inspiration to the public, Pär Wennberg says from Carstedts point of view, it was not the case. Instead, he raised the importance of promoting ethanol (flexi fuel) cars as a good and safe product. He tells that “people often are suspicious towards environmental friendly product, due to the fact that environmental friendly products often are viewed as more expensive”. The fact that flexi fuel cars are a better environmental choice is therefore a bonus and not the main message in their sales campaign.

Customers getting used to the ethanol fuel often continue to use ethanol despite changes in prices. Further it is important to use several incentives to achieve a bigger change regarding the public’s willingness to choose more environmentally friendly cars, as well as more environmentally friendly fuels. For example the project Green Zone, where Ford/Carstedts have been one financial supporter, have had a stronger influence on the public regarding their willingness to choose environmental cars, than the ethanol ambassador incentive (see www.greenzone.nu).

Free parking for clean vehicles and increased parking incentives

Free parking for clean vehicles is one of the initiatives which have been launched across the BioFuel Region and are aimed at all target groups. Both BioFuel Region and the local municipalities have promoted free parking for clean vehicles (in this case cars which run on renewable fuels), via mailings, websites and gatherings. Today, 2160 free parking permits are given in the region, in five towns; Skellefteå, Umeå, Örnsköldsvik, Härnösand and Sundsvall.

Umeå School of Business, USBE, at Umeå University has investigated whether free parking has influenced the consumer’s attitude when buying new cars, i.e. if free parking permits have increased the sold volumes of clean vehicles and also the use of these cars. Since the design of the free parking permits differs between the towns, the study also shows the differences and resemblances in attitudes of free parking in the different towns. The survey also investigate whether the free parking is a good benefit for the owners of clean vehicles and if it can be used as an incentive for choosing clean vehicles.

The results show that the main part (95 percents) of the respondents do not think that they use the car more often today than before they got the free parking permit. Some few percent of the respondents have increased their travels to the city centers. 8 percent of the respondents say that they increased their purchasing travels while 6 percent mean that these travels have decreased since they got access to free parking. 98 percent mean that the travels to workplaces have not been influenced at all of the access to the free parking permit. When it comes to spare time travels the tendencies are the same; 95 percent of the respondents mean that these travels have not been changed, 4 percent say that they have increased. 18 percents of the female respondents and 5 percent of the men state that they have increased their purchase travels.

The results also show that 74 percent of respondents consider that it is attractive to have access to free parking. 6 percent think that it is not attractive. 20 percent mean that the permit neither is attractive nor not attractive. Considering the usefulness of the free parking permits, the result show that 72 percent of the respondents mean that they have use for the free parking permit while 12 percent mean that their permits are not applicable. 16 percent say it is neither useful nor not useful.

Most of the respondents would not have used the car more if the time for the free parking was longer (in Umeå were the 95 percent, 97 in Skellefteå, 98 in Örnsköldsvik and 100 percent of the respondents in Sundsvall and Härnösand that would not do this).

Public Procurement

There are some factors that influent the conditions for green purchasing of clean vehicles in the BioFuel Region, for example cold climate, regionally adapted procurement structure and the fact that ethanol is available but the infrastructure is spread thin in the sparsely populated area. Also there are no biogas or natural gas stations for the clean vehicles. There is an early market-driven experience with ethanol buses and passenger cars.

Information and training efforts on green procurement of vehicles have been aimed at key decision-makers and purchasers. During the first period, however, interest and opportunities to take part in activities were limited. During the second period, the BioFuel Region is therefore offering support for using green criteria when procuring vehicles.

What has been done in BFR - activities and experiences?

When the BFR began in 2003, ethanol buses had been in use since 1985 and 1994 respectively in two municipalities and ethanol cars have been imported since 1994. Although the efforts with both types of vehicles resulted in their introduction to the Swedish market, the increase in clean vehicles has been slow since the BFR began. In March 2006, an inventory of clean vehicles in the BFR was released that pointed to obstacles for clean vehicles in the region, for example long distance between filling points and also higher costs which seems to be more important than environmental concerns. This associated with ethanol cars' historical difficulty to operate in cold weather are obstacles for the clean vehicle market. These obstacles, which are based on both beliefs and infrastructure point to the need for information, training, and the exchange of experience to show all BFR members that purchasing is an important part of attaining a more sustainable transport sector.

Today, BFR works in a systematic way towards three important target groups with promoting a green approach during the procurement process 2007-2009.

These are:

- Policy-makers (both politicians and civil servants).
- Procurement officers.
- Users of the vehicles (and fuels).

In 2006, the new procurement began and an enquiry for a joint procurement was sent to all municipalities in Västernorrland County. The County Council had a goal at the political and environmental level to purchase only ethanol vehicles while the purchaser saw the financial and competitive obstacles. The county council decided that 100 percent of the fleet was to be clean vehicles by 2010, which requires that all purchased vehicles to be clean vehicles.

The political level in all municipalities wants to have a joint procurement while none of them wanted or could purchase only clean vehicles. One reason for this was the lack of filling stations in sparsely populated areas in 2006. This resulted in the use of the national definition of clean vehicles without a requirement that renewable fuels be used. To meet the demands of municipalities, two categories of vehicles were used, one for flexi fuel cars and one for traditional fossil fuel cars. The process also

changed from previous procurements. The actual purchase and financing of the vehicles was separated, which resulted in greater competition, greater flexibility, and better financing.

Seminar on green, public purchasing of vehicles

The purchasing of green vehicles and work in support of sustainable transport has a bearing on public sector target groups as well as private and taxi companies. As regards private companies, it is mostly vehicle, tire and motor fuel retailers who are affected. Taxi companies are also increasingly affected by the fact that public sector travel policies are evolving to focus more on efficient travel and renewable fuels, leading to a demand for Green Vehicle taxis.

A seminar was held during the autumn of 2007 on the procurement of vehicles in Umeå, entitled: Procurement of Vehicles and Motor Fuel – an Important Tool of Today. The purpose of the seminar was to raise awareness of the possibilities purchasers have to influence the market and to direct their own organisation towards greater sustainability. Participants were invited to share their experiences and gain further knowledge about the nature of their work as purchasers. The intended outcome of the seminar was that it would contribute to a greater number of green vehicles in the region and more sustainable transportation overall.

An evaluation and follow-up of the seminar were also conducted. The evaluation was carried out at the conclusion of the seminar, with very positive feedback given, including top marks for initiative, execution and content. The event also offered a number of good opportunities to discuss BioFuel Region and sustainable transportation in general.

Ethanol buses in BFR

Functioning public transportation is a social responsibility in Sweden. Within the BFR, the use of ethanol buses began early in urban areas. The first two buses began operating in Örnsköldsvik municipality in 1985. Currently, about 5 percent, or 35 of 650 buses (class I), are operated on ethanol in BFR1. There are a total of 400 ethanol buses in Sweden.

In 1985, Örnsköldsvik municipality together with Örnsköldsviks Buss AB was the first to use ethanol buses in public transportation in Sweden. The primary goal was to reduce emissions of environmentally dangerous substances. Inexpensive ethanol was available from the Domsjö factory. Two diesel buses were converted for ethanol operation and went through tests of both fuel mixtures and motors. Today, the 15 ethanol buses work just as well as the three diesels operated buses in Örnsköldsvik. The advantages are, in addition to local fuel, better city environment and lower contributions to climate change. Örnsköldsvik is known for being active in the transition to a sustainable transport system.

In 1994, Umeå municipality introduced ethanol buses and only ethanol buses were purchased through 2004. Operational experience was very good. Scania, which produced the engines, announced they were closing production and the municipality began purchasing diesel buses since ethanol was considered too expensive. Through 2006, the municipality purchased buses through a municipal traffic company. To streamline this process, today the municipality orders buses through the County Traffic Company's procurement. Today 20 of Umeå's 55 buses operate with ethanol.

Environmental carpool in Umeå

A main strategy for a more sustainable transport system is fewer transports. For example, carpools have proven to reduce business trips in Gothenburg municipality.

The municipal council in Umeå has decided start an environmental carpool in Umeå from the 1st of January 2009.

¹ In Sundsvall municipality, a test with FT diesel as alternative bus fuel in regular diesel buses is ongoing and in Skellefteå a test with biogas trucks.

A preliminary study has indicated that there is good potential for improvements for municipal business trips through improvements in financial costs and the environment through better control and follow-up. Umeå expects to reduce the total driving distance by 15 percent. This would reduce local environmental problems with air quality while improving traffic safety and the work environment for employees. It would also help achieve the environmental goals related to greenhouse gas emissions.

Important factors at procurement of clean vehicles

- Broad support – is the most important factor for success in a purchasing is broad support at all relevant levels.
- Political level - The lack of environmental goals and similar guidelines can prevent the purchasing of clean vehicles. Incentives for the political level can be tax breaks, free parking for clean vehicles, and improving goodwill for the unit by contributing to a better environment.
- Purchasing unit - Clear guidelines, authorization, and an understanding of the importance of purchasing green have proven crucial for purchasers. The unit also needs tools to allow purchasing to include environmental aspects in the same way that financial and safety aspects.
- Suborders - Many units have budgeting responsibility and suborder their own vehicles based on applicable procurements. Because the cost of the vehicle is an important part of the budget, it is important to have good information and guidelines on clean vehicles even for those who suborder vehicles.

Information and communication

Statement of Intent

In 2007 a campaign was launched to all the members within BioFuel Region. The objective was to get all members to formulate a Statement of Intent with the content describing their ambitions in the field of biofuels and the transformation of the transport system. Guidelines and process support on how to formulate these statements of intent has been given to the municipalities. By the end of June 2008 not all but 13 of 16 municipalities have started this process.

The purpose of the Statement of Intent is to make it easier for:

- The municipality to work structured and systematically towards a sustainable transport system.
- The municipalities to evaluate their membership in BioFuel Region.
- The BioFuel Region to support the municipalities.

The regional process manager noted a shift in commitment and effort after the national election in September 2006. Between May 2006 and January 2007 there was more or less a vacuum in discretion from members and this was also a period when the BioFuel Region began its second period, 2007 to 2010, in part with new objectives and a new organisation. Halfway through the length of office the structures are once more established and it is easier to work and to reach good results.

All Statements of intent are compiled annually and are then followed up in dialogue with the members. During this period a great effort has been put down in getting all members in the BioFuel Region to develop and sign their own Statement of intent. Until today 16 (of 22) municipality members are currently processing or are ready processing their statements. Currently only municipalities are working with the Statement of Intent as a tool. Eight (50 percent) statements are signed and active. Five municipalities (31 percent) have begun working and the last three (19 percent) are just beginning to draw the framework of their own statement.

Also guidelines for transport policy has been produced and distributed to the municipalities and local authorities within BFR. This campaign is still ongoing and will be finalized during 2008.

A ten-minute-guide on green procurement of clean vehicles

Within the BEST-project a ten-minute-guide on green procurement has been produced for BioFuel Region (BFR). This guide is aimed at procurement officers within the public sector. The purpose is to promote a green approach during the next procurement process. The guide is specific, but some parts can be replicated in other regions.

The idea with the ten-minute-guide is that it shall be a quick and easy way to give guidance for an active choice. This guide is built around the principle "what, why and how", i.e. trying to give short argues for why clean vehicles should be chosen and finally give some suggestions on how to proceed with this issue. See also appendix 2.

The headlines/ headings in the guide are as follows:

- You determine the results.
- There are three strategies for the transition of the transport sector.
- Why clean vehicles?
- How – a few words.
- Differentiate between vehicles and fuel.
- Support for BFR members.
- More information.

Local events

A number of information activities with special focus have also been organised including a seminar and study visit for all participants in the public bus transport in the region. This event took place in Örnsköldsvik on the 30th of November 2006. Scania, Stockholm Transport, the municipality of Östersund was among the speakers. A visit to the Ethanol Pilot Plant for production of 2nd generation of biofuels from lingo-cellulose was also on the programme.

Another event has been to invite the participants from the training courses to make study visits to different good examples in the region. The purpose of this is to build knowledge and also that "seeing is believing".

Local Networks

Bio Energy Network was formed on the initiative of BioFuel Region and Umeå Energy (local energy company). It consists of six municipalities in the Umeå region with the purpose to build knowledge in area of bio energy with special focus on biofuels. Though, the network is open for all municipalities in the region to take part in the seminars. Approximately twenty people have been invited to two meetings every year where different topics have been presented and then strategically discussed. The participants have been from public sector, universities, the businesses and non-governmental organizations. The Bio Energy Network has been important to the different stakeholders because they can keep an update on current trends and projects within the area of bio energy/biofuels and also because it is an arena to network and plan joint activities and projects. It has also been a bridge between working on the local and regional level.

A network for further development of the BioFuel process was formed and four meetings have been held. Earlier we only had thematic regional team groups and the need for a broader forum had been obvious. The purpose of the network was to offer the opportunity for all interested and involved organisations to participate in the development of BioFuel Region. The four meetings in 2007 had the following themes: The role of the network, Communication and information, Commitments of local authorities and Green procurement of transport and vehicles. The main lessons learnt were to keep the meetings focused on concrete topics to create interest and involvement.

Newspaper and media

Nine press releases have been sent out since 2005 of which 8 were sent out from May 2007 and onwards. Over 50 news items have been published or broadcasted in regional and national media about BioFuel Regions activities, the majority from May 2007 and some as a direct result from the press releases. One lesson learnt is that in order to gain good publicity you need a media strategy where you consistently and persistently communicate and build relationships with media. This is particularly important in a situation when biofuels are under debate, since it can be decisive to be the first to define the issue and set the agenda. Another lesson learnt is that press releases on their own are not enough to gain attention from the media. Personal contacts with journalists are very important. Another important activity was to publish debate articles in the editorial pages of the major daily papers in northern Sweden. To work with media can be a very cost efficient way of getting your message across. News media reaches a large audience and are, on the whole, perceived as a trustworthy source of information by the general public. The BioFuel Region has also noted that advertisers, sponsors and funding are easier to attract today. After three years the BioFuel Region is now seen as a potential partner with legitimate and valuable expertise.

Other information, communication and education activities

Web site and newsletter

The BioFuel Region web site is continuously updated with news and background information describing the progress of the work in the region and attracts about 2,500 unique visitors per month. News, information on biofuels, and the BFR, contacts, and links are located on the webpage. The webpage is a very important carrier of BioFuel Regions messages and reflects the whole process in the region and it also contains information about all the ongoing projects.

A newsletter is frequently sent out. During 2007 and 2008, a total of 12 newsletters were sent out to 530 subscribers. Both the web site and newsletter are aimed towards BioFuel Regions main target groups' i.e. professional drivers, buyers at public and private companies, decision makers in the region, upper-secondary school students and citizens. The newsletters have proven to be important in attracting visitors to the webpage as articles are linked to the webpage. Key lessons learnt were that a webpage on its own is insufficient to drive people to take action and change their behaviour however, when combined with other communication activities it is a very efficient way of reaching a broader target group and keeping the process alive.

Training material and study circles

Training and information material have been produced within the BEST project in order to increase the knowledge about renewable fuels and strength the work in this developing process. A training material has been produced in cooperation between BioFuel Region and the adult educational association, Vuxenskolan, with the objective to be used within BioFuel Region, other Sweden and international. The material turns itself to people that are involved in the life-long learning within the comprehensive upper secondary school, within adult educational associations, within the business community, within public organizations, within political organizations and in other contexts. The training material have been used in the study circle "to travel against the future with biofuel" which aims to increase the knowledge about BioFuel Region and that transition of the transport system that is necessary.

Information material

In 2006, one of the main information materials was the 24 page newspaper that was distributed to all households (180,000 households) in the region through the six local newspapers. The magazines were also given out at regional meetings and informational events. They have also been sent to companies together with other information about BioFuel Region, biofuels, vehicles and filling stations.

BFR have also produced a number of fact-sheets describing the goals for the region and the work that we do with regard to biofuels. The goal of this activity was to increase the level of knowledge around ethanol and to correct some of the myths in society concerning ethanol.

Study visits

A large number of study visits have been organised for regional, national and international groups attracting in total over 1200 people (more than 150 study visits in 2006 and 2007).

There are at least two purposes with these study visits:

1. In order to be a world leading region there is a need for something to spearhead the development and in this case it is the Ethanol Pilot Plant for production of 2nd generation of biofuels (based on cellulose)
2. It strengthens the region to see that, in physical terms, there is something happening. "Seeing believes", i.e. to see that something actually exists within the biofuels and ethanol development is inspiring and motivating for all target groups.

An exhibition centre was also designed at the pilot plant in Örnsköldsvik that is estimated to be completed at the end of 2008 and therefore, no experiences or evaluations are available. The exhibition centre is a result of the increasing demand for study visits at the pilot plant and the increasing interest to learn more about the process of introducing biofuels in BioFuel Region. The centre will exhibit materials and information connected to production and deployment of biofuels and will have facilities for lectures.

Campaigns

Two campaigns to increase the use of clean vehicles in high profile companies (i.e. using environmental management systems) and taxi companies were launched in 2008. The campaigns included production of two brochures. The objective is to increase the number of Flexi fuel cars in private companies and taxi companies. Since the campaigns are still ongoing the impact is hard to estimate and will be evaluated separately.

A portfolio was distributed to members of BioFuel Region in late 2007 and spring 2008 containing information material about BioFuel Region in connection with personal meetings with specific decision makers. This has turned out to be a very good investment as the pinpointed people feel special and have turned from being sceptical to promoting the process.

A film has been produced about the ethanol pilot plant that has been shown at study visits and at the Clean Vehicles and Fuels conference. Since the interest in visiting the ethanol pilot plant is so high the film can reduce the pressure on the site and serve as an informative teaser at ventures and fairs. The film has been shown on several occasions both in Sweden and abroad.

Teachers and students

To increase the knowledge about renewable fuels BFR has performed two projects about this. One is financed by the Swedish authority for school development and with the objective to increase the knowledge about sustainable energy and sustainable transports. The aim is that the project starts a process through that the teachers participate actively in order to develop their education in the upper secondary school. The project has contributed to develop methods and tools that can be used in the daily education. The project also will cover exchanges of experience average representatives for different production teams in the region and work over the sectors.

The objective for the other project is to increase the interest and the knowledge among the region's young people for a sustainable future, a sustainable transport system and the industry systems that are linked to cellulose based biofuel.

Meetings

At least 65 information meetings have been held with key-actors and decision makers in the region. In late 2006 some of the biggest municipalities, and therefore important financiers, decided to continue as members in 2007 but wanted to evaluate the new organisation and activity before they decided to continue their membership in 2008. Therefore, in autumn 2007 BioFuel Region was invited to several municipality boards to present what had been achieved over the year to meet the different requests.

Conferences

Regional seminars are held every six months with open invitations to all members. The seminars have provided updates on biofuels in the region and internationally, and lectures with various themes are based on the chain and provide people the chance to network. Four regional conferences have been organised that all attracted around 100 attendants from the region.

Förnybara drivmedel – ny tillväxtindustri, Skellefteå, Spring 2006

The overall goal was to show the full potential of industrial opportunities related to the biofuel production. A lesson learned was the importance of setting aside time for discussions and questions and to have a close dialogue with speakers about the goal of the conference. By showing local initiatives we increased the regional knowledge of industrial initiatives.

Nya utmaningar för biodrivmedel, Härnösand Autumn 2006

The overall goal for the conference was to show the potential for bio refineries coupled to biofuels and to inform about the new government's policies on forest politics. The key messages were there are a great potential to increase forest biomass production although it is important to achieve it in a sustainable way and that the bio refinery concept is the best way to plan for the biofuel production in a cost effective manner.

Biomassa på kort sikt, Kramfors Summer 2007

The conference was aimed at farmers and forest owners and consisted of field excursions, lectures and workshops about small-scale business models for biomass production, governmental grants for energy crops and research findings about the potential of forests and farming for increased production. The conference evaluation suggested this combination of activities were a very successful way to communicate the key-message of the conference.

Förnya energin, Lycksele Winter 2008

The main focus of this conference was to engage the members of the BioFuel Region network and to renew their energy for the process. The conference was very successful in its mission to strengthen the network and to create new energy amongst the participants. Evaluations of the conference were very positive and the use of a professional process leader to guide the workshops turned out to be very successful.

Other conferences

In March 2006, the Minister for Enterprise ordered an educational excursion from the national forest company Sveaskog and also BioFuel Region participated as a speaker in a regional conference with the pulp and paper industry. In spring 2006, BioFuel Region was invited to Brandenburg/Cottbus to inform and discuss about BioFuel Region and BEST. They later became partners in BEST. In 2007, BioFuel Region was invited by the County administration in Västernorrland to go to Chicago for the Swedish-American entrepreneurial days. Also in 2007 the Swedish Trade Council in Vienna invited BioFuel Region, together with the Swedish secretary of the Business and Growth Authority, the Swedish Association for Bio Energy and others to speak at the Swedish Embassy in Vienna during matchmaking days between Sweden and Austria in the field of bio energy. In late autumn 2008, BioFuel Region is a key speaker at a seminar about development and growth in northern Sweden.

Movie

Within the BioFuel Region projects the organization, together with an adult educational association, Vuxenskolan, has travelled Västerbotten around and had public shows of the Al Gore's movie, An Inconvenient Truth. Approximately 1000 people in the region attended and saw the movie. In conjunction with the movie an open discussion on what can be done in order to increase biofuels was held.

Conclusions

The proportion of sold clean vehicles in Sweden is continuously increasing. On a yearly basis the total amount of sold clean vehicles in Sweden has increased from 2 percent in 2004 to 12 percent in 2007. During the period from January to October 2008, 32.7 percent of sold cars were clean vehicles. This can be compared to 16.5 percent during the same period 2007. In the BFR area, the proportion of clean vehicles was 30.2 percent in Västernorrland and 28.3 percent in Västerbotten during this period. The municipality Vindeln with 5500 inhabitants has had a strong increasing sale of clean vehicles this year, and between January and September 2008, 41 percent of new car sale are clean vehicles.

Researchers at Umeå University have shown that the most important factors costumers address when buying new cars are security, comfort, road-holding characteristic, costs for service and maintenance, and fuel consumption. The environment and low CO₂-emissions seems to be semi-important factors.

How important the incentives within the BEST-projects have been and how much they have contributed to the increase of sold volumes of clean vehicles is difficult to evaluate. In early 2006, the incentive Fuel Station Agreements seems to have affected the introduction of a market for ethanol in Northern Sweden. Later on, the Statement of Intent seems to have been an important incentive for the participating municipalities when accomplishing their visions.

The importance of incentives

Incentives can be used to stimulate development of new markets. It is generally said that legislation, and economical governing means are hard incentives, and that information, study circles and knowledge are soft incentives. Researchers at Transport Research Unit, TRUM, Umeå University have conducted a study about the acceptance for different incentives. The result shows that pulling measures as improved public transport and improved possibilities for cycling and walking, information or subsidies for renewable fuels are more positive experiences than measures as taxes or car free cities. Another study, done by the Swedish KFB in 1999, shows that the effect of incentives as free parking is lower than a separate collective traffic fee.

Incentives on the individual level are not enough to achieve larger changes. Instead different incentives should be combined. It can also be important to get rid of obstacles. About information as an incentive it is important that the information is clear. The incentives can also be directed to actors in the market, i.e. sales personnel.

Since the goal (to contribute to the overall objective in BEST by strengthening the incentives for an ethanol fuel market in the EC) in Work package 5, incentives, direct contacts with key decision makers, students, and citizens information and communication activities are particularly important. Also continuous education, information, and training to employees are needed.

An important conclusion is that due to the lack of a communication plan to structure efforts around, many efforts took place ad-hoc. Since one of the most important tasks of the BFR is to expand knowledge, and thereby increase the speed of the transition from fossil to bio-based fuels, communication activities are essential. Evaluation of the first three years led to the conclusion that coordination of communication activities had to be prioritized. To help in this effort, the BFR hired an information officer in the spring of 2007, which will help provide a more structured approach with communication issues.

Today the BFR is a popular organisation from whom groups want to learn about the transition to renewable transport systems, particularly for its system approach that includes all stakeholders and levels in society.

Impact of the incentives

Fuel station agreements

Even if it is difficult to say how powerful the incentive “fuel station agreements” has been the project manager, Lena Nordgren, think it has been successful. Especially for small fuel stations where it is quite expensive to finance a flexi-fuel pump by themselves. If re-doing this project, investments should be directed to fuel stations in sparsely populated areas. This conclusion is based on both legally requirements and lack of financial possibilities.

The sold volume of ethanol has increased since 2006 (see figure 1). If this is due to this kind of incentive or other incentives as lower fuel costs or higher taxes for non clean vehicles is difficult to evaluate.

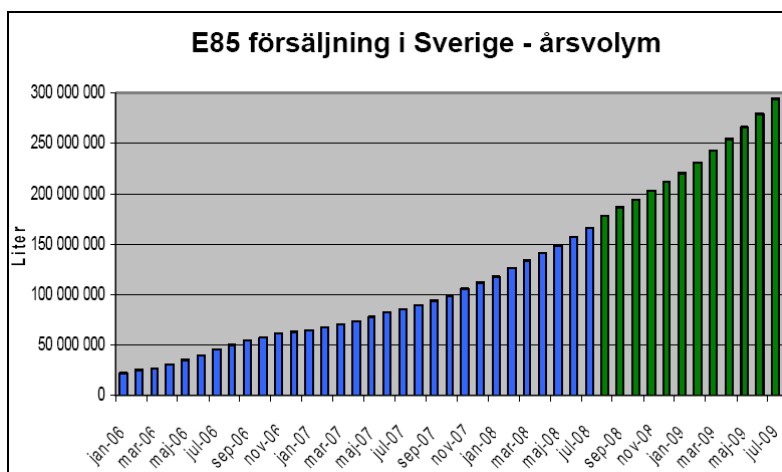


Figure 1: Selling volumes of E85 in Sweden. Blue color is sold volumes; green color is estimated selling volumes. BAFF.

For the future, flexi fuel cars can be an alternative. But later on, there will be even more renewable alternatives. For example, in the BFR area; FT-diesel, DME and biogas. It is also important to involve the industry, and particularly the pulp and paper mills along the Bothnia coast when developing new fuels.

The two interviewed fuel station managers are also content with this investment. Both address that without the initiative it would probably not have been any investment in ethanol fuel, due to economical circumstances. One of the fuel station keepers mention that this incentive is a good way of opening people’s eyes towards renewable fuels. He also addresses that during the two years after his fuel station started with ethanol fuel, the amount of sold ethanol fuel increased with approximately thirty percent.

The other fuel station manager mention that the incentive needs to be developed further if it is going to achieve a larger change regarding people’s willingness of choosing more environmentally friendly fuels. Another issue that he raised was the fact that it is hard for smaller fuel station to invest in ethanol fuel, due to the fact that it is not directly economically profitable. (Author comment: Hardly none fuel selling is profitable by itself.)

Ethanol ambassadors

The incentive of ethanol ambassadors have been a good starting point regarding influencing the public to choose more environmentally friendly cars as well as more environmentally friendly fuels. However, it is important to create and combine several different incentives in order to influence the public in an optimal way. For example the project Green Zone in Umeå, where Ford/Carstedts have been one of the financial supporters, have had a stronger influence on the public than the incentive of ethanol ambassadors.

Free parking

Whether free parking can be an incentive for buying a clean vehicle was investigated. The researchers' conclusion is that free parking has a minor effect and 82 percent of the answering persons do not consider free parking as an incentive to buy a clean vehicle, but they think that it is a good initiative that gives an added value in acting environmentally friendly. Figure 2 shows that 11 percent of the respondents consider that the free parking is an important incentive when purchasing clean vehicles.

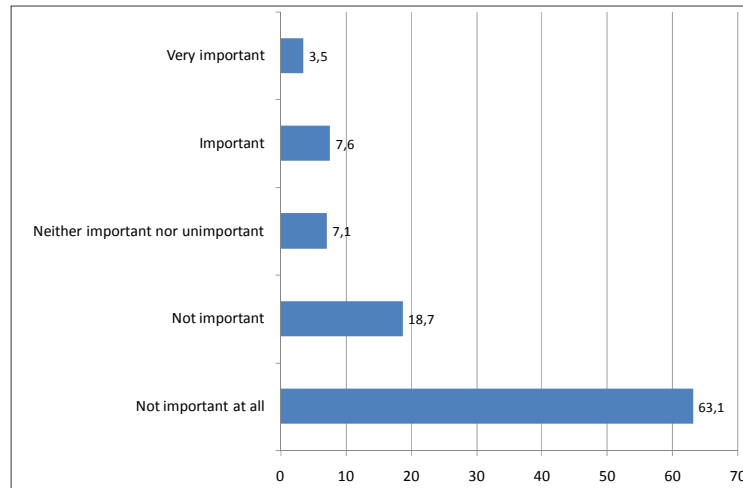


Figure 2: The importance of free parking permit at the buying moment

When questioning whether free parking would affect the preference when buying a clean vehicle today, 72 percent meant that it would not influence while 19 percents meant that it could have a positive effect, which figure 3 shows.

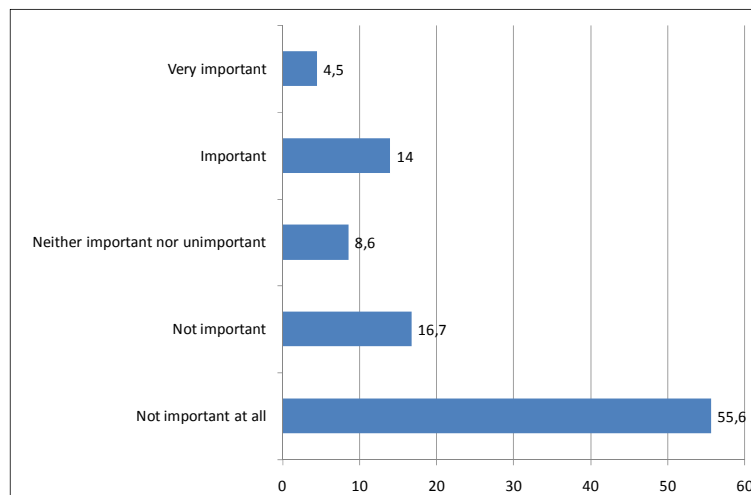


Figure 3: Free parking as incentive if buying a clean vehicle today.

13 percent of the respondents from Sundsvall consider that the free parking permit affected their decision when buying a clean vehicle. In Umeå and Örnsköldsvik the number was 15 percent. In Skellefteå, 5 percent meant that the free parking permit had an impact and from Härnösand 8 percent. It differs between the municipalities if considering whether the free parking permits would have an impact today. 30 percents of respondents from Sundsvall states that that the free parking permit has an important impact. Of respondents from Skellefteå 26 percent mean that the free parking permit would influence the purchase. In Umeå, 13 percent consider this, 10 percent in

Härnösand and 18 percent in Örnsköldsvik. In other words there are some respondents that would be influenced to buy clean vehicles due to the free parking permits.

Procurement

Initially, the region was a very strong actor for the introduction of ethanol vehicles (cars and buses) on the Swedish market. These efforts stalled over time and the region has lost its active role and position in the procurement processes. Given the background and the indirect work that BFR have done regarding green procurement in the public sector, a direct approach will now be added. And in 2009 to 2011, BFR will co-operate with the county council of Västernorrland in a project about procurement of clean vehicles. To further influence and change the procurement process is a long-term commitment. Though, at the moment, there are a lot of incentives guiding or pointing in this direction, which will make it easier to succeed.

Information and communication

The need for information, knowledge and education is never satisfied and the same holds true for dialogue and building support. Even though the BFR has actively worked with information and education, demand from members remains very high, particularly among municipal managers. One way for a decision-maker in a small municipality to see their role is in the “Statement of Intent” that each member in the BFR will produce. In their “Statement of Intent” each member addresses their intentions for their membership in the BFR. Here is a perfect opportunity to include the “greening” of the procurement process and set objectives for clean vehicles and biofuels.

Other information, communication and education activities

During the first period (2004 to 2006), BFR was successful in motivating and involving, but less successful in activating stakeholders. The school efforts were most successful in terms of activating teachers and students. The BFR have also been successful in activating key decision-makers in the public sector and in the academic structures and a number of industrial stakeholders, such as forest owners, in the region. The BFR is very active in national and international forums and projects where experience is shared and disseminated. The demand for information and talks is much higher than the BFR can meet. This has led to a conflict of interest within the BFR on where and how to spend the limited time that the “staff” in the BFR have. The model of how the BFR works can be transferred to other regions, both nationally and internationally. Since it is a bottom-up perspective it needs to be repeated in other regions, in order to get a smooth transition to biofuels. The initiative came from a few private persons and they were initially backed up by the public sector. The BFR-process could be replicated in other regions with less resources. Important to note is that the transfer of knowledge has to be conceptualized in order for this to be successful.

Result of the overall objectives

Activities towards upper-secondary schools

The goal is that 50 percent of upper-secondary students will have direct contact with the BFR (2009).

The results during 2004 to 2006: 13 schools, 30 teachers and 2500 students (approximately 12 percent), 75 project assignments.

The results during 2007 to 2008: 11 schools, 13 educations, 800 to 1000 students, totally 93 project assignments during all period.

Halfway through the year of 2008 this number is approximately 45 percent. The prognosis is that the goal will be fulfilled in June 2009 when more than 50 percent of upper-secondary students have had direct contact with the BioFuel Region.

Upper-secondary students have been viewed as a potential success factor in the BFR process since they are at the threshold of future studies or work and eventually will become future politicians, researchers and business people, i.e. future decision-makers. Many good experiences have come from the work with the students. Students have grown with the assignments, particularly those with external contacts, and the projects have been a way of challenging themselves and gaining inspiration for future studies or work.

Important aspects worth emphasising are listed below:

- The support from headmasters and school administration, important and various between schools and individuals.
- Networks like the School Group as a place to meet and discuss common questions and visions. A source of inspiration and energy is crucial for a successful schoolwork. Representation in the network is based on a number of 2-3 people from each school. This increases daily contact and the follow-up at the workplace which makes the network a manageable size.
- Methods and tools for teachers and students to use, such as study material and study visits but also knowledge transfer between the participating schools.

Activities towards citizens

The goal is that 85 percent of citizens will have had direct contact with the BFR (2008).

The results during the period 2003 to 2006: Two seminars/year, 180 000 household received the two magazines.

The results during the period 2007 to 2008: Two seminars/year, sciences lunches and information and advertising in media. There has also been one week in 2007 and one weekend in 2008 with information activities at fuel several stations in the region.

Halfway through the year of 2008 this number is approximately 75 percent. The prognosis is that the goal will be fulfilled in June 2009 when approximately 85 percent of the residents have had direct contact with the BioFuel Region.

One of the BFR's issues has been to create incentives for citizens to choose clean vehicles when buying new cars. Regional and local incentives as information or free parking places can influence partly, but national incentives as taxes, insurances fees and the Eco Car Subsidy of 10 000 SEK are often more important as incentives. Another strategy has been to use adult education with the unique training material such as a prioritised tool to reach citizens.

It is difficult to measure the impact made on citizens. Many media and many people have been reached through their professional roles and in other contexts. A phone survey was performed after the first magazine, but the response was difficult to interpret and the response group was not representative. The clearest result, however, was that 96 percent of respondents thought it was important that the BFR work with alternatives to fossil fuels? The process management also notes that BFR's issues are hot topics that motivate people and that always lead to discussions. Some people disagree while others ask questions about what they can do privately and through work. The goal for the coming period is to distribute information even more effectively through such things as the website and more information and education meetings in municipalities.

Adult education and unique study material

The goal is for 50 study circles are to be active during 2006.

The result during the period 2003 to 2006: 35 circles with 220 participants during 2006.

During 2007 and 2008 no study circles are held.

Adult education relates to both the work being done at upper-secondary schools through the study material and to key decision-makers. The BFR, however, focuses its adult education and unique study material primarily on citizens.

Experiences from adult education:

- Enthusiastic local players are very important for involving circle leaders and spreading information.
- Trained circle leaders. 50 people have been trained (two days) specifically on the BFR's study material.
- Network for circle leaders. The leaders are also ambassadors for the BFR process and have met twice a year in connection with the seminars.
- Resource person. During 2006, a person was hired to provide support and serve as a resource in the daily work with information, administration, and study visits.
- Focused target groups. To involve more participants than those already interested requires focus on specific stakeholders that are important for achieving the goal.

Some obstacles in upcoming work:

- Mobilising new enthusiasm among citizens even though the issues seem large and unmanageable.
- The degree of motivation and initiative among circle leaders varies greatly.

Activities towards key decision-makers

The goal is that 80 percent of key decision-makers will be contacted. (2009)

The results during the 2003 to 2006: 15 information meetings per year.

The results during 2007 to 2008: 15 information meetings per year

Halfway through the year of 2008 this number is approximately 60 percent. The prognosis is that the goal will be fulfilled in June 2009 when more than 80 percent of the key decision-makers will be contacted.

Major commitments and actions by the region's key decision-makers at all levels are needed to achieve these goals.

Lessons learned from these efforts toward key decision-makers include:

- Visit the key decision-makers' own forums and events. Don't wait for an invitation.
- Get an invitation by being an interesting and attractive party for internal and external stakeholders.
- When invitations come, make sure to always attend and take part.
- Active participation is also a form of information and marketing.

The regional process managers have noted a shift in commitment prior to and after the national election in September 2006. In some municipalities efforts have begun with the new majorities while other municipalities chose to not take part in the BFR. Between May 2006 and January 2007 there was more or less a vacuum in discretion from members and this was also a period when the BFR began its second period, 2007-2010, in part with a new agenda and a new organisation.

Today, the BFR process management feels it has become easier to reach municipalities than previously, both in terms of the study material and with information efforts. Reaching key decision to makers in the municipalities was also a specific goal with the study material.

Final discussion

Within the BEST-projects, and in this report, the primary focus has been on the third strategy “A fast transition to renewable fuels”. To get a sustainable transport system all three strategies need to be implemented, which also include minimizing transports and more efficient vehicles and driving manners.

Different incentives, as information, free parking, reduced taxes for renewable fuels or eco car subsidies, can be used to pursue the three strategies, or to pursue the steps in the biofuel chain; feedstock, production, vehicles, distribution, legal framework and market dynamics (see figure 4). Different incentives are more or less suitable for different occasions and since different persons, or different target groups, are attracted to different incentives, a mix of incentives should be used. Researchers at Umeå University also conclude that a combination between pulling and pushing actions seems be most efficient.

By using the biofuel chain, and BFR’s system approach, the importance of combining incentives, or actions, can be understood. The incentive activities conducted within the BEST-project, and in BFR, took part in the steps; Vehicle, Distribution and Market Dynamics. These activities will also, hopefully, start the process towards a sustainable transport system even though incentives, and actions, in all steps are needed.



Figure 4: The BioFuel chain; Feedstock - Production - Vehicles - Distribution - Legal Framework - Market Dynamics.

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6. Michael Jalmby, BioFuel Region, Umeå.

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Appendix 2

Ten minutes for greener transports – A guide to procurement of clean vehicles from the BioFuel Region (BFR)

This guide is aimed at procurement officers within the public sector. The purpose is to promote a green approach during the next procurement process.

You determine the results

The goal of the BioFuel Region is to become a world-leading region for transitioning the transport sector to the biofuel. This includes creating jobs and being a knowledge leader. The goal is to replace petrol and diesel with renewable fuel (ethanol, biogas, FT diesel) from raw materials from forests or fields. You and all other members of BFR are important in efforts to become an example for others.

There are three strategies for the transition of the transport sector, i.e. a sustainable transport system:

- Fewer transports
- More efficient vehicles and driving methods
- Faster transition to renewable fuels

Within the public sector in Sweden today, there are clean vehicles for most needs. Sweden together with Brazil and the United States are world leading in the sale of clean vehicles. The government in Sweden has decided that 85 percent of new vehicles purchased or leased by state authorities are to be clean vehicles. In the BFR, 10 to 12 percent of new car purchases are clean vehicles. The public sector is both behind the private and government sector, which is why your choices are so important.

Why clean vehicles?

▪ Membership in BFR

Purchasing clean vehicles is living as you learn.

▪ The Environment

Clean vehicles reduce local emissions as well as CO₂ from fossil fuels.

▪ Energy

Access to fossil fuel is limited.

▪ Price

The price for fossil fuel is expected to increase because of international instability and limited resources while renewable fuels are expected to stabilise.

▪ A good example

Purchasing clean vehicles is

- A way of contributing to a greener second-hand market for your citizens.

- A way of credibly showing you are taking responsibility for the environment and health.



How – a few words

- **Focus**
Direct the initial procurement decision based on a strategy for a sustainable transport system.
- **Needs**
What needs are there in terms of areas of use, size and number? What need can be covered by other means of transport, such as clean carpools and/or green taxis and/or buses?
- **Markets and infrastructure**
What renewable fuels are available today and what will be available in the future?
- **Evaluation**
How should the results of purchases be verified and evaluated?
- **Requirements and recommendations**
What classes of vehicles need what requirements?

Differentiate between vehicles and fuel

For vehicles, the same requirements as normal apply (environmental, safety and ergonomics).

For renewable fuels, new requirements may be needed. The requirements can specify either renewable fuel in general or require specific fuel types².

The ability to consider environmental aspects is primarily determined through the technical specification, selection criteria, and allocation criteria.

Support for BFR members

- BFR offers process support, political influence and support. Organisation support (e.g. formulate a plan for procurement).
- BFR offers competence development

More information

- BioFuel Region, www.biofuelregion.se
- Swedish Road Administration, www.vv.se
- Clean vehicles, www.miljofordon.se
- Green drivers, www.gronabilister.se
- "Procurement guide for environmentally friendly and safe transports", www.stockholm.se
- Mikael Brändström, BioFuel Region, 070-662 89 38 alt. mikael@esam.se

² Today there is no legal obstacle in the Public Procurement Act to require a certain type of fuel since there are several competing types of vehicle models on the market.

