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The public-private divide in household behaviour: How far into home can energy guidance reach?

Keywords:

Information policy, energy guidance, households

Abstract

Environmental problems in the energy system often originate from everyday activities and choices. Everyday activities in the home are part of the private sphere, that can be contested in relation to energy policies. This article discusses the public-private divide in energy policies and how Swedish municipal energy consultants understand the divide. By analyzing the actions of energy consultants and their efforts to influence households, as well as how households perceive this guidance, I will discuss the public-private discourse in relation to energy policy and how this discourse can be a restriction for the energy consultants to reach their full potential.

The consultants found it problematic to discuss behavioral issues because they did not know how to relate to people's everyday life activities without intruding on private and personal matters. For the households tailored information and feedback was not perceived as the consultant trespassing in the private sphere. Instead, the householders highlight the possibilities of such mapping. Lessoned learned from Sweden is that state subsidies to local energy consultants is a good way to reach households, but that they need to develop their methods and use more tailored information.

Introduction

The EU directive (2006/32) on more efficient energy use and services states that by 2016 member states should reduce their energy use by 9% in relation to their average during the five years previous to 2006. To achieve these and related national policy goals on energy reduction, energy efficiency must be improved for all end-users and energy efficiency measures must be implemented in all sectors. The home is a “node” of daily life and is often seen as our private sphere. However, the privacy of the home can be contested in relation to local policies in general and energy and environmental policies in particular. A debated example in Sweden is the prohibition or restriction to use wood burning fireplaces in cities to reduce particle emissions. This article focuses on households as end-users and on one means to achieving the end of reduced energy consumption, namely, information provision, specifically municipal energy counseling in Sweden.

Policy aimed at promoting energy efficiency in the household sector must relate to and rely on individuals and their daily choices, household routines, and everyday lives. The values and knowledge of individuals are important to the development of an efficient and ecologically sustainable energy system. People’s understanding of their own responsibilities and willingness to shoulder them are considered key factors in creating a sustainable society (Kretsloppsdelegationen, 1997).

This article focuses on municipal energy guidance directed towards households. The Swedish energy guidance model is considered unique for Sweden, where the energy consultants are employed by the municipalities but financed by state subsidies (Kjeang, 2005). The purpose of this municipal energy guidance is to disseminate objective knowledge of environmentally friendly energy sources, energy distribution, and energy use. In the Swedish investigation to a national energy efficiency action plan to achieve a 9 % reduction in energy use to 2016 municipal energy guidance is emphasized as especially important when it comes to reaching

single-family houses (SOU, 2008:25). Municipal energy consultants are important as a communication link between public policy goals and households.

According to the EU Directive on energy efficient use, as well as the national commission of an energy-efficient Sweden, information and education are basic and necessary, but not sufficient, preconditions for achieving more efficient energy use. According to the Commission, information provision can influence knowledge, attitudes, and behavior (SOU, 2008:25, p. 89). The Commission also noted that special problems were encountered in gaining homeowner acceptance of energy-efficiency measures, such as other preferences than energy is more important when investing in new appliances or renovating the house (SOU, 2008:25). But how can municipal energy consultants who provide only general information influence how people behave in the private sphere and how they choose to live their lives? This is a delicate question that impinges on how public authorities can and should advise their citizens without trespassing on their privacy. What can these consultants discuss with households? What subjects are too private? These questions will be addressed in this article. The article is based on two case studies. In the first case study we interviewed 12 energy consultants in the counties of Östergötland and Dalarna. We then interviewed 18 homeowners and three tenants that had contacted energy consultants for energy advice. In this case the households had contacted their energy consultant and in general consultants answered the specific questions that the householder rose. No home-visits were done by the consultants. We conducted in-depth, semi-structured interviews with both energy consultants and the households and asked about what kind of information the households were looking for, the information given by the consultants, what information was included and excluded and why. What issues were seen as too private to discuss and why the respondents perceived these issues as private ones.

The other case study had another approach and 10 homeowners received targeted information on energy efficiency during a whole year. The homeowners had been part of an energy use reduction project, the Energy Hunt, arranged by municipal energy consultants. This was a time-limited project wherein two energy consultants were allowed to visit the homeowners and conduct individual inspections. The households sent in an application forms including their energy use, installed heat system and the age of their house. Based on this 10 homeowners with different characteristics regarding heating system and energy consumption were chosen. In this study, we conducted in-depth, semi-structured interviews with both energy consultants and six of the ten households included in the project. I used the same interview guide that was used in the first case study described above.

All interviewees are anonymized in the paper.

This article begins with a discussion of informational policy instruments and the public-private divide in relation to different fields of discourse and the more recent concept of “ecological citizenship.” The results of the case studies are then presented. The article ends with conclusions concerning how the public-private divide is handled by energy consultants and the possible consequences for influencing reduced energy consumption of households in the future.

Information policy and the public-private divide in relation to household behaviour

Households are an important group to be targeted when it comes to energy efficiency. In spite of information campaigns and media debate on climate changes the energy use and especially the electricity use, continues to rise in households (SEA 2009). Impact on energy conservation can be achieved by changes in the context such as regulations or taxes and by changes in motivations of people such as an increase of environmental concerns or of moral obligations

to reduce energy consumptions (Oikonomou et al., 2009). I will focus informational policy tools to change attitudes and behavior, because this is emphasized as a major tool for the government to achieve energy reduction in households (SOU 2008:25). This implies moral aspects of behavior rather than strict economic consideration for the households and the users need to engage more in their energy consumption (Oikonomou et al., 2009).

As a means of control, information provision is used by public organizations to inform households about how they can reduce their energy consumption and about the energy-efficient technology available on the market. In Sweden, the state has often used informational policy instruments to promote energy efficient life styles. The use of information as a policy tool has become more common as society has moved towards deregulation (Bemelmans-Videc et al., 1998). By disseminating information, the government tries to exert influence by convincing, arguing, pleading, or educating. In the case of informational policy instruments, the government's relationship with the households, its citizens, is manifested through knowledge transfer and persuasion. The households are not *obliged* to consider the facts or follow the advice. They are not rewarded or punished in any way, as is the case with economic controls or regulations (Vedung, 1995; Lindén, 2001).

Follow ups of information measures, through statistical analysis and surveys, shows that it has been hard to see what the result is of a single campaign and what measures that users should have taken anyway (Bemelmans-Videc et al., 1998). Estimation has however suggested that it would be possible to reduce energy consumption with up to 30 percent of current energy demand by using informational tools (Erhardt-Martinez et al., 2008; Gardner & Stern 2008; Laitner et al., 2009). Campaigns concerning to get households to economize with energy can result in energy saving but it can also result in a rebound effect, which refers to behavioural response to the introduction of new technologies or measures that offset the expected

beneficial effects (Berkhout et al., 2000). Estimation of the rebound effect range from 0 to 30% (Berkhout et al., 2000; Sorrell et al., 2009).

But even if it is hard to evaluate effectiveness of general information campaigns both EU and Sweden, as mentioned above, put a great trust in the possibilities to reduce energy consumption in households through disseminating information. How information will be disseminated is poorly discussed in these documents (see for example EU directive 2006/32; SOU 2008:25). Earlier studies have shown that personalization of information is more successful than general information (Benders et al., 2006). Benders et al. (2006) discuss that personalized information is when information is offered based on specific characteristics of the household. Tailoring information take personalized information a step further and the householders get reduction options that best suit the preferences of the households (Ibid.). Steg (2008) concludes that tailored information is more effective than general information in changing behavior. There are however a limited number of studies done on how to design tailored information to meet different households needs. Steg means that it is possible to tailor information on energy saving options that are relevant for a particular household or to address a person's economical or environmental concerns. Feedback is seen as a form of personalized information by for example install a meter that give detailed information on families energy use, to increase households knowledge on how much energy they use in total or for different appliances (Darby, 2008). Feedback systems such as meters give a lot of information about peoples everyday lives that they perhaps do not want to share with others.

It is important for the government to be careful and not interfere in personal lives. Household energy use has long been treated as a "black box," something one might, should, or could not intentionally attempt to influence (Gyberg & Palm, 2009). That is also why it generally has been regarded as something to be regulated only by individual consumers. Through

information, the state tries to influence the private realm or its citizens by using logical arguments to persuade them to do the “right” things.

Stern (2000) discusses the value-belief-norm theory where he categories peoples values as egoistic, altruistic and biospheric (i.e. concern for the biosphere). Later studies have shown that public policy on energy savings are most accepted by the public if they have altruistic or biospheric values (De Groot and Steg, 2008). In relation to energy guidance this mean that energy reduction counseling that relate to peoples concern for the environment would have better chances to be implemented than advice that emphasize economical benefits from a measurement.

These values are also central to Andrew Dobson’s (2003) idea of “ecological citizenship.” Ecological citizenship means that ecological citizens are obliged to reduce the ecological footprints created by their consumption and everyday lifestyles, in order to avoid affecting other citizens’ opportunities and rights to life and health. Furthermore, ecological citizens do this out of sympathy and willingness to take responsibility for their actions. They do it to contribute, not out of self-interest or to gain anything, nor do they expect compensation. According to Dobson, ecological citizenship takes place in public as well as private spheres and does not recognizes territorial limitations or boundaries. The whole point of ecological citizenship is that acts that had previously been considered private have public implications, so the public-private dichotomy needs to be dissolved. In this perspective, implementing energy reduction strategies is not a private matter for the consumers, but of societal interest and the society have the right to require that people make effort to reduce their energy consumption.

Weintraub (1997) discuss that in public policy analysis the *liberal-economistic model* is the dominating discourse when the public-private divide is highlighted. In this model the divide is found between the public sector and the private sector, and this orientation defines public-

private issues as pertaining to striking a balance between individual and contractually created organizations, on the one hand, and state action on the other (Weintraub 1997). In this sense the government cannot interfere with peoples choices on a free market, but it can only inform them about different options and try to guide them to choose energy efficient alternatives. The government can regulate the market, by for example taxation, but not the choices made on the market by the actors. This is then a more restrictive view of the public-private divide than the perspective of ecological citizenship use.

In the following sections, I will discuss how Swedish householders and municipal energy consultants perceive informational policy instruments in relation to the public-private divide and the liberal-economistic model and ecological citizenship perspective. I will begin by providing a brief overview of Swedish municipal energy guidance.

Energy guidance targeting households in Sweden: a historical overview

Swedish municipalities first received state funding to provide energy inspection and consultancy services to households in the period from 1978 to 1986. Most municipalities did offer this service to their citizens, even if it was not mandatory. The activities generally involved outwardly directed energy advice, which was often imparted through a guidance office or at special informational meetings. In this period, these activities also involved energy inspections of properties, and compiling associated advice and inspection records. Relatively standardized advice, recommending additional insulation, furnace adjustments, and window sealing, was often provided in such instances. These municipal energy guidance activities did not target industry; rather, apartment buildings and detached houses were the focus (Palm, 2004, 2006).

State support for municipal energy guidance was withdrawn from 1986 to 1998, but was reinstated on January first, 1998 (SEA, 1999). This time, municipal energy guidance was

designed to target both households and small companies and organizations. It was intended to provide impartial and locally adapted information and guidance on energy issues; this guidance concerned areas such as energy, technology, and consumer advice. An important restriction on the municipal energy guidance program, however, is that consultants can only provide general information and cannot conduct inspections of individual households. This prohibition is in place so that municipal energy consultants do not compete with private consultants on the market (Swedish Government Decree, 1997:1322). Starting in 2008, municipal energy guidance could also address each municipality's own administrative bodies or companies. Throughout the course of the program, the Swedish Energy Agency has supported municipal energy guidance activities by providing both information and funding. The official purpose of this municipal energy guidance is to disseminate knowledge of environmentally friendly energy sources, energy distribution, and energy use (SEA, 1999; Government Bill, 2001/02, p. 143).

Municipal energy consultants report their activities over the course of the year to the Swedish Energy Agency annually. This report is related to state financing of municipal energy guidance; municipalities only receive state subsidies if they complete and submit this report, which results in a 100% submission frequency. According to these the municipal reports, all municipalities provided some sort of energy guidance in 2007, and 5% of the Swedish population, or 500,000 inhabitants, had contact with a municipal energy consultant (SEA, 2008). Information provision over the telephone is the most common activity, and the most common issues advised on concern energy subsidies, pellets, heat pumps, and general energy advice. Usually it is the households that contacts the energy consultants, but the consultants also arrange special informational meetings, take part in trade fairs and other events.

Mahapatra et al. (2009) conducted a national survey of about 3000 owners of detached houses and found that the that municipal energy consultants were an important source of information.

The survey showed that the households considered interpersonal sources as the most important source of information when deciding to adopt energy efficiency measures.

Construction companies and material suppliers, and energy advisers were the second and third most important sources for information. Of those who had contacted energy consultants for advice, 57% implemented their suggestions.

Case studies: the counties of Östergötland and Dalarna and the Energy

Hunt project

This section presents the results of the interviews with municipal energy consultants and households. I first discuss the case study of the counties of Östergötland and Dalarna. I begin with the energy consultants' views of information and the public-private divide, then the householders' perceptions of this issue. Thereafter the Energy Hunt project is analyzed.

The energy consultants

It was difficult for the energy consultant to give a straight answer as to where the divide between public and private is located, simply because this was not a matter to which they had given any deep thought. Their spontaneous reaction was that there was no clear demarcation. In general, they took the liberal-economistic view and said that because their job was only to *inform*, they did not interfere in people's everyday activities or choices. Another reason why energy guidance was seen as impersonal was that technology was often the focus. The households wanted to know about various technologies available on the market and what products were comparatively better, and this was regarded as a rather harmless information activity. However, in further discussion of the public-private divide, a common response was that the boundary was drawn when energy use was connected to behavioral and lifestyle issues:

“Yes, behavior, I cannot interfere with that, only appeal. I can only make people aware”

This energy consultant meant, however, that he could appeal to people:

“And this with showering and bathing. Yeah, ok, you should know that it costs six, seven kilowatt hours to take a bath and it costs two, three kilowatt hours to shower. If you know that, then it is okay whatever you do. If you want to lie there and have a nice time with a drink and candles or whatever you do, then it is okay. Then the bath has another value. You are not there just to be clean, but to enjoy the moment. ... It is a cost you choose. It is not that you are not allowed to use energy, but it is the awareness that energy costs money. That is what I want to achieve; that is the message.”
(emphasis mine)

In this sense, the divide between public and private was related to knowledge. The public can only inform the households about the *consequences* of an act; if the households then chooses to continue engaging in an energy using act, there is nothing the consultant can do. Some of the consultants emphasized that they thought that increased awareness will change attitudes and benefit reduction in energy consumption in the long run.

A lifestyle-related issue cited by several of the consultants as hard to deal with was when they received calls from older people who had high energy costs related to living in a big house:

“When they live in a large house that is old and perhaps has an oil boiler there is a lot of maintenance that needs to be done. And I, sometimes I jump right into it and say that I would like to advise you to move to an apartment. But, even though that would be the wisest thing to do, it is not easy. It is a sensitive issue, so you cannot just walk in

there and just say that, but you have to ask them and listen to how they react. That can be too private and I have to be careful.”

According to all of the consultants, the obvious advice in this situation was to advise these people to move to smaller living quarters. However, they usually did not give this advice because that would mean they would cross a line of the privacy sphere. Lifestyle-related issues were important, but these were also the most difficult issues for the consultants to handle:

“Anything where people regard their quality of life as decreasing is hard to deal with. Even though the things are not really necessary...it is still hard to change. People are used to having more and more TVs and other technical products in their homes, and even if they don't use them, this habit of purchasing more products is hard to change.”

Another “sensitive” issue, to use the consultants’ term, was when high energy consumption was related to the many electricity-using appliances people collect at home:

“You also have to be careful when you think that people have many very specific gadgets at the same time as they are complaining about overly expensive bills. And they have a lot of equipment that they never turn off, then you need to be diplomatic ... But this concerns peoples’ everyday life, in people’s homes. You cannot say anything.”

Technology was, as mentioned above, a ‘safe’ area for the consultants. If they could advise households to consume energy-efficient technology, then both they and the householders were happy and felt they had contributed to sustainable development.

A problem the consultants mentioned was that householders often phoned them with a specific question in mind: often they wanted to know whether there were any subsidies for a

particular investment, or what product was the best to choose in a given situation. The consultants often felt that the household would be better off if they had a systemic perspective and perhaps started with another issue. The most common question in Sweden in the autumn and winter concerned the heating system, due to the cold climate. There had been an ongoing trend in purchasing heat pumps, so the homeowners called the energy consultants to get more information about various related products available on the market. The consultants, however, thought that the homeowners were starting with the *last* question they should be asking, and that they should start by investigating their building envelope before comparing various heating products on the market. If they started by changing windows and insulating the walls or attic, then they could invest in a smaller heat pump, which would allow them to save more money in the long run. This was a dilemma for the consultants. The homeowner just wanted comparative information on the products on the market and did not want to discuss consequences or alternatives. The consultants felt they had to answer the specific question asked of them, and found it hard to direct the discussion towards energy-efficiency measures and reduced energy use. Most householders just wanted confirmation that an investment was good.

It is generally clear from the interviews with the consultants that it is hard to interfere with households' investment choices. One common comment was that as long as householder can afford to pay for high energy consumption, they will do so. The energy consultants have no arguments to wield against such economic choices. Consumption appears to be part of the private realm. It is the consumer who must pay for the investment; the consultants cannot interfere with any investment decision, but only point out the different options available and their impacts on the environment and on household finances. Household finances are a private issue. Many of the issues raised by the energy consultants were also discussed by the householders; their responses will be discussed in the next section.

Household perceptions of the public-private divide

The householders that we interviewed were 30–75 years old: six were over 60 years, 12 were 40–60 years, and four were 30–40 years old. The average household income was relatively high, EUR 60,000–70,000 per year. Their total consumption of electricity and heat varied greatly from 3,000 kWh to 30,000 kWh per year.

All of the householders were familiar with and could recall general energy-efficiency advice, for example, “turn off the light,” “wash with a full machine,” and “turn off stand-by.” The main reasons to contact an energy consultant were to ask for advice about planned investments in a new heating system or to ask about existing subsidies. Only two of the householders had contacted an energy consultant for information on how to reduce their energy consumption. Their main source for information when it comes to energy efficiency was otherwise internet and friends/relatives. Four of the householders thought that the public energy advisers could only gave “simple” energy-saving tips that could easily be looked up in a brochure at any time. Six meant that they needed more tailored information on how to reduce their consumption, but that they had difficult to find that.

When they were asked about information in relation to privacy, a common response was:

“All measures are okay to use to reach people, but they must be mediated through free and independent sources.”

The households did not perceive existing policy means as interfering with their privacy. They generally believed that government and authorities should undertake a greater number of intensive initiatives to change energy behavior.

Eleven householder spontaneously said that *other* people needed to become aware. The interviewees felt themselves to be conscious of their energy use and they knew and

sympathized with the importance of reducing energy consumption to save the environment but did not feel that others were similarly aware.

One householder thought that the divide between public and private was changing incrementally and that people generally accepted more government interference today than they did just five years before. He took the “A-labeling” of refrigerators and freezers as an example. When it first occurred, he had felt that this was rather “unattractive top–down governing”; now, however, he has accepted it and even thought that A-labeling should be used on many more goods.

Energy labeling of refrigerators and freezers was something several householders cited as a good example of government regulation that was informative but not too private. “You communicate with us, but you don’t interfere with our decision,” as one householder puts it. In line with the liberal-economistic tradition the government signals what they believe are good alternatives, but it is still up to the consumer to decide.

Two householders thought that regulations should be used much more than they were, that the government should use “all measures available”. They cited the example of SUVs that have become more and more common in the cities, which is negative for the environment because they use more gasoline than smaller cars. According to these householders, this development was something that should be forbidden by law, there is no real use for SUVs in the city, forbidding them cannot really interfere with someone’s privacy.

Two other householders, on the other hand, emphasized that regulations and prohibitions were useless and too often reached too far into the private sphere. According to these householders, individual advice and guidance were more legitimate and therefore more useful.

A common sentiment was that households were happy to receive information, but that it should then be up to them to decide how to act; for example:

“It is completely legitimate to give advice and make requests on how to save energy.

That is not too private. It is only information and people act as they want to anyway”;

and

“I gladly receive tips and advice, but then it is up to me what to do with it, what suits my home the best. I want to decide on my own.”

Not all households, however, were grateful for all information and tips. One was annoyed at the requests, for example, to shower for less time and not use the tumble drier. In such cases, he felt that the government was trespassing on his private sphere: “This makes me only angry, and this is something that I should decide on my own.” He believed that a better method would be to give every household an individual report on their energy use, i.e., how much was used by the tumble drier, heating, various appliances, etc. Then it should be up to every household to decide what it wants to do with the report. The individual report should only show the potential energy savings instead of requesting specific actions.

Surprisingly, 12 householders mentioned they wanted more individual inspections where the consultants measured all energy-related activities and appliances in their homes and gave them feedback on what they could do to reduce their energy consumption. That these inspections would result in figures seemed to make such advice neutral and could explain why the householders did not feel such supervision threatened their private sphere. Alternately, as one householder said when explaining how general information could complement individual statistics and still be acceptable, he desired “no sentimentality, but straight on, easy and simple information about your energy use and costs”. These householders still thought it was important for the government not to try to govern the private sphere, but that household

energy use should be treated in a “neutral” way. Notably, Sweden has lacked a debate about the installation of “smart meters” in relation to the emergence of a “Big Brother” society, a debate that has appeared in other countries for example United Kingdom (see for example the website for Big Brother Watch: <http://bigbrotherwatch.typepad.com>).

The Energy Hunt project

In the time-limited project the Energy Hunt, run in 2005–2006 by energy consultants in Linköping ten detached-house owners were involved. The goal of the project was to foster “sustainable energy use.” The involved households received energy counseling over the course of one year on how to reduce both household energy costs and environmental impact. Every household received an energy inspection in their home, during which the consultants followed a set routine. In every house, they inspected the insulation, windows, ventilation, and how the building envelope in general was constructed. In terms of energy use, they examined household appliances' electricity use and noted the ages of the refrigerator, freezer, dishwasher, washing machine, and electric stove. Every household also received advice on energy-efficiency measures, such as insulating the attic, sealing windows and doors, buying a new water heater, and converting to a system that uses water as a heat carrier. At the first meeting, the homeowners also received a bag of useful products, such as a low-energy lamp, electricity meter, sealing strips, an indoor thermometer, and brochures. The householders that we interviewed were 33-65 years old: 2 were 30-40 years, 3 were 40-60 years and 1 was 65 years old. The average household income was also in this case higher than a typical household in Sweden, with EUR 60,000-70,000 per year. Their total consumption of electricity and heat varied from 7,000 kWh to 36,000 kWh per year.

In this project, the divide between public and private was drawn according to the liberal-economic model. The consultants suggested various measures and informed the households of available options, but they did not interfere with decision-making.

The households were generally supportive of the Energy Hunt. Not many of the suggested measures had however been implemented by the households. The first reason was a financial reason: the suggested measures were simply too expensive. Another common reason was related to design, which had financial and aesthetic aspects. It was important, for example, that a new more energy-efficient door should match the overall design of the house. If the homeowner could not find such an item, then the measure was postponed until they found one. One household, for example, had handmade windows that they wanted to keep at any cost. Another householder could not 'sacrifice' an aesthetically attractive appliance for one that was more energy efficient. Several of the suggested measures were rejected by the households because they could not find solutions for their house design.

A common problem was that the households had difficulty to relate to general information and that general advice was not implemented. Evaluation of the Energy Hunt project showed that energy use was successfully reduced when information was combined with feedback and measurement techniques:

We monitored the freezer in the basement for a month. We defrosted it and tracked how much we could save by defrosting it more often. We got a meter [from the energy consultant] that we put in the electrical outlet to check how much energy we saved. It was very useful. ... I was surprised at how much energy we could save.

Although the householder had high awareness of energy and environmental issues, it was sometimes difficult to understand the implications of this awareness in practice:

We've measured and been shocked /../ about how much [energy] things consume when on stand-by and, you know, with 6–7 computers at home ... it becomes a substantial saving. So there really has been an awakening.

Finances were also more important than environmental concerns, and one householder said:

"We don't do a lot of unnecessary things to pretend that we are environmentally aware. There must be some logical thinking involved and also economic benefits."

The Energy Hunt mainly concerned consultation on material aspects and changing heating systems, appliances, light bulbs, insulation, and so on. Such consultation was generally regarded as not too private and the consultants did not try to push the households to implement measures they objected to. All of the major measures suggested in the project were seen as expensive by the households and they had either rejected them or postponed the investment to later. Even if many of the suggested measures were not implemented, the Energy Hunt project was successful in such a way that the 10 householders on average reduced their energy consumption with around 10 percent. Interesting to notice is that this was mainly due to behavioral changes, because most households had not done any major investments at the time for the evaluation, which was when the project had been running for one year.

Conclusions

When comparing how the consultants and the households in general reasoned about the public-private divide it is possible to highlight some similarities and differences between the groups as done in table 1.

Table 1. Summary of the arguments the consultants and the households agreed and disagreed on.

Agreements	Disagreement
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In general energy policy uncontroversial	Interference in consumption patterns
Information acceptable	Need of more prohibitions
The householders have decision power, because they pay	Energy reduction measures only for environmental concern
Cannot force people to implement measures that reduce quality of life	If you can pay for your consumption no one else should care
Energy reduction of economical reason	
Information must be personal	

On a general level both groups meant that energy policy was a rather uncontroversial issue that seldom interfered with the private sphere. Both groups agreed on that general information were acceptable to give to the households, as long as the consultants did not interfere with people's decisions. There seems to be an agreement that because the householders pay for their energy consumption they also have to decide on energy reduction measures. The consultants said that it was more or less impossible to interfere with anything where the householders' quality of life decreased. Most householders argued in the same way. They also agreed on the need for more individual tailored information and feedback where all energy related activities and appliances were measured.

In some issues there were disagreements between the groups. The consultants felt that they could not interfere with peoples' consumption patterns with energy demanding products or luxury consumption. This was something that some of the households opposed and they wanted to see more regulations and prohibitions to what they perceived as unsustainable consumption. The consultants meant that energy efficient measures could and should be implemented of only environmental reasons. This was something most households disagree on and they meant that it must be some financial reason involved too.

The consultants found it problematic to discuss behavioral issues because they did not know how to relate to people's everyday life activities without intruding on private and personal matters. Ecological citizenship theory demands a far-reaching citizenship in which such lifestyle issues definitely belong among public interests and should be dealt with communally.

The result of their guidance, however, was often advice to consume, to buy new, more energy-efficient products. This was safe advice because the consultants could inform households about the most energy-efficient products on the market, and then it would be up to the households to decide what to do with this information. In this way, they maintained the traditional demarcation between public advice and private consumption, and cannot be criticized for interfering in citizens' private concerns.

When it comes to how households accept the authorities' interference in their own lives, the households draw limits. They can accept information, even individually tailored information, but they do not accept requests to do certain things, at least when it concerns their own choices and habits. Other people's choices and behavior could on the other hand be more regulated.

If we compare the results from the Energy Hunt with the other case study the biggest difference is that the consultants in the Energy Hunt had the possibility to use tailored information. Tailored information and feedback was not perceived as the consultant trespassing in the private sphere. That this could expose a detailed picture of family life was not problematized. Instead, the householders highlight the possibilities of such mapping, allowing the consultants to give them tailored information on how to change behavior to reduce energy consumption.

Energy consultants are, by EU and Sweden, seen as an important policy mean to influence households' behavior and investments. Lessons learned from Sweden is that state subsidies to local energy consultants is a good way to reach many households, but that this service could be improved. Swedish regulation, that forbids the consultants to go far enough into the home and give feedback and tailored information, results in that the full potential of this service is not reached. Tailored information and feedback is a way for consultants to encourage the active involvement of householders in energy-efficiency measures. An important improvement of this policy mean is to give energy consultants the possibility to use

all energy reduction methods available. People are also becoming more and more aware of the climate issue and want to contribute to a sustainable development. Energy consultants could diversify more between the households and divide them into defined target groups. Earlier research has shown that households with for example biospheric values should be approached differently than households with economical values. To develop this in energy consultancy would personalize the general information and make it more accurate for the households, which is another important improvement for the future.

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