

Motives for Using Agreements in Energy Policy

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Synopsis

Why do governments try to influence industry's energy consumption through agreements and why do industry sign agreements, though it is voluntary to participate?

Abstract

A growing number of countries have begun to use agreements in their energy policy instead of more traditional kinds of regulations like taxes and standards. Here agreements mean that the authorities and industry negotiate and sign a contract about targets for energy savings, e.g. improved energy efficiency or reduction in energy use, and different means to achieve these targets. However, in many ways these agreements differ, e.g. by the means, sanctions or the monitoring system, even though they are all called "agreements".

The reason for using agreements seems, however, not clear. So the question is first and foremost, why do the authorities choose agreements in the first place? And secondly why do the firms or industrial organizations choose to sign an agreement? To understand agreements we therefore need a better knowledge of the incentives or motives from the different participants to engage in such a policy formulation process and to sign an agreement. Here one argument could be that this is a more effective way to achieve energy savings. At the moment we are trying to answer some of these questions through a case study of different kinds of agreements and in this way be able to describe some of the mechanisms behind agreements. A country's regulation tradition and the cooperative tradition between industry and authorities might explain some of the differences in the "agreement designs".

1. Introduction

During the last years voluntary agreements are used more and more in the OECD countries' energy policy instead of more traditional kinds of energy regulations, e.g. taxes and standards. Agreements are in this way seen as a new way to influence the energy use in industry.

However, a close look at these agreements shows in many ways a variation in the agreement design, e.g. the means, targets and participants in the agreements. In the following I will define agreements as some where:

- some kind of contract signed by the parties involved exists
- the signing parties are on the one hand a public authority, and on the other hand industry represented by individual firms or interest organizations
- the targets concern energy issues, such as improved energy efficiency, reductions in energy consumption or CO₂ emissions
- it is voluntary for the industry to participate.

Traditionally, different criteria to evaluate policy instruments exist and taxes are often considered a "first best" policy instrument because of their efficiency and their incentives to improve industry's environmental performance now and in the future. However, it is difficult to evaluate agreements in the same way, partly because the agreement design is ambiguous and partly because the mechanism behind the working of agreements is different

from other policy instruments. It is therefore necessary to find and use alternative criteria to evaluate and understand the working and effects of agreements. These criteria and incentives to sign an agreement are also important because it is voluntary for the industry to participate.

An examination of incentives for signing an agreement is, among other things, made by using case studies of selected agreements in the project “Energy Policy and Voluntary Agreements” financed by the Danish Energy Agency and carried out by AKF. The purpose of the project is to evaluate and describe agreements from a theoretical and empirical point of view. Therefore, at the moment a case study of existing agreements in the OECD countries is being carried out, and the above-mentioned definition of agreements has here been the criterion for the choice of agreements for this study. In the following I will summarize the experience achieved so far from this case study.

2. A Short Characterization of Agreements

To give an idea of the differences and similarities among agreements, it is necessary to focus on some main characteristics of agreements. This is done in Table 2-1. In general, there are three main characteristics of agreements, a specification of energy targets, means to achieve these targets, and the participants involved, e.g. the signing parties. It seems that an agreement can be everything from a general framework for a branch or industry to more firm-specific agreements with individual considerations, e.g. monitoring mechanisms and some kind of enforcement. So even though agreements are seen as one policy instrument, the agreement design differs from agreement to agreement and from country to country (e.g., IEA 1996). In the following, some of these differences will be summarized.

The agreements all have energy targets, but their extent differs. Some agreements are called covenants as the targets cover a whole industrial sector or branch, while others are more firm specific, the so-called contracts. The covenants are often signed by interest organizations, while actors participating in contracts often include individual firms.

Even though agreements are seen as a new and unambiguous kind of policy instrument, the means contained in the agreements both differ from and reminiscent of more traditional kinds of policy instruments, e.g. regulatory, economic and informative. The difference between these means is the degree of control or power imposed on the regulated party by the regulator. So even though it is voluntary for the parties to participate, it does not necessarily indicate soft policy means within the agreement. However, many agreements use information, a soft policy, as the main policy instrument, e.g. by establishing networks among different stakeholders who through the agreement share their own experience with energy saving, by increasing the knowledge of energy issues in general, e.g. energy-efficient technology and improving industry's energy monitoring. When agreements contain economic means, it is often in the form of grants to investments in energy-efficient equipment or an energy/CO₂ tax rebate if the agreement is kept. In rare cases the means are regulatory. Standards for energy management or an environmental certificate, e.g. BS7750, EMAS or ISO14000, can in some ways be classified as a regulatory instrument though the standardization of the firm is no longer decided by the regulator, but by a certificating body (e.g., British or Danish Standard).

3. The Relevant Actors in an Agreement-Formulation Process

Besides the agreement design differing from other policy instruments, the way in which agreements are formulated also differs. In general, the choice and formulation of agreements can be seen as a process where different actors have the ability to influence the process and the outcome. Before discussing the motives of relevant actors it is therefore necessary to discuss where they enter into the processes of policy making and implementation. In general, the implementation of policy instruments can be seen as a three-phased process, see Figure 3-1.

When policy makers have set up targets and decided to influence the energy use in industry, they can choose among different policy instruments. The choice of policy instruments in this policy-formulation process is not

Table 2-1. Characteristics of Energy Agreements in Selected Countries

		Denmark	The Netherlands	Finland	Sweden
Means	Regulatory	Standards	-	-	Standards
	Economic	Tax rebate	-	Grants to investments etc.	Financing of energy and environmental audits
	Informative	Energy audits	Energy audits	Promote information about energy issues & monitoring in industry	Environmental and energy audits
Targets	Covenants	-	20% reduction in energy intensiveness in industrial sectors	X% reduction in specific energy consumption in industrial sectors	-
	Contracts	Energy-conservation projects & energy management	X% reduction in energy intensiveness at the enterprise	X% reduction in specific energy consumption	Long-term observation of Agenda21 at the enterprise
Participants	Main	* Authorities * Energy-intensive enterprises * Few industrial branches	* Novem * Individual enterprises	* Authorities * Industrial interest organizations * Individual enterprise	* Authorities * Energy avantgarde enterprises
	Others	*Consultants	*Dept. of Economics * Industrial associations		* Consultants

Source: Inspired by Krarup & Kroemer (1996).

usually different for agreements than for other policy instruments. In this first phase all interested parties can in principle influence the choice of policy and instruments.

However, in one particular respect agreements differ from other policy instruments, and that is in the second phase. With traditional policy instruments, it is government, parliament and different interest organizations who discuss and negotiate the specific policy design. However, with agreements this process differs. After the government, parliament etc. have decided to use agreements in energy policy the further negotiations are between a selected number of actors. In the agreements we have mainly looked at two parties negotiate about the agreement design. One side representing some kind of government authority is usually an administrative employee from the central energy authority. On the other hand, industry is represented by an individual firm in the case of firm specific agreements (contracts), and by one or several industrial interest organizations in the case of branch agreements (covenants). At firm level it is usually the energy manager who negotiates with an administrative employee while the managing director signs the agreement. By this, the implementation is probably facilitated as the managers also feel bound by the agreement. If interest organizations are involved there is a similar picture.

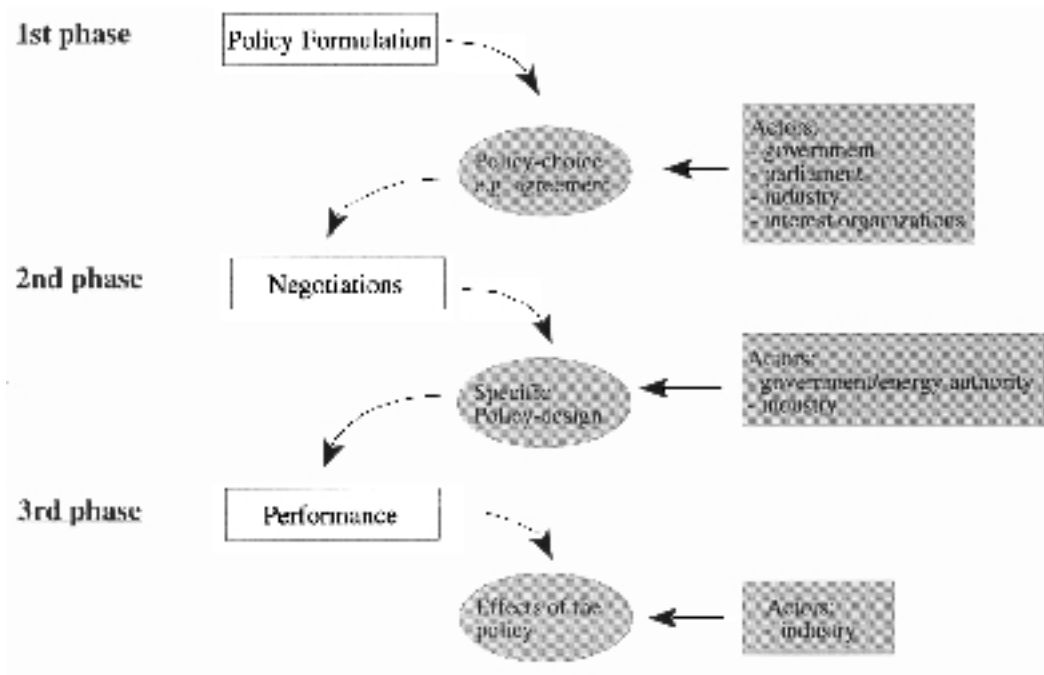


Figure 3-1. Implementation of Policy Instruments

In this second phase, parliament and other “third party” interests, e.g. environmental organizations, are kept out of this process and by this they are not able to influence the agreement design. Using agreements therefore means close negotiations between industry and government, which could indicate that, e.g. the environmental targets in the agreement are not ambitious enough, especially if government is more proindustry than parliament.

The last phase, the implementation phase, covers the effects in industry such as what kind of activities have started because of the agreement and what effect they have on the target in the agreement. This process is no different regarding agreements than regarding other policy instruments. However, the incentives to start activities might differ depending on the means in the agreements that might indicate other effects with agreements than with taxes. And special arrangements are needed to cope with new firms and firms not entered into the agreements.

The question in relation to the three phases can therefore be formulated as why does the government:

- use agreements in their energy policy? (1st phase)
- negotiate with the industry about the agreement design? (2nd phase),

and why does industry:

- choose to enter into an agreement? (2nd phase)
- start different activities and achieve (or not achieve) the agreement target? (3rd phase)

In the following I will try to answer the questions related to the first and second phases and here describe the parties' motives for participating.

4. Motives by Different Actors to Participate

As experience with agreements and evaluation of their effects are still rather unstudied, there can be many reasons for both parts to sign an agreement. Theoretical explanations and empirical evidence can describe the

motives by both parts. The empirical evidence until now only covers case studies of agreements from Finland and Denmark whereas the Swedish and Dutch agreements are about to be examined.

In Finland and Denmark the agreements both cover agreements with individual firms and with industrial interest organizations. The reasons for industry to sign an agreement will therefore be described both from a firm and branch level point of view, if there are differences. The incentives of the government for entering into an agreement will be discussed as well. In our case studies government is represented by the energy authorities responsible, e.g. administrative employees.

4.1. Energy Authority

The government's motives for choosing agreements can be explained partly through theoretical considerations and partly from empirical experience. From our case studies it seems as if there are several arguments for choosing agreements in energy policy.

Theoretical Considerations

The environmental economic literature (e.g., Russell 1996), sets up different criteria for evaluation of policy instruments, which could be part of the policy makers' motives for choosing one type of regulation. The overall goal is to reach the policy targets, e.g. CO₂ emission, at the least costs as possible now and in the future. These criteria shall therefore be seen as a way to choose a successful policy instrument and implementation that can reach the overall policy target, and they can in some way be seen as the government's motives in their policy choice. Examples of such criteria are:

- an efficient implementation, both statically and dynamic, e.g. incentives exist to do more than achieve policy targets now and in the future
- the ability to monitor and control the effects of the policy instrument on the target—has the industry's behaviour changed in a desirable way?
- the ability to enforce the regulated party to keep the demands in the regulation, for example through sanctions
- how flexible is the policy instrument in case of change in needed action for example if the state of the environment or the pollution change
- political reasons, e.g. the possibility of entering R&D in industry.

However, as agreements might be difficult to evaluate from these criteria, other explanations for choosing agreements are necessary, which also came up through the interviews with the administrative employees.

A Search for Alternative Policy Instruments

The reasons for policy makers to choose agreements in the first place are not quite clear. The failure of traditional policy instruments to solve environmental problems can be one argument for choosing alternative instruments. This can be due to more complex environmental problems or because it is politically more difficult to regulate industry's behaviour nowadays. Both make it relevant to look for other ways and policy instruments to solve environmental problems. An administrative employee in Finland mentions that the reason for choosing agreements is because a growing number of countries do so, e.g. the Netherlands have used agreements since 1990, and the authorities therefore thought “..it might be a good idea”. The choice of agreements can therefore be rather accidental and related to the growing use of agreements in other countries. However, as agreements contain a dynamic and flexible element through negotiations with the regulated industry, this could indicate an easier implementation of energy savings in industry. Particularly because the agreements contain industrial considerations. Furthermore, there is a need to reach a consensus between industry and the regulator on how to solve the industry's environmental problems. Through negotiations about the agreement design one can expect that a consensus is reached more quickly. In this way the authorities get the industry's approval of the regulation, which could ease the implementation.

Traditions of Regulation

Alternatively, agreements are chosen because it might suit the country well. The history of energy and industrial regulation in a country can be decisive for what types of regulations the policy makers choose and which policy instruments are preferred to others, e.g. is there a tradition for regulating industry at all? Furthermore, if a cooperative tradition between authorities and industry (on energy issues) exists agreements can just be seen as a continuation of this cooperation. The advantage with agreements could be that this kind of cooperation is more structured. For example, in Finland it does seem that a selected number of people within the industry and the ministry discuss energy matters in industry and that there is a close connection between these persons. Furthermore, industry and energy policy are rather integrated which to some degree makes the energy policy more industry friendly, for example, historically there has not been a strong regulation of the industry. Therefore, agreements might be appropriate for such a cooperative system. At the same time this indicates that the agreement design might be affected by these conditions. For example, the means in the Finnish agreement are mostly informative, where the means in the Danish agreement are reminiscent of more traditional regulation. Here the historical regulation with energy taxes is in some way transferred to the design of the agreement.

A First Step

When the policy makers are going to regulate in a different way or areas that have not previously been regulated, agreements can be chosen as a first step to stronger regulation. If this is the case, this means that agreements in the long run will be substituted by other more restrictive kinds of regulation (e.g., Doern & Wilson 1974). On the other hand, if agreements are effective, e.g. they can achieve energy targets in the industry, there might never be a second step. This could therefore be viewed as an incentive for industry to cooperate and join the agreements.

Avoid Criticism

A maybe more theoretical explanation is described in Hansen (1996). When industry is involved in the policy formulation and signs the agreement it becomes responsible for the implementation. By this, the government is no longer responsible for the policy implementation and if the policy fails the criticism is aimed at the industry instead of the government. As industry is less affected than the government by such criticism the government does not risk losing votes from either industry or environmentalists in case of a non-successful policy implementation. However, whether this is the case in practice is difficult to uncover.

Information Problems

An often mentioned advantage with agreements is that the problems with asymmetric information are hereby diminished. Asymmetric information appears when it is difficult to design an optimal regulation because the abatement costs in the enterprises are not well known to the authorities. This makes it difficult to foresee the effects of the regulation in general and to evaluate which policy design is most appropriate. Through negotiations with industry the authorities try to get more information about the enterprises' abatement costs. A reduction in the uncertainty about the abatement costs through regulations can therefore also be a reason for using agreements (e.g., Glachant 1996). However, talking to the authorities has not so far given a clear picture. The information about the enterprises that came out through the negotiations does not seem immediately surprising to the authorities as this was already known by the authorities. However, it is still difficult for the authorities to evaluate if the enterprises hold back information for strategic reasons.

4.2. The Industry

Reduce Energy Costs

The enterprises that have signed an agreement have a big and energy-intensive production, e.g. steel and paper. In this way, they are enterprises where energy costs make up a relatively large part of the total costs. It is therefore not surprising that these enterprises already were aware of their energy consumption before the agreement was signed, but at the same time this is also one major explanation for why such enterprises chose to enter into an

agreement. As energy is a cost among others there is always a natural incentive for such enterprises to minimize such costs, and if the enterprises expect to do so through an agreement this is a strong incentive. If they by that avoid an energy tax or get grants for investments the incentive gets even stronger.

Economic Means

The way the enterprises expect to reduce their energy costs can be related to economic incentives in the agreement. Signing an agreement in Denmark means a rebate on the energy intensive enterprises' energy taxes. This rebate increases within the three years the agreement lasts, so the tax rebate is lowest in the first year (Ministry of Finance 1995). By signing the agreement the enterprises get a reduction in their energy costs. Despite the low tax rebate the first year, the enterprises choose to sign the agreement because they want to be among the first to sign the agreement to get first-mover advantages.

Furthermore, many enterprises in energy intensive industries know what should be done to achieve energy savings in their production, so signing an agreement just means that the beginning of the projects is more structured and within a limited horizon. It is rare that these enterprises are unaware of their potential for energy savings, as they already have done a lot in energy savings, and all the time they are aware of their energy consumption. When the managers in an enterprise have signed such an agreement, the implementation is also easier as people working in the enterprise have more respect for energy savings.

The Finnish agreement enterprises are able to get grants for investments in energy savings, however, "within the limits of the grants annually allotted through the State budget" (Ministry of Trade and Industry 1992). The enterprises in Finland that have signed an individual agreement stress the increased possibility for getting grants to their energy-saving projects as the main reason. Through the agreement the enterprise also hopes to get a closer contact to the ministry which can be useful now and in the future.

Political Reasons

However, some enterprises mention other reasons which are not directly related to the economic incentives in the agreement. They find other more non-monetary issues caused by the agreement just as advantageous. For some enterprises, energy is, besides being a cost, part of a more environmental issue. That is, if the enterprise wants to promote its environmental image or profile, handling energy problems becomes relevant. Some industrial sectors can also be sensible to the environmental movement, which stresses the importance of a green image. Signing an agreement is regarded as one way to promote this image.

Interest organizations stress other explanations for signing an agreement. In expectation of other stronger regulations "... We would rather see an agreement than a tax increase". Furthermore, agreements as a voluntary action are seen as a more effective instrument, because there is a liberty for both parties for using different means and setting individual targets. The dynamic and flexible elements using agreements are therefore seen as advantageous.

5. Concluding Remarks

There are many reasons for both government and industry to sign an agreement. In general, the motives are related to the particular country and the kind of industry that has signed the agreement. Furthermore, the motives for industry can both be related to economic incentives contained in the agreement and to more political considerations towards the authorities and their customers. This shows that the measure to get industry to sign an agreement is due to economic as well as other means.

However, even though incentives exist to use and sign an agreement in the industrial energy policy, the effects on the implementation and energy targets are unclear. It still remains to be answered whether or not agreements are a more effective way to promote energy savings in industry and in the long run to achieve policy targets like energy efficiency, energy savings and CO₂ reductions.

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