



Extract from the report to the  
Public Accounts Committee on  
public funding provided to energy  
research, development and  
demonstration

May  
2013

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## I. Introduction and conclusion

1. This report concerns the funding provided to energy research, development and demonstration by the Ministry of Climate, Energy and Building (the Ministry of Climate) and the Ministry of Science, Innovation and Higher Education (the Ministry of Education). Funding is awarded through various energy programmes on the basis of funding competitions. Rigsrevisionen launched the study in April 2012.

2. The Danish parliament (the Folketing) has over the past years appropriated increasing amounts to energy research, development and demonstration, and the Danish energy sector currently receives just under DKK 1 billion annually. This places Denmark among the European countries that contribute most funds per citizen to the energy policy area.

The overall objective of appropriating funds to energy research, development and demonstration, is to support achievement of the long-term energy policy goals set by the political level; increasing security of supply, reducing greenhouse gas emissions, and creating more jobs and promoting growth in the energy industry. Public funding to energy research is also meant to contribute to fulfilling research-political objectives like, for instance, enhancing research-based teaching at the Danish universities.

3. The Ministry of Climate and the Ministry of Education have the overall responsibility for the allocation of the funds for energy research, development and demonstration. In 2012, the funds managed by the two ministries were allocated through four major and three minor programmes. We have examined the four largest programmes allocating approximately 85 per cent of the total funds.

4. We decided to launch the study, because funds appropriated by the Folketing to energy research, development and demonstration have increased significantly over the past years. It rests with the ministries to establish an appropriate management system for the allocation of energy funds and thus ensure that the funds contribute to achievement of the political goals. Elaborating an overall strategy for the area and defining concrete targets for the activities within the policy area will help achieve these goals. The ministries should also collect data on the effect of efforts made, in order to assess the extent to which the funds contribute to fulfilling the political goals. It is also essential that the contestable public funds for energy research, development and demonstration are administered efficiently. Funding is provided through many programmes with the inherent risk that the system – put together – is inefficient and ineffective.

### The four examined programmes

#### *Ministry of Climate:*

- Energy Technology Development and Demonstration Programme (EUDP)
- ForskEL, administered by Energinet.dk

#### *Ministry of Education:*

- The Danish Council for Strategic Research (DSF) - Programme Commission on Sustainable Energy and Environment
- The Danish National Advanced Technology Foundation (HTF).

5. The objective of the study is to assess whether the ministries and the organisations providing funding through the energy programmes, manage and administer the contestable public funds for energy research, development and demonstration efficiently. The report answers the following questions:

- Are the contestable public funds for energy research, development and demonstration managed by the ministries in a manner that contributes efficiently to fulfilment of the political goals?
- Are the programmes administered in a manner that provides a generally efficient system for contestable public funds for energy research, development and demonstration?

### MAIN CONCLUSION

To a certain extent, the Ministry of Climate and the Ministry of Education manage and administer the contestable public funds for energy research, development and demonstration efficiently. Rigsrevisionen recognises the complexity of the task, which is, however, considered essential for the Folketing's on-going assessment of whether results achieved commensurate with activities.

Strategies have been defined for the individual programmes, but concrete targets have not been defined for the activities. The extent to which the effect of the individual programmes has been assessed varies. Management of the activities across the ministries is, however, inadequate due to the absence of a joint strategy and concrete targets. Targets must be defined for the energy policy area, if the ministries are to determine whether energy research, development and demonstration, overall, contribute to achievement of energy political and research political goals. In the current set-up, the ministries do not have insight into the overall effect of Danish research, development and demonstration in the energy sector. Rigsrevisionen is of the opinion that the absence of a joint strategy and the inadequate knowledge of the effect of the activities raise the risk that the results will not commensurate with activities.

Rigsrevisionen recommends that the ministries and organisations, through which the programmes are provided, should consider developing a joint strategy and defining concrete targets, for instance, for the number of articles to be published in research publications, number of patents, employment and reduction of greenhouse emissions. Doing so will make it possible for the ministries and the Folketing to assess whether activities meet the expectations. Rigsrevisionen also recommends that the ministries should evaluate the degree to which the funding contributes to achievement of the political goals.

Funding for energy research, development and demonstration is mainly provided through seven programmes established under two ministries. The organisations, through which the funding is provided, have each established their own system for administration of the programmes, which contributes to increasing the administration costs. Rigsrevisionen recommends that the ministries, to the extent possible, should establish uniform administration systems across the ministries and at the same time increase the transparency of administration.

The main conclusion is based on the following sub-conclusions:

*Are the contestable public funds for energy research, development and demonstration managed by the ministries in a manner that contributes efficiently to fulfilment of the political goals?*

The contestable public funds for energy research, development and demonstration are, to some extent, managed efficiently by the Ministry of Climate and the Ministry of Education.

Strategies for the allocation of funds have been defined for all the programmes in compliance with the regulations. In 2011, the ministries worked on a new joint strategy for funding energy research, development and demonstration, but the work was not resumed after the general election in September 2011, and the ministries are therefore now without a joint strategy. Rigsrevisionen recommends that the ministries should re-consider developing a joint strategy and also consider defining concrete targets, ie targets for effect on employment, reduction of greenhouse gas emissions, number of articles published in research publications and number of patent applications filed. These measures will facilitate assessment of the extent to which energy research, development and demonstration contribute to achievement of the political goals.

The ministries have – in a few specific areas – benchmarked the performance of Danish energy research, development and demonstration against the performance of other countries, and the funding organisations have – to some extent or other – assessed the effect of the funding. Yet, the ministries have no knowledge of the extent to which funding provided to energy research, development and demonstration contribute, overall, to achievement of the political goals. The effect of the funding has not been assessed within the ministries, nor across the ministries. Rigsrevisionen welcomes the fact that the ministries and funding organisations are working on enhancing methods and data collection to support the evaluation of effect, and recommends that the ministries should follow up on the general effect of the funding provided to energy research, development and demonstration, to ensure that the Folketing has access to information on the effect of the funding in relation to achievement of the political goals.

*Are the programmes administered in a manner that provides a generally efficient system for contestable public funds for energy research, development and demonstration?*

The administration of the programmes is to some extent providing an efficient system for contestable public funds for energy research, development and demonstration

Efficiency would be enhanced, if the administrative systems established by the funding organisations were uniform across the ministries, as the applicants would thus have to familiarise themselves with only one system when applying for funding. The funding organisations could, for instance, develop uniform application and follow-up forms. The Ministry of Climate intends to uniform the administration systems across the programmes provided through organisations under the ministry. Rigsrevisionen recommends that the ministries should uniform administration across the ministries to the widest extent possible despite the difficulties posed in the current system.

The efficiency of the administration system can be increased if the funding organisations enhance the transparency and quality of the application and selection process. According to the Danish Public Administration Act, applicants are entitled to be heard in connection with external assessment of their applications, and the organisations providing the support are required to motivate their refusal of applications. So far, only one of the audited programmes – *ForskEL* – has failed to hear the applicants in connection with external assessments and motivate its refusal of applications. *ForskEL* intends to observe these requirements in the future. The other three programmes – and particularly the HTF programme – provide brief reasons for refusing applications. Rigsrevisionen considers it important that the applicants are adequately informed of the reason for the refusal of their application, and thereby better positioned to improve future applications.

The efficiency of the system depends on the intensity of competition for funds, which must be such that it ensures high-quality applications. On the other hand, competition must not be so intense that too many applicants apply in vain. In 2012, approximately 20 per cent of the applications for funding through the DSF and HTF programmes were approved, as were approximately 50 per cent of the applications submitted to the EUDP and *ForskEL* programmes. Rigsrevisionen recommends that the funding organisations should monitor and subsequently decide on the number of applications that should be approved.