



Extract from the report to the
Public Accounts Committee on
the electricity emergency
preparedness in the Nordic countries

October
2008

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I. Introduction and Results

1. Electricity is an indispensable source of energy and modern society is becoming increasingly vulnerable to power outages. Compared to other countries, the security of supply is high in Denmark, yet extensive power outages do occur. Maintaining a high level of emergency preparedness in Denmark is important, as power outages have obvious negative consequences for citizens and businesses.

Denmark has in recent years experienced several incidents of quite extensive power outages caused by a variety of factors. The 1999 and 2005 hurricanes were the cause of many local power outages around the country. In 2003, technical errors on the Swedish power plants resulted in power outages in large parts of eastern Denmark. The errors in Sweden transmitted to eastern Denmark through one of the transmission cables connecting the Danish power system with the other Nordic countries (and Germany). As a result, for instance public transportation in the greater Copenhagen area jammed for hours and missing emergency power supply units were one of the reasons why the bridge over the Sound between Denmark and Sweden had to be closed temporarily.

2. There are only few requirements to government and regional institutions to uphold local emergency power supply units. It is generally up to the management to decide whether – and to which extent – these institutions should maintain emergency power supply units to secure them against power outages.

The Danish Ministry of Climate and Energy holds the overall responsibility for the national emergency preparedness, whereas the Danish Energy Agency establishes the rules governing emergency preparedness. Much of the responsibility for the emergency preparedness has been delegated to the transmission system operator Energinet.dk. Safeguarding the emergency preparedness and ensuring a well-functioning energy market are among the tasks performed by Energinet.dk.

Both the Danish Energy Agency and Energinet.dk participate in the Nordic cooperation on emergency preparedness.

3. As power outages may occur in institutions (locally), in the public network (nationally) or be transmitted through the cable connections, mainly to the Nordic countries, Rigsrevisionen assesses, in this report, the overall emergency preparedness by examining the local emergency preparedness (emergency power supply), the national emergency preparedness, and the Nordic cooperation on emergency preparedness.

4. The objective of the examination is to assess whether the plans made for the emergency preparedness are satisfactory. The report addresses the following three questions:

- Is the local emergency preparedness satisfactory?
- Is the national emergency preparedness satisfactory?
- Is the cooperation established between the Nordic countries concerning emergency preparedness appropriate in the event of an extensive power outage in the Nordic region?

5. Rigsrevisionen launched the examination on its own initiative in February 2007. It covers the period stretching from 2005 - when the first executive order concerning emergency preparedness in the electricity sector took effect - to the conclusion of the examination in mid 2008.

Rigsrevisionen has, in cooperation with the Norwegian and the Finnish Supreme Audit Institutions, conducted a parallel audit in order to highlight the Nordic cooperation on emergency preparedness. The Swedish Supreme Audit Office participated in the beginning of the parallel audit and contributed data on conditions in Sweden, but due to issues relating to resources, Sweden had to withdraw from the audit work.

RESULTS OF THE EXAMINATION

It is Rigsrevisionen's assessment that the overall emergency preparedness is generally satisfactory. However, there is scope for improvement within the local, the national, and the Nordic emergency preparedness.

This overall assessment is based on the following:

The local emergency preparedness

It is Rigsrevisionen's assessment that the local emergency preparedness is generally satisfactory. However, in some government and regional institutions, the local emergency preparedness can be improved if, in particular, maintenance is upgraded.

- Rigsrevisionen's mapping of emergency power supply units in 309 government and regional institutions disclosed that 88 percent of the institutions have established emergency power supply units, whereas 12 percent do not have such facilities.
- Rigsrevisionen's mapping and visit showed that institutions which were assumed to have emergency power supply units, like for instance, hospitals, maximum security prisons and institutions handling traffic and preparedness, did have emergency power supply units. Institutions without access to emergency power are certain county gaols, small institutions within healthcare and culture, and administrative institutions such as foundations, councils, and tribunals.
- The examination showed that the extent of maintenance performed on the emergency power supply units by the institutions varies and is, in some cases, inadequate. Rigsrevisionen is of the opinion that the local emergency preparedness may be improved through guidance on selection and maintenance of emergency power supply units. The Danish Energy Agency agrees with this assessment and will develop a guideline on selection and maintenance of emergency power supply units.

The national emergency preparedness

According to Rigsrevisionen's assessment, the Danish Energy Agency has provided the platform for a satisfactory emergency preparedness by establishing the framework for the national emergency preparedness. Moreover, Rigsrevisionen is of the opinion that the Danish Energy Agency and Energinet.dk's supervision of the implementation of the framework also contributes to ensure a satisfactory emergency preparedness. Rigsrevisionen notes that the energy authorities do not know how much the electricity consumers are paying to the emergency preparedness and the security of supply, respectively.

- The Danish Energy Agency has ensured that the executive order for the emergency preparedness in the electricity sector lays down extensive and updated rules for the emergency preparedness, including clear and transparent delegation of responsibility for the various tasks within emergency preparedness to the authorities and licensed suppliers of electricity.
- The Danish Energy Agency's supervision of the activities within emergency preparedness is focused on areas of specific importance to Energinet.dk's emergency preparedness and supervision of the licensed electricity suppliers. Rigsrevisionen finds it positive that the Danish Energy Agency is developing a supervision plan based on materiality and risk, and including Energinet.dk's detailed plans for emergency preparedness and assessment of the materiality of emergency drills, as this will strengthen the Danish Energy Agency's supervision of Energinet.dk's own efforts within emergency preparedness.
- Energinet.dk's supervision of the licensed electricity suppliers is satisfactory, as the nature and extent of the supervision provide Energinet.dk with detailed insight into the emergency preparedness work conducted by the enterprises.
- The energy authorities do not know how much the electricity consumers are paying to the emergency preparedness and the security of supply, respectively. The reason is that the two intertwine and are closely connected to the ordinary operation and therefore difficult to isolate. Rigsrevisionen finds it positive that the Danish Energy Agency and Energinet.dk are planning to launch a project with the purpose of clarifying the allocation of costs to the emergency preparedness.

The Nordic emergency preparedness

Based on the findings of the parallel audit, the Danish, Norwegian, and Finnish Supreme Audit Institutions find it positive that a Nordic cooperation concerning emergency preparedness has been established through NordBER. The cooperation includes exchange of experiences, joint examinations and joint emergency preparedness drills. The cooperation has also resulted in proposals for activities which may contribute to improve both the national emergency preparedness and the cooperation within this field across the Nordic countries. How an extensive power outage in either of the countries is handled will depend on the involved countries' planning of the emergency preparedness.

On the basis of the parallel audit, Rigsrevisionen finds that the Ministry of Climate and Energy together with their Nordic peers should consider strengthening the Nordic cooperation with respect to emergency preparedness, because the current cooperation does not to the extent required address preparedness with respect to repair.

- Handling of incidents causing extensive damage to electricity plants, which will require coordinated assistance between the Nordic countries, is not covered in a binding agreement similar to the systems operating agreement.
- No joint Nordic or national risk and vulnerability analyses or emergency plans address how assistance provided in the form of repair resources should be handled.
- It should be considered whether the Nordic emergency preparedness cooperation should be more deeply anchored in the responsible authorities, as the participating countries have not set any national objectives for the cooperation.
- On the basis of the parallel audit, the three Supreme Audit Institutions find that the cooperation existing between the Nordic countries concerning repair preparedness is not sufficiently well structured. The Nordic ministers of energy should consider upgrading and strengthening the elements of the cooperation which concern repair resources in the event of an extensive power outage in the Nordic electricity system.