



FOLKETINGET
STATSREVISORERNE



FOLKETINGET
RIGSREVISIONEN

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Energinet's outsourcing of critical IT infrastructure operations services

1. Introduction and conclusion

1.1. Purpose and conclusion

1. This report concerns Energinet's decision to outsource critical IT infrastructure operations services.

The energy sector plays a vital role in modern society. Critical IT infrastructure is of crucial and direct importance for the supply of electricity in Denmark and other essential functions that are vital to society. It is therefore important to protect critical IT infrastructure and ensure that the security of IT infrastructure is not compromised. When critical IT infrastructure is outsourced, external suppliers will be able to alter functions that support the supply of electricity. It is essential to have focus on security, when services are outsourced, and retaining this focus is the responsibility of Energinet.

2. The overall purpose of the government ownership of Energinet is to keep government control over critical infrastructure. In its capacity as systems operator, Energinet performs several essential social tasks that the government has an interest in controlling.

3. Energinet's organisation consists of a parent company and seven subsidiaries. In 2018, the group was re-organised and some of the company's activities were transferred to subsidiaries and thus moved further away from the control of the minister. As a consequence of the reorganisation, the Danish Act on Energinet was amended in 2019 to strengthen the minister's right of access and control with Energinet's subsidiaries. The amendment facilitated the establishment of an unbroken chain of management from the minister down to the subsidiaries.

4. According to Energinet, the objective of the outsourcing is to achieve financial savings and obtain benefits in the form of an agile and flexible approach to task performance, faster delivery, a scalable operating environment, staff with the IT skills required to meet the increasing demands of the sector, and better supply chain management with fewer external suppliers.

Energinet

Energinet is an independent public enterprise owned by the Danish Ministry of Climate, Energy and Utilities. Energinet owns, operates and develops the transmission systems for electricity and natural gas in Denmark.

Outsourcing

Outsourcing means that a company buys services from external suppliers that have traditionally been performed inhouse by the company's employees.

Critical IT infrastructure

IT infrastructure is the foundation that supports the operation of an organisation's software and applications. The IT infrastructure includes networks, routers and servers. When external suppliers take over the operation of critical IT infrastructure, they will be able to change the functionality of, for instance, networks, routers and servers.

5. The threat assessment published by the Danish Centre for Cyber Security in 2020 showed a very high risk of cyber espionage and cyber attacks against the IT infrastructure of Energinet and the utilities sector in general. It is the Center for Cyber Security's assessment that foreign states have an interest in stealing information either to strengthen and develop their own utilities sector or for use in a political or military conflict. Centre for Cyber Security notes that attempts have been made to compromise the Danish utilities sector.

6. In May 2021, the greatest oil pipeline in the US, Colonial Pipeline, was attacked by hackers. Following the attack, the operator of the pipeline had to shut down the transport of oil between Texas and New York, which seriously affected the supply. It is essential for the security of supply that the Danish utilities sector is not compromised in a similar way.

7. Rigsrevisionen has on several occasions enquired into and called attention to security risks associated with Energinet's decision from January 2019 to outsource the operation of critical IT infrastructure. Rigsrevisionen initiated this study in April 2021, because Energinet's decision on outsourcing was a matter of significance that the Ministry of Climate, Energy and Utilities should have been informed of in advance. At the time, it was however not clear whether the ministry had been informed, before Energinet in June 2020 entered the outsourcing contract.

8. The purpose of the study is to assess whether the Ministry of Climate, Energy and Utilities and Energinet have managed outsourcing of the operation of the critical IT infrastructure in a responsible manner.

9. Energinet has informed Rigsrevisionen that it disagrees with Rigsrevisionen on the point that outsourcing of critical IT infrastructure operations services is a matter of significance that the Ministry of Climate, Energy and Utilities should have been informed of, before tenders were invited.

Rigsrevisionen finds that the decision to outsource critical IT infrastructure operations services is a matter of significance, because the purpose of the government ownership of Energinet is to ensure government control with critical infrastructure, and because the operation of critical IT infrastructure is essential for the security of supply.

10. Energinet has also made it clear that Rigsrevisionen's description and treatment of IT security issues in connection with the examination of the outsourcing of the critical IT infrastructure operations services should be treated as confidential, as the information, in particular in the current security situation, could compromise state security and the defence of the Kingdom.

Rigsrevisionen has met Energinet's request for confidentiality, and the report does not include any specific descriptions of the IT security breaches that Rigsrevisionen refers to in its conclusion. In the opinion of Rigsrevisionen, the breaches are outlined in general terms and cannot per se be used to compromise security.

Matters of significance that the Minister of Climate, Energy and Utilities must be informed of in accordance with the amendment to the Danish Act on Energinet in 2019

- Material changes in Energinet's economy, including revenue, costs, capital buffers and risk exposure.
- Major changes relating to the security of supply of electricity and gas.
- Changes in Energinet's strategy and activities.
- Matters of political importance.



Main conclusion

Overall, the Ministry of Climate, Energy and Utilities and Energinet have not managed the outsourcing of critical IT infrastructure operations services in a responsible manner. Energinet's basis for decision and implementation of the outsourcing is worthy of criticism. The consequence is that the outsourcing risks compromising the security of supply of electricity and gas.

Energinet has not informed the Ministry of Climate, Energy and Utilities about the outsourcing in due time

Energinet has not met its obligations to inform the Ministry of Climate, Energy and Utilities of matters of importance in due time. The ministry therefore did not have opportunity to assess Energinet's outsourcing project separately, before the tender process was started.

Energinet has failed to ensure the IT security in connection with the outsourcing

The study shows that Energinet's preparations did not include a risk assessment of the outsourcing in relation to ensuring adequate government control with critical IT infrastructure. However, in connection with the outsourcing, Energinet has carried out a risk assessment of IT security, according to which Energinet will not for a long period of time be able to meet current IT security requirements. Rigsrevisionen has detected serious breaches of security in connection with the outsourcing. Rigsrevisionen drew attention to these breaches of security in 2020 and in 2021, but Energinet has not addressed these.

The Ministry of Climate, Energy and Utilities has not provided a clear framework for the supervision of Energinet's IT security

The ownership documents of the Ministry of Climate, Energy and Utilities do not support that the ministry should be informed of major changes in matters relating to supply security. The study shows that the ministry, in the ownership documents, has failed to include a qualitative description of the matters relating to supply security of which the ministry must be informed. Nor does this appear from Energinet's group instructions.

The Ministry of Climate, Energy and Utilities has supervised Energinet's IT security on an ongoing basis, but the ministry has not fully applied its knowledge

The study shows that the Ministry of Climate, Energy and Utilities has addressed IT security issues regularly at its meetings with Energinet. The ministry also intensified its supervision of IT matters relating to critical supply of electricity and gas, when it was informed of the scope of the outsourcing in April 2021. The ministry's supervision has not in all cases taken into consideration the results of the Danish Energy Agency's inspection reports about Energinet, when these were available to the ministry.