



LAW FIRM

OBSERVATIONS ON THE DANISH ENERGY TICKET MARKET

1 Introduction

This memorandum points out potential illegal discrimination in the current legal regulation of the Danish energy ticket market, due to the exclusion of electricity.

2 Executive Summary

The Danish Biofuel Act (in Danish: Biobrændstofloven) implements parts of the Renewable Energy Directive (RED) and the Fuel Quality Directive (FQD).

The Biofuel Act was originally introduced in the Danish parliament and entered into force in 2009 where, at the time, neither biogas nor electricity played any significant roles in the road transport sector. Thus, neither biogas nor electricity were included in The Biofuel Act when it was adopted.

In 2015, the RED and the FQD were revised to recognise and mitigate the negative environmental impact that biofuels production can have in terms of indirect land-use change and related greenhouse gas emissions. Subsequently, the Danish parliament updated the Biofuel Act on the 15th of December 2016 to adjust for the changes. The 2016-amendment sought a technology neutral approach, which is stressed twice in the proposal¹.

The 2016-amendment notes that biogas had entered the road transport sector since the original Biofuel Act was adopted in 2009. Consequently, biogas suppliers were included in the provision that covers companies, and thus subject to the 5.75% requirement for the use of renewable energy sources (RES).

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¹ https://www.ft.dk/samling/20161/lovforslag/l67/20161_l67_som_fremsat.htm

Just as biogas in road transport had developed since 2009, so had electricity. However, the 2016-amendment failed to allow renewable electricity to road transport the same status.

This shortcoming was not addressed by the Danish parliament. *"Whether renewable electricity should or could be included in the oil companies' implementation of the blending requirement has not yet been considered"*, the Danish Energy Agency notes in the memorandum on the 2016 legislative change of the Biofuel Act².

Both the RED and the FQD strongly encourage renewable electricity used in road transport. According to the RED (see article 3 and 4) renewable electricity used in road transport counts five times its energy content³.

The FQD contains similar encouragement for renewable electricity. Article 7a paragraph 1 stresses that; *"In the case of providers of electricity for use in road vehicles, Member States shall ensure that such providers may choose to become a contributor to the reduction obligation laid down in paragraph 2 if they can demonstrate that they can adequately measure and monitor electricity supplied for use in those vehicles."*

As the discrimination against renewable electricity in road transport constitute a selective and significant economic advantage to fluid and gaseous RES, the current practise is likely distorts competition among different types of renewable energy.

3 The European RES target and the ticket system, implementation in the Biofuel Act

Energy providers, that are obliged to meet the 5.75% RES requirement, trade among each other to meet this obligation.

Companies with a renewable energy surplus can sell renewable energy tickets to companies with a renewable energy deficit. The voluntary trading among obliged parties happen through the so-called ticket market⁴. Renewable energy units are traded as tickets (one ticket is one gigajoule renewable energy). The trading mechanism resembles that of the EU emissions trading system.

² Høringsnotat om forslag til lov om ændring af biobrændstofloven, J nr.2016-7115, 19. september 2016

³ The Danish Energy Agency's 2016-memorandum also notes that this change was brought about due to a Danish proposal during the ILUC-negotiations. The Danish government proposed to increase the multiplication factor from 2.5 to five to incentivise the use of renewable electricity in road transport. The proposal found broad support and was adopted.

⁴ For explanation, please see Energistyrelsen (2018), Håndbog om dokumentation for biobrændstoffers bæredygtighed, https://ens.dk/sites/ens.dk/files/Transport/haandbog_version_1_4_1_pdf26022018.pdf

The 2016-amendment to The Biofuel Act included biogas in the ticket market. Electricity and hydrogen produced by RES are currently excluded from the ticket market, and thus only gaseous and fluid energy forms are included.

3.1 Distortion of competition

Due to the discrimination between electricity and hydrogen compared to gaseous and fluid energy forms the act currently distorts competition among different types of renewable energy (fluid, gaseous and electricity) in road transport as electricity is specifically excluded from the ticket market.

Since only fluid and gaseous renewable energy can be traded in the ticket market, it constitutes a selective economic advantage to providers of renewable energy derived from fluid and gaseous energy sources.

Renewable electricity in road transport contributes to the implementation of RED, but while suppliers of fluid and gaseous fuels are given additional incentive to exceed their blending obligation (through the possibility of selling tickets), the same incentive does not exist for suppliers of electricity to road transport.

Unlike fluid fuel options, electricity is not a drop-in fuel. Neither is biogas, which is included in the current Danish regulation.

Thus, the continued discrimination against electricity conflicts with the intention of the regulation.

3.2 The position of the Danish Government

As stated by the Danish Energy Agency, the Danish parliament has yet to consider the possibility of including renewable electricity into the provision in the Biofuel Act that covers energy suppliers and thus subject to the 5.75% obligation.

The government has until now opposed the inclusion of renewable electricity in the ticket system on two grounds; biofuels can easily be used in existing vehicles and are therefore promoted, and an inclusion of electricity in the ticket system would incentivise electric vehicles and thus reduce the tax revenue from fossil vehicles, which are taxed at a higher rate.

In answers to parliament, the government has stressed the following (our translation, emphasis added):

“The EU-target of renewable energy in transport can be met by using different technologies. This includes e.g. biofuels and renewable electricity for cars and trains. Biofuels are more expensive than fossil fuels but can be used in existing vehicles. Biofuels are therefore promoted through a blending requirement, which currently is 5.75%. This require-

ment is the overarching requirement for providers of diesel, gasoline and gas to transport. The requirement can be met by varying blends as long as the overall target is met. The law also allows for multiple energy providers to meet the target together”⁵.

And:

“Theoretically it is possible to allow for renewable electricity in the implementation of a blending target for biofuels. This would entail that the blending target is increased correspondingly to ensure the full implementation of the RED’s target of 10% renewable energy use in transport.

It is only if this action, in itself, leads to an increase in renewable electricity usage in transport that the use of biofuels can be reduced. For example, an increase in renewable electricity usage can happen through an increase in the share of renewable energy’s production or by increasing the number of electric vehicles beyond the energy projection (Energifremskrivning, *Danish translation*).

There must be additional contributions before there will be an effect. However, this will lead to increased costs, much larger than the cost associated with the trade of renewable electricity tickets. For example, an increased sale of electric vehicles will constitute a governmental revenue loss as the registration tax for an electric vehicle is substantially lower than for conventional vehicles”⁶.

It should be noted that the answers to parliament explicitly acknowledge that the current practise directly affect the competition between renewable electricity and other renewable energy sources as it is stated that the inclusion of renewable electricity in the ticket system is likely to increase the sales of electric vehicles.

Contrary to this position, the Danish Council on Climate Change, an independent panel of experts providing recommendations to the Danish government, has recommended the adoption of renewable electricity in the ticket system.

”If electricity from electric vehicles was included in a general requirement of a specific share of renewable energy in transport, it would be possible to generate tickets and thereby potentially reduce the cost of fulfilling the 2020-target in transport as these tickets could displace more expensive forms of renewable energy. This would ensure that the cheapest form of renewable energy in transport would be used”⁷, the council states.

⁵ Energi-, Forsynings- og Klimaudvalget 2017-18, EFK Alm.del – endeligt svar på spørgsmål 60

⁶ Energi-, Forsynings- og Klimaudvalget 2018-19, EFK Alm.del – endelig svar på spørgsmål 265

⁷ Klimarådet (2018), Status for Danmarks klimamålsætninger og -forpligtelser

This understanding of the ticket system and its dynamics is also echoed by the Danish Energy Agency. In a 2017-background report, it is stated that *“it is assumed that biogas-generated tickets will be the cheapest way of fulfilling any shortage in relation to the blending requirement in so far that these tickets are available”*⁸.

As providers of gaseous and fluid RES are subject to a 5.75% RE-obligation, and providers of renewable electricity are not, the general blending obligation for providers of gaseous and fluid RES will be lower than expected if all energy forms were treated equally. In other words, the contribution from renewable electricity towards the RES target is, by way of accounting method, transferred without compensation to providers of gaseous and fluid RES, who are then subject to a correspondingly lowered blending obligation.

A technology neutral, market-based and cost-effective implementation of the RES target would include and treat all renewable energy forms in an equal manner under the same general requirement of a specific share of renewable energy in road transport.

4 Presence of state aid

Pursuant to Article 107(1) TFEU, any aid granted by a member state or through state resources in any form whatsoever which distorts or threatens to distort competition by favouring certain undertakings or the production of certain goods must, insofar as it affects trade between member states, be incompatible with the internal market.

In the General conditions in the Guidelines on State aid for environmental protection and energy 2014-2020 (2014/C 200/01), it is specifically stressed that (our emphasis added):

“In order to keep the distortions of competition and trade to a minimum, the Commission will place great emphasis on the selection process. Where possible, the selection process should be conducted in a non-discriminatory, transparent and open manner, without unnecessarily excluding companies that may compete with projects to address the same environmental or energy objective. The selection process should lead to the selection of beneficiaries that can address the environmental or energy objectives using the least amount of aid or in the most cost-effective way.”

In the light of the above, it is difficult to see how the continued exclusion of renewable electricity in the ticket system fulfils these criteria. It should also be noted that renewable electricity is expected to lead to a more cost-effective and energy-

⁸ Energistyrelsen (2017), Baggrundsrapport til Basisfremskrivning 2017

effective way of implementing the RED. At the very least, to the extent the exclusion of renewable electricity provides other energy suppliers with a selective economic advantage, it needs to be authorised by the Commission.

As the current Biofuel Act provides providers of gaseous and fluid RES with the possibility of generating tickets, and thus an added value, it clearly constitutes an economic advantage that providers of renewable electricity do not have access to.

As an example of this foregone value creation derived from the ticket market, had electricity providers been able to participate in the trading of tickets, it would be possible to provide discounts in the order of 17,000 euros per year per electric bus when bidding for public tenders, according to industry actors as well as our calculations (see appendix 1).

It should also be noted, that gaseous and fluid RES receive production subsidies and are exempt from CO₂-taxes (regardless of whether they are first- or second-generation biofuels). As the Commission has held in previous decisions, such tax exemptions constitute state aid within the meaning of Article 107(1) TFEU (e.g. see decision SA.48069 (2017/N)).

The Danish Energy Agency has previously estimated that the CO₂-tax exemption on biofuels, under the 5.75% obligation, amounts to a governmental revenue loss of 72 million euros and 163 million euros in societal costs⁹. These costs are expected to increase if the general requirement of a specific share of renewable energy in transport is increased. The report from the Danish Energy Agency further stresses that the prices of different RES in road transport significantly affect trade between member states, specifically Denmark and Germany.

In relation to this, it is worth noting that reductions in or exemptions from environmental taxes can at least indirectly contribute to a higher level of environmental protection. However, as the EEA Guidelines lay down, the overall objective of the environmental tax to discourage environmentally harmful behaviour should not be undermined. The tax reductions should be necessary and based on objective, transparent and non-discriminatory criteria, and the undertakings concerned should contribute towards increasing environmental protection.

In Denmark, the production of fluid, electric and gaseous RES receives state subsidies. When fluid and gaseous RES are used in road transport, the RES is subject to CO₂-exemptions. As electricity production is covered by the EU emissions trading system (ETS), electricity used in road transport is per definition carbon neutral as the carbon emissions are neutralised in the ETS.

⁹ Energistyrelsen (2015), Analyse af alternative muligheder til opfyldelse af 2020 målet for VE til transport

Fluid, electric and gaseous RES counts equally towards the RES target as outlined in the RED. The mass balance system is the only chain of custody system permitted under the RED, requiring suppliers to account for their product on an energy unit basis. It is also this mass balance system that create the basis for the ticket market. A renewable energy unit is required for each ticket.

In an analogue example to the current ticket system, it is relevant to ask whether the following would abide to state aid law or at the very least, would not need to be subject to notification and authorisation from the Commission.

A member state wants to support electricity production from wind turbines.

The wind turbines produce renewable electricity and as GOs can be established, owners of wind turbines can subsequently provide companies or private consumers with green certificates. Now, let us presume that the government in this member state prefers onshore wind turbines. Could we then imagine a legal discrimination of offshore-derived green certificates, which would benefit owners of onshore-derived green certificates?

It seems highly unlikely and at the very least, it would require prior notification and Commission approval.

5 The current practise needs state aid verification

I do not contest that member states can implement the RES-target in various and technology-specific ways. However, I strongly dispute that the current practise relating to the Danish ticket market is a well-designed instrument, which is appropriate to achieve the environmental aim sought.

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Please do not hesitate to contact me should I be able to help any further.

Best regards
TVC Law firm

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Enclosed:

Appendix 1

Appendix 1

Price example and assumptions regarding e-busses, including tickets

The example builds on the assumptions and numbers in the latest Danish report on the topic¹⁰. Furthermore, a RE-share for electricity of 73% is assumed (2017-level) as well as a 20% distortion in the trading process. All things being equal, a yearly value of €17,158 is generated per electric bus.

Fuel economy, diesel busses

Range per bus (km/year)	70.500
Number of busses	412
Total use (km/year)	29.046.000
Diesel consumption (l/km)	3,1
Total diesel consumption (l/year)	9.369.677
Diesel price incl. taxes (€/l)	0,99
Total cost, diesel operations (€/year)	9.245.585

Fuel economy, electric busses

Range per bus (km/year)	70.500
Number of busses	412
Total use (km/year)	29.046.000
Electric consumption (kWh/km)	1,5
Total electricity consumption (kWh/year)	43.569.000
Price of electricity, incl. tax (€/kWh)	0,07
Total cost, electric operations (€/year)	2.653.979

Estimation of ticket value

Price, fossil diesel (€/GJ)	14,99
Price, 1G biodiesel (€/GJ)	30,26
Estimated distortion in relation to ticket trading (€/GJ)	2,68
Estimated ticket price (€/GJ)	12,58
Ticket value from electricity to busses (€/year)	7.069.452

Fuel economy, electric busses (incl. tickets)

Total cost of operations (€/year)	2.653.979
Ticket value from electricity to busses (€/year)	7.069.452
Financial value of tickets (€/year)	4.415.473

¹⁰ COWI (2018), Alternative drivmidler i Sydtrafik