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<p>In the published version of this decision, some information has been omitted, pursuant to articles 24 and 25 of Council Regulation (EC) No 659/1999 of 22 March 1999 laying down detailed rules for the application of Article 93 of the EC Treaty, concerning non-disclosure of information covered by professional secrecy. The omissions are shown thus [...].</p>		<p>PUBLIC VERSION</p> <p>This document is made available for information purposes only.</p>
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**Subject: State Aid SA.42776 (2015/N) – Finland  
Individual aid to biofuel plant (St1 Biofuels)**

Sir,

The Commission wishes to inform Finland that, having examined the information supplied by your authorities on the matter referred to above, it has decided not to raise objections to the proposed aid measure.

#### **1. PROCEDURE**

- (1) Following pre-notification contacts, by electronic notification of 31 July 2015, Finland notified, pursuant to Article 108(3) of the Treaty on the Functioning of the European Union (hereinafter referred to as TFEU), support to the construction of an advanced biofuel demonstration project in Finland. Further information was provided on 8 and 22 September 2015. On 7 December 2015 Finland provided a language waiver and agreed that the decision will be adopted in English as authentic language.

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## 2. DESCRIPTION

### 2.1. The measure

- (2) According to the Finnish authorities, the share of energy from renewable sources in all forms of transport in 2020 in Finland shall be at least 20% of the final consumption of energy. According to Finland, to meet this target, it is necessary to ensure that there will be sufficiently high quality advanced biofuels (that is, biofuels derived from lignocellulosic biomass, agricultural residues or waste) on the market towards the end of the decade and that the technological development will take place to meet this objective.
- (3) Finland requires a minimum share of biofuels in transport fuels (the so-called blending obligation). Advanced biofuels count double toward this target than conventional biofuels (that is, a 1 % share of advanced biofuel is counted as a 2 % share towards the target). However, despite this advantageous counting in the blending obligation, Finland claims that it does not provide a sufficient incentive for the production of advanced biofuels. Advanced biofuels are still in an early phase of development and State aid is therefore needed to cover part of the risks associated with advanced biofuel projects and to ensure a sufficient level of profitability for the private market to make the investments.
- (4) With the aim to incentivise the construction of biofuel plants that produce only advanced biofuels, Finland made available a budget for supporting advanced biofuel plants<sup>1</sup>. Any company could subsequently apply for investment aid to produce advanced biofuels under the budget.
- (5) The total amount of aid applied for by the eligible projects was twice as much as the available budget. Since some of the projects were still in early planning phase at the time of application, it was allowed to supplement the application and make corrections to calculations as well as to the total costs and the applied amount.
- (6) From the total of 8 applications which were made by the end of September 2013, 6 were assessed to meet the objectives of the aid<sup>2</sup>. The total amount of aid for which these eligible projects would account was EUR 167.32 million. The Finnish authorities decided to support 3 of the 6 eligible projects on the basis of the effectiveness and the incentive effect of the aid and the feasibility of the project<sup>3</sup>. The 6 eligible projects were all planned to use waste and residues as feedstock.
- (7) The notified aid measure supports the construction of a second generation bio-refinery producing advanced bio-fuels in Kajaani. The capacity of the plant would be 10 million litres of bioethanol which would be equal to approximately 1.5 % of the total Finnish biofuel target. In addition to the bioethanol, the plant would produce lignin, furfural and turpentine as by-products. The biogas and lignin

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<sup>1</sup> In 2012 the budget was upgraded to EUR 100 million (from EUR 50 million in 2011). This reservation was again reduced in 2014 and is now EUR 82.5 million.

<sup>2</sup> One application did not concern biofuel production (but biocoke) and another one was considered to be a first generation biofuel plant.

<sup>3</sup> The other selected projects have not yet been notified yet to the Commission.

produced by the process are utilised in heat and power production<sup>4</sup> and the by-products of ethanol production are sold on the market.

- (8) Finland underlines in particular that the bioethanol demonstration plant in Kajaani will use processing residues as raw material (saw dust), and thus the production will be based on non-food raw material fulfilling the sustainability criteria set out in Section 2.2 of the Act on biofuels and bioliquids (393/2013).
- (9) Furthermore, Finland confirmed that the supported biofuels meet the sustainability criteria of the Renewable Energy Directive<sup>5</sup> and that the plant will not use waste.
- (10) According to Finland, there are still very few biofuel plants producing advanced biofuels. Compared to other bioethanol plants, the project is unique in terms of used raw materials, as there are no other biofuel plants using softwood as raw material.

## **2.2. Beneficiary**

- (11) The beneficiary of the aid is St1 Biofuels Oy ("St1"). St1 is a subsidiary of the Finnish energy company St1 Nordic Oy (100%) and is specialized in technologies for the production of ethanol from waste.
- (12) St1 Biofuels Oy will oversee the construction and subsequent operation of the biofuel plant, and will also be responsible that the criteria in the aid decision are met. The plant will be owned by North European Biotech Oy ("NEB").
- (13) Finland confirmed that none of the abovementioned companies can be regarded as firms in difficulty according to the criteria laid down in the Guidelines for supporting firms in difficulty.

## **2.3. Legal basis**

- (14) The legal bases are the Act on Discretionary Government Transfers (688/2001) and the Government Decree on General Terms of Granting Energy Support (1063/2012). The granting authority of the investment aid is the Ministry of Employment and the Economy.

## **2.4. Aid amount and Budget**

- (15) The notified aid amount in favour of the advanced biofuel plant in Kaajani is EUR 12 million<sup>6</sup>.
- (16) Finland confirmed that the measure will be financed from the State budget. The State Budget for 2014 contains a reservation of EUR 82.5 million for investment aid to support demonstration projects for advanced biofuels plants. Part of this budget is used to support to advanced biofuel plant in Kaajani.

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<sup>4</sup> In particular power production will take place in a nearby power plant that will also supply electricity to the project.

<sup>5</sup> Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009 on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC

<sup>6</sup> The beneficiary had applied for EUR 16 million investment aid.

- (17) Finland confirmed that the company has not received any other State aid for the project and the project has not applied nor will get funding through the NER300-process.

### **2.5. Duration**

- (18) On 14 August 2014, Finland committed to grant the aid, subject to Commission approval. The aid will be paid in three tranches:
- 50 % of the aid once binding equipment orders have been made and more than 50 % of the total costs of the project has been paid.
  - 30 % of the aid once at least 80 % of the costs are paid.
  - 20 % of the aid when the project is finished and operations started.

### **2.6. Cumulation**

- (19) Finland stated that the granted aid will not be cumulated with other aid.

## **3. ASSESSMENT**

### **3.1. Lawfulness of the aid**

- (20) By notifying the aid measure before its implementation and subjecting its entry into force to Commission approval, Finland fulfilled its obligation according to Article 108(3) TFEU.

### **3.2. Presence of aid pursuant to Article 107(1) TFEU**

- (21) By virtue of Article 107(1) Treaty on the Functioning of the European Union ("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 shall, insofar as it affects trade between Member States, be incompatible with the internal market.”*
- (22) Under the proposed aid measure, investment aid is granted from the State budget for the production of advanced biofuels from non-food raw materials. The beneficiary is an undertaking active in the production of ethanol from industrial by-products. The beneficiary will gain an economic advantage by obtaining funding for the project in question through a grant from Finland which would not be available under normal market conditions. The grant (investment aid) is financed from the general budget and, therefore, state resources are involved. The measure is selective as such grant only favours the beneficiary undertaking, which is active in the bio-fuel and chemical sectors, to the exclusion of other undertakings active in the sector. Biofuels are widely traded between Member States and therefore the notified measure is likely to distort the competition on the market and affect trade between the Member States. Therefore, the notified measure constitutes State aid in the meaning of Article 107 TFEU.

### **3.3. Compatibility under the Environmental and Energy Guidelines**

- (23) The Commission notes that the notified measure aims at promoting the production of advanced biofuels from non-food raw materials, namely processing residues. As it regards support for energy from renewable sources, the notified measure falls

within the scope of the Guidelines on State aid for environmental protection and energy 2014-2020 (EEAG). The Commission has therefore assessed the notified measure based on the compatibility provisions of the EEAG.

### *3.3.1. Objective of common interest*

- (24) The aim of the notified aid measure is to help Finland to achieve the long term climate change and energy sustainability targets in line with the EU 2030 strategy.
- (25) The Commission notes that Finland has set as its national target to increase the share of energy from renewable sources in all forms of transport to 20 % by 2020 and that, according to Finland, to meet this target it is necessary to ensure that there will be sufficiently high quality advanced biofuels on the market towards the end of this decade and that the technological development will take place to meet this objective.
- (26) The project will help Finland diversify its biofuel mix to more advanced biofuels. In line with point 30 – 33 EEAG, Finland confirmed that the contribution of the project to the sustainability objectives would be equal to approximately 1.5 % of the total Finnish biofuel target.
- (27) In point 112 EEAG, the Commission states that "in view of the overcapacity in the food-based biofuel market [...] investment aid to biofuels can only be granted in favour of advanced biofuels." In line with point 112 and 113 EEAG the investment aid will not support food based biofuels as the supported biofuels are produced from wood.
- (28) In point 114 EEAG, the Commission sets out additional compatibility conditions for aid granted for biofuels which are subject to a supply or blending obligation and requires the demonstration "that the aid is limited to sustainable biofuels that are too expensive to come on the market with a supply or blending obligation only".
- (29) The Commission notes that according to the Act on the promotion of the use of biofuels in road transport (1420/2010), biofuels are subject to a blending obligation, which was 6 % until the end of 2014 and will be increased up to 20 % by 2020.
- (30) In this context, Finland provided detailed information showing that the supported sustainable biofuels are too expensive to come on the market with a supply or blending obligation only. In particular, Finland stressed that the plant is a pilot project using an innovative process at the early stage of development. For this reason, the investment costs for the advanced biofuel plant are roughly [...] than comparable reference investments in first generation biofuels and operating costs are roughly [...]. Finland also demonstrated that without the aid the total rate of return for the project would be negative.
- (31) Finally, taking into account the blending obligation (and the double counting of advanced biofuels towards the blending target, see recital (3) above), Finland provided detailed calculations showing that the price a fuel supplier would be ready to pay for advanced biofuels is at the level of [...] EUR/l. In order for the project to result in a rate of return (weighted average cost of capital) of [...] % based on a standardised cost calculation, the price for the advanced biofuel would need to be [...] EUR/l. Therefore, in spite of the blending obligation, without the aid the advanced biofuels would not come on the market.

(32) Therefore, the Commission considers that the notified aid measure is aimed at an objective of common interest in accordance with Article 107(3)(c) of the Treaty.

### *3.3.2. Need for State aid, appropriate instrument and incentive effect*

(33) With reference to in particular points 34 and 38 EEAG, State aid should be targeted towards situations where aid can bring a material improvement that the market cannot alone deliver. State aid should address market failures that remain unaddressed by other policies and measures already in place, and - in case of individual aid - targeted to the case at hand.

(34) As stated in point 115 EEAG, the Commission in principle presumes the existence of a residual market failure which can render State aid necessary to encourage investments in renewable energy.

(35) According to point 40 EEAG, an aid measure will not be considered compatible with the internal market if the same positive contribution to the common objective is achievable through other less distortive policy instruments or other less distortive types of aid instruments.

(36) Furthermore, according to point 116 EEAG, in order to allow Member States to achieve their targets in line with the EU 2020 and 2030 objectives, the Commission presumes the granting of State aid is in principle an appropriate instrument to promote energy from renewable sources.

(37) In line with point 49 EEAG, the incentive effect occurs if the aid induces the beneficiary to change its behaviour towards reaching the objective of common interest which it would not do without the aid. In particular, in point 50 EEAG the Commission explicitly excludes the compatibility with the internal market of any aid granted to a project if the beneficiary starts implementing it before applying for aid. With reference to point 58 EEAG, the incentive effect should be demonstrated for the project at hand.

(38) The Commission notes that the application was submitted before work on the projects has started and that Finland confirmed that the application procedures used were in line with point 51 EEAG.

(39) The Commission also notes that Finland has already put in place a supply obligation in order to incentivise the use of biofuels. The supply of advanced biofuels is however limited and advanced biofuels are not expected to come on the market with a supply obligation only. This is mainly due to much higher costs of producing advanced biofuels. In effect, the Finnish authorities explained (see recital (3) above) that the existing blending obligations will not be sufficient to bring advanced biofuels to the market and therefore incentives in the form of investment aid are needed to cover part of the risks associated with advanced biofuel projects and to ensure a sufficient level of profitability for the private market to make the investments.

(40) The Commission notes that the aid is targeted to a specific project that would not be profitable without the aid (see also section 3.3.3.). Without aid for the project, it is unlikely that development could be financed by private funding alone.

(41) Consequently, the Commission considers that the aid for the notified project is necessary, granted by means of an appropriate instrument and provides the necessary incentive effect to address the objective of common interest.

### 3.3.3. Proportionality

(42) According to point 69 EEAG, "*environmental and energy aid is considered to be proportionate if the aid amount per beneficiary is limited to the minimum needed to achieve the environmental protection objective aimed for*". According to point 72 EEAG, the costs eligible for environmental aid are the extra investment costs in tangible and/or in intangible assets which are directly linked to the achievement of the common objective

(43) In line with point 73 EEAG, Finland provided calculations to establish the extra investment costs based on a counterfactual situation in the absence of State aid. Finland submitted as a reference project the construction of a first generation (food based) bioethanol plant of equal capacity. The eligible extra investment costs are EUR 33.62 million as presented in table 1.

A	Investment costs	EUR 40 million
B	Reference investment costs	EUR 6.38 million
C	Investment costs eligible for subsidy (A-B)	EUR 33.62 million

Table 1: Eligible investment costs

(44) According to point 77 EEAG, the Commission applies maximum aid intensities which are set out in Annex 1 of the EEAG and for investment aid favouring renewable energy this would be at the level of 45 % (for large undertakings).

(45) The proposed investment aid amounts to EUR 12 million. As a percentage of the extra costs as presented in Table 1, the aid intensity amounts to 35.7 %. The notified measure complies with the conditions of points 73 and 77 EEAG.

(46) Furthermore, in line with point 81 EEAG, Finland confirmed that the aid in question cannot be cumulated with other of aid.

(47) According to point 83 EEAG, these maximum aid intensities are used as a cap for individually notifiable aid. Point 85 EEAG clarifies that in situations where no specific alternative project can be identified as a counterfactual scenario, the Commission will verify whether the aid amount exceeds the minimum necessary to make the aided project sufficiently profitable.

(48) As regards the project's expected profitability, Finland submitted a profitability calculation<sup>7</sup> for a useful technical life of the project of 15 years. This showed that the project would have a [...] internal rate of return (IRR) without the aid [...]. Finland furthermore demonstrated that the expected average IRR is 15 % (at global level) for advanced biofuel plants<sup>8</sup>.

(49) In order to demonstrate the proportionality of the aid, Finland provided a calculation including the envisaged EUR 12 million investment aid. It calculated

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<sup>7</sup> The calculation included an advanced bioethanol price of EUR [...] /l as well as revenues from by-products. The included investment costs are EUR 40 million.

<sup>8</sup> Source Bloomberg New Energy Finance.

that, with this aid, the IRR for this project amounts to [...] %<sup>9</sup> which is [...] below the required rate of return.

- (50) In addition, to analyse the impact of operating parameters on the project's IRR, Finland provided a sensitivity analysis assuming positive developments for the two most important factors: a low investment costs scenario and a high biofuel price scenario (based on cash flow model).<sup>10</sup> The high price scenario (including the investment aid) would result in an IRR of [...] % and the low investment cost scenario in an IRR of [...] %. [...].
- (51) Based on the analysis above, the Commission concludes that the envisaged investment aid for the project is proportional.

#### *3.3.4. Distortion of competition and balancing test*

- (52) According to point 88 EEAG, the Commission considers that for the aid to be compatible with the internal market, the negative effects of the aid measure in terms of distortions of competition and impact on trade between Member States must be limited and outweighed by the positive effects in terms of contribution to the objective of common interest. The Commission also focuses on the distortions resulting from the individual aid in line with point 101 EEAG.
- (53) In line with point 98 EEAG, if the aid is proportionate and limited to the extra investment costs, the negative impact of the aid is in principle softened (see also point 116 EEAG). In this context, the Commission notes that the profitability calculations take into account the production advantages and in particular the resulting by-products. In addition, the aid amount is reduced by 25 % compared to the aid amount applied for by the company and the IRR is well below the required rate of return of advanced biofuel projects.
- (54) The Commission notes that the biofuels produced by the demonstration project will be a small fraction (up to 1.5 %) of the Finnish biofuel market and that the existing supply obligation already helps biofuels which are less expensive to come on the biofuel market.
- (55) The Commission further notes that two other projects have been selected for aid in the same procedure, all of which will produce more expensive, non-food sustainable biofuel from waste products. These projects have not yet been notified to the Commission.
- (56) The Commission therefore considers that aid to advanced biofuel project does not result in undue distortive effects on competition and trade so that the overall balance is positive.

#### *3.3.5. Conclusion with regard to the compatibility of the measure*

- (57) In light of the above, the Commission considers that the notified aid measure pursues an objective of common interest in a necessary and proportionate way and that therefore the aid is compatible with the internal market on the basis of the EEAG.

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<sup>9</sup> This calculation includes revenues from sale of the by-products described in recital (7) above.

<sup>10</sup> The *high price scenario* includes a higher advanced bioethanol price of EUR [...] /l, as compared to the baseline case presented. The *low investment cost scenario* foresees a lower investment need of [...] % lower, i.e. EUR [...] million investment costs instead of EUR 40 million.



#### 4. CONCLUSION

(58) The Commission has accordingly decided:

not to raise objections against the notified measure, because the aid can be authorised under Article 107(3)(c) of the TFEU and Article 61(3)(c) of the EEA Agreement.

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Yours faithfully  
For the Commission

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