

EFTA SURVEILLANCE AUTHORITY DECISION
of 15 December 2016
on Enova's Demo scheme 2017-2022

(Norway)

The EFTA Surveillance Authority ("the Authority"),

Having regard to:

the Agreement on the European Economic Area ("the EEA Agreement"), in particular to Articles 61 and 62,

Protocol 26 to the EEA Agreement,

the Agreement between the EFTA States on the Establishment of a Surveillance Authority and a Court of Justice ("the Surveillance and Court Agreement"), in particular to Article 24,

Protocol 3 to the Surveillance and Court Agreement ("Protocol 3"), in particular to Article 4(3) of Part II,

Whereas:

I. FACTS

1 Procedure

- (1) The Norwegian authorities notified Enova's Demo scheme 2017-2022 ("the Demo scheme"), pursuant to Article 1(3) of Part I of Protocol 3 by letter of 20 October 2016.¹ The Norwegian authorities provided some clarifications by emails of 2 and 8 December 2016.²

2 Background

2.1 Previously approved schemes

- (2) On 1 January 2002, the Norwegian Energy Fund aid scheme was established. It represented the continuation of two schemes operated by the Norwegian Water Resources and Energy Directorate. The Norwegian Energy Fund aid scheme was approved by the Authority in 2006 by its Decision No 125/06/COL. Amendments to that scheme were approved by the Authority by Decisions No 536/09/COL, 75/10/COL and 486/10/COL.

¹ Documents No 823193, 823194 and 823197.

² Documents No 829374 and 830285.

- (3) In 2011, the Authority approved a new Norwegian Energy Fund aid scheme by Decision No 248/11/COL. An amendment to that scheme was approved by Decision No 299/11/COL.

2.2 The notified aid measure

- (4) The notified Demo scheme is an aid scheme for the promotion of demonstration projects and feasibility studies directly linked to the demonstration projects (the demonstration projects and feasibility studies are commonly referred to as “projects” in the following). It is managed by Enova SF (“Enova”), a state enterprise owned by the Norwegian State via the Ministry of Petroleum and Energy. The objective of the scheme is environmental protection. More concretely, Enova wants to incentivise the demonstration of new technologies, products or processes (also referred to as just “technologies” in the following) within the fields of renewable energy production, energy efficiency and reduced greenhouse gas (GHG) emissions. The long-term goal is to increase the number of new energy and climate technologies available in the market.
- (5) The Norwegian authorities have explained that the end user of a new technology faces a risk in adopting new technologies compared to the state of the art. The new technologies therefore must go through a process of qualification. Firstly, the basic technical features and service reliability need to be documented. Furthermore, undertakings are typically required to document that new technologies represent a low risk in terms of health, safety and the environment. The qualification is achieved through the demonstration project. This is a part of the process of bringing the new technology to the market. Typical elements of a demonstration project are: product certification, monitoring and documenting the following elements: reliability, accumulated running hours, service records and real life energy efficiency and GHG emissions. It is the view of the Norwegian authorities that the Demo scheme addresses a double market failure – for the innovation linked to knowledge spill-over effects (positive externalities) and on the environmental side, the insufficient internalisation of the cost of pollution (negative externalities). Furthermore, the scheme seeks to address market access barriers such as the lack of available capital and the lack of user acceptance due to the technological and financial risks associated with the technologies.

2.3 Schemes not covered by the current notification

- (6) Whilst the Norwegian Energy Fund aid scheme approved by Decision No 248/11/COL was a broad scheme encompassing a wide variety of activities (four programmes which in turn were divided into chapters),³ the current notification exclusively covers support to demonstration projects and feasibility studies directly linked to the demonstration projects.
- (7) Enova will continue to support a wide variety of environmental activities with the Energy Fund. To this end, the Norwegian authorities have notified separately two other schemes; one under which it will grant aid for eco innovation, and one for alternative fuels infrastructures. They have also made use of the General Block Exemption Regulation (“the GBER”)⁴ to exempt from notification the remaining aid granting activities of Enova.

³ See Decision No 248/11/COL paragraphs 8-12.

⁴ Commission Regulation (EU) No 651/2014 of 17 June 2014 declaring certain categories of aid compatible with the internal market in application of Articles 107 and 108 of the Treaty (OJ L 187 26.6.2014 p. 1). Incorporated into point 1j of Annex XV of the EEA Agreement.

3 National legal basis

- (8) The national legal basis for the Demo scheme is Parliamentary Decision of 5 April 2001 on the basis of a proposition by the Ministry of Petroleum and Energy of 21 December 2000. The Parliamentary Decision amends the Energy Act of 29 June 1990 No 50.

4 Beneficiaries

- (9) Eligible beneficiaries under the Demo scheme are undertakings carrying out the relevant studies and implementing environmentally friendly demonstration projects. The scheme is technologically neutral and is not sector specific.
- (10) In order to be eligible for aid under the scheme, the relevant undertaking must be registered in Norway. The supported project must be located in Norway or in the Norwegian economic zone. In case of ships, they must in principle be registered in the Norwegian ship registers (NOR or NIS) in order to be eligible for aid. However, ships that are not registered in NOR or NIS may be eligible for aid where significant operations in Norwegian territory or economic zone can be documented for the lifetime of the investment.
- (11) Undertakings with pending recovery orders will not be eligible for aid, nor will undertakings in financial difficulties.

5 Eligible projects

- (12) The Demo scheme supports demonstration projects involving new energy and climate technologies. Environmental studies directly linked to these demonstration projects are also supported.
- (13) No aid is granted to research, development and innovation projects. In order to be eligible for aid the technology to be demonstrated must have reached a maturity level corresponding to at least Technology Readiness Level (“TRL”)⁵ 6 (technology demonstrated in relevant environment (industrially relevant environment in the case of key enabling technologies) or 7 (system prototype demonstration in operational environment). Enova requires a documented technical description of the technology with the application for aid. The documentation will often consist of results from laboratory, prototype or pilot tests. It can also take the form of computer simulations.
- (14) Projects with an estimated risk of failure that is higher than 25% will not be eligible for support under the scheme.
- (15) Support is only granted to the demonstration of *new* technologies. This entails that only projects that involve the demonstration of technologies that have not been introduced to the market at all or not for the relevant purpose or under the relevant conditions are eligible for aid. Where known technologies are combined in a novel and innovative manner the combination is considered a new technology, a demonstration project would be eligible for aid if there is a well-defined need for demonstration of the combination as a whole. In cases where a known technology has been demonstrated under a specific set of operating conditions, but where a change to the operating conditions necessitate further demonstration it is the view of the Norwegian authorities that the technology has not been introduced to the market under those changed operating conditions. This could for

⁵ Technology Readiness Level (TRL) is an indicator of the maturity level of particular technologies. This measurement system provides a common understanding of technology status and addresses the entire innovation chain. There are nine technology readiness levels; TRL 1 being the lowest and TRL 9 the highest.

example be the case where a windmill design has been tested in above freezing temperatures, but not under sub-zero conditions.

- (16) In order to be eligible for support under the scheme, the demonstration projects have to be carried out under realistic and typical operating conditions. These must be similar to where the technology is intended to be used. Projects must go beyond laboratory testing and other controlled environments. On the other hand, the demonstration phase environment does not have to be identical to the area of the intended use of the technology. As an example, a wind turbine intended for offshore use may be tested onshore when the goal is to test the turbine and not a floating device or sea-bed fundamentals (enabling the turbine to function offshore).
- (17) The project should involve demonstration of the new technology at a scale (full or near full scale) sufficient to demonstrate the technology. No aid is granted for scaled down models or pilot plants as defined by the OECD Frascati Manual 2015,⁶ nor limited component testing with the purpose of developing the technology further. The demonstration projects do not have to include more than one unit of the new technology.
- (18) Projects are required to generate a positive operating cash flow during the lifetime of the investment in order to be eligible for aid under the Demo scheme.
- (19) The technology developer must commit to actively make the technology available to third parties in the EEA, either through the sale of the technology itself or through licencing on objective and non-discriminatory terms for a minimum period of five years. The beneficiary must commit to let the demonstration project serve as a reference case for the technology provider. This may entail making the aided demonstration facility available for inspection upon request from interested third parties, and providing information on the performance of the technology that may be made publicly available. Technology that is to remain proprietary, i.e. not made available to third parties, is not eligible for aid.

6 Aid instruments

6.1 General

- (20) For the support of demonstration projects under the notified scheme, Enova provides convertible loans and grants. Enova will use the most appropriate instrument that in a given situation addresses the specific market failure.
- (21) Grants are used to support feasibility studies.

6.2 Convertible loans for demonstration projects

- (22) Convertible loans are loans with debt relief covenants. They are used to handle the financing barrier. Enova provides convertible loans at market rates using the methodology set out in the Authority's Guidelines on reference rates and discount rates.⁷
- (23) The convertible loans contain no automatic debt relief. The beneficiary can apply for it. The covenants will be connected to risks in the construction and demonstration phases. At a designated point in time, there is a cut off where the convertible loan is turned into an ordinary loan, unless the debt relief covenants are called. The Norwegian authorities have explained that this will normally occur 2 to 5 years after the start of the demonstration period. In any event, debt relief is subject to a maximum cut-off date occurring 7 years

⁶ See paragraph (75) below.

⁷ OJ L 105, 21.4.2011, p. 32.

after the start of the demonstration period. The start of the demonstration period is the point in time when the construction is completed and the testing commences.

- (24) For establishing and verifying debt relief criteria, Enova will rely on three kinds of third party evaluations: (i) financial assessments of the beneficiary; (ii) legal assessment of the covenants and the contracts; and (iii) technological assessments of the technologies.
- (25) The Norwegian authorities explain that Enova's mandate is to complement the market, not to compete with ordinary financial institutions. Convertible loans carries an element of risk sharing, where debt relief becomes effective in the event of technology failure. This is the risk that the financial market overprices and thus leads to the market failure of inadequate private funding of demonstration projects.
- (26) The maximum loan-to-value ratio is 60%. Enova will provide loans with maximum tenor of 20 years after the demonstration period is completed. The loans are disbursed in tranches according to the progress of the project and the budget. The disbursements are made after Enova has approved reports provided by the beneficiaries with documented costs.

6.3 Grants for demonstration projects

- (27) For smaller projects, Enova will consider using grants to trigger the investments whenever there are concerns that the administrative cost of structuring and processing a convertible loans would be prohibitively high.
- (28) Grants are disbursed in tranches according to the progress of the project and the budget. The disbursements are made after Enova has approved reports provided by the beneficiaries with documented costs. Twenty percent of the total grant is withheld until Enova has approved a final project report.

7 Eligible costs, aid intensities and cumulation

- (29) For demonstration projects, costs related to the following budget posts are eligible:
 - a. planning, engineering, construction and development of a physical unit,
 - b. materials, supplies and similar products,
 - c. the documentation of new or improved products or processes,
 - d. building and demonstration of the physical unit, including engineering, instrumentation procurement, project management and costs of operations personnel and technicians, and
 - e. consultancy and equivalent services used exclusively for the supported project.
- (30) Costs related to activities aimed at conceptual definition of new or improved products or processes are not eligible. Neither are costs related to intellectual property rights.
- (31) The eligible costs of the feasibility studies are the costs of the study.
- (32) The level of profitability of the demonstration projects will be assessed by calculating the net present value ("NPV") and the internal rate of return ("IRR"). This analysis is primarily a safety check to ensure that no aid is granted to demonstration projects that are

profitable in isolation, in other words where the NPV of the demonstration project is positive.

- (33) When assessing the need for financing as well as aid, Enova assesses the business plan, taking into account not only the cash flows connected to the demonstration project as such, but also cash flows connected to the expected market diffusion of the technology in case of success.
- (34) For the calculations, Enova uses observed market prices, which are collected from several sources such as: price statistics, listed exchange prices, tenders and Enova's project database. Enova calculates a common internal price for certain commodities like electricity, in order to ensure comparability between applicants and price stability from month to month. Currently, the electricity price is calculated as a six-month moving average of the three-year forward prices on the power market Nord Pool Spot AS converted from EUR to NOK. Where the applicant has entered into long-term contracts for commodities like oil and electricity, Enova will use the contract price in the calculation.
- (35) For demonstration projects the maximum aid intensity is 40% for large enterprises, 50% for small and medium-sized enterprises. For environmental studies, the maximum aid intensity is 50% regardless of the size of the undertaking.
- (36) Aid granted under the scheme can be cumulated with aid from other sources to cover the same eligible costs. Enova is responsible for ensuring that the total aid granted does not exceed the aid intensities set out above. Applicants are obliged to provide information about aid from other sources to the relevant project.

8 Procedure for granting aid

- (37) Within the remit of the Demo scheme, Enova designs programmes. The programmes are launched and announced on Enova's website: <https://www.enova.no/>. The calls for applications describe the purpose of the programmes, the associated objectives, eligible applicants, eligible projects, selection criteria, the application process and the application forms.
- (38) Applicants must submit electronic application forms, developed for interactive processing through Enova's extranet services. The forms include detailed instructions about the application requirements. Applicants must provide a self-declaration of the size of the undertaking, a description of the project, including its location and project start and end dates, eligible costs, technology supplier, investment plan and cash flow analysis (for the demo project in isolation, as well as for the anticipated market diffusion phase) as well as the requested amount of financing. In the application form, beneficiaries must also describe the counterfactual scenario. Where the project requires any form of authorisation such as a concession (licence), proof must be provided that the concession has been granted.
- (39) Enova assesses whether the application is complete and whether the project fulfils the programme requirements. For some projects, it will be necessary to ask the applicant for additional information or to ask a third party for an independent evaluation of specific aspects of the project (technology, financial analysis, debt relief covenants etc.). Enova assesses the cost-effectiveness of the projects and the incentive effect of the subsidies.
- (40) Projects under the Demo scheme are given priority according to the level of innovation of the technology versus state of the art technologies, the technology's potential for

contributing to increased environmental protection, and the applicant's financial and technical ability to execute the project. All other factors being equal, projects triggering the highest amount of private funds per aid amount are given priority until the annual budget is fully allocated.

- (41) Where the gross grant equivalent of the aid exceeds EUR 15 million (which is NOK 144.7 million with the current exchange rate⁸), Enova will notify the individual aid measure to the Authority for its prior approval. In these cases, no aid will be granted without the Authority's prior approval.
- (42) Enova will not give grants to projects with eligible costs above NOK 100 million without the Authority's approval.

9 Irregularities

- (43) If a project is not carried out, no aid will be granted. If a project is only partially carried out, Enova may reclaim the aid. If the beneficiary has provided incorrect information in the application for aid or in cases where the project differs significantly from the application, Enova will reclaim the aid. In cases where the applicant has carried out the project as described in the application, but the project is terminated due to factors beyond the beneficiary's control, Enova may not claim the aid back.
- (44) If the costs of the project turn out to be lower than expected in the application, the total aid will be reduced pro rata. Regardless of the aid instrument used, Enova will in any event not pay more than the predetermined aid amount.

10 Financing of the scheme, budget and duration

- (45) The Demo scheme is financed by allocations over the state budget, drawing on the Energy Fund. The Energy Fund has a total annual budget of NOK 2 546 million, and is financed by the following three revenue streams:
 - a. Interest accrued on a fund set up to finance the Energy Fund, the Base Fund. At present, this amounts to NOK 1 846 million annually.
 - b. Interest accrued on the resources of the Energy Fund itself. At present, this amounts to NOK 50 million annually.
 - c. A levy on the electricity grid tariff. Households are charged NOK 0.01/kWh. All other end users of electricity are charged NOK 800 per measurement point. At present, the revenue from the charge amounts to NOK 650 million annually.
- (46) The 2017 budget of the Demo scheme is NOK 1.5 billion.
- (47) As explained above, Enova intends to make use of interest carrying loans under the scheme. The generated revenues will be added to the scheme's budget. The Norwegian authorities estimate that this will generate NOK 20 million from 2018 onwards.
- (48) The duration of the Demo scheme is 1 January 2017 until 31 December 2022.

⁸ The Authority sets currency exchange rates for the NOK on an annual basis. For 2016, EUR 1 equals NOK 9.6475. The rates are available at the Authority's website: <http://www.eftasurv.int/state-aid/rates/>.

11 Transparency

- (49) The Norwegian authorities have confirmed that they will ensure that the information concerning the implementation of this scheme is published on the national comprehensive state aid website (the national state aid register).

12 Evaluation

- (50) The Norwegian authorities have explained that Enova routinely evaluates their programmes in order to assess the degree to which they achieve their objectives. The evaluations are carried out in accordance with evaluation methodologies relevant for assessing state aid schemes.⁹ They are conducted by independent third parties, which are chosen through public tenders. The evaluation reports are made publicly available.

⁹ E.g. the European Commission's Common methodology for state aid evaluation (Commission staff working document SWD(2014) 179 final (Brussels, 28.5.2014), available at the following url: http://ec.europa.eu/competition/state_aid/modernisation/state_aid_evaluation_methodology_en.pdf.

II. ASSESSMENT

1 The presence of state aid

(51) Article 61(1) of the EEA Agreement reads as follows:

“Save as otherwise provided in this Agreement, any aid granted by EC Member States, EFTA States 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, in so far as it affects trade between Contracting Parties, be incompatible with the functioning of this Agreement.”

(52) This implies that a measure constitutes state aid within the meaning of Article 61(1) of the EEA Agreement if the following conditions are cumulatively fulfilled: the measure: (i) is granted by the State or through state resources; (ii) confers a selective economic advantage on the beneficiary; (iii) is liable to affect trade between Contracting Parties and to distort competition.

1.1 Presence of state resources

(53) In order to constitute aid within the meaning of Article 61(1) of the EEA Agreement, the measure must be granted by the State or through state resources. The Demo scheme supports various projects by disbursing convertible loans and direct grants, which are financed by the interest generated on the Base Fund and the Energy Fund as well as the revenue of the parafiscal charge.

(54) The financing stemming from the state controlled funds represent state resources. With regard to revenue from the parafiscal charge, state resources are involved where money is transferred from a fund established by the State, and the fund is fed by contributions imposed or managed by the State,¹⁰ and its assets are permanently under the control of public authorities.¹¹ The level of the parafiscal charge is determined by the State. The proceeds are allocated directly to the Energy Fund from where Enova in turn, allocates them directly to the chosen projects. The Authority, therefore, considers that the Norwegian State exercises permanent control over the levy and that it qualifies as state resources within the meaning of Article 61(1) of the EEA Agreement.

(55) On this basis, the Authority considers that the resources disbursed under the Demo scheme constitute state resources within the meaning of Article 61(1) of the EEA Agreement.

1.2 Favouring certain undertakings or the production of certain goods

(56) In order to be characterised as state aid within the meaning of Article 61(1) of the EEA Agreement, the measure must favour certain undertakings or the production of certain goods.

(57) The EEA law notion of “undertaking” encompasses every entity engaged in economic activity, regardless of the legal status of the entity and the way in which it is financed. Economic activity is characterised by the provision of goods and services on a market. The goal of the Demo scheme is to incentivise demonstrations of new technologies, products or processes within the fields of renewable energy production, energy efficiency and reduced GHG emissions and feasibility studies directly linked to the demonstration

¹⁰ Judgments in *Italy v Commission*, 173/73, EU:1974:71, paragraph 16; and *Steinike*, 78/76 EU:C:1977:52, paragraphs 21-22.

¹¹ Judgments in *Vent De Colère and others*, C-262/12, EU:C:2013:851, paragraph 21; and *Essent Netwerk Noord BV*, C-206/06, EU:C:2008:413, paragraph 70.

projects. Thus, the scheme is targeted towards economically active entities that constitute “undertakings” within the meaning of Article 61(1) of the EEA Agreement.

- (58) In order to constitute a measure “favouring certain undertakings” within the meaning of Article 61(1) of the EEA Agreement, the measure must confer an advantage on economically active entities.
- (59) Convertible loans and direct grants provide undertakings with financial advantages that they would not obtain on the market.¹² They therefore confer advantages on the beneficiaries.
- (60) Additionally, in order to constitute state aid, the measure must be selective. It cannot apply generally to all undertakings. The Demo scheme involves disbursing economic advantages to certain undertakings engaging in environmentally friendly activities. Only undertakings successfully participating in the selection processes (open calls for applications) receive support. Hence, the measure is selective within the meaning of Article 61(1) of the EEA Agreement.

1.3 Distortion of competition and effect on trade between Contracting Parties

- (61) The aid measure must be liable to distort competition and to affect trade between the Contracting Parties to the EEA Agreement. The Authority is not required to establish that an aid measure actually has an appreciable effect on trade between Contracting Parties or that competition is actually being distorted, but only to examine whether such aid is liable to do so.¹³
- (62) In the present case, funding provided for under the measure will strengthen the competitive situation of the supported undertakings, which actually or potentially compete with other undertakings in the EEA. Accordingly, the aid measure is liable to distort competition.
- (63) Equally, the aid measure is liable to affect trade. The Demo scheme supports projects in all economic sectors covered by the EEA Agreement. The support enables the benefitting undertakings to lower the cost of implementing environmentally friendly measures. Support will be granted to undertakings engaged in intra-EEA trade. These advantages will be liable to distort competition and affect trade between Contracting Parties.

1.4 Conclusion on the presence of state aid

- (64) In light of the above, the Authority considers the Demo scheme to constitute an aid scheme.

2 Procedural requirements

- (65) Pursuant to Article 1(3) of Part I of Protocol 3: “*the EFTA Surveillance Authority shall be informed, in sufficient time to enable it to submit its comments, of any plans to grant or alter aid. The State concerned shall not put its proposed measures into effect until the procedure has resulted in a final decision.*”
- (66) The Norwegian authorities have submitted a notification of the aid measure and have not let the scheme enter into force yet. They have therefore complied with the obligations under Article 1(3) of Part I of Protocol 3.

¹² For convertible loans, Enova uses a 25% risk of failure when calculating the gross grant equivalent.

¹³ Joined Cases E-5/04, E-6/04 and E-7/04 *Fesil and Finnfjord and Others v EFTA Surveillance Authority*, 2005 EFTA Ct. Rep. p. 117, paragraph 93.

3 Compatibility of the aid

3.1 Introduction – legal framework for the compatibility assessment

- (67) The Authority can declare state aid compatible with the functioning of the EEA Agreement under its Article 61(3)(c) provided that certain compatibility conditions are fulfilled. The Authority has issued guidelines setting out how it will use its discretion in applying Article 61(3)(c) of the EEA Agreement. Potentially relevant for the notified measure are the Guidelines on state aid to research and development and innovation (“the RDI”)¹⁴ and the Guidelines on state aid for environmental protection and energy 2014-2020 (“the EEAG”)¹⁵. In the following, the Authority explains why neither of these guidelines are applicable to the notified measure.

3.2 Inapplicability of the RDI

- (68) According to the RDI point (8), the guidelines apply to research, development and innovation in “all sectors governed by the EEA Agreement”, hence they apply in the field of environment and energy. Furthermore, the RDI point (75) clarifies that the Authority will use the OECD Frascati Manual (“the Frascati Manual”),¹⁶ in order to determine whether a given project must be classified within the scope of activities covered by the RDI, namely: “fundamental research”, “industrial research” or “experimental development”. The Authority and the European Commission have also used the Frascati Manual to determine whether a project falls within the RDI as such.¹⁷
- (69) The RDI footnote 44 furthermore clarifies that TRLs (see paragraph (13) above) should be used to classify activities under the guidelines, unless it is shown that a different scale should be used in individual cases. Under the Demo scheme, the Norwegian authorities will support projects with TRLs at 6 and 7. According to RDI footnote 44, this corresponds to “experimental development”. On the basis of this, the demonstration projects supported under the Demo scheme should be classified as “experimental development” subject to the provisions of the RDI.
- (70) According to the RDI point (15)(j) “experimental development”: *“means acquiring, combining, shaping and using existing scientific, technological, business and other relevant knowledge and skills with the aim of developing new or improved products, processes or services. This may also include, for example, activities aiming at the conceptual definition, planning and documentation of new products, processes or services. Experimental development may comprise prototyping, demonstrating, piloting, testing and validation of new or improved products, processes or services in environments representative of real life operating conditions where the primary objective is to make further technical improvements on products, processes or services that are not substantially set. This may include the development of a commercially usable prototype or pilot which is necessarily the final commercial product and which is too expensive to produce for it to be used only for demonstration and validation purposes. Experimental development does not include routine or periodic changes made to existing products,*

¹⁴ OJ L 209, 6.8.2015, p. 17.

¹⁵ OJ L 131, 28.5.2015, p. 1.

¹⁶ The RDI refer to the 2002 version of the Frascati Manual “as amended, or replaced”. Since the adoption of the RDI, the Frascati Manual has been revised and replaced by a seventh edition, the 2015 Frascati Manual. This is the document referred to as the Frascati Manual in the current decision.

¹⁷ The Authority’s Decisions No 248/11COL, 249/11/COL and Commission Decision in case N 521/2008 (Germany) *Aid to Offshore Wind Park Borkum, Alpha Ventus*. These decisions relate to the formerly applicable sets of Authority and Commission RDI Guidelines. The Authority sees no reason as to why the same approach should not be valid under the currently applicable RDI Guidelines.

production lines, manufacturing processes, services and other operations in progress, even if those changes may represent improvements”.

- (71) Points 2.32 and 2.33 of the Frascati Manual set out the following definition of “experimental development”: *“experimental development is systematic work, drawing on knowledge gained from research and practical experience and producing additional knowledge, which is directed to producing new products or processes or to improving existing products or processes. The development of new products or processes qualifies as experimental development if it meets the criteria for identifying R&D activity. An example is uncertainty about the resources needed to achieve the goal of the R&D project in which the development activity is taking place. In this manual the “D” in R&D refers to experimental development.”*
- (72) According to point 1.33 of the Frascati Manual, to constitute R&D, an activity must satisfy five core criteria, it must be:
- novel,
 - creative,
 - uncertain,
 - systematic, and
 - transferable and/or reproducible.
- (73) The Frascati Manual point 2.34 sets out what is not comprised by the notion of “experimental development”: *“The concept of experimental development should not be confused with “product development”, which is the overall process – from the formulation of ideas and concepts to commercialisation – aimed at bringing a new product (good or service) to the market. Experimental development is just one possible stage in the product development process: that stage when generic knowledge is actually tested for the specific applications needed to bring such a process to a successful end. During the experimental development stage new knowledge is generated, and that stage comes to an end when the R&D criteria (novel, uncertain, creative, systematic, and transferable and/or reproducible) no longer apply. As an example, in a process aimed at developing a new car, the option to adopt some technologies could be taken into consideration and tested for use in the car under development: this is the stage when experimental development is performed. It will lead to new results by dealing with new applications of some general knowledge; it will be uncertain, because testing could give rise to negative results; it will have to be creative, as the activity will focus on the adaptation of some technology to a new use; it will be formalised, by needing the commitment of a specialised workforce; and it will involve a codification, in order to translate the results of the tests into technical recommendations for the further stages of the product development process.”*
- (74) The Norwegian authorities have explained that the activities covered by the Demo scheme are not research, development or innovation activities within the meaning of the RDI and the Frascati Manual. The projects do not meet the five core criteria, referred to above. In particular, the activities supported under the Demo scheme are not “novel” or “creative” as the purpose of the demonstration projects is not to gain new knowledge or produce new findings. The demonstrated technologies are demonstrated on the basis of an existing stock of knowledge, insusceptible to further improvements that could be attributed to new hypotheses or new concepts. Furthermore, the projected risk of the supported projects is substantially lower than research and development projects. Projects with an estimated risk of failure that is higher than 25% will not be eligible for support under the scheme. For a project to receive support under the Demo scheme, the technology to be

demonstrated must be substantially set and the primary objective of the demonstration project must be to qualify the technology and promote its use to potential investors and customers.

- (75) The Norwegian authorities have confirmed that projects under the Demo scheme involving prototyping or pilot/demonstration installations will be assessed on the basis of points 2.49-2.55 and 2.100-2.101 which set out detailed descriptions for when such activities are, and are not, research and development. If the project, in light of those criteria, is deemed to fall into the category of research and development and innovation it is not eligible for aid under the Demo scheme.
- (76) Based on the above, and in light of the description of the objective criteria of the Demo scheme, the Authority concludes that the scheme, as notified, cannot be considered as a scheme that supports experimental development or any other kind of research and development and innovation within the meaning of the RDI. The Authority therefore concludes that the Demo scheme is not covered by the RDI.

3.3 Inapplicability of the EEAG

- (77) The Authority also concurs with the Norwegian authorities that the Demo scheme falls outside the EEAG.
- (78) Under the Demo scheme, Enova will grant aid to projects that involve the demonstration of new technologies that, after their successful demonstration, can be diffused on the market and can contribute to increased renewable energy production, more efficient energy use or reductions of GHG emissions. On this basis, the compatibility of the Demo scheme could arguably be based on the EEAG.
- (79) However, projects supported under the Demo scheme will not primarily and directly target the production of renewable energy, increase energy efficiency or reduce GHG emissions. The goal is rather to demonstrate the technology under realistic and typical operating conditions in order to increase user acceptance and decrease barriers for the adoption of the technology. The demonstration projects will be adapted to a scale that makes sense for the demonstration project and will not necessarily be scaled for full commercial exploitation, and thus not benefit from economies of scale. Additionally, the demonstration projects may only operate for a limited period rather than the full economic lifetime of the asset. The EEAG points (55) and (56) set out profitability as a benchmark for the incentive effect assessment. Furthermore, the EEAG point (57) stresses that the incentive effect of aid can be assumed when there is a funding gap. As such, the demonstration projects will not normally adhere to the economic logic of the EEAG.
- (80) Although the conditions of the Demo scheme requires that demonstration projects generate a positive operating cash flow during the lifetime of the investment, production of renewable energy, increased energy efficiency or reduced GHG emissions is not the primary objective of the supported projects. Although the long-term goal is to make the technology profitable in future installations, the goal of the supported demo projects is not to be profitable in and of themselves. It is therefore the view of the Authority that projects supported under the Demo scheme do not normally suffer from lack of profitability *per se*. Therefore calculating the funding gap of the demonstration project is not an appropriate methodology to determine the amount of financing and aid needed to trigger the projects.
- (81) In Decision No 248/11/COL where the Authority assessed the compatibility with state aid law of the forerunner to the Demo scheme, the New Energy Technology Programme, the Authority concluded that the programme fell outside the then applicable guidelines on

state aid for environmental protection,¹⁸ because it did not adhere to the economic logic of those guidelines. It is the view of the Authority that the EEAG do not represent a change in this regard. This is, in the view of the Authority, illustrated by the above-referenced points (55) to (57) of the EEAG.

- (82) On the basis of the above, the Authority concludes that the Demo scheme, as notified, does not fall within the scope of the EEAG, because the scheme does not adhere to the economic logic of the guidelines.

3.4 Compatibility assessed on the basis of Article 61(3)(c) directly

- (83) As neither the RDI nor the EEAG apply to the notified measure, its compatibility with the EEA Agreement is based directly on Article 61(3)(c) of the EEA Agreement. When it applies Article 61(3)(c) of the EEA Agreement directly, the Authority applies the following common assessment principles:¹⁹
- a. contribution to a well-defined objective of common interest;
 - b. need for state intervention;
 - c. appropriateness of state aid as a policy instrument;
 - d. incentive effect;
 - e. proportionality of the aid (aid limited to minimum necessary);
 - f. avoidance of undue negative effects on competition and trade between Contracting Parties; and
 - g. transparency of aid.

3.5 Objective of common interest

- (84) State aid must aim at a well-defined objective that has been recognised by the Contracting Parties as being in their common interest.
- (85) As set out in chapter I.2.2 above, the objective of the Demo scheme is to protect the environment by incentivising the demonstration of new technologies, products or processes within the fields of renewable energy production, energy efficiency and reduced GHG emissions and incentivising feasibility studies directly linked to the demonstration projects. The long-term goal is to increase the number of new energy and climate technologies available on the market. The protection of the environment is recognised as an objective of common interest in the EEA Agreement by the Contracting Parties.²⁰ The demonstration and bringing to market of new technologies, products or processes is the natural step after research and development, which is an objective of common interest.²¹
- (86) In light of the above, the Authority concludes that aid for investments under the Demo scheme is aimed at well-defined objectives of common interest.

¹⁸ OJ L 144, 10.6.2010, p. 1.

¹⁹ See the European Commission's Communication on state aid modernisation (COM(2012)0209 final of 8.5.2012). See also the RDI point (36) and EEAG point (22).

²⁰ See Articles 1(2)(f), 73-76 and 78 of the EEA Agreement as well as its preamble at the ninth and tenth paragraphs.

²¹ See Articles 1(2)(f) and 78 of the EEA Agreement.

3.6 Need for state intervention

- (87) In order to assess whether state aid is effective to achieve the identified objective of common interest, it is necessary first to diagnose and define the problem that needs to be addressed. State aid should be targeted towards situations where aid can bring a material improvement that the market alone cannot deliver, for example by remedying a market failure or addressing an equity or cohesion concern.
- (88) The substantial environmental benefit pursued is the demonstration of environmentally friendly new technologies, products or processes. Norwegian legislation does not require undertakings to use new innovative technologies, products or processes instead of conventional production facilities or state of the art solutions. Provided that they respect applicable standards (notably as regards air pollution or building codes), conventional technologies known to the market may be authorized and built. Consequently, the Norwegian authorities have initiated positive individual incentives to help reducing pollution and other negative impacts on the environment by establishing the Demo scheme. It is the view of the Norwegian authorities that the objective could not be achieved without the Demo scheme because the financial market does not provide financing at all or at terms acceptable to the undertakings seeking financing for demonstration projects. The Norwegian authorities could set certain standards, but not impose a specific technology upon the industry. The Authority concurs with the assessment of the Norwegian authorities.
- (89) On this basis, the Authority concludes that there is a need for state intervention.

3.7 Appropriateness of state aid

- (90) State aid must be an appropriate instrument to address the identified objective of common interest. An aid measure is not compatible with the functioning of the EEA Agreement 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. The choice of instrument should be coherent with the market failure. Aid should not be granted where other less distortive non-aid based instruments can achieve the same goal.
- (91) Non-aid instruments are unlikely to be appropriate to address the market failures faced by the demonstration projects supported under the scheme. In particular, there are no regulatory obligations for Norwegian undertakings to demonstrate new technologies, products or processes within the fields of renewable energy production, energy efficiency and reduced greenhouse gas (GHG) emissions.
- (92) The Norwegian authorities have explained that Enova will use the aid instrument that is the least distortive. In making that assessment, Enova evaluates the market conditions and the business case of the technology. The Norwegian authorities have designed the aid scheme so that Enova can use different aid instruments to tackle different forms of market failure.
- (93) Typically, the outcome of a demonstration project is binary; success or failure. Due to the risk of technology failure, a demonstration project is often faced with a financing barrier, and there is usually a need for risk mitigation. In case a project achieves its objectives, the recipient can diffuse the technology on the market and will thereby be in a position to repay the loan. In case of failure, the undertaking will not realise the business plan as anticipated and may not be in a position to pay back the loan. Therefore, convertible loans are the preferred aid instruments for the demonstration projects in order to mitigate the technology risk and the financing barrier.

- (94) For smaller projects, the administrative burden of structuring a custom loan is proportionally higher than for larger projects. For these reasons, Enova also has the possibility of disbursing grants under the Demo scheme.
- (95) The Norwegian authorities do not consider guarantees as a suitable tool under the Demo scheme as the supported projects will have a limited potential for short to medium term return on the investment. While guarantees could serve as an instrument to incentivise subsequent investments into the demonstrated technologies, products or processes, when verified, the Norwegian authorities are of the view that guarantees are not appropriate to incentivise the demonstration projects as such.
- (96) In light of the explanations above and the information summarised in chapter I.6 of this decision, the Authority is satisfied that the Norwegian authorities have carefully assessed and will select the appropriate instrument to address the specific market failure.
- (97) Feasibility studies handle an information and knowledge barrier and will not generate direct income for the undertakings. The economic value of the studies will materialise further down the line if and when the successful technology, product or process is commercialised. For the feasibility studies eligible for aid under the scheme, Enova will give grants. It is the view of the Authority that grants are the appropriate instrument to support the feasibility studies under the Demo scheme.
- (98) In light of the above, the Authority concludes that state aid is appropriate and that the notified scheme uses the appropriate instruments to achieve its objectives.

3.8 Incentive effect

- (99) State aid is only compatible with the functioning of the EEA Agreement if it has an incentive effect. An incentive effect occurs when the aid induces the beneficiary to change its behaviour to further the identified objective of common interest, a change in behaviour which it would not undertake without the aid.
- (100) As a starting point, no aid will be granted to projects where the works have started prior to the application for aid.
- (101) Enova will use an NPV analysis to verify whether the demonstration project is profitable without aid. The Norwegian authorities have explained that this is almost never the case with the type of demonstration projects under the scheme. In that regard, the use of the NPV analysis is a safety mechanism to exclude any stand-alone demonstration projects that are profitable. The demonstration projects are typically not profitable in isolation, even with aid, and the undertakings carry out the projects for their strategic value in case of technology success. This means that NPV analyses and funding gaps do not provide a reliable method to determine the incentive effect of the aid.
- (102) The Norwegian authorities have explained that the incentive effect of the aid will be verified by Enova through a counterfactual analysis, comparing the levels of intended activity with and without aid. This analysis will be based on information provided by the undertaking applying for aid, but may also involve third party assessments. The goal for Enova is to determine whether the aid will increase the project size, scope, speed or total amount spend on the demonstration. If no such effects are identified, no aid will be granted.
- (103) The Authority is satisfied that the methodology presented by the Norwegian authorities is suitable to examine whether aid would be needed to trigger the projects for which an aid

application is made. The Authority therefore concludes that the scheme, as notified, ensures that the aid has incentive effect.

3.9 Proportionality

- (104) State aid is proportionate if the aid amount per beneficiary is limited to the minimum needed to achieve the identified objective of common interest.
- (105) Enova limits the aid to the eligible investment costs and respects the maximum aid intensities of the scheme as set out in paragraph (35) of this decision. These intensities are comparable to the intensities allowed for under the RDI²² and the EEAG²³. The Norwegian authorities have explained that they will ensure that the projects that are supported under the notified scheme do not receive aid from other sources to the extent that they receive aid in excess of the maximum aid intensities.
- (106) Important to the assessment of the proportionality of the aid for demonstration projects is the method for determining the appropriate instrument, as set out above. With this method, the Norwegian authorities ensure that convertible loans are the main aid instrument. This ensures that undertakings with successful projects repay the loan. Further, the use of grants is reserved for the smaller projects due to disproportionately high administrative cost of structuring and follow up a convertible loan. It is the view of the Authority that this ensures the proportionality of the Demo scheme.
- (107) Based on the above, the Authority concludes that the Norwegian authorities have justified that the scheme as notified ensures that the condition of proportionality is met.

3.10 Avoidance of undue negative effects on competition and trade

- (108) For state aid to be compatible with the functioning of the EEA Agreement, the negative effects of the aid measure in terms of distortions of competition and impact on trade between Contracting Parties must be limited and outweighed by the positive effects in terms of contribution to the objective of common interest.
- (109) Above, the Authority has concluded that the notified scheme establishes a methodology to ensure that the aid is well targeted to the market failure it seeks to address. Aid to demonstration projects will primarily be granted as convertible loans. This ensures that the risk that the aid will unduly distort competition is limited. It is the Authority's view that Enova's open selection process ensures that only the most efficient operators are eligible for aid and that the aid is limited to the minimum necessary.
- (110) The aid under the scheme will by its nature provide advantages to undertakings investing in environmentally friendly measures that are innovative over undertakings investing in non-environmentally friendly and non-innovative technologies. The aid, by its very objective, being in support of the demonstration of new technologies, products or processes within the fields of renewable energy production, energy efficiency and reduced GHG emissions, the Authority will not view those effects as an undue distortion of competition. The promotion of new solutions will incentivise competitors to improve their respective technologies, products or processes for the benefit of the environment. Furthermore, the aid is subject to conditions on dissemination of information about the

²² See the RDI, Annex II. The maximum aid intensities for experimental development where the results are subject to a wide dissemination is 40% for large enterprises, 50% for medium-sized enterprises and 60% for small enterprises. The maximum aid intensities for feasibility studies is 50% for large enterprises, 60% for medium-sized enterprises and 70% for small enterprises.

²³ See the EEAG, Annex I and the various aid categories listed therein.

performance of the technology and on making the technology available to third parties in the market for five years. The demonstration projects supported will normally be carried out by the technology provider and an end-user. The project results will be made available to the market, thus limiting any distortions of competition and effects on trade.

- (111) The Authority notes that the condition for undertakings to be registered in Norway in order to be eligible for aid under the scheme (see paragraph (10) above) does not impose an undue burden on undertakings not registered in Norway. This is because Norwegian law caters for the administratively simple registration of foreign companies (Norwegian registered foreign undertakings, so-called NUFs²⁴).²⁵
- (112) The Norwegian authorities have confirmed that Enova, when granting the aid, will take into account the beneficiaries' power to influence market prices, output, the variety or quality of products and services, or other parameters of competition. The Norwegian authorities have confirmed that the maximum aid intensities will never be exceeded. Furthermore, aid will not be granted where it merely leads to a change in location of the economic activity without improving the existing level of environmental protection in the Contracting Parties.
- (113) The Authority notes that the aid to feasibility studies helps launch the demonstration projects and contribute to the European pool of knowledge. The aid is limited to the costs of the studies. The maximum aid intensity is 50% regardless of the size of the undertaking, which is more limited than the comparable aid intensities allowed for under the RDI, the EEAG and the GBER. In light of this, the Authority considers the positive effects to outweigh the negative effects of the aid in terms of contribution to the objective of common interest.
- (114) In light of the above, and on balance, the Authority concludes that the negative effects of the aid in terms of distortions of competition and impact on trade between Contracting Parties are limited and outweighed by the positive effects in terms of contribution to the objective of common interest.

3.11 Transparency

- (115) The Norwegian authorities have confirmed that they will ensure that the information concerning the implementation of this scheme is published on the national comprehensive state aid website (the national state aid register). In light of this, the Authority concludes that the Norwegian authorities have complied with the general transparency requirement.

4 Evaluation, reporting, monitoring and individual notification

- (116) The Authority does not require that the Norwegian authorities evaluate the notified scheme. Nonetheless, the Norwegian authorities regularly carry out ex-post evaluations. As set out above, the Norwegian authorities have explained that such evaluations are carried out in accordance with evaluation methodologies relevant for assessing state aid schemes. They are conducted by an independent third party, chosen through a public tender. Enova's evaluation reports are made publicly available. The Authority welcomes this practice.

²⁴ In Norwegian: *norskregistrert utenlandsk foretak*.

²⁵ The Authority notes that this requirement is also in line with the general principle set out in Article 1(5)(a) of the GBER that a requirement to have an establishment or branch in the aid granting State at the moment of payment of the aid is compatible with EEA law.

- (117) The Norwegian authorities have confirmed that detailed records for each aid award will be kept by Enova.
- (118) The Norwegian authorities have committed to notifying individual awards of aid that exceed a gross grant equivalent of EUR 15 million.

5 Compliance with other general principles

- (119) By confirming that no aid can be granted to firms in difficulty, nor firms with an outstanding recovery order, the Norwegian authorities have ensured that the scheme complies with other general state aid compatibility principles.

6 Conclusion

- (120) The Authority considers that the Demo scheme constitutes state aid with the meaning of Article 61(1) of the EEA Agreement. The aid is compatible with the functioning of the EEA Agreement.
- (121) The Norwegian authorities are reminded that all plans to modify this scheme must be notified to the Authority.

HAS ADOPTED THIS DECISION:

Article 1

The Authority has accordingly decided not to raise objections to Enova's Demo scheme 2017-2022 on the grounds that it is compatible with the functioning of the EEA Agreement, pursuant to its Article 61(3)(c).

Article 2

The implementation of the measure is authorised accordingly.

Article 3

This decision is addressed to the Kingdom of Norway.

Article 4

Only the English language version of this decision is authentic.

Done in Brussels, on 15 December 2016

For the EFTA Surveillance Authority

Sven Erik Svedman
President

Helga Jónsdóttir
College Member

This document has been electronically signed by Sven Erik Svedman, Helga Jonsdottir on 15/12/2016