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**Subject: State Aid SA.54683 (2020/N) – Ireland
Renewable Electricity Support Scheme (RESS)**

Excellency,

1. PROCEDURE

- (1) Following pre-notification contacts, by electronic notification of 21 May 2020, Ireland notified, pursuant to Article 108(3) of the Treaty on the Functioning of the European Union (TFEU), the above-mentioned scheme (RESS). In response to questions from the Commission of 9 and 10 June 2020, Ireland provided additional information on 11 and 17 June 2020.

2. DETAILED DESCRIPTION OF THE AID

2.1. Objective

- (2) The main objective of the RESS is to contribute to the Union's 32% renewable energy target as set out in the Renewable Energy Directive¹. Ireland has also explained that the RESS will help deliver national renewable energy targets and economic and social changes needed to enable the transition to a more environmentally sustainable economy, as well as reducing dependence on imported fuels and thereby increasing Ireland's energy security.

¹ Directive (EU) 2018/2001 of the European Parliament and of the Council of 11 December 2018 on the promotion of the use of energy from renewable sources, OJ L 328, 21.12.2018, p. 82–209.

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2.2. National legal basis and granting authority

- (3) The national legal basis is the Electricity Regulation Act 1999 and is expected to include the European Union (Renewable Energy) Regulations 2020 which are due to be enacted later in 2020.
- (4) The Department of Communications, Climate Action and Environment is the granting authority for the notified measure. The Minister for Communications, Climate Action and Environment will be responsible for the design of each RESS auction, including the development of terms and conditions for each RESS auction.
- (5) The Transmission System Operator (EirGrid) is responsible for administering the competitive bidding process for the RESS scheme.
- (6) The National Regulatory Authority, the Commission for Regulation of Utilities (NRA) will be responsible for advising on the potential supply of renewable electricity projects for each RESS auction, competition parameters for each RESS auction, appointing and overseeing an auction monitor and for the ongoing administration and calculation of the RESS payments through the PSO levy (see Section 2.5).

2.3. Beneficiaries and aid allocation process

2.3.1. Eligibility

- (7) The RESS will be open to various forms of electricity production from renewable sources meeting the definitions in the Guidelines on State aid for Environmental Protection and Energy 2014-2020 (EEAG)² and the Renewable Energy Directive.
- (8) Support is not permitted for the co-firing of renewable fuels alongside fossil fuels. Food-based biofuels are not eligible for support.
- (9) All renewable energy technologies will be subject to a viability gap analysis prior to each auction, to ensure that technologies that no longer require a subsidy and are expected to be delivered without a RESS subsidy are not included in the RESS, but also to ensure that the RESS is opened to new technologies that become commercially viable during the lifetime of the RESS.
- (10) The RESS is open to new generation units, i.e. generating equipment not previously used at the site, and where investment costs have exceeded a threshold of 300 000 EUR / MW³.
- (11) Where projects are built on sites that have previously been used for renewable energy generation, such projects must demonstrate that they will increase their expected annual energy output by at least 50% compared to the previous output

² OJ C 200, 28.06.2014, p. 1.

³ Ireland will keep this threshold under review to ensure only substantial investments qualify for support, but to avoid a situation where the threshold excludes mature technologies such as solar and wind.

from the site, and must also meet the investment threshold of 300 000 EUR / MW.

- (12) The RESS will involve competitive auction processes for allocating subsidies in which eligible beneficiaries bid for the level of support they require to proceed with their projects.
- (13) For each auction, a maximum and minimum procurement quantity (demand) will be set. To avoid the need for any kind of optimisation between the size of bids in the supply curve and the demand specified for each auction, Ireland proposes to set a maximum bid cap not lower than 600 GWh. This equates to a solar or onshore wind project of around 600 MW and 200 MW installed capacity respectively and has been set (and will be reviewed if necessary) based on the pipeline of projects coming through the planning system. The maximum bid cap for an auction would then be the minimum difference between the maximum and minimum procurement capacity for that auction, to ensure that there is never a need to accept bids out of ascending price order.
- (14) The minimum bid size will be 0.5 MW. This will be kept under review and possibly changed for future auctions, but would only be changed where evidence suggests this would have no material impact on the level of competition in the auctions. Beneficiaries will be free to aggregate smaller projects behind the same metering point, to present a single bidding entity in the auction that respects the minimum eligibility threshold.
- (15) The starting principle for the RESS is that all eligible renewable electricity technologies will be allowed to participate and compete in the auctions organised within the RESS unless differences in levelised costs of energy (LCOEs)⁴ and viability gaps make effective competition unfeasible. However, Ireland has identified various options to ensure a certain diversification among the successful project types:
 - (a) ‘Enhanced LCOE’ – this would involve attempting to quantify the whole system costs/benefits of different RES technologies and using this to calculate an adjustment factor to each unit’s bid to reflect these costs/benefits. For example, Ireland explains that load peaks in Ireland occur in winter evenings, which are well correlated with wind production but not with solar production. However, solar might become more and more valuable to the system if the overall amount of wind increases, since the output from solar would help reduce the impact of variation in wind output.
 - (b) Segregation into separate auction ‘preference categories’ – where specific separate demand is set for different technologies. In the first auction, these would be used to ensure a minimum contribution from solar energy (see Section 2.3.1.1) and from renewable energy communities (see Sections 2.3.1.1 and 2.6.1.1).
 - (c) Separate auctions specifically for offshore wind (see Section 2.3.1.2).

⁴ The levelised cost of energy is a measure of the average net present cost of electricity generation from a given technology over its expected lifetime.

- (16) The use of these options and associated design parameters (e.g. the adjustment factors needed for the enhanced LCOE approach) would be publicly consulted in advance of an auction in which they are used.
- (17) Ireland also continues to evaluate whether the additional costs that lead to the need for these options can be ‘internalised’ into electricity prices or the RESS, so that signals for diversification are provided without the need (or with a reduced need) for these additional administrative corrections in future.
- (18) The RESS will be open to projects physically located in Ireland or in countries that have signed cooperation agreements with Ireland. Such projects would need to meet the same terms and conditions as domestic projects. Ireland does not currently have cooperation agreements in place with any Member States. Ireland plans to develop such agreements with the United Kingdom, subject to the eventual finalisation of the future relationship between the United Kingdom and the European Union, and with France, in advance of the commissioning of the Ireland-France Interconnector (the Celtic Interconnector) which is expected in 2026.
- (19) There will be no requirement for any benefitting project to include local content – i.e. materials sourced from within Ireland – and the use of any such local content will not affect the selection of projects in the auctions.

2.3.1.1. Preference categories (including for solar energy)

- (20) Ireland has identified potential benefits from ensuring a more diversified energy mix, by specifically supporting a certain minimum contribution from solar energy alongside the wind energy that is expected to be the most competitive in the auctions. Ireland has also identified potential benefits from specifically supporting projects developed by renewable energy communities (see Sections 2.6 and 3.3.5.2). One of the ways in which Ireland proposes to support these projects is through a preference category.
- (21) For the first RESS auction, Ireland proposes to establish:
 - (a) a preference category for a minimum of up to 300 GWh / yr (subject to achieving sufficient competition in the auction) of solar energy, which is 10% of the potential maximum renewable energy that will be supported in the first auction; and
 - (b) a preference category for a minimum of up to 30 GWh / yr (subject to achieving sufficient competition in the auction) of community projects, which is 1% of the potential maximum renewable energy that will be supported in the first auction and could for example be met by 6 x 5 MW solar farms.

2.3.1.2. Separate auctions for offshore wind energy

- (22) Ireland proposes to hold separate auctions for offshore wind energy, for up to a total of 2 000 MW of capacity. The first auction is currently planned for 2021, and subsequent auctions for 2023 and 2025.

- (23) The maximum bid cap described in Section 2.3.1 would not apply to the specific auctions for offshore wind.

2.3.2. *Setting demand and setting prices*

- (24) Demand will be set in the auctions to ensure sufficient competition. Potential supply of projects will be analysed in advance of each auction, and an initial quantity target set based on advice from the NRA. For each auction, this will then be adjusted once pre-qualification is complete to ensure that there are sufficient qualified bidders to adequately exceed demand in the auction. When setting demand, account will also be taken of the distribution of ownership and commonality of control of different qualified projects to guard against the risk of market power being exercised.
- (25) Where separate demand quantities need to be set, e.g. for preference categories, demand will be set in the same way based on pre-qualified bids that can meet the specific demand being set.
- (26) The auctions in the RESS will use a pay as bid pricing rule. However, Ireland intends to keep this under review and may implement a pay as clear pricing rule in the future if evidence suggests this would enable the renewable objective to be met at reduced cost.
- (27) When identifying the successful beneficiaries in an auction, as an additional tool to control costs and reduce the risk of any anticompetitive behaviour, Ireland will also apply a ‘maximum step’ mechanism designed to try to ensure that projects are not selected where they are significantly more expensive than other projects that can achieve the same objective. This would assess the difference between adjacent project bids forming the supply curve and identify any ‘excessive viability gap’ where the difference in the prices of adjacent bids has exceeded a maximum allowable step (where that step size is defined by parameters preset for the auction). If an excessive viability gap is identified, the auction demand will be reduced so that the more expensive project, and other more expensive projects further along the supply curve, will not be selected and aided.
- (28) A price cap will be set for each auction, based on economic analysis and aiming to limit the maximum aid that can be paid based on the levelised cost of the participating technologies. The terms and conditions of each auction, including the proposed price caps and maximum step parameters, will be published for consultation before they are finalised.
- (29) For the first auction under the RESS, there will be a general price cap and no specific price caps for different technologies. Ireland will keep this under review and technology specific price caps will be introduced in future auctions if deemed necessary to reduce the risk of overcompensation.

2.3.3. *Collateral requirements*

- (30) All bidders will be required to submit a bid bond, which for the first auction will be set at 2 000 EUR / MW, where the MW value is based on the maximum capacity value of the bidder. The bid bond will be returned to unsuccessful bidders, and to successful bidders that sign an ‘implementation agreement’ after

the auction. Successful bidders that fail to sign an implementation agreement will forfeit their bid bond.

- (31) Performance security will also be required at the point when an implementation agreement is signed, and for the first auction will be set at 25 000 EUR / MW. The implementation agreement will set out a number of milestones that must be respected by successful bidders. Failure to meet these milestones will result in a forfeit of the posted performance security, subject to the terms of the implementation agreement.
- (32) Collateral requirements will be the same for all participants, except for renewable energy communities (see Section 2.6.1.2).
- (33) Ireland will keep collateral requirements under review and may adapt the requirements for future auctions based on review of the realisation rate of projects participating in the auctions.

2.4. Aid instrument

- (34) Under RESS, renewable energy generators which are successful in the auction (hereinafter: Beneficiaries) will receive a statutory entitlement to payments, coupled with a conditional payback obligation, through a sliding feed in premium (FIP). The FIP involves a strike price and a reference price. The strike prices will be set in the auctions. The reference price is the day ahead electricity market price.
- (35) Beneficiaries will enter into an implementation agreement and will receive a letter of offer, which will entitle the retail supplier of electricity that enters into a Power Purchase Agreement (PPA) with the Beneficiary to receive support under the relevant RESS auction. Although the aid will be formally granted to retail suppliers of electricity who enter into PPAs with renewable electricity generators, the latter should be considered as the final beneficiaries of the aid.
- (36) Beneficiaries will be entitled to a specific payment from the retail supplier for each hourly period in which they generate electricity and the reference price is below the strike price and not below zero. The payment is the difference between the reference price and the strike price for each unit of electricity generated.
- (37) Beneficiaries will be obliged to make a payback for each hourly period in which they generate electricity and the reference price exceeds the strike price. The payback is the difference between the reference price and the strike price for each unit of electricity generated.
- (38) Beneficiaries will receive monthly payments based on annual projected electricity generation and projected electricity prices. Beneficiaries' remuneration will then be corrected after the end of the relevant year based on actual hourly day ahead market prices and metered electricity generation. The correction will be applied by adjusting future payments through an 'adjustment factor'.
- (39) If market prices are consistently higher than the strike price, beneficiaries would be required to make payments (i.e. the contracts would act to reduce the revenue these beneficiaries earn from selling their output in the market).

- (40) Support would be generally payable for a period of 15 years, with up to 16.5 years possible for projects that deliver early and shorter durations for those that deliver late.
- (41) Beneficiaries will need to sell electricity generated in the market. All RESS beneficiaries will face standard balancing responsibility; there will be no exemptions or derogations from balancing responsibility. Support payments will be settled against day ahead market prices and there will be no support payment for any hours in which day ahead market prices were negative.
- (42) Ireland has explained that, since the proposed system involves hourly settlement based on each beneficiary's metered output in each hour, the reference price in the RESS will not initially provide incentives for operators to produce more in high priced hours and less in low priced hours (other than in negative price periods)⁵. Ireland will investigate implementing an alternative settlement approach – e.g. linked to longer term average rather than hourly prices – after the first RESS auction has taken place.

2.5. Budget and financing

- (43) The RESS will be financed by electricity consumers in Ireland through the 'public service obligation (PSO) levy' established in Section 39 of the Electricity Regulation Act 1999. The transmission system operator has a duty to collect payments of the PSO levy from suppliers. Consumers have a duty to pay to suppliers their share of contributions to fund the PSO levy. The NRA is responsible for administering the PSO fund.
- (44) The current estimated budget for the RESS is between 7.2 and 12.5 billion EUR over 5 years⁶.

2.6. Specific support for renewable energy communities and the communities hosting renewable energy projects

- (45) The RESS involves 3 features for directly supporting 'community projects' (i.e. electricity generation facilities owned by a community), and 2 measures for supporting the wider communities that host RES projects owned by others. Ireland has explained that these features and measures are expected to have various benefits, in particular in relation to increasing public acceptance of renewable energy and thereby building support among the population for achieving increasingly ambitious renewables targets.
- (46) Ireland defines community projects in line with the Renewable Energy Directive. Ireland has set a maximum size limit for community projects of 5 MW installed capacity.

⁵ Ireland has explained that the terms and conditions for the RESS will require beneficiaries to make reasonable endeavours to conduct planned outages at times of system surplus and lower than usual prices.

⁶ Ireland has explained that the overall cost of the RESS should be lower because this budget figure does not take into account expected reduced consumer costs from lower wholesale electricity prices that will result from increased renewable energy participation in the market.

2.6.1. *Features for directly supporting 'community projects'*

2.6.1.1. Feature 1 – preference category for community projects

- (47) Community projects would benefit from a preference category within the first RESS auction (see Section 2.3.1.1).

2.6.1.2. Feature 2 – Other advantages for community projects

- (48) Community projects would benefit from:
- a) no requirement to post bid bonds in the auctions (for projects that compete only in the community preference category);
 - b) no requirement to submit performance security if successful in the auctions (for projects that compete only in the community preference category); and
 - c) no requirement to offer the investment opportunity in the 'Renewable Electricity Participation Scheme' (see Section 2.6.2.2).

2.6.1.3. Feature 3 – Grants and soft loans for community projects ('Community supports')

- (49) Community projects would benefit from:
- a) grants of up to EUR 25 000 per project for feasibility studies;
 - b) development loans of up to EUR 150 000 per project; and
 - c) grants for the cost of professional advice covering all aspects of project delivery (legal, financial and technical).
- (50) This funding would only be paid where the beneficiary can demonstrate the level of costs that were incurred solely for the listed activities.

2.6.2. *Measures for supporting the wider communities that host RES projects*

2.6.2.1. Measure 1 – 'Community Benefit Fund'

- (51) A 2 EUR/MWh surcharge will be applied to all beneficiaries of the RESS (who can therefore be expected to reflect this in their bids for subsidy in the competitive process). This amount must be used to fund near neighbour proximity payments for certain technologies and 'sustainable goals' including education, energy efficiency, sustainable energy and climate action initiatives in the area surrounding the projects benefitting from the RESS⁷.
- (52) For the first RESS auction, projects within 5 km of the RES project would be prioritised for support under the Community Benefit Fund, but projects within 10 km are also initially eligible. Unused funds, if any, can be spent on projects further away. There would also be flexibility for spending on projects further away even where more geographically local projects were available, for example

⁷ Ireland will develop specific provisions for the Community Benefit Fund for offshore projects which will be set out in the terms and conditions for future auctions.

where consultation with the community revealed a preference for funding more distant projects.

- (53) Because of particular challenges associated with public acceptance of onshore wind, Ireland proposes that onshore wind projects benefitting from the RESS must pay a minimum of 1 000 EUR / year to each household within 1km of its turbines up to a maximum of 50% of the overall annual fund. This would be counted as part of the 2 EUR / MWh required from onshore wind projects, so would not put onshore wind at a competitive disadvantage compared to other technologies.
- (54) Ireland will keep the rules for the Community Benefit Fund under review for future RESS auctions as part of the ongoing evaluation of the scheme, but in any case the surcharge will not exceed 2 EUR/MWh and will be applied to all projects.
- (55) Ireland has explained that the beneficiaries of the Community Benefit Fund are not expected to be ‘undertakings’, as they are expected to be residential owner-occupiers and some municipal facilities that do not undertake any economic activity. However, it is not possible to be certain at this stage which projects will benefit from the community benefit fund, and the precise eligibility rules for the participation scheme, have not yet been specified.
- (56) Ireland has explained that it will keep under review the beneficiaries of the Community Benefit Fund. If any undertakings benefit from the fund (and receive total State aid exceeding the *de-minimis* threshold) then the aid from the Community Benefit Fund would be designed to fit within the General Block Exemption Regulation (GBER) or notified to the Commission pursuant to Article 108(3) TFEU.

2.6.2.2. Measure 2 – ‘Renewable Electricity Participation Scheme’

- (57) Ireland has explained its intention to develop proposals for citizen investment opportunities for renewable energy generation as part of the overall package of community measures under the scheme. While the Renewable Electricity Participation Scheme has not been included in the first auction, at least for future onshore auctions it is intended that a certain percentage of the capital expenditure or equity of each RES project benefitting from the RESS (other than community projects which would be exempted from this requirement – see Section 2.6.1.2) may be required to be offered as an investment opportunity to local citizens and not-for-profit communities or clubs. The opportunity may initially be offered to those within a certain geographic proximity to the project, then gradually offered to those further afield if there was insufficient interest (regional, national, then intra-EU).The Renewable Electricity Participation Scheme is not yet fully developed and Ireland does not propose to implement it until after the first proposed RESS auction has taken place.
- (58) Ireland has explained that the beneficiaries of the Renewable Electricity Participation Scheme are not expected to be ‘undertakings’, as they are expected to be only citizens and not-for-profit communities or clubs.
- (59) Ireland has explained that it will keep under review the beneficiaries of the Renewable Electricity Participation Scheme. If any undertakings benefit from the

Renewable Electricity Participation Scheme (and receive total aid exceeding the *de-minimis* threshold) then the aid from the Renewable Electricity Participation Scheme would be designed to fit within the General Block Exemption Regulation (GBER) or notified to the Commission pursuant to Article 108(3) TFEU.

2.6.3. *Controlling the costs of support for renewable energy communities and the communities hosting renewable energy projects*

(60) Table 1 provides an overview of the planned budget for the various features and measures.

Table 1 – Estimated budget for the community aspects

Feature/measure	Budget (total estimated for RESS notified 5 year lifetime, EUR million)	Budget (% of low end of estimated RESS budget of EUR 7.2 billion)
Feature 1 – reserved capacity	100	1.39
Feature 2 – other advantages	0	0
Feature 3 – grants and loans	11	0.15
<i>SUB-TOTAL for Features 1-3</i>	<i>111</i>	<i>1.54</i>
Measure 1 – community benefit fund	334.5	2.78
Measure 2 – investment opportunity	30	0.21
<i>TOTAL for all features and measures</i>	<i>475.5</i>	<i>6.6</i>

Source: Ireland

2.7. Duration, evaluation and review

- (61) Ireland has notified the RESS for a period of five years. It has done so to allow an ex post evaluation to be conducted after four years, the results of which will be taken into account if an extension to the duration of the scheme is notified. Ireland plans to submit the final evaluation report by 31 December 2024.
- (62) For the purpose of the ex post evaluation, Ireland has notified an evaluation plan, which it will publish on the website of the granting authority.
- (63) The evaluation plan notified by Ireland includes 57 evaluation questions and corresponding indicators. These evaluation questions and indicators cover two broad aspects:
- (a) an evaluation of the overall RESS scheme: the scheme's outputs, its direct effects, its indirect effects (both positive and negative), as well as the proportionality of the aid and the appropriateness of the chosen aid instrument; and

- (b) an evaluation of specific design elements within the RESS schemes, such as the community preference category in the auctions or the support for offshore wind or solar energy, as well as a number of design elements that will be kept under review (see further below).
- (64) The central focus of the evaluation will be on assessing the scheme and specific measures against the counterfactual, i.e. netted out from what would have happened in the absence of the RESS. The most relevant evaluation questions are those measuring the extent to which a given effect can be *causally* linked to the scheme being in place.
- (65) The intention of the evaluation process is to assess the impact of the RESS and evaluate whether the benefits of the aid justify the costs. Ongoing evaluation of specific design elements, community aspects and support for specific technologies will inform potential design changes during the lifetime of the scheme.
- (66) The evaluation questions and indicators will be used to keep under review the following specific design aspects of the RESS⁸:
- (a) the full costs and benefits of each of the various different features for supporting community projects (as well as the measures for supporting communities hosting RESS projects) will be identified as part of the evaluation of the RESS;
 - (b) assessment of whether the assumed benefits of technology specific support for solar projects materialise;
 - (c) assessment of whether the assumed benefits of technology specific support to offshore wind projects materialise;
 - (d) evaluations of the possibility of internalising more costs in future and reducing/avoiding the need for technology specific approaches;
 - (e) the costs and benefits of moving from a ‘Pay as Bid’ to ‘Pay as Clear’ auction pricing rule;
 - (f) the costs and benefits of implementing technology specific price caps.
 - (g) adapting future collateral requirements if necessary to ensure realisation of projects;
 - (h) implementing an alternative settlement approach for the RESS Floating Feed in Premium; and
 - (i) the likelihood of offshore wind becoming more competitive with onshore technologies reducing the need for separate offshore auctions.
- (67) The envisaged counterfactual evaluation methods which Ireland plans to use fall into two over-arching categories, ‘top-down’ analysis and ‘bottom-up’ analysis.

⁸ The precise methodology for assessing some of these aspects will be developed as part of the implementation of the evaluation plan.

In summary, top-down involves modelling counterfactual scenarios at the industry or auction level, and comparing modelled outcomes to the actual outcomes observed. Bottom-up involves analysing specific project-level data points and inferring causality where possible on that basis. Where it is not possible to establish causality through bottom-up analysis, greater emphasis will be placed on modelling of the counterfactual. Similarly, surveys will be employed as complementary tools.

- (68) Electricity sector outcomes in the ‘top-down’ analysis will be estimated by way of modelling⁹. The model will estimate what new generation investments would have been made without the RESS, and what generation retirements would have occurred without the RESS. It will also estimate what output would have been produced by each generator without the RESS (and thus the energy mix by technology type). Accordingly, other metrics such as the total amount of investment, fuel usage, the level of emissions, and so on, will be estimated for the ‘without RESS’ scenario. The levels of each of these metrics modelled will be compared to actual levels observed in real life, so as to estimate the impact of the RESS on each such metric.
- (69) Ireland furthermore intends to assess auction outcomes using supply curves constructed on the basis of all bids submitted into a given RESS auction¹⁰. Such supply curves can be used as an input into the counterfactual model which will show how much investment would have been carried out without any aid (if the aid was zero) and, in turn, allows identifying how much investment was ‘caused’ by the aid. Regarding specific RESS elements such as the community and technology-specific provisions, the supply curves can also be used as a basis to ‘re-run’ a hypothetical auction without the elements concerned, for example with no solar preference category, but otherwise with the same actual bids and with no other factors changed. The outcome can then be compared to the actual auction results and the results indicators are directly attributable to the inclusion of the element concerned within the RESS scheme¹¹.
- (70) The ‘bottom up’ approach will be used in the evaluation, to the extent that sample sizes are sufficient, to identify the causal impact of the aid on the beneficiaries. This approach will utilise ‘difference in difference’ analysis between the

⁹ The model used for this purpose will be an appropriate industry-standard model which integrates efficient long-term planning and security-constrained least-cost dispatch into a single problem formulation. The long term capacity mix in the counterfactual scenario will reflect the optimised mix of: continuing operation of efficient legacy generators; the economic and technical retirement of inefficient legacy generators; and investment in new generating capacity of each technology in the most efficient mix and quantity so as to offset retirements and meet load growth. Regarding the short-term (dispatch) aspects of this model, production will be simulated in much the same way as it is done today using the security-constrained least-cost simulation which is carefully calibrated and employed by the NRA.

¹⁰ Ireland presents the supply curve approach as part of the ‘top down’ approach given that it entails a certain modelling of the counterfactual scenario. Given that the method relies on the use of auction data at project level to construct the counterfactual, it might also be considered a ‘bottom up’ approach, however.

¹¹ It will be established that this offer price curve reasonably represents underlying costs because the NRA will have tested for sufficient competitiveness as a precondition to running the auction(s) concerned.

treatment group (the winners in the auctions) and the control group. The control group will consist of firms who were not successful in the auction where such information is available¹².

- (71) Evaluation of projects' financial indicators (for example IRR, WACC, and CAPEX and OPEX per MW of capacity) will be assessed from both groups where reliable data sets are available¹³.
- (72) For the community measures the control group will be determined based on the specific evaluation questions and indicators. The control group could be a community with only developer led projects. Alternatively, the impacts of developer led projects within a specific community could be compared with community project impacts within the same community. For community benefits, the control group could be communities who host developments prior to compulsory community benefits provision. For attitudes towards RESS projects (including specific measures like the benefit fund), the control group(s) may be the wider population (with comparable socio-economic characteristics) who had no direct dealing with RESS projects; and/or those communities who experienced either or both of the RESS development models; and or neighbouring communities without scheme support.
- (73) A general baseline of attitudes to renewable energy projects across suitable control groups in relevant (i.e. wider social acceptance), and potential and actual projects proximate to communities (i.e. community acceptance) will be established prior to commencement of operation of RESS projects. The aim is to serve as a broad baseline for several evaluation questions. Targeted methods (including surveys of recipients) will be used to evaluate the effects of community measures in host communities/regions¹⁴. These effects will be situated within the overall socio-economic context of these areas, for example using deprivation indexes or socio-economic data gathered through surveys, to build a picture of broad distributive effects.
- (74) Further development of the above methodologies will be required as part of the implementation of the Evaluation Plan. As the methodologies are refined, greater emphasis may be placed on methodologies that are most appropriate, proportional and efficient to support the evaluation. Ireland will keep the Commission

¹² In order to further improve the 'comparability' of the two groups, Ireland intends to use Regression Discontinuity Design (RDD) analysis which focuses on projects that are 'near-marginal' in the auctions: both marginal winning bids and marginal losing bids. For RDD, the discontinuity may be also analysed in the context of the eligibility criteria or performance milestones of projects participating in the auction and other characteristics of such projects.

¹³ This information will be requested from all auction participants and be subject to commercial confidentiality. For practical and legal reasons, Ireland plans to request this information as from the second auction onwards.

¹⁴ Ireland envisages that the IEA Wind TCP Task 28 (<https://community.ieawind.org/task28/home>) may support the evaluation in terms of advising on survey design, carrying out the surveys, analysis of results and developing the methodologies for assessing the community impacts of the scheme. Early stage design of the methodology for assessing the community impacts of the scheme will be undertaken by researchers/academic secondments in the Sustainable Energy Authority of Ireland (SEAI) in 2020.

informed of this on an annual basis as part of progress reporting on the evaluation plan.

- (75) Independent appointed experts appointed by the Department for Communications, Climate Action and Environment will carry out the evaluation. The independent expert has not yet been selected. It is intended that the independent expert will be in place by the end of 2021 at the latest and sooner if necessary to establish baseline data in advance of that.

2.8. Cumulation

- (76) Ireland has explained that beneficiaries of the RESS will also be eligible to receive aid from two other schemes: the capacity mechanism¹⁵ and the Support Scheme for Renewable Heat (SSRH)¹⁶. RESS beneficiaries will not be eligible for aid from any other sources.
- (77) Where a RESS beneficiary also participates in the capacity mechanism, the NRA will deduct the remuneration received from the capacity mechanism for the relevant generation unit when calculating any payments due under the RESS.
- (78) High efficiency combined heat and power plants based on renewable technologies (e.g. biomass and biogas) are eligible to participate in the SSRH, which remunerates their heat output, and the RESS, which remunerates their electricity output. The electricity LCOE estimates prepared by Ireland, which took full account of revenues for heat production including from the SSRH, indicate that CHP technologies may be relatively expensive compared to other renewable electricity technologies and will need to bid aggressively in the RESS to be selected for support.

3. ASSESSMENT OF THE MEASURE:

3.1. Existence of aid

- (79) Article 107(1) TFEU states that ‘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, in so far as it affects trade between Member States, be incompatible with the common market’.

3.1.1. Imputability to the State and financing through State resources

- (80) For measures to qualify as State aid within the meaning of Article 107(1) of the TFEU, (a) they have to be imputable to the State and (b) the resources

¹⁵ See the Commission’s decision of 24 November 2017 in case SA.44464 (2017/N) (OJ C 121, 6 April 2018).

¹⁶ See the Commission’s decision of 15 April 2019 in case SA.50807 (2019/N) (OJ C 244, 19 July 2019).

have to derive from the State's funds, being granted either directly or indirectly by any public body designed or established by the State¹⁷.

- (81) The RESS was established in national law and the Irish Government determines the parameters of the scheme including the eligible technologies and the amount of renewable energy to support.
- (82) The funding mechanism for the RESS is also established in law and requires the costs of the RESS to be recovered from suppliers, and requires consumers to pay their share of the costs (see Section 2.5). The fund for managing these costs and payments is administered by the NRA, a public entity.
- (83) On that basis, the Commission concludes that the RESS is imputable to Ireland and financed from State resources, a view not disputed by Ireland.

3.1.2. Selective advantage

- (84) The RESS is selective, since it only applies to renewable electricity technologies, as opposed to conventional electricity production technologies. It also only applies to renewable electricity production facilities located in Ireland or, potentially in future, to production facilities in countries with whom Ireland has signed cooperation agreements. The beneficiaries receive an advantage from the RESS that would not be available under normal market conditions.

3.1.3. Distortion of competition and effect on trade

- (85) Electricity is widely traded within the European Economic Area (EEA) and therefore the RESS is likely to distort the competition on the electricity market and affect trade across the EEA.

3.1.4. Measures for supporting communities hosting RESS projects – Community Benefit Fund and Renewable Electricity Participation Scheme

- (86) Ireland has explained that the Community Benefit Fund and Renewable Electricity Participation Scheme may not involve State aid since the beneficiaries of these measures may not be undertakings (see Section 3.1.4).
- (87) However, these measures remain in development at this stage and all the eventual beneficiaries are not yet known. Ireland has explained that it will keep under review the beneficiaries of these measures, and if any undertakings benefit (and receive total State aid exceeding the *de-minimis* threshold) then any potential aid would be designed to fit within the General Block Exemption Regulation (GBER) or notified to the Commission pursuant to Article 108(3) TFEU.
- (88) These measures are not assessed further in this decision.

¹⁷ Case 76/78 Steinike & Weinlig v Germany [1977] ECR 595, paragraph 21; Case C-379/98 PreussenElektra [2001] ECR I-2099, paragraph 58; Case C-706/17 Achema [2019] paragraph 47 and following.

3.1.5. Conclusion on existence of aid

- (89) On the basis of the analysis above, the Commission concludes that the RESS constitutes State aid within the meaning of Article 107(1) TFEU.
- (90) The Commission does not conclude on the existence of aid in the specific measures for supporting communities hosting RESS projects (the Community Benefit Fund and the Renewable Electricity Participation Scheme) but takes note of Ireland's commitment to notify any notifiable aid arising under these measures.

3.2. Legality of aid

- (91) By notifying the RESS before its implementation, the Irish authorities have fulfilled their obligation under Article 108(3) TFEU.

3.3. Compatibility assessment

3.3.1. Applicable rules

- (92) The RESS aims to promote the generation of electricity from renewable sources. Consequently the RESS falls within the scope of the Guidelines on state aid for energy and environment 2014-2020 (EEAG) as corrected by the corrigendum adopted by the Commission¹⁸.
- (93) The Commission has assessed the RESS on the basis of the general compatibility provisions in Section 3.2 and the specific compatibility criteria for aid to energy from renewable sources in Section 3.3, in particular operating aid for energy from renewable electricity in Section 3.3.2.1. of the EEAG.

3.3.2. Objective of common interest

- (94) As explained in Section 2.1, the aim of the RESS is to increase the electricity generated from renewable sources and help Ireland achieve EU and national renewable energy targets.
- (95) The Commission considers that the RESS is clearly aimed at an objective of common interest in accordance with Article 107(3) c of the TFEU.

3.3.3. Need for state aid and appropriate instrument

- (96) According to point 115 of the EEAG, the Commission presumes the existence of a residual market failure which can render State aid necessary to encourage investments in renewable energy.
- (97) According to point 107 of the EEAG, under certain conditions State aid can be an appropriate instrument to contribute to the achievement of the EU objectives and related national targets.
- (98) Point 116 of the EEAG states that, to allow Member States to achieve their targets in line with the EU 2020 objectives, the Commission presumes the appropriateness of aid provided all other conditions are met.

¹⁸ OJ C 290, 10.8.2016, p.11

- (99) EEAG point 108 recalls that the EEAG should prepare the ground for achieving Union environmental objectives beyond 2030. Directive (EU) 2018/2001 establishes a binding renewable energy target for the EU for 2030 of 32%. The Commission therefore interprets EEAG points 107 and 116 as applying not only to the achievement of the EU's 2020 targets for renewable energy but also to the new 2030 target.
- (100) Point 113 of the EEAG states that operating aid cannot be granted for new installations generating energy from food-based biofuels. Food-based biofuels are not eligible for support under the RESS.
- (101) Point 117 of the EEAG requires that, where Member States grant aid for the production of hydropower, they must respect Directive 2000/60/EC (Water Framework Directive)¹⁹ and in particular article 4(7) thereof. The Commission notes that a Letter of Formal Notice in infringement file 2007/2238 was sent to Ireland on 25 January 2019 regarding the compliance with the provisions of the Water Framework Directive. Therefore, the Commission welcomes that Ireland has confirmed that the requirements of the Water Framework Directive will be respected, with regard to any support provided for hydropower.
- (102) Point 118 of the EEAG recalls the requirements of Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain Directives (Waste Framework Directive)²⁰. Ireland has confirmed that the RESS will respect the waste hierarchy, with regard to any support provided under the RESS to installations using waste.
- (103) Point 121 of the EEAG stipulates that the Commission will authorise aid schemes for a maximum period of 10 years. Ireland has notified the RESS for a period of five years (cf. Section 2.7 above for further detail).
- (104) In view of the above, the Commission considers that the aid is necessary and that the RESS is an appropriate instrument to address the objective of common interest.

3.3.4. Incentive effect

- (105) In line with point 49 EEAG, the incentive effect occurs if the aid induces the beneficiary to change his behaviour towards reaching the objective of common interest, which it would not do without the aid.
- (106) The Irish authorities have explained that despite the falling costs of renewable technologies, developers would not make sufficient investment in renewable energy technologies to meet Ireland's increasingly ambitious renewables targets without support. Ireland has also explained that before the eligible technologies are determined for each auction process there will be a viability gap assessment to ensure that there is a viability gap (i.e. projected market revenues are insufficient to enable investment) for each eligible beneficiary type (see Section 2.3.1).

¹⁹ OJ L 327, 22.12.2000, p.1

²⁰ OJ L 312, 22.11.2008, p. 3

- (107) Ireland has confirmed that aid will only be granted to beneficiaries before the start of works on their projects – i.e. before the investments identified in Section 2.3.1 are made. This satisfies the requirements of EEAG point 50.
- (108) EEAG points 51 and 52 require application forms including counterfactual situations to be submitted by beneficiaries, unless the aid is granted on the basis of a competitive bidding process. In the RESS the aid will be granted on the basis of a competitive bidding process.
- (109) The Commission therefore concludes that the aid to be granted under the RESS will have an incentive effect.

3.3.5. *Proportionality*

- (110) According to point 69 of the EEAG, environmental 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.
- (111) Point 109 of the EEAG explains that in the Commission's view market instruments, such as competitive bidding processes to select the beneficiaries of aid to renewable sources should normally ensure that subsidies are reduced to a minimum.
- (112) The strike price in the FIPs, which represents the support level the beneficiaries receive, will be set in a competitive bidding process, where demand will be set based on advice from the NRA and taking into account the number of potential bidders and the diversity of project ownership to ensure there are sufficient qualified bidders to exceed demand in the auction and that beneficiaries will need to bid competitively to secure support under the RESS (see Section 2.3.2).
- (113) The RESS allows all technologies to compete in the same main bidding process, and allows more experimental and expensive technologies the possibility to outcompete more established technologies where their developers have found innovative solutions for reducing costs. The eligibility of the RESS will be reviewed before each auction to ensure that innovative new technologies that become commercially viable have a chance to compete (Section 2.3.1), further increasing competition.
- (114) The selection of beneficiaries will also be subject to controls, in particular auction price caps and the maximum step factor, to reduce any risk of market power and windfall profits for cheaper technology types (see Section 2.3.2).
- (115) EEAG point 126 requires aid granted from 1 January 2017 to be granted through a competitive bidding process in which all generators producing electricity from renewable sources compete on a non-discriminatory basis. The general approach in the RESS – involving multi-technology competitive auctions subject to the controls described above, therefore meets the requirements for proportionality in the EEAG.
- (116) EEAG point 126 also allows competitive bidding processes to be limited to particular technologies under certain conditions, including where the selected technologies have longer term potential, where there is a need to achieve diversification, and linked to system costs. The following sections examine the

preference categories for solar energy and renewable energy communities, and the separate auctions for offshore wind, against these conditions.

3.3.5.1. Preference category for solar energy

- (117) Ireland has justified the preference category for solar energy on the basis of a need to achieve diversification and reduce system costs.
- (118) Ireland has explained that the cheapest source of renewable energy in Ireland is expected to be onshore wind. However, Ireland has explained that as the proportion of energy from wind increases, there is an increasing risk of needing to curtail wind generation in some time periods where there is a lot of wind and low demand. In Ireland, the maximum ‘System Non-Synchronous Penetration’ (SNSP) level is set administratively. The SNSP level represents the maximum proportion of electricity demand that can be fulfilled by renewable electricity and imported electricity at any time. It is currently set at 65% with a goal to increase to 75% by end 2020 and 80% or more by 2030.
- (119) Ireland has explained that where possible, costs have been ‘internalised’, for example:
- (a) where a beneficiary of the RESS is curtailed because of its geographical location, rather than because the overall SNSP level is reached for the system, that generator will not receive any compensation. This should help ensure that renewable projects are developed in areas where it is less likely that there will be a local glut of production and insufficient transmission to ‘export’ it to demand elsewhere.
 - (b) Network costs are internalised on a local basis, incentivising projects to locate where connection costs are lower because the projects can be more cheaply connected to the network.
- (120) Ireland also proposes that for the first RESS auction the costs of system-wide curtailment will be internalised up to the point where such curtailment exceeds 10% of potential generation. Above that level, Ireland proposes that costs will be socialised because the SNSP level is set administratively and is outside the control of renewable generators. Ireland has explained that fully internalising this cost would be expected to significantly increase the costs of the RESS and/or reduce participation because of the extra risk that would be transferred to project developers. Ireland has explained that these aspects will be kept under review and additional costs internalised in future if this proves feasible.
- (121) Ireland has explained that promoting a diversification of the energy generation mix by specifically supporting electricity production from solar is expected to deliver the following benefits which it has not so far been possible to internalise in either electricity market price signals or the RESS:
- (a) savings due to a reduced need for curtailment (which involves compensating renewable energy producers for the subsidy payment they would have earned had they not been curtailed)²¹;

²¹ Regulation (EU) 2019/943 Article 13.

- (b) savings for the distribution and transmission system operators gaining experience connecting solar resources to the network;
 - (c) security of supply benefits by avoiding a particular reliance on the supply chain for wind turbine operation and maintenance, and weather inputs associated with wind energy generation; and
 - (d) a faster delivery of renewables targets and associated decarbonisation objectives because the planning process for solar projects is faster than that for onshore wind projects.
- (122) Given the uncertainty about the future benefits of specifically supporting solar energy, Ireland has explained that limits will be placed on these preference categories to avoid increased costs where associated benefits cannot be verified. In particular:
- (a) the anticipated costs and benefits of the preference category will be measured as part of the general review and evaluation of the RESS (see Section 2.7);
 - (b) other than for the first auction process, there will be a limit of 2% of the total volume of energy procured under the scheme through preference categories for technologies and community projects unless evaluation can demonstrate quantitative benefits that equal at least 75% of the additional costs of the preference categories; and
 - (c) investigating the possibility of internalising additional costs into electricity prices, ancillary services prices or the RESS so that the preference categories are no longer necessary.
- (123) The Commission concludes that the preference category for solar energy can be considered compatible with the requirements of EEAG point 126. This is because Ireland has explained that solar energy can contribute to reduced system costs and diversification in Ireland, and has proposed controls to evaluate the costs and benefits of the preference category so that its size and cost will be limited unless sufficient benefits can be quantified.

3.3.5.2. Preference category and other features for renewable energy communities

- (124) Ireland has proposed a preference category for renewable energy communities as well as various features for renewable energy communities (see Sections 2.3.1.1 and 2.6)
- (125) Ireland has justified the preference category and additional features for renewable energy communities on the basis of the longer term potential of these projects.
- (126) Ireland has explained in particular that the support for renewable energy communities is expected to increase public acceptance of renewable energy and thereby build support among the population for achieving increasingly ambitious renewables targets.

- (127) Where grants and soft loans are made available, these are only payable for the specific costs incurred in preparing projects for participation in the RESS.
- (128) Given the various novel features and measures for renewable energy community projects, Ireland has proposed that:
- (a) the full costs and benefits of each of the various different features for supporting community projects (as well as the measures for supporting communities hosting RESS projects) will be identified as part of the evaluation of the RESS;
 - (b) the size of the preference category for community projects will be limited in the same way as the preference category for solar energy (see Section 3.3.5.1);
 - (c) a maximum of 1.5 % of the total RESS budget will be dedicated to features 1, 2 and 3 for community projects, unless and until evaluation demonstrates quantitatively that higher limits are justified; and
 - (d) Community projects will be limited to projects of no more than 5 MW installed capacity for the duration of the RESS.
- (129) The Commission concludes that the preference category for renewable energy communities can be considered compatible with the requirements of EEAG point 126, and the other features for renewable energy communities can be considered proportionate. This is because Ireland has explained that renewable energy communities have longer term potential, and has proposed controls to limit the size of benefitting projects, evaluate the costs and benefits of these features and the preference category, and limit their size and cost unless sufficient benefits can be quantified.

3.3.5.3. Separate auctions for offshore wind

- (130) Ireland has justified the separate auctions for offshore wind on the basis of the longer-term potential of offshore wind, and the need to achieve diversification.
- (131) Ireland estimates that the strike price, including grid connection costs, for offshore wind in the RESS auctions will start at roughly a 25% price premium over the expected starting strike prices for onshore wind. Ireland identifies two reasons for this projected price disparity:
- a) onshore wind is very well-established in Ireland, comprising almost 4 GW of installed capacity and, for the first time in Q1 2020, producing more electricity than any other energy source, including natural gas; and
 - b) offshore wind is effectively unproven in Ireland at contemporary commercial scale. While a single 25 MW project was developed in 2004 and remains operational (Arklow Bank), there are no other commercial offshore windfarms in Ireland, and critically, there are no existing offshore projects (or renewable projects of any form) comparable to the 500MW+ scale typical of contemporary offshore wind developments elsewhere in Europe. The required supply chains, port infrastructure and relevant experience therefore does not yet exist in Ireland and will be

essential for financing, developing, operating and maintaining the 500MW+ projects Ireland aims to see developed in future.

(132) Ireland has also explained that this projected 25% price disparity is expected to shrink in future, for two main reasons:

- a) project risk premiums and costs of capital are expected to reduce as industry develops the necessary supply chains and becomes assured of public policy consistency in the areas of consenting, grid development and route to market, i.e. a technology-specific auction. Ireland expects this should bring the strike prices for offshore wind projects in Ireland closer to those of neighbouring Member States and the UK; and
- b) as the global offshore wind sector continues to mature and develop, it has been characterised by continued LCOE reductions. This trend is expected to continue, driven in part by continued increases in turbine size and capacity factors.

(133) Ireland has also identified the following other reasons to support offshore wind in Ireland:

- a) offshore wind projects generally have considerably greater public acceptability than cheaper onshore wind projects. Therefore, a separate auction for offshore wind reduces the risk that significant capacity won by onshore wind projects is ultimately delayed or cancelled as a result of public opposition.
- b) Ireland has no significant additional hydroelectric resources, very few indigenous biomass resources and a relatively poor solar resource when compared with many Member States. Providing separate support for offshore wind will therefore ensure a certain degree of energy diversification, even after allowing for energy production correlation with onshore wind as offshore typically delivers in more periods than onshore wind. Diversification reduces curtailment and increases energy security, two factors that cannot be completely internalised to projected strike prices.
- c) Specific support for offshore wind is expected to support the development of supply chains, infrastructure and experience necessary to develop future renewable marine technologies such as floating solar and wind, which may play a significant role in the longer term.

(134) Ireland has explained that the option to proceed with a separate auction rather than a preference category for offshore wind was selected because of the different characteristics of onshore and offshore projects in Ireland (such as specific marine development consents, the greater scale of offshore grid connection infrastructure, the current uncertainty regarding the enduring offshore grid model and the likely divergence in eligibility conditions, lead-times, collateral arrangements, delivery milestones and incentives). Ireland will keep the evolution of offshore wind prices and the development of these elements under review, to ensure that separate auctions are stopped and the main auction expanded – potentially through a new

preference category – to include offshore wind if the price gap closes sooner than anticipated.

- (135) Given the relatively limited number of sites at which offshore wind can be developed in the short term, the Commission has paid particular attention to the potential competitiveness of the specific auctions for offshore wind.
- (136) Ireland is currently developing an overarching marine spatial planning regime which, subject to parliamentary approval, is expected to be adopted in late 2020/early 2021. New applications are not currently being accepted pending the work on the new marine spatial planning regime.
- (137) There is a small number of offshore projects, amounting to 4.7 GW potential installed capacity, which have been in the consenting and grid application process for a number of years. None of these projects currently has full planning consents and grid connection offers but they have been identified by Ireland as being sufficiently advanced to be eligible to continue their development while the new rules are developed and to potentially participate in the first auction (planned mid-2021). Ireland has explained that once new rules are in place the potential for offshore wind development is around 10-12 GW. Therefore Ireland has explained that there is expected to be additional supply of projects that could participate in further auctions planned in 2023 and 2025.
- (138) Ireland has proposed that, to ensure the competitiveness of the auctions, the planned offshore auctions covered by this decision are limited to a total awarded capacity of 2 GW, unless the NRA advises (through its determination of the final competition ratio for the relevant auction) that sufficient competition exists for increasing this demand and maintaining competitive auctions, taking into account factors including the distribution of ownership and commonality of control and other factors the NRA deems appropriate.
- (139) The Commission concludes that the specific auctions for offshore wind, limited to 2 GW unless the NRA advises that there is sufficient supply to ensure a competitive outcome, can be considered compatible with the requirements of EEAG point 126. This is because Ireland has explained that offshore wind supports diversification and has the longer term potential to benefit from significant cost decreases.

3.3.5.4. Conclusion regarding proportionality

- (140) Based on the information in this section (Section 3.3.5) the Commission concludes that the RESS, including the preference categories and the specific auctions for offshore wind, meets the relevant requirements of the EEAG and is proportionate.

3.3.6. Cumulation

- (141) As explained in Section 2.8, RESS beneficiaries that also receive support under the capacity mechanism will have the revenues from the capacity mechanism deducted before support under the RESS is paid.
- (142) Beneficiaries of the SSRH will only be selected if they bid successfully in the RESS auctions, which acts as a protection against any possible overcompensation

from the combination of SSRH payments for heat production and RESS payments for electricity production.

- (143) RESS beneficiaries will not be eligible for aid from any other sources.

3.3.7. Distortion of competition and balancing test

- (144) EEAG point 88 recalls that for aid to be found compatible with the internal market, the negative effects of the RESS 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.
- (145) EEAG point 90 explains that the Commission considers that aid for environmental purposes will by its very nature tend to favour environmentally friendly products and technologies at the expense of other, more polluting ones. Moreover, the effect of the aid will in principle not be viewed as an undue distortion of competition since it is inherently linked to its very objective. The Commission should consider the potential distortive effects of the RESS on competitors of the beneficiary operating in the same market for environmentally friendly products.
- (146) EEAG point 122 states that in principle operating aid schemes should be open to other EEA countries and Contracting Parties of the Energy Community to limit the overall distortive effects, as well as to minimise costs. However, point 122 also recognises that Member States may want to have a cooperation mechanism in place before opening their schemes to other countries. Ireland is in the process of developing cooperation mechanisms with other Member States to enable foreign projects to compete within the RESS.
- (147) EEAG point 124 requires that: aid is granted as a premium in addition to the market price, where generators sell their electricity directly in the market; beneficiaries are subject to standard balancing responsibilities unless no liquid intraday markets exist; and measures are put in place to ensure that generators have no incentive to generate electricity under negative prices.
- (148) The aid instrument is a FIP, where payments will be made based on the difference between the market price and the FIP strike price (see Section 2.4). Ireland has confirmed that beneficiaries will have standard balancing responsibilities (see Section 2.4). And Ireland has explained that no subsidy will be paid for hours in which the day ahead price is negative. The RESS therefore complies with point 124 of the EEAG.
- (149) Point 116 EEAG states that, to allow Member States to achieve their targets in line with EU objectives, the Commission presumes that the aid has limited distortive effects, provided all other conditions are met.
- (150) In view of the above and considering that all other EEAG assessment conditions are met, the Commission considers that the RESS will not have undue distortive effects on competition and trade and that the overall balance is positive. Consequently, the Commission concludes that the distortion of competition caused by the RESS is limited.

3.3.8. Compliance with other provisions of EU law

- (151) As the RESS is financed from a charge levied on all electricity consumption in Ireland, the Commission has examined its compliance with TFEU Articles 30 and 110 in accordance with EEAG point 29.
- (152) According to the case-law, a charge which is imposed on domestic and imported products according to the same criteria may nevertheless be prohibited by the Treaty if the revenue from such a charge is intended to support activities which specifically benefit the taxed domestic products²². If the advantages which those products enjoy wholly offset the burden imposed on them, the effects of that charge are apparent only with regard to imported products and that charge constitutes a charge having equivalent effect to custom duties, contrary to TFEU Article 30. If, on the other hand, those advantages only partly offset the burden borne by domestic products, the charge in question constitutes discriminatory taxation for the purposes of TFEU Article 110 and will be contrary to that provision as regards the proportion used to offset the burden borne by the domestic products.
- (153) If domestic electricity production is supported by aid that is financed through a charge on all electricity consumption (including consumption of imported electricity), then the method of financing – which imposes a burden on imported electricity not benefitting from this financing – risks having a discriminatory effect on imported electricity from renewable energy sources and thereby violating TFEU Article 30 or 110²³. A similar issue would arise between any neighbouring country that has signed a free trade agreement with the European Union containing provisions similar to TFEU Articles 30 and 110.
- (154) Ireland has explained that the scheme will be financed by a levy on energy consumption. In this respect, the Commission notes that:
- a) the notified aid scheme is financed through a charge imposed on electricity consumed in Ireland, irrespective of whether domestically produced or imported; and
 - b) the charge is calculated on the amount of electricity consumed (and thereby imposed on the product itself).
- (155) Where a Member State finances aid for domestic producers through a charge that is levied on imported and domestic products alike, the charge may have the effect of further exacerbating the distortion on the product market caused by the aid as such. For that matter, it is not necessary that the charge exclusively finances the aid, since the additional distortive effect can already be present if a sizable share of the revenues from the charge is used to finance the aid.
- (156) Ireland has explained that, to alleviate any concern regarding compliance with Articles 30 and 110 TFEU, Ireland will ensure that producers located in other

²² Joined Cases C-128/03 and C-129/03 AEM, EU:C:2005:224; Case C-206/06 Essent, EU:C:2008:413, paragraph 42.

²³ Case 47/69 France v Commission, EU:C:1970:60, paragraph 20.

EU Member States (or in a neighbouring State with which a free trade agreement exists) will be allowed to participate in the RESS auctions, subject to cooperation agreements being signed (see Section 2.3.1). As explained in Section 3.3.7 this is in line with EEAG point 122.

- (157) The Commission therefore considers that the financing mechanism of the RESS does not infringe TFEU Articles 30 or 110.

3.3.9. Transparency

- (158) EEAG Section 3.2.7 requires, from 1 July 2016, the publication of the various information relating to the granting of State aid for environmental protection and energy on a comprehensive State aid website.

- (159) Ireland has confirmed that the requirements of EEAG Section 3.2.7 will be met, and that all details of the RESS including auction results will be published on a public website.

3.3.10. Evaluation

- (160) The EEAG (point 28 and Chapter 4) state that the Commission may require that certain aid schemes be subject to an evaluation, where the potential distortion of competition is particularly high, that is to say when the measure may risk significantly restricting or distorting competition if their implementation is not reviewed in due time. Given its objectives, evaluation only applies for aid schemes with large aid budgets, containing novel characteristics or when significant market, technology or regulatory changes are foreseen.

- (161) The present scheme fulfils the criteria of being a scheme with a large aid budget and containing novel characteristics; therefore it will be subject to an ex-post evaluation.

- (162) Ireland has notified an evaluation plan, setting out the scope and modalities of the ex-post evaluation. The plan is described in section 2.7.

- (163) The Commission considers that the notified evaluation plan contains the necessary elements: the objectives of the aid scheme to be evaluated, the evaluation questions, the result indicators, the envisaged methodology to conduct the evaluation, the data collection requirements, the proposed timing of the evaluation including the date of submission of the final evaluation report, the description of the independent body conducting the evaluation or the criteria that will be used for its selection and the modalities for ensuring the publicity of the evaluation.

- (164) The Commission notes that the scope of the evaluation is defined in an appropriate way, and adheres to the principles set out in the Commission Staff Working Document on Common methodology for State aid evaluation²⁴. It comprises a list of evaluation questions with corresponding result indicators. Data sources are individually defined for each evaluation question.

²⁴ Staff Working Document on Common methodology for State aid evaluation, SWD(2014) 179 final.

- (165) The evaluation plan sets out and explains two main methods (the ‘top down’ and ‘bottom up’ methods) that will be used in order to identify the causal impacts of the scheme, and discusses why these methods are likely to be appropriate for the scheme in question. Both methods, while quite different in nature, fundamentally aim to establish a counterfactual to market developments as they occurred because of the RESS support, against which to measure the causal impact of the aid.
- (166) Overall, the Commission believes the ‘bottom up’ method to be the more orthodox approach, as it relies on tried and tested ex-post counterfactual evaluation principles to assess the causal effects of aid. In particular, the method aims to compare the actual investment behaviour of the aid beneficiaries with that of an adequate control group consisting of comparable non-successful applicants. The proposed approach (difference-in-difference and RDD) is empirical in nature, employing data available at project level for both sets of actors and takes into account, to the extent possible, factors other than the RESS support that may also exert an influence on investment decisions into renewable projects in Ireland. Given that the approach works with individual data at project level, it can give insight into the distribution of outcomes (not only averages).
- (167) The “top down” approach towards electricity sector outcomes is a less empirical, more model driven assessment of investment behaviour, based on a stylised multi-period electricity market dispatch model, where the model parameters are updated over time to reflect actual cost and revenue developments. The Commission welcomes this second approach as a useful complement to the empirical (data driven) approach to assess the causal impact of the aid scheme on investment behaviour. In addition, the model will also allow to assess the magnitude of the non-RES electricity output displaced by the additional RES capacities due to the aid and hence to obtain an estimate of the CO₂ emissions avoided by the aid (in tCO₂ per year) as well as the cost of abatement (in EUR / tCO₂), both of which are highly relevant policy parameters.
- (168) The Commission also welcomes the use of supply curves constructed on the basis of bids submitted into a given RESS auction. Such supply curves can effectively inform the evaluator on the effectiveness of the aid, assuming the supply curves are reflective of the underlying cost curves²⁵. They can also form a good basis for running simulations of auction results when using different auction designs (for example with no technology preference categories). Separate supply curves can be drawn to see how, for instance, the supply curves differ by technology; year; geography/location; size of the projects; revenue characteristics; cost characteristics; community projects vs. non-community projects.²⁶

²⁵ Ireland has indicated that it will be established that this offer price curve reasonably represents underlying costs because the NRA will have tested for sufficient competitiveness as a precondition to running the auction(s) concerned. The Commission notes that also the evaluation of projects’ financial indicators and/or the use of more advanced forms of ‘auction econometrics’ can be used to assess the competitiveness of the auctions.

²⁶ In the same way as one can draw separate supply curves as described above, one can also go a step further and establish the statistical relationship between aid amounts/bid prices and the underlying factors (technology, year, location, ...) through regression analysis, provided sufficient are available.

- (169) The evaluation of projects' financial indicators (for example IRR, CAPEX, WACC, gearing levels and sourcing of equity and debt funding) can shed further light on the question of incentive effect and proportionality at project level, as well as the distribution of outcomes. They can also be informative as to how well the supply curve reflects the underlying cost curve (cf. previous recital).
- (170) Ireland also proposes a number of evaluation questions specifically addressing the novel aspects of this case, notably in relation to the community projects. Ireland envisages the use of surveys to obtain the necessary data, e.g. in relation to community acceptance. The Commission believes this to be a useful approach and welcomes the envisaged involvement of external experts from the IEA as well as academics in the design of the surveys.
- (171) The Commission notes that the evaluation will be conducted according to the notified evaluation plan by an independent evaluation body. Moreover, the envisaged publication of the evaluation plan and its results on a public website are adequate to ensure transparency.
- (172) The Commission also notes that Ireland plans to submit the final evaluation report by 31 December 2024.
- (173) The Commission therefore considers that the notified evaluation plan meets the requirements in EEAG point 28 and Chapter 4.

3.3.11. Conclusion on compatibility

- (174) In light of the above assessment, the Commission considers that the RESS is in line with the relevant provisions of the EEAG and pursues an objective of common interest in a necessary and proportionate way, the distortion of competition are limited, and therefore the aid is compatible with the internal market on the basis of Article 107(3)(c) TFEU.

4. CONCLUSION

The Commission has accordingly decided not to raise objections to the aid on the grounds that it is compatible with the internal market pursuant to Article 107(3)(c) of the Treaty on the Functioning of the European Union.

If this letter contains confidential information which should not be disclosed to third parties, please inform the Commission within fifteen working days of the date of receipt. If the Commission does not receive a reasoned request by that deadline, you will be deemed to agree to the disclosure to third parties and to the publication of the full text of the letter in the authentic language on the Internet site: <http://ec.europa.eu/competition/elojade/isef/index.cfm>.

Your request should be sent electronically to the following address:

European Commission,
Directorate-General Competition
State Aid Greffe
B-1049 Brussels
Stateaidgreffe@ec.europa.eu

Yours faithfully,

For the Commission

Margrethe VESTAGER
Executive Vice-President