IWEA response to the DCENR Renewable Electricity Support Scheme – Technology Review

Deadline: 11 September 2015

By e-mail to: ress@dcenr.gov.ie

Introduction

IWEA welcomes the opportunity to respond to the consultation on Renewable Electricity Support Schemes. The Renewable Energy Feed in Tariff (REFIT) has been very effective in delivering wind energy projects in Ireland, with 2395MW of wind generation currently installed. The guaranteed floor price provided by the scheme has provided certainty to investors in the industry in Ireland and has attracted significant investment. This has been achieved in a manner which does not place any additional burden on the consumer as the support paid through the Public Service Obligation (PSO) is offset by the reduction in wholesale energy prices which is attributable to wind generation. This has been shown in a number of studies/publications:

- The *Value of Wind Energy to Ireland*[1] study published in March 2014 by Pöyry, a leading international consulting and engineering consultancy, and Cambridge Econometrics. The analysis shows that if Ireland deploys wind capacity to meet 2020 targets the wholesale price will fall by €2.10/MWh by 2020 and that wind energy does not place a burden on the Irish consumer due to the net economic benefits of wind energy development.
- A Moody's Investor Services report[2] published in June 2015 stated that an increase in the number of onshore wind farms in use, will contribute to a fall in the wholesale power price in Ireland over the next three years.
- The European Commission confirmed in its *Working Document on Energy Prices and Costs*[3] published 17 March 2014 that "***for wind electricity in Spain and Ireland the benefits for electricity consumers in terms of reduction in whole-sale prices outweigh the costs of subsidies."***

IWEA acknowledges that the State Aid Guidelines call for a market based support mechanism and notes that:

"Aid is granted in a competitive bidding process on the basis of clear, transparent and non-discriminatory criteria, unless:

- Member States demonstrate that only one or a very limited number of projects or sites could be eligible; or
- Member States demonstrate that a competitive bidding process would lead to higher support levels (for example to avoid strategic bidding); or
- Member States demonstrate that a competitive bidding process would result in low project realisation rates (avoid underbidding)."

[1] http://www.iwea.com/index.cfm/page/industryreports?twfId=1467&download=true
[2] http://renews.biz/91036/irish-wind-to-blow-prices-down/
[3] http://ec.europa.eu/energy/doc/2030/20140122_swd_prices.pdf (Page 236)

Given the cost effectiveness of the Feed in Tariff that has been used in Ireland to date, IWEA would call on DCENR to assess the cost-effectiveness of the different options under consideration and to explore whether some of the exemptions outlined in the State Aid Guidelines might apply for Ireland. It is essential to ensure that compliance with the requirements under the State Aid Guidelines does not have an adverse impact on the consumer, in particular where there is scope for exemptions within these guidelines. Any analysis will also need to take into account the following:

- The risk associated with the different options and how this risk might be factored into any competitive bidding process;
- The level of competition/liquidity within a particular auction;
- The frequency of auctions that may be required; and
- The volume of capacity to be included in any auction.

The objectives of the support scheme need to be identified at an early stage to help to inform the analysis and decision making process

Objectives of the Support Scheme

The consultation paper outlines that the objective of a support scheme is "to incentivise the introduction of sufficient renewable generation to deliver the broader policy objectives such as security of supply, climate change and economic development in a cost effective manner to minimise the costs for consumers". IWEA welcomes this objective and the proposals, however further clarity on the objectives would be welcomed. The main objective of the support scheme should be to provide revenue certainty to those generating from renewable sources.

IWEA believes that the new support scheme will be required to help deliver the 2020 renewable electricity targets and further support targets to 2030. There will be clearer sight in Q1 2016 of the level of projects which will have accessed the REFIT 2 scheme. It is also possible that some of these projects may still fall away during the construction phase. We therefore encourage DCENR to ensure a follow on scheme is available without hiatus.

Apple's recent decision to locate a new data centre in County Galway demonstrates that Ireland is increasingly seen as an attractive location for large data centres powered by renewable energy. IWEA recently commissioned Pöyry to carry out an independent study showing the impact of increased demand on the electricity market "Future Wind Scenarios and Electricity Market Effect in Ireland"[4]. It was found that EirGrid have "identified a queue of up to 1,000MW of new data centres by 2020" The Pöyry study assess , 900MW of new demand from data centres, spread over three years, would result in a 20% increase in annual electricity consumption in Ireland between 2013 and 2020. Ireland's reliance on energy imports means that this demand growth could impose costs on the Irish electricity system and result in increased electricity prices, unless the demand is met by indigenous renewable energy sources, such as wind energy. The increasing levels of demand will have an impact on our 2020 targets along with the increasing demand from companies for renewable energy.

Ireland has an overall energy target of 16% of our energy to come from renewables by 2020. The electricity sector is best placed to achieve its allocation of this target. We believe we are now entering

4 file:///C:/Users/Mary/Downloads/Future_Wind_Scenarios___Electricity_Market_Effect_in_Ireland_Poyry_Report_-_March_2015.pdf

an opportune period to address any shortfall in the areas of heat and transport which is likely to arise and which could be met by the electricity sector. This needs to be taken into account when looking at the volumes of electricity from renewables to be supported.

Timescales

While IWEA welcomes the publication of this consultation we would like to highlight our concerns in relation to the timelines for the introduction of a new support scheme, and note that this process is already behind schedule. There is no margin for any additional delay in this process and we would urge DCENR to adhere to the timelines outlined within the consultation paper.

With the large number of projects expected to connect in the coming years it is essential that the gap between support schemes in minimised. REFIT 2 closes for application on 31st December 2015 and there is no clarity as to what will be in place for projects that do not meet this deadline. Concerns have been raised in relation to a number of issues which are outside the control of the developer, including delays in planning decisions from An Bord Pleanála and delays in the processing of grid connection modification offers, which could result in the deadline not being achieved for some projects. In the absence of certainty around a follow-on scheme there is a risk that these projects may not be able to proceed.

IWEA also stresses the importance of ongoing engagement with the European Commission in relation to the design of a new support scheme so that State Aid Approval can be achieved in as short a timeframe as possible. This approval process caused considerable delay when REFIT 2 was being introduced and led to a hiatus development within the wind industry while there was no support scheme in place. We would urge that the department learns from these past experiences and ensures that there is strong coordination with the Commission and that all information is provided in a timely manner. This will require the resources being available to respond to any queries which may arise throughout the approval process.

The introduction of a competitive process for larger projects as outlined by the State Aide Guidelines also would have implications for the timelines. Once the scheme is approved there will need to be a clear timeline for the competitive process be run. This will need to allow sufficient time for projects to understand the terms of the scheme and to put a tender together. If the scheme is expected to be implemented in 2016, it is unlikely that the first auction would take place before 2017. The timelines will also have to consider the construction timelines for these projects once they have been awarded support, as construction work will not commence until the developer is awarded the contract due to the allocation risk associated with a competitive process. A competitive process will, by its nature, take longer to run than the current application process under REFIT and these timelines will need to be factored in. IWEA specifically have concerns in relation to a hiatus in development between end December 2017 and Q4 2018; this comes at a time when there is likely to be pressure on achieving our renewable energy targets and therefore at a period where construction activity should be at it's greatest.

Regulatory Certainty

In general, Ireland has a good record in relation to regulatory certainty and, as a result, has become known as a good location for investment. Any new scheme that is introduced needs to also come with that regulatory certainty. There have been examples in other countries where changes to support schemes have been made soon after their introduction or where there has not been sufficient clarity in relation to the levels of support that would be available (e.g. the CfD in the UK), or even cases where changes have been applied retrospectively (e.g. Spain) and led to a complete halt in development. This level of uncertainty can halt the progress of development, or, at a minimum, significantly add to the cost of a project in terms of the risk premium. There is also a knock on impact on investor confidence which is vital to ensuring a vibrant renewable sector in Ireland Therefore we would urge DCENR to continue to show leadership in this area and to maintain the levels of policy and regulatory certainty for which Ireland is known.

Retrospective Change

There are some aspects of the investment landscape which have changed, or are in the process of changing, and which are significantly impacting the viability of existing projects, in particular those projects which are out of support. These include:

Additional costs:

- The proposed changes to commercial rates will result in a 200% increase of the rates bill for wind farms.
- The changes to the market structure which now require active participation of generators in the market. In particular for renewable energy technologies there is an additional cost of forecasting which will not apply to other technologies.
- The as yet un-known cost and risk of operating in the I-SEM market.
- Operation & Maintenance Costs,
- The introduction of Transmission Use of System (TUoS) charges. (*It is noted that these charges did not exist at the time AER projects submitted competitive bids)*

Reduction in revenues

Aside from the reduction in revenues associated with changes in market prices[5], there have been a number of policy changes which have led to reduced revenues for generators, below what they would not have legitimately expected at the time of investment:

- Reduction and uncertainty in capacity payments, and the possibility that wind generators may not be competitive in a capacity auction under the reliability options which are to be introduced.
- The introduction of constraint and curtailment, which did not exist, when the AER projects submitted competitive tender bids.
- The lack of indexation since the financial crises, which could not have been foreseen, when these project submitted competitive tender bids.

[5] The fall in the wholesale electricity price over the last 15-18 month is noted in this regard.

- The decision to remove compensation for curtailment in the market from 2018.
- Increased levels of outages and uncertainty around timing and possible compensation.
- The removal of LECs in the UK from the 1st August 2015 which contributed to the revenue stream for Out-of-Support generators. (*Only out of support could get LEC revenue)*

In the face of these additional costs and reduced revenues to generators which would not have been seen at the time of investment, the viability of some projects is now being called into question. IWEA has concerns that these projects may not be able to continue to operate under these tougher market conditions, and we would request that consideration be given to ensuring these projects can remain viable and continue to contribute to meeting our renewable energy targets. In Denmark there was an ongoing premium paid to renewable generation projects for 20 years which was designed to cover the balancing cost within the market, once the initial support period has closed. Consideration could be given to a mechanism to provide certainty for projects where changes to the operating conditions are introduced which would not have been anticipated when the investment was made.

There is approximately 800MW of projects which are out of support and subject to market revenues. These projects are contributing to our renewable electricity generation targets and most of them will continue to contribute towards our renewable energy targets in 2020 and beyond as long as the market conditions are appropriate. However, given the retrospective changes which have occurred since these projects were developed, and the expected further changes as outlined above the conditions are challenging for these projects to remain commercially viable.. It would not make sense for these projects to fall away, and where possible having to re-power at a much higher cost to the PSO, new projects would need to be developed in order to meet our 2020 targets at a higher cost to the consumer. An argument could be made for some sort of low support, which could depend on revenue obtained in any given year, for these projects to remain operational to the end of the technical lifespan.

Interaction with market design

The consultation outlines that the new support scheme is due to be implemented in 2016. In this timeframe the SEM will still be in place, however we will be moving to the new Integrated Single Electricity Market (I-SEM) structure in Q3/Q4 2017. It is essential that there is clarity in relation to how any scheme introduced will work under both market structures to ensure that there is no delay in project delivery while the market changes are being introduced. It is also very possible that, in the lifetime of the scheme, that a new market, or significant market changes, may be introduced. It is therefore crucial that the support scheme is designed in a manner which can work with any future market changes that may be introduced. The main objective of the support scheme should be to provide revenue certainty to those generating from renewable sources, irrespective of the market in which they are operating.

It is clear that there will need to be coordination on the interaction of any new support scheme with the I-SEM market. At this time there is still considerable uncertainty in relation to pricing, in particular in the Balancing Market. In the absence of a decision on the Energy Trading Arrangements at the time of drafting of this response, it is difficult to understand fully the interactions. It should also be noted that the new market design brings additional risk to variable generators with need for forecasting capability and balance responsibility compared to the current SEM. It is essential that there is coordination between DCENR and the Regulatory Authorities in the design of the support scheme to

ensure it doesn't distort the functioning of the market or introduce signals which may damage efficient operation of the market. There should be information provided on the roles and responsibilities of the different stakeholders in this regard.

It is also essential that there is clarity around the operation of a new support scheme in the transition period until the new market arrangements are introduced to ensure that projects can proceed. With 2020 being only 5 years away, and considerable build-out required between now and then, it is essential that any gaps between support schemes are minimised to the greatest extent possible.

Answers to the consultation questions

The answers to the following questions are generally framed with regard to the State Aid Guidelines, however, as outlined above, we would urge DCENR to carry out a detailed assessment to see if there may be more value to the consumer in continuing with the current approach of a feed in tariff.

Process Layout and Approach

1. ***Is the structure and approach to the process to develop the support scheme appropriate?***

IWEA supports the approach to develop the support schemes. As outlined above we stress the importance of the timelines being adhered to so that a new scheme can be in place as soon as possible after the closure of REFIT 2. We also highlight the need for close engagement with the CER in relation to market interactions, and with the European Commission in relation to State Aid approval.

2. ***Are there any additional considerations to build into the process plan?***

As outlined above, consideration needs to be given to the timelines required to run a competitive process if that option is selected, and following on from this the timelines required to construction. By the time the scheme is approved at a European level (end 2016 as outlined in the consultation document) there will be significantly less time available to build the projects required to meet our 2020 targets.

We believe that the programme around the I-SEM design should be factored into the process for the support scheme design also given the clear interactions between both workstreams.

Policy Context

3. ***Are there any additional aspects, such as policies, publications or reports that should be considered?***

We note the broader benefits to renewable energy such as the reduced emissions. There cannot be a level playing field for renewable energy technologies until there is an adequate price of carbon.

Contribution to shortfall of heat and transport

Ireland has an overall energy target of 16% of our energy to come from renewables by 2020. The electricity sector is best placed to achieve its allocation of this target. It is now time to address to any shortfall in the areas of heat and transport which is likely to arise which could be met by the electricity sector. This needs to be taken into account when looking at the volumes of electricity from renewables

to be supported. IWEA notes that a review of the National Renewable Energy Action Plan (NREAP) is due this year. This will require a detailed and realistic assessment of the progress towards the targets in the areas of electricity, transport and heat. IWEA urges that DCENR take this opportunity to carry out an objective analysis and clearly outline whether there is a need for additional renewables in the electricity mix. Wind generation can contribute to the shortfall in other targets, however the policies and targets have to be identified now in order to ensure development for 2020.

Increasing levels of demand

Apple's recent decision to locate a new data centre in County Galway and further facebook's Plans to site a data centre in County Meath, demonstrates that Ireland is increasingly seen as an attractive location for large data centres powered by renewable energy. IWEA recently commissioned Pöyry to carry out a study showing the impact of increased demand on the electricity market "Future Wind Scenarios and Electricity Market Effect in Ireland"[6]. According to the study, 900MW of new demand from data centres, spread over three years, would result in a 20% increase in annual electricity consumption in Ireland between 2013 and 2020. Ireland's reliance on energy imports means that this demand growth could impose costs on the Irish electricity system and result in increased electricity prices, unless the demand is met by indigenous renewable energy sources, such as wind energy. The increasing levels of demand will have an impact on our 2020 targets along with the increasing demand from companies for renewable energy.

Given that many data centres are seeking to be able to demonstrate that they are powered 100% by renewables, consideration should be given in the new support scheme to how the Guarantees of Origin or similar certifications can be used to achieve this.

When does a support mechanism not fall under the State Aids process?

IWEA would take this opportunity to raise the question as to what is considered support in this consultation. If a competitive process is run and the results are such that the strike price is below that of conventional generation, is this considered to be support under the State Aid process, or does this fall under a different process? Due to the capital intensive nature of wind generation, there is significant value in long term contracts for these projects, however is the provision of long term contracts considered to be support?

4. ***Are there any particular support schemes in other Member States that would be beneficial to consider in an Irish context? If so please provide evidence and reasoning.***

IWEA will consider responding to this aspect as this consultation process progresses.

Learning from other Member States

IWEA would urge that DCENR look at the experiences in other member states and learn from the experiences of where things have not worked well. In particular the recent introduction of the Contracts for Difference (CfD) scheme in the UK has provided some valuable experience which should

6 file:///C:/Users/Mary/Downloads/Future_Wind_Scenarios___Electricity_Market_Effect_in_Ireland_Poyry_Report_-_March_2015.pdf

be taken into account in the design of any new scheme. Some learning outcomes from this process include the following:

- A clear development and implementation plan is required in order to build confidence in the regime.
- While eligibility criteria help to minimise speculative bidding, it should be noted that eligibility criteria tend to favour larger players, therefore consideration needs to be given to the participation of smaller players under this type of scheme.
- A number of projects were successful in the allocation round which were then unable to proceed to the next round as the clearing price was not sufficient for these projects. Categorisation is therefore a required consideration.
- Clarity is required in relation to the size of the budget and the frequency of the allocation rounds assuming the absolute need for allocation rounds in the first instance Transparency is required around the budget setting process. The budget for all pots needs to be visible at the very least two rounds in advance.
- Flexibility is required in relation to the milestone delivery date. All appropriate costs, including enabling infrastructure, should be considered in any spend requirement.
- The current CfD process was dealing with an existing pipeline of projects which already had sunken costs. It is not yet clear if this mechanism is sufficient to attract new investment.
- It is not yet clear how the allocation risk and the construction risk will impact on the cost of capital.

These are just some examples of the learnings and we would urge caution in the development of any new support scheme, even one based on a mechanism that exists elsewhere.

The Irish Experience of Tenders

Ireland has previously used the tender approach in selecting renewable energy projects. The Alternative Energy Requirement (AER) programme was launched in 1996 and was the first step towards a market support for renewable energy as part of the Department's programme to promote the generation of electricity from renewable resources. In total 4 tenders were held for wind energy projects between 1996 and 2003: AER I, AER III, AER V and AER VI.

The AER contracts were allocated in a number of rounds. AER I aimed to secure 75MW of electricity generation capacity from renewables. 34 projects were selected to receive the offer of Power Purchase Agreements (PPA's) from the ESB. 22 projects were commissioned with a total installed capacity of 70.62MW, of which 45.8 MW was wind electricity generation capacity.

The Third Alternative Energy Requirement competition (AER III) was launched in March 1997 and the results were announced in April 1998. The original target was to provide 100 Megawatts of new electricity generation capacity. In order to allow for possible fall-out, contracts for 158.75MW, including 137.33 MW of wind, were provided for. In total, 30 projects were selected to receive the offer of Power Purchase Agreements from the ESB for a period of 15 years. A total of 11 projects were constructed including 6 windfarms, 4 small-scale hydro schemes and one Biomass landfill gas project. Of the 137.33MW of wind offered contracts, only 42.11 Megawatts in electricity generating capacity

was added to the national grid as a result[7]. The big fallout was due to speculative bids, which were not economically feasible, being awarded contracts. This clearly shows that, despite allowing for some fall-out in the design of the scheme, the tender process did not deliver the capacity that was needed.

AER 3 provides a good example of how the tender process does not always work well. 137.33 MW of wind capacity was made available under this round, however less than 50% of the required capacity and less than 30% of the contracted capacity was actually built. This was due to companies bidding tenders which were unrealistic and were then unable to meet the commitments. This led to a considerable under-utilisation of the available capacity and resulted in a lower build out than expected.

AER V offered contracts for 240MW of wind but only 44.345MW was built. This was quickly followed by AER VI, which, even though a competitive bidding, offered a better price and indexation.

The last round of competitive tendering occurred in 2005. Experience from the tender process showed that this is not necessarily the most efficient process, in particular in smaller markets with limited competition. There was an acknowledgement that a more efficient way of incentivising investment in renewables was required, leading to the introduction of a feed-in-tariff. The first REFIT scheme ('REFIT 1') was announced in 2006 and state aid approval was obtained in September 2007. REFIT 1 also became the first time, evidence of planning permission, land-lease and a grid connection offer was required. The introduction of REFIT has seen increased development in wind energy due to the certainty it provides, and as discussed in the Commission's Energy Prices paper the cost of the scheme is outweighed by the benefits. This scheme has worked well in Ireland through the delivery of efficient development and in good quantities. There is also a reduced administrative burden associated with this approach which is of benefit as RES projects tend to be quite small in scale in comparison to other generation technologies.

General Comments on Tenders

Tender-based approaches have had mixed results in the past and there is no evidence that this is the most cost effective way to deploy renewables. They rely on sufficient competition and the significant upfront costs with no certainty of return can be a significant barrier to entry.
IWEA is concerned that the tender process may create a barrier to entry for smaller projects and developers. The resources required to carry out the work for a tender bid are quite substantial and would be very risky to take on with no guarantee of your project being selected. There is significant risk for all project developers, large and small, which will have a knock-on impact on the availability of finance, and result in reduced levels of development. The tender process is also perceived to be a barrier to smaller players due to the larger resource requirements upfront with little guarantee of success.

Technology related

5. What technologies should be considered for support?

IWEA believes that support should be considered for **all** renewable technologies as defined in the RES Directive, however there should be a focus on the most cost effective technologies. Consideration

[7] AER Programme 2005

should be given to support for technologies which are in earlier stages of development. Other funding options should be explored such as European funding for demonstration projects which will allow technologies in the demonstration phase to come to fruition without having a significant impact on the PSO. The volume of support provided to these technologies should also be capped to ensure the customer isn't exposed.

Ireland has the best wind resource in Europe and, being the most cost effective renewable technology, wind has a considerable role to play in meeting Ireland's climate and energy ambitions.

6. ***What are the likely characteristics of deployment?***

   a. Is there a range of potential deployment characteristics, for example in terms of technology type, installed capacity, fuel etc?

   b. What is the anticipated energy yield of the technology?

IWEA believes that DCENR should commission an independent assessment of the deployment characteristics of the different technologies to ensure that same criteria are being used for assessment and there are no differences in the methodologies being used.

While the traditional characteristics of wind energy are well known, it should be noted that due to continued improvements in technologies, many sites which were previously unsuitable are now becoming viable for wind energy projects.

7. ***What potential categorisation of technologies would be appropriate?***

Consideration should be given to having categories for well-established and less-established technologies. We would reiterate the importance of the most cost effective technologies continuing to be supported, while at the same time providing a route to market for less established technologies and ensuring that lessons are learnt from the GB CfD auctions which resulted in a number of projects not progressing despite successful bids due to inadequate pricing.

The State Aid guidelines note that:

"Aid may be granted without a competitive bidding process as described in paragraph (126) to installations with an installed electricity capacity of less than 1 MW, or demonstration projects, ***except for electricity from wind energy, for installations with an installed electricity capacity of up to 6 MW or 6 generation units****"*.

IWEA proposes that for installations below this threshold there should be a Feed in Tariff in place. It is not appropriate for projects of this scale to compete with larger projects under a competitive process. However it is important that smaller scale projects are commercially viable as they provide significant benefits in their own right. From microgeneration to small community based projects the benefits – both social and environmental - need to be recognised:

- Consumers can engage in renewable energy themselves and make a contribution towards our sustainable energy future.

- The ability for consumers and communities to engage in energy production promotes wider acceptance of infrastructure among communities as well as increased awareness of energy use.
- Communities can come together to develop renewable energy projects.
- In the absence of more direct support for smaller projects, communities and consumers may feel excluded from participation in the energy transition, which is in sharp contrast to the sentiment behind the forthcoming White Paper of Empowering the Energy Citizen.

There is significant interest in smaller projects in Ireland, however in the absence of access to support many of these projects are not currently going ahead. IWEA has previously put forward the case for different funding options for microgeneration as we see this as being a crucial aspect to local acceptance of energy projects. By having a support scheme in place there is also an opportunity to ensure that the supported installations and equipment are of a suitable standard. An example of this is available from the UK where supported microgeneration installations must achieve the microgeneration certification standard.

Optimisation of Sites

There has been some discussion in relation to the optimisation of sites such that more efficient use can be made of the grid connection. There are a number of complexities associated with this, however IWEA proposes that consideration should be given to this.

8. How could technologies that can generate heat and electricity be best supported?

N/A

9. What is the levelised cost of energy (LCOE) per MWh for each category? Do you foresee these costs changing – how and over what timeframe? Please provide a breakdown of what costs have been included and how these costs have been derived.

IWEA believes that DCENR should commission an independent assessment of the levelised cost of energy (LCOE) of the different technologies to ensure that same criteria are being used for assessment and there are no differences in the methodologies being used. In the absence of Irish information, reference could be made to the DECC publication "Electricity Generation Costs 2013"[8] which provides a useful overview of the costs of different technologies.

It should also be noted that the design of the scheme will have an influence on the costs and this needs to be taken into account.

10. Should repowering of existing sites be considered?

a. If so how would the cost of deployment vary from the use of new technology?

[8] https://www.gov.uk/government/publications/decc-electricity-generation-costs-2013

b. What types of repowering could occur?

Consideration should be given to the repowering of existing plant, however it is essential that any budget which is available for renewable electricity support is best used to ensure that the renewable energy targets are met.

Any support of repowering needs to ensure that there is value to the consumer. There is an efficiency in repowering sites which already have grid connections in place. During the lifetime of this support scheme it is likely that a number of wind farms will come to the end of their mechanical operational life, as well as many Out-of-Support projects may find the arrangement of ISEM more challenging, Rather than these sites decommissioning and no longer contributing to the targets, there would be a value in supporting the repowering of these projects, where technical and environmental possible.

11. Should the use of reconditioned plant and equipment be supported?

a. If so how would the cost of deployment vary from the use of new technology?

IWEA believes that there should be no distinction between the use of reconditioned equipment or new equipment, but notes that the risks associated with this would need to be borne by the generator.

Eligibility

12. Based on the guidelines for state aid, what aspects of the cost of deployment should be eligible for support?

IWEA notes that all normal costs associated with the business should be taken into account so that when there are significant changes to any of the associated costs the generator remains protected. A case in point is the ongoing commercial rates revaluation process where wind farms are seeing a 200% increase in the commercial rates for a windfarm. This is not taken into account in the support scheme and has the potential to leave generators exposed to much higher costs than was anticipated at the time of investment.

13. Is the current definition of eligible electricity appropriate?

IWEA requests that consideration be given to support for electricity consumed on site, for example in an Autoproduction facility where electricity is generated on site for use on site, and where surplus energy is exported to the grid. The current REFIT scheme only pays for exported electricity. This does not recognize the green value of the energy consumed on site.

14. What criteria should be utilised to assess eligibility for support?

a. Are there any particular criteria that should be applied to individual technology categories?

IWEA notes that this is a critical aspect in relation to the development of a new support scheme, however we also believe that the appropriate criteria will depend on the scheme chosen. Therefore we propose that this be consulted on in further detail once an assessment of the most appropriate scheme has been carried out.

Support mechanism

15. Do you think a single support mechanism should apply to all applications?

As outlined above we think consideration should be given to support for **all** technologies. There should also be options for funding projects which are in the demonstration phase to provide a route to market for new technologies. Consideration should be given to other funding mechanisms which will not significantly impact the PSO.

We would also request that generation below the thresholds outlines in the State Aid Guidelines be funded through a Feed in Tariff, as it is not appropriate for generation installations below this threshold to be expected to compete with larger scale projects.

16. What are the key components you would like to see in the support mechanism?

The following are the key components IWEA would like to see in the support mechanism:

- Transparent allocation methodology.
- Provision of long term, clear, stable and predictable revenue streams for investors in low-carbon electricity generation.
- Creating sufficient certainty for investors is a key objective of new support mechanism. It is important to provide investors with a sufficiently clear understanding of the regulatory environment that will govern their operations.
- Grandfathering, supporting the principle of no retrospective change to low-carbon policy incentives, within a clear and rational planning cycle;
- Provision of an efficient and stable framework for investors, ensuring that the cost of capital required for new low-carbon generation capacity is low. The support mechanism must reduce the cost of capital by removing long-term electricity price exposure.
- The support must be resilient and ensure revenue adequacy under a range of economic scenarios over the lifetime of the support (for example: fossil fuel prices and inflation).
- It must be complementary with other market arrangements **over the lifetime of the support** (i.e. it must work with I-SEM and any replacement of the same during the lifetime of the support).
- If the new Renewable Energy Support Scheme is to be successful in meeting the investment challenge, investors also need to have confidence in the stability and certainty of the overall policy framework for decision making on the construction and operation of major energy projects (planning etc).

17. Taking account of the objectives of the new scheme what type of mechanism do you think would achieve this within the overall objectives of the scheme and the State Aid guidelines?

IWEA believes a clearer understanding of the objectives is required. We also reiterate the request for DCENR to carry out an analysis to ascertain whether the current REFIT scheme may still be appropriate in terms of delivering value to the consumer.

Allocation

18. Do you consider that the State Aid guidelines will necessitate a competitive bidding process for allocation?

IWEA believes that this is something which should be assessed by DCENR in discussion with the European Commission, however we propose that the opportunities for exemptions from the competitive process should be explored. The State Aid Guidelines state that:

"Aid is granted in a competitive bidding process on the basis of clear, transparent and non-discriminatory criteria, **unless**:

- Member States demonstrate that only one or a very limited number of projects or sites could be eligible; or
- Member States demonstrate that a competitive bidding process would lead to higher support levels (for example to avoid strategic bidding); or
- Member States demonstrate that a competitive bidding process would result in low project realisation rates (avoid underbidding)."

Given the cost effectiveness of the Feed in Tariff that has been used in Ireland to date, IWEA would call on DCENR to assess the cost-effectiveness of the different options under consideration and to explore whether some of the exemptions outlined in the State Aid Guidelines might apply for Ireland. It is essential to ensure that compliance with the requirements under the State Aid Guidelines does not have an adverse impact on the consumer, in particular where there is scope for exemptions within these guidelines.

19. Do you foresee any exemptions under the conditions outlined in the State Aid guidelines?

IWEA believes that this is something which should be assessed by DCENR in discussion with the European Commission as outlined in response to Question 18.

20. Do you have any concerns regarding the introduction of a competitive bidding process and how do you see these concerns being addressed?

As with any competitive process there is concern in relation to allocation risk. There are considerable costs associated with getting a project to the stage where it can put a tender together and, if unsuccessful, these costs will not be recovered.

The recent introduction of the CfD in the UK has provided some valuable experience which should be taken into account in the design of any new scheme. Some learning outcomes from this process include the following:

- A clear development and implementation plan is required in order to build confidence in the regime.
- While eligibility criteria help to minimise speculative bidding, it should be noted that eligibility criteria tend to favour larger players, therefore consideration needs to be given to the participation of smaller players under this type of scheme.

- A number of projects were successful in the allocation round which were then unable to proceed to the next round as the clearing price was not sufficient for these projects. Consideration would need to be given as to how this can best be addressed.
- Clarity is required in relation to the size of the budget and the frequency of the allocation rounds. Transparency is required around the budget setting process. The budget for all pots needs to be visible at the very least two rounds in advance.
- Flexibility is required in relation to the milestone delivery date. All appropriate costs, including enabling infrastructure, should be considered in any spend requirement.
- The current CfD process was dealing with an existing pipeline of projects which already had sunken costs. It is not yet clear if this mechanism is sufficient to attract new investment.
- It is not yet clear how the allocation risk and the construction risk will impact on the cost of capital.

These are just some examples of the learnings and we would urge caution in the development of any new support scheme, even one based on a mechanism that exists elsewhere.

As outlined in the introduction of this response, an auction process will take additional time compared to an application process as currently available under REFIT 2. If the scheme is expected to be implemented in 2016, it is unlikely that there will be an auction before 2017. There is a risk of a development hiatus until the developer is certain that they have won the auction.

We refer to our answer to question 18 in this respect to clarify to what extent competition is required and hence developed (i.e. are allocation rounds appropriate etc.)

Scheme Limits / Cost controls

21. What would be appropriate scheme limits to introduce – should it be a single limiting factor or a combination including volume, capacity or budgetary?

The scheme needs to be of a sufficient size to ensure that the 2020 targets can be met, and as information on 2030 targets becomes available this should also be taken into account. In addition, if the contribution of electricity is to increase to make up for a shortfall in the area of heating and transport, this will need to be taken into account in the volume requirement.

In relation to support for small scale developments or demonstration projects a budgetary cap may be more appropriate.

In the event that projects do not deliver there needs to be an effective methodology for recycling available support in a timely manner to ensure that projects which can deliver have access to the scheme where other projects fall away.

22. What would be appropriate backstop dates for the scheme given the pipeline of potential projects and estimated connection timeframes?

The backstop date will depend on the design of the scheme chosen. We would urge that the support scheme be introduced for sufficient time so as to allow certainty to the industry going forward and to

reduce the risk of a gap between schemes again in the near future. IWEA believe that the issue of connections post Gate 3 need to be appropriately considered in this regard.

23. Does the 15 year support duration still remain an appropriate support period and if not why?

The 15 year support currently in place has worked well for the delivery of projects. If the timeline is reduced the magnitude of the payments is likely to increase to ensure that the required revenues are attained in the duration of the support scheme. Conversely a longer duration will have lower payments. The cost of capital will also need to be considered when selecting the support scheme duration.

24. Should a project be eligible to receive support under RHI and the electricity support scheme and if so how might this be structured?

It is important to ensure that there is a level playing field for projects entering a competitive process for support.

Tariffs

25. Given your submission to the allocation methodology, do you have any suggestions on the process for determining tariffs?

It is important to ensure that any tariff introduced has an appropriate inflation mechanism which will reduce the volatility of bids which would otherwise include assumptions over future inflation.

26. Do you think that degression should be introduced to a new support scheme and if so please suggest if only for certain categories? If so, how you see it being introduced such as degression methodology and degression periods?

Under a competitive process the tenders which are submitted are likely to account for any reduced costs associated with improving technologies, provided there is sufficient liquidity in the competition.

For categories where there is no competitive process, such as smaller scale projects under a feed in tariff, further consideration should be given to a degression methodology. Any methodology needs to be defined in a clear and predictable manner and needs to be properly considered. The overall objective of ensuring project build out needs to be kept in mind when determining a degression methodology. IWEA does not support quarterly degression analysis, and further we support pre-accreditation which allows a project to lock in its tariff in order to support financing and construction with a degree of certainty over future revenues.

27. Should the tariff retain an element of reference to market revenues?

In general, IWEA supports the proposal that the tariff retains an element of reference to market revenues, however this will depend on the mechanism which is chosen. This is a question which would be better dealt with in a follow-on consultation.

Summary

IWEA welcomes the opportunity to respond to this important consultation for the electricity industry going forward. In a country that is so reliant on imported energy sources, the importance of a move to a sustainable electricity system cannot be emphasised enough. The existing REFIT schemes have been very effective at delivering renewable energy projects in a cost effective way, and it is essential that the introduction of any new support scheme is compared with the effectiveness of the current scheme.

The timelines of the introduction of a new support scheme are critical given that the deadline for applications to REFIT 2 is 31 December 2015. It is essential that the gap between schemes is minimised to the greatest extent possible and that there is strong engagement with the European Commission and the Regulatory Authorities throughout the development phase.

IWEA looks forward to continued engagement with DCENR in relation to the development of any new support scheme and remains at your disposal should you have any questions in relation to this response. Given the importance of the development of a new support scheme we request to meet with DCENR for further discussion on this topic.