Department of
Enterprise, Trade
and Investment
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Discussion Paper

CFD Implementation in NI–Strategic issues Discussion Paper

27 March 2015

Contents

Ministerial Foreword
Page 3

1
Introduction
Page 4

2
Strategic Issues
Page 7

Annex A
Summary of the emerging findings from the Assessment of Costs and Benefits of the Executive's target of 40% electricity consumption from renewable sources by 2020
Page 13

Annex B
List of issues that DETI is seeking views on
Page 18

FOREWORD

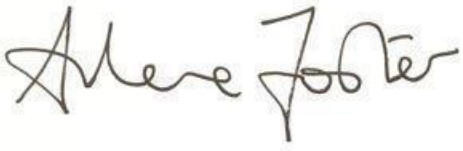
The publication by the Department of Energy and Climate Change of a Call for Evidence on how the Contract for Difference (CFD) scheme could work in Northern Ireland is an important milestone.

The UK Government is introducing a new 'Contract for Difference' scheme to reduce the cost of supporting renewable and low carbon electricity deployment. The Call for Evidence seeks views on the technical modifications to the CFD scheme required for this to be extended to Northern Ireland. But these are complex issues and before we commit irrevocably to our policy approach it is sensible to step back and look at the strategic issues.

This is what I hope to do by issuing this strategic issues discussion paper.

The CFD scheme raises difficult questions for Northern Ireland in terms of cost to electricity consumers, our ability to operate devolved energy policy, the further contribution we should make to renewable targets and the economic impact of renewables.

We have been very successful in achieving the Executive's 2015 Programme for Government target of 20% renewable energy generation. It is a tribute to the renewables sector that it has risen to the challenge of delivering green energy to meet a significant portion of our needs. Nonetheless, looking to the future I have to be mindful of affordability. This is why I'm seeking your views.



Arlene Foster MLA
Minister of Enterprise, Trade and Investment

INTRODUCTION

Purpose of this discussion paper

1.1 The purpose of this discussion paper is to seek views on the specific NI strategic policy issues that implementing the Contract for Difference (CFD) scheme in Northern Ireland (NI) will bring for NI consumers and renewable electricity generators in NI.

1.2 The CFD scheme was introduced in GB in 2014, as part of UK-wide Electric Market Reform (EMR), and plans to implement a consistent CFD scheme in NI continue to be taken forward in line with previous announcements. The Department of Energy & Climate Change (DECC) issued a Call for Evidence on the implementation of the CFD scheme in NI on 23 March 2015 covering the four main elements of the scheme i.e. institutional arrangements, allocation, the CFD contract and the supplier obligation. A link is attached; stakeholders are encouraged to read it in conjunction with this document.

https://www.gov.uk/government/consultations/call-for-evidence-implementation-of-contracts-for-difference-and-the-supplier-obligation-in-northern-ireland

1.3 Renewable electricity generation has grown rapidly in recent years and the Executive's Programme for Government target of 20% renewable electricity by 2015 has all but been reached. Expenditure, levied on consumers' bills, has supported this growth in renewable electricity.

1.4 The UK-wide mechanism for incentivising renewable electricity production has been the Renewables Obligation (RO), since 2002 in GB and 2005 in NI, which provides non-competitive support to technologies which would otherwise be unable to compete with conventional generation. HM Treasury has placed a cap on this support through the Levy Control Framework (LCF), which sets annual limits on the overall projected cost of all low carbon electricity consumer funded policies, including the CFD scheme.

1.5 The objectives of EMR are to reform the electricity market in response to the challenges facing the electricity sector including:

- The very rapid closure of existing capacity as older, more polluting plant go offline;
- Our generation mix needs to respond to the challenge of climate change and meet our legally-binding carbon and renewable targets;
- Electricity demand is expected to continue to grow over the coming decades as we increasingly turn to electricity for heat and transport.

EMR therefore is designed to enable the UK to reform the way that renewable electricity generation is supported and introduce support for non-renewable technologies. CFDs should reduce the cost of meeting the UK's renewable and decarbonisation targets by providing generators with a stable price for their electricity, and through competition for contracts ensuring that the best value for money projects receive support.

1.6 CFDs will be replacing the Renewables Obligation in GB as the main way of supporting large–scale renewable electricity generation and it is intended that it will also replace the Northern Ireland Renewables Obligation (NIRO). As a result the NIRO, together with the RO in England & Wales and the Renewables Obligation Scotland (ROS) will close to new generation on 31 March 2017.

1.7 It is the ambition that NI generators will have access to an allocation round in October 2016 and payments to successful applicants would commence from 1 April 2017. However, the Minister may reconsider NI's strategic approach in the context of the scheme in light of views provided.

1.8 This discussion document sets out strategic NI issues on CFD implementation. If you wish to provide your views you should do so by **5pm on 8 May 2015.**

How to respond

1.9 Responses should be sent, preferably by email, to:

emr@detini.gov.uk

or by post to:
Renewable Electricity Branch
Department of Enterprise, Trade and Investment
Netherleigh, Massey Avenue
BELFAST
BT4 2JP

All responses should include the name and postal address of the respondent.

Confidentiality & Data Protection

1.10 Your response may be made public by DETI and placed on the DETI website. If you do not want all or part of your response or name made public, please state this clearly in the response by marking your response as 'CONFIDENTIAL'. Any confidentiality disclaimer that may be generated by your organisation's IT system or included as a general statement in your fax cover sheet will be taken to apply only to information in your response for which confidentiality has been specifically requested.

1.11 Information provided in responses, including personal information, may be subject to publication or disclosure in accordance with the access to information regimes (these are primarily the Freedom of Information Act 2000 (FOIA) and the Data Protection Act 1998 (DPA)). If you want other information that you provide to be treated as confidential, please be aware that, under the FOIA, there is a statutory Code of Practice with which public authorities must comply and which deals, amongst other things, with obligations of confidence.

1.12 In view of this, it would be helpful if you could explain to us why you regard the information you have provided as confidential. If we receive a request for disclosure of the information we will take full account of your explanation, but we cannot give an assurance that confidentiality can be maintained in all circumstances. An automatic confidentiality disclaimer generated by your IT system will not, of itself, be regarded as binding on the Department.

Copies of the document

1.13 This document is being produced in electronic form and may be accessed on the DETI Energy website: www.energy.detini.gov.uk or may be obtained from the address above or by telephoning 028 9052 9240.

1.14 If you require access to this Statutory Consultation document in a different format – e.g. Braille, disk, audio cassette, larger font – or in a minority ethnic language please contact the Department on 028 9052 9240 and appropriate arrangements will be made as soon as possible.

STRATEGIC ISSUES

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Strategic policy issues for Northern Ireland arising from the CFD scheme

2.1 The principle of being part of a UK-wide CFD scheme means that no region of the UK has guaranteed renewables deployment. There are benefits to all parts of the UK by meeting UK-wide renewable and decarbonisation targets[1], regardless of the location of generation. These benefits include climate change mitigation, helping to meet Member State EU targets, supporting least cost renewable generation and supply chain benefits which are not necessarily co-located with generation location.

2.2 The costs of supporting renewable electricity generation are already socialised across the UK through the RO. Under the current RO, GB consumers make a net contribution towards deployment in NI because a greater proportion of ROCs are awarded to generators in NI than are paid for by NI suppliers.

2.3 As a non-competitive scheme the RO supports all eligible renewable projects that deploy. By contrast, the CFD scheme is based on competitive auctions (to ensure that the UK consumer pays the lowest cost for renewable generation). In short, renewable development will take place within the UK wherever it is most economic. It cannot therefore be known in advance what proportion of contracts will be allocated to NI generators.

2.4 This also means that there is no basis for the Executive to set a NI renewable target. Instead it would contribute to the UK target. Despite the commitment to the 40% target by 2020, there is no EU driver for this.

2.5 The NI Executive has already agreed that if a 2030 statutory decarbonisation target is decided in 2016, this should be extended to NI. In addition, there are a number of other drivers for renewable deployment. These include the UK's target

[1] The UK targets are for 15% renewable energy by 2020. This target is to be met from heat, transport and electricity. The UK does not have a specific renewable electricity target but for modelling purposes it is assumed that 30% renewable electricity is required to meet the 15% wider energy target.

under the Climate Change Act 2008 to reduce greenhouse gas emissions by 80% by 2050; the framework of statutory carbon budgets; the 2020 UK wide renewables targets; the LCF envelope; and the indicative budget announcements for the CfD scheme.

DETI is seeking views on:
1. The impact on the renewables industry in NI in the absence of a local renewable electricity target.

Future deployment of renewable electricity in NI

2.6 The principle of least cost development is embedded within the CFD scheme and the CFD allocation process is designed to ensure least cost decarbonisation across the UK. The CFD competitive auction process will determine the most cost effective renewable projects and these may not necessarily be in NI.

2.7 Whilst securing a portfolio of the most cost effective renewable projects in the UK means that more projects can be supported from within the LCF limits, it does mean that there could be a much reduced level of renewable deployment in NI and no direct economic benefit.

DETI is seeking views on:
2. If it matters that there is no guaranteed level of renewable deployment and economic benefit in NI (and indeed a possibility of very limited deployment of new renewable projects here) as long as the power sector is being decarbonised at least cost across the UK.

2.8 The CFD auctions will provide visibility of the pipeline of contracted projects as auctions progress. Going forward this is likely to impact on the grid planning process in NI, as projects are only eligible to compete for CFDs if they have planning permission and a grid connection agreement prior to application to a CFD allocation round.

2.9 It will be a matter for the NI Utility Regulator in due course to decide how to factor competitive CFD allocation rounds into the regulatory price control process.

2.10 The potential absence of a future local NI target for renewable electricity will need to be considered by both NIE and the Utility Regulator going forward. NIE has a duty to develop and maintain an efficient, co-ordinated and economic electricity network and any proposals for grid strengthening would have to be considered by the Utility Regulator in that context.

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DETI is seeking views on:
3. Potential regulatory impacts in the absence of a NI renewable electricity target.
4. The ability of NI generators to compete in CFD auctions.

Cost to consumers

2.11 The implementation of a UK-wide CFD scheme in NI will mean additional costs for NI consumers. But the costs for the UK as a whole will be significantly lower than if national renewable and decarbonisation targets were met through the RO scheme.

2.12 CFDs are paid for through a supplier obligation which is a levy on electricity suppliers, the cost of which is assumed to be passed on to consumers. It will be imposed evenly across all UK suppliers. Under the current proposals, all UK suppliers would pay the same £/kWh cost for meeting UK-wide decarbonisation and renewable targets, which we assume would result in the same £/kWh impact on bills for GB and NI consumers.

2.13 It is important to remember that NI consumers have benefited from lower costs under the RO mechanism since 2005 due to the lower obligation imposed on NI suppliers compared to those in GB, and this will continue throughout the lifetime of the NIRO. Under the CFD scheme, increasing renewable deployment across the UK and the lack of a discount factor that NI benefited from under the RO means that the direct cost of renewables support[1] (which currently accounts for £17.25 (2.9%) of an average domestic annual electricity bill) could see an almost three-fold increase by 2020[2], compared with a two-fold increase for GB consumers. However, NI consumers will still be paying less for large scale renewables support in 2020 than GB consumers.

2.14 Renewables support costs for industrial and commercial customers is also forecast to increase, and could represent between 7% and 9% of bills (depending on their consumption) by 2020.

Electricity intensive industries

2.15 The UK Government intends to exempt the most trade exposed and electricity intensive industries (EII) from some of the costs of the CFD scheme, subject to

[1] These figures do not account for any wholesale price benefits from renewable and low carbon deployment. Note that under CFDs support will also be provided for certain low carbon non-renewable generation.
[2] £17.25 is NIRO cost in Power NI 2014/15 tariff. Source: Utility Regulator. Estimated cost of renewable support in 2020 is made up of the following elements; NIRO £24 (DETI estimate as half of GB RO of £48); CfDs £30; Total £54 on bills in 2020. Source: DECC Table D2 https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/384404/Prices__Bills_report_2014.pdf

State Aid approval. In addition, as a condition of State Aid approval for the CFD scheme for renewable, the UK Government agreed to exempt eligible imported renewable electricity from contributing to the costs of CFDs. It is intended that the EII and imported renewable electricity exemptions will both apply UK-wide from the point at which NI enters the scheme.

2.16 Initial indications suggest that very few, if any, large energy users in NI will meet the qualifying criteria for the exemption which is based on electricity intensity. Further information on the qualifying criteria can be found at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/395809/bis-15-31-electricity-intensive-industries-relief-from-the-indirect-costs-of-renewables-government-response-to-the-public-consultation.pdf

Small scale renewables

2.17 In relation to small scale renewables, DETI continues to discuss with DECC how Northern Ireland generators and suppliers can participate in the existing GB small scale Feed-In Tariff (FIT) following closure of the NIRO. A review by DECC of the small scale FIT is due to be undertaken during 2015 and DETI has received assurances that Northern Ireland's integration into the FIT will be considered as part of the review. The outcome of the review will not be known until the end of 2015 at the earliest. Further clarity cannot be provided until the outcome of DECC's review is known. DECC estimates that the total costs of the small scale FIT scheme in 2020 will add £14/year for GB consumers. It cannot be known at this stage what the cost to the NI consumer will be if NI joins the small scale FIT but it is anticipated that it would be no more than the cost to the GB consumer.

Administrative costs

2.18 NI consumers will also be expected to meet a share of the one off set up costs and ongoing administration costs of the CFD scheme. Set up costs would add to consumer bills in the period 2015-16 and 2016-17 with administration costs incurred on a yearly basis from 2016-17.

DETI is seeking views on:

5. The implications of the principle that NI consumers should continue to contribute to the cost of power sector decarbonisation across the UK.

6. The implications of the likely increased costs to consumers to pay for decarbonisation as a result of the CFD scheme.

Closure of the NIRO

2.19 DETI issued a consultation on proposals for the closure of the NIRO and its transition to the CFD support mechanism including arrangements for grace periods for eligible generating stations, on 13 March. This can be accessed at

http://www.detini.gov.uk/deti-energy-index/deti-energy-sustainable/northern_ireland_renewables_obligation_.htm

Impact of strategic decision

2.20 DETI has discussed with DECC the possibility of tailoring the GB CFD scheme to meet NI concerns. But it appears that the commitment to promoting renewables development at least cost to the consumer and the conditions of the CFD scheme for renewables State Aid approval leaves little scope for flexibility.

2.21 The DETI Minister, in conjunction with her Executive colleagues, could consider other options than joining a UK-wide CFD scheme for supporting renewables development. This could involve a form of NI-only scheme. However, such a scheme could not be in place before the NIRO ends in 2017. In addition, the cost of the scheme design and set-up in a small region could be disproportionate and may outweigh the benefits of increased renewable deployment.

2.22 Any new scheme would require a budget allocation and State Aid clearance, both of which would be challenging to achieve.

2.23 It also needs to be borne in mind that any alternative scheme would have to be based on a competitive allocation process similar to the CFD. Replicating a NIRO style scheme is not possible under current EU rules and whilst an all-island scheme might seem logical within the all-island Single Electricity Market this is not without its challenges, not least from a regulatory, jurisdictional and state aid perspective.

2.24 A further option is to defer action on renewables support and consolidate the gains that have been made so far. Contributions will continue to be made to existing renewables scheme which will be supported for 20 years. Nonetheless, without a renewables incentive scheme there would be little prospect of new renewables development in NI after 2017 and NI would not be contributing towards the costs of meeting the UK's national, statutory renewables and decarbonisation targets.

DETI is seeking views on:

7. The acceptability of reducing costs to consumers by, for example, not implementing the CFD scheme and thereby not supporting new renewables projects post 2017.

8. The impact on investor confidence of not being part of a UK-wide scheme.

Emerging findings of the assessment of costs and benefits of the 40% renewable electricity target

2.25 Finally, as part of the planned mid-term review of the Strategic Energy Framework, DETI commissioned work to assess the economic impact of pursuing the Executive's target of 40% renewable electricity consumption by 2020. As noted earlier the Executive's Programme for Government target of 20% by 2015 has almost been reached. DETI will publish the full study in due course but has prepared a brief summary with emerging findings to accompany this discussion paper. It is at Annex A.

2.26 This shows that there is economic benefit to Northern Ireland from achieving higher levels of renewables up to 40% (the costs start to outweigh the benefits after that level) with the maximum net benefit at around 25%. However, under the CFD scheme NI consumers will pay the costs regardless, but some of the benefits such as jobs and local supply chain in the renewable industry, may occur outside NI. The CFD scheme is a UK-wide scheme and is not designed to operate on a regional basis. The Study in assessing costs and benefits assumed that a 40% local deployment was achievable, however, under the CFD scheme, this is not guaranteed.

Annex A

Summary of the emerging findings from the Assessment of the Costs and Benefits of the Executive's target of 40% of electricity consumption from renewable sources by 2020.

Background

1. In 2010, DETI published the Strategic Energy Framework (SEF) which contained the Executive's target of 40% renewable electricity consumption by 2020. Significant progress has been made towards this target and the Executive's 2008-2011 Programme for Government (PfG) target of 12 % by 2012 was met and the 2012-2015 PfG target of 20% renewable electricity by 2015 has also been met.

2. In recognition of changes to the energy and renewable energy market over the last few years and in preparation for the planned mid- term review of SEF in 2015-2016, DETI appointed Ricardo–AEA to produce an updated and extended analysis of previous (2009) baseline figures and estimates of the costs and benefits arising from the 40% target. This analysis includes an assessment of incremental costs and benefits of different renewable electricity levels (from 15% to 40% at 5% increments). It also includes options for the most cost effective renewable electricity deployment levels in NI and associated costs to a range of consumers and benefits to Northern Ireland in terms of CO2 savings, energy diversity and economic benefits. The work involved the development of a set of scenarios to inform the financial model.

Methodology

3. There were a number of key stages in this work:

   a) A wide range of existing data sources were drawn together by Ricardo AEA and supplemented by engagement with key stakeholders –e.g. NIE, SONI, NIAUR, Consumer Council and NIRIG. Evidence was gathered on electricity generation/demand and technical and financial data on the operation of the NI electricity system.

   b) A range of low, medium and high scenarios out to 2020 were developed for electricity generation , including both fossil fuel and renewable generation, which considered existing and proposed projects at various stages of development across different technologies to meet the range of percentage levels up to 40%. Historical and forecast electricity demand scenarios were also developed.

   c) A detailed assessment was undertaken of the main cost elements of the NI electricity system which impact on consumers' bills i.e. wholesale costs (58%), network costs (26%) and other costs (16%). This assessment considers the likely changes (up and down) to each of the three cost elements out to 2020 and separately considered the impact which renewable electricity would have on those costs mainly in terms of support levels and grid strengthening costs.

d) The development of the financial model of the NI electricity system using the above information enables;

- Calculation of the costs and benefits to the consumer and the NI economy of achieving different levels of renewable electricity for a range of generating scenario mixes.
- assessment of the sensitivity of each scenario to changes in electricity demand, fuel and technology costs, outages of key plants and interconnectors.
- inclusion of different levels of investment in the transmission and distribution network required to facilitate higher levels of renewable electricity.

e) A Cost Benefit Analysis showing a Net Present Valuation(NPV) to the Northern Ireland economy of achieving progressively higher renewable deployment levels has been undertaken; and

f) The impact on customer bills of renewable support has been estimated.

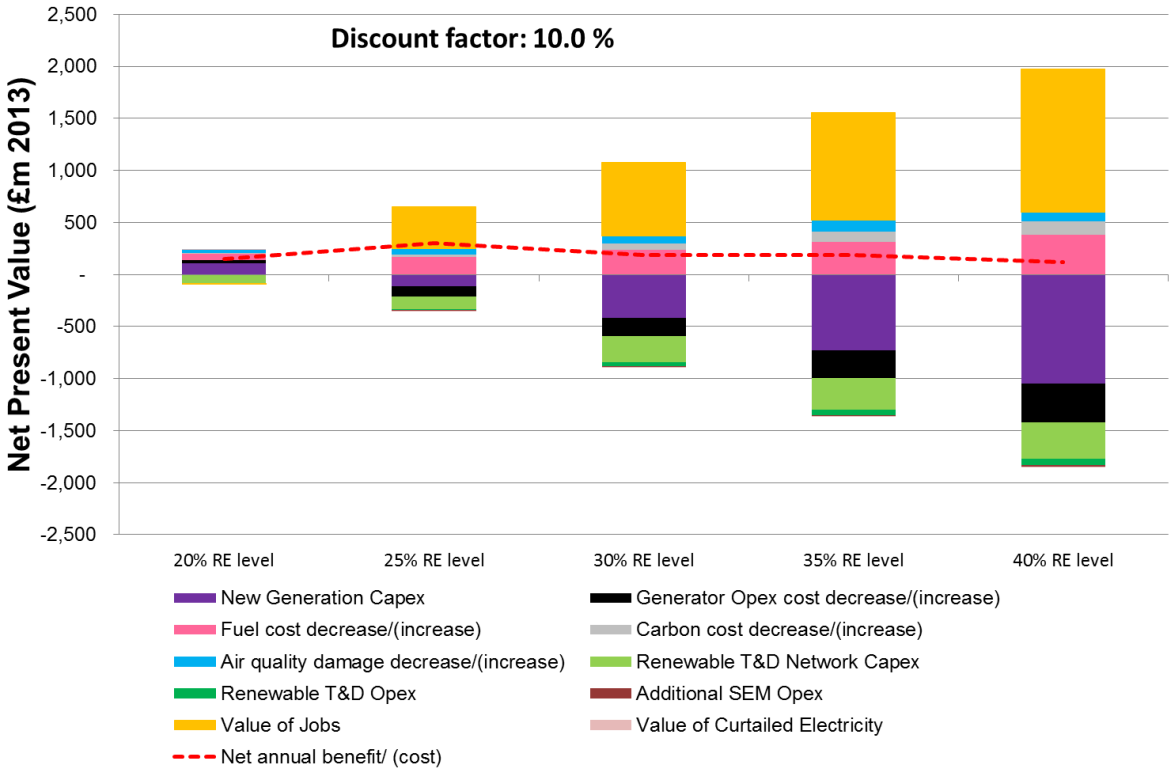
Emerging findings

4. Large scale on-shore wind remains the technology with the most potential to make up the bulk of the renewable electricity target consumption followed by off-shore wind[1] and the other technologies to a lesser degree. Biomass would be the most cost-effective means of achieving the target followed by on-shore wind and then the other RE technologies - although the scope for large scale biomass deployment is limited.

5. The emerging findings of the analysis relate firstly to the costs and benefits of the incremental stages up to the 40% target to the Northern Ireland economy as a whole and secondly on the impact on consumer bills.

[1] The withdrawal of the 300MW offshore wind project in December 2014 post dates the analysis and will impact on the ability to achieve the 40% target.

The Cost Benefit Analysis – Emerging findings



- Increasing consumption of electricity from renewables sources up to the Executive's target 40% level will have a positive effect on the Northern Ireland economy overall.

- Achieving the 40% target level will provide a net benefit of £120m to the Northern Ireland economy across the lifetime of the renewable energy generation.

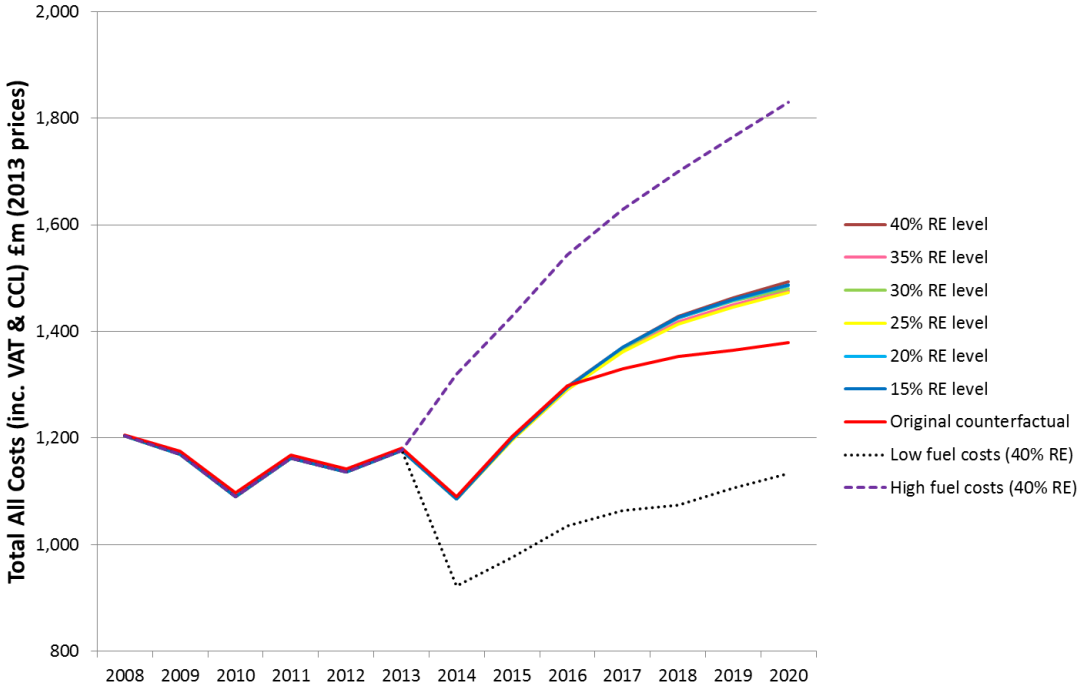
- This positive result is achieved because Northern Ireland has availed of preferential terms under the NIRO scheme compared to customers in GB.

- The maximum net benefit to the economy is achieved at 25% renewable deployment. Increasing deployment above 25% is still positive for the economy but the net benefit declines with increasing deployment.

- Using a commercial discount rate of 10%, renewable electricity delivers a positive net benefit to the economy at all levels up to 40% RE, before switching to a small negative cost at 46%.

- The costs of achieving the renewable target will only fall on electricity customers while the benefits would be enjoyed by society as a whole in terms of environmental impacts and greater potential levels of employment.

Forecast overall costs of NI electricity to consumers 2014 to 2020



6. This above graph indicates that the overall costs of electricity to NI consumers will increase between 2013 and 2020 under the six renewable electricity deployment scenarios from 15% to 40%. However, the cost to consumers only varies by around 1% between six scenarios.

7. Overall bills will rise due to the following key factors:

- the most significant factor in determining electricity prices are fuel costs which are expected to rise by 2020. The graph shows costs under DECC's central fuel scenario with the dotted lines showing the sensitivity of electricity costs to the fuel price forecast;

- the cost of reinforcing the transmission and distribution network to facilitate increasing levels of renewable electricity will also rise;

- major changes to the UK wide incentive scheme for renewable electricity that are designed to double the level of renewable electricity across the UK by 2020 – the establishment of the EMR and closure of NIRO which will increase prices in NI.

8. The finding that there is little difference between the cost of 15% and 40% deployment may seem counterintuitive but occurs for the following reasons:

- Previous analysis provided by NIE to the Utility Regulator indicates that funding already allowed should facilitate up to 27% renewable penetration. However,

significant additional funding would be needed for the North South interconnector and further grid strengthening to facilitate higher levels of renewable penetration.

- The majority of the increase in incentive costs are the additional 'catch-up' costs moving to UK levels with the loss of the lower level of obligation. This will happen under all scenarios.

- The costs of the CFDs (and assumed costs of small-scale incentives) are modelled using DECC forecasts. Whether we have a 20% or 40% penetration will only marginally affect the proportion of UK wide CFDs for which we pay as part of the EMR.

- Finally moving to 40% penetration will reduce wholesale costs through generating more from renewable sources with little or no associated fuel costs.

EMR related issues

9. The 40% deployment level only shows net benefit to NI economy if jobs are created in the renewables industry in Northern Ireland. However with the closure of the NIRO and introduction of EMR, there is no guarantee that generation will be located in Northern Ireland. If no additional renewable generation is located in Northern Ireland, then no direct NI jobs will be created. The 40% target would also be unachievable.

Annex B

DETI is seeking views on:
1. The impact on the renewables industry in NI in the absence of a local renewable electricity target. 2. If it matters that there is no guaranteed level of renewable deployment and economic benefit in NI (and indeed a possibility of very limited deployment of new renewable projects here) as long as the power sector is being decarbonised at least cost across the UK. 3. Potential regulatory impacts in the absence of a NI renewable electricity target. 4. The ability of NI generators to compete in CFD auctions. 5. The implications of the principle that NI consumers should continue to contribute to the cost of power sector decarbonisation across the UK. 6. The implications of the likely increased costs to consumers to pay for decarbonisation as a result of the CFD scheme. 7. The acceptability of reducing costs to consumers by, for example, not implementing the CFD scheme and thereby not supporting new renewables projects post 2017. 8. The impact on investor confidence of not being part of a UK wide scheme.

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Department of Enterprise,
Trade and Investment
Netherleigh
Massey Avenue
BELFAST
BT4 2JP

E: email emr@detini.gov.uk
T: 028 9052 9240
F: 028 9052 9549
Textphone: 028 9052 9304
www.energy.detini.gov.uk