



**1. Attendees**

1. Frank Prashad (FP), RWE npower	12. Guy Nicholson (GN), RenewableUK
2. Ivo Spreeuwenberg (IS), NGET	13. Helen Snodin (HS), Scottish Renewables and HIE
3. James Anderson (JA), ScottishPower	14. Ricky Hill (RH), Centrica
4. Tim Russell (TR), REA	15. Michael Dodd (MD), ESB International
5. Garth Graham (GG), SSE	16. Robert Longden (RL), Mainstream Renewable Power
6. Stuart Cotten (SC), Drax Power Limited	17. Anthony Mungall (AM), Ofgem
7. Louise Schmitz (LS), EDF Energy	18. Jonathan Hodgkin (JH), Ofgem
8. Andrew Barker (AB), Redpoint Energy	19. Scott Hamilton (SH), Ofgem
9. Duncan Sinclair (DS), Redpoint Energy	20. Miles Perry (MP), Ofgem
10. Nick Screen (NS), Redpoint Energy	21. David Omom (DO), Ofgem
11. Simon Lord (SL), First Hydro	<b>Apologies for absence:</b> Paul Jones (PJ), E.ON

**2. Overview of Discussion**

Ofgem opened the meeting by explaining the purpose of Technical Working Group (WG) meeting 7 was two-fold. Firstly, to allow Redpoint Energy Limited (Redpoint) to present the provisional modelling results for the three potential charging options to the WG, and to “sense check” initial modelling outputs by giving the WG the opportunity to review and comment on the data. Secondly, to allow Redpoint to present their provisional ‘Stage 2’ modelling work to the WG and to receive feedback.

Ofgem stated that because Redpoint would be leading the meeting, they would provide a meeting note that would be specifically concerned with capturing WG comment on the modelling work. Alongside this, Ofgem agreed to provide a ‘high-level’ note as a general record of the meeting.

**Review and feedback from WG meeting 6:**

Ofgem noted they had received several comments on the draft meeting note from WG meeting 6 which had been captured in the final WG 6 meeting note published on the TransmiT web forum<sup>1</sup>.

Ofgem noted that the action arising from WG 6 (Action 39), requesting Ofgem produce a note explaining the rationale for the different charging approaches Redpoint had been

<sup>1</sup> Technical Working Group meeting 6, Meeting Note (final): [http://www.ofgem.gov.uk/NETWORKS/TRANS/PT/WF/Documents1/Minutes%20-%20Working%20Group%20meeting%206%20\(vers%201.1%20FINAL\).pdf](http://www.ofgem.gov.uk/NETWORKS/TRANS/PT/WF/Documents1/Minutes%20-%20Working%20Group%20meeting%206%20(vers%201.1%20FINAL).pdf)

instructed to model, remained outstanding. Ofgem stated that this action would be discharged.

### **Stakeholder feedback:**

None was reported.

### **Redpoint presentation:**

Redpoint began their presentation to the WG by explaining that the purpose of the presentation was to discuss the preliminary stage one results to help Redpoint understand the 'realism' of the initial modelling outputs, and to confirm the accuracy and validity of their input assumptions.

Redpoint explained that because the interactions between transmission charging and low-carbon support were complex, they had agreed with Ofgem the following two stage approach:

Stage 1: Under status quo charging approach, Redpoint would set low-carbon support at levels that deliver the 2020 renewable target and achieve around 100 g/kWh carbon intensity in 2030 – then apply the same low-carbon support levels under the Socialised and Improved ICRP charging approach.

Stage 2: Adjust the levels of low-carbon support under the Socialised and Improved ICRP charging approach to deliver the same 2020 renewables and 2030 carbon intensity outcome as Status Quo.

#### **- Presentation of Stage 1 results**

Redpoint explained that while they were seeking feedback from the WG on several aspects of their modelling work, they were particularly keen to hear WG views on their assumptions about the following issues:

1. levels of government low-carbon support, ie Contract for Difference ("CfD").
2. generation build potential and maximum annual build rates
3. treatment of nuclear plant under a socialised charging approach
4. levels of CfD support in Stage 2 modelling

#### *1. CfD*

Redpoint noted that because the primary objective of the CfD is to stimulate investment in low-carbon technologies, ensuring the input assumptions about levels of CfD support over the modelling timeframes (2011-2030) were accurate and would serve to generate more realistic outputs.

The WG acknowledged the difficulty of this problem, noting that it was, to all intents and purposes, based upon a degree of speculation as to what government policy would be over the next two decades towards providing support for all forms of low carbon energy. Redpoint noted that in Stage 1 they had assumed equivalent levels of low-carbon support (Renewable Obligation "RO"/CfDs) across the three options in order to isolate the impacts of the different charging approaches.

One member of the WG asked Redpoint to clarify what Redpoint had based the fixed/constant transmission background upon. Redpoint stated that it was based on the Gone Green scenario<sup>2</sup>.

Redpoint explained that the provisional modelling results were based on 'imperfect foresight', which assumes that generation investors have a five-year view of forward wholesale price, transmission charges, low-carbon support levels and retirals (that would take place in the following year). These probabilistic views drive decisions on generation and transmission investment. Redpoint noted that they did not expect the results for

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<sup>2</sup> "Gone Green" is a scenario created by National Grid as one way of meeting 2020 renewable targets.

'perfect foresight' (ie full information on transmission charges and generator locations) to be radically different from the 'imperfect foresight' model.

One WG member asked Redpoint to clarify which was the most expensive marginal renewable generator plant used to drive the scaling of the renewable support level, ie is it the LRMC of a potential windfarm on Shetland? Redpoint confirmed that the support level has been set using the average LRMC and it does include the LRMC of plant located on the Scottish islands.

## 2. Build constraints

Redpoint stated that their assumptions on setting the upper limits of build rates were based on the current "TEC Register"<sup>3</sup>. These inputs were used to generate outputs projecting the potential and maximum annual build rates for each type of generation technology up to 2020. Redpoint used other sources of information for maximum build to 2030.

The WG noted that the annual and cumulative build rates for some of the generator types appeared to be unduly constrained. One member observed that CCGT, Coal and Biomass generators will examine the location of plants if the charging system were to move away from Investment Cost Related Pricing (ICRP). He concluded therefore that the TEC Register is not a good basis for making projections under all three charging approaches. As such, it was his view that the TEC Register should only be used for Status Quo.

Other WG members suggested that the use of the TEC Register is only "wrong" if there are projects that are under development or could be brought forward by 2020, but are not in the TEC register for one reason or another. It was posited that all TEC Register plant will have some momentum behind them (ie finance/planning) meaning it was plausible that the information represented a reasonable maximum envelope to 2020.

There was some agreement amongst the WG that the initial modelling outputs for build rates (presented in slide 8 of the pack) appeared overly constrained and should be relaxed to better account for locational build decisions.

Redpoint also confirmed that the build rates and cumulative limits included embedded generation (based on National Grid's *Gone Green Scenario*).

The WG then discussed which particular technologies appeared overly constrained in the initial modelling outputs. Redpoint agreed to revisit the assumptions. To assist in this process, Redpoint agreed to circulate additional detail on the current assumptions and requested WG feedback by 2pm on Wednesday 12 October. It was agreed that Redpoint would use this feedback to reassess and adjust their build rate assumptions.

## 3. Treatment of nuclear plant under a Socialised charging approach

The WG discussed the modelling outputs which indicated there would be no new nuclear build in the stage 1 results of the Socialised scenario. Redpoint explained that the results simply reflect the modelling approach taken, involving fixed CfD levels across all three charging approaches. Redpoint explained that because the tariffs are tightly matched to the LRMC in Status Quo, a small increase in LRMC (ie that would be observed across the majority of areas designated by the government for nuclear sites when moving from a SQ to socialised charging approach) leads to the result that nuclear is not economic and does not get built under the Socialised policy option. This result was observed in slide 17 of the pack.

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<sup>3</sup> The TEC Register provides a publicly available record of the existing allocation of Transmission Entry Capacity (TEC), the business it is allocated to, and the site details.

There was general consensus that part of the problem in determining realistic nuclear plant build and retirement was contingent upon government policy towards this generation technology. It was explained that, while the WG was reticent to make assumptions about government policy, it was logical to expect that the need for diversity in the generation mix would make it unlikely there would be no nuclear plant under a socialised scenario. Some working group members noted that there is currently no RO support for new nuclear build that could be used to provide a comparable support level under the CfD FIT mechanism and it is likely that CfD FIT support levels would be set after the completion of Project Transmit. However, some WG members noted that the Stage 1 modelling was not intended to produce realistic outcomes or forecasts for the future but to assess the impact of different charging models, all other things being equal. Redpoint acknowledged this and agreed to review its approach to the setting of CfDs. Redpoint did warn against confusing the intent of stage 1 and stage 2 modelling; noting that more "realistic" scenarios for build by technology will be produced in stage 2.

- *Additional comments on stage 1 results;*
- the WG queried why large decreases in offshore wind tariffs in the Socialised scenario have a very small impact on aggregate offshore wind build towards the end of the modelling period. Redpoint noted that this is linked to the build rate assumptions (discussed above).
- The WG noted the significance of gas exit charges on CCGT plant locational decisions, the WG therefore asked for more information on the assumptions about gas exit charges. Redpoint agreed to provide further information on the modelling approach.

#### 4. Level of CfD in Stage 2

Redpoint stated that the stage 2 modelling differed from stage 1 in that it featured adjusted levels of government low-carbon support under the Socialised and Improved ICRP charging approach to deliver the same 2020 renewables and 2030 carbon intensity outcome as the Status Quo scenario.

Redpoint explained their methodology for scaling the CfD levels to the Improved ICRP and Socialised scenarios. Some members of the WG noted that applying a non-specific (ie uniform) scalar results in large rents to generators that are subject to high positive TNUoS charges (ie offshore technology) when transmission charges drop under a socialised charging approach. Redpoint took an action to further consider the CfD approach adopted in Stage 2 modelling with a view to ensuring that the capacity mix was as efficient as possible.

The following general comments were made by the WG:

- under the socialised charging approach the level of support for offshore seemed somewhat excessive given the costs associated with offshore generation. In the interests of transparency, the approach to setting CfDs should be clear so that people can interpret the results
- there was general consensus that under all modelling scenarios, there is a need for diversity of the generation mix to meet targets
- if basic levels of each technology type were required in the generation mix, then would it be possible to develop a methodology to reflect levels of government support under each scenario
- while transmission charging and levels of low-carbon support are inherently linked, the modelling should primarily concentrate on the impacts of transmission charging
- the modelling should avoid second-guessing government policy in setting CfDs and there is a need to be clear about what we are trying to achieve by adjusting low-carbon support. Some working group members were concerned about the way in which subsidy levels are manipulated as part of the modelling process to meet 2020 targets, given that a change to the subsidy arrangements is not a viable

outcome of Project Transmit, ie the project should be evaluating the effect on generation investment as a result of amending the transmission charging methodology.

- the provisional modelling results appeared to show that small adjustments to CfD levels had a sizeable effect on the deployment of specific technologies.

*5. Additional general comments about the modelling*

- Following concerns about the use of the TEC Register information as a basis for making projections on build constraints, some members of the WG suggested that it would be prudent to consult with experts from the various technology types to check the accuracy of build projections. Redpoint agreed. Comments on the build rate assumptions were requested by Wednesday, 12 October at 2pm.
- Redpoint stated they would circulate the 'stage 2' slides after the meeting and invited the WG to submit comments and analysis via email. Further comments on the Stage 2 results should then follow by end of Thursday, 13 October.

**3. Next meeting**

**WG Meeting 8:** Wednesday 9<sup>th</sup> November, 12:30-5pm, at Ofgem's offices in Millbank,

**Meeting Agenda:**

- 12:30 – 1pm : Lunch followed by Ofgem introduction
- 1pm – 5pm : Redpoint presentation of provisional modelling results