Consumer Focus
Campaigning for a fair deal

Consumer Focus response to DECC's second consultation on improving grid access

March 2010

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Summary

The Department of Energy and Climate Change (DECC) has announced its support for extending the interim socialised Connect and Manage model in order to resolve the long delays that generators, particularly renewable generators, face when wishing to connect to the network.

We recognise the importance of increasing the supply of renewable generation flowing onto the network. However we are concerned that DECC has been too focused on meeting the European Union's 2020 renewables targets and this has been to the detriment of considerations of the higher constraint costs under an enduring socialised Connect and Manage model, costs which will ultimately be passed on to consumers.

The issue

An Energy White Paper published in May 2007 announced a joint review by Ofgem and the Department for Business, Enterprise and Regulatory Reform (BERR) of the access regime for electricity transmission networks in Great Britain.[1] This was a consequence of a large and growing queue of generators being unable to connect to the grid under the current 'invest then connect' (I&C) system. The generators had to join an access queue on a 'first come, first served' basis and were unable to join until all relevant reinforcement of the wider network is completed. This led to some plants being offered connection dates as late as 2025.[2]

Running concurrently is the issue of the European Union's target of one-fifth of all Europe's energy coming from renewable sources by 2020. For the UK to meet its part of the target 15 per cent of its energy will need to come from renewable sources, and to achieve this, renewable generators will need to constitute 30 per cent to 40 per cent of electricity supplies.[3]

The ability of the UK to meet the EU targets is directly proportional to the ability of renewable energy generators to connect to the grid and therefore the Government's main objective, through Transmission Access Review (TAR), is to allow renewables to connect to the grid 'quickly and cost effectively.'[4] TAR attempts to find a solution with the guiding principles that:

- grid access arrangements should be in place that allow large volumes of new renewable and other essential low carbon and conventional generation to connect quickly
- generators should be offered connection dates, which are reasonably consistent with their project development timetables and for early steps to be taken to deliver essential investment in the grid[5]

[1] *Transmission Access Review – Final Report*, OFGEM & BERR [26 June 2008], p.1.
[2] *Improving Grid Access – Technical consultation on the model for improving grid access*, DECC [03 March 2010], p.10.
[3] *Transmission Access Review – Final Report*, OFGEM & BERR [26 June 2008], p.1.
[4] Ibid, p.6.
[5] Ibid, p.1.

The issue of insufficient transmission access for generators, coupled with high constraint costs, led Ofgem to approve the introduction of an interim Connect and Manage system in May 2009. This was a 'socialised' model under which all constraint costs would be spread equally among all generators and suppliers on a per-MWh basis.[6]

DECC considered these arrangements to be temporary, citing the need for a permanent solution to 'give certainty to industry.'[7] Stating the success of the interim arrangements, DECC supported extending them to create an enduring Connect and Manage system to resolve the issues with transmission access. [8]

Key issues for Consumer Focus

We believe that there are four key issues with DECC's proposal to adopt socialised Connect and Manage in an enduring form:

- increased constraint costs
- insufficient network investment signals
- inability to change or revert the model in future
- access benefits under socialised Connect and Manage

Increased constraint costs

We understand that DECC's priority is necessarily focused on meeting the EU's 2020 renewable energy targets, but we are unconvinced that the potential increase in constraint costs under the proposed enduring access model can be justified by the increased access opportunities it offers.

Modelling by National Grid Electricity Transmission Ltd (NGET) and an industry working group[9] indicated that projected constraint costs resulting from the implementation of a socialised Connect and Manage model would be £600 million for the period 2012-2017; this is well above the forecast carbon abatement benefit of £475 million.[10] We therefore believe that it does not meet Ofgem's access model proviso that:

'Any additional costs borne by customers are necessary and justified by other benefits, such as lower carbon emissions and/or lower wholesale and retail prices.'[11]

We are also concerned that research carried out by Frontier Economics on behalf of Ofgem has shown that a socialised Connect and Manage model would likely lead to significant increases in constraint costs up until 2017/18[12]; one scenario revealed that mark-ups over cost by Scottish generators in the balancing mechanism could rise to around £500 million per annum.[13]

We are aware that additional analysis of the expected costs of the socialised Connect and Manage model was recently undertaken by Redpoint on behalf of DECC and this analysis projected constraint costs to be '£195 million higher than I&C in Net Present Value (NPV) for the 2010-20 period,' resulting in an annual average cost of £18 million which equates to an increase of 'just over' 20 pence per average annual household bill (five pence per MWh).[14]

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[6] *Improving Grid Access – Technical consultation on the model for improving grid access*, DECC [03 March 2010], p.5.
[7] Ibid, p.11.
[8] Ibid, p.5.
[9] CAP164, **http://bit.ly/c6N2Jv**
[10] *Enduring Transmission Access Reform*, Ofgem [25 June 2009], p.11-12.
[11] Ibid, p.5.
[12] Ibid, p.2.
[13] Ibid, p.11.
[14] *Impact Assessment of proposals to improve grid access*, DECC [03 March 2010], p.2.

These estimated constraint costs given by Redpoint differ radically from those under other cost models, including DECC's own figures cited in their original consultation document, in which they stated that 'our initial assessment is that [constraint costs] could be of the order of £630 million in total to 2020 or £1 per household per year to 2020.'[15] This discrepancy cannot be attributed solely to the more current nature of the Redpoint data. Equally recent cost modelling by National Grid forecasts constraint costs of £322 million for the 2010/11 period. Such disparities are readily acknowledged by DECC[16] and the difference is elaborated in the Impact Assessment:

'National Grid are forecasting a cost of £322 million from constraining off 6.2TWh (4.11TWh in Scotland) during 2010/11. Redpoint's analysis for the Improving Grid Access impact assessment suggest just over £100 million as a result of having to constrain off 1.6TWh (976GWh in Scotland).'[17]

While this explains the difference in the figures produced from the various analyses, we are concerned that Redpoint has made a number of assumptions about the data they are covering and have therefore given an inaccurate, and far smaller, prediction of the constraint costs. These apprehensions are highlighted by two key examples given in the Impact Assessment:

1. Demand fall and the merit order

   DECC argues that National Grid's data shows that 'load factors for GB plant have fallen from 52 per cent in 2007 to 51 per cent in 2008 to 48 per cent in 2009' with Redpoint's modelling suggesting that under DECC's central fuel price assumptions, 'load factors for conventional Scottish thermal generation would be substantially lower' than has been observed historically. The difference in these load factors 'fully explains' the difference between the 'Redpoint's estimates' and 'NG's forecast' in the volume of Scottish constraints which account for about two thirds of total constraints.[18]

   DECC adds that 'a possible explanation for the difference in load factors is market power' elaborating further that Ofgem is seeking to add a Market Power Licence Condition (MPLC) in the Energy Bill 2009 as it believed that market dominance may have been responsible for 'between £125 million and £151 million of a total £238 million of constraint costs in 2008/09.'[19] Redpoint's analysis has consequently made the presumption that the regulation of any market exploitation is entirely successful and therefore no market dominance is exercised by generators behind a network constraint, thus eliminating the attendant constraint costs estimated by Ofgem and used by National Grid in their forecast for 2010/11.[20] DECC believes that any such difference is unimportant to the Impact Assessment as these constraint costs would affect any transmission access system.[21]

[15] *Improving Grid Access – Consultation Document*, DECC [25 August 2009], p.38.
[16] *Improving Grid Access – Technical consultation on the model for improving grid access*, DECC [03 March 2010], p.14.
[17] *Impact Assessment of proposals to improve grid access*, DECC [03 March 2010], p.20.
[18] Ibid.
[19] Ibid.
[20] Ibid.
[21] Ibid, p.21.

2. Local constraints

National Grid's forecast 'suggested that in 2010/11 local network outages related to Grendon and Staythorpe works in the Thames Estuary area will account for £87 million in constraint costs and 779GWh of constrained volume.'[22] As this information was not available at the time of Redpoint's modelling these costs were not included in the final estimate. Nevertheless, DECC acknowledges that these would not have been included if they had been known, as Redpoint's analysis did not focus on 'localised issues' and was instead centred around electricity flows over seven network boundaries where historically I&C regime constraints had 'accounted for close to 90 per cent of all constraint costs.'[23]

We believe that it is optimistic to assume that the MPLC will completely eliminate market power exploitation and therefore it is somewhat myopic to remove all constraint costs that result from that exploitation. We note that DECC considers that constraint costs resulting from market power exploitation occur regardless of the access model employed. However this then leads to the perception that the Redpoint figures for constraint costs under enduring socialised Connect and Manage are misleading as they are portrayed as resulting from the model itself, and not from an holistic view of all industry measures that will be adopted up until 2020.

That Redpoint's analysis has not focused on 'localised issues' and has instead been centred upon electricity flow over seven network boundaries results in the conclusion that particular network problems have been ignored in the pursuit of a pure economic model. We believe there is some cognitive dissonance in DECC using a pure economic model to predict the cost impact of a model that is wholly dependent upon real world factors such as localised network outages.

Any cost analysis of socialised Connect and Manage must also consider that the model necessarily allocates more transmission access rights than the system can accommodate, resulting in a significant increase in constraint costs. We consider this outcome to be particularly likely as the definition of 'enabling works' (the works that must be completed for plant to connect under Connect and Manage) that appears in Section 13 of the Connection and Use of System Code (CUSC) is so vague that it may result in more generators connecting to the network than allowed by the enabling works.

The smearing of costs that occurs under a socialised model results reduces the incentives for generators to avoid connecting where constraints are already high. Constraint costs may therefore be high due to the lack of efficient signalling through charges, consequently it 'only provides weak signals of the cost (or benefit) of locating where there are (or are no) existing constraints.'[24]

Based on our considerations of the various analyses, we do not believe that the Redpoint data gives an accurate reflection of constraint costs and therefore do not think that the cost to consumers will be 20 pence per average annual household bill; we remain concerned that the costs to consumers will be far higher per annum under socialised Connect and Manage.

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[22] *Impact Assessment of proposals to improve grid access*, DECC [03 March 2010], p.20.
[23] Ibid.
[24] *Transmission Access Review – Final Report*, Ofgem & BERR [26 June 2008], p.20.

Insufficient network investment signals

The consistent message across all consultations on improving grid access is the importance of the completion of wider works. That the real enduring solution to network access problems lies in the completion of wider works is an assessment with which we concur, however we do not believe that socialised Connect and Manage will be able to deliver the necessary network reinforcement.

Industry responses to DECC's 17 August 2009 consultation indicated that adequate network investment was a vital long-term solution to constraint costs.[25] DECC agreed, stating that 'the ultimate solution to the problem of network constraints and connecting new generation is investment in the transmission network' adding that they are working closely with Ofgem to ensure that this is delivered in a timely manner.[26]

DECC believes that constraint costs under socialised Connect and Manage will provide a 'commercial incentive' for National Grid to invest in network reinforcements 'where this is considered to be more efficient than continuing to face constraint costs.'[27] While NGET is incentivised to reduce the cost of managing constraints through its System Operator Incentive scheme, the maximum reward or penalty it can achieve under its current scheme is £15 million per year.[28] Such incentives may not be strong enough to manage constraint costs that could run in to hundreds of millions of pounds per year. We would add that the socialised nature of the costs means there is no incentive for generators to avoid connecting to areas of high constraints and thus indicating areas with access problems; consequently it does not provide the long-term investment signals for necessary transmission reinforcement. It also does not allow NGET to easily target areas with access problems ahead of connection by generators, meaning that any investment must be reactive or speculative.[29]

A socialised model has an additional impact on network investment from generation owners. Socialising constraints costs increases the cost of generation in some regions while reducing it in others, consequently affecting locational decisions for new plant and operating decisions for existing plant. There is a risk that this policy may result in sub-optimal decisions being made on where generation should be built or maintained, the costs of which will eventually be borne by consumers.

We also agree with Ofgem's previous assessment that delivering cost efficiency under a Connect and Manage model is dependent upon a timely network investment regime otherwise constraint costs will escalate without delivering the benefit of additional generation.[30] Ofgem's final proposals published on 19 January 2010 confirmed £319 million in funding for the first tranche of the Electricity Networks Strategy Group (ENSG) projects, enabling grid companies to commence development of the network reinforcements identified in the ENSG report. These are expected to go some way towards funding the first phase of priority new grid lines which would need to be in place by 2015.[31] Ofgem has also stated its intention to allow £241 million of construction funding on six specific projects planned to commence construction before the end of

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[25] *Improving Grid Access – Technical consultation on the model for improving grid access*, DECC [03 March 2010], p.19.
[26] Ibid, p.11.
[27] Improving Grid Access – Consultation Document, DECC [25 August 2009], p.37.
[28] **http://bit.ly/9jyj7w** (pdf 580 KB)
[29] *Enduring Transmission Access Reform*, Ofgem [25 June 2009], p.9.
[30] *Transmission Access Review – Final Report*, Ofgem & BERR [26 June 2008], p.20.
[31] *Improving Grid Access – Technical consultation on the model for improving grid access,* DECC [03 March 2010], p.35.

2010/11 and almost half (47 per cent) of this construction funding is to be directed at transmission reinforcement projects in Scotland.[32]

While we welcome Ofgem's consideration of funding proposals, we are concerned that the level of investment may be insufficient to ensure constraint costs are kept at a reasonable level under socialised Connect and Manage, particularly when the ENSG estimated that the cost of the proposed reinforcements required to support the 2020 targets would be an additional £4.7 billion above the £3.8 billion investment approved by Ofgem for the 2007-2012 period.[33] There will also be insufficient network capacity available to support the new generation until 2015 when the priority grid lines are put in place, and as we anticipate that the unclear definition of 'enabling works' will result in more generators connecting than the network can accommodate, it is possible that the 2015 reinforcements will also prove inadequate.

A key factor in network constraint issues is generator commitment. The ability to predict when a plant will cease to generate not only gives the network operator an idea of when and for how long constraints will be an issue, but also gives them an idea of the level of investment that will be required for network reinforcement. We therefore welcome DECC's proposal to increase user commitment from one to two years for all new and existing generators,[34] however we still feel that this is too short to provide network operators with sufficient information on network constraints.

Inability to change or revert the model in future

There is extremely wide variance in predicted constraint costs and the Redpoint model contains some highly questionable assumptions on market power and localised constraints. We think DECC should conduct further cost analysis before considering its implementation. However, should DECC decide to institute enduring socialised Connect and Manage, a review into the model's effectiveness at delivering the renewable generation targets and its impact on consumer costs must be conducted after its implementation.

Any meaningful assessment of the impact of interim Connect and Manage is dependent upon a sufficient amount of data being available to analyse. As we are also conscious of the necessity of a firm date being set for a review, we suggest that DECC commits to such a review being undertaken no later than 12 months after the first gigawatt has been connected to the network through socialised Connect and Manage.

DECC has already suggested the possibility of review:

'While we do not foresee the need to make any subsequent amendments to the licence, amendment is possible in line with the powers and duties in the Electricity Act 1989. Although the evidence suggests that the costs will be small, in the event that costs directly as a result of the Connect and Manage model were considerably higher than expected for an intolerable period, and where all other appropriate options for reducing those costs had been implemented, it would be possible for the licence to be amended within the process provided for by section 11A of the Electricity Act 1989.[35]

We would suggest that DECC gives a clearer indication of what costs it considers to be 'considerably higher than expected' and also the length of time that constitutes an 'intolerable' period.

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[32] *Improving Grid Access – Technical consultation on the model for improving grid access*, DECC [03 March 2010], p.36.
[33] Ibid. p.35.
[34] *Impact Assessment of proposals to improve grid access*, DECC [03 March 2010], p.6.
[35] Ibid, p.33.

There should always be the possibility of changing the access model should costs become too high and we are therefore wary of any measure that could be seen to 'hardwire' socialised Connect and Manage into industry agreements, consequently making any changes difficult and reducing accountability.

Access benefits under socialised Connect and Manage

DECC considers the interim socialised Connect and Manage system to have been successful in moving forward connection dates for generators and has therefore proposed expanding it into an enduring form. We remain sceptical that the system will be able to deliver the connection necessary to justify the increased constraint costs.

DECC has based its support of socialised Connect and Manage on the following data:

'Over three GW of current projects have had their connection dates advanced since its introduction; and over two and half GW more are in the process of advancing. In addition, this approach has allowed a further five and a half GW of new applications to be offered earlier connection dates than would have been the case under previous arrangements.'[36]

While we do not doubt the veracity of this information, we have concerns with the way that it has been framed – specifically that none of this generation has been connected at the time of writing and therefore it is not possible to use such data as evidence of the success of the access model; this cannot be accurately assessed until the generation is connected to the network.

Our conclusions

We do not find the cost benefit analysis conducted by DECC convincing and think that it is likely to have materially underestimated future constraint costs. We believe that the costs of socialised Connect and Manage could result in unacceptably large bills for consumers; such costs would be additional to the other costs already evidenced by Ofgem in its Project Discovery, thus adding to the burden of pass-through costs to consumers.

As socialised Connect and Manage does not provide clear signals for network operators to identify areas requiring reinforcement, we also remain sceptical that wider works will be satisfactorily completed to prevent constraint costs rising further as more generators connect to the network.

We believe that DECC has chosen socialised Connect and Manage solely because they think it will be the best access model under which the 2020 renewable targets can be met; this has resulted in them giving insufficient consideration to the impact it will have on constraint costs.

We recognise that despite our opposition to enduring socialised Connect and Manage, DECC may move forward with its implementation. Should that be the case then we would seek a commitment from DECC to consult on the impact and success of socialised Connect and Manage no more than 12 months after the first gigawatt has been connected to the network through the application of this model.

[36] *Improving Grid Access – Technical consultation on the model for improving grid access*, DECC [03 March 2010], p.11.

Views on consultation questions

1. Do you agree that the proposed model for reforming grid access would best meet the Government's objectives for this reform?

   We are sceptical that the proposed model for reforming grid access is the best way to meet the Government's objectives. Please see sections *'Insufficient network investment signals'* on page 7 and *'Access benefits under socialised Connect and Manage'* on page 9 for further information.

2. Do the proposed licence and code amendments deliver the policy aim?

   We have limited our response to a consideration of the overall policy proposal and as such have not considered the text of the licence and code amendments. However we do have concerns regarding the proposed definition of 'enabling works' which are discussed on page 4 under the section *'Increased constraint costs'*.

3. Do you think there are any other changes to industry codes and licences or any other actions needed to implement the model?

   As we currently do not support the implementation of enduring socialised Connect and Manage, we are unable to comment.

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