

Monitoring the 'Connect and Manage' electricity grid access regime

Second report from Ofgem, 30th September 2011

This is the second of our half-yearly reports to the Secretary of State monitoring the impacts of the enduring Connect and Manage reforms introduced by the Government in August 2010¹. These reforms, fully implemented on 11 February 2011, are aimed at improving access for generators to the electricity transmission network. (More background information is set out in annex 2.)

We provided our first report to the Secretary of State in April 2011². This report covers the period April to September 2011.

In carrying out our monitoring role of enduring Connect and Manage, DECC has asked that we provide a published half-yearly report to the Secretary of State on the following:

- Impact on connections by generation type and region
- Developers' confidence in the new arrangements
- Costs and benefits to consumers of the new arrangements
- Progress and costs of delivering the necessary wider grid investments.

We set out below a summary of the available evidence in each of the areas for the period April to September 2011.

Timing of our next report

As we commented in our first report, it may be appropriate for the format and content of future reports to change to reflect new information and market, policy and regulatory developments. We now have greater certainty around the type of information in relation to connections and network investment that will be available under the new RIIO-T1 price control arrangements. We also note that the snapshot data National Grid Electricity Transmission plc (NGET) provides to Ofgem on the status of connections has not changed significantly in the period since we last reported to you.

We consider it may be beneficial to take a longer-term view of the overall impacts. We note that once RIIO-T1 is in place, we expect to have a wider set of data to supplement the connections data that NGET already publishes and will continue to publish on a quarterly basis. We will therefore consider, in consultation with colleagues at DECC, the appropriate timing of our next report and how we can best reflect additional information available through our work on RIIO-T1.

¹ <http://www.decc.gov.uk/assets/decc/Consultations/Improving%20Grid%20Access/251-govt-response-grid-access.pdf>

² [http://www.ofgem.gov.uk/Networks/Trans/ElecTransPolicy/TAR/Documents1/110330_CM_report_SoS%20\(amended\).pdf](http://www.ofgem.gov.uk/Networks/Trans/ElecTransPolicy/TAR/Documents1/110330_CM_report_SoS%20(amended).pdf)

Impact on connections by generation type and region

This section sets out the number of connection offers made, agreements entered into and the amount of generation connected to the transmission system under enduring Connect and Manage agreements. The data is based on information provided to us by NGET and published in their latest quarterly report on the Connect and Manage regime³.

Table 1: Connection information for large projects (offers, agreements and connected generation)

Region		As at March 2011	As at July 2011	Difference ⁴
England & Wales	Total number of offers, agreements and connections	19	15	-4
	Mega Watts (MW)	16,737	14,180	-2557
	Average reduction in connection date ⁵	5 years	6 years	-
	Number of projects connected	0	0	0
	MW connected	0	0	0
Scotland	Total Number	54	58	4
	MW	11,007	11,815	808
	Average reduction in connection date	5.5 years	6 years	-
	Number of projects connected	2	3	1
	MW connected	56	69	13
Totals	Total number of offers, agreements and connections	73	73	0
	MW	27,744	25,995	-1,749
	Average reduction in connection date	5	6	-

Please see annex 1 for further connections data

³<http://www.nationalgrid.com/NR/rdonlyres/2262CBC0-EF59-47CA-8FE8-5B365832D88A/49202/CMReportAugust2011v1.pdf>

⁴The difference in some instances is negative. The contracted background and status of offers is fluid, changing regularly as new projects come forward, and those that have already been made offers choose not to accept. This table compares 2 'snapshot' periods, as set out in NGET's quarterly reports to Ofgem. Even where the figure *overall* is negative, this in itself does not mean no new offers have been made during this period.

⁵ This is the average difference between the estimated date for connection in an offer made under 'Invest and Connect' (see footnote 7) and Connect and Manage.

As can be seen from table 1 above, as at 31 July 2011, a total of 73⁶ large generation projects have signed enduring Connect and Manage agreements, totalling 25,995 MW, connecting on average 5-6 years earlier than under the previous 'Invest and Connect' approach⁷. This total includes 3 projects with a total capacity of 69MW that are now connected to the system. 6 of the total of 73 large generation projects are new offers that have been accepted by users during 1 May 2011 and 31 July 2011, totalling around 316 MW. In addition, NGET has told us that another 3 projects have approached them in this period seeking connection; at the date of this report, these projects have not yet been made offers/entered into agreements.

In addition to the data above on larger projects, as can be seen from the data in annex 1, around 300MW of smaller, embedded generation projects have benefited from Connect and Manage; of this 300MW, 17MW has connected to the system since Connect and Manage was introduced. This brings the total volume of large and small projects connected under Connect and Manage so far to 86MW.

Overall, from the information NGET has provided, we can see that in the last six months some new projects have approached NGET for connection, whilst others have chosen not to proceed with proposed projects, to reduce capacity or to connect later. As such the overall number of projects that have been offered earlier connection under Connect and Manage remains broadly the same as when we reported in April. However, as set out above, there has been connections activity in this six month period, and the status of offers is often fluid as various factors influence projects' contractual decisions.

As noted above and as can be seen from figure 1 below⁸, we have continued to see an advancement of connection dates under enduring Connect and Manage compared with connection dates that may have been identified under 'Invest and Connect'⁹. Consistent with what we reported in April, latest data indicates that connection dates have advanced by on average 5-6 years. Many of the projects that have benefitted are renewables.

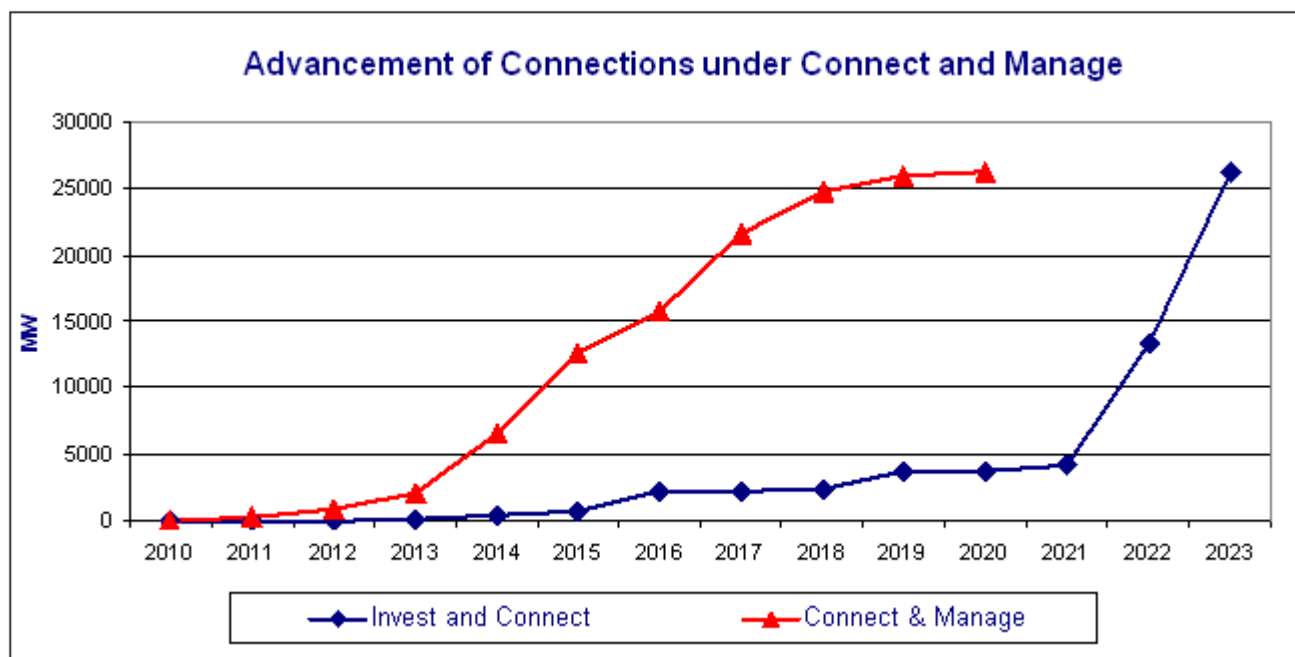
⁶ Transmission connected and large embedded generation signed agreements for accelerated connections.

⁷ Under 'Invest and Connect', generators seeking to connect to the network had to wait for the completion of all wider transmission system works, identified as required for their connection in accordance with the minimum criteria set out in the National Electricity Transmission System Security and Quality of Supply Standard (NETS SQSS).

⁸ Taken from NGET's August 2011 report on Connect and Manage. See link in footnote 3.

⁹ As we noted in our April report, the 'Invest and Connect' date against which NGET compare the Connect and Manage date is only an estimate of the timescales within which projects would have been expected to connect. Even prior to ICM and Connect and Manage, the transmission licensees were optimising the queue for connections, to facilitate earlier connection where possible by identifying spare capacity.

Figure 1: Advancement of connections under Connect and Manage



Developers' confidence in the new arrangements

As we set out in our last report, it is difficult to report with accuracy on developers' confidence in the new arrangements.

As you will be aware, we are currently conducting Project TransmiT¹⁰, our independent and open review of transmission charging and associated connection arrangements. As part of our work under Project TransmiT, we recently published a consultation¹¹ that proposes to introduce a licence obligation on each of the onshore electricity transmission licensees that will require them to provide us with appropriate information to inform our ongoing consideration of whether any changes to the existing framework are needed to facilitate timely connection. We consider that this proposed licence obligation will have the additional benefit of increasing transparency around likely timescales for connecting, as we are proposing that the licensees will produce a report that can be published. Going forward, we also hope that, should this licence obligation be brought into effect, it will provide a useful source of information in measuring developers' confidence in enduring Connect and Manage.

You will also be aware that we are continuing to work on the latest transmission price control, RII0-T1. The transmission companies are defining a set of outputs that we will hold them to account for delivering. One of these outputs relates to customer/stakeholder satisfaction. Our proposal in this area includes developing a survey of stakeholder views on the companies' performance in a range of activities, including connections. From 2013, this should provide another useful source of information on developers' confidence in enduring Connect and Manage.

¹⁰ <http://www.ofgem.gov.uk/Networks/Trans/PT/Pages/ProjectTransmiT.aspx>

¹¹ http://www.ofgem.gov.uk/Networks/Trans/PT/Documents1/110812_TransmiT_Connections.pdf

Cost and benefits to consumers of the new arrangements

For the period of this report, NGET has identified no constraint costs that are attributable to projects that have benefited from earlier connection dates. NGET has set out in its report on Connect and Manage that this is because projects that have benefited are not yet generating or because of limitations on embedded generation metering. NGET has set out that it does not have access to real time metering information for certain types of embedded generation and, for this reason, is unable to allocate any related constraint costs or related carbon savings to these generators.

However, NGET has again provided outputs from two scenarios for the anticipated costs of earlier connection under the enduring Connect and Manage framework. Under the two scenarios considered, total constraint costs up to 2018/19 are expected to be in the range of £282.7m to £1,349.8m. NGET's 'best view' forecast is at the lower end of this range and this has decreased since our last report, from £300m for the period 2017/18, to £282.7m for the period 2018/19. NGET has advised that changes in its forecast figures are as a result of changes to the contracted background.

Progress and costs of delivering the necessary wider grid investments

In my last report, I updated you on our work to consider the funding arrangements for the substantial programme of network investment proposed by the transmission companies over the coming years, to facilitate achievement of the UK renewable energy targets.

We continue to ensure that the transmission companies are incentivised to invest appropriately in their networks and deliver efficiently and in a timely fashion. In the last six months, we have made good progress in a number of the areas I highlighted to you in our last report.

This includes, most recently, approving around £250m funding for the Beaulieu Denny line upgrade, which is expected to result in significant benefits to consumers through reduced constraint costs and transmission losses¹². In addition, we are continuing our assessment of the request for funding for the Western High Voltage Direct Current (HVDC) link, also known as the Western Bootstrap, an undersea cable being developed by NGET and SP Transmission Limited (SPTL) to provide a further 2GW of extra electricity capacity between Scotland and England. In August, we consulted on our minded-to position, in principle, to provide funding for this link to enable delivery in 2015¹³; our assessment is ongoing as the transmission companies continue to firm up their plans. Further, we also recently set out our proposals to allow the transmission companies to invest £543m on new infrastructure in the year 2012/13, as part of the rollover of the current price control¹⁴.

¹² <http://www.ofgem.gov.uk/Networks/Trans/ElecTransPolicy/CriticalInvestments/TIRG/Pages/TIRG.aspx>

¹³ <http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=10&refer=Networks/Trans/ElecTransPolicy/CriticalInvestments/InvestmentIncentives>

¹⁴ See table 7, page 15, in our 'TPCR4 rollover: initial proposals' document: <http://www.ofgem.gov.uk/Networks/Trans/PriceControls/TPCR4Rollover/Documents1/110802TPCR4RolloverIP.pdf>

RIIO-T1

As you will be aware, RIIO-T1 will be the first transmission price control review to reflect our new regulatory framework resulting from our RPI-X@20 review¹⁵. As part of the RIIO-T1 process, each network company is required to develop and publish a detailed plan which demonstrates how they will deliver in the interests of both existing and future consumers and how they will meet the challenges associated with facilitating the move to a low carbon economy.

The three onshore electricity transmission companies have now submitted and published their RIIO-T1 business plans¹⁶. The business plans of each of the three onshore electricity transmission companies provide, amongst other things, detail on the wider works they intend to take forward under their next price control.

The business plans for each of the three companies considered central, upper and lower scenarios that reflected different rates of deployment of renewable generation. Each of the transmission companies based the scenarios on those used in the work of the Electricity Networks Strategy Group (ENSG)¹⁷ and built upon these to reflect their more detailed knowledge of their networks. The transmission companies' business plans set out their proposals on how they plan to ensure that their funding allowances accurately reflect the investment needs. They all propose to use uncertainty mechanisms¹⁸ to vary their revenue allowances once the needs become more certain.

In summary (as set out in figure 2 below), the three companies' expected costs (in 2009/10 prices) and approaches to wider works are:

- NGET's best view forecast is £5.9bn, with an upper forecast of £6.3bn. NGET has proposed that its baseline funding should equal the best view forecast, and has proposed to use uncertainty mechanisms to flex this revenue according to how quickly the actual needs develop.
- SPTL's best view forecast for wider works is £1.0bn, with an upper forecast of £1.2bn. SPTL has proposed a low baseline for wider works to meet the requirements that are certain at present, and has proposed to use uncertainty mechanisms to increase the revenue from the baseline, according to when the actual needs develop.
- Scottish Hydro-Electric Transmission Limited's (SHETL) best view forecast is £2.9bn, with an upper forecast of £3.5bn. SHETL has proposed a low baseline for wider works to meet the requirements that are certain at present, and has

¹⁵ RPI-X@20 review: <http://www.ofgem.gov.uk/NETWORKS/RPIX20/Pages/RPIX20.aspx>

¹⁶ Links to business plans are available here: <http://www.ofgem.gov.uk/Networks/Trans/PriceControls/RIIO-T1/ConRes/Documents1/RIIOT1busplans.pdf>

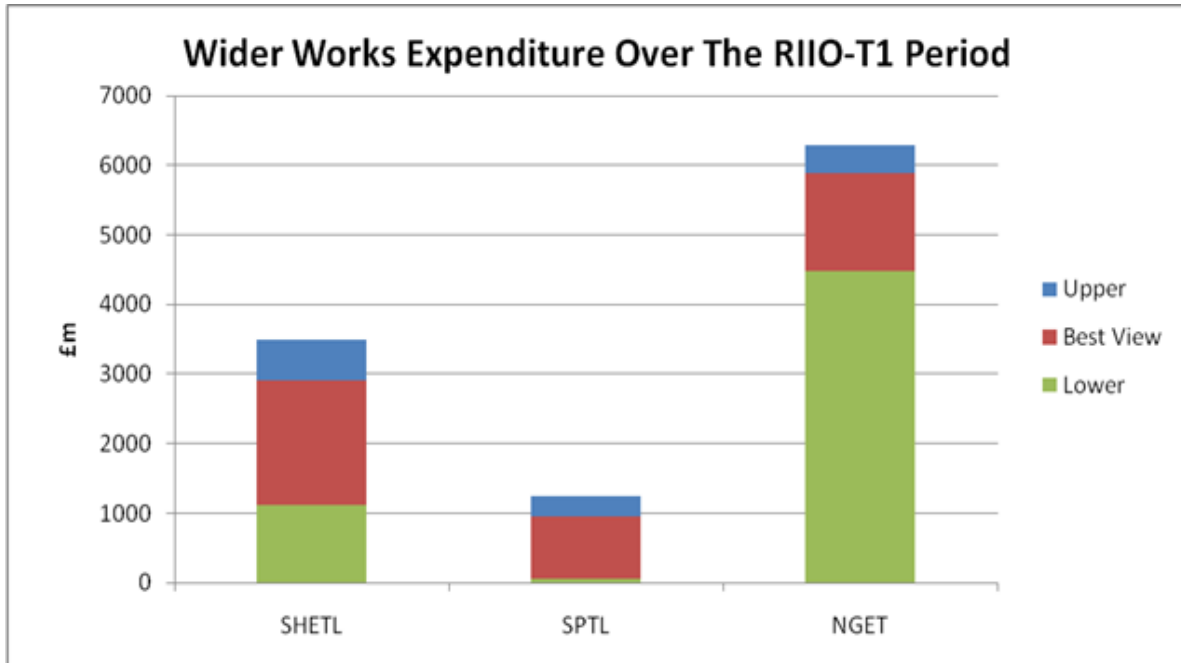
¹⁷ A cross industry group jointly chaired by DECC and Ofgem. The three onshore transmission licensees were tasked to produce the following report for the ENSG: http://webarchive.nationalarchives.gov.uk/20100919181607/http://www.ensg.gov.uk/assets/ensg_transmission_pwg_full_report_final_issue_1.pdf

¹⁸ Uncertainty mechanisms are funding arrangements outwith the baseline allowances that allow us to deal with uncertainty facing the TOs. We proposed three such mechanisms for wider works: a trigger mechanism that would provide funding for a specific project only after the timing of the need becomes clear; a volume driver that provides funding based on a unit cost allowance (UCA) once the transmission companies has delivered an increase in capacity; and a within-period determination in which we would scrutinise detailed plans for the largest projects.

proposed to use uncertainty mechanisms to increase this according to when the actual needs develop.

These proposals represent potentially significant investment in the onshore electricity transmission system. We are committed to playing our part in ensuring that the companies are able to fund efficient and timely delivery.

Figure 2: Proposed investment in wider works¹⁹



¹⁹ This graph is based on the information set out in each of the companies' business plans (see link in footnote 15).

Annex 1: Connections data

Breakdown of large connections data by Transmission Owner, generation type and MW

Transmission Owner	Fuel Type	March 2011	July 2011	Difference²⁰
NGET	Offshore wind	12,105	10,533	-1,572
	Onshore wind	200	0	-200
	Other ²¹	4,432	3,647	-785
	Total (MW)	16,737	14,180	-2557
SPTL	Offshore wind	4,065	4,065	0
	Onshore wind	846	1,038	192
	Other	1,677	1,650	-27
	Total (MW)	6,588	6,753	165
SHETL	Offshore wind	3,575	3,575	0
	Onshore wind	780	1,336	556
	Other	64	151	87
	Total (MW)	4,419	5,062	643
All TOs	Offshore wind	19,745	18,173	-1,572
	Onshore wind	1,826	2,374	548
	Other	6,173	5,448	-725
	Total MW	27,744	25,995	-1,749

²⁰ The difference in some instances is negative. The contracted background and status of offers is fluid, changing regularly as new projects come forward, and those that have already been made offers choose not to accept. This table compares 2 'snapshot' periods, as set out in NGET's quarterly reports to Ofgem. Even where the figure *overall* is negative, this in itself does not mean no new offers have been made during this period.

²¹ This includes Combined Cycle Gas Turbine (CCGT), Biomass, hydro and clean coal.

Small/embedded generation connections data

Region		As at March 2011	As at July 2011	Difference
England & Wales	Total Number of offers, agreements and connections	1	1	0
	MW	81	81	0
	Average reduction in connection date ²²	3	3	0
	Number of projects connected	0	0	0
	MW connected	0	0	0
Scotland	Total Number	73	75	2
	MW	215	224	9
	Average reduction in connection date	11	11	0
	Number of projects connected	17	17	0
	MW connected	17	17	0
Totals	Total Number of offers, agreements and connections	74	76	2
	MW	296	305	9
	Average reduction in connection date	10.9	11	-

²² This is the average difference between the estimated date for connection in an offer made under 'Invest and Connect' and Connect and Manage.

Annex 2: Background to Connect and Manage

Following consultation on models for improving grid access²³, in August 2010 the Government introduced Connect and Manage. Under this access regime, all new generation is able to apply for a connection date based on the time taken to complete a project's 'enabling works', i.e. ahead of the completion of wider reinforcements. Any resultant constraint costs are socialised across all consumers, along with constraint costs more widely. The cost of wider works required on the network is also spread across all consumers.

Connect and Manage followed the 'Interim Connect and Manage' (ICM) arrangements which Ofgem introduced in 2009. Ofgem introduced ICM on a temporary basis, with the aim of accelerating the connection of new generation by extending the principle of 'over selling'. We noted that, in the transition to the British Electricity Trading and Transmission Arrangements (BETTA) in 2005, certain generators that had connected or applied to connect to a transmission or distribution system in GB by 1 January 2005 had benefitted from the policy of over selling transmission capacity²⁴. To avoid undue discrimination in the terms for accessing and connecting to the transmission system, we considered it appropriate to extend this principle for an interim period until, and subject to, the timely and successful implementation of enduring access arrangements²⁵.

We recognised that this approach could give rise to significant increases in the volume and costs of constraint. However, we expected that the impact on costs would be small in the short term, and considered this interim approach appropriate until enduring arrangements were developed that we then expected would address our concerns about high constraints costs. We set out that we would revisit our approach if, for example, there were delays to introducing a new access regime or if costs were to rise. We noted that this could require remedies which would affect all generators in areas of over selling. The Connect and Manage regime introduced by Government in August 2010 replaced ICM, and was fully implemented on 11 February 2011.

²³http://www.decc.gov.uk/assets/decc/consultations/improving%20grid%20access/1_20100303161452_e_@@_condoc.pdf

²⁴ In the transition to BETTA, Ofgem granted a derogation to NGET and SP Transmission Limited from the requirement to comply with the Security and Quality of Supply Standard (SQSS) planning criteria over the circuits which form the transmission boundary between Scotland and England ('the Cheviot boundary'). The effect of this derogation was that additional generation connected to the system, ahead of the reinforcement of that boundary needed to achieve compliance of the SQSS.

²⁵ Ofgem's decision letter on Interim Connect and Manage can be viewed at the following link: <http://www.ofgem.gov.uk/Networks/Trans/ElecTransPolicy/tar/Documents1/20090508%20derogations%20interim.pdf>