10 NETWORK CAPABILITY FOR INTERCONNECTION WITH GREAT BRITAIN

The government has stated that it intends to develop a project for two 500 MW electrical interconnections between Ireland and Wales. The TSO understands that a decision in relation to the interconnector project is the subject of a submission from the CER to the Minister for the Department of Communications, Marine and Natural Resources and that a decision is expected shortly.

Part of the consideration of any new interconnector is the selection of suitable connection points on both sides of the Irish Sea. The capability of the grid in the Republic of Ireland to accept imports and exports of 500 MW was tested at nine potential connection points located along the east and south coasts. These locations are shown in Figure 10-1.

This chapter presents the results of that analysis and highlights the opportunities for export and import power transfers with Great Britain.

Figure 10-1 Stations Analysed as Potential Points of Interconnection with Great Britain

The results in this chapter are dependent on the assumptions made about generation and demand, and on the completion dates of transmission reinforcement projects as described in previous chapters.

10.1 TRANSFER CAPABILITY RESULTS FOR INTERCONNECTION WITH GREAT BRITAIN

The results for import and export transfers in 2009 and 2012 are presented in Tables 10-1 to 10-4. The results are classified as:

- Very high — more than 400 MW;
- High — between 250 and 400 MW;
- Medium — between 100 and 250 MW;
- Low — less than 100 MW.

The figures in brackets in the tables provide a cross reference between the medium or low transfer capabilities and the relevant additional information on the constraints provided in Appendix F.

In Table 10-1 and 10-2 the stations in the first column are the nine potential connection points shown in Figure 10-1. For each potential connection point the results give the transfer capability in 2009 and 2012 for imports from Great Britain when replacing generation at Dublin, the South and the West.

Table 10-1 Total Transfer Capability for Imports from Great Britain in 2009

Import at:	Replacing Generation at:		
	Dublin	South	West
Louth	Very High	Low (P1)	Very High
Gorman	Very High	Low (P1)	Very High
Woodland	Very High	Low (P1)	High
Finglas	High	Low (P1)	High
Carrickmines	Very High	Low (P1)	Low (C3)
Arklow	Very High	Low (C1)	Very High
Great Island	High	Low (C1)	High
Cullenagh	High	High	Very High
Knockraha	Low (P5)	Low (P5)	Low (P3)

Table 10-2 Total Transfer Capability for Imports from Great Britain in 2012

Import at:	Replacing Generation at:		
	Dublin	South	West
Louth	Very High	Medium (C9)	Very High
Gorman	Very High	Medium (C9)	Very High
Woodland	Very High	Low (C3)	Very High
Finglas	High	Low (C3)	Medium (C9)
Carrickmines	Very High	Low (C3)	Medium (C3)

Table 10-2 Total Transfer Capability for Imports from Great Britain in 2012 (continued)

Import at:	Replacing Generation at:		
	Dublin	South	West
Arklow	Very High	Medium (C1)	Very High
Great Island	Very High	Medium (C8)	High
Cullenagh	High	Medium (C8)	High
Knockraha	High	Low (P3)	Low (P3)

Similarly, in Tables 10-3 and 10-4 the stations in the first column are the potential connection points. The results for each potential connection point give the transfer capability for exports to Great Britain when increasing generation at Dublin and the South. It is assumed that generation in the West will be at or close to its maximum capacity and therefore cannot be increased for exports.

Table 10-3 Total Transfer Capability for Exports to Great Britain in 2009

Export at:	Increasing Generation at:	
	Dublin	South
Louth	Medium (P1)	Very High
Gorman	Medium (P1)	High
Woodland	Medium (P1)	High
Finglas	Very High	Very High
Carrickmines	Medium (C9)	Medium (C9)
Arklow	Medium (F2)	Very High
Great Island	High	Very High
Cullenagh	Medium (C3)	Very High
Knockraha	Medium (F4)	Very High

Table 10-4 Total Transfer Capability for Exports to Great Britain in 2012

Export at:	Increasing Generation at:	
	Dublin	South
Louth	Very High	Very High
Gorman	Very High	Very High
Woodland	Very High	Very High
Finglas	Very High	Very High
Carrickmines	Medium (C9)	Medium (C9)
Arklow	Medium (F2)	Very High
Great Island	High	Very High
Cullenagh	Very High	Very High
Knockraha	High	Very High

10.2 SUITABILITY OF LOCATIONS FOR CONNECTION OF IRELAND-GREAT BRITAIN INTERCONNECTOR

The results show that by 2012, following completion of planned network developments, Louth, Gorman, Woodland, Finglas and Cullenagh stations would be suitable connection

points for exports. These stations could accommodate transfers to Great Britain up to the full capacity of the link. However, none of the stations examined could accommodate a 500 MW import without additional network reinforcement.

The capability at most stations could be improved through the completion of planned network projects or the implementation of plans currently being considered. However, it is likely that substantial investment would be required to provide both import and export capacity of 500 MW at many of the potential connection points examined.

The suitability of connection points should also take account of the capability of the networks in Great Britain to cater for transfers. For information on the system in Great Britain, users should contact National Grid, the British system operator (www.nationalgrid.com/uk).

10.3 IMPACT OF CHANGES SINCE THE DATA FREEZE

It is unlikely that the changes since the data freeze at the end of December 2005 will have any significant impact on the suitability of the potential connection points as presented.