

510/10

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cc. Mr Spence
Mr Wilson
✓ 527/10

To: 1. PS/Mr Viggers (B&L)

2. PS/Secretary of State (B&L)

From: R Gamble, Electricity Division, DED

cc PS/Minister of State (B&L)

PS/PUS (B&L)

(1) PS/Sir K Bloomfield
Secretary

Mr Gibson

Mr Stephens)

Mr Burns)

Mr Miles)

Mr Chesterton) NIO

Mr A Wilson)

Mr Masefield)

Mr Bell)

Mr Hewitt)

Mr McMinnis

MC

(2) Mr. Speyer 26/10

(3) DED

205/10

ELECTRICITY INTERCONNECTOR WITH THE IRISH REPUBLIC

1. Miss Hume's minute of the 12 November advised that the Secretary of State wishes to have a discussion about the electricity interconnector between Northern Ireland and the Irish Republic. This note has been prepared in response to the request for a paper which might be used as the basis of the discussion.

Background

2. A 300 MW interconnector with the Irish Republic was first established in 1970. It took the form of a high voltage line, supported by steel towers, running from Tandragee in County Armagh to Maynooth in the Republic. In total the line covered a distance of 50 kilometres of which 20 kilometres was in NI. The NI portion of the line ran through south Armagh and as Appendix A shows was the subject of repeated attack by PIRA during the early 1970s. As a result the line was put out of commission and attempts to restore it met with failure in the face of PIRA threats and intimidation. It has been out of service since the mid 1970s.
3. Repair of the interconnector would entail reconstruction of three towers and restoration of two miles of wire leading to the border. In addition the associated equipment (switchgear, circuit breakers, insulators etc) would require to be serviced in view of the length of time the line has remained inoperable. NIE has estimated that its portion of this repair work would amount to £³/₄ million. We have no estimate of the cost to Electricity Supply Board in the Republic.

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Main Benefits of Interconnection

4. The main benefits to be derived from interconnection between electricity supply systems are:
 - It cuts the operating costs of each system by reducing the amount of generating plant which must be kept on standby to meet surges in demand or to guard against breakdowns.
 - It facilitates trade in electricity where one of the systems generates at lower cost than the other and has spare capacity; it also helps to compensate for plant shortage.
 - It may enable larger and more efficient generating units to be installed, so producing economies of scale.
 - Both systems may need less generating capacity (with resultant savings in capital costs) if their daily peak demand periods do not precisely coincide.
5. From a NI standpoint the principal benefit to be gained from a working interconnector would be that it would help to reduce NIE's operating costs and improve security of supply. Leaving aside any additional benefit which might result from trade with the Republic, it has been estimated that savings of £2.5m each year would accrue to NIE if the link were to be restored.

Security Assessment

6. NIE has recently re-examined the possibility of restoring the interconnector. As part of this review an up-to-date security assessment was obtained through NIO channels. RUC advice was that any workforce engaged in repair of the interconnector would in all probability become subject to intimidation; and that even if the link were successfully reinstated it would again become a target for PIRA. Consequently the RUC felt unable to recommend that an attempt be made at present to restore the interconnector. NIE has accepted this advice but plans to keep the question of restoration under regular review.

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Conclusion

7. There would be economic benefits to NIE (and to the Electricity Supply Board in the Republic) if the interconnector could be restored and kept in service. The security advice, however, is that this is unlikely to be achieved. There is no effective means of protecting a long line over open country from terrorist attack. There must therefore be a very high risk that restoration would be simply a waste of resources. It could also hand the terrorists a soft target and an easy propaganda success. On these grounds this Division agrees with NIE's conclusion that the time is not ripe to attempt restoration of the interconnector.

R Gamble

R GAMBLE
Electricity Division, DED

25 October 1988

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APPENDIX A

HISTORY OF TERROIST ATTACKS ON THE NORTH/SOUTH INTERCONNECTOR

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|-------------------|---|
| 25 July 1971 | - Tower No 614 North South Interconnector at Drummuckaval Crossmaglen, damaged by explosion (Est £17,900). |
| 8 September 1971 | - Tower No 613 at Drummackaval on N/S Interconnector damaged by explosion (Est £4,500). |
| 15 September 1971 | - Tower No 560 at Aghincurk on the 275kV North South Interconnector damaged by explosion (Est £2,000). |
| 23 September 1971 | - Tower No 586 at Tullyvallen Newry on 275kV North/South Interconnector damaged by explosion (Est £1,700). |
| 26 January 1972 | - Towers No 610-611-612-613-614 at Drummackaval, Crossmaglen damaged by individual explosions on 275kV North/South Interconnector (Est £7,800). |
| 27 January 1972 | - Tower No 560 Aghincuk, Newtownhamilton on the 275kV North/South Interconnector damaged by explosion. |
| 28 January 1972 | - Drummackaval, Crossmaglen cars 8391 WZ and AOI 1525 Ford Cortinas and Bedford van 1144 UZ hijacked at gunpoint from engineers inspecting damage to North/South Interconnector and blown up. |
| 31 January 1972 | - Tower No 589 Tullynavall, Cullyhanna on 275kV line North/South Interconnector damaged by explosion. |
| 12 April 1972 | - Tower Nos 611-612 Drummuckaval Crossmaglen on North/South Interconnector 275kV damaged by explosions. |
| 14 April 1972 | - Attack on NIES office building at Camlough. Fence cut, bomb placed beneath building, causing small fire. Guard dog had proved effective, other explosives found outside perimeter fence. |
| 31 July 1972 | - Tower No 580 Dundalk Road, Newtownhamilton on 275kV North/South Interconnector damaged by explosion. |

- 9 August 1972 - Tower No 555 Aughincurk, Newtownhamilton on 275kV line North/South Interconnector damaged by bomb.

- 16 September 1973 - Tower No 592 Cullyhanna on 275kV line North/South Interconnector damaged by explosion.

- 21 December 1973 - Tower No 603 Crossmaglen on 275kV line North/South Interconnector damaged by explosion.

- 1 February 1974 - Tower No 614 at Drummackaval, Crossmaglen on the 275kV line North/South Interconnector damaged by explosion.

- 8 February 1974 - Tower No 614 and 613 at Drummackaval, Crossmaglen 275kV line North/South Interconnector damaged by explosion.

- 25 September 1977/
6 October 1977 - J Scotts (Contractor) on site. Rebuilt Tower 612 and started to string new conductors 609-615. Work stopped when terrorists approached men on site.

- 22 September 1975 - Tower Nos 612-613-614 felled by explosives at Drummackaval, Crossmaglen on the 275kV North/South Interconnector.

- 27 February 1978 - Tower 614 damaged by explosion, close to Crossmaglen border. Main leg blown off.

- 30 January 1979 - Two explosions at interconnector line at Crossmaglen border bringing down Towers 606/607. A third Tower 608 was also damaged.

- 3 March 1980/
25 March 1980 - Repair work started by NIES staff. Damaged Towers 606 and 607 cleared and tower 608 repaired. New steelwork delivered for towers 606 and 607. Tower 606 partially erected. Tower 607 stubs repaired. Tandragee squad held at gunpoint and warned off.

- 3 May 1980 - Explosion at Tower 614 severed a second leg. Tower leaning to No 2 side.

- 6 April 1982/
24 April 1982 - Conductors in span 604-605 made safe to allow reinstatement of 110kV overhead line and recovery of interrupter cable.