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To: Bruce Robinson

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MANAGING THE CONSEQUENCES OF POWER OUTAGES

Objective: Civil Contingencies Secretariat (CCS) are managing a UK wide exercise to assess the implications of major power outages for key stakeholders.

Issue: DETI, as lead Department for NI, was tasked with assessing (via a questionnaire provided by the CCS) the implications of major power outages for key stakeholders in NI. This survey has been completed and the results analysed.

Timing: Routine.

Recommendation: That you note the analysis of the survey before this is forwarded to the CCS (via OFMDFM's Central Emergency Planning Unit).

Background

The Defence in Overseas Policy Sub Committee on International Terrorism Ministerial Group on Consequence Management and Resilience, known as DOP(IT)(R), has agreed DTI recommendations that Departments and the Devolved Administrations should discuss the implications of power outages with their key stakeholders. The Secretary of State (or one of his Ministers) represents NI at DOP(IT)R meetings.

2. Last year's outages in London and the West Midlands had widespread and prolonged impacts across many sectors even though power was restored within approximately 40 minutes. This was particularly true in the transport sector where the London underground was not fully operational for about 5 hours.
3. DOP(IT)(R) has recommended that Departments and the Devolved Administrations begin a programme of discussions with vital services for which they are responsible to ensure they understand and have taken into account the impacts of major power outages within their business continuity plans and risk management strategies.

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4. DETI used a questionnaire to determine the level of resilience planning key stakeholders in NI have in place against major power outages. This survey was part of a UK wide enquiry into how infrastructure would be affected by power failure. For the purposes of this survey, the questionnaire was sent to three basic types of organisation - Private Infrastructure, Central Government and Local Government. DETI are members of the Infrastructure Emergency Planning Forum (IEPF) and this was used as one of the means of contacting interested bodies. In addition, DETI met with key food retailers (Tesco and John Henderson & Co Ltd) to discuss their plans.
5. The questions in the questionnaire were broken into five basic headings:
 - (i) handling power failures;
 - (ii) backup generators;
 - (iii) main supplies;
 - (iv) technical issues; and
 - (v) communications.
6. The responses to the survey were mostly favourable with key private sector organisations and Central Government having back up generators in place. However several weaknesses have been identified, most notably the capacity of local Councils to deal with a major outage. This is something which DETI will need to raise with the Councils and NIE.

Recommendation

7. I have attached an analysis of the outages survey. It is recommended that you note the analysis of the outages survey before it is forwarded to CCS via OFMDFM's Central Emergency Planning Unit.

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MANAGING THE CONSEQUENCES OF POWER FAILURE IN NORTHERN IRELAND

Background

This note contains a general analysis of the resilience of Northern Ireland's infrastructure in respect of a major power outage. The analysis has been completed by the Department of Enterprise, Trade and Investment (DETI) following a survey of major interested parties.

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- (i) handling power failures;
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- (v) communications.

Private Infrastructure

Respondee to the survey included airports, ports, energy, oil and telecoms companies. Most respondees appear to have quite robust systems which would enable them to continue operations, in the short-term at least. In addition, all organisations advised that they were able to resume normal service quite quickly following an outage.

It was notable from the responses provided by the main airports (Belfast International, Belfast City and the City of Derry) that these organisations have substantive emergency plans in place to deal with power outages. The airports have back up generators with on site oil storage (4-5 days supply). Belfast International and Belfast City have also plans in place should the back up generators fail and have discussed reconnection with NIE. Responses from Premier Transmission and Phoenix Gas indicate full contingency plans are in place to deal with an outage.

BT NI is also fully aware of the importance of power supplies to the continuation of its core functions. BT liaises regularly with NIE and has back up generators at each of its sites (3 days supply). Mobile generators are also available if required.

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One particular area was identified where resilience should be strengthened. This relates to the BP Oil terminal at Belfast Harbour (BP is one of the main fuel suppliers to NI). BP's response to the survey highlighted that the company would be unable to supply fuel in the event of major power failure to their site. Back-up generation is only for fire pumps, and systems such as pumps and compressors do not have any back-up.

On restoration of power critical systems would take some 2-3 hours to restore. Therefore if there is a power supply failure to a localised area, which included the BP Oil terminal, it would not be possible to access oil from the terminal. BP have not discussed reconnection with NIE. DETI has raised this issue with BP.

Central Government

In addition to Government Departments, a number of agencies responded to the questionnaire eg Road Service, Driver and Vehicle Licensing and the Environmental Heritage Service. Responses indicate that Government Departments appear to be well covered as far as power outages are concerned. Most appear to have back-up generators as well as uninterruptible power supply (UPS) for computer systems etc.

A notable example of effective contingency planning is DRD's responsibility for the provision of drinking water supplies and sewage services to domestic and agricultural users. A major power outage could result in untreated water being delivered to customers and disruption of critical water supplies to power stations. Critical sites therefore have 100% standby through diesel generator sets and some major water treatment works have dual NIE supplies. Mobile generators are also available.

In respect of the Stormont Estate, a number of Departments have indicated that they are reliant upon DFP's Office Estates and Building Division in an outage. However, importantly DHSSPS's NI Regional Health Command Centre (which comes into operation in a major health emergency in NI) is located in Castle Buildings and is therefore covered by a back-up generator.

The Environment and Heritage Service does not appear to have a robust emergency plan in place in the event of an outage. This may be due to the nature of the work of the Department also the Forestry Service of DARD do not seem to have done as much work on emergency planning as other Departments, however this may also be more due to the type of work they are involved in and the fact that it will not have much impact on the Department if they fail to do their duties for a few days.

In general, most Departments seem to have UPS to cover computer systems and do appear to have some sort of generation capacity which would allow them to continue working in the short term. It does however stress the importance that all

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Departments should have a robust emergency plan in operation to cover all eventualities.

District Councils

Seven of the 26 Councils responded to the (Antrim, Ballymena, Castlereagh, Derry, Fermanagh, Lisburn and Newtownabbey). Using these as a representative sample there would appear to be very limited coverage in stand-by generators for the Councils (only one of the 7 responding Councils has a back up generator and most have not discussed reconnection with NIE) and they appear in the main to rely upon 'hiring in' generation power if electricity fails. In the event of a major power outage other organisations and businesses would no doubt have the same idea and there may well be a shortage.

In addition, not every site appears to have UPS to protect the computer systems or telephones in the event of a power failure leading to them being cut off immediately. Only two of the responding Councils had discussed reconnection with NIE in the event of a power failure. It does appear however that several of the Councils are looking at getting generators installed and are taking on board the need to have a robust system.

Summary

The responses to the survey were mostly favourable. This is possibly the result of the major power outages NI has experienced in the past (for example Winter 1998) and the threat of terrorism in Northern Ireland. This has possibly led to NI being more resilient than other areas in terms of dealing with power outages.

Many of the businesses and infrastructure companies are well protected by back up generators in the event of a major power outage in NI and important organisations such as Belfast International Airport have also discussed reconnection with NIE.

Central Government is also well prepared in the event of any problems with power supply, although several Departments based in the Stormont Estate are vulnerable in the short term. The same cannot be said of local Councils. The lack of back up generators at most Councils means that many would be reliant upon NIE for reconnection (a situation made the more vulnerable by lack of UPS needed to keep telephones working).

It is worth noting that while many organisations have back up generators and on site storage for oil, in most cases these would be exhausted in 3-5 days. In a major power outages lasting a number of days it would therefore be essential that the supply of oil to NI, and throughout, is maintained. The vulnerability of BP to a major power outage (particularly important given BP's role in supplying fuel to NI) highlights the importance of the continued supply of oil into NI.