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Clare Haughey MSP
Convener
Health, Social Care and Sport Committee
Scottish Parliament
Edinburgh
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19 March 2025

Dear Clare

I'm writing to provide an update to the Scottish Parliament on the investigation into the power outage at NHS Forth Valley Royal Hospital on Friday 24th January during Storm Éowyn.

NHS Forth Valley Royal Hospital experienced a power outage at 14:45 on Friday 24th of January due to significant power fluctuations and power was lost at the hospital for 70 minutes before the Serco Authorising Electrical Engineer and the onsite team were able to fully restore the power to the hospital site.

On 28th of January, Angela Constance Cabinet Secretary for Justice and Home Affairs provided an update to the Scottish Parliament on the national response to Storm Éowyn and confirmed that a full investigation into the power outage at NHS Forth Valley was on-going and the report would be shared with the relevant authorities and with Parliament.

The investigation has now concluded and I attach a copy of the report and its findings which includes a number of recommendations and key actions, along with this letter.

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The Committee may wish to know that the Scottish Government's Health Emergency Preparedness Resilience and Response team are currently working with all Health Boards to assess their resilient communications and response to power failures.

I hope this correspondence has been helpful.

Yours sincerely



NEIL GRAY

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Update on Power Outage at Forth Valley Royal Hospital on 24 January 2025

Situation

Forth Valley Royal Hospital experienced a power outage due to significant power fluctuations during Storm Eowyn, resulting in the loss of power at 14.45 for a total period of 70 minutes (power was restored after an hour followed by a short manual restart process which took approximately 10 mins).

Background

Storm Eowyn was categorised as a Red Weather Warning by the Met Office on 23 January 2025 with effect from Friday 24 January 2025, 10:00 until 17:00, across southern Scotland and the Central Belt with a high likelihood of high impact. Predictions were expected winds gusting to 80-90mph across inland areas of southern Scotland and the Central Belt, bringing the potential for significant damage and disruption.

Forth Valley Royal Hospital has four generators, with three required to power 100% capacity of the hospital and on-site fuel stocks able to support three days of continued use.

The monthly generator testing schedule was up to date, and the annual full on-load black start was undertaken on 26 November 2024, with no significant issues identified. In addition, there is weekly off load testing and monthly on-load testing. This is in accordance with SHTM 06 requirements. The generators are subject to six-monthly servicing in line with manufacturers recommendations, with the last taking place on 19 December 2024.

Several meetings took place on Thursday 23 January 2025 with a Gold Command structure in place, Operational/Silver Command site meetings and Local Resilience Partnership (LRP) to discuss and agree how to prepare for the anticipated weather-related issues. Meetings were scheduled throughout Thursday 23rd and Friday 24th January to monitor the situation and respond to any emerging issues.

Throughout the morning and early afternoon of Friday 24 January, the extreme weather resulted in disturbances on the electricity grid transmission and distribution networks. This, in turn, caused some disruption to the hospital's mains power supply. Whilst this was not significant enough for the back-up generators to deploy automatically, it did cause some local disruption with power dips causing lights to flicker and several circuits and systems having to be reset.

As a result, a decision was taken by the Serco team to set the hospital's generators to parallel run alongside the mains power supply to help minimise the impact of more frequent power dips as the storm progressed.

At 14:45, all areas within the hospital experienced a loss of power because of a major power surge which tripped the connections for both incoming mains and generator power supplies. This power outage was compounded by other weather-related issues which impacted on fixed and mobile network infrastructure across the local area and made communication extremely challenging.

The onsite Serco team immediately commenced the Standard Operating Procedures in place for all manual and digital resets but were unable to reinstate mains or generator supplies. The Serco Authorising Electrical Engineer, who had been contacted at the onset of the outage, attended the site and working with the local site team was able fully restore the power.

This full site power loss was managed via our Incident Command structure, reported to Scottish Government and the Local Resilience Partnership with support requested from the

Scottish Ambulance Service and neighbouring NHS Boards, if required. It was declared as a Major Infrastructure Failure and the response plan for this was enacted.

The main aims and priorities were to:

- avoid any loss of life or potential harm to patients
- restore power as quickly as possible
- return the hospital and systems to normal operations

Critical medical equipment, including ventilators, were plugged into a network of blue sockets which are part of the Isolated Power Supply (IPS). These are powered from the UPS system, a separate battery-operated Uninterruptible Power Supply (UPS). Checks were undertaken to ensure that vital equipment was functioning appropriately and expected battery life was reported back to Silver Command (ventilators can continue to operate on battery power for 3 – 4 hours and other ITU equipment for up to 8 hours). No identified risks were highlighted with no interruption to the continuity of care, with staff working together to support patients and each other during this very challenging time. Contrary to some initial media reports – no patients required to be manually ventilated as a result of the power loss. There was no patient harm recorded as a result of the infrastructure failure, however a small number of patients who were being prepared for theatre had to have their procedures rescheduled.

After power was restored, IT systems were brought back online in a prioritised, planned manner along with the phone system and Wi-Fi communications.

The immediate response to the power loss by staff on site was exceptional with staff working and willing to do whatever was required to prevent loss of life or harm to local patients. We have also received positive feedback from patients in hospital during the power outage who got in touch to praise staff for their care and ongoing communication during the incident.

Debrief

A full site debrief into the power outage was held on 31 January 2025 at Forth Valley Royal Hospital to review feedback and identify learning from departments, wards and services across the hospital site. Key themes and issues were discussed along with feedback on what worked well and what could be improved.

Key Actions & Recommendations

- Serco has carried out a review and updated their Standard Operating Procedures to incorporate additional checks linked to the circuit breakers and switch as part of the manual reset procedures for the generators
- Serco has updated local operating procedures to avoid parallel running of the generators during periods when there is an unstable mains supply, with consideration given instead to enacting full generator power only
- Serco has carried out training for manual reset processes to ensure local site staff are aware of the updated operating procedures
- Pre-agreed actions and communication for future red weather warnings affecting the local area are being developed to ensure that decisions on the level of activity that can be maintained and what should be rescheduled are taken at an earlier stage

- Local business continuity plans are being reviewed and updated and checklists prepared to help improve preparations for any potential disruption to local systems during a red weather alert
- Additional training in contingency arrangements for major infrastructure failures is planned to ensure staff, particularly those who have joined the organisation recently, are aware of the arrangements and actions required
- Potential solutions to improve the resilience of local telecommunication systems are being explored
- Serco will develop a protocol in collaboration with NHS Forth Valley to support earlier decision making and intervention in advance of a red weather warning

Recommendations

Review and implement lessons learned to ensure the risk of this incident is mitigated and plans are updated. Share learning from this Major Infrastructure Failure through the local, regional and national resilience partnerships.

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