HSE Policy Re-opener Application

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WALES&WEST UTILITIES

Contents

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Document Security

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Guidance and Supplementary Information

The structure of this document follows the guidance set by Ofgem in its ‘Re-opener Guidance and Application requirements Document’.

Introduction

This HSE Policy reopener is being submitted in relation to the management of fatigue at Wales and West Utilities (WWU) within the current price control. It includes both costs incurred to date (April 2021 to August 2024) and forecast costs for the remainder of GD2 (September 2024 to March 2026) based on experienced cost.

The management of fatigue has been a focus of the HSE over the last few years and they have recently provided guidance on their expectations which has exceeded those originally considered as suitable and sufficient across the gas industry.

Application summary

This application requests additional allowances for efficiently incurred costs as a result of changes implemented to manage fatigue, grouped under the following headings:

1. **Operational Resource Impact** – impact of a change in shift patterns, call out arrangements, ability to operate a full shift the next day, unproductive time associated with swapping teams due to fatigue limits being hit and an increase in resource to maintain levels of service

2. **Fatigue Management** - management of fatigue including completion of fatigue risk assessments and safety team investigation

3. **Training** - the development and delivery of training

4. **IT & Research** – research on behalf of the gas industry to assist in the development of bespoke solution for fatigue risk management, and the associated IT solution required.

In 2018/19[1] prices our application is as follows:

		£m
1.	Operational Resource Impact	**23.9**
2.	Fatigue Management	**1.1**
3.	Training	**0.5**
4.	IT Systems & Research	**0.3**
	Total	**25.8**

Values are based on actual costs incurred in the first three years of RIIO-GD2 (April 2021 to March 2024), with forecast costs (April 2024 – March 2026) in line with historic actuals unless otherwise stated.

Detailed workbook with supporting methodology and calculations has been submitted to evidence the values included. All costs quoted in this paper are in 18/19 prices unless otherwise stated.

[1] Ofgem's conversion factors used

Needs case and preferred option

Alignment with overall business strategy and commitments

The management of health and safety, including fatigue management, is a fundamental element of the overall business case and delivery strategy at WWU.

The ability to remain compliant with statute, and HSE expectation, removes a layer of risk associated with the undertakings of our business. Therefore, the option to 'do nothing' is not available to WWU.

There have been a number changes to repex costs or specified changes to Emergency and Repair Costs directly associated with statutory requirements relating to managing fatigue for shift workers enforced by the HSE.

Demonstration of needs case / problem statement

The management of fatigue in the gas industry has, in the last few years, been a focus of the HSE.

Whilst there is no direct legislation focused on fatigue management, unlike that for other occupational hazards including vibration and noise for example, the HSE has referenced less specific and generic statute to be applied for fatigue management across the gas industry.

This includes

- Health and Safety at Work Act 1974
- Management of Health and Safety at Work Regulations

As the requirements set out in the aforementioned legislation is generic to all health and safety management and does not directly relate to fatigue there has always been an element of interpretation as to what is 'suitable and sufficient' across the gas industry. This is further compounded by the fact that there is no precedent for fatigue management across the gas industry and / or like industry comparison as to what constitutes an effective fatigue management system.

In October 2023 the HSE provided the gas industry with further guidance on their expectations in relation to fatigue management which has exceeded the original understanding as to what was deemed compliant (suitable and sufficient), albeit to generic legislation.

The management of fatigue is a highly complex subject and as a result significantly open to interpretation and therefore the HSE's expectation / high level principles could not have been reasonably foreseen. An individual's level of fatigue is not solely and directly related to what activities they undertake during working hours as it is also influenced by their personal life. When considering the design of our fatigue management system, and the solutions developed, we have considered how fatigue impacts an individual including the following. This has assisted WWU determine the level of resource required to achieve the HSE high level principles.

- Health including age, sex and physical ability / existing conditions
- Sleep including quality which may be impacted by personal life (young children, social activities, eating / drinking habits etc)
- Activity / task type – mental vs physical fatigue
- Environmental conditions including weather, urban vs rural etc

Below we set out how we have been addressing the impact of fatigue on our workforce since the beginning of this price control."

Consideration of options and methodology for selection of the preferred option

WWU, in collaboration with the other GDN's, has very carefully considered the advice provided by the HSE in the form of the following high-level principles for fatigue management:

- Working arrangements that mean workers do not routinely work excessive hours.
- Systems that identify when a worker is at risk of working excessive hours.
- Systems that prevent excessive hours and provide adequate rest.
- Where the above is not possible, a system to manage the risk of Human Error on Safety Critical Tasks due to fatigue.

Where;

"Excessive hours" is deemed to mean:

- More than 12 hours work in a single day.
- More than 60 hours work in a rolling seven-day period.

"Adequate rest" is deemed to mean:

- Enough time that Workers typically have sufficient time between shifts to commute, eat meals, sleep and participate in domestic and social activities. Compensatory rest procedures may be used in the instances of overtime or on-call working.

The preferred option, and that being adopted by WWU, is to achieve all of the above HSE High Level Principles by the end of GD2. A significant amount of change (alternate shift and standby patterns / contract negotiation / increased workforce) has already been delivered at WWU and we are broadly compliant, however, further action is required to enable a predictive fatigue management system and a more focused risk assessment process based on the results of ongoing research within the gas industry.

In 2021 when the HSE first introduced a focus on fatigue management at WWU the initial key focus was to not exceed 16 hours worked in a single day. At this time the WWU Fatigue Management system was developed to achieve this expectation and introduced alongside this a robust risk assessment process to determine an individual's level of fatigue. [redacted]

Since 2021 when the management of fatigue was not so prominent across the gas industry and it was often a common occurrence that the recently provided HSE High Level Principles were not adhered to in full there has been a push from the HSE towards not exceeding 12 hours worked in a single day alongside other stringent parameters surrounding rest periods and total hours worked in a rolling seven-day period. This has brought about the need for WWU to make more changes to its shift patterns / and call out arrangements further impacting the availability of persons to fully complete tasks before teams require swapping out and / or operate the next day.

Stakeholder engagement and whole system opportunities

Since 2021 when fatigue became a key focus area for the gas industry there has been a significant amount of stakeholder engagement with the HSE in the form of numerous planned interventions on fatigue management and consultation on their precise expectation that resulted in the sharing of the HSE High Level Principles for fatigue management in October 2023.

There has also been extensive collaboration across the gas industry with other gas transporters to interpret the HSE High Level Principles and align our respective approaches to fatigue management, although it should be noted that environmental conditions i.e. rural vs urban will bring about subtle differences in approach to fatigue management.

Cost information

Whilst the management of fatigue should be focused on determining an individual's level of fatigue (mental and physical) that will either impact on their ability to perform a task and / or make decisions without increased risk of an incident to enable cost modelling, in alignment with the other GDNs, to be undertaken the HSE High Level Principles have been transpired into tangible values including

"Excessive hours" is deemed to mean:

- More than 12 hours work in a single day.
- More than 60 hours work in a rolling seven-day period.

"Adequate Rest" is deemed to mean

- 8 hours between shifts with the addition of compensatory rest should an individual be called out on emergency response.

The WWU cost information has been structured around four areas

1. **Operational Resource Impact** – This includes the impact of a change in shift patterns, call out arrangements, ability to operate a full shift the next day, unproductive time associated with swapping teams due to fatigue limits being hit and an increase in resource to maintain levels of service.
2. **Fatigue Management** – This includes those costs associated with the management of fatigue including completion of fatigue risk assessments and investigation conducted by the safety team when fatigue levels are exceeded.
3. **Training** – This includes costs associated with the development and delivery of training across all of WWU including e-learning modules and general guidance to enable individuals to recognise personal fatigue and understand how it is managed at WWU.
4. **IT and Research** – In collaboration with the other gas transporters and in the absence of fatigue data / evidence for the gas industry Nottingham University has been engaged to undertake research on fatigue to assist in the development of bespoke solutions. To enable effective predictive systems and live triggering of risk assessments alongside the ability to obtain and analyse management information on fatigue WWU requires an IT solution to have in place a fully compliant fatigue management system that satisfies the HSE High Level Principles.

The impact on cost, and the value for this reopener application, is as follows:

£'m

Cost impact	2021/22	2022/23	2023/24	2024/25	2025/26	GD2 Total
Operational Resource	£1.87	£4.06	£6.21	£5.87	£5.87	£23.88
Fatigue Management	£0.21	£0.22	£0.20	£0.22	£0.22	£1.06
Training	£0.11	£0.16	£0.28	£0.00	£0.00	£0.55
IT & Research	£0.00	£0.00	£0.00	£0.00	£0.26	£0.26
	£2.19	**£4.44**	**£6.69**	**£6.09**	**£6.35**	**£25.75**

We provide more detail for each of the above four areas in the following sections, including a methodology on how the total has been calculated.

Operational Resource Impact - £23.88m

£'m

Operational Resource Impact	2021/22	2022/23	2023/24	2024/25	2025/26	GD2 Total
Build & Repair - Productivity impact	0.29	2.24	4.09	3.76	3.76	**14.14**
Emergency Services - Work pattern changes	1.19	1.28	1.39	1.39	1.39	**6.65**
Build & Repair - Standby rota changes	0.16	0.31	0.50	0.50	0.50	**1.96**
Operational dept - Compensatory rest	0.23	0.23	0.23	0.23	0.23	**1.14**
Operational resource impact	**1.87**	**4.06**	**6.21**	**5.87**	**5.87**	**23.88**

Build & Repair Productivity impact - £14.14m

The flexibility of our operating model

On entering RIIO-GD2, we insourced the delivery of our mains replacement programme which was previously outsourced to a single contractor. Our GD2 delivery model differs to other GDNs who operate separate repex, opex and capex teams, instead we have a multiskilled workforce who operate across all work activities. This provides us the opportunity to train and flex a wide pool of resources across all work activities, deploying them in the most efficient way, maximising their productivity whilst maintaining compliance to all regulatory and customer requirements.

Our Head of Operations is responsible for all operational delivery, and his direct report Senior Managers cover all work activities. The managers and teams, whether leakage, repair, maintenance, connections or replacement are all based out of the same depots which helps our teams to discuss, plan and react accordingly to changing demands on the network.

As an example, substantially all our Direct labour B&R colleagues are trained to deliver mains replacement as well as attend emergency leaks and repair those leaks. During summer periods when leaks are low, we flex staff onto repex activities who, under other operating models, would have been unproductive within opex.

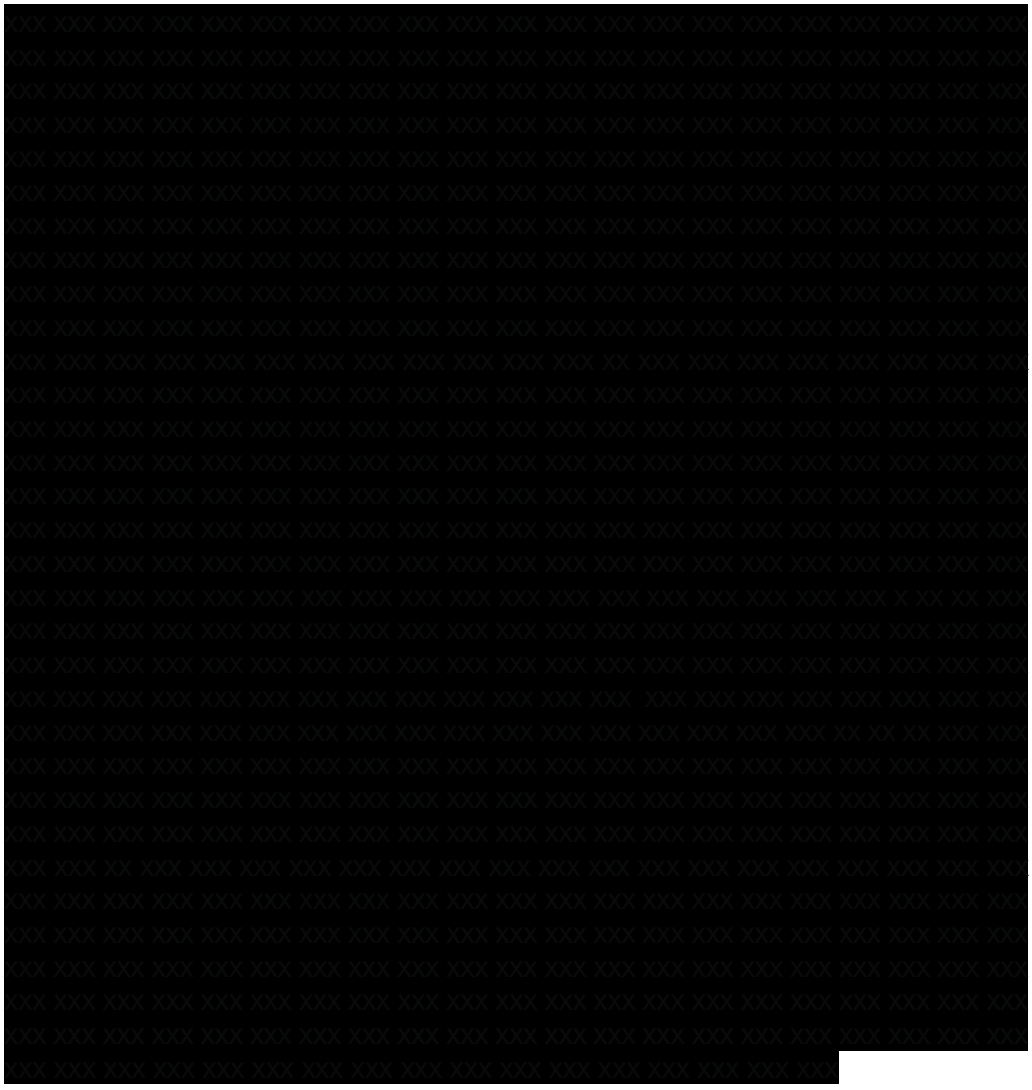
The impact of fatigue on the GD2 operating model

The introduction of fatigue management systems and processes on our B&R operatives has led to a greater level of unproductive time and cost. Examples of how fatigue has impacted are:

1. Make safe & return - teams unable to complete the job due to fatigue hours being reached and having to return the following day. In RIIO-GD1 the existing team would stay on site and complete the works in one visit.
2. Continuation of work - requirement to relieve initial team during a repair activity to manage their fatigue limits. In RIIO-GD1 the existing team would have worked on into the night and completed the works. Instead, a secondary team is now sent from the standby rota to complete the works. This impacts the productivity through
    a. Duplicated travel time and site handover
    b. The next working day is impacted as teams require rest time. The mains replacement project is delayed.
3. Convenience breaks instructed to be taken following Fatigue Risk Assessments resulting in reduced availability and increased unproductive time

Measuring the productivity impact

We operate an established Performance Management Framework which has been embedded since 2005. This is expressed as a productivity percentage and is embedded in how we manage our performance.



[redacted]

[redacted]

Emergency Services Work Pattern changes - £6.65m

In RIIO-GD1 the work stagger patterns in place ensured adequate resources were available to meet the forecast demand workload for every geographical region (15 regions in WWU). These were optimum patterns for Emergency Services, with every geographical region having its own tailored profile based on the latest actual demand, matching forecast demand and maximising the utilisation of our Emergency Services workforce.

At the beginning of RIIO-GD2, to manage fatigue it became necessary to increase the hours worked on-shift out of core hours to reduce the number of times excessive hours are worked. This meant a shift away from the previous optimum patterns designed to match the workload profile as closely as possible to patterns designed to comply with HSE fatigue guidance.

The change to the less efficient patterns has meant additional cost has been incurred to maintain an adequate level of resource for emergency standby (gas leaks). These additional FTEs is the cost associated with Emergency fatigue.

A downward adjustment of £0.3m per annum has been applied to the value to recognise the savings on work pattern payments and reduction in overtime payments since GD1 as a consequence of the changes to reflect a fair and balance net impact of the cost increase.

[redacted]

Build & Repair - standby rota changes - £1.96m

Standby is the duty under which an employee, by prior arrangement, is available during their normal rest periods (including non-rostered days of work, Saturdays, Sundays and Public Holidays) for contacting and callout to attend at work without delay.

By design, WWU do not normally roster individuals on standby at frequencies more than 1 in 4. This recognises the importance of maintaining health and safety standards, operational effectiveness, and the disruption to personal and family life.

To effectively manage fatigue in accordance with the HSE High Level Principles, WWU has employed an increased number of competent persons for standby to avoid others being placed in a position where they are forced to work 'Excessive Hours' and / or not receive 'Adequate' rest time.

It is standard industry practice to make a fixed payment to employees who are on the standby rota; more employees required on standby increases the total cost to business. The only change that could have impacted standby rotas since 2021 is the management of fatigue.

We have calculated the difference in standby payments between pre-2021 and each year in the GD2 period.

Operational Industrials Compensatory rest - £1.14m

'Compensatory rest' is where an employee has to work when they should be resting, such as when called out to an escape out of hours and accrues that rest to be taken within a certain period of time.

Prior to April 2021, rest time was applied where, due to emergency working or unusual and unforeseeable circumstances associated with gas transmission and distribution an employee is prevented from taking their daily or weekly rest or exceeds the night worker limits the manager would provide the opportunity for compensatory rest to be taken the following day.

In April 2021 WWU introduced a change to rest time rules to assist the management of fatigue and enable the provision of 'Adequate Rest'. Under the 2021 change compensatory rest time is accrued if, for example, rest time is earned on a Friday evening and the individual is not rostered to work Saturday or Sunday then the rest time should be accrued and taken when the individual is next scheduled to be in work, which, in most cases, is the following Monday. Irrespective of when it is earned it should be taken within 7 days of being accrued.

This change means that compensatory rest time can now be taken anytime the next week meaning two additional days of the week where rest time could be accrued.

The cost to our business of introducing this as a result of fatigue management is the unproductive time in the following working week as a result of compensatory rest no longer being restricted to be taken the following working day.

[redacted]

Fatigue Management - £1.06m

In 2021/22 WWU introduced a comprehensive risk assessment process as a key (vital) element of the fatigue management system. This represents the costs of administering and adhering to this process.

Completion of risk assessments - £0.80m

Risk assessments are required when an individual's hours of work reach 11 hours, 12 hours, 14 hours and 16 hours. We maintain a comprehensive record of every risk assessment undertaken.

By their nature these risk assessments are completed outside of the working day. To carry out these risk assessments, First Line Managers (FLM) complete overtime in the evenings, up to 10pm. Overtime is only recorded when a risk assessment is required (it is not a standard set of overtime, it is only required when a risk assessment is required).

After 10pm to 6am/8am, to avoid fatigue of our FLMs and to minimise cost, these risk assessments are carried out by our Despatch team.

There is an additional overtime cost of FLMs completing risk assessments in the evenings, and an additional one FTE burden required in Despatch to complete manage the risk assessment process.

[redacted]

Safety department - £0.25m

This is the cost incurred for our safety department completing investigations for all occasions when an individual exceeds >16 hours in any single shift. It is vital that when >16 hours is exceeded we understand the reason to avoid re-occurrence and maintain confidence that the fatigue management system is effective. It is anticipated that the number of investigations required will increase given the move towards not exceeding >12 hours work in a single shift being the standard expected by the HSE.

All investigations are carried out by our HSE advisors, once the HSE manager has reviewed them they are then sent to the wider operational management team.

[redacted]

Training costs - £0.55m

This is the cost incurred for training the incremental operational FTE's required for standby rota's to be ERL trained (Escape, Locate & Repair) and the time incurred of WWU staff in fatigue management, this includes the completion of e-learning modules on how the WWU fatigue management system operates to protect them and the company from an increased risk of an incident due to fatigue.

[redacted]

IT & Research costs - £0.26m

IT - £0.23xm

This is the anticipated cost for the procurement, development and implementation of an IT solution that is a vital element of the overall fatigue management system and WWU's ability to achieve compliance with the HSE's High Level Principles. It will enable the ability to predict an individual's fatigue based upon previous actual working patterns and those anticipated in the near future. The system will also need to have the capability to trigger and record the outcomes of fatigue risk assessments in a 'live' environment as individuals reach specific trigger levels i.e. 12 hours. The IT solution is expected to have the ability to provide management information that enables analysis of WWU's conformance to the HSE High Level Principles for fatigue management and proactively recognise trends that indicates weaknesses in our fatigue processes / procedures.

We intend to implement a suitable IT system in 2025.

[redacted]

Research - £0.035m

This is the actual and forecast cost incurred for WWU's share of the empirical research being undertaken by Nottingham University for gas networks. This research has been commissioned as there is an absence of data / information that determines fatigue for those individuals working in the gas industry. There is also no data / information for fatigue that has been developed for any comparable / like industry i.e. other utility including electricity and / or water. The objective of this research is to develop a more detailed risk assessment that will further enable the ability to more precisely determine, an subsequently manage, an individual's level of fatigue (mental and physical) for those persons undertaking roles within the gas industry.

[redacted]

Fast/Slow money impact of the reopener

This reopener has a materially worse fast/slow money split than the actual cost incurred across Opex, Capex and Repex. We would welcome consideration on changing the fast/slow split to better align to the actual capitalisation rate of the underlying spend.