Anglian Water: PR24 Cost Change Proposal

Critical Power Supplies

1 May 2026

Cost Change proposal 2026 Power Supplies

Power supplies: Cost Change 2026

1 Overview of power supplies cost change proposal

The resilience of our Water and Sewerage assets is underpinned by around 1,400 High Voltage (HV) power supply assets which reside across the region. This asset class includes 11kV HV motors, transformers and switchgear which are strategically located across our operational locations, ranging from smaller localised assets such as raw water abstraction and sewage pumping stations, to major infrastructure at Water Treatment Works (WTWs) and Water Recycling Centres (WRCs), with transformer sizes ranging from 400-4,000kVA.

Current asset condition

In this proposal we make the case for a relatively small and targeted investment in replacing around 50 of our higher risk, oil filled High Voltage (HV) transformers and switchgear assets. These are long life assets, but they will not last indefinitely. 61% of the 315 assets we have in operation are over 50 years old, and 26% of the 315 have been assessed as having a Health Index of grade 4 or 5 (the worst condition). Transformers contain flammable oil and their failure poses operational risk due to potential catastrophic consequences such as explosion and fire, interruptions to service and environmental impacts. Replacing these with modern assets will significantly improve safety standards, and operational resilience by addressing single points of failure.

Ofwat has not identified Power Supplies as an asset class on its current priority list. However, in recent Asset Health Roadmap workshops, it has signalled a willingness to consider other asset classes and confirmed that it is considering allowing each company to apply for one additional asset class for which there is a company specific asset risk.

The need for additional investment in AMP8

Our evidence shows that it is critical to make a proposal for power supplies through the 2026 Cost Change process due to the operational and performance risks to customers and the environment associated with HV power supply and switchgear assets. Asset failures at one of our most strategic WTWs could put tens or even hundreds of thousands of households at risk of an interruption to their water supply, whilst a loss of power to one of our WRCs could result in a serious pollution incident.

These risks were highlighted in the sector-wide asset health prioritisation exercise. We flagged this asset class as a high priority for both water and wastewater as it met all of the prioritisation principles (asset criticality; known/ indicated current challenges; sufficient range of assets; data can be collected in time; visible condition is a factor in asset health; and long life assets), and we presented on HV assets to Ofwat's Operational and Resilience Working Group as part of our company showcase in November 2024.

We have used the proposed criteria in the table below to demonstrate that our power supplies cost change proposal would be suitable for a company-specific asset health proposal.

Table 1 Assessment of our proposal against Cost Change criteria

	Principle	How this proposal meets the proposed criteria
Structure	Related to a single Asset Class (e.g. GRP Sewer Rising Mains, HV Transformers/switchgear, etc). Companies would be expected to evidence the asset class would be at high risk and high consequence of failure (e.g. Supply interruptions, pollution, Process Safety risks). Limited to one proposal per company. There would be a limit of investment depending on the size of the company, for example % RCV / Totex.	Proposal focuses exclusively on high voltage transformers and switchgear. There are clear high-risk, high-consequences to: site failure; health and safety; CAT1 pollution events; major interruptions to water and water recycling services. This is one discrete proposal - the other two (storage point and gravity sewers) relate to industry-wide priority areas. At £15.2m totex across the AMP, the scale is small and targeted.
Need for investment	Companies to demonstrate why it is a specific issue for them and evidence company-specific conditions (e.g. historic issues, geography, operating	A high proportion of assets were installed in the 1960s-70s, and are now approached or exceeding design life.

	Principle	How this proposal meetings the proposed criteria
	environment, etc). This will be particularly important in the absence of sector wide asset condition information. We would look to engage with the company to understand the specificities (supervisory approach).	We have applied the Ofgem DNO Common Network Asset Indices Methodology (CNAIM) in absence of water sector condition data. The proposal is suitable for proportionate and timely supervisory engagement.
Customer protection	Companies must evidence why was a case not made in PR24, and why the spend is beyond current base. PCDs required for 'what base buys' and any additional investment funded through CCP. As we would not have a sector wide view on 'what base buys' companies would need to outline historical spend across all asset classes. This helps demonstrate to customers where money has been spent, if not on the asset class in question. This will give customers confidence they are not paying twice.	There is no sector-wide view on what base buys for this asset class. We have quantified historic spend at £2m per AMP but this does not deliver asset replacement and results in continued deterioration. We include an expenditure-based PCD which links allowances to the effective delivery of investment. This includes ex-post review, independent assurance, and clawback of any end of period underspend.
Asset health assessment	Companies to propose a condition methodology based on methodologies already developed for the cost change process, or Ofwat to develop sector wide methodologies for the asset classes put forward by companies.	We have applied the CNAIM methodology which is widely use and accepted in the electricity sector. This is potentially transferrable to help Ofwat develop broader methodologies of power assets in future.

1.1 Consequence of failure and benefits of proposed investment

The operational and performance risks (and consequences) associated with any potential failure of HV power supply and switchgear assets are of significant concern to us as the operator of the assets, but also to our customers, regulators and neighbours:

- Explosion and Fire, with associated safety risk, resulting in and damage to critical infrastructure;
- Loss of Power, potentially resulting in loss of abstraction, treatment, pumping or water recycling processes;
- Operational Site Failure - partial / full, resulting in loss of treatment capability and increased risk of non-compliance;
- Environmental Pollution Incidents, and/or untreated/ partially treated discharges, including category 1 incidents following loss of critical treatment processes;
- Interruptions to supply (I2S) - both water and sewerage, and/or prolonged supply outages;
- Site based permit breaches.

Major asset failures have historically been high impact, low probability events. But the risk profile increases as assets age and we do experience occasional power outages across our sites. Moreover, we find it increasingly difficult to source spare components, increasing the risk of extended outages. Asset failures may result in a material impact in our ability to provide continuous service to customers and the environment. This would have a detrimental impact on our reputation as well as the wider water industry. Therefore, we believe that this relatively targeted investment package offers substantial risk reduction benefits for customers and the environment including:

- Improved safety due to reduced fire and operations risk
- Reduction in water supply interruptions
- Reduction in pollution incidents
- Reduction in compliance failures at water recycling centres
- Improved system resilience

Table 2 Summary of investment proposals (£m, 22/23 price base)

Price control	Expenditure type	2027/28	2028/29	2029/30	AMP8
Water resources	Capex	2.0	3.5	2.4	7.9
Water Network +	Capex	0.2	0.3	0.2	0.6
Wastewater Network +	Capex	1.7	2.9	2.0	6.6
	Totex	**3.9**	**6.7**	**4.6**	**15.2**

Table 3 Summary of approach to cost development

Cost benchmarking	
Method	Cost efficiency was assessed through internal benchmarking against ten years of fully reconciled historical transformer replacement outturn costs, supplemented by validation against competitively procured current market pricing and structured to reflect programme-level delivery efficiencies and consistent scope definition.
Findings	The benchmarking demonstrates that the proposed costs are proportionate and efficient, sitting in line with historical maintenance replacement outturns, below enhancement-led scheme costs where scope is greater, and within expected industry ranges
Customer protection	
PCD	We propose an expenditure-based PCD which links allowances to the effective delivery of investment. This includes ex-post review, independent assurance, and clawback of any end of period underspend. Our PCD is aligned to PR24 resilience PCD principles, which enables a shift from reactive maintenance to a planned, risk-based replacement programme whilst maintaining strong customer protection where agreed conditions are not met or investment is not delivered.

1.2 Strategic alignment

Ofwat assessment criteria: *alignment to long-term asset class strategies that demonstrate why the future is different from the past for the priority asset type, and why the investment is required now. For example, evidence that the asset is posing a greater risk in the future due to asset deterioration. Future uncertainties are taken into account for example. climate change impacts*

The resilience of the UK's Critical National Infrastructure (CNI) is of central importance to ensuring that the essential services the public rely on continue to operate. Given the fundamental and connected nature of these services, failure has the potential to cause cascading and catastrophic consequences. This could be, for example, power outages impacting other essential functions, like transport or water provision, or a failure in the telecoms or data infrastructure sectors impacting the energy sector.

Incidents such as the North Hyde Substation fire, which resulted in the closure of Heathrow airport in March 2025, demonstrate the fundamental importance of resilience across the CNI. The National Energy System Operator's report into the incident[1] highlighted lessons for UK government policy on resilience across infrastructure sectors, which align with the steps set out in the UK Government Resilience Action Plan.

We have been leading the industry in highlighting this issue for some time. For example, we led the the CReDo project[2] in collaboration with UKPN and BT to showcase how digital twins could be used to better understand the interdependencies between these infrastructure systems and expose vulnerabilities to 'cascading' asset failure. This project was a direct response to Ofwat feedback in our 2021 Asset Management Maturity Assessment (AMMA) to the effect that we could "consider the consequences of cascading failure on [our] internal systems and other stakeholders' systems in [our] assessment of risk".

In addition, we have also taken a steer from both the recent Ofwat work with Arup to develop a resilience framework, and the DWI's guidance on Water Sufficiency, both of which encourage companies to identify vulnerabilities in their asset system that are not able to resist shocks and

1 https://www.neso.energy/publications/north-hyde-review
2 https://digitaltwinhub.co.uk/climate-resilience-demonstrator-credo/

stresses, before then providing mitigation strategies. Our corporate resilience framework[3] has been applied to identify the vulnerability this business case seeks to address via comprehensive alignment between infrastructure resilience and asset condition risk.

3 https://www.anglianwater.co.uk/siteassets/household/about-us/a-framework-for-resilience-pr19-and-beyond.pdf

2 Strategic Overview

2.1 Asset health is critical to deliver resilient services to customers and protect the environment

The health of our assets underpins everything we do. Our ability to deliver our societal objectives - healthy rivers, economic growth and resilient services, all depend upon our infrastructure. Stewarding our existing assets is viewed by our customers as one of our most basic responsibilities, alongside the provision of safe, clean drinking water.[4].

Critical power supply assets play a fundamental role in our operations. High-voltage transformers and switchgear provide the power required to run abstraction assets, treatment works, pumping stations and water recycling centres. When power supply assets fail, core water and water recycling services fail with them (see our case study on Whitlingham WRC in Section 3.3). Power resilience is a fundamental enabler of service delivery.

2.2 Our approach to asset management

Asset stewardship is a key focus for our business. We were one of the first companies in the world to achieve ISO55001 Asset Management Standard, and Ofwat's 2021 AMMA analysis, assured by Arup, identified us as the highest scoring company for asset management maturity in the sector [5]. In 2025, our Board launched a company-wide capability improvement plan, and this has placed us in a good position to respond to Ofwat's updated AMMA requirement. Our assessment confirms that we will score at least '3 - Competent' on all 40 measures and we expect to achieve a higher level of maturity across several key areas[6].

For power supply assets, our maturity of understanding is based on a forward-looking approach to understanding asset health risk. Recognising the absence of established water-sector condition methodologies for HV assets, we adapted the Common Network Asset Indices Methodology (CNAIM) used by the UK's Electricity Distribution Network Operators (DNOs). This approach combines asset condition data, known deterioration rates and the quantified consequence of failure to assess both current and future risk level.

2.3 Ofwat's current approach to capital maintenance allowances

We have long been concerned that Ofwat's current approach to setting capital maintenance allowances, based on backwards looking econometric models, has resulted in persistent and significant underfunding and driven short-term 'fix on fail' management strategies. This is not sustainable for long-lived asset classes such as power supplies, where deterioration has little operational impact for decades before crystallising rapidly, and where we are at risk of storing up increasing costs to be recovered from future customers via steeper price rises.

Not only is this a deep concern to our customers, it is also undermining the sector's ability to attract essential investment, as leaving companies without funding to maintain assets produces disproportionate, unfunded risks that contribute to the equity challenge facing the sector.

Our concerns are now widely shared. The need for an alternative approach has been recognised by multiple organisations, including the CMA at PR19[7] and the National Infrastructure Commission[8]. Both Scotland and Northern Ireland's water regulators have taken action to reform their approaches. The depth of concerns amongst other water companies is evidenced by the prevalence of asset health in companies' CMA statements of case. More recently the IWC concluded that 'the current regulatory approach to infrastructure resilience is not adequate'[9] and recommended the development of statutory resilience standards to 'drive the action and funding necessary to ensure these assets are fit for the future[10]. Finally,

4 Anglian Water State of the Nation Survey 2026 April 2026 ANH-CC26-02
5 Anglian Water, March 2025, PR24 CMA Redetermination Statement of Case, pages 84 and 85
6 Our final assessment will be confirmed in the summer 2026.
7 At PR19 the CMA called for Ofwat to develop forward-looking asset health metrics
8 See NIC, Developing resilience standards in UK industry (September 2024), page 9
9 IWC, July 2025, Final Report, page 382
10 IWC, July 2025, Final Report, page 8

the DWI’s draft water sufficiency guidance highlights its concerns over asset health, and reinforces the need for good asset data and forward looking risk assessments to drive funding for aging assets.

These concerns have been recognised in the Water White Paper, which sets out a clear intention to ‘shift to a system where assets are properly maintained … with the right funding and incentives to ensure the long-term resilience of asset bases’[11].

2.4 The role of Ofwat’s Asset Health Roadmap and Cost Change process

Despite the urgency of the asset health concerns across the industry, Ofwat's Asset Health Roadmap was introduced relatively late in the PR24 process. Given the lack of certainty at that time about how the Roadmap would lead to additional funding, we and the other disputing companies raised the need for additional base allowances as part of our case to the CMA during the PR24 redeterminations. Against the backdrop of the Independent Water Commission and the growing expectation of significant future reform in this space, the CMA decided that it would not be appropriate to address asset health concerns through the redetermination, noting instead that these issues are better considered through Ofwat’s Asset Health Roadmap and in-period reopeners. The CMA therefore focused its assessment on defined individual claims and modelling issues, rather than undertaking a broader reassessment of underlying asset health needs during AMP8[12].

For HV power supply assets, the Cost Change process is the logical mechanism to address company-specific risk. While power supplies are not currently identified as a sector-wide priority asset class, Ofwat has explicitly recognised that company-specific asset health risks may warrant cost change consideration where evidenced and proportionate.

It is critical that we collectively recognise the urgency of the asset health issue and use the Cost Change process to fund the right investment for customers and the environment. Our proposal - which is targeted and focused on the highest risk power supply assets where failure would have the greatest impact -should be viewed within the long-term trajectory of increasing investment requirements, and as such it is an opportunity to both bring forward investment and smooth bill increases for customers over a longer period.

During the Cost Change process Ofwat will need tobalance short-term affordability concerns against the longer-term risks to asset resilience and increased operational failures. We urge Ofwat toplace appropriate weight on the longer-term context in its decision, and explicitly consider how its decision may impact upon future customers and the environment.

11 A New Vision for Water, January 2026, Defra, page 37
12 https://assets.publishing.service.gov.uk/media/69c5136793cc6e8b87a6f71c/Final_decision_summary_and_volume_1.pdf para 4.176

3 Need for additional investment

3.1 Historical Analysis

***Ofwat assessment criteria:** historical investment and how risk and asset health has changed over time, to underpin the 'as is' position. If historical health or risk data is not available, an explanation of how the assets have been managed should be provided*

The majority of our HV power supply assets were originally installed in the 1960s and 1970s. Despite a continuous inspection and maintenance programme throughout their lifespan, these assets are deteriorating and pose increased risk of failure due to age and corrosion resulting from the chemical make up of the oil contained within the transformers as well as environmental conditions particularly when situated outside. This is evidenced by a catastrophic fire at our Whitlingham water recycling centre site in 2023. Some of Anglian Water's highest criticality, strategic sites are powered directly with HV assets, meaning that we own and operate HV assets that are very similar to those operated by the UK electricity DNOs regulated by Ofgem.

Our historical base allowances have been insufficient to fund a meaningfully proactive programme of asset renewals. Over the period 2015/16 to 2024/25, we estimate that we have spent £407k per annum (2022-23 prices) on maintenance of high voltage transformers but this has generally been reactive spend in response to asset failure. Based on research we commissioned from independent asset risk experts at ICS Consulting, the proportion of high voltage transformer assets in poor condition will continue to increase year-on-year at current investment levels. The entire stock of oil filled transformers will fall into the lowest health band within 23 years and oil filled switchgear within 15 years (see Figure 1 below). This in turn increases the likelihood and frequency of failures and in turn our ability to respond adequately to mitigate impacts.

3.1.1 Standardising Investment Methodologies for Asset Replacement across the Energy and WASC Sectors.

HV power supply assets are critical by their nature given that they often power plant serving hundreds of thousands of customers. To refine and improve our asset investment planning process, we conducted an analysis in 2024 to evaluate, for comparison purposes, how Ofgem would assess and monitor the risk associated with our HV assets using their Common Network Asset Indices Methodology (CNAIM). The CNAIM methodology provides energy companies with a standardised calculation to derive both a 'Health Index' score (similar to Ofwat's condition grade 1-5) and a 'Criticality Index' score (based on scale of impact 1-4). These parameters are combined to support investment decision making and provide a standard metric to prioritise which equipment should be replaced and when. Ofgem then uses this approach to implement its Network Asset Risk Metric (NARM), which converts the output into monetised risk and is used as part of the RIIO incentive framework to encourage the energy networks to outperform the baseline level of risk reduction explicitly funded through the price review.

The findings of this asset health analysis confirmed that the Health Index forecast scores for HV assets is for rapid further deterioration over the forthcoming years and AMPs. In the absence of a rolling planned replacement programme, our activities will be primarily reactive in response to increased metal and structural fatigue with age. The need to top up or replace oil, or to completely replace the asset often means unplanned interruptions to water processes. Spare parts for switchgear and like for like equivalents are unavailable and must be manufactured bespoke by specialist engineering companies, dependent upon the unique circumstances of each site or replacement and modification work must be undertaken to suit modern alternatives. This situation is not sustainable over the medium-term and it is critical that we collectively aim to transition towards the risk based monitoring and funding methodologies employed in the energy sector.

Although the ICS Consulting analysis did not quantify the consequences of failure (as this was not directly transferrable from the existing Ofgem methodology), we have conducted our own assessment as to the likely impact of failures in this asset class based on the historic evidence available to us and our operational experience.

Table 4 Likely impact of failure based on historic evidence

Site type price control	Failure type	Frequency / likelihoods
Abstraction	Instant 24 hour disruptions	2 instances per year have up to 24hr impact
	Significant disruptions	1 in every 10 instances or once every 5 years, have more significant impacts (e.g., 1 week)
Water treatment/ Supply	Instant 24 hour disruptions	2 instances per year have up to 24hr impact
	Significant disruptions	1 in every 10 instances or once every 5 years, have more significant impacts (e.g., 1 week)
Wastewater treatment	Instant 24 hour disruptions	2 instances per year have up to 24hr impact
	Significant disruptions	1 in every 10 instances or once every 5 years, have more significant impacts (e.g., 1 week)
Wastewater pumping	Instant 24 hour disruptions	2 instances per year have up to 24hr impact
	Significant disruptions	1 in every 10 instances or once every 5 years, have more significant impacts (e.g., 1 week)

3.2 What base buys

Ofwat assessment criteria: *an assessment of 'what base buys' to provide confidence that the requested additional investment is to address risk above and beyond what existing base expenditure allowances cover*

In its recent consultation on expanding the Asset Health Roadmap to include company specific proposals, Ofwat stipulated that companies should set out their historical expenditure rates on the relevant assets, to demonstrate that customers would not be paying twice as a result of claims for additional expenditure allowances.

In the absence of industry-wide workload and expenditure data for this asset class, we have analysed our own cost systems to identify our historic run-rate of expenditure on power supply assets. We have spent on average £407k per annum (2022-23 prices) between 2015/16 and 2024/25 on maintenance of high voltage transformers and associated switchgear - or roundly £2m per AMP. It should be noted that historic base allowances have 'bought' only reactive maintenance activity, and therefore the proactive replacement programme we propose in this submission is entirely over and above our existing PR24 base allowance.

Using this analysis, we have included our current run rate within the PCD design so that the customer protection mechanism covers both the uplift provided to address the growing risk to service, as well as for the existing allowance within base.

3.3 Risks from current 'as is' asset health status and future risk

Ofwat assessment criteria: *identified risks posed to service or the environment as a result of the asset's current health. Where there is no historical precedent, companies should use expert judgement to determine risk; forecast of future asset health, how health and risk will change over time showing a change in quantified risk requiring a step-change in asset investment. If quantified risk information is not available, qualitative risk information and expert judgement should be used*

As described above, these assets are ageing and nearing the end of their asset life which is increasing the operational risks associated with their use. Despite the effective maintenance regimes adopted across the region, there have been some recent examples of high-impact failures.

Case study: Insulated oil HV Power supply unit fire - permit breach and CAT 1 pollution

On the 12 October 2023 we experienced a significant fire originating from overheating of the oil within a HV transformer at Whitlingham WRC in Norwich, our largest sewage treatment works. The fire resulted in a total loss of aeration treatment, causing an upper tier permit failure at the works.

The affected power supply asset had been routinely inspected and was deemed fit to be in service. Despite the initial use of back-up generators (which were available on site for resilience purposes), the Fire Service advised upon arrival that the back-up generators had to be stopped immediately on safety grounds whilst the fire was suppressed. It was this pausing of the back-up generators which resulted in the total loss of power to the treatment process and consequent CAT 1 pollution incident.

Due to previous resilience planning, we had organised the operational site to segregate the HV equipment and other assets using brick partitions, therefore the fire was contained to a single transformer. However, this example illustrates the risk and consequence associated with these assets, showing that losing the power supply to a site is one of the most significant risks to operational performance that we face.

3.3.1 Current Asset Condition assessment: Using Ofgem's CNAIM process for our own assets

For the purposes of this proposal, we use the analysis conducted by ICS Consulting to apply the CNAIM Methodology developed by the electricity DNOs to our oil-filled HV assets. The benefit of CNAIM is that:

- It provides an audit trail showing how asset-specific condition assessments and consequence of failure assessments contribute to the long-term risk associated with that asset.
- It provides a methodology for determining how standardised interventions (or investments) mitigate these quantified risks and change the long-term risk forecast, resulting in a monetised benefit which can be used directly in CBA analysis and for intervention prioritisation.

CNAIM uses a standardised process to derive a Health Index (HI) band for each asset, using an industry standard tool that uses primary inputs: age, oil sample analysis, visible inspection and location factors. Oil samples from a laboratory inform the rate at which the structure will corrode. Likewise the location affects corrosion, in particular proximity to the coast. Observations pick up leaking oil or the need to top up oil levels at periodic inspections for example. We have the supporting information to underpin this assessment available on demand.

Health Index bands are essentially a condition grade, ranging from 1 to 5, broadly equating to 1 being new and 5 being end of life, where the probability of failure (PoF) increases sharply as the Health Index increases. The Initial Health Score is largely based on asset age. This is modified upwards or downwards based on condition data to create the Current Heath Score. This asset-level Current Health Score can then be deteriorated over time based on provided deterioration rates.

Health Scores are then used to estimate a probability of failure for each asset based on the current condition of the asset. The probability of failure is calculated for future years based on the deteriorating Health Score derived in the previous steps.

A cap is applied to the Health Score and probability of failure to prevent deterioration continuing beyond a point where the asset would have typically been replaced. The probability of failure is then used to calculate the Health Index (HI1 to HI5) for each asset based on the CNAIM Health Score bandings.

Consequence of failure values were applied using the CNAIM methodology using four risk categories: financial, safety, environmental and network performance. The calculated consequence of failure is used to assign a Criticality Score to each asset (C1 to C4). The probability of failure is multiplied by the consequence of failure to give a monetised risk for each asset.

The following table provides ICS's assessment of how closely they were able to follow the Ofgem/DNO methodology, showing that the standard methods were able to be replicated to forecast future asset health indices, whilst noting that they were less able to use the standard approaches to determining consequence of failure.

Table 5 ICS assessment of us of Ofgem methodology to forecast future asset health indices

CNAIM Element	Alignment	Comments
Asset base	Fully aligned	All data available with minimal need to gap fill (except some age and unit cost data).
Probability of failure	Mostly aligned	Observed and measured condition data available and used to drive Health Index, especially for switchgear. Missing some measured condition tests (FFA test; Oil tests) & duty/utilisation rates.
Consequence of failure	Partially aligned	There was limited CoF data & AWS & CNAIM defaults were mostly used. Network Performance risk cannot be derived from CNAIM as the assets have very different uses in water compared to electricity distribution. Analysis on impact of an asset failure needs on service/performance needs to be estimated by AWS.
Monetised risk (and long term risk)	Mostly aligned	It was possible to apply the Methodology as defined with only minor modifications. Only Replacement was modelled but it would be straightforward to apply others if the post-intervention probability and consequences of failure are known. AWS service valuations should be used in preference to CNAIM values (e.g. cost of carbon) and there are other relevant consequence measures which are not considered by CNAIM (e.g. pollutions; flooding; low pressure).

The tool produces both current Health Index scores (as at 2024 when the exercise was conducted) and forecasts of the number of assets within each Health Index band in the future. The charts below show how the Health Index changes over time without investment for the population of oil-filled HV transformers and our 630 Amp switchgear assets.

Figure 1 Count of HV transformers by health index

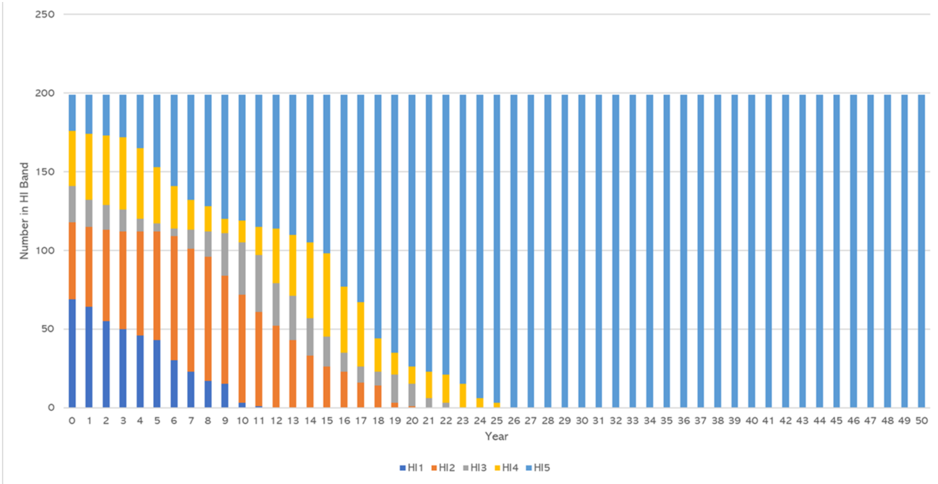
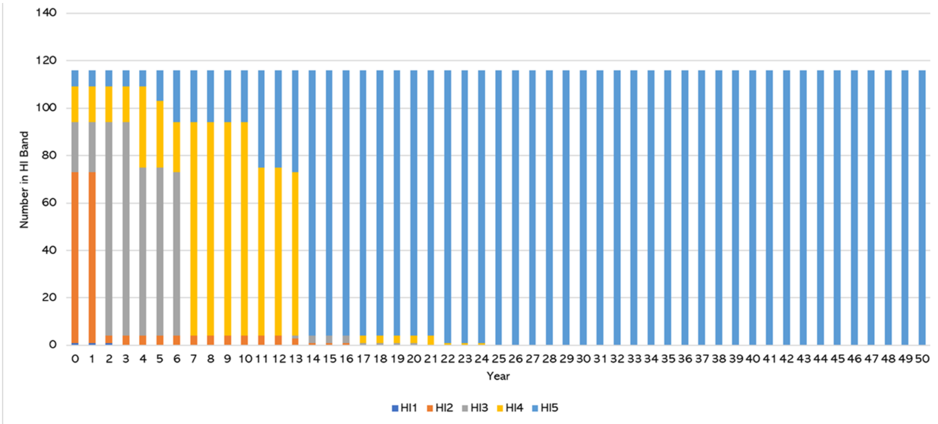


Figure 2 Count of HV switchgear by health index



3.3.2 Obsolescence

In addition to corrosion of the structures themselves resulting in an increased probability of failure, it is becoming increasingly difficult to procure parts for repair or replacement of existing assets (particularly switchgear assets) in their present format. This further multiplies our resilience risk due to the potential for extended outages whist we procure bespoke spare parts. This risk will compound over time as the global stock of spares reduces.

3.4 Stakeholder engagement

Ofwat assessment criteria: *engagement with stakeholders, where appropriate (e.g. Environment Agency, Drinking Water Inspectorate and local authorities)*

We have engaged both the EA and the DWI during the development of this case. We presented our proposals, separately, to our EA Area Director and to senior DWI managers on 22 April 2026. The feedback on our proposals was positive and both regulators expressed support for additional investment in asset health.

Both the DWI and the EA have been active in this space recently:

- The EA is the enforcement body for The Environmental Protection (Disposal of Polychlorinated Biphenyls and other Dangerous Substances) (England and Wales) Regulations 2000. In recent years we liaised with the EA in relation to 3 HV transformers that were contaminated with PCBs but which have since been removed.
- The DWI has adopted ‘asset principles for power resilience’ which state explicitly that where the network relies on power (such as booster stations) these assets should have appropriate power resilience.

4 Best option for customers

4.1 Optioneering

Ofwat assessment criteria: *an unconstrained set of potential credible options over a range of intervention types to meet the identified need; robust decision making and robust whole life cost-benefit appraisal that clearly shows best value for customers and the environment to inform the selection of the proposed solution(s)*

In the context that this is a targeted investment package aimed at realising substantial risk reduction benefits for customers by focusing on high risk assets at critical locations on our network, we have considered the following options:

Table 6 Options considered

Option	Description	Feasible	Selected?
Segregation	Build partitions between assets to contain fire risk	Y	Y (complete)
Enhanced inspection	Increased frequency of oil analysis	Y	N
Incident response planning	Prepare emergency response to reduce time to react including purchase of mobile generators or introduction of 'uninterruptable power supplies' (UPS)	Y	Y (complete)
Like-for-like replacement	Replace in-situ with modern unit	N	N
Replace to modern standard	Replace in new kiosk adjacent to old unit	Y	Y
Downrate to lower voltage	Replace downstream equipment with low voltage assets	Y	Y (but not as part of this proposal)
Transfer assets to IDNO	Sell power supplies to an Independent District Network Operator and instead pay for the service in opex	Uncertain	N (due to deliverability risk)

Segregation of HV assets, specifically transformers, has already been considered and is present at most sites by historic design or building partitions to reduce the spread of fire should an asset fail.

Our maintenance standard for HV transformers includes annual oil testing and four yearly electrical servicing. This is considered to be at the frequent end of the industry norm. Failures are usually due to assets reaching end of life due to age related deterioration or due to non-maintainable parts. Increasing the frequency of oil analysis would simply increase data and frequency of monitoring but will not address the issues of asset deterioration, therefore it is not selected. Investment in continuous remote monitoring of oil has also been considered but still needs to be verified by physical independent analysis, so provides limited benefits.

Emergency response plans are already in place for all sites to minimise the consequence of asset failure.

In-situ like for like replacement of transformers in buildings (usually transformers less than 1000 kVA in size) has not been selected due to the difficulty and increased time needed to remove the old assets and install new assets in existing buildings. In addition, old buildings may not comply with current fire standards. Our selected option is to install replacement transformers in new kiosks to ensure current standards are met and to greatly reduce the switchover time. Larger transformers (greater than 1000 kVA) require greater ventilation and will be located in fenced compounds with roofs to reduce exposure to weather related deterioration.

Downrating HV power supply assets to low voltage (LV) assets is sometimes carried out to reduce issues associated with specialist engineer resource availability or for other reasons, but this requires replacement of the downstream equipment, such as pumps and motors, with LV equipment which greatly increases the capital cost, if equipment with a suitable process output is viable. LV power supply systems can also be less efficient, increasing opex. For the purposes of this targeted £15m investment proposal, we have assumed like for like replacement as the most pragmatic option for overcoming site specific issues and realising benefits for customers and the environment as soon as possible.

More widely, we are exploring the feasibility of transferring power supply assets to an Independent District Network Operator and paying for the service in opex. Such an option would depend on commercial appetite amongst IDNO market participants and therefore was not considered deliverable at the current time due to the urgency of replacing the assets in scope of this proposal.

4.2 Details of the proposed solution

Ofwat assessment criteria:*the proposed solution, including scale and timing of the investment. Including how it meets customer preferences*

We have developed a proportionate response to the risk identified. We are not seeking to remove all of the risk associated with this asset class in AMP8, but taking a multi-AMP view and keeping our requested totex prior to 2030 both deliverable and affordable. Replacing these critical assets requires careful planning and coordination of the outage, and so replacing one or two on average per month is considered feasible. We aim to replace around 50 transformers and switchgear assets at a cost of approximately £15m. Rather than specify 50 outputs from this funding, we propose that best value for customers would be achieved by structuring the associated PCD as an expenditure-based PCD (in common with other resilience PCDs) such that we are incentivised to over-deliver if possible, and to maximise the risk reduction per pound spent.

Using the CNAIM methodology we have targeted the transformers and switchgear that offer the highest value. This does not mean replacing all those in Health Index 5. Instead we have selected a range of assets currently in Health Index bands 3-5 but which are forecast to move into worse Health Index scores in the coming years, and that have higher criticality scores. These assets are located at our largest abstraction/intake sites, water recycling centres and water treatment works. All of these sites are key strategic sites serving large populations.

The scope of the proposed solution is set out below.

Each transformer smaller than 1000 kVA will include provision of the following:

- Transformer
- Upstream and downstream switchgear
- Air circuit breaker
- Kiosk
- Bund
- Cabling
- Earthing
- Hardstanding

Each transformer larger than 1000 kVA will include provision of the following:

- Transformer
- Upstream and downstream switchgear
- Air circuit breaker
- Fencing
- Roof
- Bund
- Cabling
- Earthing
- Hardstanding

In addition each site will require a new telemetry outstation.

4.3 Benefits of the proposed solution

Ofwat assessment criteria: *what additional benefits the proposed solution will provide compared to the current situation, with clarity on the assumptions underpinning the cost benefit analysis (CBA)*

Replacement of oil-filled HV transformers and switchgear will significantly improve safety, reliability, operational and regulatory performance, and system resilience. Modern electrical infrastructure reduces the likelihood of power failures that can disrupt water treatment and supply, therefore lowering the risk of service interruptions, environmental incidents, and costly reactive repairs. Old oil-filled HV transformers and switchgear contain flammable oil that can ignite when a transformer fails, causing intense and long-lasting fires. Oil filled switchgear also presents a far higher risk to people in the vicinity should they fail and (unlike modern alternatives) are more difficult and complicated to operate remotely. Modern vacuum based equipment is designed to reduce impact on the operators of equipment, as opposed to older units which were designed with limited consideration of the operator being immediately present. Replacement with modern assets will increase safety in human interfacing and reduce the fire risks.

The benefits of the proposed investment to replace poor condition HV transformers and switchgear include:

- Improved safety due to reduced fire and operations risk
- Reduction in water supply interruptions
- Reduction in pollution incidents
- Reduction in compliance failures at water recycling centres
- Improved system resilience
- Potential reduction in operating and maintenance costs

Through this replacement programme and the associated enhancement in reliability, this supports continuous operation of critical assets, strengthening our compliance and reducing the organisation's operational risk. It is these benefits which demonstrate that proactive replacement is more efficient and resilient than continuing to operate deteriorating, failure-prone, and more dangerous equipment.

Although it is challenging to precisely quantify the impact of this targeted replacement programme relative to a realistic counterfactual scenario, our indicative analysis suggests that:

- Each transformer replaced at a WRC mitigates a ~1 in 100 chance of the site becoming a failing works and the potential occurrence of an associated pollution event every year.
- Each transformer replaced at an abstraction site mitigates a ~1 in 100 to 1 in 1000 chance of a 1-4-day supply interruption affecting tens of thousands of properties every year.
- Each transformer replaced at a WTW mitigates a c.1 in 1000 chance of a 1-4 day supply interruption also affecting tens of thousands of properties every year[13].

4.4 Customer engagement

***Ofwat assessment criteria:** customer engagement to understand customer preferences for final options where appropriate*

4.4.1 Power supplies as critical infrastructure for customers

The State of the Nation Survey 2026[14] shows that, while customers hold a range of concerns at local, national and global levels, expectations of Anglian Water are focused squarely on delivering the basics well. Safe and resilient infrastructure underpin public trust. Customers are explicit that they want companies to invest early to prevent service failures and health risks, rather than respond reactively once issues become visible or disruptive.

This priority is reinforced in the engagement we did for our PR24 Plan (Customer Engagement Synthesis Report August 2024), which identifies asset health as a core, non negotiable customer expectation. Customers link proactive maintenance of power supply assets directly to outcomes that matter most to them: water quality, uninterrupted supply, flooding, pollutions and long term reliability. Power supply assets are recognised as long life components of the system where failure would have immediate and high impact consequences.

4.4.2 Strong customer support through Online Community insight

The Online Community insight [15] specifically carried out to inform our cost change proposal, provides clear evidence of how customers prioritise power supply investment when faced with real trade offs. When asked to allocate relative importance across investment areas, power supplies ranked third highest overall, ahead of growth related categories.

Customers who scored power supplies highest see it as critical to keeping water and wastewater services running, emphasising that outages directly risk loss of supply, sewer flooding, pollution and service failure, especially during extreme weather or emergencies. Customers who expressed broader affordability concerns believe this should already be standard.

13 *We pro-rate number of properties affected by a transformer failure relating to a single pump such that the impact is proportionate to the number of pumps on site. For example if a site supplies 300,000 properties and has 10 pumps then one pump transformer failing equates to 30,000 properties (300,000 props / 10 pumps).*
14 ANH-CC26-07
15 See ANH-CC26-09

4.4.3 Alignment with attitudes to affordability and bill impacts

Customer support for power supply investment is also consistent with views on affordability. Evidence from both the State of the Nation Survey 2026 and Online Community engagement shows that customers support the investment, but want costs to be introduced in a fair, predictable way and clearly linked to beneficial outcomes.

Customers prefer gradual, planned investment that avoids emergency responses, regulatory enforcement or unplanned service failures – all of which they associate with higher long term costs and greater disruption. Investment in power supplies is therefore seen as good stewardship: protecting customers from avoidable future risks while maintaining value for money over time.

4.4.4 Protection of the environment alongside customers

Customers also increasingly expect us to protect rivers and the wider environment across our region as part of delivering core services. Power supply deterioration that leads to contamination events, sewer flooding, emergency drawdown or repeated outages undermines confidence in our environmental performance. Customers view investment in power supply as contributing to both outcomes simultaneously: protecting public health while safeguarding environmental integrity.

5 Robust and efficient costs

5.1 Costing methodology

Ofwat assessment criteria: *the costing methodology and approach being applied to derive the cost of options and chosen solution*

Our cost estimates are primarily derived from historic outturn costs of completed transformer replacement schemes we have delivered in the last 10 years. These historic schemes represent like-for-like installations delivered in accordance with our Minimum Asset Standards (MAS), Water Industry Mechanical and Electrical Specifications and with scopes defined to ensure compliance with the latest regulatory and safety requirements under the Electricity at Work Regulations 1989 (EAWR) and The Electricity Safety, Quality and Continuity Regulations 2002 (ESQCR), Electrical Equipment (Safety) Regulations 2016.

Cost relationships were developed using historic scheme data to estimate costs for associated components (e.g. civils, kiosks, cabling and ancillary works) based on key drivers such as transformer rating, footprint and configuration.

This ensures that costs are:

- Data-led rather than theoretical.
- Scalable and internally consistent.
- Grounded in actual delivery experience.

Based on the transformer dimensions, the layout and associated works have been assessed using:

- MAS technical requirements for bunding, housing, access, monitoring and safety,
- Historic schemes to infer typical quantities and spatial requirements.

The scope consistently includes all necessary works to deliver a compliant, operable and maintainable asset, including:

- Replacement transformer, bund and compliant enclosure (GRP kiosk with ventilation or substation)
- Switchgear
- Hardstanding, access routes and impact protection
- Telemetry reprogramming and alarms
- Allowance for approximately 20m of cabling per site
- Enabling civils and reinstatement
- Temporary works

Where existing buildings do not meet Minimum Asset Standards, the methodology assumes provision of new kiosks, ensuring compliance without reliance on asset life extensions.

The methodology accounts for whole-life considerations by recognising the operational inefficiencies, safety risks, and maintenance burden of ageing units, supporting a cost-benefit rationale that favours proactive renewal. By basing costs on historical delivery experience and standard specifications, and by applying consistent on-cost allowances, the investment aligns with Ofwat's guidance in demonstrating transparent, repeatable, and fully inclusive solution costing.

5.2 Cost efficiency

Ofwat assessment criteria: *efficient costs for options and the chosen solution; cost benchmarking, including comparison to historical outturn costs and external benchmarks, where available (for related/alike schemes).*

The cost efficiency of the transformer replacement programme has been tested through:

- Benchmarking against historical internal outturn costs.
- Validation against current market pricing via competitively procured supply chain frameworks.
- Consideration of economies of scale and delivery methodology.
- Consistent scope definition to avoid cost inflation through scope creep or over-specification.

Internal benchmarking forms the primary basis for assessing cost efficiency, derived from a dataset of historical transformer replacement schemes delivered over the last ten years, primarily where these have been required due to asset failure. These schemes are directly relevant as they:

- Represent comparable transformer replacements.
- Were delivered to Anglian Water Minimum Asset Standards.
- Include a range of site types and transformer capacities; and
- Provide fully reconciled outturn costs rather than estimates.

From this contained dataset, typical scope and cost relationships were established to define standard installation scope, civils and electrical quantities, ancillary works allowances and delivery-related on-costs.

While many of these historic installations were delivered as part of larger capital schemes, the methodology explicitly recognises this and reflects the economies of scale achieved in those programmes.

Where historic transformers were installed as part of larger multi-asset schemes, efficiencies were observed through:

- Shared 'back office' costs (preliminaries)
- Reduced mobilisation and demobilisation
- Fewer repeat site visits
- Combined commissioning and outage planning with associated temporary works

To replicate these efficiencies and avoid unnecessary cost inflation, the current programme has:

- Grouped transformer installations by site, where feasible
- Assumed single preliminaries per site, rather than duplicated prelims for multiple discrete interventions
- Structured estimates to reflect programme-based delivery, not isolated asset replacements

This approach avoids overestimating costs that would otherwise arise from treating each transformer as a fully standalone project and demonstrates a proactive and efficient delivery strategy.

5.2.1 Comparison to historical outturn costs and validation against current market pricing

For like-for-like replacements, scheme costs have been compared to the total outturn costs of previously completed transformer replacement projects, including all associated civils, electrical works, cabling, commissioning, and on-costs. This cross-check confirms that the estimated costs fall within the expected range of historical delivery performance when adjusted for scope, specification, and prevailing market conditions.

In addition, benchmark comparisons have been undertaken against historic enhancement schemes where new transformers were installed as part of wider process system upgrades at the sites (i.e. resilience). These enhancement schemes typically exhibit higher total costs than maintenance replacements due to:

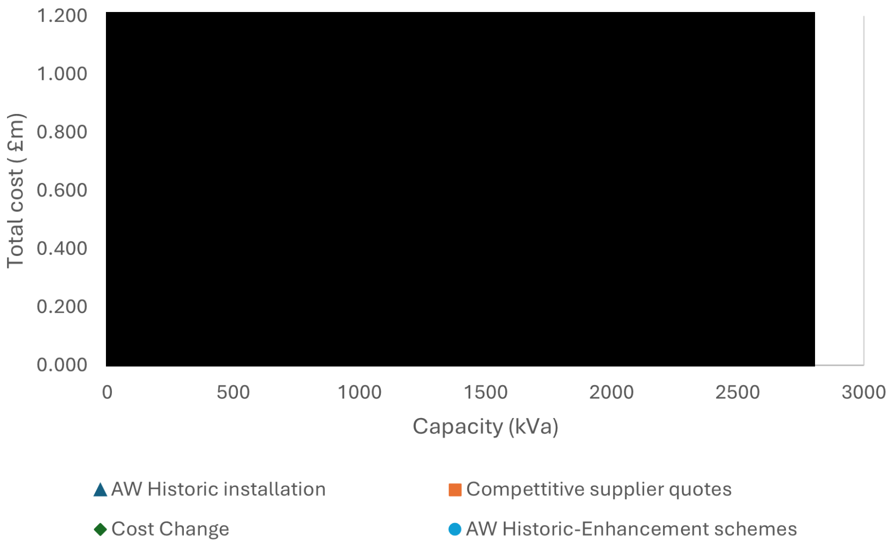
- More extensive and complex civil works
- Longer cabling and ducting runs to connect into additional process groups or network assets
- Increased site establishment, enabling works, and commissioning requirements associated with new installations

By explicitly distinguishing between maintenance-driven replacements and enhancement-led installations, the benchmarking demonstrates that the proposed costs are proportionate, context-specific, and not overstated by comparison to inherently more complex scheme types.

To complement historical benchmarking and reflect current market conditions, budget quotes were sought from Anglian Water's supply chain frameworks, which have been established through competitive procurement, assured for value for money and regularly market tested

Supplier budget pricing was compared against estimated costs for; transformer supply, installation and civils and ancillary equipment and enabling works.

Figure 3 Scheme total cost replacement benchmarking



The graph above presents benchmarking of total scheme transformer replacement costs (green diamonds) against three comparators: historic maintenance replacements (dark blue), competitive supplier quotations (orange), and enhancement led installations (light blue).

Cost variation across transformer capacities is expected, as all data points represent fully inclusive scheme costs, incorporating civils, cabling, installation, commissioning, and necessary temporary works to maintain operational continuity. Apparent outliers in historic maintenance driven schemes reflect justified scheme specific requirements rather than inefficiency; for example, the higher outturn cost observed for a 2,500 kVA maintenance scheme is driven by the need to hire a larger temporary generator to ensure uninterrupted power supply during the replacement at that site. Enhancement schemes are consistently higher cost than like-for-like maintenance replacements due to more extensive civils and longer cabling connections. Overall, this analysis provides confidence that proposed costs are reasonable.

In summary, the benchmarking results demonstrate that the costs of the preferred solution are:

- Consistent with historical outturn costs for comparable maintenance replacement schemes (dark blue triangles).
- Lower than enhancement-driven installations where increased scope and complexity are required, providing confidence that costs have not been inflated (light blue dots).
- Fully inclusive of all necessary scope elements, avoiding optimism bias through omission of enabling works, civils, or integration activities.
- Within industry-expected ranges and reflect known efficiencies achieved in previous programmes, once scope consistency and economies of scale are taken into account.

This provides additional assurance that costs are efficient in both company and sector-wide contexts.

5.3 Cost breakdown

Ofwat assessment criteria: *cost breakdowns for individual schemes*

The costs for this proposal are summarised in the table below:

Table 7 Summary of costs of proposal

Investment	Title	Quantity	Transformer capacity kVa	AMP8 Capex £m
I048218	PR24 CC Power Supply assets WRCs	2	1750	[redacted]
		2	1000	
		3	1000	[redacted]
		4	2000	
		3	1250	
		2	1500	[redacted]
		1	2000	

Investment	Title	Quantity	Transformer capacity kVa	AMP8 Capex £m
I048177	PR24 CC Power Supply Assets Raw Water Resources Abstraction sites	3	500	[redacted]
		1	550	
		2	2500	[redacted]
		2	200	
		2	315	[redacted]
		4	550	[redacted]
		5	500	
		10	1000	[redacted]
		2	1250	
I048220	PR24 CC Power Supply Assets WTWs	2	1000	[redacted]
Total		**50**		**15.162**

The full scheme level cost breakdowns underpinning the Transformer Programme estimates are provided in ANH-CC26-16. These include detailed asset level costs and on costs for each individual scheme.

Our historic run rate of £407k per annum for reactive base maintenance is based on a 10-year dataset. This equates to £2m in total for AMP8 and the £15.162m requested is over and above this estimate of What Base Buys. We consider this to be a reasonable and pragmatic estimate of the implicit allowance within our existing AMP8 base allowance. However, such are the wider flaws with any approach to estimating What Base Buys, we suggest that this would be sensible opportunity to adopt a more pragmatic stance and decide that in practice What Base Buys on power supplies is practically zero.

6 Customer protection

6.1 PCD design

We propose an expenditure-based PCD which links allowances to the effective delivery of investment. This includes ex-post review, independent assurance, and clawback of any end of period underspend. This design is based on similar principles to the climate change resilience expenditure PCD (PCDWW32), taking learnings from the price review and CMA, to ensure the specification provides protection whilst acknowledging the practicalities of delivery.

In our view, this approach is in customers' long-term interests as our proposed activity represents a fundamental shift from a more reactive approach towards a more proactive replacement model, but ultimately within a relatively targeted investment package with specific aims that could be compromised if the PCD is too rigid. Specifically:

- Our cost change proposal involves switching from the inspection, testing and reactive replacement regime assumed in our original plan to a dedicated, planned replacement programme for our HV assets that pose the most risk to customers and the environment. This is consistent with the sector's renewed focus on improving the long-term health of our asset bases.
- Our claim is deliberately focussed on renewing our highest risk assets where, as we switch from a maintenance to a rolling replacement footing, the interventions required are likely to be more complex and the solutions and benefits to customers across sites more changeable.

Given this, a flexible end-of-period expenditure-based PCD will maintain clear incentives to deliver the activity underpinning our claim and provides us with the necessary flexibility to adapt the programme to deliver the most impact for customers and the environment in terms of reduced risks of outages, supply failures, and pollution incidents.

To ensure customers retain strong protection, our delivery against the PCD will be subject to independent assurance on a proportionate basis at the end of each reporting year. The assurer will confirm that any additional allowances have been spent on high voltage power assets that are a priority for renewal (as supported by CNAIM Health and Criticality Index assessments) and verify that the outturn unit rates appear reasonable given the known complexity of the job. Where we deliver alternate solutions to those originally envisaged, and consistent with post final determination changes to the mains renewal PCD, the assurance will also consider whether our overall investment decisions have been efficient and appropriate and that the high voltage power assets renewed are those that are in the best interests of customers, the environment, long-term asset health, and deliver equivalent or greater benefits.

Where delivery falls short against the agreed conditions at the end of the period, we will return funding to customers on a proportionate basis. We have not included any over-delivery incentive, but note that this 'use it or lose it' design will incentivise us to deliver additional outputs where possible.

Consistent with some cross price control PCDs from PR24 (eg: PCDWW32), we have not sought at this stage to allocate the PCD outputs and incentives across the controls covered by our planned high voltage asset renewal programme (i.e. water resources, water network+ and wastewater network+).

We consider that the scope of this PCD and investment does not overlap with existing PCs, PCDs and investment proposals.

Overall, our proposed PCD provides clarity of output definition with sufficient flexibility to manage the significant operational and delivery risks arising from this work to improve the health of our assets and deliver the best value risk reduction for customers and the environment. It provides assurance that customers only pay for delivery, while recognising the practical realities of delivering interventions which offer the largest system-wide benefits.

The technical details for the PCD are outlined in ANH-CC26-17.

7 Investment delivery plan

7.1 Delivery risks and mitigations

This proposed package is considered deliverable but - as with any investment programme - there are risks. Given that this a relatively targeted investment in the wider context of our AMP8 plan, and the effectiveness of measures already being actively managed for delivery of our existing programme, we are confident we can manage these risks.

Due to the age, criticality and external dependency of interventions on high voltage electrical assets, there are specific delivery risks such as long lead times for specific bespoke components, and limited local electricity supply network capacity may be required for assets to be upgraded. There is also a high degree of competition for supply chain access from other sectors, and significant price volatility for component inputs, such as metals. We know we will have to hold some site-specific risks until work commences, as individual sites will have been previously upgraded in piecemeal ways historically.

As we set out in our PR24 plan, while there are supply chain risks, and power supply resilience is certainly subject to these, we are mitigating these risks by engaging closely and early with our supply chain. We have worked to provide early visibility of work programmes with our suppliers, and we have increased our internal capacity for supply chain engagement. As part of our engagement, we intend to integrate power supply resilience work with existing PR24 enhancement and asset health programmes, allowing coordinated access planning, reduced duplication of back office/preliminaries, and more efficient outage management.

We will also engage early and collaborate with DNOs, to understand potential grid capacity constraints, and secure timely connection agreements. This is in line with Ofwat's expectations that we will actively manage third party dependencies as part of credible delivery planning. Engagement with DNOs will be formalised through forward work plans, joint delivery schedules and agreed milestones, with progress incorporated into interim reporting under the PR24 delivery plan monitoring framework.

In line with Ofwat's monitoring expectations, we have identified these risks to our power supply resilience programme, and we intend to track these transparently against our PCD milestones (see section 6 for more detail on our proposed PCD).

7.1.1 Future Delivery programme

We expect to continue to invest in power resilience in AMP9 and beyond as part of driving operational vulnerability out of our assets. We anticipate that this will be linked to, or potentially part of, resilience schemes under enhancement activity at PR29. We intend to optimise our future power resilience programme to align with other investments on the same sites and asset systems. We also recognise that transformer replacement is a core part of DNO activity as part of the RIIO price controls. Therefore, in order to compete for resource from that market in AMP9, our plans under this reopener begin to improve our capability and experience of planned replacement programmes for this asset type.

8 Assurance

Jacobs was engaged as an independent assurance provider to review Anglian Water's PR24 Cost Change business case and provide assurance. Their scope covered technical aspects of the proposed investments, including power supply resilience, asset health, and growth schemes, in line with Ofwat's requirements for robust and credible delivery planning. The assurance process was conducted under the ISAE 3000 (Revised) standard, using a risk-based approach and sampling methodology to assess the appropriateness of assumptions, methodology, and supporting evidence.

For the power supply resilience programme, Jacobs examined the methodology used to identify, assess, and prioritise asset needs. They found that the use of the Copperleaf investment platform provided consistency in option development and cost appraisal, and that data governance was reliable, with cost data consistently represented across project reports and Ofwat data tables. Jacobs noted that while the scope was limited to high-risk transformer assets, the investment proposal was methodical, but recommended further development of a longer-term asset strategy and deeper understanding of historic costs and risks.

Jacobs also reviewed our approach to engagement with supply chain partners and third-party stakeholders, confirming that early engagement and forward planning were in place to mitigate supply chain risks, grid capacity constraints, and delivery dependencies. They highlighted the importance of integrating power supply resilience works with existing enhancement and asset health programmes to optimise efficiency and outage management.

The assurance report concluded that the business case was supported by clear engineering rationale and convincing evidence, but identified some material weaknesses, particularly around the documentation of optioneering updates for AMP8 and the development of the critical power supply infrastructure proposal. Jacobs confirmed that plans were in place to address these issues and that the proposed investments met requirements for need, best option, and deliverability, while recommending ongoing monitoring and documentation improvements to strengthen assurance further.

The assurance work was completed at a point where the business case document was in an earlier draft, we have sought to incorporate their comments and expand on the optioneering section above.

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THE QUEEN'S AWARDS FOR ENTERPRISE: SUSTAINABLE DEVELOPMENT 2020

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