ANNEX 8

GAD REPORT ON SIZEWELL C FUNDING PLAN SCENARIO TESTING

This Annex is structured as follows:

1. Part A (*Overview*), which provides an overview of the report prepared by the Government Actuary's Department entitled "Sizewell C funding plan scenario testing for NLFAB" dated 20 June 2025;

2. Part B (*Sizewell C funding plan scenario test for NLFAB*) of this Annex appends this report; and

3. Part C (*Sizewell C decommissioning – TPR funding code comparison*).

PART A – OVERVIEW

1. THE BOARD AND THE GOVERNMENT ACTUARY'S DEPARTEMENT'S ROLE

1.1 Over the last three (3) years, the Government Actuary's Department has provided scenario modelling support to the Board and the DESNZ. This has assisted the Board in analysing different funding paths, the projections for growth of funds and the impacts of inflation as well as exploring the risks of insufficiency in various scenarios. The Government Actuary's Department has produced the report appended at Part B (*Sizewell C funding plan scenario test for NLFAB*) of this Annex. This report summarises the Government Actuary's Department's work and approach, illustrating the build-up and disbursement phases of the Fund and modelling sufficiency under various assumptions.

1.2 In particular, the Government Actuary's Department has carried out modelling of the FDP Contributions and the Fund size to test how the FAP responds under various scenarios and determine whether there is likely to be an expected funding shortfall. This has shown that in the majority of circumstances, there would not be a shortfall with certain exceptions which include the following:

(A) where the actual costs of delivering the DWMP turn out to be higher than the P80 + 25% contingency cost estimate made at the last Quinquennial Review during the Operational Period and investment returns achieved match the Long Term Discount Rate; or

(B) where investment returns achieved are lower than the Long Term Discount Rate and the actual costs of delivering the DWMP are in line with the basis for the P80 + 25% contingency DWMP costing produced at the last Quinquennial Review during the Operational Period.

1.3 As described in paragraph 5 of Annex 3 (*Assumptions*), while the DWMP costing for the DWMP liabilities at P80 + 25% contingency has been deemed prudent in accordance with FDP Assumptions, the Board has sought to understand the potential impact of the risk that post-closure investment returns during the Disbursement Period are lower than the estimate at the

final Quinquennial Review and therefore the Long Term Discount Rate. The Government Actuary's Department has carried out a simplified stochastic analysis, for a limited range of investment strategies and outturn DWMP costs, to assess the likelihood that there is no Funding Shortfall using 10,000 investment performance simulations.[1] The findings of the analysis in relation to the risk of Funding Shortfall during the Disbursement Period are summarised in the table below.

Investment Strategy	LTDR	Max DWMP Cost	Actual Cashflows	Target Fund (£bn)	% probability of funding sufficiency
A	= Investment Strategy A	P80 + 25%	P50	54.8	93%
A	= Investment Strategy A	P80 + 25%	P80 + 25%	54.8	48%
A	= Investment Strategy A - 1%	P80 + 25%	P80 + 25%	60.3	61%
A	= Investment Strategy A	P80 + 40%	P80 + 25%	60.5	61%
B	= Investment Strategy B	P80 + 25%	P50	66.5	98%
B	= Investment Strategy B	P80 + 25%	P80 + 25%	66.5	50%
B	= Investment Strategy B - 1%	P80 + 25%	P80 + 25%	74.2	69%
B	= Investment Strategy B	P80 + 40%	P80 + 25%	73.4	67%

In relation to the above summary, the Government Actuary's Department has noted that the rates of return are a bit more nuanced than as indicated in the table. For the Investment Strategy A scenarios, the target fund is based on the 6% return whereas the results are based on the return assumed in the Government Actuary Department's "ESG model", which is a bit less than 6% (which is why the first result in the table is 48% rather than 50%). Also, for the 100% gilts return for Investment Strategy B, the Government Actuary's Department has used the gilts return assumed in its "ESG model" which on average is around 3%. It should be noted that the average rate of returns in the analysis is an effect of the cashflow timings.

1.4 In the Board's scrutiny of the FAP and reaching the conclusions as set out in this Advice, the Board has relied on the various analyses carried out by the Government Actuary's Department, some of which are set in the report appended at Part B (*Sizewell C funding plan scenario test for NLFAB*) of this Annex. The results from these analyses, while indicative, have illustrated the

[1] **Note:** See pages 10 to 25 of the report in Part B (*Sizewell C funding plan scenario test for NLFAB*) of this Annex.

issue highlighted in paragraph 8.2(A) of the Main Report in relation to the lack of a margin for prudency for investment risk in the Long Term Discount Rate.

1.5 In addition, as noted in paragraph 8.1 of the Main Report, upon the Board's request, the Government Actuary's Department has considered how The Pensions Regulator's funding code for Defined Benefit pension schemes compares to the framework surrounding the funding of DWMP costs in respect of the decommissioning of Sizewell C, and the extent to which the concepts underpinning the code might be applicable to determining the appropriate investment strategy for funding the DWMP costs. The findings from this analysis are set out in the report appended at Part C (*Sizewell C decommissioning – TPR funding code comparison*) of this Annex.

1.6 The Board has not sought to scrutinise or verify the figures, rates and assumptions used by the Government Actuary's Department in these analyses carried out by the Government Actuary's Department.

PART B – SIZEWELL C FUNDING PLAN SCENARIO TEST FOR NLFAB

Government Actuary's Department

Sizewell C funding plan scenario testing for NLFAB

Modelling pack

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20 June 2025

Contents

Key Assumptions

Context

> As requested by NLFAB, GAD has carried out modelling on target funds and expected contributions on various scenarios around the funding plan of Sizewell C

> Aim is to help illustrate impact of variability of contributions to unexpected scenarios

> Based on the latest assumptions and the decommissioning and waste management plan (DWMP) costs

> Based on the final Funding Arrangements Plan (FAP)

Key assumptions

Description	Assumption
Nuclear inflation	3.20% p.a.
Nuclear inflation premium	1.00% p.a.
CPI	2.20% p.a.
Contribution inflation	CPI
DWMP costs	Estimates as at August 2022
Investment returns[1]	• years 1-54 8% p.a. (100% growth) • years 55-59 tapering down to 5.6% p.a. (40% growth, 60% Low risk) • years 60-61 4.8% p.a.[2] (20% growth, 80% Low risk) • years 62-82 tapering down from 5.6% to 4% p.a. (100% Low risk) modelled as a single equivalent discount rate of 5.01% for simplicity. • Investment returns reflect broad assumptions for growth, lower risk portfolios and a period of de-risking

[1] Assumptions on the investment returns have been derived by GAD following discussions with SZC.
[2] in line with the macro assumptions note. 4.8% is the rate assumed using the 'average' investment strategy, of 20% growth, 80% low risk, across the investment strategies in the periods before and after. FAP describes de-risking over the period to end of year 58 (start of year 59 in the modelling) then have a couple of years of stability before end of operations and further de-risking.

- Assumed operations start in 2032, end of generation at end of 2092, Waste Transfer Contract (WTC) transfer at end of 2113
- Assumptions are consistent with the financial assumptions paper except the LTDR is taken to be a single equivalent rate of 5.01% as based on a previous iteration rather than the simple time-weighted equivalent of 4.8% used in the final version, we do not deem this significant for the results and messages shown in these slides
- These will be updated before operation starts and the first set of contributions are calculated; but will follow the same philosophy.
- The assumptions shown are in line with a modelling approach to illustrate how some de-risking may affect outcomes. The actual FAP will result in decisions being made by FundCo which may result in a slightly different profile.

Model uses

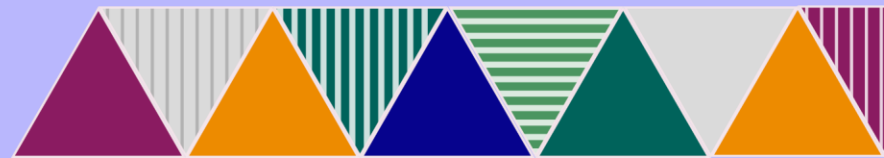
Model Can:

- Illustrate the anticipated importance of investment returns, relative to consumer contributions, in funding decommissioning costs
- Indicate how the funding arrangement plan is expected to react to unexpected performance in the fund or changes to Sizewell C operating life
- Demonstrate potential risks of fully covering decommissioning costs

Model Can’t:

- Predict exactly what contributions will be charged in reality. Although we would not expect them to be materially different, nuances in the calculations such as exact timing of contributions or allowance for interest on deficit, may result in slightly different outputs.
- Show what will happen in the future, and is limited by the assumptions used and the model parameters themselves
- Provide a full assessment of the risks through the decommissioning period.

Base Case Scenario



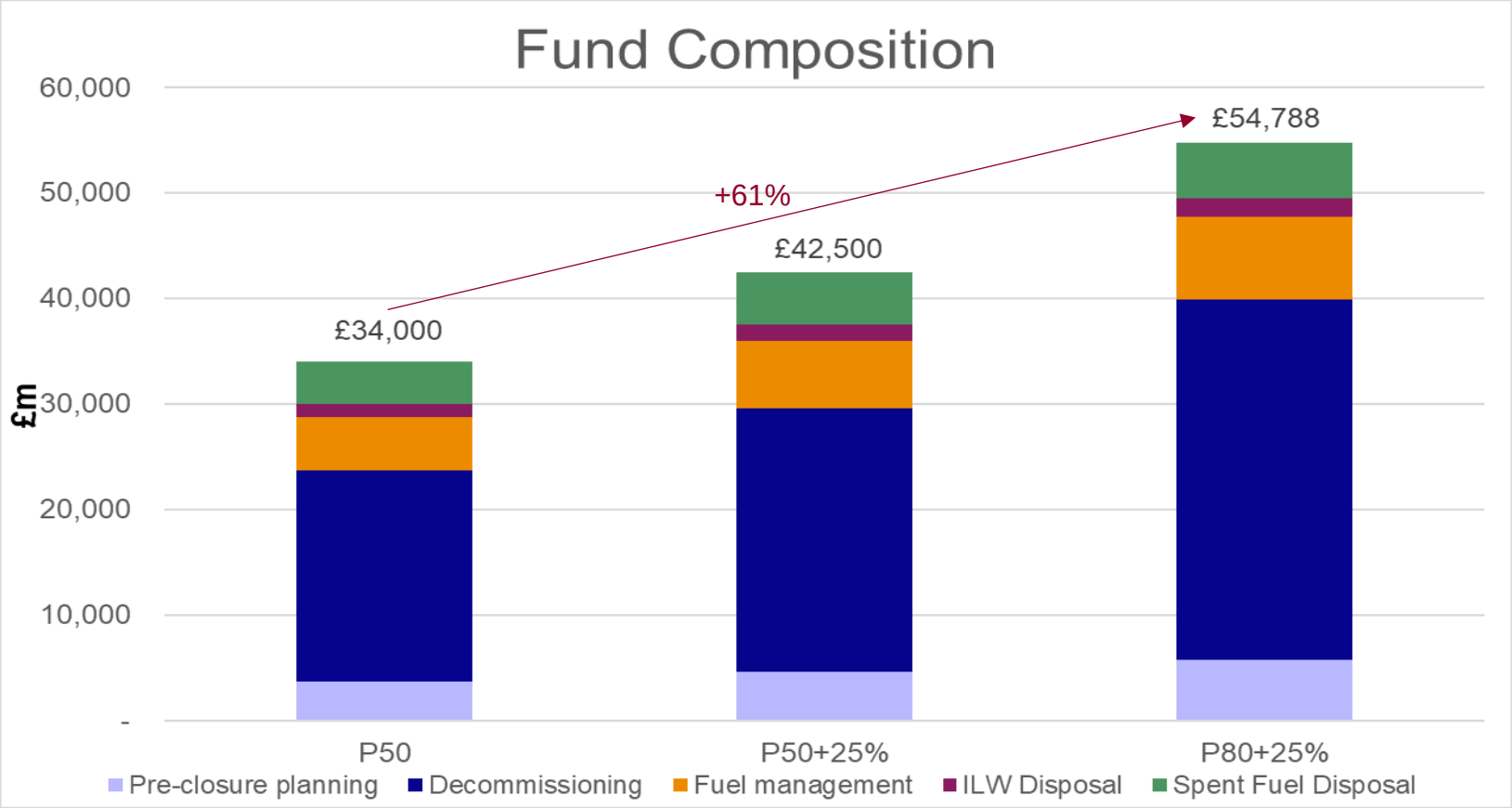
Cashflows

		Current date up to end of generation 2024 to 2092		End of generation to waste transfer 2092 to 2113[1]		After waste transfer, up to when cashflow is paid 2113-2160	
Cashflow	Basis	Inflation	Investment strategy	Inflation	Investment strategy	Inflation	Investment strategy
(1) Pre-closure planning	P80[2] + 25%	Nuclear inflation[3]	Growth rate[4]	N/A as all cashflows expected to have been paid by this point		N/A as all cashflows expected to have been paid by this point	
(2) Decommissioning	P80 + 25%	Nuclear inflation	Growth rate	CPI +Nuclear inflation premium	LTDR[5]	N/A as all cashflows expected to have been paid by this point	
(3) Fuel management	P80 + 25%[4]	Nuclear inflation	Growth rate	CPI +Nuclear inflation premium	LTDR	-	CPI + 1.5% per SFTC[6]
(4) ILW Disposal	P80	CPI	Growth rate	CPI	LTDR	N/A as all cashflows expected to have been paid by this point	
(5) Spent Fuel Disposal	P80	CPI	Growth rate	CPI	LTDR	-	CPI + 1.5% per SFTC

[1] This is the assumed end of decommissioning – in practice this date is unknown and could be later than 2113
[2] P80 means the value which represents an eighty per cent. (80%) probability that the final cost will be at or below the estimate calculated on the basis set out in the FAP
[3] Up to end of generation this will be a mixture of actual known inflation and unknown future assumed inflation
[4] Growth rate strategy is growth rate up to end of year 54, from years 55-59 de-risking to a 40% growth, 60% low risk portfolio and years 60-61 consisting of a 20% growth, 80% low risk scenario
[5] LTDR = long term discount rate. Strategy is de-risking from 40% growth, 60% Low risk portfolio to a 100% low risk portfolio. Note funded on P80+25%, but transfer payment is based on P80 (no 25%).
[6] SFTC - Spent Fuel Transfer Contract i.e. any waste transfer agreement. This strategy/discount rate is fixed in the contract.

Funding Target

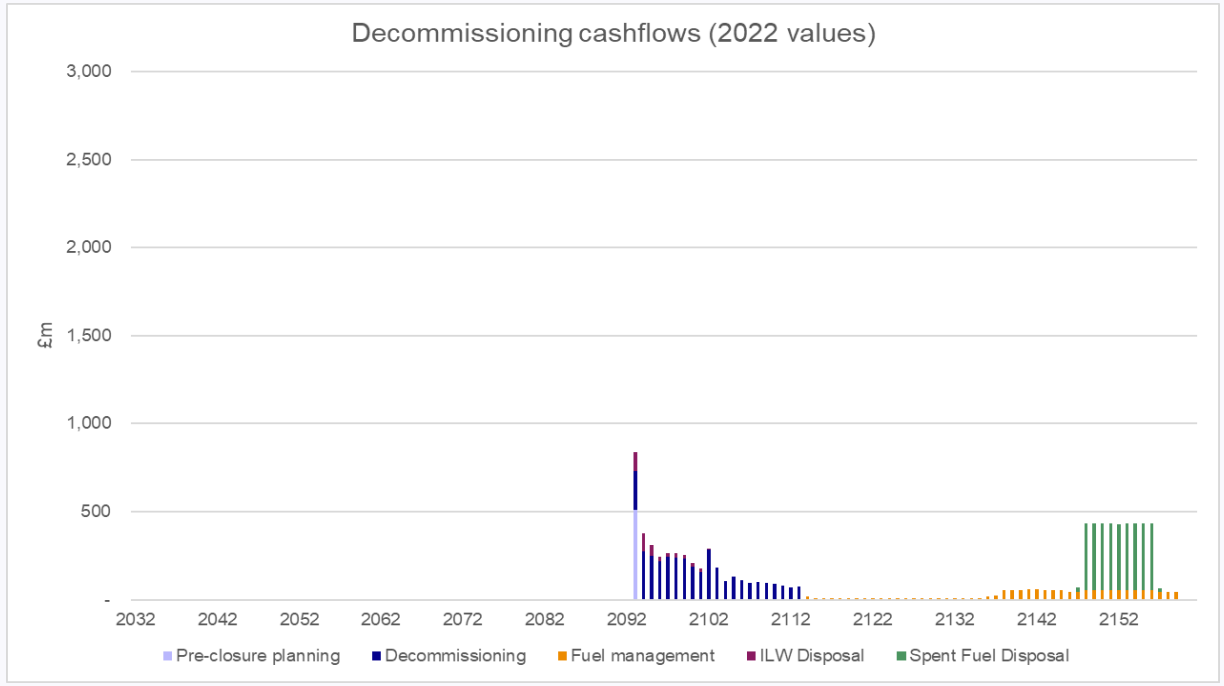
The funding target, in 2092 terms, based on best estimate cashflows as at August 2022 is £34,000m
The funding target, in 2092 terms, based on P80+25% cashflows as at August 2022 is £54,788m, 61% higher



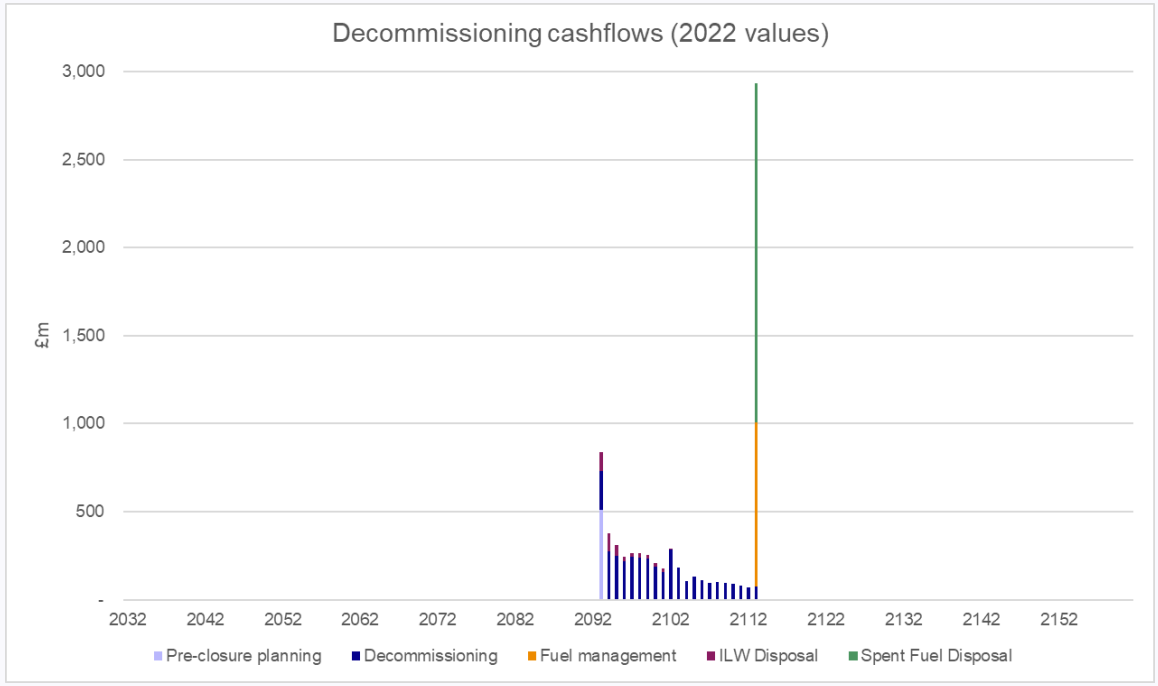
* P50 is the value which represents a fifty per cent probability that the final cost will be at or below the relevant estimate set out in the FAP i.e. best-estimate

Decommissioning cashflows

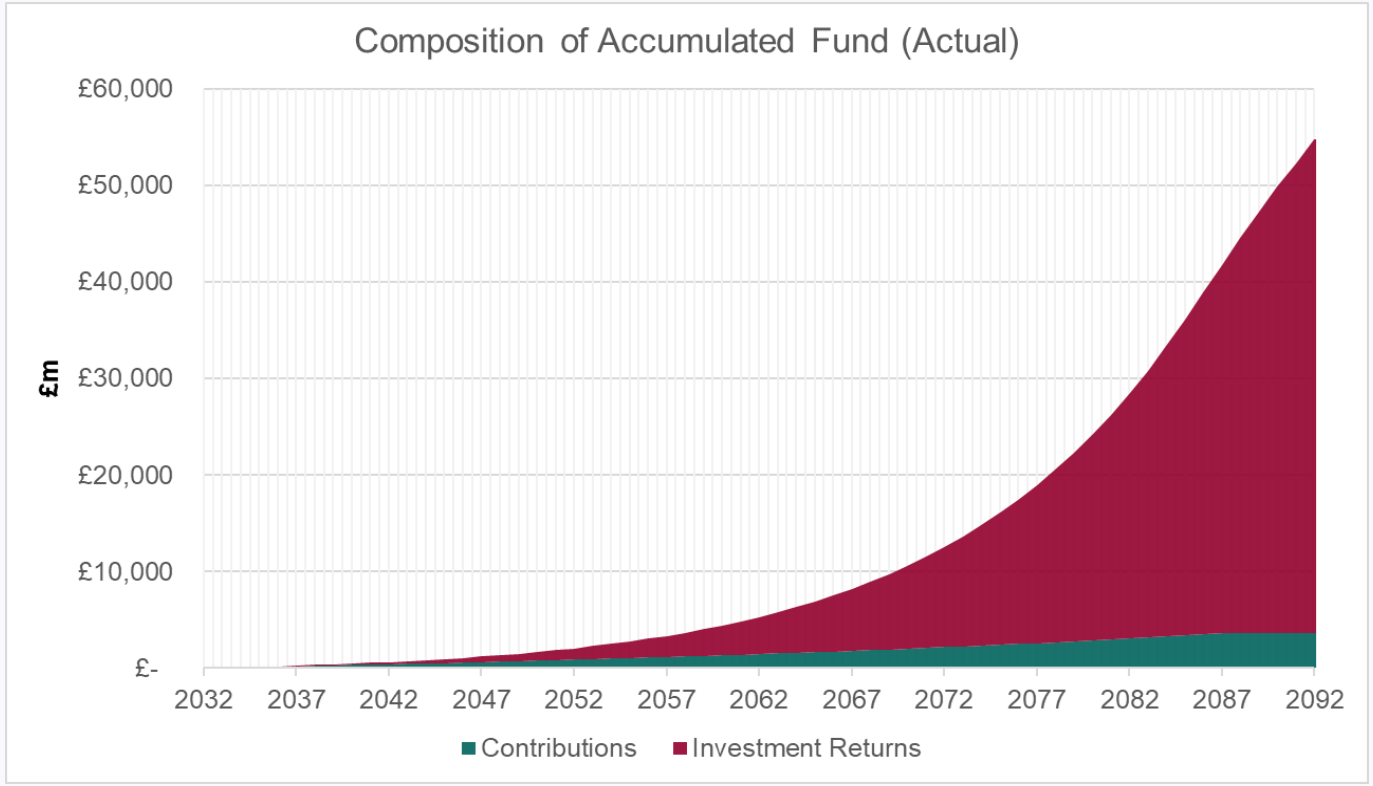
Expected cashflow dates in DWMP



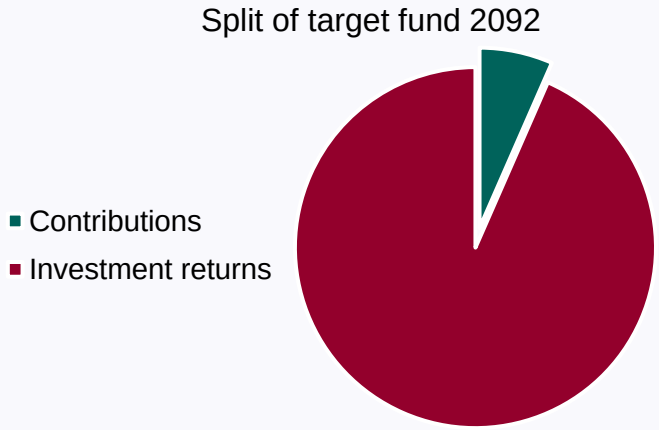
Assuming SZC exercise the option to transfer fuel management and spent fuel disposal costs in ~2113



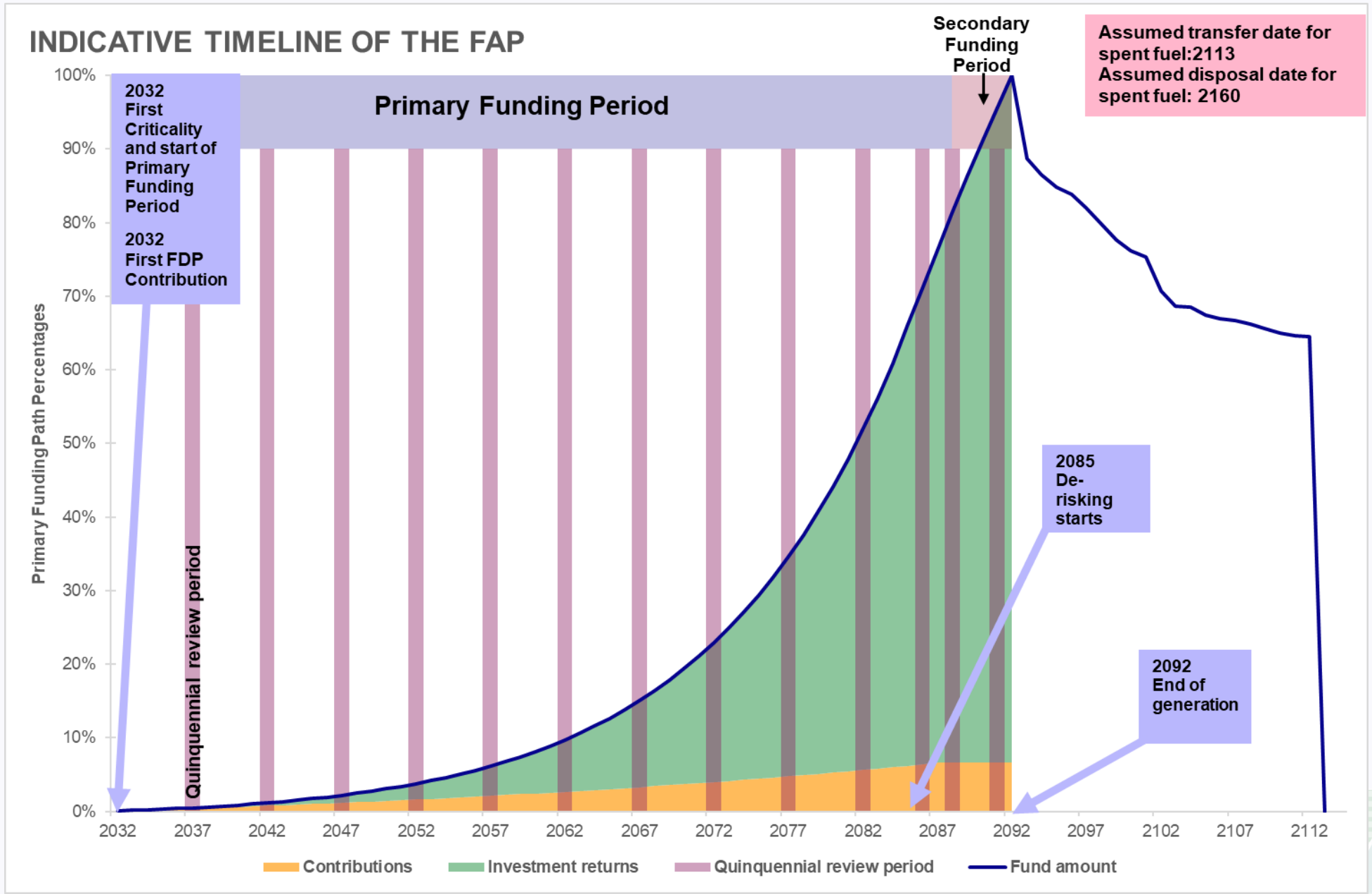
Funding Period – Base Scenario



- Lefthand graph shows fund accumulation over the funding period to achieve the funding target based on P80+25% decommissioning cashflows
- Contributions increase with assumed CPI from £33m in 2032 to £110m a year in 2087
- Target fund = £54.8bn made up of £3.6bn total contributions + £51.2bn total investment returns so very reliant on investment returns as shown in chart below



Indicative timeline – base case scenario



Scenario Testing

Outputs produced

For each scenario, we show the following outputs:

	Output	Description
A	End of operations date funding as % of target	Actual fund at end of operations relative to required target • Less than 100% is a shortfall • More than 100% is a surplus
B	Number of years early fund will expire assuming P80+25% cashflows	Number of years between actual fund being depleted and end of decommissioning based on P80+25% cashflow payments
C	Present Value (PV) of total liability as a % of expected costs at end of operations	Actual fund accumulated at end of operations plus additional cashflows required to be paid after fund expires, divided by scenario's target fund, all discounted to 2022 terms using CPI as the discount rate (2.2%)
D	PV of additional cashflows from taxpayer required after fund expires	Sum of all cashflows required from taxpayer after the fund expires, discounted to 2022 terms using CPI as the discount rate (2.2%)
E	PV of total consumer contributions	Sum of all consumer contributions discounted to 2022 terms using CPI as the discount rate (2.2%)

Fund projection scenarios

Scenario	Description
Base case - P80 + 25%	Cashflows modelled on a P80 basis including 25% prudence with assumptions all bearing out as expected
Early closure - X years early closure, Y years notice	All assumptions as per the base case, but with the operations period cut short by X years whilst being given Y years' notice to prepare for the change, including changing contributions to achieve an adequate fund value. In these cases, decommissioning is also brought forward by X years.
High DWMP costs - Material increase in DWMP cost estimates 2070 (+20%)	All assumptions as per the base case until 2070, when the estimated future cashflows are assumed to unexpectedly rise by 20%
Known high nuclear inflation - Higher nuclear inflation known from start of operations	All assumptions as per the base case, other than the nuclear inflation assumption which is 1% higher than expected from the start. This acts to increase the inflation applied to the cashflows
Unexpected high nuclear inflation - Unexpected higher nuclear inflation during decommissioning	All assumptions as per the base case, other than the nuclear inflation assumption is 1% higher starting at the beginning of the decommissioning period; this is unknown throughout the operational lifetime so the fund target does not allow for it.
Underperformance in operations - Persistent shortfall in investment returns during operations	All assumptions as per the base case, apart from the investment returns are consistently 1% a year lower than expected during the operational lifetime.
Underperformance in decommissioning - Persistent shortfall in investment returns during decommissioning	All assumptions as per the base case, other than the investment returns are unexpectedly, 1% a year lower throughout the decommissioning period.
Investment shock - shock in 2086-88 (replicate 2007-08 financial crisis)	All assumptions as per the base case, other than the investment returns for a period of 3 years, starting in 2086 and finishing in 2088. The investment returns used in this period aim to replicate the return from the UK stock market during the financial crisis experienced in 2007-2008.
Early taper – de-risking in years 21-25 (55-59 in base case)	All assumptions as per the base case, apart from the investment returns which assume a profile of growth rate from years 1-20, de-risking from year 21 (following the same profile as the base case) and reaching a fully de-risked portfolio by year 48, i.e. 100% gilts return (assumed to be 4%); all known from the outset so fund target does allow for it.
No transfer - All CF paid from the fund (transfer does not occur)	All assumptions as per base case, except the assumed WTC cashflows are not transferred in 2113 and instead are paid out of the fund until 2160
Separate investment strategies - Separate investment strategy for early/transfer CF	All assumptions as per the base case scenario, except the investment return assumptions. For the 'early cashflows' i.e. those which are finished being paid by 2113, the investment returns are as per the base case. For the 'transfer cashflows' the investment returns are de-risked more quickly to a 100% gilts portfolio (returning 4% p.a.) over years 55-59 and remain fully de-risked for the rest of the decommissioning period. This scenario aims to replicate the strategy outlined in the TPR comparator memo. It is assumed that the decision to have separate strategies is known from the start of operations.

Summary outputs

Fund Projection Scenario	(A) End of operations date funding as % of target	(B) Number of years early fund will expire	(C) PV of total liability as a % of target	(D) PV of additional cashflows required after fund expires (£m)	(E) PV of total consumer contributions (£m)
Base case	100%	-	100%	-	1,501
Early closure 1 - 10 year early closure no notice[1]	80%	<1	114%	3,768	1,653
Early closure 2 - 10 year early closure 5 year notice	100%	-	100%	-	3,810
Early closure 3 - 30 year early closure no notice[1]	52%	11	127%	6,952	1,936
Early closure 4 - 30 year early closure 5 year notice	100%	-	100%	-	6,162
High DWMP costs	100%	-	100%	-	2,732
Known high nuclear inflation[2]	100%	-	100%	-	3,001
Unexpected high nuclear inflation	100%	<1	114%	1,721	1,496
Underperformance in operations[3]	100%	-	100%	-	2,253
Underperformance in decommissioning	100%	<1	114%	1,682	1,513
Investment shock	100%	-	100%	-	2,118
Early taper	100%	-	100%	-	4,548
No transfer[4]	100%	4	106%	1,058	1,502
Separate investment strategies	100%	-	100%	-	1,538

[1] Notes on early closure - no notice scenarios: i) The 10 years early scenario shows the fund expiring less than a year early because funds are exhausted when the final transfer payment is made which is in the final year, whereas the 30 years early scenario runs out much earlier. ii) The partial revocation means that, although these scenarios are short of target at end of operations, there is a mechanism to receive the extra funding they require to meet the shortfall

[2] Assumed nuclear inflation=CPI+2%

[3] -1% p.a.

[4] The decision to not transfer occurs after the end of operations, hence original funding was in line with planned target

Summary outputs – allowing for partial revocation

Fund Projection Scenario	(A) End of operations date funding as % of target	(B) Number of years early fund will expire	(C) PV of total liability as a % of target	(D) PV of additional cashflows required after fund expires (£m)	(E) PV of total consumer contributions (£m)[1]
Base case	100%	-	100%	-	1,501
Early closure 1 - 10 year early closure no notice	100%[2]	-	114%	-	4,188
Early closure 2 - 10 year early closure 5 year notice	100%	-	100%	-	3,810
Early closure 3 - 30 year early closure no notice	100%[2]	-	127%	-	5,209
Early closure 4 - 30 year early closure 5 year notice	100%	-	100%	-	6,162
High DWMP costs	100%	-	100%	-	2,732
Known high nuclear inflation[3]	100%	-	100%	-	3,001
Unexpected high nuclear inflation	100%	<1	114%	1,721	1,496
Underperformance in operations[4]	100%	-	100%	-	2,253
Underperformance in decommissioning	100%	<1	114%	1,682	1,513
Investment shock	100%	-	100%	-	2,118
Early taper	100%	-	100%	-	4,548
No transfer[5]	100%	-	106%	-	1,915
Separate investment strategies	100%	-	100%	-	1,538

[1] Consumer contributions include provision for additional contributions under partial revocation over 10 years where there was a shortfall at the end of operations
[2] Following partial revocation period
[3] Assumed nuclear inflation=CPI+2%
[4] -1% p.a.
[5] The decision to not transfer occurs after the end of operations, hence original funding was in line with planned target

Main themes

- Generally, unexpected changes during the primary funding period can be addressed and target fund met by the end of operations date.
- The later in the operations period changes occur, and the less notice given, the higher the impact on outcomes

- More frequent reviews towards the end of the funding period helps ensure shocks are corrected for
- However, correcting for shocks may result in over or under funding - this is driven by the delay in reacting to surplus or deficit situations (correction based on fund position as at the end of the previous period)
- Partial revocation may also help address under funding

- From previous iterations, we showed that if contributions are brought forward:
  - Lower total contributions are required as they accrue investment returns for longer
  - But fund gets larger earlier, therefore more exposed to investment return volatility
- We have modelled contributions increasing with CPI in line with the FAP.

Post end of operations investment performance volatility

- The analysis and scenarios shown in the previous slides were deterministic assuming investment returns followed a fixed path.
- In practice investment returns will fluctuate over time. Given the lack of consumer contributions available after the end of operations, we have also carried out stochastic analysis, using a range of economic scenarios, to look at the potential investment risk/return trade off of two simple investment strategies.
- This is intended to help illustrate the risks that will need to be managed throughout the post operations period.

Economic scenario analysis

We have adopted a pragmatic approach to illustrate the effect of timing and volatility of returns on the fund. Other approaches could be taken, and we'd be happy to discuss further if of interest.

Portfolio for decommissioning period scenarios (2092 onwards) - simplistic

Scenario A:
- 50% UK equities
- 50% gilts

Scenario B:
- 100% gilts

Assumed transfer payment occurs, in 2113

Approach

1. Our calculation method was set to determine the required fund amount at the end of operations to avoid a shortfall with a 95% probability of investment performance scenarios.

2. To do this, we have used 10,000 investment performance simulations (economic scenarios) over the decommissioning period. As opposed to the funding path modelling, this analysis is not deterministic*.

3. We have 50 years of projected simulations and have used years 20-41 to avoid short-term volatility – with the assumed transfer payment occurring in 2113, this is sufficient to cover the decommissioning period

4. Starting with P80+prudence target fund value at the end of the operational period

5. Considered two scenarios, one in which the cashflows payable are in-line with the P50 estimates, and another in which the cashflows are in-line with P80+25% estimates.

*Deterministic modelling assumes all inputs are known and produces one result from those inputs.

Economic scenario analysis

As part of this analysis, we have looked at following four different scenarios. The results of each of the scenarios are shown on the next slides:

1. **Base scenario P80+25% -** this is the base case scenario where the target fund and assumed cashflows are modelled on a P80+25% basis.
2. **P80 + 40% -** the target fund and assumed cashflows are modelled on a P80+40% basis, which is the maximum cost estimation allow in the FAP.
3. **ESG gilts return P80+25% -** the target fund and assumed cashflows are modelled on a P80+25% basis but allowing for returns in line with a gilts return as assumed in our ESG model. This is on the basis that the FAP investment strategy is updated to assume a gilts strategy throughout decommissioning.
4. **ESG gilts return P80+40% -** the target fund and assumed cashflows are modelled on a P80+40% scenario and allowing for returns to be in line with the gilts return assumed in our ESG model.

Economic scenario analysis results (1)

Base scenario P80+25%

Target fund	Investment strategy	Assumed cashflows for target fund	Actual cashflows	% of simulations resulting in break-even or surplus	Fund required to B/E in 95% of simulations
£54.8bn	A	P80+25%	P50	93%	£57.3bn
£54.8bn	B	P80+25%	P50	91%	£58.4bn
£54.8bn	A	P80+25%	P80+25%	48%	£91.3bn
£54.8bn	B	P80+25%	P80+25%	22%	£92.7bn

- With this type of analysis, if actual cashflows match those assumed to determine the target fund (P80+25%) then the number of simulations resulting in break-even or surplus will be 50% (as is broadly the case under the third scenario shown).
- We expect actual cashflows to be in line with P50 and therefore, as shown in the first two scenarios, there is over a 90% chance the results will be break-even or in a surplus.
- In the second and fourth scenarios shown above, the target fund is set up assuming the decommissioning investment strategy is in line with strategy A but in practice strategy B is adopted during decommissioning. The funding target would be higher if strategy B was assumed from the start of operations. As a result, there is only a 22% chance the results will be break-even or in surplus under this scenario.

Economic scenario analysis results (2)

P80+40%

Target fund	Investment strategy	Assumed cashflows for target fund	Actual cashflows	% of simulations resulting in break-even or surplus	Fund required to B/E in 95% of simulations
£60.5bn	A	P80+40%	P50	97%	£57.3bn
£60.5bn	B	P80+40%	P50	97%	£58.4bn
£60.5bn	A	P80+40%	P80+25%	61%	£91.3bn
£60.5bn	B	P80+40%	P80+25%	35%	£92.7bn

- This analysis is similar to that on the previous slide but the target fund and assumed cashflows are determined allowing for returns to be in line with a P80+40% scenario, which is the maximum cost estimation allowed in the FAP.
- If actual cashflows match those assumed to determine the target fund in the base scenario (P80+25%) and the investment strategy is 50% equities, 50% gilts (scenario A) then the number of simulations resulting in break-even or surplus will be around 60% (as is broadly the case under the third scenario shown)
- We expect actual cashflows to be in line with P50 and therefore, as shown in the first two scenarios, there is a 97% chance the results will be break-even or in a surplus in this scenario.

Economic scenario analysis results (3)

ESG gilts return P80+25%

Target fund	Investment strategy	Assumed cashflows for target fund	Actual cashflows	% of simulations resulting in break-even or surplus	Fund required to B/E in 95% of simulations
£66.5bn	A	P80+25%, ESG gilts return	P50	98%	£57.3bn
£66.5bn	B	P80+25%, ESG gilts return	P50	99%	£58.4bn
£66.5bn	A	P80+25%, ESG gilts return	P80+25%	73%	£91.3bn
£66.5bn	B	P80+25%, ESG gilts return	P80+25%	50%	£92.7bn

- This analysis is similar to that on slide 21 but the target fund is determined allowing for returns to be in line with the gilts return assumed in our ESG model (around 3%). This is on the basis that the FAP investment strategy is updated to assume a gilts strategy throughout decommissioning.
- If actual cashflows match those assumed to determine the target fund (P80+25%) and the investment strategy is 50% equities, 50% gilts (scenario A) then the number of simulations resulting in break-even or surplus will be around 70% (as is broadly the case under the third scenario shown)
- We expect actual cashflows to be in line with P50 and therefore, as shown in the first two scenarios, there is over a 98% chance the results will be break-even or in a surplus in this scenario.

Economic scenario analysis results (4)

ESG gilts return P80+40%

Target fund	Investment strategy	Assumed cashflows for target fund	Actual cashflows	% of simulations resulting in break-even or surplus	Fund required to B/E in 95% of simulations
£73.4bn	A	P80+40%, ESG gilts return	P50	99%	£57.3bn
£73.4bn	B	P80+40%, ESG gilts return	P50	100%	£58.4bn
£73.4bn	A	P80+40%, ESG gilts return	P80+25%	83%	£91.3bn
£73.4bn	B	P80+40%, ESG gilts return	P80+25%	67%	£92.7bn

- This analysis is similar to that on the previous slide but the target fund is determined assuming a P80+40% scenario and allowing for returns to be in line with the gilts return assumed in our ESG model (around 3%).
- If actual cashflows match those assumed to determine the target fund in the base scenario (P80+25%) and the investment strategy is 50% equities, 50% gilts (scenario A) then the number of simulations resulting in break-even or surplus will be around 80% (as is broadly the case under the third scenario shown)
- We expect actual cashflows to be in line with P50 and therefore, as shown in the first two scenarios, there is over a 99% chance the results will be break-even or in a surplus in this scenario.

Economic scenario analysis - Important considerations

Outputs are very **sensitive** to timing of cashflows relative to specific investment performance in a given year

This analysis is **simplistic**, based on combining nearer term economic projections to illustrate potential investment risks during decommissioning, and does not model any decommissioning cashflow uncertainty. It is therefore not as detailed as any stochastic modelling that may be carried out in practice at a later stage as part of the FAP.

The analysis provides an illustration of an extreme approach, which assumes the fund is transferred at the end of operations and **no monitoring** or investment management is conducted afterwards.

In reality, the most likely case is that regular reviews will be carried out, and there will be flexibility to adapt the investment strategy depending on the progression of the fund position.

Appendix: Modelling principles and limitations

Modelling principles

Our modelling has been carried out in line with the final version of FAP, unless otherwise stated. Some notable features include:

- Deterministic investment returns assumed, unless otherwise described.
- Investment assumptions are post-tax and post investment management fees
- Primary funding period is taken to be years 1-56, secondary funding period years 57-61
- Aim for fully funded by end of primary funding period, allowing for investment returns
- De-risking period from year 55
- Contributions increase in line with CPI and are revised at every Quinquennial review (QQR). Contributions are based on the fund position at the end of the previous year and modelled to occur one year after the QQR date.
- Shortfall and surpluses are recovered in 10 years max
- QQRs are allowed for every 5 years from start of operations up to year 50, then 54, 56, and 59 (or 7, 5 and 2 years before end of operations).

We consider this approach reasonable for the purpose of this exercise.

Modelling vs FAP

We are aware of some slight differences between our illustrative model and the wording in the FAP. We don't consider these would have a material impact in the modelling outputs and therefore have not updated the model in the interests of time and cost.

Area	Difference	Rationale
Spreading period	FAP defines spreading period as min(10 years, period remaining until end of secondary funding period) Model defines spreading period as min(10 years, period remaining until end of primary funding period)	Not material, model consistent with aim of being fully funded by end of primary funding period Both approaches aim to ensure the target fund is attained by the end of operations.
Additional storage cashflows	Not allowed for in the model	Not material, expected to be less than 0.1% (~£200m out of ~£220bn) of decommissioning CF inflated to end of operations
Spent fuel disposal target	FAP calculates the target as 55/60ths of spent fuel transfer payment. Model calculates the target as 100% of spent fuel transfer payment.	FAP wording means contributions will be required during secondary funding period if experience is in line with assumptions Model slightly prudent and consistent with aim of being fully funded by end of primary funding period

Distribution & Limitations

- The charts and figures are based on simplified modelling of the fund accrual and decommissioning system and reflect the assumptions and modelling principles described in the slides.

- This presentation is intended for use by the NLFAB and DESNZ and no other person or third party is entitled to place any reliance on the contents of this presentation, except to any extent explicitly stated herein, and GAD has no liability to any person or third party for any act or omission taken, either in whole or part, on the basis of this presentation.

- This work has been carried out in accordance with the applicable Technical Actuarial Standard TAS100 issued by the Financial Reporting Council (FRC).

The standards we apply

The Government Actuary's Department is proud to be accredited under the Institute and Faculty of Actuaries' Quality Assurance Scheme. Our website describes the standards we apply.

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PART C – SIZEWELL C DECOMMISSIONING – TPR FUNDING CODE COMPARISON

Government Actuary's Department

Sizewell C decommissioning – TPR funding code comparison

Date: 7 April 2025

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Status: FINAL

Purpose

This note is addressed to the Nuclear Liabilities Financing Assurance Board (NLFAB). As requested, we have considered how The Pensions Regulator (TPR)'s funding code for Defined Benefit pension schemes (hereafter referred to as 'TPR's funding code') compares to the framework surrounding the funding of Decommissioning and Waste Management Plan (DWMP) costs in respect of the decommissioning of Sizewell C (SZC). It sets out a summary of the funding code and considers how the principles might be applied to the situation of SZC's decommissioning.

We consider there are parallels between the characteristics of pensions schemes and the cashflows associated with SZC's decommissioning. Therefore, some of the principles and techniques used in the TPR's funding code may help better understand and control risks in the funding of DWMP costs.

Executive Summary

The conclusions and actions set out in this note can be summarised as follows:

- The decommissioning of SZC has cashflows with different characteristics to a typical pension scheme covered by TPR's funding code. However, some of the general principles regarding risk and investment strategy can still be applied to SZC.
- The structure and content of the latest version of the Funding Arrangement Plan ('FAP') is generally aligned with the TPR's funding code principles: a growth investment strategy to be adopted during the operations period while consumer contributions are available, followed by a gradual reduction of investment risk as payouts approach.

- The following additions to the FAP have been identified that would align it more closely to the regulatory principles followed by pensions schemes:
    - Consider separating groups of cashflows by timing and inflation links and set the investment strategy of each individually based on those characteristics
    - The definition of the Long-Term Discount Rate (LTDR) could adopt the parameters used to set the low dependency discount rate in TPR's funding code. However, SZC's cashflows are more difficult to hedge than that of a typical pension scheme so additional flexibility may be desirable.
    - TPR's funding code sets out stress testing requirements which could be a tool used in a more tailored approach for SZC's situation

Background

Pensions has been a heavily regulated sector for many years. It is now in a run-off phase with many schemes closed and looking for end-game solutions. That has contributed to a change in regulations and refinement in the approaches available

TPR's funding code was laid in parliament on 29 July 2024[1] and sets out a twin track regulatory approach - 'Fast Track' and 'Bespoke'. Whilst both approaches are valid, the 'Fast Track' approach reflects a 'low risk' option (with limited TPR scrutiny / ease of compliance) while the alternative (Bespoke') approach offers a higher risk (lower cost) option, providing the risk can be tolerated and justified to TPR.

In comparing TPR's funding code to the decommissioning of SZC, we have mainly compared against the Fast Track approach parameters as these set out a baseline approach that TPR considers appropriate for investment and funding for typical schemes. Therefore, these can be used as potential guidelines to be considered in respect of the approach for decommissioning SZC.

The guidance on the Bespoke approach is less prescriptive, schemes can deviate from Fast Track in different ways and to varying degrees as long as the trustees have justification for taking on any additional risk.

The regime set out in the funding code is also underpinned by Integrated Risk Management (IRM), a risk management tool requiring pension Trustees to understand how three key pillars - covenant, funding and investment strategy – interact together and inform an integrated approach in respect of managing their pension scheme. We have also considered this when comparing the code to SZC.

However, the decommissioning of SZC is not a pension scheme and there are differences that need to be recognised. We have tried to highlight these in this note and reflect on whether some aspects of the funding code approach may not be appropriate for SZC. We do believe the general principles set out in the funding code could be applied in the case of SZC, even if the specific details are different due to the difference in circumstances.

[1] Funding defined benefits code of practice | The Pensions Regulator

Distribution and limitations

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This note must be considered in its entirety as individual sections, if considered in isolation, may be misleading, and conclusions reached by review of some sections on their own may be incorrect.

GAD are not lawyers or experts in nuclear decommissioning and this note has been formed based on our knowledge gained from being involved in this project, as well as a number of other nuclear decommissioning related projects.

This work has been carried out in accordance with the applicable Technical Actuarial Standard TAS100 issued by the Financial Reporting Council (FRC). The FRC sets technical standards for actuarial work in the UK. Please see our website for details of these standards and other standards that apply to our work.

Cashflows

One of the key aspects which differs between the decommissioning of SZC and a typical pension scheme is the shape, timescale and nature of the cashflows.

The cashflows for a typical pension scheme are smoother and likely more predictable than those of SZC. The timescale is also much shorter, with a typical duration[2] of 15-20 years, and member benefits (apart from the level of inflation) are generally known, it is how long they will be paid for that is less certain.

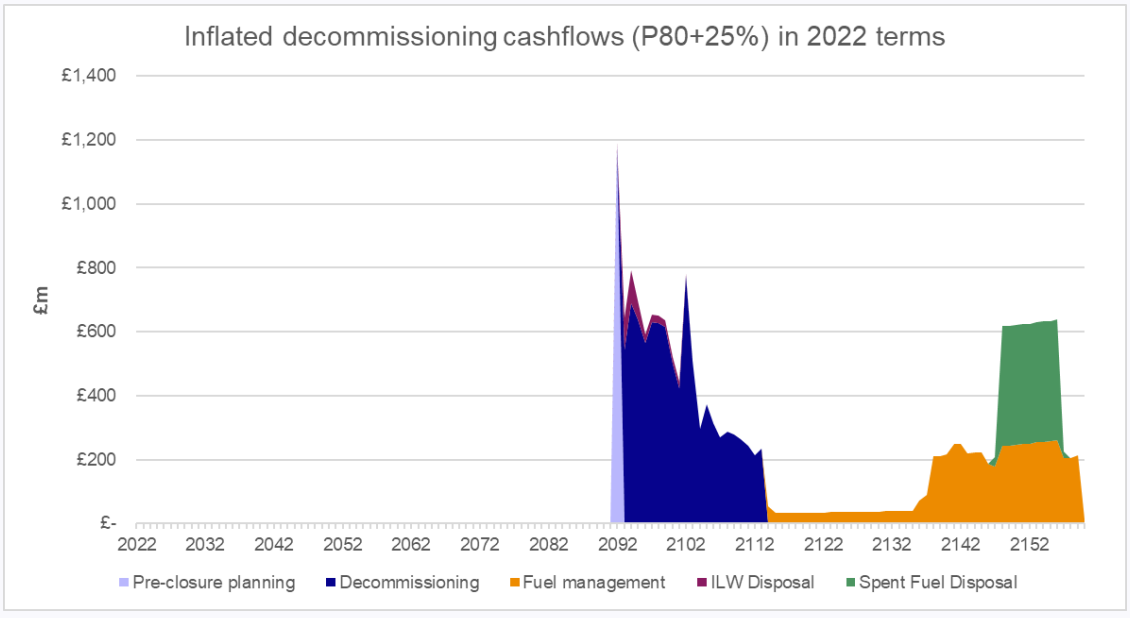
In comparison, the cashflows for SZC do not commence until almost 60 years after the start of operations. However, the NLFAB are interested in the post operations period, when there are no longer any consumer contributions to make good shortfalls in funding. Considering the period after cashflows commence, the timescale of payments is much shorter than a typical pension scheme but with only a slightly lower duration due to the large final waste transfer contract ('WTC') payment.

The SZC cashflows are also less certain, without the same defined amount and rate of increase as that provided by a pension scheme. The inflation effects in particular are less controllable as they are not all linked to a specific inflation index.

However, by the end of the operations period, the payments due under the waste transfer contracts should be relatively certain and mostly linked to CPI inflation. This will be similar to a pension scheme's cashflows and able to be well matched against investment options. Other cashflows are likely to continue to have inflation uncertainties that are difficult to match against.

To demonstrate these differences, the following graphs show the expected cashflows of SZC and of a typical pension scheme for comparison.

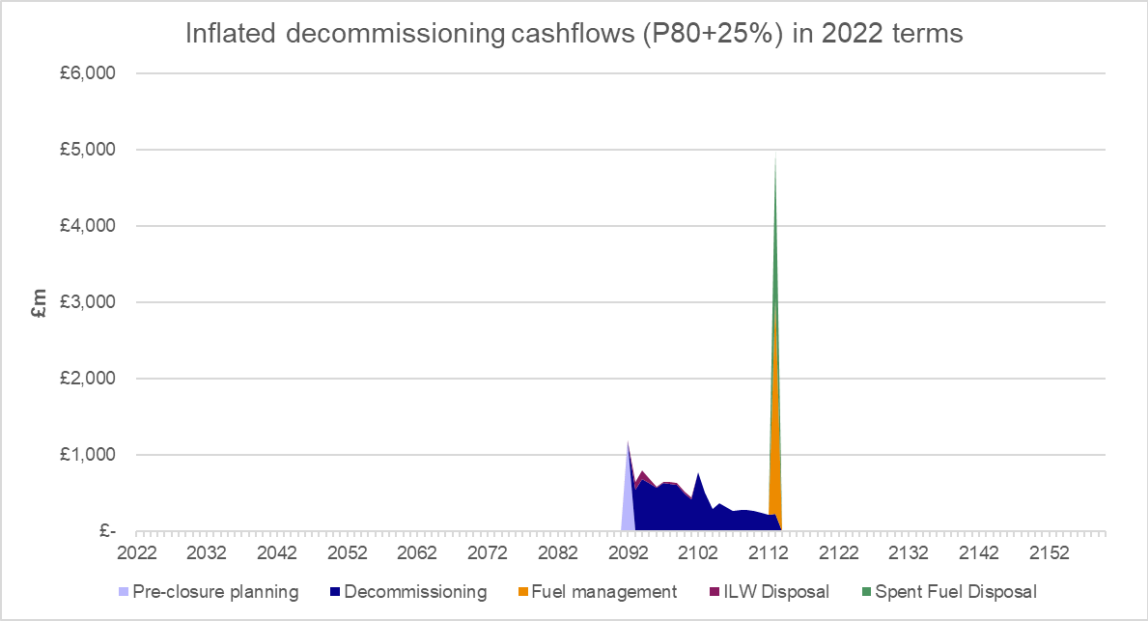
Graph 1: Expected cashflows in relation to the decommissioning and spent fuel of SZC



[2] Duration is a measure of the average time over which future cashflows are payable, which the Pensions Regulator uses in the new DB funding code.

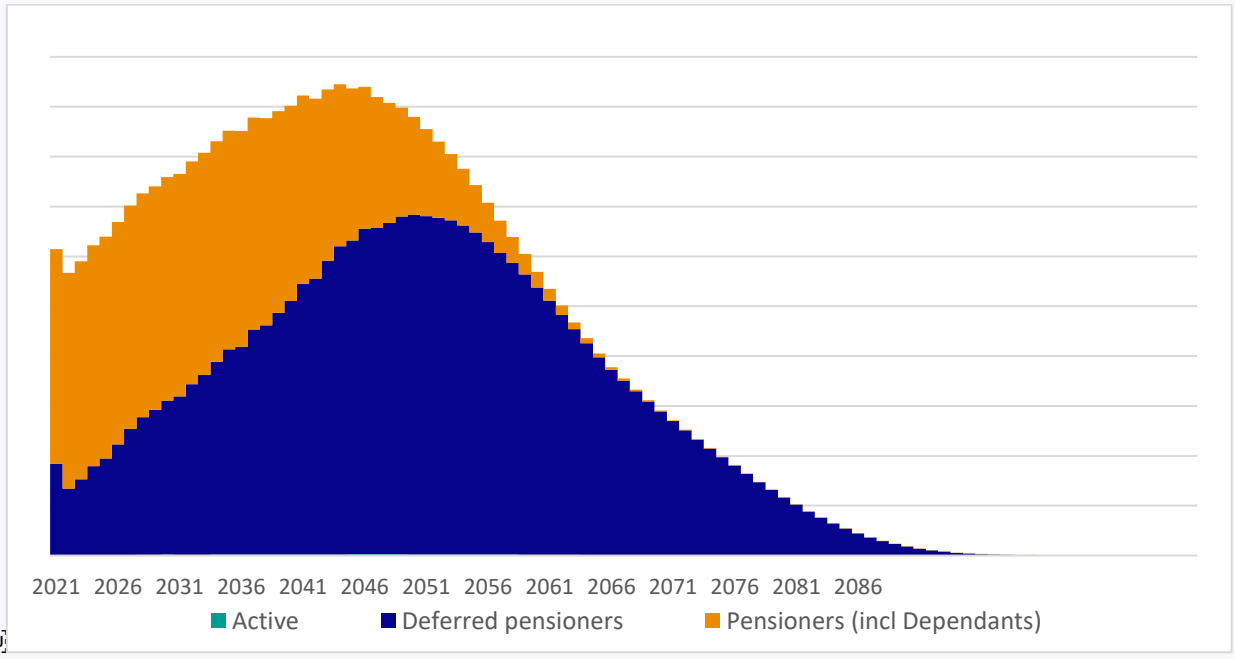
The expected cashflows for SZC have two peaks, one starting at around 2092 with the decommissioning cashflows for around 20 years. The cashflows are then relatively low for a further 20 years until the second peak starts in the late 2130s due to the fuel management and spent fuel disposal costs.

Graph 2: Expected cashflows from FundCo in relation to SZC decommissioning liabilities (assuming SZC exercise the option to transfer fuel management and spent fuel disposal costs in ~2113)



The cashflows expected from FundCo allowing for the waste management contracts with government alter the shape of the cashflows to be considered in relation to the SZC project. Rather than two peaks, there is now one block of cashflows starting around 2092 and then a very large peak of payments at the end of the period (assumed to be around 2113). This significantly reduces the period over which funds will be invested after the end of operations.

Graph 3: Expected cashflows of a typical pension scheme



In comparison, a typical pension scheme will have ongoing cashflows from paying benefits to both deferred members and pensioners. Cashflows are expected to peak, with the point this is expected to happen depending on the scheme's maturity, and then run off relatively quickly after that point due to member mortality.

Funding code summary

TPR have produced the funding code to be able to compare thousands of pension schemes across the industry in a consistent and practical way, while also acknowledging the potential differences on an individual scheme level.

The code provides guidance on how trustees of pension schemes should approach planning for the long-term funding of their scheme and the monitoring of its funding on an ongoing basis. This is in line with TPR's objectives of protecting members' pension benefits and reducing the risk of calls on the Pension Protection Fund (PPF), which acts as a safety net if the sponsor of a scheme becomes insolvent.

The code also provides specific guidance for open pension schemes (schemes allowing new entrants to join) as such schemes are likely to stay in a more 'steady state' with a higher duration that remains more stable over time, compared to most closed schemes that will experience a reducing duration as the scheme matures. Open schemes are provided with more flexibility within the code due to their circumstances, and this kind of approach may be more applicable to SZC when allowing for the period of operations due to the timescales and durations of the cashflows involved.

The approach and parameters TPR have adopted reflect their view on the appropriate balance between risk to member benefits and the PPF versus the cost to sponsors to fund a scheme. Within this framework, schemes will adopt bespoke strategies, reflecting the strength of the covenant, risk appetite and maturity of the arrangement.

Adopting similar principles for the SZC situation requires parameters that reflect what is considered the appropriate balance between risk to the taxpayer during decommissioning versus cost to consumers during the period of operation. The NLFAB has been asked to test whether the risk of recourse to taxpayers from fund insufficiency is remote, although the definition of remote is not defined.

The table across the following pages sets out a summary of the main principles and parameters in the funding code and comments on the similarities and differences between the situation for SZC and that of a typical pension scheme.

Table 1: Summary of TPR's funding code and comparison with SZC

Principle	Details	Pension schemes vs SZC
Significant maturity	Defines pension schemes to be 'significantly mature' when their duration[3] is 10 years (based on conditions as at 31 March 2023) and is the point schemes are expected to have reached a position of low dependency on the sponsor.	The duration of FundCo's SZC cashflows, at the start of the operational period, is much higher than that of a typical pension scheme. This means, for SZC, there is a much longer period to try and recover from any poor investment performance. The focus of NLFAB's attention is the post operations period (from around 2092), at which point the duration of the cashflows is expected to be around 11 years.
Low dependency	Low dependency discount rate under Fast Track set as gilts+0.5%. Fast Track also expects schemes to meet specified funding levels on the low dependency basis by certain durations e.g., 92% at 15 years. Low dependency investment allocation is one under which the value of the assets is highly resilient to short-term adverse changes in market conditions. TPR does not define an actual investment strategy that should be followed to reach low dependency but have set out the strategy used to determine the Fast Track parameters. This assumes, at significant maturity: • an allocation to growth assets of 15% • Matching portfolio is 35% corporate bonds and the remainder (i.e., 50%) is used to hedge inflation and interest rate risks using nominal and index-linked gilts.	The gilts+0.5% target is set on current market conditions and the Fast Track low dependency investment parameters which support close matching with the cashflows of a typical pension scheme. This reflects TPR's view on the appropriate risk / cost balance between members and sponsors. FundCo's expected cashflows are concentrated at the end point (transfer date), so the investment approach would ideally look to recognise the large peak and required liquidity. The cashflows before the transfer date also have more uncertainty than those in a typical pension scheme, which means the funding code investment strategy would not necessarily be low risk during decommissioning. The funding code is focussed on hedging against inflation (CPI) and interest rates, which are the key drivers for pension scheme cashflows. In comparison, for SZC the waste transfer contract cashflows are mostly linked to CPI, but other cashflows are driven by nuclear inflation which

[3] TPR sets out the calculation for duration should use the following formula for the Macaulay duration:
$\sum_i t_i\, cf_i\, v_i / \sum_i cf_i\, v_i$
Where: – cf_i is the i^{th} projected cashflow – t_i is the (average) time that cfi is expected to be paid – v_i is the discount factor appropriate at time i – the denominator in the equation is the value of the low dependency liabilities

Principle	Details	Pension schemes vs SZC
	• Appropriate levels of liquidity to cover benefit payments and reasonable allowance for unexpected cashflow requirements.	would be more difficult to hedge as there are no available assets to fully match this. The Nuclear Liabilities Fund (NFL) has a Statement of Investment Principles (SIP)[4] very similar to a SIP for a typical pension scheme, setting out terms in respect of objectives, assets managers, illiquidity etc. The NFL's main objective is to deliver a return sufficient for the fund to meet the qualifying nuclear decommissioning costs taking risks within the bounds of prudence.
Stress tests	To meet Fast Track, a scheme must demonstrate that when stressed its funding level does not fall by more than a set percentage depending on its current duration e.g., 13.1% at 20 years, 10.2% at 15 years. The stressed position is set out with defined stress factors for each asset class within the assets and interest rate and inflation stress factors for the liabilities.	TPR needed to set a proportionate method to measure the level of risk across thousands of pension schemes of varying sizes, including some which are very small. In comparison, SZC is only looking to fund one set of very large cashflows. It is therefore intended that stochastic modelling will be used as the end of operations approaches to help set appropriate risk levels. However, stress testing (which is a simplified version of what stochastic modelling can show) may still be a useful tool to measure risk alongside stochastic modelling.
Sponsor Covenant	Trustees are expected to have evidence-based assessment of the levels of supportable risk. Schemes following Bespoke rather than Fast Track will require justification for the additional risk taken. The Funding Code doesn't comment on 'no covenant' scenarios as, in the case of a pension scheme, this would usually be when an employer goes insolvent and so the scheme would move into the PPF and not be subject to the Code.	For a pension scheme, the sponsor is usually the employer of the members of the scheme. For SZC, the 'sponsor' is the consumers in the operational period and then becomes taxpayers during decommissioning. The covenant of a pension scheme employer can vary greatly and can also change over time depending on their financial situation. In SZC's case, support from consumer contributions during the operational period will be very strong and stable as it is difficult to see a situation where these would fall away. However, as NLFAB requires reassurance that the risk to the taxpayer will be remote, the covenant

[4] https://www.nlf.uk.net/how-we-invest/investment-principles

Principle	Details	Pension schemes vs SZC
	In respect of schemes where 'covenant longevity is expected to be shorter and is driven by a specific event or foreseeable limitation' then the code sets out that trustees should plan to move to low dependency no later than the end of the covenant longevity period. It also recognises that, for schemes with this type of covenant situation, trustees may decide to take some 'unsupportable' risk in the investment strategy to target full payment of benefits. It also suggests trustees should consider whether a more prudent funding and investment approach within the low dependency position than that set out in Fast Track may be more appropriate for the scheme.	needs to be treated as effectively zero when operations end. This could be considered as equivalent to the end of the 'covenant longevity period' as set out in the Funding Code. Increasing the prudence in the funding target will reduce the risk to the taxpayer during decommissioning and increase the cost to consumers during the operational period. The current funding approach targets P80 decommissioning costs with an additional allowance on top, which will act as some additional protection against the lack of covenant. However, this does not explicitly allow for the investment and inflation risks involved to reach an appropriate level of 'remoteness' of risk for the taxpayer.
Recovery plan	Deficits must be repaired as soon as can be reasonably affordable and affordability assessed on a year-by-year basis. The code sets a maximum 6-year recovery plan for Fast Track and maximum 3 years by the point of significant maturity for any scheme. No additional investment performance to be included in the recovery plan under Fast Track.	The recovery plan length in the funding code has been set as 6 years to be equal to two triennial valuation cycles (which pension schemes are required to carry out). It is also based on the duration and covenant of a typical pension scheme. The SZC approach has been set up to allow for 10-year recovery periods if required during the operational period. This is in line with two quinquennial reviews. The duration of the SZC cashflows is also longer and the covenant during the operational period is stronger and more stable than that of a pension scheme, so it's appropriate for the recovery plan length to be longer. During the decommissioning period there is no recovery mechanism set up for SZC due to the lack of covenant at that stage. So, from the end of the operational period, the SZC process carries more risk than that recommended in the Code under Fast Track.

Principle	Details	Pension schemes vs SZC
Expenses	Future reserve for expenses expected on low dependency funding basis unless Rules explicitly set out that employer covers all expenses.	The expenses of SZC will differ significantly to those of a pension scheme both in size and type. The expenses may also include tax charges for SZC as the tax position is different to that of a pension scheme.

Applying the funding code to SZC

As illustrated in the section above, SZC's cashflows have different characteristics to pensions cashflows covered by TPR's funding code. However, some of the general principles regarding risk and investment strategy can still be applied.

The structure and content of the latest version of the Funding Arrangement Plan ('FAP') is generally aligned with the TPR's funding code principles: a growth investment strategy to be adopted during the operations period while consumer contributions are available, followed by a gradual reduction of investment risk as payouts approach.

This exercise identified some additions that could be made to the FAP, that would align it more closely to the regulatory principles followed by pensions schemes. We outline these below and note where these have been incorporated in the latest version of the FAP.

Significant maturity – consider separating groups of cashflows by timing and inflation links

The duration of the full set of cashflows for SZC at the start of operations is much longer than that of a typical pension scheme whereas by the end of the operations period, when cashflows begin to be paid, duration has reduced to something much more like a typical pension scheme.

The idea of using some measure of maturity to determine when it is appropriate to ensure the level of investment risk has materially reduced does therefore remain valid. TPR has adopted duration in the funding code and selected the duration they consider appropriate on average across the range of pension schemes in scope. However, there may be other metrics, aside from duration, that may be appropriate to adopt for FundCo, for example timing of the point at which no further consumer contributions are payable.

Under the waste transfer contracts, it is expected that there will be a large payment from FundCo around 2113 to transfer all remaining liabilities to the government. This transfer is expected to be significantly larger than the cashflow payments in preceding years, and with more defined terms. It may therefore be appropriate to consider the cashflows in two parts:

- Early cashflows: all the cashflows before the transfer date, which will be similar to a very mature pension scheme, although with greater uncertainty around the size of each cashflow. The investments held to meet these cashflows can move to lower risk as the end of operations approaches, recognising the inability to exactly match the cashflows.

- Transfer cashflows: the cashflows associated with the waste transfer contracts will form a single payment point and a reasonably well defined cashflow amount. The investments held to meet these cashflows can move to lower risk as certainty of the transfer amount increases and matching assets of suitable term become available.

In the next section we illustrate how a long-term discount rate (LTDR) can be derived from separate investment strategies for the two sets of cashflows.

For context, the table below illustrates how duration may change throughout the operations and decommissioning periods, using the same blend of growth rate (8%) and LTDR (4%) as used in the modelling.

Table 2: Duration of Sizewell C's cashflows (allowing for WTCs) at different stages

When	Year	Duration (years)		
		All cashflows	Early cashflows	Transfer cashflows
Start of operational period	2032	71	67	82
Halfway through operational period	2062	41	37	52
Start of decommissioning	2092	11	7	22
Start of late cashflows	2114	No cashflows after transfer date		
Start of second peak	2136			

Investment strategy – de-risking

The above illustrates how separating the cashflows into two parts could be used to inform de-risking paths. The exact timing associated with de-risking could use duration as in the funding code, or other, less technical, alternatives as mentioned in the two cashflow group descriptions above. Another alternative could be the date when payouts are expected to exceed income received from assets, which is the point when assets will need to be sold and values crystallised. The earlier de-risking is planned to occur, the greater the expected consumer costs will be to fund the expected cashflows.

If cashflows were split into two groups as proposed above, the investment strategy could be considered separately for the two. The timing of de-risking could vary between the part of the investment portfolio expected to cover the early cashflows and the part covering the transfer cashflows. Additionally, the low-risk strategy for each cashflow group may differ slightly, reflecting the greater ability to match the transfer cashflows, subject to index-linked gilts of suitable duration being available.

The latest version of the FAP does not prevent reaching this position as there is flexibility for FundCo to determine the precise investment strategies that will be appropriate in the growth phase and how these change through the de-risking phase. However, it would be possible to make minor changes to the FAP wording, to be more explicit about reflecting the different expected timings for de-risking the two separate groups of cashflows. This could be achieved by increasing the periods considered from 'Growth', 'De-Risking' and 'Long-term' to, say, 'Growth', 'De-risking early', 'De-risking transfer'.

By way of example, periods could be defined as follows:

- Growth period: years 1-53
- De-risking of early cashflows: tapering down from growth to LTDR from year 54 to year 81 (transfer date) – the reduction to LTDR is longer reflecting higher uncertainty in cashflows and hence retaining some growth investments as potential risk diversification
- De-risking of transfer cashflows: tapering down from growth to LTDR from year 54 to year 58. Most of the cashflows are linked to CPI, all disbursed in a single payment with relatively certain timing, hence inflation risk could largely be hedged by investing in an index-linked gilt of suitable duration (if available at the relevant time).

As an illustration, if we consider the investment strategy used in the modelling[5], the single equivalent rate of return is 5.6% p.a. from the start of de-risking (year 54) onwards. This compares to a derived single equivalent rate of return of 5.3% if we apply different strategies:

- same investment strategy as used in the modelling for early cashflows
- apply a quicker tapering down to the LTDR for the transfer cashflows[6]

We would not expect the underlying investment principles to require changes, as these could be applied to the two sets of cashflows separately to come up with a suitable aggregate portfolio. In practice, we would expect this split to be notional, rather than two separate funds, to minimise administration costs and fees.

Additionally, as mentioned above, the approach could become more sophisticated when getting closer to the end of operations and the cashflows are more certain. However, we do not consider this to be a material weakness in the latest version of the FAP which provides enough flexibility for FundCo to consider the timing and scale of cashflows when setting the investment strategy.

Low dependency – difficult to match assets and liabilities

The definition of LTDR in the FAP is still relevant, defined as the expected annual rate of return of the Long-Term Portfolio during de-risking from the end of the Secondary Funding Period.

There is a question around what value the LTDR may take and whether it could be defined based on similar principles to the low dependency discount rate in the TPR's funding code. Following the TPR's funding code principles, the investment strategy should consider resilience against short-term market movements. The parameters used to set the Fast Track give an idea of what may be considered as a suitable low dependency investment strategy, i.e., have a low allocation to growth assets and high levels of hedging.

However, the nature of cashflows for SZC makes it more difficult to hedge them. As outlined in the 'Cashflows' section, areas of uncertainty such as nuclear inflation or decommissioning costs have no appropriate asset type to match against, so will not be able to be fully hedged, unlike a typical pension scheme.

Therefore, for SZC it may be appropriate to consider holding a higher level of growth assets than TPR expect a pension scheme to adopt, to offset the additional uncertainty in cashflows while still allowing for some hedging against inflation. This is especially true for the early decommissioning cashflows.

There are also other options available to manage this additional uncertainty other than holding a higher level of growth assets. One option would be to target a higher fund and invest in a lower risk investment portfolio. Another option would be to try and diversify risk in some other way by investing in types of assets (not necessarily return-seeking assets) that are not correlated to the bonds.

This should be considered alongside the quantification of risk discussed below.

[5] 100% growth to the end of the primary funding period (year 53), tapering down to 40% growth / 60% LTDR at the end of the secondary funding period (year 58), remaining at this rate for two years until end of generation (year 60), then tapering down linearly to 100% LTDR by the transfer date (expected in year 81).
[6] 100% growth to the end of the primary funding period (year 53), tapering down to 100% LTDR by the end of generation (year 60), to reflect the higher certainty of the underlying cashflows and potential inflation matching asset available.

Stress testing – quantification of risk

The purpose of stress testing in the TPR's funding code is to ensure investment strategies being adopted by pension schemes using a Fast Track approach, have sufficient resilience against poor investment market experience. This is particularly relevant where sponsor covenant for the scheme is uncertain, and hence poor performance may not be recoverable. A relatively formulaic and simple approach is adopted to measure the level of risk across thousands of pensions schemes of varying sizes.

In comparison, SZC is a single fund to meet one set of very large cashflows, and during the operational phase has a strong and persistent covenant from consumer contributions. A more tailored approach can therefore be taken to quantify risk, though stress testing may still be a useful tool within that. The latest version of the FAP, incorporates the requirement for FundCo to measure risk (using stochastic modelling or other tools) and provide a report the Secretary of State can use to consider whether any changes are required to the FAP.

Recovery plan and Sponsor covenant – accounting for intergenerational fairness

A balance is required between the level of consumer contributions during the operational period and the level of risk being left for taxpayers during decommissioning, as higher consumer contributions will reduce the risk for taxpayers later and vice versa. NLFAB aims for the risk to the taxpayer to be remote during decommissioning and this is linked to how the funding target and risk taken during the operational period are set up.

Ideally, the amount consumers contribute would exactly cover the decommissioning costs and taxpayers would not need to contribute. However, it would be impossible to achieve this precisely and there will be risks of either a large surplus of assets remaining at the end of decommissioning or of taxpayers needing to meet some of the costs. Which of these scenarios is more likely will depend on the level of risk defined as decommissioning approaches.

As the covenant for the cost of decommissioning SZC effectively falls away at the start of the decommissioning period, some of the points set out in the Funding Code around schemes which have 'limited covenant longevity' could be considered. This may include taking more investment risk during the operational period to target full funding and then setting a low dependency target at the start of decommissioning to be as, or more, prudent than that prescribed in Fast Track (gilts+0.5%) but recognising gilts+0.5% reflects the characteristics of pension funds and TPR's view of the balance between risk for members and costs to sponsors.

For SZC, the FAP aims for future cashflows to be fully funded by the end of operations. The latest version of the FAP requires the level of risk during the decommissioning period to be considered by FundCo, which allows the Secretary of State to determine whether the approach being adopted is considered appropriate as decommissioning approaches.

Expenses

Expenses should be included in expected future cashflows and these should be allowed for appropriately in any funding targets. Our understanding is that this is already the case within the costs provided in the DWMP.