

RIIO-2 Sector Specific Methodology Decision Investor Call



24/05/2019

Improving the customer
and user experience



Delivering high quality and reliable services to all network users and consumers, including those who are in vulnerable situations

Improving the network
and its operation



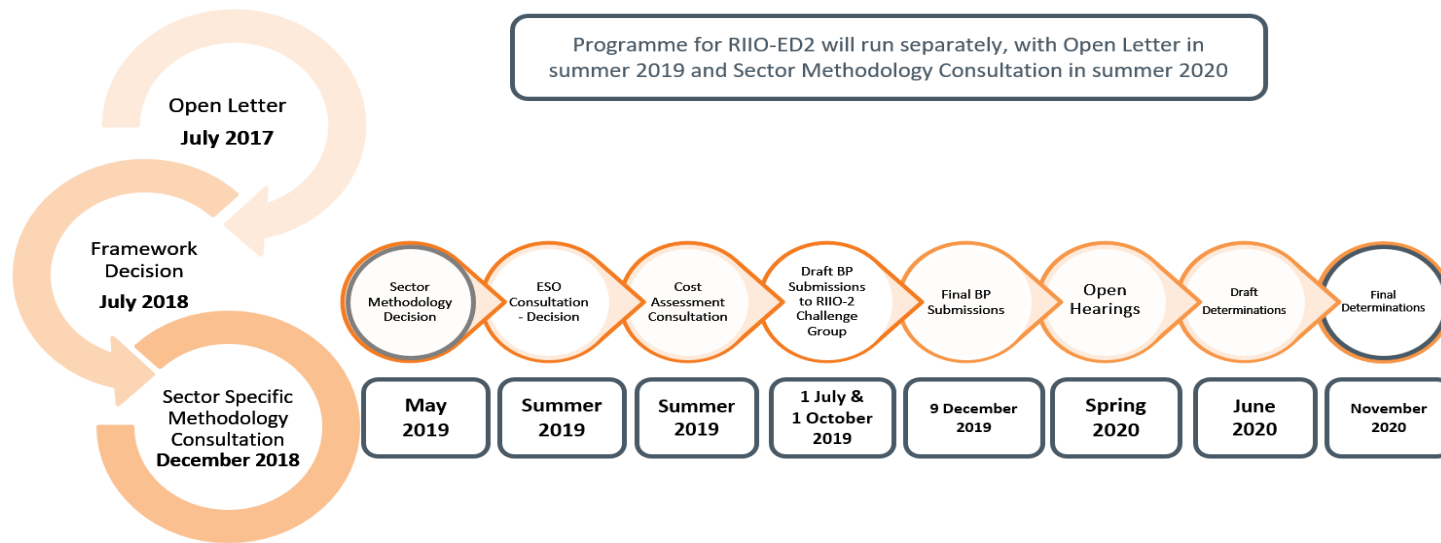
Delivering a safe, resilient and efficient network that is more responsive to change

Supporting the energy
system transition



Enabling the transition to a smarter, more flexible, sustainable low-carbon energy system

- We have learned lessons from previous price controls and aim to drive a better balance between the interests of consumers and investors
- But we are retaining rewards for companies delivering great customer service and outperforming tougher targets through efficiency and innovation



Sector Specific Methodology Decision

- Builds on Framework Decision (July 2018) and **is the decision document to the** Sector Specific Methodology Consultation (Dec 2018)
- Update on methodology for Draft Determination (Q2 2020)
- Not setting values today but Working Assumptions for key items
- Covers GD, GT, ET and ESO sectors (not Electricity Distribution)
- Next steps:
 - Business plans in July, October and December 2019
 - Draft and Final Determinations in 2020

RIIO-2 will drive the delivery of high quality network services at lower cost (than RIIO-1) whilst preparing our networks for the energy system of the future. We do this by:

- confirming an outputs and incentive framework that focuses on the things that really matter to consumers, with rewards and penalties set accordingly
- retaining an incentive regime that ensures networks strive for efficiency but with a higher share of the savings returned to consumers
- indexing rather than forecasting for key variables, such as interest rates
- reducing the return to equity investors through better alignment with current market conditions and the risks that networks face
- confirming the opportunity to use competitive processes to reveal efficient costs and ideas, where the benefits are likely to exceed the costs
- confirming the introduction of return adjustment mechanisms to protect against the risk of extreme deviations from expectations set at the start of the control.
- retaining a strong innovation stimulus covering both large-scale transformational R&D projects, as well as smaller scale technological innovations

We have updated our working assumption for the allowed return on capital in response to the evidence received through the consultation process, and in light of current market conditions:

- allowed return on equity increases from 4.0% to 4.3%, on the basis that our central estimate of the cost of equity has increased from 4.5% to 4.8% (all values in CPIH Real)
- allowed return on debt increases from 1.7% to 1.9% (CPIH Real), due to combination of current estimates of sector debt costs and market movements

We are also confirming that a number of the proposals we consulted on in December will not be progressed at this stage, helping to streamline the regime and reduce complexity. These include:

- the competed element of the Business Plan incentive
- anchoring as a return adjustment mechanism for gas distribution
- the cashflow floor

Overview of key policy decisions

Totex incentive mechanism:

- Retaining an incentive regime that ensures networks strive for efficiency but with a higher share of the savings returned to consumers
- Achieve this through introduction of a confidence-dependent incentive rate, which varies according to the degree of confidence we have in setting totex baselines.
- Incentive rates will be confirmed through draft and final determinations

Business Plan incentive:

- Confirming introduction of absolute incentive to encourage high-quality and ambitious Business Plans, incorporating assessments of both cost and quality
- Four-stage process will result in a net penalty or reward, with a total cap of $\pm 2\%$ of allowed totex
- Rewards will not be subject to any return adjustment mechanism

Continuing need for a strong innovation stimulus:

- We are retaining a strong innovation funding programme for both big transformational R&D projects as well as smaller scale process or technological innovations
- New strategic innovation fund to replace the RII0-1 Network Innovation Competition
- Retaining opportunity for additional Network Innovation Allowance, with necessary reforms
- Primary focus on key energy transition challenges in power, heat and transport and improving outcomes for vulnerable consumers

Confirming the scope of competition:

- Confirming the use of competitive processes to drive efficient costs and ideas, where the benefits are likely to exceed the costs
- Confirming our existing onshore late competition models to the electricity transmission and gas sectors, and requiring networks to identify projects which are potentially suitable for early competition
- We are implementing competition ‘best practices principles’ to best capture value for consumers through the competitive processes undertaken by network companies

Avoiding the risk of excessive returns:

- Ruling out discretionary adjustments
- Ruling out anchoring for gas distribution sector
- Confirming implementation of sculpted sharing mechanism for transmission and gas distribution
- Excluding financial and tax performance as well as performance through the Business Plan Incentive

Targeting outputs and incentives on what consumers want and value

- An outputs framework that will:
 - Meet the needs of consumers and network users, including a package of additional support and protection for vulnerable consumers
 - Maintain a safe and resilient network
 - Deliver an environmentally sustainable network
- Outputs to be clearly distinguished as either licence conditions, output delivery incentives or price control deliverables

Maintaining a safe and resilient network

- Confirming measures that ensure the actions and investments undertaken by the network companies in RIIO-2 maintain the long-term safety, security and reliability of their networks and systems

Managing uncertainty in RIIO-2

- Where it will add value we will establish an inter-institutional group to advise on decisions of strategic importance and how they might interact with government policy

Cost of capital and financeability

Cost of Equity

- *Step One* – CAPM estimation: (A) Risk-free rate, (B) TMR, (C) Beta
- *Step Two* – Cost of Equity cross-checks
Cost of Equity range (updated working assumption at this stage)
- *Step Three* – Distinguish between Allowed and Expected Return
Allowed Equity Return (working assumption)

Cost of Debt

- Full indexation based on iBoxx bond yields
- Sector-level allowed return to be based on efficient sector average debt costs
- Updated working assumption provided for business plan purposes

Weighted Average Cost of Capital

- Notional gearing and Allowed Equity and Debt Returns

Setting Methodology at this stage with values to be finalised at Determination

Decisions

- Introduce equity indexation
- Focus on 20 year real gilt
- Apply CPIH/RPI wedge

Working assumptions

- Real CPIH today - 0.96%
- Average for '21-26 - 0.75%
- Implied uplift +0.22%

Risk Free Rate and the forward curve, 20yr tenor, as at 29th March 2019

Component	2022	2023	2024	2025	2026	Average	Ref	Source
Risk-free rate (RPI, spot)	-1.99%	-1.99%	-1.99%	-1.99%	-1.99%	-1.99%	A	Bank of England
Forward curve (RPI)	0.11%	0.17%	0.22%	0.26%	0.30%	0.21%	B	Bank of England
Risk-free rate (RPI, forward)	-1.88%	-1.82%	-1.77%	-1.73%	-1.69%	-1.78%	C	C = A+B
Risk-free rate (CPIH, spot)	-0.96%	-0.96%	-0.96%	-0.96%	-0.96%	-0.96%	D	$D = (1+A) * (1+1.049\%)^{-1}$
Risk-free rate (CPIH, forward)	-0.85%	-0.79%	-0.74%	-0.70%	-0.66%	-0.75%	E	$E = (1+C) * (1+1.049\%)^{-1}$
Uplift (CPIH)	0.11%	0.17%	0.22%	0.26%	0.30%	0.22%	F	F = E - D

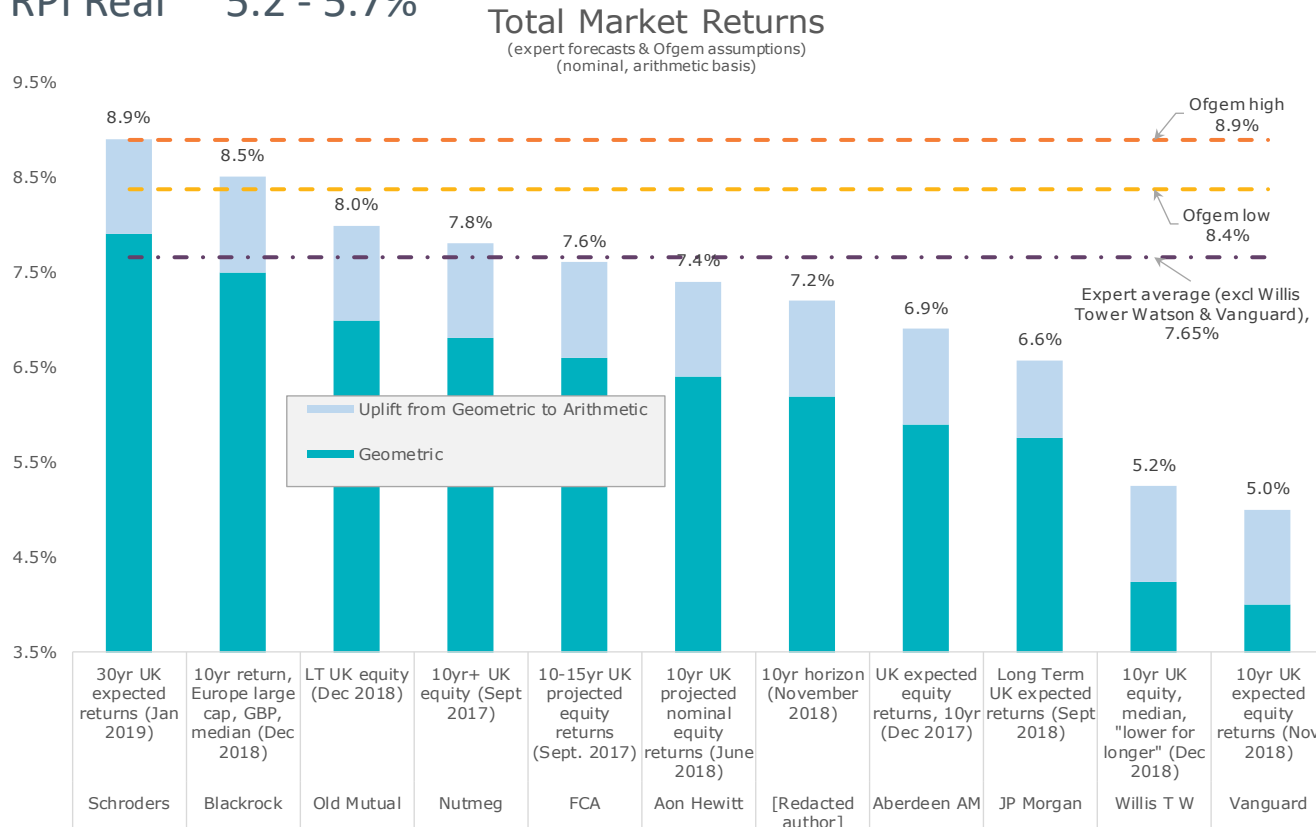
Finance Annex, Table 6, p30

Decisions

- Real CPIH TMR range
 - 6.25 - 6.75%
- Equivalent to:
 - Nominal 8.4 - 8.9%
 - RPI Real 5.2 - 5.7%

Evidence

- Long run historical data
- Forward-looking DGMs
- Current investor views



*Finance Annex,
Figure 6, p39*

Decisions

- Assess raw beta using at least 5 years data (OLS and GARCH)
- De-gear and re-gear using:
 - Debt beta
 - Historical debt market values
 - Adjust for EV to RAV

Updates to methodology

- Considering a wider range of historic data
- Align average historic gearing and time period for raw beta estimation

Working assumption for the notional equity beta range

Component	Low	Mid	High	Ref	Source
Raw Equity beta	0.55	0.63	0.70	A	Low value = 17.5-year period, High value = 5-year period. Both to Sept 2018
Book Value Gearing: net debt/EV	43.5%	43.4%	43.2%	B1	As per Bloomberg. Table 29 in Finance Annex
Market Value Factor	1.03	1.04	1.06	B2	Table 31 in Finance Annex, Financial Accounts and Bloomberg.
EV/RAV	1.10	1.10	1.10	C	Ofgem judgement based on outturn values for long-run
Adjusted Gearing: net debt/RAV	49.2%	49.8%	50.3%	D	$D = B1 * B2 * C$
Debt beta	0.15	0.125	0.10	E	Ofgem judgement based on precedent and academic research
Asset beta	0.35	0.38	0.40	F	$F = A * (1 - D) + E * D$
Notional gearing	60%	60%	60%	G	Working assumption
Notional equity beta	0.66	0.75	0.85	H	$H = [F - (G * E)] / (1 - G)$

Decisions

- Retain Step 2 cross-checks
- Include: MARs, OFTO returns, Infrastructure fund discount rates, and Return surveys
- Consider additional sources
- Set at Determination

Working assumption updates

- OFTO returns : 5.1% CPIH Real
- Funds: 5.4%
- Survey TMR: 5.5%
- Implied utility returns: 4.0%

Equity methodology: Step 1 & Step 2, working assumptions December 2018 compared to May 2019, CPIH real

Component	Low	High	Low	High	Ref	Source
	December 2018		May 2019			
Notional equity beta	0.646	0.762	0.66	0.85	A	Finance Annex, Table 8
Total Market Return	6.25%	6.75%	6.25%	6.75%	B	Finance Annex, Table 7
Spot risk-free rate	-0.69%	-0.69%	-0.96%	-0.96%	C	Finance Annex, Table 6
Forward curve uplift	0.15%	0.15%	0.22%	0.22%	D	Finance Annex, Table 6
Risk Free Rate	-0.53%	-0.53%	-0.75%	-0.75%	E	Finance Annex, Table 6
Cost of equity (step 1)	3.85%	5.01%	3.87%	5.63%	F	$F = E + A * (B - E)$
Cost of equity (step 2)	4.00%	5.00%	4.00%	5.60%	G	Judgement based on Step 1 and Step 2

Finance Annex, Table 11, p66

Background

- Decision made at Framework to distinguish between Allowed and Expected Returns, in line with 2018 UKRN report
- We proposed to distinguish between allowances and expectations of (out- or under-) performance, when setting the allowed return on equity
- Consultation responses reviewed in detail and objections considered

Decision

- To apply the distinction when setting Allowed Returns (Step 3)
- Value to be confirmed at Determination stage based on final RIIO-2 incentives and overall package

Updated working assumption

- Balance of probabilities remains expected outperformance
- Retain 0.5% working assumption; to be updated at Determination

Decisions

- Full indexation
- No debt sharing
- Sector-level allowed return based on efficient sector average costs

Next Steps

- Continue to assess:
 - Halo effect
 - Transaction and liquidity costs
 - Any smaller company premium
 - CPIH deflation of iBoxx
- Calibrate final indexation mechanism after business plans at determination stage

Updated working assumptions

- Reflects market rates as at 29th March 2019
- Expected actual cost of debt data received from companies
- Illustrative calibration used for working assumption purposes

Cost of debt working assumptions

	RIIO-2 Average
Nominal (%)	3.97%
CPIH real (%)	1.93%

Finance Annex, Table 5, p19

Updated Allowed Return on Capital Working Assumptions (CPIH real)

		Year-end 31st March					Average		
Price base	Component	2022	2023	2024	2025	2026	'22-'26	Ref	Source
CPIH	Allowed return on debt	2.03%	1.96%	1.91%	1.88%	1.86%	1.93%	A	Working assumption as per Table 5 of Finance Annex
	Allowed return on equity	4.27%	4.29%	4.30%	4.31%	4.32%	4.30%	B	Working assumption as per Table 21 of Finance Annex
	Notional gearing	60%					60%	C	Working assumption as per Paragraph 7.33 of Finance Annex
	Allowed return on capital	2.93%	2.89%	2.87%	2.85%	2.84%	2.88%	D	$D = A * C + B * (1 - C)$

Finance Annex, Table 4, p8

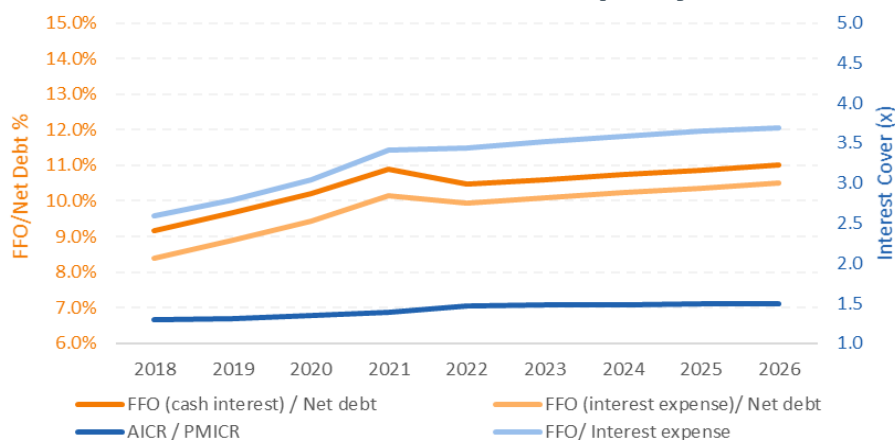
Comparing RIIO-2 methodology with Ofwat PR19

CPIH Real	Cost of Equity (mid)	Allowed return on equity	Allowed return on capital
RIIO-2 – May 2019	4.8%	4.3%	2.9%
RIIO-2 – Dec 2018	4.5%	4.0%	2.6%
PR19 – Dec 2017	5.0%	5.0%	3.4%

Approach to Financeability

- Duty to have regard to the need to secure that licensees are able to finance activities subject to legislation, assessed with reference to the notional company
- Initial modelling of working assumptions indicates adequate notional credit metrics

Notional Gas Distribution company



Finance Annex, Figure 17, p86

Cashflow Floor

- Would provide contingent credit support for companies
- Consultation responses by networks unsupportive
- Rating agencies unsupportive
- Consumer groups supportive if needed to avoid increases in allowed returns
- Given current view of financeability of notional company and lack of support for CFF, work on CFF to be suspended

- **RIIO-2 comes at a time when the energy system is undergoing a fundamental transformation**
- **The energy networks sit at the heart of this system, and our framework of regulation needs to adapt to a range of future possibilities**
- **Our approach to this change is guided by our principal objective to protect the interests of consumers now and in the future, with particular emphasis on protecting the vulnerable**
- **We believe that these interests are best protected by an energy system that can attract investment and innovation and keep costs as low as possible, while also promoting sustainability**
- **Our methodology for RIIO-2 focusses on the things that really matter to consumers, retains strong but cost-efficient incentives, and will continue to encourage efficiency and innovation**
- **This approach will help to ensure the delivery of high quality services for all network users and consumers whilst preparing the networks for a smarter, cleaner, energy future**

Q&A session

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Our core purpose is to ensure that all consumers can get good value and service from the energy market. In support of this we favour market solutions where practical, incentive regulation for monopolies and an approach that seeks to enable innovation and beneficial change whilst protecting consumers.

We will ensure that Ofgem will operate as an efficient organisation, driven by skilled and empowered staff, that will act quickly, predictably and effectively in the consumer interest, based on independent and transparent insight into consumers' experiences and the operation of energy systems and markets.