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RIIO-2 Framework Consultation Investor Call

7 March 2018

Summary of proposals

- **Facilitating the energy transition**
  - Shorter price control -> five years as a default, but some allowances could be set for longer
  - No delay to electricity transmission price control timing
  - Minded to separate the electricity system operator price control
- **Enhancing the business planning process**
  - A stronger consumer voice -> a new approach to stakeholder engagement
  - Supportive of innovation, and seeking to extend competition across sectors
  - Consulting on amending the IQI; approach to fast tracking; a single business plan incentive for distribution
- **Fair returns for a low risk environment**
  - Cost of debt -> consulting on tweaking indexation/pass-through/pay embedded cost, index future debt
  - Cost of equity methodology suggests range of 3.0-5.0% RPI real -> possibility of indexing
  - Financeability challenge -> consulting on nominal WACC/putting onus on companies/debt protection
  - Proposal to move away from RPI, and looking at tax allowances
  - Consulting on mechanisms to ensure fair returns

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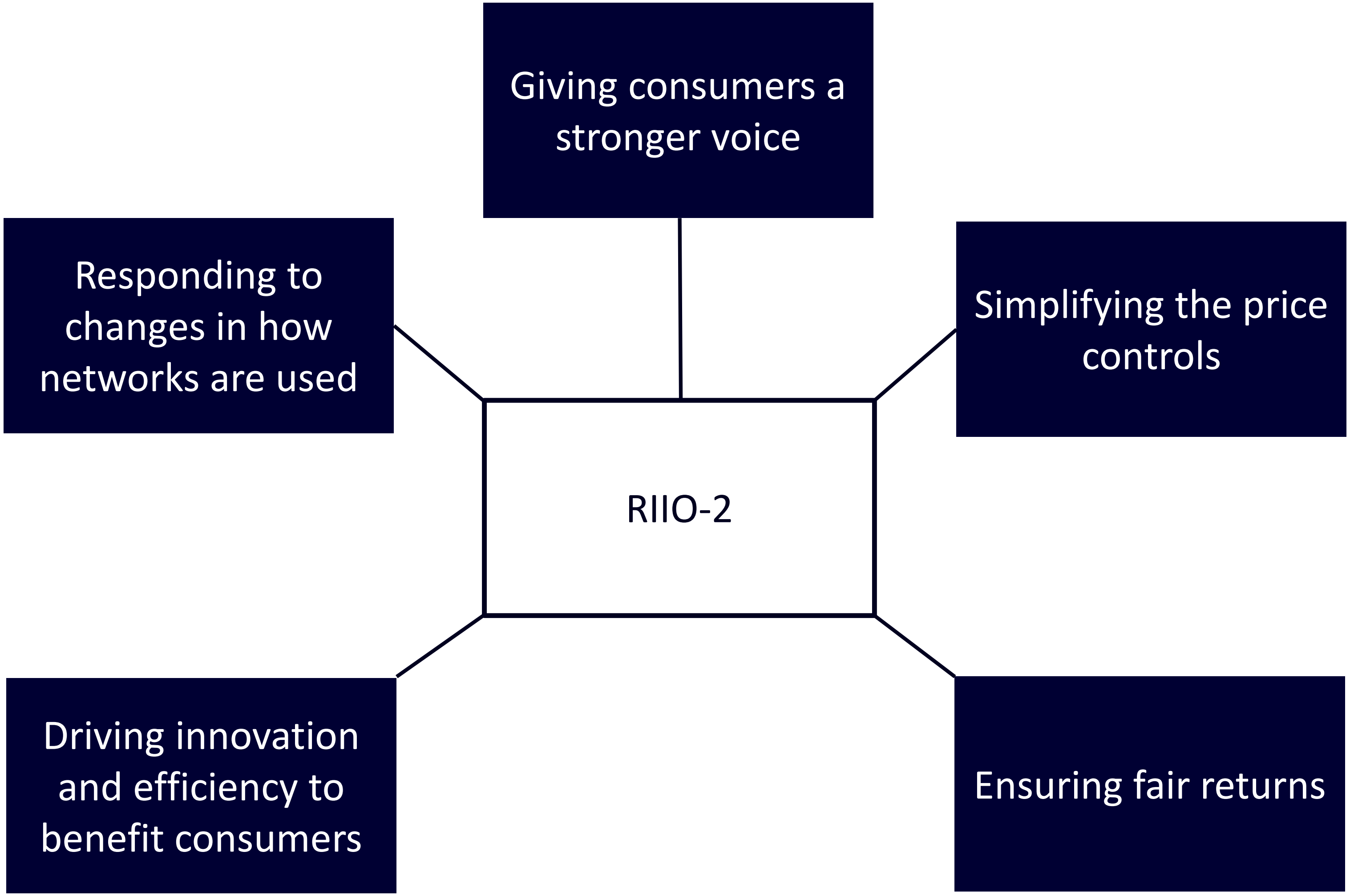
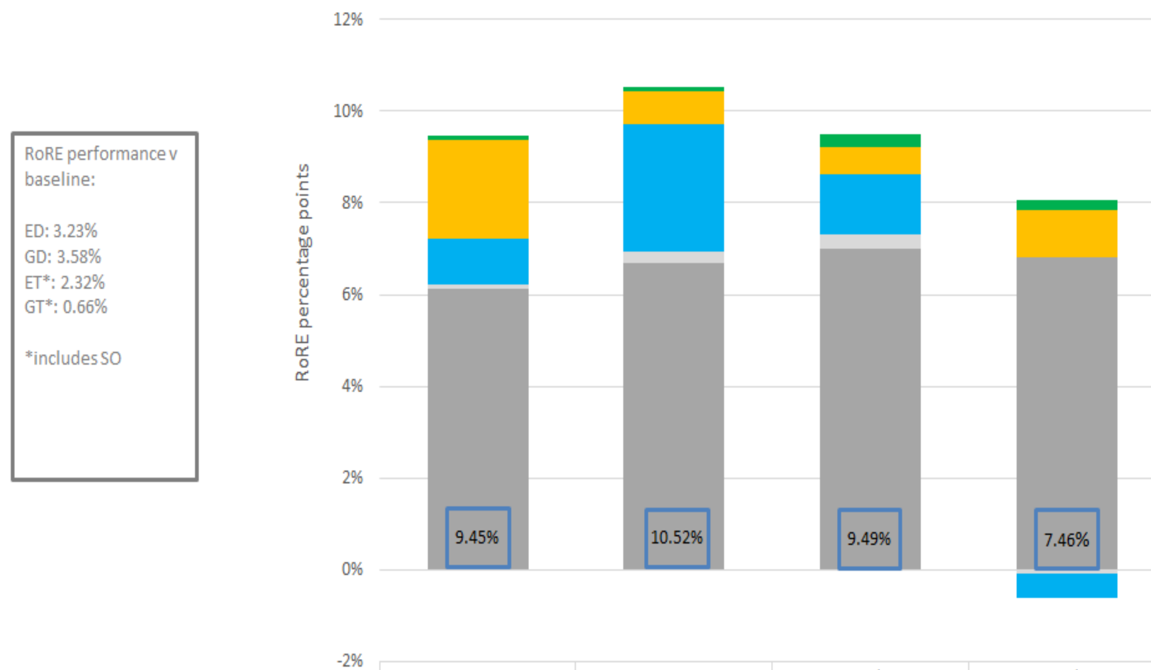
RIIO-2 at a glance



Lessons learnt from RIIO-1

- By and large, network companies are delivering well for customers
  - Increase in distribution connected generation
  - Increased reliability
  - Number and length of power cuts almost halved since 2001
  - Customer satisfaction at record levels
- Returns have been higher than expected – some of this has been delivered through genuine innovation and efficiency, but companies have also benefitted from risks that were outside their control
- Sharing mechanisms have benefitted customers and some network companies have made voluntary contributions
- RIIO-2 needs to build on RIIO-1, learn lessons, and address the balance of risk between network companies and consumers

8-year RoRE (2016/17) by sector



	ED	GD	ET*	GT*
Other	0.09%	0.08%	0.26%	0.23%
Performance against other incentives	2.15%	0.72%	0.62%	1.04%
Performance against Totex Incentive Mechanism	0.99%	2.78%	1.29%	-0.54%
Baseline: IQI	0.10%	0.24%	0.32%	-0.07%
Baseline: Cost of Equity	6.12%	6.70%	7.00%	6.80%

Source: Ofgem

Consumer voice, energy transition

- **Giving consumers a stronger voice**
  - Distribution
    - Each company to establish an independently chaired Customer Engagement Group
    - Group to challenge companies on how consumer needs and energy system changes are reflected in business plans
    - Group to consider proposals for improving output performance, cost efficiency, and strategic issues
  - Transmission
    - Companies to establish an independently chaired User Group to provide input and challenge the business plan
    - Focus to be on outputs, incentives, expenditure forecasts, uncertainty mechanisms, and capital project needs
  - Ofgem to establish a RIIO-2 Challenge Group covering all sectors to further scrutinise business plans
  - Enhanced stakeholder engagement will help us assess business plans and provide assurance
  - We will publish guidance later this month
- **Responding to changes in how networks are used**
  - Length of price control
    - Set RIIO-2 price controls over five year period
    - Consideration to a multi-track arrangement for some allowances where networks identify greater efficiencies
  - Whole system outcomes
    - No clear evidence that re-scheduling and aligning electricity price controls benefits consumers
    - Review areas that are likely to impact on whole system solutions as part of sector specific strategies
  - Separate electricity System Operator price control and consideration of a number of remuneration models
  - New investment needs to be economic, and subject to a higher burden of proof regarding need

Innovation, efficiency, simplification

- **Driving innovation and efficiency**
  - Innovation
    - Energy transition -> need for innovation
    - Committed to driving innovation in RIIO-2, and a transition of more innovation to business as usual
    - Consulting on (i) increased alignment of funding streams, (ii) greater co-ordination with public sector innovation funding, (iii) increased third party access to innovation funding
  - Competition
    - Extending the scope of competition in RIIO-2 could benefit consumers
    - Consulting on extending the new, separable and high value (>£100m) criteria across all network sectors
    - Develop models to deliver competition including both late and early stage
- **Simplifying the price controls**
  - Outputs
    - Outputs to be revisited at the sector level, and NOMs retained
    - Possibility of output delivery incentives for service quality improvements beyond the minimum standard
  - Cost allowances
    - Indexation of certain costs, use of volume drivers, extension of SWW approach
  - Information asymmetry
    - Benefits of retaining IQI are unclear; do we retain, but amend?
    - Fast-tracking has led to benefits for RIIO-ED1; do we retain for distribution only?
    - Is a single business plan incentive in distribution an alternative?

Fair returns & financeability

- **Cost of debt**
  - Current approach uses indexation (iBoxx) on a trailing average basis
    - CEPA estimate that the latest yield is over 300bp lower than expected at final proposals (RIIO-GD1/T1)
    - CEPA analysis suggests that network companies may outperform the cost of debt allowance by (i) outperforming on the day; (ii) using different debt tenor than assumed; (iii) raising finance when debt is cheaper
  - We plan to analyse other debt issues
    - Tenor vs. tenor of index
    - Inflation assumption to calculate real cost of debt (20-year assumption might be more appropriate)
    - Is the RIIO-1 allowance upwardly biased?
    - Debt transaction costs
    - Sensitivity of trailing averages to increases in market rates
    - Company specific factors including re-financings and business plans
  - We are considering at least three different approaches for RIIO-2
    - Re-calibrate the RIIO-1 indexation policy
    - Fixed allowance for existing debt plus indexation for new debt only
    - Pass-through allowance for debt

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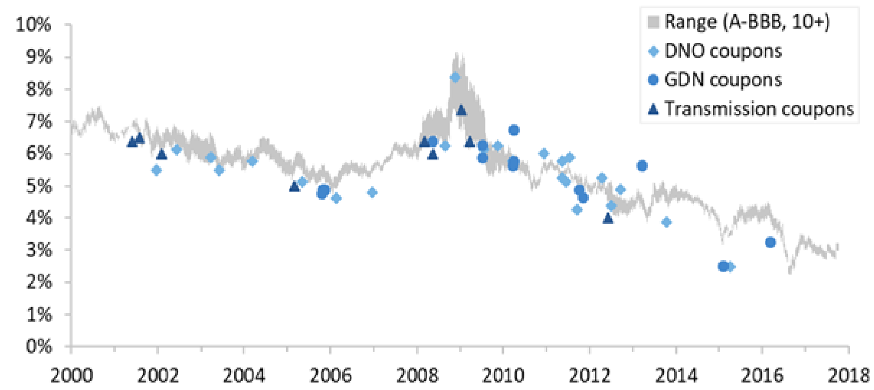
Fair returns & financeability

Out-turn cost of debt/forecast cost of debt for RIIO-GD1/T1

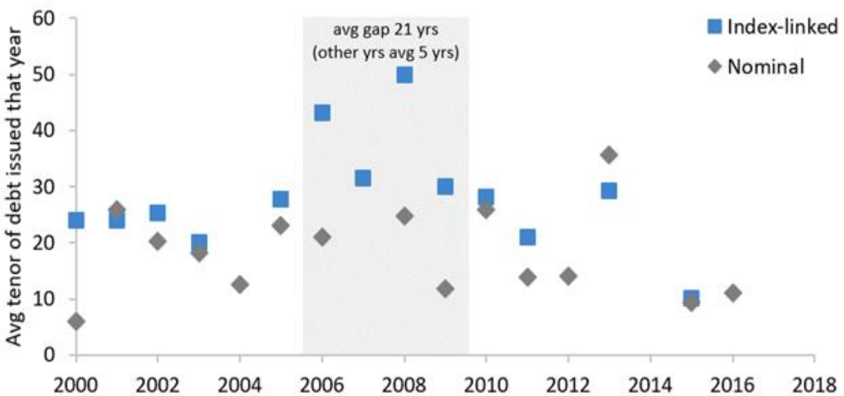
Source: CEPA analysis of iBoxx and Bloomberg data

Nominal coupons (10Yr +) vs. range of the iBoxx A and BBB indices



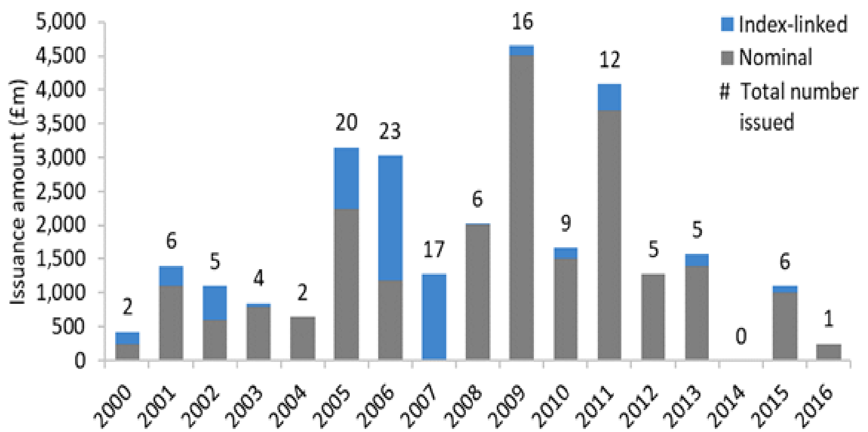
Source: CEPA analysis of iBoxx data

Average tenor of coupons raised by GB regulated energy companies



Source: CEPA analysis of iBoxx data

Regulated GB energy network issued index-linked and nominal coupons



Source: CEPA analysis of iBoxx data

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Fair returns & financeability

- **Cost of equity**
  - We propose to continue to use CAPM as the basis for estimating the cost of equity
    - Estimating the risk free rate using current yields on long-dated government debt, and considering indexing
    - Estimating the total market return (TMR) by considering historical long-run averages and forward looking approaches
    - Estimating forward looking betas by looking at historical correlations of regulated utility share prices
  - UKRN made 10 recommendations; we have accepted eight, and will consider two in further detail
  - CEPA have analysed the main component parts of the CAPM
    - Risk free rate - on current market evidence, a range of -1.8% to -0.6% (RPI real) can be assumed
    - Evidence points to a decline in the TMR over recent years
      - CEPA propose a TMR of 5.0% to 6.5%
      - Dividend growth model, where GDP is a common proxy for corporate dividend growth, indicates a TMR of 4.4% to 5.0%
    - CEPA recommend a beta range of 0.7-0.8, although UKRN propose a range of 0.3-0.5
    - CEPA suggest an indicative cost of equity of 3.1% to 5.1% RPI real if rates were being set today
  - Market evidence offers further support to a lower cost of equity
    - Market transaction premia suggest that expected returns offered by allowances > returns expected by investors
    - Competitive procurement of network assets (e.g. Thames Tideway & OFTOs)
  - CEPA suggest three options for indexing the cost of equity: 1. Index risk-free rate only; 2. Index risk-free rate with an offsetting adjustment for the equity risk premium; 3. Index risk-free rate and TMR
  - One way to index the cost of equity would be to treat it as a weighted average of the risk-free rate and the TMR, with the weight equal to the beta factor – TMR and beta would be fixed, and the risk-free rate indexed

We are <u>consulting on the methodology</u> - our current estimation is that the allowed equity return in RIIO-2 could be between 3% and 5%, should it be calculated based on today's conditions

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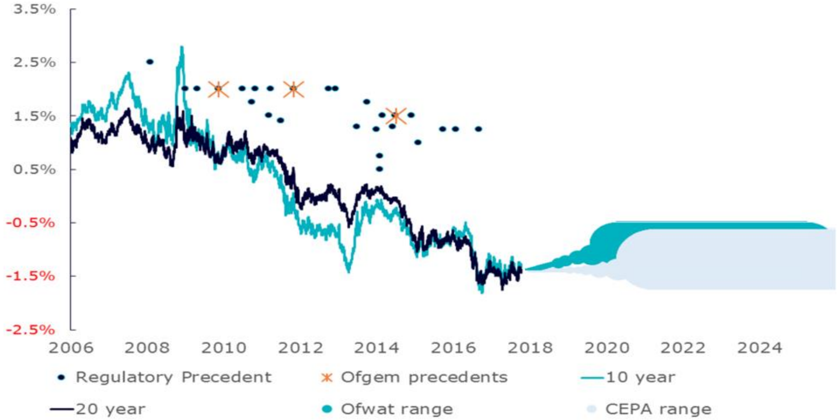
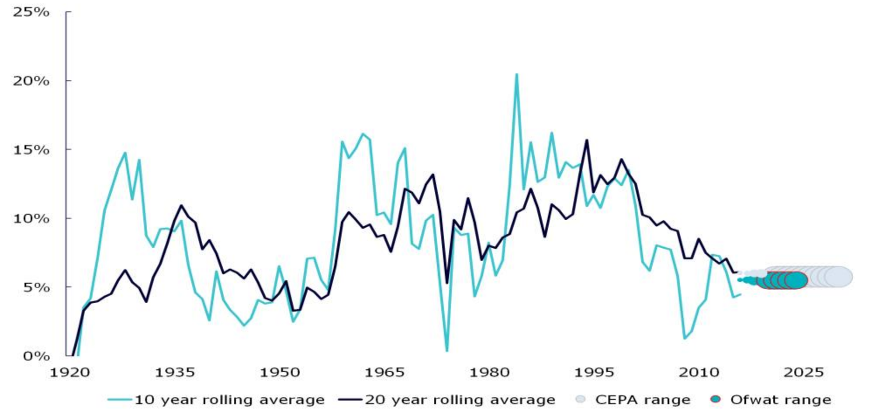
Fair returns & financeability

Risk-free rates (real RPI)



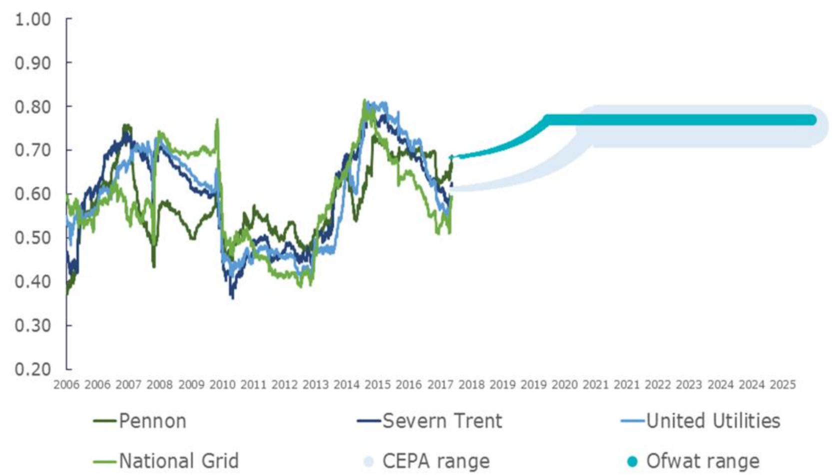
Source: Ofgem analysis of Bank of England data, regulatory decisions, Ofwat's final methodology, CEPA's report

TMR rolling averages from 1920 (Real RPI)



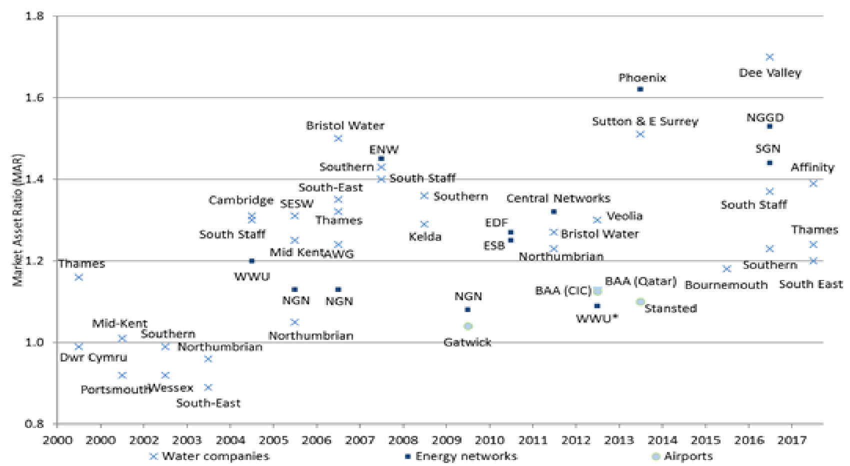
Source: Ofgem analysis of Dimson Marsh Staunton 2016 dataset, Ofwat's final methodology, CEPA's report

Raw equity betas using the Ordinary Least Squares technique



Source: Ofgem analysis of Bloomberg data, Ofwat's final methodology, CEPA's report

MAR determined using transaction values



Source: CEPA analysis of transaction evidence

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Fair returns & financeability

- **Financeability**
  - We have a duty to secure that efficient companies are able to finance their licensed activities
  - Key equity and credit metrics
    - Notional RAV/EBITDA
    - Regulated Equity/Regulated Earnings
    - Net Debt/RAV
    - PMICR: (Cash From Operations – Capex)/Interest
  - A lower baseline allowed return in RIIO-2 will make it more challenging to meet standard financeability metrics
  - Three high-level policy options for addressing financeability issues
    - Adopting a nominal return instead of a 'real' return calculation
    - Putting the onus on the companies
    - Introducing a licence-backed revenue floor
- **Other issues**
  - Taxation
  - A move away from RPI to CPI/CPIH
  - Some consideration of gearing, depreciation and asset lives, capitalisation rates

Fair returns & financeability

- **Fair returns**
  - Higher returns are justified when companies find new, more efficient ways of operating their networks
  - Some underspend is attributable to genuine efficiency and innovation, but some is because:
    - Input price inflation lower than forecast
    - Weaker economic conditions/milder winters
    - Re-profiled expenditure
    - Scope assumptions higher than actual
  - RIIO-1 contained some mitigation measures, but we intend to update and enhance in RIIO-2
    - Index where feasible
    - Link costs to delivery of outputs or volumes
    - Use uncertainty mechanisms to automatically adjust costs
    - Wait until we have more certainty where there is doubt over cost and scope of work
    - Revisit efficiency incentives to better reflect the balance of risks
  - Five options to ensure fair returns, but still retain benefits of an incentive based framework
    - Hard cap/floor
    - Discretionary adjustment
    - Constraining totex and output incentives
    - RoRE sharing factor
    - Anchoring returns

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Fair returns & financeability

Potential strengths/weaknesses of options to protect against higher than expected returns

	Hard cap/floor	Discretionary adjustment	Constraining totex and output incentives	RoRE Sharing Factor	Anchoring
Strengths	Complete mitigation against high returns at both the sector and company level. Companies will not be able to achieve a cost of equity above a certain point.	Mitigates against drivers of performance that we do not believe warrant additional profits.	Provides more protection against high returns in comparison to RIIO-1. When linked to information-revealing devices, it might provide an incentive to companies to improve quality of business plans.	When linked to information-revealing devices, it might provide an incentive to companies to improve quality of business plans. Combines and simplifies a number of framework elements. Extends protection to include all incentives.	Provides absolute assurance that a sector average RoRE would not exceed a cap. Might increase companies scrutiny on other companies' business plans.
Weaknesses	Eliminates incentives to deliver output improvements and find cost efficiencies when a RoRE cap is breached.	Requires us to define circumstances when we would make an adjustment. Unclear definition of reopening criteria might increase regulatory uncertainty.	The mechanism is not bullet proof to higher than expected returns.	The mechanism is not bullet proof to higher than expected returns.	Under certain circumstances, company returns can be affected by the performance of other companies in the sector and would not be solely based on their own performance. Differences in company size and/or activities may exacerbate the impact of high/low performance by other companies.

Source: Ofgem

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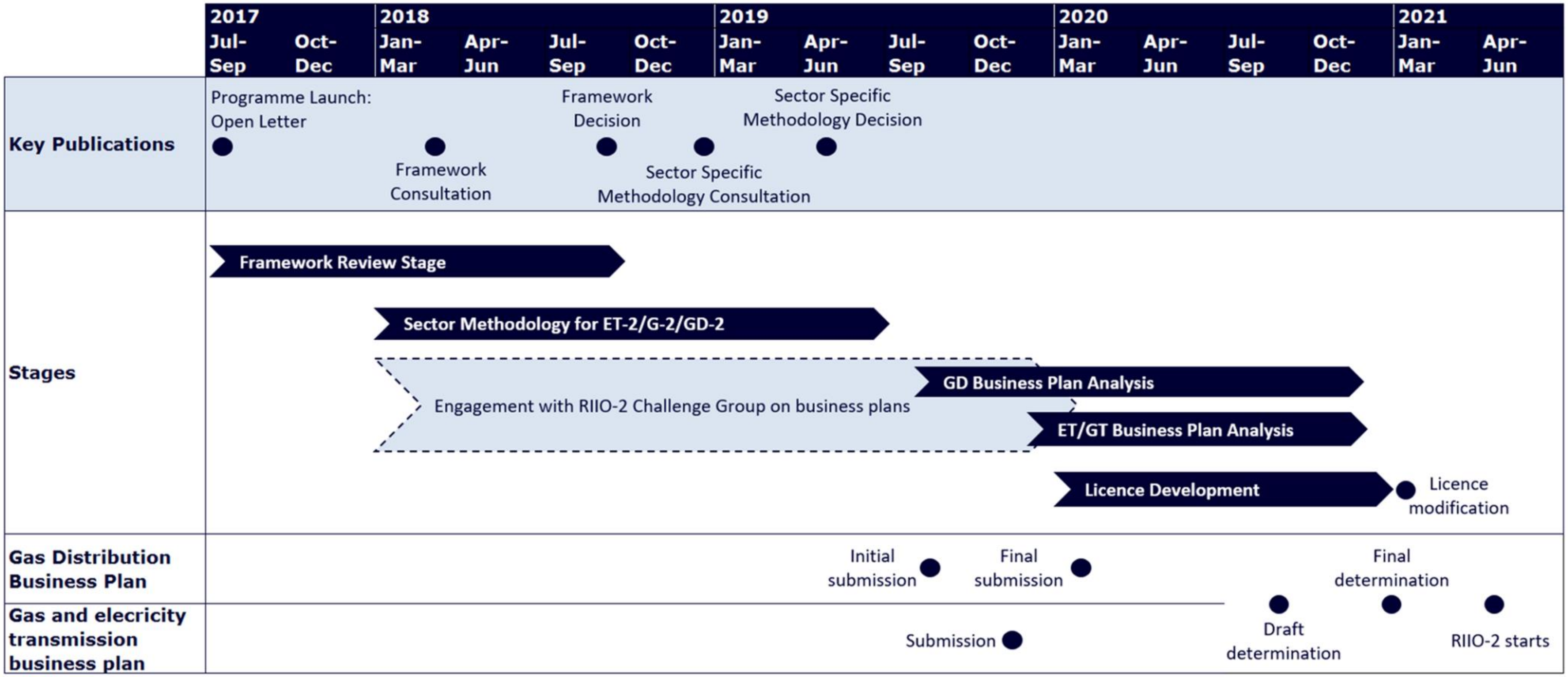
Next steps

RIIO-2 indicative timeline



Source: Ofgem

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Key takeaways

- We are facing a significant period of change in network usage
- RIIO-1 has worked well, but we have learnt lessons
- We will continue to use the incentive based RIIO framework to set price controls
- Higher returns are justified where these result from genuine innovation and efficiency, but we will continue to ensure that the regulatory framework remains fit for purpose
- This will be a tough price control for network companies, but those who deliver great customer service at lower cost will be rewarded
- An attractive environment for investors, but returns should reflect the low level of risk of a stable, predictable regulatory framework

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