



# Ofwat water resources working group

28 June 2016



	Agenda Item	Time
1	Introduction and background – Peter Hetherington	10:00am to 10:20am
2	Terms of reference – Peter Hetherington	10:20am to 10:30am
3	Water resources May document summary – Rob Cunningham, Peter Hetherington, Andrew Chesworth	10.30am to 12.15pm
4	Direct procurement for customers and its implications for water resources – Jacob Wood	12.15pm to 12.30pm
5	Lunch	12:30pm to 1.00pm
6	The boundary for the water resources price control – Ian Pemberton, David Young, Rob Lee	1.00pm to 2:00pm
7	Access pricing for bilateral markets in England – Mat Stalker	2:00pm to 3.00pm
8	Forward planning, actions and agenda for next meeting – Peter Hetherington	3.00pm to 3:45pm

# Introduction and background



The Water 2020 programme is about challenging ourselves to identify where (and how) we can change our approach to regulating water and sewerage services, to deliver:

- trust and confidence; and
- the UK and Welsh Government's legislative commitments

From a practical perspective this means:

- developing and implementing the upstream water resources and sludge markets in England
- developing and delivering an efficient and effective methodology for the 2019 price review
- supporting the development of retail competition for non-households; and
- understanding and implementing our resilience duty

**Outcomes focused: we focus on what matters to customers, the environment and society, now and in the future**

**Pro-market: we use our tools to align the interests of investors and companies with those of customers. We use market mechanisms to deliver benefits for everyone**

**Proportionate and targeted: we focus our regulatory work where it is most needed**

**Using all of our tools: we will use traditional and broader regulatory tools to shine a light on issues and provoke debate**



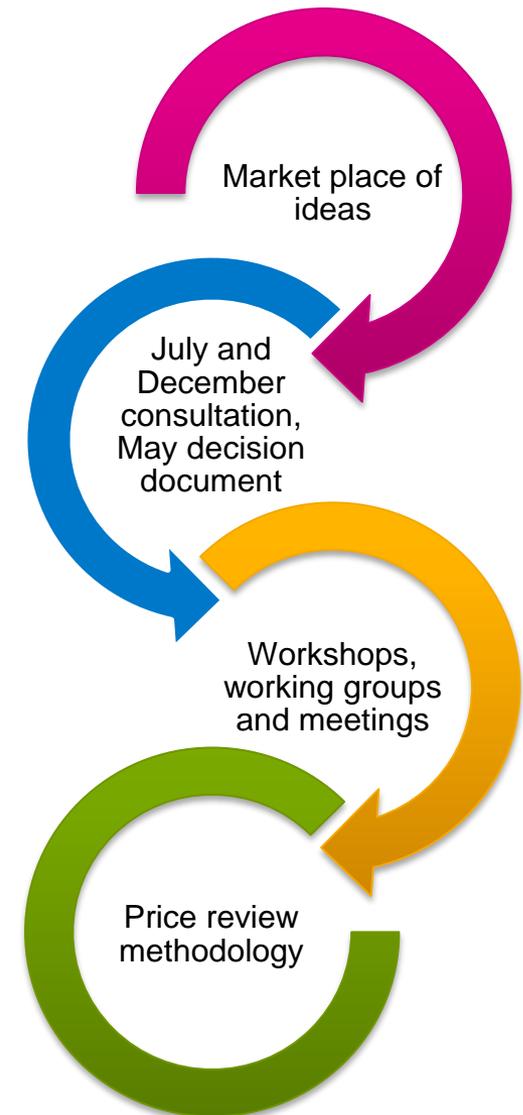
**Relationships focused: we want to see companies listen to and understand their customers and respond to their needs and requirements**

Market place of ideas helped us to move from blue sky thinking to solid proposals for water resources and sludge

We set out our case for change in July 2015, this was followed up by consultation in December 2015 and our decision document (with areas for consultation) in May 2016

Going forwards we will use workshops, working groups and meetings to build on our decisions and develop the detail for the methodology for water resources and sludge

The 2019 price review methodology will be published for consultation in July 2017 and the final methodology will be published by December 2017



# Our timetable for delivery of PR19

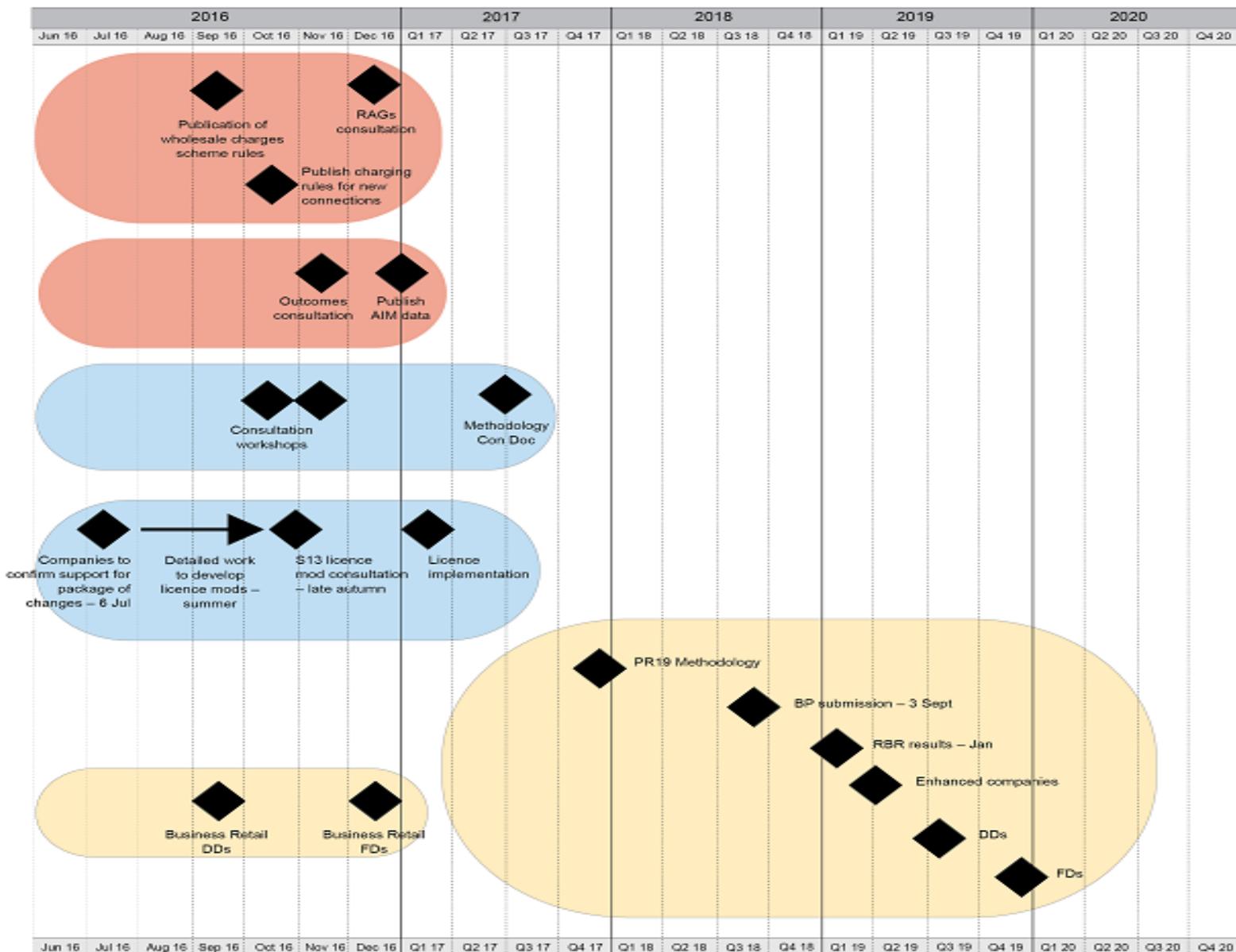
Charging and accounting separation

Outcomes and customer engagement

Design

Licensing

Implementation  
Business Retail



## Terms of reference

# Summary of the terms of reference

## The working group is ...

1

An open forum to enable constructive discussion

2

There to support the design and implementation of our decisions in the May document

3

A collaborative effort, with papers supplied and discussions facilitated by participants as well as Ofwat

4

Open to all relevant parties

5

Transparent, material from the working group will be published on the Ofwat website

5

Time limited, it will end in Spring 2017

## The working group is not ...

A decision making body

A forum for our May decisions to be challenged

A one way exercise with Ofwat leading all discussions and work

A closed shop

A black box

An ongoing commitment until bilateral market opening

The terms of reference are based on the sludge working group terms and will be circulated for comment and published on our website once agreed

## Water resources: May document summary

On 25 May 2016 we published our decision document “[Water 2020: our regulatory approach for water and wastewater services in England and Wales](#)”

**Question:** How many words did we publish that day?

1. 29,160 words?
2. 95,022 words?
3. 146,178 words?
4. 206,052 words?

- This was across 474 A4 pages
- Covering the main document, six appendices and one customer policy statement
- Based on an average reading speed of 200 words per minute, it would take just over 12 hours to read it end to end

# Context for the May document

## July 2015

- PR14 reflections and discussion paper
- Broad discussion of issues

## December 2015

- Regulatory framework consultation: Form and number of price controls, treatment of RCV, scope for markets, customer engagement, direct procurement for customers

## May 2016

- Decisions on regulatory framework – identify licence changes
- Consultation on next level of regulatory design

## October/November 2016

- Next level outcomes and markets
- Approach to cost of debt

## July to December 2016

- Licence changes
- S.13 consultations (Oct)

## July 2017

- Methodology consultation: outcomes, totex, risk and reward, retail controls, financeability and affordability

## December 2017

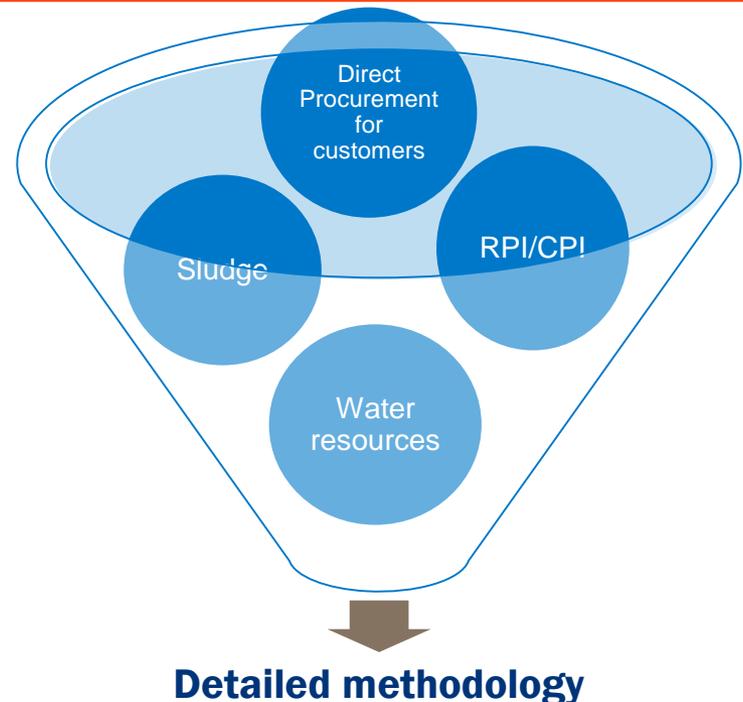
- Methodology statement: outcomes, totex, risk and reward, retail controls, financeability and affordability
- WACC range, RoRE range

## PR19 Delivery

- Risk-based review
- Draft determination
- Final determination

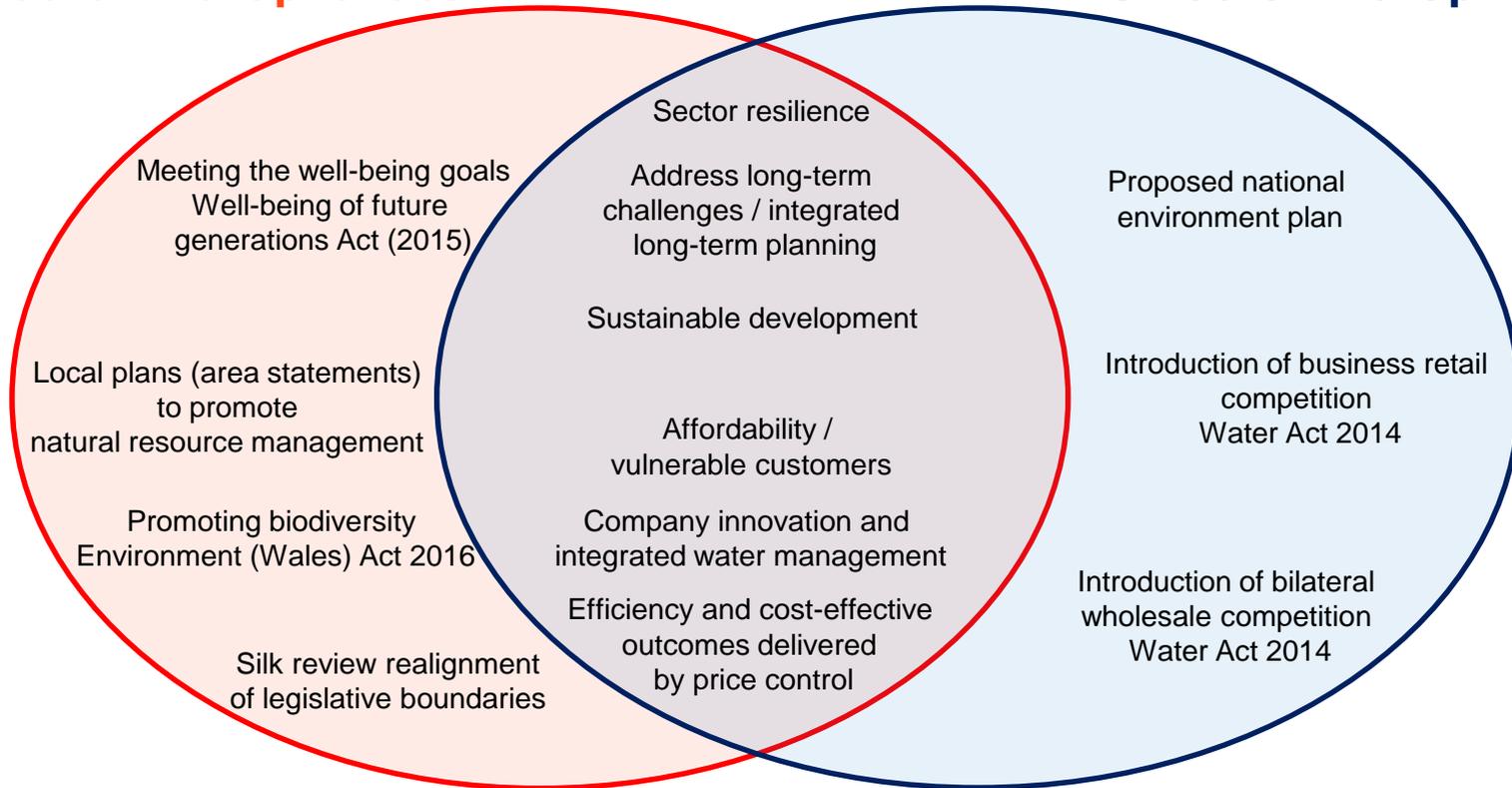
The May document was the next step along the path to PR19 delivery. The May document:

- **presented our decisions** on our future regulatory approach for PR19 and beyond;
- **seeks views on our areas for further consultation** which we can subsequently reflect on as we further refine our thinking; and
- **identifies how we will implement our decisions**, including whether and to what extent changes are required to company licences to support these reforms.



## Welsh Government priorities

## UK Government priorities



We have challenged ourselves to ask: given the Welsh government and UK government priorities, is the same approach best for England and for Wales?

We have concluded that our approach to setting price controls and promoting markets is appropriate in both jurisdictions. We are exploring areas where we could focus on differing priorities e.g. in the risk based review.



**Changing Demand** through population growth, climate change, demographic change and the need for improved resilience

**Add Value** by stimulating conversations between sellers and potential buyers who have supply-demand issues

**Bilateral Market for business customers in England** in line with the Water Act 2014 supported by an appropriate access pricing framework

**Achieve Secure Supplies** that are environmentally sustainable, resilient and affordable

Photo © Jinx!

## A number of underlying issues/barriers were identified

**Asymmetric information** – new market participants face search costs and information barriers relative to incumbents, and there is a perceived lack of transparency in the WRMP decision-making process

**Cost structure** – new water resources tend to be more costly than existing ones and incumbents' historic costs reflect a substantial RCV discount, leading to a large difference between historic and incremental costs

**Culture and practice** – low levels of trading may have fostered a lack of interest in trading over time, and this may be reinforced by a regulatory framework that is perceived to favour owning supplies

**Legislation** – a number of features of the current market have been defined by legislation, such as the pre-Water Act 2014 requirements on access pricing and licensing

**Regulatory incentives** – historically evidence suggests there has been a capex bias in investment decisions. Incentives for trading and/or interconnection may be insufficient and RCV protection may also introduce distortions

**Wider policy issues** – e.g., concerns over security of supply, perceived risks to drinking water quality and uncertainty over abstraction licence reform. These wider issues may reinforce cultural barriers to trading

## In practice, these issues lead to the following problems

- 1 Incumbents biased towards within-company solutions** rather than markets/third party providers to meet their water resource needs
- 2 Potential third parties may be deterred from bidding markets**, because of a lack of information, high transaction costs, an opaque WRMP process, and perceived lack of incumbent interest in trading
- 3 Entry under bilateral market model not viable**, e.g. because the existing access pricing regime makes it difficult to compete with incumbent providers, even when their costs are higher or similar
- 4 Market entry may not maximise value to customers**, given the structure of price controls and approach to the RCV

## Our policy solutions will help to address these problems

**Information platform and bidding framework** to support bidding in by third party water resource providers through WRMPs  
- *Helps to address problems 1, 2*

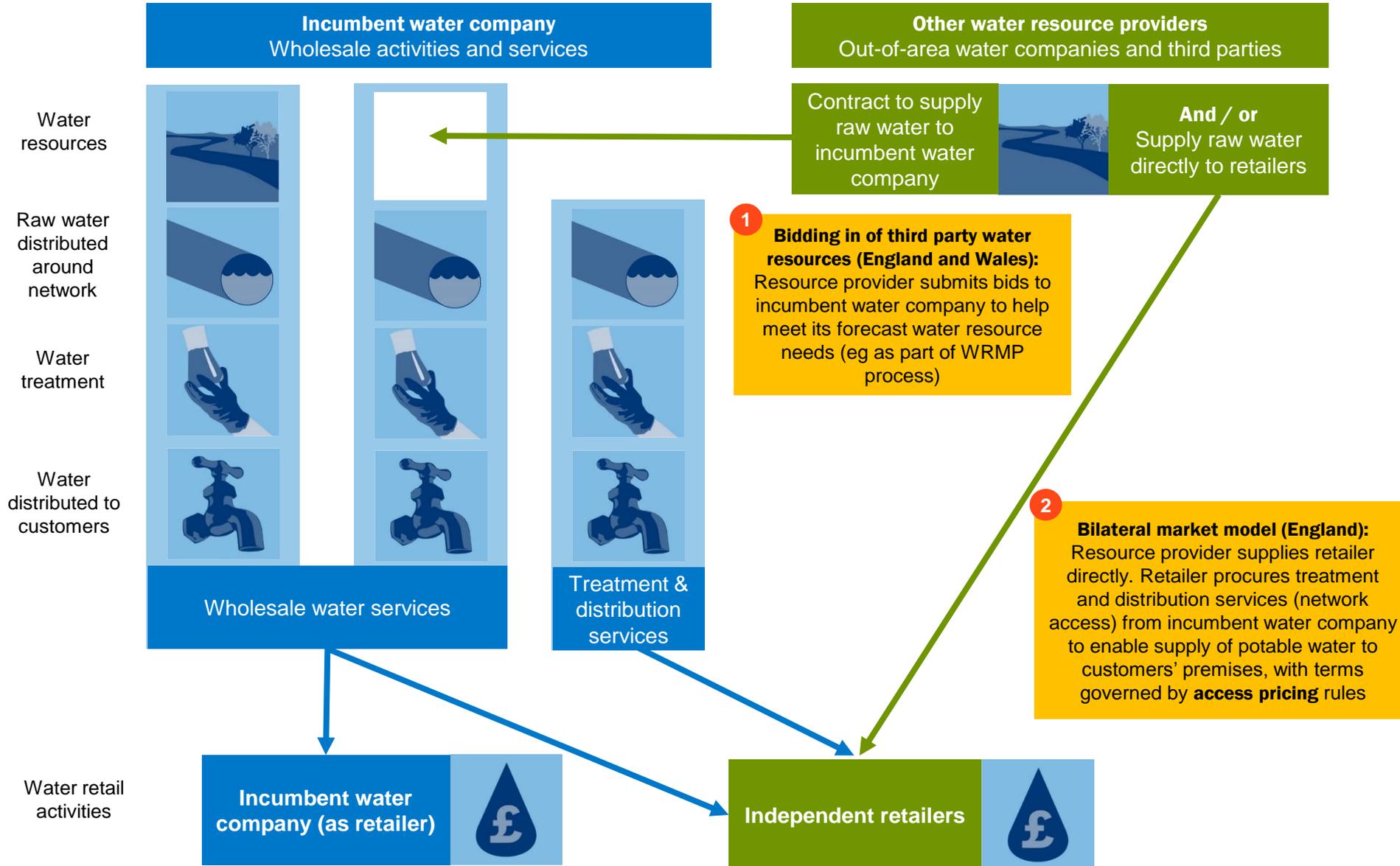
**New access pricing framework** to support development of bilateral markets in England  
- *Helps to address problems 3, 4*

**Separate binding water resources price control**, based on unfocused RCV allocation  
- *Helps to address problems 3, 4*

**A market and regulatory model that does not create new sources of risk for pre-2020 RCV**, with more limited RCV protection after 2020  
- *Helps to address problems 3, 4*

**Wider options to support market development**, we intend to review the effectiveness of existing water trading incentives and treatment of cross-company interconnection capacity as part of PR19  
- *Helps to address problems 1 – 4*

# We see two alternative market models for water resources



	<b>Do Nothing</b>	<b>Preferred Package</b>
<b>Achieving our objectives</b>	<p>Not consistent with pro-market objectives (although revised access pricing framework in England will help to support bilateral markets).</p> <p>Does not expand existing regulatory tool set or sharpen incentives on outcomes and delivery.</p> <p>Delivers predictability but does not provide framework to meet future challenges and opportunities.</p>	<p>Promotes markets in a proportionate and targeted way by focusing on areas with greatest potential gains.</p> <p>Incentivises focus on outcomes and delivery by revealing information and providing upside opportunity to efficient providers and their customers.</p> <p>Uses a broad range of tools.</p> <p>Delivers predictability in transition to market-based arrangements by protecting historic RCV.</p>
<b>Addressing known problems</b>	<p>Does not address identified problems with current arrangements, which have not been successful in promoting incumbent water trading and new entry.</p>	<p>Tailored to address identified barriers to greater use of markets in water resources.</p> <p>Helps to address environmental challenges through more efficient development and use of resources.</p> <p>Improves system resilience by encouraging greater connectivity and increased third party participation.</p> <p>Should deliver efficiency savings which will flow through to lower customer bills.</p>
<b>Practicality</b>	<p>Low cost approach which avoids creating additional regulatory burden.</p> <p>Revised access pricing regime in England still required in light of Water Act 2014 changes.</p>	<p>Increased regulatory burden due to separate price controls and associated RCV allocation, but our approach avoids need to undertake full asset valuation exercise.</p> <p>Licence changes required.</p> <p>Some additional costs associated with market information platform but these have been minimised through simplified design.</p>



Quantified benefits of our approach (NPV over 30 years)*	
Increased water trading between incumbents	£416m to £810m
Efficiency gains for new investment	£100m to £202m
Wider efficiency gains for existing capacity	£81m to £242m
<b>Total scope of quantified benefits*</b>	<b>£597m to £1,254m</b>
<b>England</b>	<b>£588m to £1,232m</b>
<b>Wales</b>	<b>£9m to £22m</b>

Quantified costs of our approach (NPV over 30 years)*	
Costs to industry	£18m to £28m
Regulatory costs	£4.4m to £14m
<b>Total scope of quantified costs*</b>	<b>£23m to £42m</b>
<b>England</b>	<b>£20m to £37m</b>
<b>Wales</b>	<b>£2.7m to £4.9m</b>

\* Numbers may not add due to rounding

Estimated benefits are taken from Ofwat internal modelling. Sources for data and key modelling assumptions included WRMPs, the Water Act 2014 impact assessment, the Cave Review, Frontier Economics/South East Water paper submitted to Marketplace of Ideas, and academic literature.

Estimated costs are taken from Ofwat analysis of information submitted by water companies in response to our February 2016 information request.

Further detail on our impact assessment analysis can be found in Chapter 5 and Appendix 3 of the [May 2016 decision document](#).

We have strong confidence that benefits will be significantly greater than the costs  
 The majority of benefits felt in England, but the benefit cost ratio is positive in both England and Wales

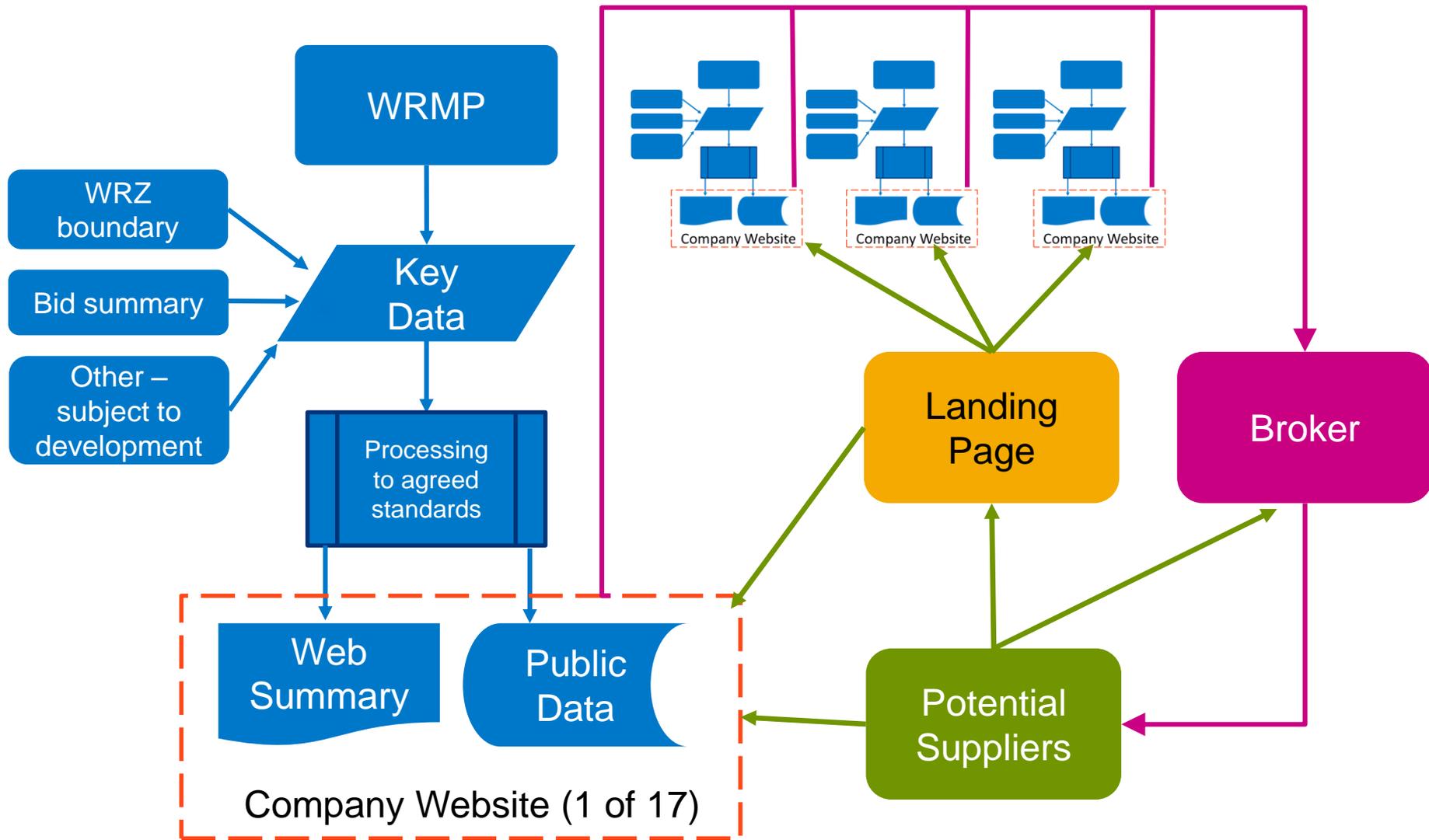


<p><b>December consultation proposal</b></p>	<ul style="list-style-type: none"> <li>• Day-to-day water resource system operation would remain with incumbent companies and market entrants with the bidding market facilitating out-of-area coordination</li> <li>• We will consider examining the effectiveness of system operation following experience gained from the emerging water resource market in the next price control period</li> </ul>
<p><b>Stakeholder feedback</b></p>	<ul style="list-style-type: none"> <li>• We received few comments on our proposed approach and, of those we did receive, most were supportive of the status quo</li> <li>• It was suggested that more consideration should be given to system operation for cross-company transfers, particularly in times of drought</li> </ul>
<p><b>Further review and analysis</b></p>	<ul style="list-style-type: none"> <li>• While we agree there may be a case for greater cross-company transfer we do not believe this requires a new approach to system operation</li> <li>• We note that transfers are planned in the context of WRMPs, business plans and drought planning obligations</li> <li>• The Environment Agency has set out the wider legislative and policy framework for drought management in England</li> </ul>
<p><b>Revised policy decision</b></p>	<ul style="list-style-type: none"> <li>• We will maintain the status quo - system operation functions will remain with incumbent companies and other market participants</li> <li>• We may consider system operation if evidence of problems/inefficiency emerge over the next price control period but we note that the legal framework that supports drought response sits outside the scope of our regulatory work</li> </ul>



<p><b>December consultation proposal</b></p>	<ul style="list-style-type: none"> <li>• Market information database, managed by a third-party organisation, which would also provide a platform for bid assessment on an ongoing basis</li> <li>• Principles-based approach to bid assessment, with potential recourse to Ofwat</li> </ul>
<p><b>Stakeholder feedback</b></p>	<ul style="list-style-type: none"> <li>• Stakeholders were generally supportive on the overall policy proposal to improve information provision and encourage trading but some raised concerns including             <ul style="list-style-type: none"> <li>○ Risks to resilience, water quality and environmental impact</li> <li>○ Cost and complexity of the proposed design</li> <li>○ The sharing of sensitive data such as cost information and intellectual property with value</li> <li>○ The model of third party design, which most supported but some saw as overly complex</li> <li>○ The need for a bid assessment framework given existing legislation and controls to ensure fairness</li> <li>○ Alignment with WRMP19</li> </ul> </li> </ul>
<p><b>Further review and analysis</b></p>	<ul style="list-style-type: none"> <li>• The input we have received underlines the importance of taking a targeted and proportionate approach to information provision</li> <li>• In the first instance our focus will be on stimulating conversations between potential suppliers and buyers rather than setting out all information required to determine a trade</li> <li>• This puts greater emphasis on commercial negotiations and means complex issues such as resilience, water quality and environmental risk will be determined off-line</li> <li>• International experience suggests that third-party brokers may play a significant role in aggregating and analysing data to identify opportunities</li> </ul>
<p><b>Revised policy decision</b></p>	<ul style="list-style-type: none"> <li>• We will require incumbent companies to make data available on supply-demand deficits and water resource costs in a consistent format on their websites with Ofwat providing a signposting page</li> <li>• We will require companies to allow reasonable use of published information</li> <li>• We will require companies to publish a bid assessment framework setting out policies and process for assessing bids to supply water resource or demand management/leakage services</li> <li>• These changes will be supported by a license modification</li> </ul>

The market information platform will be a key area of discussion for the second working group





<p><b>December consultation proposal</b></p>	<ul style="list-style-type: none"> <li>• We identified at a high level a range of potential options to support markets namely:                             <ul style="list-style-type: none"> <li>○ maintaining / enhancing existing water trading incentives</li> <li>○ mechanisms for funding interconnectors</li> <li>○ a standardised contract template to reduce transaction costs</li> <li>○ clearer, non-discriminatory rules for restricting or stopping supply, particularly where this affects cross-border supply; and</li> <li>○ case studies and worked examples to encourage smarter contracting and hedging</li> </ul> </li> </ul>
<p><b>Stakeholder feedback</b></p>	<ul style="list-style-type: none"> <li>• We received a significant number of response to these proposals – most of which supported further measures</li> <li>• But there was no consensus about the best option(s) to take forward</li> </ul>
<p><b>Further review and analysis</b></p>	<ul style="list-style-type: none"> <li>• The responses we received have helped us prioritise revision of the water trading incentive and potential interconnector funding mechanisms for further analysis and engagement</li> <li>• While model contracts and case studies could potentially be beneficial there was little demand from respondents so these are considered low priority</li> <li>• On ensuring non-discrimination - we consider that companies should take primary responsibility through contractual negotiations.</li> <li>• Our plan to make license modifications in consequence of the 2014 Water Act duty on Ofwat to prevent undue discrimination and undue preference may have a bearing on future contracts</li> </ul>
<p><b>Revised policy decision</b></p>	<ul style="list-style-type: none"> <li>• We will engage stakeholders on water trading incentives and interconnector funding mechanisms as we develop the final PR19 methodology</li> <li>• We will not develop model contracts or case studies although we may revisit this should demand grow</li> <li>• We will not introduce any specific non-discriminatory rules for restricting or stopping supply</li> </ul>



<p><b>December consultation proposal</b></p>	<p>For networks of water companies based wholly or mainly in England, the access pricing framework would involve two main elements:</p> <ul style="list-style-type: none"> <li>• <b>Cost-based charge for network plus services</b>, split into different elements (e.g. raw/treated water distribution, treatment services) based on accounting separation data</li> <li>• <b>Compensation payment</b> (or offset mechanism), based on the difference between the incumbent's estimated incremental cost of new water resources and its average cost of water resources – this could use AIC data from WRMPs initially</li> </ul>
<p><b>Stakeholder feedback</b></p>	<p>Most stakeholders were broadly supportive or neutral. There were concerns around complexity and a number of comments on specific design issues and requests for further clarity on how the approach would work in practice</p>
<p><b>Further review and analysis</b></p>	<p>We have a duty to issue new access pricing rules under the Water Act 2014, so do nothing is not an option</p> <p>We accept that the compensation payment element adds complexity to the arrangements, but without this the framework is unlikely to support efficient entry</p>
<p><b>Revised policy decision</b></p>	<p>We will develop an access pricing framework for English water undertakers that is in line with our proposals set out in December (i.e. a cost-based network plus charge and a compensation payment)</p> <p>We will draw on cost measures in WRMPs (particularly the AIC) as a starting point, but these will need to be adapted for access pricing and price control purposes</p> <p>The compensation payment may need to vary by WRZ (or even at a more granular level in some cases), but the network plus charge will not be required to vary, unless needed for consistency with standard wholesale tariffs</p> <p>We intend to create explicit structural links between the methodology for access pricing (particularly the compensation payment) and the separate water resources price control</p> <p>Developing new access pricing rules will be a phased process and we welcome further engagement with market participants as we move forward</p>

Access pricing will be discussed separately in the afternoon



<p><b>December consultation proposal</b></p>	<p>Separate binding price control for water resources, applying to all companies in E&amp;W</p> <p>Total revenue control based on return on RCV, with RCV allocated on an unfocused basis</p>
<p><b>Stakeholder feedback</b></p>	<p>Respondents evenly split between agree / disagree</p> <p>Supporters saw that it would introduce information transparency and enable better targeted incentives</p> <p>Issues raised by those who disagreed with our proposals included, among others:</p> <ul style="list-style-type: none"> <li>• Not necessary to achieve objectives</li> <li>• Added complexity, leading to compliance costs and regulatory burden</li> <li>• Potential for distortions and poor investment decisions</li> <li>• Boundary issues in designing the control</li> <li>• Interactions between price control and WRMP process</li> </ul>
<p><b>Further review and analysis</b></p>	<p>To inform our decisions we undertook detailed further analysis on the case for the control and how it should work, some of these key considerations are discussed in the next few slides</p>
<p><b>Revised policy decision</b></p>	<p>Separate binding price control for water resources, applying to all companies in E&amp;W</p> <p>Total revenue control, based on unfocused RCV allocation, with an explicit within-period adjustment mechanism that depends on scale of bilateral market entry</p> <p>Duration five years (in line with network plus)</p> <p>Modification will be needed to licence condition B</p> <p>We intend to follow a similar approach to the existing retail price control condition introduced at PR14, with the detailed form of control specified outside the licence via the price control methodology</p>

The boundary for the separate price control is a topic for discussion this afternoon



Existing price control framework has two limitations for market development:

- Transfers risks of competition from incumbent water companies to customers
- May provide opportunities for cross-subsidy, giving incumbents an advantage over third parties

Particularly important with respect to bilateral market entry in England – but benefits of separate price control go beyond bilateral markets:

- Improves information transparency and assists with cost allocation and reporting for water trading
- Assists with developing better targeted regulatory incentives and increasing focus on water resources

Some of the alternatives to a separate binding price control for water resources are set out on the next slide



<p><b>Alternative 1 – non-binding price control</b></p>	<p>A non-binding control would bring many of the same administrative costs (six out of nine respondents to our February information request stated they expected costs to be similar under binding vs non-binding, e.g. because data would still need to be allocated and audited)</p> <p><b>However, being non-binding it would offer less protection against cross-subsidy concerns and transfer of risk to consumers</b></p>
<p><b>Alternative 2 – separate binding control covering water resources, raw water distribution, storage and treatment</b></p>	<p>Could be more straightforward to draw boundary in this way, but outside scope of proposals</p> <p>Some third parties may have both water resources and treatment facilities, and scope of competitive activities could include treatment</p> <p>However we do not think it would be proportionate to include all these activities in a separate control at this stage of market development</p>
<p><b>Alternative 3 – single wholesale price control</b></p>	<p>As noted above, single control does not fit well with development of markets</p> <p>Might be possible to maintain a single control but change aspects of its design and operation (e.g. related to financial incentives and risk sharing) to align better with markets – but we consider this approach inferior to a separate control because:</p> <ul style="list-style-type: none"> <li>• changing incentives across the whole value chain could lead to a disproportionate increase in risk and financing costs</li> <li>• more difficult and costly to tailor price control arrangements for water resources to align with market development</li> <li>• less clarity and information transparency vs separate control</li> <li>• less effective in tackling risk of cross-subsidy</li> </ul>
<p><b>Alternative 4 – remove price control regulation from water resources</b></p>	<p>Do not consider this to be a viable option, as market entry unlikely to be a sufficient constraint on incumbents – particularly in relation to existing capacity, given industry cost structure and the RCV discount</p>

A separate binding price control is the best option to meet our objectives



Sum of

1. Fixed element for pre-2020 capacity

Fixed revenue element = PAYG (fast money) + Run-off + WACC x RCV  
(for pre-2020 capacity)

2. Variable element for post-2020 new capacity

Variable revenue element = PAYG (fast money) + Run-off + WACC x RCV  
(for post-2020 capacity) - **within-period adjustment factor** for bilateral  
market entry

The **adjustment factor** reflects:

- Volume differential – extent to which customer demand is higher or lower than expected at the price review due to bilateral market entry
- Unit cost measure – annualised unit cost of the post-2020 new capacity, applied to the volume differential measure to calculate the financial adjustment factor to apply to the water resources control.

In this example and on the next slide we assume there is no utilisation risk relating to market-wide demand



	£m annualised cost	Capacity MI/d	Annualised unit cost £m/MI/d
PR19 Allowance resource capacity	1.00	10	0.10
Bilateral market entry		2	
Revenue adjustment (annualised)			0.20

- PR19 determination includes a revenue allowance of £1 million per year for additional water resource capacity from 1 April 2020
- This is calculated on the assumption that additional capacity of 10 MI/day is needed to meet demand (taking account of peaks and headroom)
- If it turns out that in 2024/25 only 8 MI/day of additional capacity is needed from the incumbent, because of the transfer of some customer demand to third parties, then a downward adjustment of £200,000 would apply to the 2024/25 revenue allowance (2 MI/day at a unit cost of £100,000 per MI/day)
- if the reduction in demand relative to forecast was attributable to lower market-wide demand, rather than to greater bilateral market entry than expected, then no adjustment would apply

Further work required on:

- precise operation of the mechanism for the adjustment factor
- measure of capacity for the purposes of the assessment of utilisation risk: and
- how to distinguish between variations in the incumbent's demand driven by bilateral market entry and variations driven by market-wide demand



<b>Alternative 1: Total revenue control without any within-period adjustment</b>	<ul style="list-style-type: none"><li>• May achieve a similar financial effect, with adjustments related to bilateral entry made in subsequent PR periods</li><li>• But we consider that a within-period adjustment is more transparent and brings the design of the adjustment to the foreground rather than the background.</li></ul>
<b>Alternative 2: Average revenue control</b>	<ul style="list-style-type: none"><li>• Under this approach, the price control would be based on volume measures (e.g. average revenue per cubic metre of water supplied)</li><li>• This could expose incumbents to considerably greater financial risk, e.g. full exposure to variations in aggregate demand</li><li>• Not proportionate given likely scale of bilateral entry in near term, and would reduce transparency with respect to regulatory protection for pre-2020 RCV</li></ul>
<b>Alternative 3: Formal caps on prices or tariffs</b>	<ul style="list-style-type: none"><li>• Would present significant implementation challenges given companies do not currently calculate separate prices on this basis</li><li>• Difficult to combine with our policy on regulatory protection for pre-2020 RCV</li></ul>

A total revenue control with an explicit within-period adjustment factor is the best option to meet our objectives



<p><b>December consultation proposal</b></p>	<ul style="list-style-type: none"> <li>• RCV allocation is required to: (1) Ensure a level playing field within water resources; (2) Ensure a level playing field in relation to wider markets; (3) Maintain consistency between charges and cost recovery</li> <li>• An unfocused approach would be the most appropriate methodology for the RCV allocation to water resources</li> </ul>
<p><b>Stakeholder feedback</b></p>	<ul style="list-style-type: none"> <li>• Main challenges were from companies:             <ul style="list-style-type: none"> <li>○ RCV allocation is not necessary to achieve our objectives</li> <li>○ RCV allocation would be unnecessarily complex and introduce risk/uncertainty</li> <li>○ Consequences of RCV Allocation need to be fully understood</li> </ul> </li> </ul>
<p><b>Further review and analysis</b></p>	<ul style="list-style-type: none"> <li>• We confirm that the pre-2020 legacy RCV will stay within the appointed water company. We are not proposing any formal business separation of water resources or allocation of the RCV to different legal entities</li> <li>• Various issues raised in considering how allocation should be made. Preference for each company to have greater ownership and responsibility for how its historical RCV is allocated between water resources and network plus</li> </ul>
<p><b>Revised policy decision</b></p>	<ul style="list-style-type: none"> <li>• Each company will need to develop and justify an appropriate allocation for submission to Ofwat for review</li> <li>• We will issue guidance in late 2016 and expect allocations to be submitted in 2017, to be finalised as part of PR19</li> <li>• We expect companies to understand the implications of the allocation for wholesale tariff structures</li> </ul>



<p><b>December consultation proposal</b></p>	<ul style="list-style-type: none"> <li>• We proposed to extend our protection of past, efficiently-incurred investments included in the RCV, up to 31 March 2020. Beyond 31 March 2020, investment in water resources (and sludge) should be incurred ‘at risk’</li> </ul>
<p><b>Stakeholder feedback</b></p>	<ul style="list-style-type: none"> <li>• There was strong agreement with our proposal to protect efficiently-incurred investment included in the RCV up to 31 March 2020. Most respondents who commented welcomed our commitment on this issue</li> <li>• There was less support for our view that the risk of stranded assets was very low in the 2020-25 period</li> </ul>
<p><b>Further review and analysis</b></p>	<ul style="list-style-type: none"> <li>• Any new risk exposure can be targeted on incremental investment to ensure that efficiently-incurred RCV at the start of the PR19 price control is not put at risk</li> <li>• As an additional safeguard for water resources, we will provide scope for companies to propose revisions to the allocation of the RCV between network plus and water resources at PR24, if the allocation at PR19 does not provide an appropriate allocation between the controls – and if there are compelling reasons</li> </ul>
<p><b>Revised policy decision</b></p>	<ul style="list-style-type: none"> <li>• Water company investment, or additions to the RCV in water resources from 1 April 2020, would not have the same degree of regulatory protection. There will be some explicit utilisation risk for new water resource capacity from 1 April 2020 onwards, and we are now consulting on the form that this should take</li> </ul>



Sources of risk affecting post-2020 investment		
Type of risk	Rationale	W2020 comment on risk
Utilisation risk from bilateral market entry	Customers should not be expected to provide protection to incumbent water companies against the risks of bilateral market entry	<p>Extent of bilateral market entry likely to be small relative to overall capacity and pace of market development</p> <p>Scope for upside or downside – reforms do not necessarily require a higher cost of capital, although from a theoretical perspective, could impact on the balance of debt / equity finance</p>
Utilisation risk relating to market-wide demand	Allocation of utilisation risk to incumbents where it relates to market wide demand (factors include population growth, household consumption, industrial demand, weather) avoids distorting incentives associated with the provision of new water resources	<p>Some risks e.g. weather, per capita consumption unlikely to be strongly correlated with equity markets, others e.g. changes in industrial demand could increase the cost of capital</p> <p>In some circumstances, it may be appropriate for companies to propose new investment that would expose them to the risk of market demand when developing new capacity. We would consider these on a case-by-case basis</p>

We are consulting on the form utilisation risk should take (see next slide)



- On market-wide demand risk, we have identified three options on which we are seeking views from stakeholders:
  - Option 1: Incumbent water companies could be fully exposed to market-wide utilisation risk in relation to post-2020 water resource capacity;
  - Option 2: Companies could be fully protected by customers (through the price control framework) against market-wide utilisation risk in relation to post-2020 water resource capacity; or
  - Option 3: Incumbent water companies could be exposed to some degree of market-wide utilisation risk sharing in relation to post-2020 water resource capacity.
- Our current preference is for option three which reflects our policy to allocate risk to the party best able to manage that risk. This issue is discussed in Section 5 of Appendix 3.

Consultation questions (closes 20 July)

Q1 In our opinion, demand and utilisation risks relating to bilateral market entry should be allocated to incumbent water companies rather than customers, subject to our policy to protect the pre-2020 RCV. Do you agree that the water resources price control framework should differentiate between utilisation risks relating to market-wide demand and utilisation risk relating to bilateral market entry?

Q2 Do you agree that the price control arrangements for increases in water resources capacity should, at least in some circumstances, expose an incumbent water company to some degree of market-wide demand risk? If so, what circumstances?

## Direct procurement for customers and its implications for water resources

## What is direct procurement for customers?

By 'direct procurement for customers' we mean arrangements whereby a water company procures services, particularly infrastructure projects, on behalf of customers, which [can include the financing of the project](#).

Thames Water's procurement of the delivery of the Thames Tideway Tunnel from an independent service provider is an example of this. While the Thames Tideway Tunnel has a number of unique characteristics – including the scale and risk of the project and a Government support package – the principle of a water company acting to procure major projects or enhancements on behalf of customers can be applied elsewhere.

Direct procurement for customers is a means of [promoting the use of markets](#) to provide significant infrastructure projects, which would otherwise be provided by the incumbent water company. It will reveal information that will help us to regulate more effectively, and enable a less intrusive approach.

Currently, many companies will tender for the design and build parts of these projects. The key difference between the existing approach and a direct procurement for customers approach is that companies would also be encouraged to [tender for the financing and operation of the assets](#).

## What is the case for direct procurement for customers?

### Lower costs

Requiring companies to consider alternative financing and operating options could provide benefits to customers through cheaper financing and totex (total expenditure = capital and operating costs). Evidence from the energy sector and Thames Tideway Tunnel suggests there could be significant savings from reducing costs. Analysis by Cambridge Economics Policy Associates (CEPA) shows that the first three tender rounds of Ofgem's Offshore Transmission Operator (OFTO) regime will bring savings of over £700m over 20 years. DPC projects will also help to reveal the actual cost of capital for the wider sector and so potentially help with setting the allowed return in price controls.

### Can encourage a longer term focus by companies

Thames Tideway and the OFTO regime provide longer term price controls for specific infrastructure projects. By providing the option to consider projects outside of the 5 year price review cycle, a longer term project focus could be achieved and enable lower whole life costs.

# Description of options for direct procurement for customers

	<b>1</b> No change	<b>2</b> Direct procurement 'encouraged'	<b>3</b> Direct procurement 'prescribed'	<b>4</b> Thames Tideway-type model	<b>5</b> Ofgem model
	No change from current use of competitive tendering	Direct procurement encouraged through risk based review	Direct procurement required for all qualifying projects	Water companies run tenders for separately licensed infrastructure providers	Ofwat runs tenders for separately licensed infrastructure provide
Legislation	No legislation required			Legislation could be required	
Financing costs	By water company	Competitive tender	Competitive tender – financing costs for project specified separately in price control.		
Procurement	By water company	By water company	By water company subject to Ofwat rules	By water company	By Ofwat
Extent of competition	Market testing of design and build	Direct procurement of design, build, finance and operation	Direct procurement of design, build, finance and operation	Direct procurement but bidders limited by exclusion of water company	Direct procurement of design, build, finance and operation
Timing and price controls	Funding for projects decided in 5 year business plan cycle	Open to possibility of separate price control for companies that propose it	Funding set outside of 5-year price control cycle; price control set for water company for the project	Funding set outside of 5-year price control cycle; separate price control given to separate licensed entity	
Threshold	No threshold	Soft guideline threshold	Hard threshold	Criteria set out in Specified Infrastructure Projects Regulations	Threshold could be set out in legislation

# Preferred option for direct procurement for customers

	1 Do nothing	Preferred option 2 Direct procurement 'encouraged'	3 Direct procurement 'prescribed'	4 Thames Tideway-type model	5 Ofgem model
Achieving our objectives	Transparent and predictable but risks missing opportunity to promote efficiency through effective competition.	Targeted at projects with appropriate economic characteristics; consumer objective met through effective competition. 	Risk of compromising company ownership of their business plans; risk of efficient options being excluded if incumbent cannot bid.	Equally as compliant with objectives as Thames Tideway. 	Consumer objective furthered by the promotion of effective competition, but removes ownership and accountability from company.
Addressing known problems	Does not address problems identified. 	Encourages water companies to consider alternative financing solutions, but does not require their use.	Requires use of alternative financing where available. Moves procurement decision outside of 5-year process and opens possibility of setting longer-term price control to enhance longer-term focus.		
Practicality	No additional cost. 	Can be encouraged through RBR; possible under current legislation; voluntary licence change needed if separate price controls set. 	Exclusion of water company from bidding process could require licence change; allowing water companies to bid could reduce confidence in process. 	Additional costs if extended to more projects; could require primary legislation to allow SIP Regulations to apply to broader range of schemes. 	Additional costs of regulator-led bidding process; could require primary legislation to introduce new forms of licence and to allow Ofwat to run tenders. 



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## Project identification

- Water companies will need to identify any projects over £100m whole life totex. Such projects will be procured under a direct procurement approach, or compelling evidence will need to be provided why a direct procurement approach is not appropriate – for example, if the project is not sufficiently separable.
- Companies will be free to propose and use a direct procurement approach for projects less than £100m if they consider this to be appropriate.

## Price controls

- Companies can choose to undertake direct procurement within the standard price controls (water resources, network plus etc).
- Alternatively, companies can propose to include a separate price control (which would require a licence modification) which could have a non-standard duration.

## Market risk exposure

- Any water resource investment made through direct procurement will be exposed to the same level of market risk as any other new water resource investment made by the water company.

# Boundary of the water resources price control

## Why does the boundary matter?

- At PR19 we will be introducing a separate binding price control for water resources (see next slide)
- The separate price control will support the development of water resource markets and help ensure a level playing field between incumbents and third party entrants. It will also limit cross subsidy risks
- To unlock these benefits, it is important for incumbent companies, investors, potential third party entrants and regulators that the boundary is set correctly
- This needs to be completed by September 2016 to allow us to collect two years data ahead of PR19. (16/17 and 17/18)
- Our experience with separation of retail controls has taught us that this process will require careful work from both Ofwat and the industry

## What work has been done on this already?

- The issue of the water resources boundary was raised in the responses to our December consultation
- The findings of the “[Targeted review of sludge and water resources report](#)” (CEPA March 2016) also revealed inconsistencies between companies and highlighted issues where increased guidance is required
- This has been confirmed in follow up meetings with water only companies

## What we said in May 2016

“ We still intend to use the regulatory accounting guidelines as the basis for setting the boundary. The further work on accounting separation boundaries will take into account the practicalities of the different types of water resources and the need to avoid any undue regulatory burden”

# Our evolving price review approach

In PR09 we had a single control for each company, covering all wholesale and retail activities



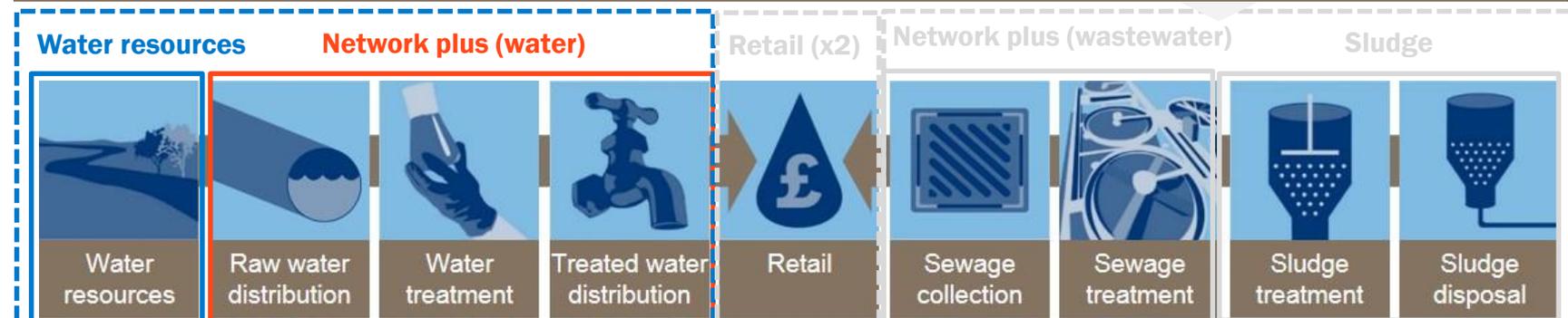
Accounting separation, introduced in 2011, separated the value chain into 9 business units

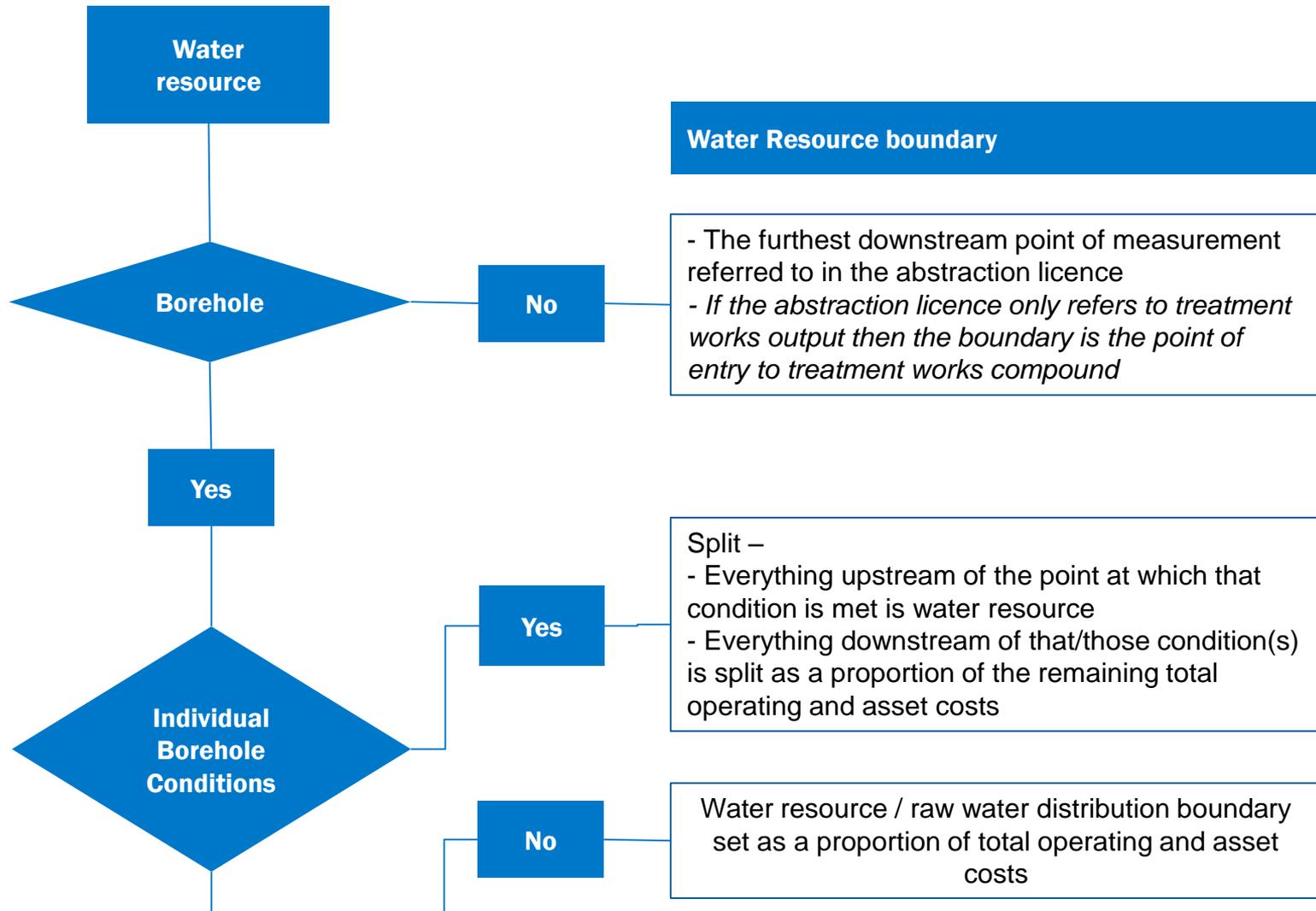


In PR14 we had four separate controls, wholesale water and wastewater, residential and business retail

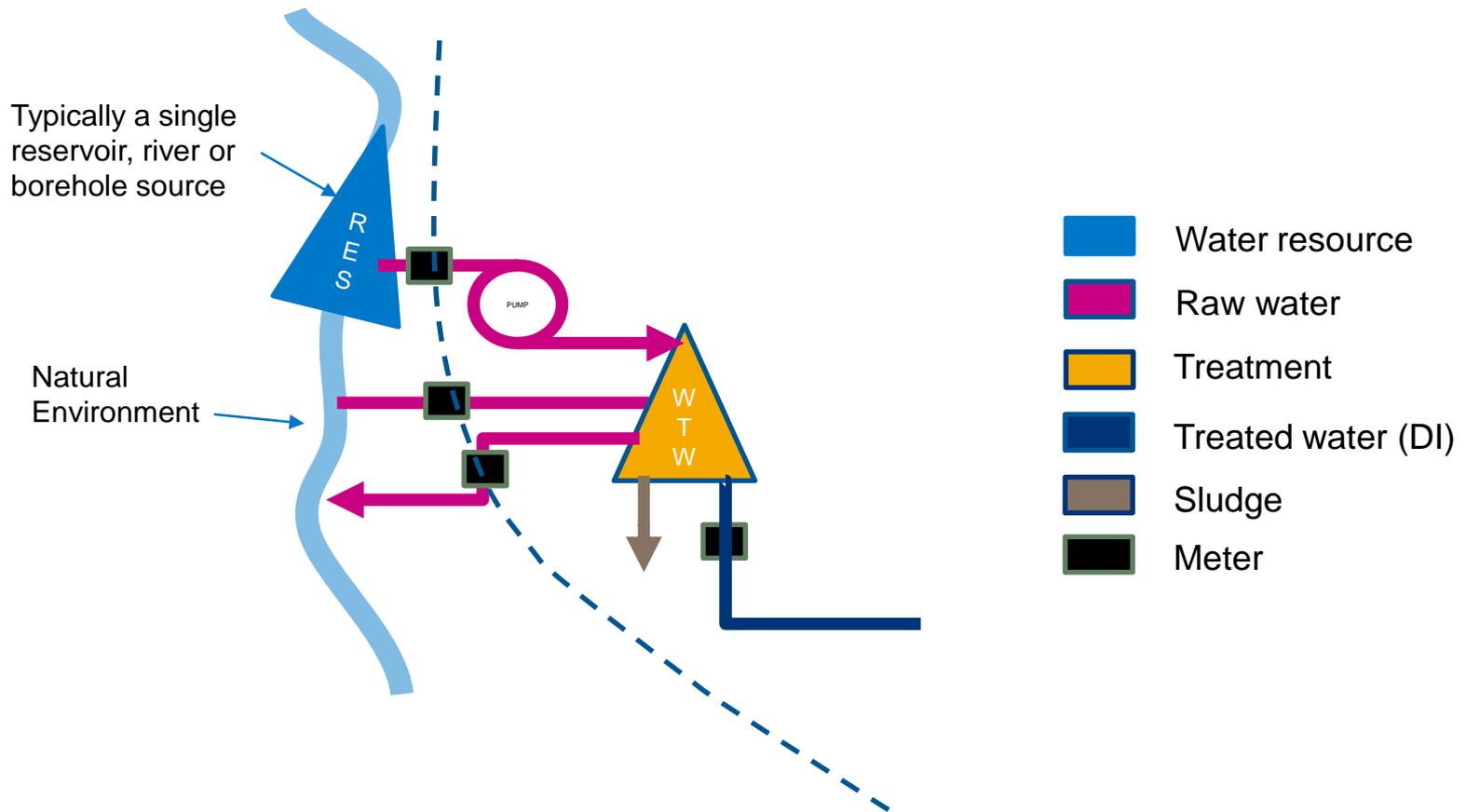


In PR19 we will have six separate controls, water resources, network plus water, sludge, network plus wastewater, residential and business retail.

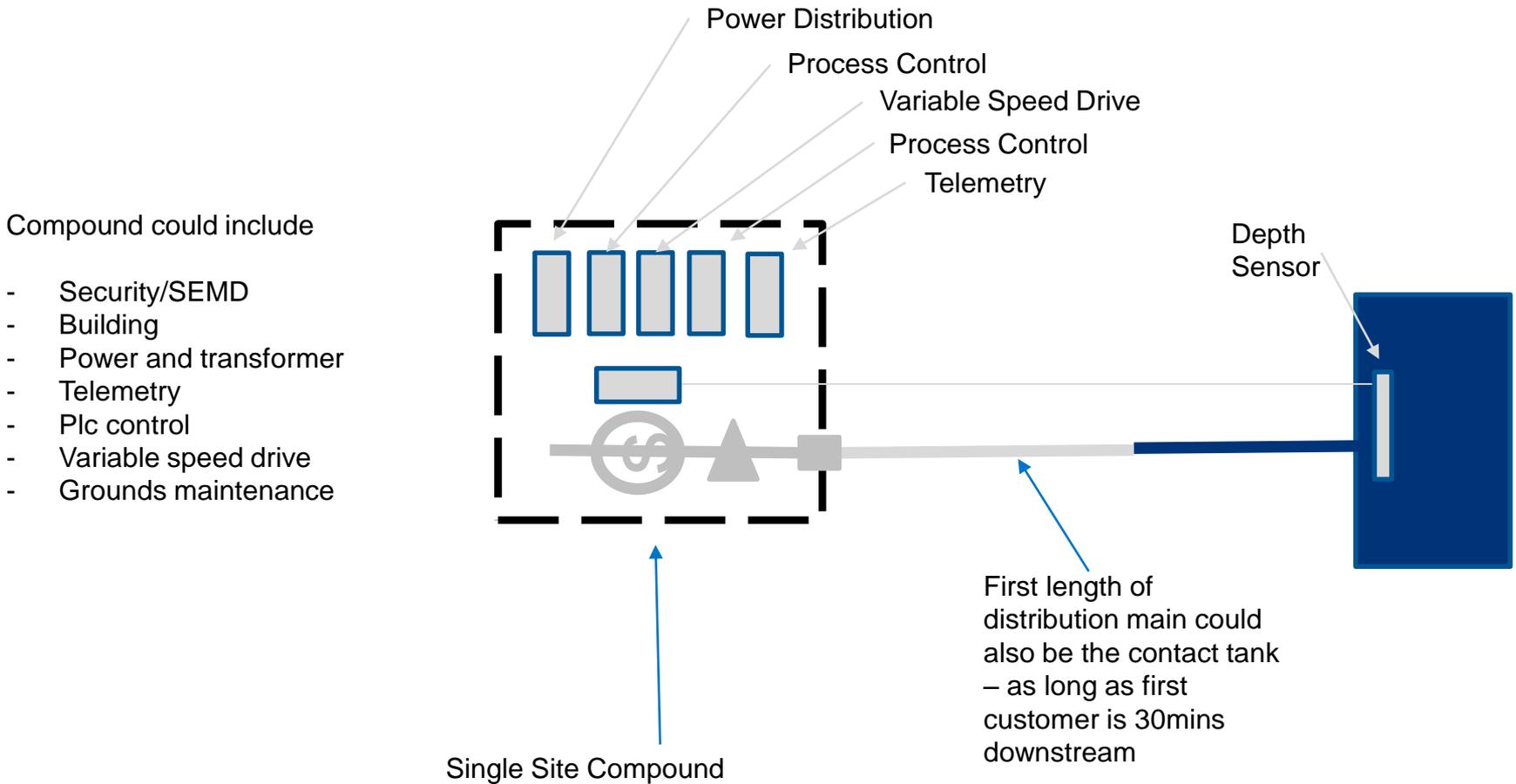




This proposed approach is set out in Appendix 3 of our May decision document

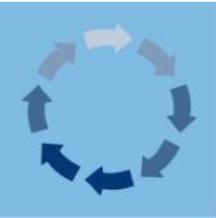


In many cases the boundary between water resources and network plus is not clear, as it cannot be defined by assets or land use boundaries



- Assets on borehole sites often serve both water resource and treatment purposes
- Asset use cannot be defined by the site boundary

	Item	CEPA Suggestion
1	Impounding Reservoirs and Abstraction Licences	RAG 4.05 should expressly state that only reservoirs with an abstraction licence attached to them should be included.
2	Wholly Compensating Reservoirs	Reservoirs which purely provide a compensating role should be classified as part of water resources, even if they do not have abstraction licences
3	Pumping – borehole cost disaggregation	RAG 2.05 should specify that where pumps perform functions for two or more business units, that its costs be split across each of them
4	Pumping – borehole pumping head and management estimate	RAG 2.05 should be amended to include operational pumping head as the preferred driver to split power costs, for those pumps which perform a joint function for water resources and at least one other business unit
5	Blending	<p>Water source → Pipe → Reservoir without abstraction licence</p> <p>CEPA suggestion is that this becomes classified as Raw Water Distribution</p>

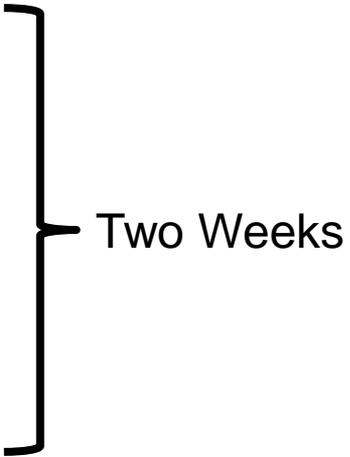


Following CEPA review of WaSCs Ofwat visited WOCs. Main findings:

- Proportion of directly coded assets ranged from 45% to 74%
- Allocation is a significant issue where companies rely on borehole sources with basic treatment – in this scenario the borehole pump is supporting more than just the extraction from the ground source
- Suggestion that we could mandate use of ‘Average Pumping Head’ – could we use T11 JR guidance? Would need worked examples
- But this is different to a potential new entrant, e.g. a farmer with a borehole – would not have water treatment works and would pipe to an industrial customer (or perhaps to an incumbent for treatment to public water supply). Where’s the entry? How do you apportion costs?
- For river abstraction - consider 1 mile limit for a pipe to a reservoir for the whole unit to be classed as water resources. If the pipe is over 1 mile then it would be raw water transport
- Rates – further clarification will be provided to treatment of cumulo and business rates
- Employment costs – some companies have integrated timesheet/asset/accounting systems, others are less advanced

# Other findings of the CEPA report – (included for Completeness)

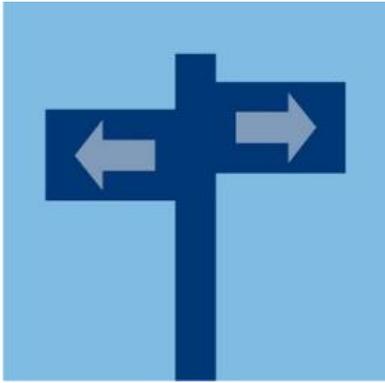
	Item	CEPA Suggestion
1	Aquifer recharge schemes	Costs associated with aquifer recharge schemes which augment groundwater yields should be placed entirely in water resources and this should be reflected in RAG 4.05
2	Labour and Maintenance costs	RAG 2.05 - should issue guidance on cost allocation between water resources and water treatment, and unless a better driver can be found, management estimates (a robust centralised process) should be used to allocate site labour.
3	Cumulo Rates	RAG 2.05 should be amended so that only the whole GMEAV approach can be used for allocating costs
4	Management and General allocation	RAG 2.05 should be amended so that M&G CCD is disaggregated by type of asset and appropriate drivers used for each. Cumulative CCD and NMEAV would not seem appropriate.
5	Third Party services - activities	<ul style="list-style-type: none"> <li>• It is important companies report 3<sup>rd</sup> party costs on a consistent basis because OFWAT has in previous reviews excluded these from cost efficiency assessment</li> <li>• RAG 2.05 should be amended to explicitly state that costs associated with all bulk supplies are shown as third party costs, and provision of non-potable supplies are also shown as third party costs.</li> <li>• Recreation activities on protected land under the WIA 1991 should be reclassified as third party costs, so they are treated consistently and excluded from Ofwat's efficiency modelling</li> </ul>
6	Third Party services – cost transfers	<ul style="list-style-type: none"> <li>• Wide variety of cost recharges</li> <li>• CEPA suggested that RAGS be expanded to state that third party costs should be fully loaded, and include CCD and IRC where applicable, except where the terms of the contract state that a lesser amount should be charged to the customer.</li> </ul>
7	Bulk Supply definition	RAG 4.05 should be amended to state that a company providing treated water to another company's customers should treat the cost as a third party cost in treated water distribution

- Take evidence from companies to support decisions
  - Off-line discussions
  - 13 July 2016 for comments
  - 14 July 2016 conference call
  - Ofwat to draft copy of the RAGs in time for....
  - Working Group dissemination/conclusions session **25 July**
  - RAG consultation document to be published in August 2016
  - Final RAGs published September 2016
- 
- Two Weeks



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## Access prices for bilateral water resources providers in England



Our proposals for access prices for bilateral trading of water resources in England



Further assessment needed to be able to put access prices into practice



## Objectives

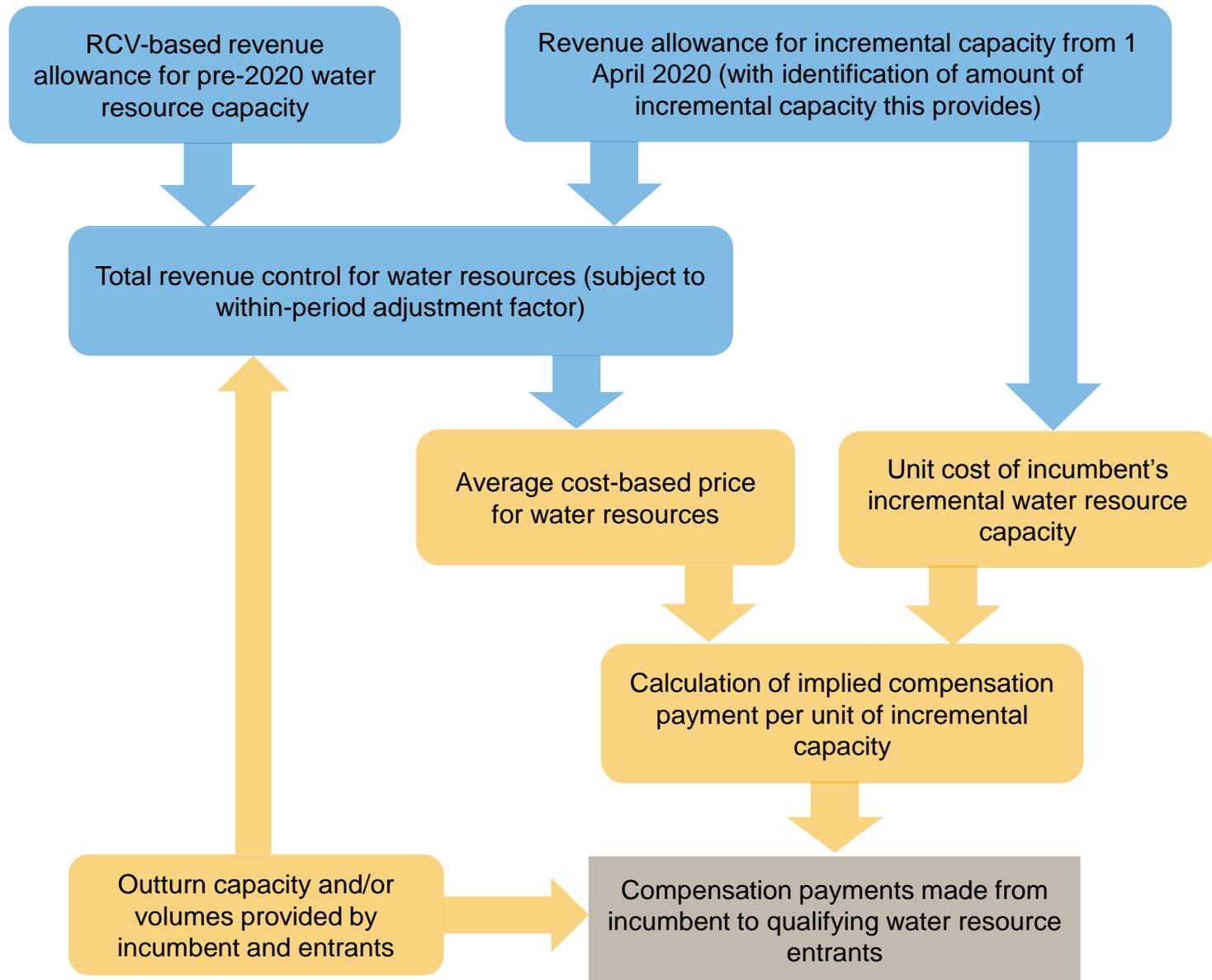
- Enable efficient entry
- Cost representative
- Customer benefits
- Flexibility
- Certainty
- Clarity

## Practicality

- Availability of cost information
- Robustness of information
- Timescale of implementation

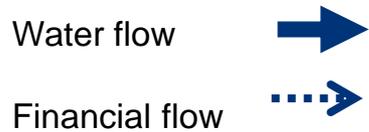
## Other issues

- Addresses information asymmetry
- RCV consistency



	Cost / Price Element	Existing resource	New resource	Total (Existing + New)
COSTS	Water capacity (cubic metres per year)	1,000 m <sup>3</sup>	100 m <sup>3</sup>	1,100 m <sup>3</sup>
	Total cost of water resource (£ per year)	£250	£40	£290
	Unit cost of water resource (£ per cubic metre)	£0.25 (= £250/1000)	£0.40 (= £40/100)	£0.26 (= £290/1100)
	Total network plus costs (£ per year)			£1,250
PRICES	Network plus access price (£ per cubic metre)			£1.14 (= £1,250/1100 m <sup>3</sup> )
	Compensation payment based on difference between unit costs of new water resource and all resource (£ per cubic metre)			-£0.14 (= £0.26 - £0.40)
	Net access price paid by third party water resource provider (£ per cubic metre)			£1.00 (= £1.14 - £0.14)

# Our proposal for access prices in water resources – revenue flows



**Incumbent WR**  
 WR Costs: £250  
 Volume: 1,000m<sup>3</sup>  
 Revenue: £250

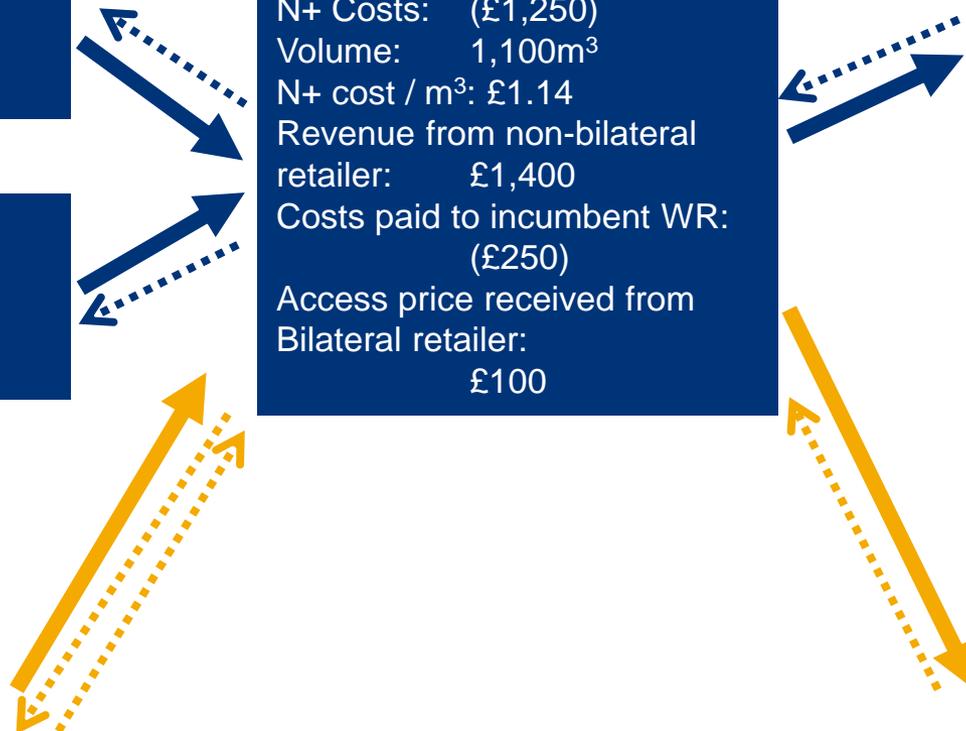
**Incumbent New WR**  
 WR Costs: £40  
 Volume: 1,00m<sup>3</sup>  
 Revenue: £40

**Bilateral WR provider**  
 WR Costs: £35  
 Volume: 100m<sup>3</sup>  
 Revenue: £38

**Network + (N+)**  
 N+ Costs: (£1,250)  
 Volume: 1,100m<sup>3</sup>  
 N+ cost / m<sup>3</sup>: £1.14  
 Revenue from non-bilateral retailer: £1,400  
 Costs paid to incumbent WR: (£250)  
 Access price received from Bilateral retailer: £100

**Non-bilateral Retailer**  
 Revenue collected on behalf of wholesale: £1,400  
 Volume: 1,000m<sup>3</sup>  
 Revenue per m<sup>3</sup>: £1.4

**Bilateral Retailer**  
 Revenue collected on behalf of wholesale: £138  
 Volume: 100m<sup>3</sup>  
 Revenue per m<sup>3</sup>: £1.38  
 Standard access price: (£114)  
 Access price rebate: £14



## Deriving access prices from cost information

How to use AICs?

WACC

Redundancy?

Link with controls?

## Form of pricing

Volumetric?

Capacity?

Mixed?

## Treatment

Raw water or treated water price?

Who treats water?

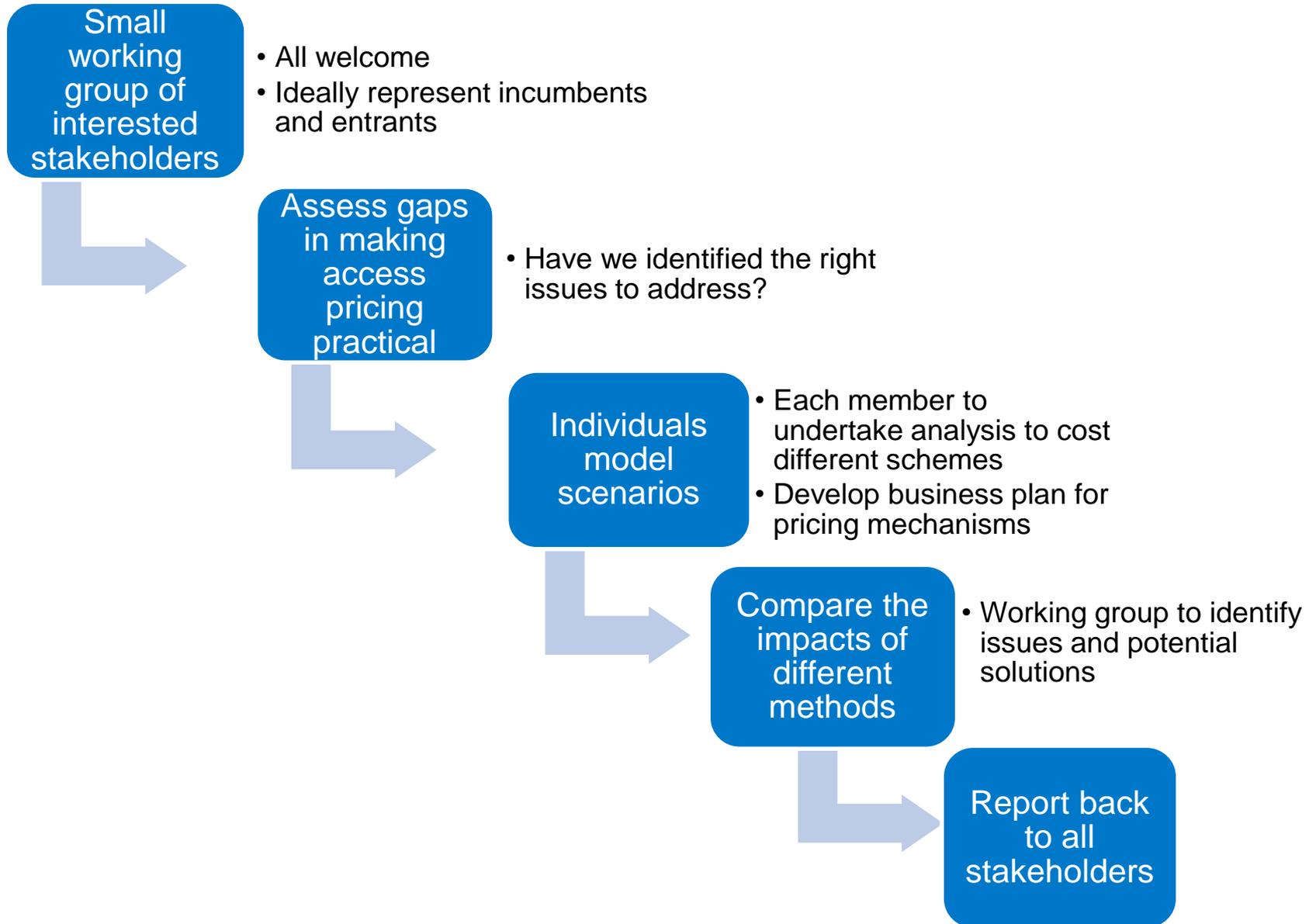
Account for DWI requirements and double treatment?

## Distribution and transport costs

How to deal with leakage?

Average or specific transport costs within an area?

Price for transporting out of area?



## Scenarios to model:

Scenarios modelling different options:

- Large new reservoir
- Set of new boreholes and river abstractions
- New network storage
- Connecting WRZ
- NAV site with spare capacity
- Farmer with spare water in winter



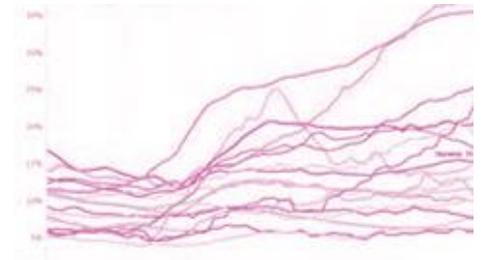
## Scenarios to model:

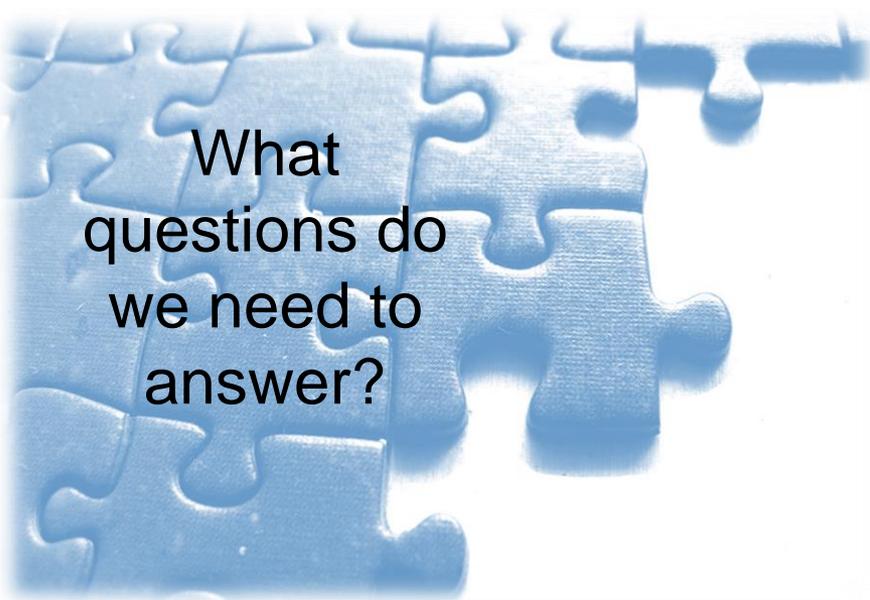


- Over supply/undersupply
- Multiple entries and different times
- Demand above/below forecast

## Outputs

- AICs, unit costs and implied unit costs from a control
- Average cost and changes in compensation payment

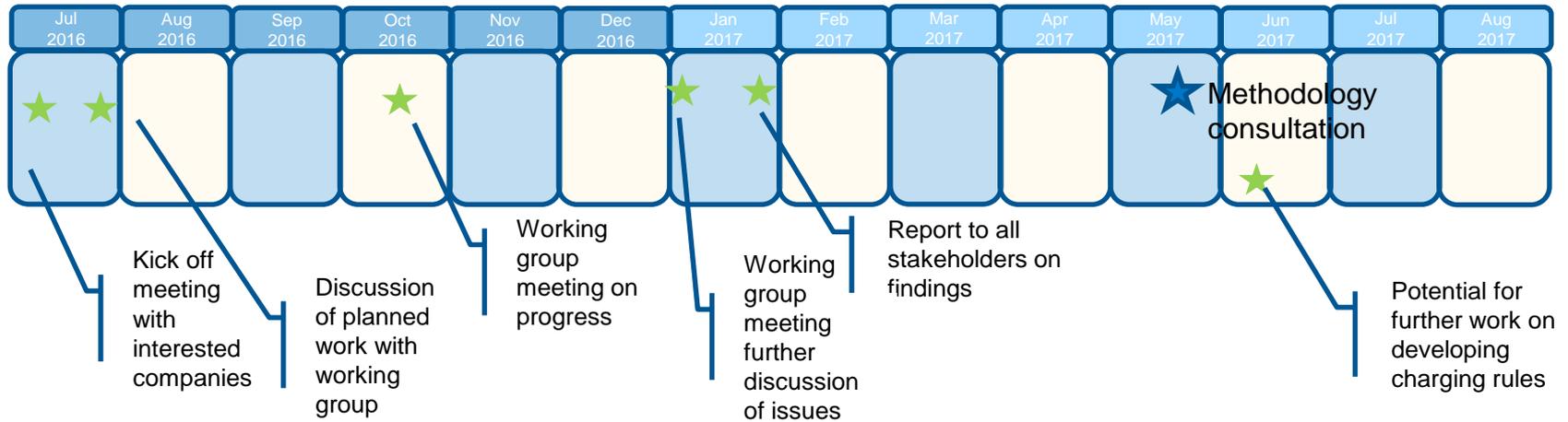




What  
questions do  
we need to  
answer?



What  
analysis/modelling  
will be required?



Forward planning, actions and agenda for  
next meetings



## In your tables

5 mins



Each group should write down the issues they want the working group to discuss

15 mins



In your tables organise notes into

- Must discuss
- Should discuss
- Could discuss

10 mins

Feedback and discussion – what are the key themes and any points of disagreement?



Policy Area	Issues for discussion
Market Information	<ul style="list-style-type: none"><li>• Information and functionality specification</li><li>• Data format</li><li>• Bid assessment framework</li></ul>
Access pricing	<ul style="list-style-type: none"><li>• Going engagement (see access pricing presentation)</li></ul>
Separate price control	<ul style="list-style-type: none"><li>• Confirmation of boundary</li><li>• Form of control</li><li>• Treatment of risk</li><li>• Historic RCV vs new investment</li></ul>
RCV allocation	<ul style="list-style-type: none"><li>• Guidance on allocation</li></ul>
Further options to support market development	<ul style="list-style-type: none"><li>• Water trading incentives</li><li>• Approach to interconnection funding</li></ul>
Other areas	<ul style="list-style-type: none"><li>• Risk based review for water resources</li><li>• Cost assessment for water resources</li></ul>

We are currently finalising our Level 2 plans to the methodology consultation



## Morning session

- Market information platform design and implementation

## Afternoon session

- Feedback on the boundary of the water resources price control
- Proposed work on access pricing for discussion
- Form of control discussion

The final agenda will be circulated in advance of the next meeting



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