

Regulators' Alliance for Progressing
Infrastructure Development

June 2021



The regulatory and commercial framework for strategic water resource solutions – a discussion document



About this document

RAPID, established in 2019, is the Regulators' Alliance for Progressing Infrastructure Development. We are a partnership of three water regulators: Ofwat, the Environment Agency and the Drinking Water Inspectorate. Natural Resources Wales is involved in an advisory capacity and has a decision making role for any scheme involving Wales, Welsh policy and legislation.

This discussion document concerns RAPID's work on the regulatory and commercial framework for strategic water resource solutions. We explain how our work fits in with the established and developing framework for planning water resources, and with wider work, including in Ofwat's 2024 Price Review and RAPID's gated process. We outline the work to date, and the work we are currently undertaking with industry, our partner regulators and with Natural Resources Wales. We set out our initial thinking on the regulatory and commercial framework.

We welcome views regarding the scope of what we are developing, the priorities and timing, and our initial thinking.

Executive summary

RAPID, established in 2019, is the Regulators' Alliance for Progressing Infrastructure Development. We are supporting strategically important new water resource infrastructure supply solutions to meet future water needs. We are a partnership of three water regulators: Ofwat, the Environment Agency and the Drinking Water Inspectorate (**DWI**). Natural Resources Wales (**NRW**) is involved in an advisory capacity and has a decision making role for any scheme involving Wales, Welsh policy and legislation.

Our vision is resilient, timely, high-quality, environmentally beneficial water resources which are acceptable and affordable for customers. We seek to achieve this through regulators working together to promote the development of strategic water resource solutions that are in the best interests of water users, society and the environment.

Many of the best value options to develop strategic water resources require collaboration across more than one water company, and often with third parties. Such strategic resource options (**SROs**) require more complex commercial arrangements as compared to projects designed to serve individual company areas. And they present new or heightened challenges to water sector regulation – be that environmental regulation, drinking water quality or funding and outcomes. We see benefits in establishing common frameworks for addressing these challenges: these should reduce costs for individual projects, mitigate risk of project delay, and help make water resource arrangements better able to adapt to challenges of the future.

The sector has already made progress in collaborating to develop best value water resource options:

- **Gated process:** Companies now have ring-fenced funding to develop SROs to be 'construction ready' for the 2025–2030 period. RAPID (working with the partner regulators and NRW) assesses the quality of companies' plans at specific points (**gates**) to ensure that sufficient progress is being made, and SROs are developed further.
- **Regional planning:** The water sector is establishing arrangements for strategic regional planning to deliver future water needs for England, in particular through regional planning groups. Each region's plan must consider how the region will be resilient to a range of uncertainties and future scenarios. It must identify a set of options that provide the best value to customers, society and the environment rather than simply the least cost. These plans will be reflected in statutory Water Resource Management Plans (**WRMPs**) and will shape investment in water resources over many years through business plans. This includes shaping which of the SROs in the gated process progress to delivery.

Regional planning isn't required in Wales as a whole, but Welsh companies and stakeholders are also contributing to planning for cross-border options. Options involving sourcing water from Wales must demonstrate benefit to the people and environment of Wales. Proposals that affect Wales will have regard to the interests of Wales, in particular sustainable management of its natural resources and Welsh legislation and policies.

RAPID is working with the sector to develop the regulatory and commercial approach with respect to strategic water resource solutions. We think we can most add value by focusing on arrangements for **large schemes that involve at least two companies or partners**. Our outputs will take the form of recommendations to regulators and to the wider sector, for example in the form of standardised terms for bulk supply agreements or other contractual arrangements.

In this discussion document we set out what we see as key issues, and in some cases possible approaches for their resolution. We also note complementary work being undertaken.

Among the issues we consider are arrangements for transfers under drought conditions and times of operational stress, charging and incentives, major project delivery, environmental regulation, drinking water quality, multi-sector solutions, and co-ordinated operations.

A key concern is how water is allocated in **drought conditions and times of operational stress**. We propose that companies within England and within Wales adopt a 'fair shares' approach, where different sets of customers receive a fair – which may be a similar or equivalent – level of service. There may be separate arrangements for cross-border supplies between Wales and England. The fair shares approach would be supported by charges to incentivise companies appropriately. In this document, we clarify how this approach fits with companies' legal obligations.

Companies are concerned about being able to **recover efficient costs of investment** from beneficiaries of the water resource, for example if the water resource is used less than anticipated. We think in principle companies should have a similar level of confidence about the recovery of these costs as if they were developing the resource entirely for their own customers. In practice, this might be realised by having charges which are paid irrespective of usage to ensure fixed costs are recovered. Such fixed charges might be complemented by volumetric charges that are set on the basis of variable costs, to encourage efficient usage of the water resource.

We note that Welsh Government guidance states that customers of Welsh companies should get fair value for the use of resources consistent with competition law. The Defra guidance says that the distribution of costs should be fair and proportionate. Ofwat must have regard to this guidance when setting the applicable charging rules.

Ofwat has a financial incentive for companies to trade water, which it is considering as part of its price review (PR24). We consider that key principles underpinning the incentive, that **the exporting company should be incentivised to trade, and the importing company should at least be able to recover its costs**, are as relevant for strategic resources as for smaller trades.

Ofwat has a specific regulatory regime for procurement and delivery of major projects, such as strategic water resources. It is developing this further as part of PR24. Direct Procurement for Customers (**DPC**) is where the major project is built, financed and operated by a competitively appointed provider (**CAP**). Where a major project meets certain eligibility criteria, the water company should consider whether it would be beneficial to customers to deliver the project via DPC. **We see having a competitively appointed provider, such as through a DPC model, as being just as applicable to SROs as to a single water company project.** The situation may be complicated where it is important that more than one company be the procuring party, and we are reflecting on this further as part of a working group.

A number of SROs would rely on water abstraction licences, and will need to manage other risks around **environmental regulation**. The Environment Agency, in conjunction with Natural England and RAPID, is setting up a dedicated task and finish group to consider these risks. NRW will be a member of the group and lead on any issues within or affecting Wales. The group will produce an overall risk assessment across all SROs and build an understanding of which schemes are most sensitive to which issues. Where the group recommends changes in guidance, the Environment Agency, Natural England and NRW (where relevant) will consider the appropriate changes.

Strategic water resource infrastructure may mix different waters, potentially changing its chemistry. This may have implications for how risks to public health and / or customer acceptability are managed. Water companies are responsible for the **quality of their drinking water supplies** and need to manage these risks when incorporating new water resources bulk supplies into existing distribution systems. This includes risk assessments for the whole supply chain, source to tap. Therefore bulk supply agreements must provide for suitable, preferably standardised, relationships between companies including operational protocols, data sharing and investigative support where required to ensure the protection of public health.

Planning water resources beyond the public water supply (e.g. shared resources between sectors, or more generally integration of drought and flood planning) seems likely to lead to best value solutions in some cases. Set against this, such **multi-sector solutions** may bring additional complexity. We are reflecting on regulatory and commercial aspects of this as part of a working group.

Funding for developing strategic water resource solutions, supported by the RAPID gated process, continues to 2025. Whatever arrangements replace them, continuing to take multiple alternative solutions through early phases of development should result in better value outcomes. There are questions around what alternative approaches for planning strategic water resources might be effective in future, but which **require less regulatory oversight**.

Over time, to the extent that strategic transfers become more prominent, the benefits from effective **coordination of operations** are expected to increase. This includes decisions around asset utilisation, access to capacity and volumes of water supplied. The technical complexity of co-ordinated decision making may be significant. We are taking this work forward through a consultancy study and a working group.

In this discussion document we explain how our work fits in with the established and developing framework for planning water resources, and with wider work, including in PR24 and RAPID's gated process. We outline the work to date, including NERA's study on bulk supply agreements, and the work we are currently undertaking with industry, our partner regulators and with NRW in Wales. We set out our initial thinking on the regulatory and commercial framework for strategic water resource solutions.

We welcome views regarding the scope of what we are developing, the priorities and timing, and our initial thinking. We plan to consult on policy options towards the end of 2021, prior to the initial consultation on regional plans. This will subsequently feed into our advice to partner regulators and to NRW during 2022.

Responding to this discussion document

We welcome any comments on this document. Please email them to rapid@ofwat.gov.uk.

The closing date for responding to this discussion document is **Wednesday 21 July**. If you wish to discuss any aspect of this document, please email us at rapid@ofwat.gov.uk.

The questions we invite stakeholders to respond to are:

- Q1.** Which aspects of our initial thinking do you agree with or disagree with? What other approaches would you advocate and why?
- Q2.** What have we missed that also needs to be progressed?
- Q3.** We welcome views on our proposed next steps, including additional activities that we should be undertaking.
- Q4.** We welcome views on NERA's recommendations and our initial thinking on them.

We will publish responses to this document on our website at www.ofwat.gov.uk/regulated-companies/rapid, unless you indicate that you would like your response to remain unpublished. We will also share responses with our partner regulators (Ofwat, the Environment Agency and the Drinking Water Inspectorate), and with Natural Resources Wales. Information provided in response to this consultation, including personal information, may be published or disclosed in accordance with access to information legislation – primarily the Freedom of Information Act 2000 (FoIA), the General Data Protection Regulation 2016, the Data Protection Act 2018, and the Environmental Information Regulations 2004. For further information on how we process personal data please see our [privacy policy](#).

If you would like the information that you provide to be treated as confidential, please be aware that under the FoIA there is a statutory [Code of practice](#) which deals, among other things, with obligations of confidence. In view of this, it would be helpful if you could explain to us why you regard the information you have provided as confidential. If we receive a request for disclosure of the information, we will take full account of your explanation, but we cannot give an assurance that we can maintain confidentiality in all circumstances. An automatic confidentiality disclaimer generated by your IT system will not, of itself, be regarded as binding.

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1. Background

Water is a precious resource. Our water resources are coming under increasing pressure from population growth, economic development and climate change. Society expects that water will be available for users while also protecting and improving the environment we live in. While water shortages are forecast to be most acute in the south and south east of England, severe drought is a widespread risk that needs to be managed. These factors all contribute to a growing sense of urgency that we need to act now to develop new strategic resource solutions to avoid severe restrictions to water use in the coming years.

In 2018 the water regulators realised that they needed to do more to meet the scale of the challenge. WRMPs are where water companies must plan how they will provide a secure, resilient and wholesome supply of water to their customers, at an affordable price while protecting the environment. Companies' WRMPs, and their business plans (submitted as part of Ofwat's price review 2019 (**PR19**)) included few solutions involving cross-company collaboration. Yet such strategic water resource solutions may be vital over the next five to 15 years to meet future demands. This chapter sets out the current arrangements the regulators have established to address this, including the role of RAPID, as well as the wider framework for water resources and infrastructure project delivery. It is structured as follows:

- RAPID;
- RAPID's three roles relating to
 - the gated process;
 - the National Framework for water resources and the regional groups, with links to WRMPs and the water resources planning guideline;
 - the regulatory and commercial framework for strategic water resource solutions;
- Other key aspects of the existing and developing framework:
 - water trading; and
 - Ofwat's price review PR24.

1.1 RAPID

RAPID was established in 2019. Our vision is to facilitate the delivery of resilient, timely, high quality, environmentally beneficial water resources which are acceptable and affordable for customers. We will achieve this through regulators working together to promote the development of strategic water resources infrastructure that is in the best interests of water users, society and the environment.

RAPID is intended to benefit England and Wales. We are a partnership of three water regulators: Ofwat, the Environment Agency and DWI. NRW is involved in an advisory capacity and has a decision making role for any scheme involving Wales, Welsh policy and legislation.

We are supporting strategically important new water resource infrastructure supply options (strategic resource options or **SROs**) to be developed by water companies with funding secured in PR19. Alongside the project-specific work, we recognise that the regulatory and commercial framework for strategic water resource infrastructure needs to develop, both to facilitate the best of those projects and to encourage and support ongoing optimisation of water resources into the uncertainties of the future.

As our [2021-22 forward programme](#) sets out, RAPID's role is to:

- deliver the gated process;
- implement the National Framework (described below); and
- develop the regulatory and commercial framework to support timely delivery of water resource infrastructure.

1.2 RAPID's gated process

RAPID's first role is to deliver the gated process.

At PR19 Ofwat announced a £469 million ring-fenced development fund for water companies to investigate and develop strategic water resource solutions (which we refer to in this document as SROs). This funding provides companies with the ability and certainty to accelerate the development of solutions to be 'construction ready' for the 2025-2030 period; it encourages joint working, enables additional analysis where required and provides outputs with greater certainty than would be available without it.

In its PR19 final determination, Ofwat determined that delivery of these solutions will be subject to a formal gated process. RAPID supports and oversees the development of the SROs that benefit from this funding through this gated process (**RAPID gated process**). At each gate, we (working with the partner regulators and NRW) assess progress and provide advice and recommendations to Ofwat. Ofwat's objectives in making decisions for each gate are that:

- water companies are sufficiently progressing the strategic water resource solutions;
- their development fund costs are efficient; and
- only those solutions that have been proposed as preferred solutions within WRMPs and regional plans will continue to be progressed.

If a company's submission is of insufficient quality, it may be subject to a delivery incentive penalty.

There are two tracks in the gated process: standard and accelerated. The standard gates are aligned with WRMPs and regional plan timetables. The accelerated gates are for solutions intended to provide Southern Water with additional supplies by the end of 2027.

Table 1.1 RAPID gates

Gate	Standard gate submission dates	Accelerated gate submission dates
Gate 1: Initial concept design and decision making	5 July 2021	28 September 2020
Gate 2: Detailed feasibility, concept design and multi-solution decision making	31 October 2022	27 September 2021
Gate 3: Developed design, finalised feasibility, pre-planning investigations and planning applications	Summer 2023	June 2022
Gate 4: Planning applications, procurement and land purchase	Summer 2024	April 2023
Gate 5: Land purchase and finalising develop consent orders.	Winter 2025	Autumn 2024

We have published [guidance](#) on company submissions for the gates due in 2021.

1.3 The National Framework and regional plans

This section explains the National Framework for England including regional plans and arrangements for Wales / England cross-border options. RAPID's second role is to oversee the implementation of the National Framework.

The water sector is establishing arrangements for strategic regional planning to deliver the long term water needs for England and Wales. The Environment Agency outlined these arrangements for England as part of its [National Framework for Water Resources](#), published in 2020. The National Framework lists principles, expectations and challenges for five regional planning groups, made up of the water companies and other water users.

The regional planning groups are introducing increased ambition in delivering resilience and promoting new ways of working. The regional planning groups focus on integration, collaboration and co-ordination between water companies and with other sectors to safeguard water resources for all.

Each region's plan must consider how the region will be resilient to a range of uncertainties and future scenarios. It must identify a set of options that provide the best value to customers, society and the environment rather than simply the least cost. These plans will be reflected in statutory WRMPs and will shape investment in water resources over many years through business plans. This includes shaping which of the SROs in the gated process progress to delivery.

Regional planning isn't required in Wales as a whole. When solutions affect Wales, Welsh Government, NRW, Ofwat and DWI are key members involved in the decision making process. Any further development involving sourcing water from Wales must demonstrate benefit to the people and environment of Wales. Any proposals that affect Wales will have regard to the interests of Wales, in particular sustainable management of its natural resources and Welsh legislation and policies. The regional plan for Water Resources West is being shaped by both English and Welsh considerations and includes partners from both sides of the border.

Regional plans will have interdependencies. More efficient outcomes are possible if solutions are considered that cross regional boundaries. This is particularly the case with respect to water transfers between regions. This is relevant for some of the SROs which have the potential to supply different regions. To manage this the regional groups are planning a reconciliation process from August 2021 to November 2021. This will be an iterative process that takes account of the timing of water needs and the alternative options available to each potential recipient. Each region will appraise alternative plans and propose the best value combination of options.

The Environment Bill includes provision to allow the Secretary of State and Welsh Ministers to direct water companies to prepare and publish joint proposals with respect to water resources, which could provide a statutory underpinning for regional planning in the future.

1.3.1 WRMP and water resources planning guideline

WRMPs set out how water companies intend to achieve a secure supply of wholesome water for customers and a protected and enhanced environment both now and in the long term. The duty to prepare and maintain a WRMP is set out in sections 37A to 37D of the Water Industry Act 1991. Plans are produced at least every 5 years and reviewed annually. Within their WRMPs water companies plan works for at least the next 25 years. Water companies should take a leading role in a more holistic and integrated approach to water management exploring all opportunities to deliver cross sector mutual benefits, for society and the environment.

The [water resources planning guideline](#) explains the legal requirements and technical approaches that water companies should follow to develop a WRMP in England and Wales.

The guideline should be used in conjunction with any relevant government policy and outcome expectations.

The Environment Agency, NRW and Ofwat are responsible for jointly writing the guideline, with inputs from DWI and Natural England.

1.4 The regulatory and commercial framework

RAPID's third role is developing the regulatory and commercial framework to support the timely delivery of strategic water resources infrastructure. This is the subject of this discussion document. We are asking the water sector to develop water resources in a new way recognising that the current regulatory and commercial arrangements may need to change to support this.

This degree of change will inevitably expose challenges and issues. We have committed to improving the existing regulatory framework so that emerging issues, be they opportunities, gaps or barriers, are addressed through our work in support of each partner regulator.

We commissioned [NERA Economic Consulting](#) to conduct a study into the role of contract design in promoting the efficient bulk trading of water in England and Wales. The study focused on the trading of bulk supplies between water companies. The findings of the NERA study have informed this discussion document. The NERA report included specific recommendations on the regulatory and commercial framework and Appendix 1 shows how we are taking these forward.

RAPID has commissioned the consultants Baringa and Mott MacDonald to consider how water resources decision making might be co-ordinated to deliver the best outcomes for customers, the environment and wider society. The study will draw on approaches in other regulated infrastructure sectors both within the UK and internationally and what lessons can be learned that may be relevant to the future development and management of water resources for the period 2025–2050. The project will identify the barriers to progress in the current system and consider some options to address them. These will include more co-ordinated development and operations at regional levels to support and incentivise the optimal utilisation of existing and new water resource assets. We expect to consult on the findings from this study and our proposals for next steps in our consultation in late 2021.

1.4.1 Working groups

RAPID has established three working groups with fellow regulators and the industry to develop thinking on areas of the regulatory and commercial framework for strategic water resource solutions. These working groups are advisory only, and will not limit broader

consultation on these issues, whether in the present document or subsequent consultations. The areas covered by the three working groups are as follows:

- **WG1 – Standardisation:** to develop published, standardised contract terms to reduce the transaction costs of organising new water trades, and promote best practice in agreements. The contract terms may be used in bulk supply agreements, and potentially other contracts (between water companies and third parties).
- **WG2 – Pricing, incentives and risk:** the allocation of risk between parties and the pricing provisions are pivotal to ensuring that parties have incentives to trade when it is economically efficient to do so. This working group is considering the structure of pricing, the existing trading incentive mechanism and potential gaps and issues with incentives, and how different commercial models can accommodate multi-party and multi-sector projects.
- **WG3 – Co-ordinated operations:** co-ordinated management of water will be essential to the successful operation of SROs. This working group, supported by the Baringa Mott-MacDonald consultancy study, is to identify barriers to co-ordinated operations involving two or more companies and to determine immediate and longer term actions that may be needed to overcome them.

In addition, the Environment Agency, in-conjunction with Natural England and RAPID, is setting up a dedicated Environmental Regulation task and finish group with industry stakeholders and NRW to assess issues with respect to each SRO and suitable mitigation measures.

We thank the sector for its commitment, through working groups and other means, in collaborating with us on the framework. We plan to bring this work together in a consultation on policy in late 2021.

1.5 The regulatory framework for water trading

1.5.1 Water trading and bulk supply agreements

Water trades are where water companies or third parties buy water from each other. Most water trades between water companies were agreed before privatisation, and amount to only 4-5% of water going into supply. Trades can be for raw or treated water and reflected in the WRMP process.

The Environment Agency and NRW regulate the abstraction and discharge of water. They oversee any abstraction licence or operating agreement required for trading at catchment level. DWI regulates drinking water quality from source to tap.

Bulk supply agreements are the contracts for water trades between two water companies. Ofwat's powers with respect to these agreements are:

- to determine disputes in establishing an agreement, including on price terms;
- to make codes in respect of bulk supply agreements; and
- to set charging rules, having regard to the relevant guidance from Defra and the Welsh Government, which water companies are required to follow when developing bulk supply charges.

Ofwat's powers to establish codes and bulk charging rules were introduced as part of the Water Act 2014. Ofwat may consider introducing a code and/or charging rules to support the regulatory framework for water trades. In setting charging rules Ofwat must have regard to guidance from [Defra](#) and the [Welsh Government](#).

There are ongoing issues with how bulk supply agreements work in the context of drought, which has led to disputes between companies, increasing costs and impacting on customer service.

1.5.2 Water trading incentives

In its 2014 price review (**PR14**), Ofwat introduced a new set of financial incentives for water trading and these were maintained in PR19. It required water companies to establish a trading and procurement code for new trades. Ofwat enhanced the previous incentive for companies to export water, allowing them to retain a greater share of the profits for new trades than from previous trades. To address a perception that companies were reluctant to acquire water that they hadn't developed themselves, it also introduced a new incentive for companies to import water via trades, allowing them to retain some of the savings that they made by doing so.

Based on available data, the trading incentives have not yet resulted in a significant uplift in trading activity between water companies. At the time of the PR19 final determinations in December 2019 only a small volume of water had been traded under these arrangements. One explanation could be that companies need more time to identify and develop schemes and more will emerge over time. There are also non-economic barriers to trading (such as contracting and ensuring an appropriate level of drinking water quality) and further work to address these areas should make trades easier and more attractive. It may also be the case that companies consider that the current incentives are still not sufficiently attractive to encourage trading.

1.5.3 Bidding market

In the bidding market third party providers submit bids to water companies to provide solutions to help them meet their future water needs, as set out in their WRMPs. Third party providers can be other water companies, retailers or organisations from different sectors, such as industry or energy.

This process is supported by companies publishing water resource market information and bid assessment frameworks on their websites. These are intended to increase transparency and ensure fair treatment of third party options that provide better value than a water company's own options.

Based on available information, these arrangements have yet to result in a third party providing a water resource solution in a water company's plans.

1.6 PR24

One of the main ways Ofwat regulates water companies is by conducting periodic price reviews. The activities of water companies covered by the price review includes abstracting, treating and transporting water; providing retail services (such as billing and debt collection); and taking away, treating and disposing of wastewater and sludge. The price review sets the price, investment and service package that customers receive. When conducting price reviews, Ofwat must balance consumers' interests with the need to ensure that companies are also able to finance the delivery of water and sewerage services and that they are able to meet their other legal obligations, including their environmental duties.

In May 2021 Ofwat published [PR24 and Beyond: Creating tomorrow, together](#), its discussion paper outlining its initial views on PR24 and future price reviews. Ofwat invites written submission to the discussion paper by 5pm on 22 July. Ofwat has proposed four goals for PR24 that reflect the outcomes it wants to achieve for customers and the environment. These are to:

- increase focus on the long term;
- deliver greater environmental and social value;
- reflect a clearer understanding of customers and communities; and
- drive improvements through efficiency and innovation.

The way Ofwat proposes to deliver its goals is by:

- Strengthening incentives for companies to deliver good long term outcomes for customers, communities and the environment;

- Ensuring that customers do not pay for more costs than needed to achieve these outcomes;
- Continuing to align the interests of companies and investors with those of their customers; and,
- Improving the effectiveness of markets, where appropriate.

It will publish the PR24 draft methodology in summer 2022.

RAPID's key interactions with PR24 relate to the regulatory treatment of major projects, and with respect to water resources.

The PR24 discussion paper sets out six areas to improve the delivery of major projects:

- Enhancing the long term view of major projects;
- Improving incentives to incumbents to engage with DPC;
- Reducing transaction costs through standardisation;
- Investigating the further award of project licences;
- Enhancing the assessment of major projects; and
- The treatment of shared assets, risks and outcomes.

All of these apply to water resources infrastructure and RAPID will be contributing to the work from the perspective of strategic water resource solutions, and in particular shared assets, risks and outcomes.

At PR19 Ofwat set out that projects which met certain eligibility criteria should consider whether delivering via a competitively tendered model (DPC) would be beneficial to customers. DPC involves a water or wastewater company competitively tendering for services in relation to the delivery of certain large infrastructure projects, resulting in the selection of a third-party competitively appointed provider (CAP). DPC will result in water companies competitively procuring more aspects of an infrastructure project, including financing for the project. We believe that by outsourcing the delivery of infrastructure projects using DPC, water companies can achieve significant benefits for customers. This includes both through innovation and lower whole life costs of the project.

On water resources, the PR24 discussion paper states that while Ofwat is likely to retain water trading incentives and mechanisms to promote water resource markets, it proposes to:

- review the structure and boundary definition of the water resources control;
- promote regional and national solutions to help unlock best value for customers and the environment;
- review the prospect for bilateral markets before PR29, but not anticipating that it will come into effect during the next price review period;

- consider RAPID's review of issues around contracting and trading bulk supplies of water; and
- consider additional interventions if water companies show insufficient ambition to develop water resources.

Ofwat will consider the findings of RAPID's ongoing work on the regulatory and contractual framework and planning, development, and operation of strategic water resources assets, as it develops its price control framework for the development of water resources more generally.

1.7 Barriers, gaps and opportunities

There have been a number of reviews of barriers and gaps that hinder the development of best value water resource infrastructure. The most recent has been produced for the National Framework. [The study](#) examined barriers to collaboration in relation to water resources. Over 100 barriers were identified from the stakeholder engagement that ranged from perceived policy barriers through to issues with costs and contracts. These were refined to 20 barriers in the following categories:

- overarching industry wide barriers;
- regulatory barriers;
- financial barriers;
- technical institutional and process barriers; and
- organisational culture and customers.

The report sets out how each of the barriers would be addressed and their owner. Already there has been substantial progress in reducing the barriers identified, notably through the National Framework, regional planning groups and establishing the RAPID gated process.

In the next chapter we set out our initial thinking on the regulatory and commercial framework for strategic water resource solutions. We highlight barriers and gaps, explain how we are working to address them, and our initial thinking on approaches and opportunities.

2. Initial thinking

In this chapter, we set out issues and our initial thinking on a more effective regulatory and commercial framework for strategic water resource solutions. We build on approaches already used, particularly with respect to single-company schemes and bulk supply agreements that are already established. We want to test our thinking and would welcome views on particular approaches where they may be effective at delivering our vision.

Our outputs will take the form of recommendations to regulators and to the wider sector.

We outlined the regulators' approach to water resource planning, and RAPID's gated process in the previous section. We do not discuss these approaches further here. We note some interactions between the regulatory and commercial framework and the gated process, and we also discuss potential successor arrangements to the gated process beyond 2025 as part of this chapter.

In developing our approach to regulatory and commercial issues, our focus is on SROs that involve at least two water companies and that are large enough for relatively sophisticated commercial and regulatory arrangements to be proportionate. For example, the solution is likely to be classified by Ofwat as a major project and in England may require a development consent order under the Planning Act 2008.

These considerations may also be relevant for multi-sector solutions and where solutions are of smaller scale.

We are envisaging that this framework applies to new SROs, including trades for treated, partially treated or raw water. We are not considering its application to existing trades. The regulators can prescribe certain arrangements (such as through Ofwat's charging rules or its PR24 determination), but parties have some freedom to agree to diverge from the general approach.

We start by setting out our proposed approach to the overall market design to identify schemes, then how they are procured and the implications of multi-sector involvement. We address regulatory and commercial aspects of major water resource projects which need further development, followed by key issues in the use of transfers. Finally we look ahead to the next round of schemes and how they could be taken forward with less detailed regulatory intervention.

2.1 Market design

We see the market design as an enhanced version of the current model: regional identification of need; water companies and others (in and out of region) putting forward solutions with varying timeframes, regional selection of the best value options.

There are alternative models involving more competition in the market for wholesale water, with analogies to wholesale markets in the energy sector, for example. A large-scale market for water resources would require more interconnected infrastructure. However, the characteristics of water are quite different from energy. For example, mixing of sources is less straightforward as the product is not homogeneous (either from a drinking water quality or environmental perspective). It is therefore not obvious that an energy-like model is optimal and in any event it is not practically achievable in the medium term. We will therefore not consider it further here, although we note that more interconnection is likely over time and further analysis of these issues may be warranted in a five to ten year horizon.

As more strategic transfer schemes become operational, it is possible to envisage a situation where there are multiple sources and destinations of water using a strategic interconnector or potentially an inter-related system of interconnectors (whether via rivers, canals or pipelines), provided the issues associated with mixing water from different sources can be satisfactorily addressed. Terms in bulk supply agreements contracts and/or competitive tenders and other contracts should seek to cater for these future developments.

2.2 Procurement of solutions and tendering

Meeting RAPID's vision for future water resource resilience relies on the delivery of significant infrastructure projects. It is important that these investments, often characterised by high costs or complexity, are efficiently procured and delivered.

As part of the procurement strategy, a company is expected to assess the suite of delivery routes available to it and prepare value for money analysis on the best value option for customers. As part of this we would expect companies to assess the eligibility and viability of DPC. As a minimum, companies are required to look at feasibility and eligibility for DPC at Gate 1 & 2 versus the traditional route for delivery in-house. Submissions for Gate 3 should include a strategic business case for using DPC alongside comparisons with alternative procurement options. We anticipate a finalised procurement strategy to form part of Gate 3, with procurement itself occurring as part of Gate 4. Gate 3 occurs in summer 2023 (or June 2022 for the accelerated gate).

We see having a CAP, such as through a DPC model, as being just as applicable to SROs as to a single water company project. Indeed, when there is more than one company using the

water resource, having it operated by a CAP may help address perception of bias towards one company over another.

In cases where multiple water companies are involved, either as promoters or potentially as beneficiaries, further consideration is needed as to who should undertake the procurement. While it often seems to be assumed that the incumbent water company on whose territory the assets will be developed will be the procurer, this does not need to be the case and there could be advantages in the importing company or a third party undertaking the procurement.

We are also considering whether it may be appropriate that the CAP delivering some projects might benefit from being licensed (and therefore be directly subject to regulation by Ofwat and DWI) using the Water Industry Specified Infrastructure Projects regulations (SIPR). Projects may qualify for these arrangements, which apply to Thames Tideway Tunnel, where the assets are of a size or complexity that threatens the water company's ability to provide services for its customers.

In some cases, the SRO is to free up other resources that already exist but are then redirected to serve the transfer. This is the case with the Havant Thicket bulk supply agreement between Portsmouth Water and Southern Water. We think the DPC model also applies to such circumstances. The Havant Thicket reservoir was potentially suitable for delivery through DPC, but instead is subject to a separate 10-year price control, due to DPC being under development during PR19 and the reservoir's urgent delivery timescales.

The situation may be complicated where there are multiple water companies, as is the case for the Severn Thames Transfer for example, or when it is important that more than one company be the procuring party. In addition, multi-sector options (for example, with agriculture contributing to investment costs and having subsequent resource rights) may offer better value, and we discuss these below. To date, DPC has been developed on the basis of a single water company being responsible for tendering for and managing the contract with the CAP, with Ofwat and DWI regulating customer outcomes and drinking water quality respectively through the company's licence. Our Pricing, Incentives and Risk working group is considering commercial models under multi-party scenarios.

2.3 Financing the RAPID solutions

To facilitate efficient funding of the RAPID solutions, we will engage with the investor and financing community to build understanding of the commercial delivery models being proposed for the different solutions. We anticipate that a number of solutions are likely to be competitively tendered and we want to attract a deep and varied investor base. As mentioned, we will look at ways to ensure consistency of the framework across RAPID solutions and look to standardise the commercial frameworks to the extent possible, to

provide a clear pipeline of projects for which investors and financiers can invest/lend to. We welcome views from the investor community on our initial thinking.

2.4 Contract standardisation

Standardising contract terms should reduce costs of establishing (and potentially bidding for) new contracts, help promote the adoption of good practice, and mitigate the risk of future coordination problems. This applies both to bulk supply agreements and other contracts, for example with a CAP. We anticipate that parties would have some freedom to agree to diverge from the standard terms.

We see developing such terms as a key area for RAPID. We will do this working with fellow regulators and the sector, including with DWI with respect to drinking water protocols, and Ofwat in its work standardising contracts for major projects (DPC). The contract terms may be used in bulk supply agreements, and potentially other contracts (between water companies and third parties). These are aimed at supporting water trading and strategic resource solutions by reducing the transaction costs of organising new water trades, and promoting best practice in agreements.

NERA considered standardisation of bulk supply agreements. We are considering its recommendations in our standardisation working group. We anticipate the scope of the working group to include: practical business-as-usual issues such as notice periods, invoicing, metering; inclusion of standards and protocols, such as with respect to drinking water quality regulation; arrangements during drought and other times of operational stress; force majeure; dispute resolution; and contract termination.

In practice the best utilisation of a strategic water resource is likely to vary through its lifecycle evolving from that expected when it was planned. Ofwat has powers to establish Codes in respect of bulk supply agreements that may have a role in supporting this.

2.5 Drinking water quality

Strategic water resource infrastructure may mix different waters, potentially changing its chemistry which may have implications for how risks to public health and / or customer acceptability are managed. Water companies need to manage these risks when incorporating new water resources into existing distribution systems.

NERA therefore recommends that trades for potable water should include references to water quality standards and protocols and proposes that drinking water quality requirements are standardised in bulk supply contracts.

Current legislation (Water Supply (Water Quality) Regulations 2016 and the Water Supply (Water Quality) Regulations 2018 in Wales; the **drinking water quality regulations**) are clear that recipient water companies are responsible for the quality of their drinking water supplies. This includes risk assessments for the whole supply chain, source to tap. Therefore bulk supply agreements must provide for suitable relationships between companies including operational protocols, data sharing and investigative support where required to ensure the protection of public health.

Water companies must comply with the requirements of the drinking water quality regulations. These companies must therefore:

- ensure that all water supplied for to premises for cooking, drinking, food preparation or washing, must be **wholesome** at the time of supply, i.e.
 - meet certain standards (55+ parameters)
 - not contain substance which would constitute a potential danger to human health
- be **acceptable** to consumers; and
- so far as reasonably practicable, ensure, there is, in general, **no deterioration** in the quality of the drinking water.

Risk assessments and drinking water safety planning processes are used to manage drinking water quality from source to tap. The assessments undertaken during the planning, development and implementation of SROs will identify and mitigate drinking water quality risks inherent in the development of the supply option prior to delivery. [DWI guidance](#) is available on the DWI website.

For all transfers (raw, partially or fully treated water), the importing company is responsible for the risk assessment required under the drinking water quality regulations, relating to wholesomeness of drinking water, and ensuring appropriate treatment is implemented prior to supply. Exporting companies must supply appropriate information (e.g. relating to the catchment) to enable the importing company to properly risk assess its supply.

The contract therefore needs to ensure that there is suitable ongoing monitoring of these risks and mitigations alongside assessment of emerging risk and maintenance of relationships between exporting and importing companies throughout the duration of the agreement.

Development of any direct reuse SROs will need careful customer engagement. Direct reuse (the transfer of effluent from a wastewater treatment works directly to a drinking water treatment works for further treatment and supply) is not currently used in England and Wales. Should such options progress, water companies will need to work with customers and DWI to achieve their acceptance. This includes the very concept of utilising wastewater treatment effluent in this manner. Current safeguards on drinking water quality (including

approval for the membranes that will be required for the treatment) will apply to these solutions.

2.6 Charges

In this section we set out how charging might work. Where it is between water companies, it could be incorporated into Ofwat charging rules for bulk supply agreements. The section is also relevant to charges between a CAP and a water company. The focus of this section is strategic transfers between companies. This area is being considered in more detail by the Pricing, Incentives and Risk working group. Charging arrangements are important issues that need to be resolved to support procurement, financing and commercial arrangements, for Gates 3 or 4. The structure of charges is important for incentivising behaviour, for example signalling the variable costs of different water resources.

SROs involving sourcing water from Wales may have different charging arrangements from those within England, reflecting different legislative and policy contexts.

We do not see that charging arrangements between water companies or between water companies and a CAP need to be established in advance of preparing submissions for Gate 3. In particular, the costs of each SRO are much more important than its charging arrangements in the appraisal of its value. This is separate to consideration of financial contributions from multi-sector parties, which we discuss in section 2.9.

We think in principle companies should have a similar level of confidence about the recovery of efficient costs of investment as if they were developing the resource entirely for their own customers. We propose that this is realised by having charges to recover fixed costs, which are paid irrespective of usage, and separate volumetric charges. We discuss each in turn, before considering any mark-up or return.

We anticipate that different prices might apply, for example in the form of compensation payments in the event of an operational failure.

2.6.1 Fixed charges to manage risk of stranded assets

Water companies are concerned about being able to recover efficient costs of investment from beneficiaries of a water resource, for example if the water resource is used less than anticipated.

Ofwat is developing its regulatory approach to the delivery of projects, including major projects, as part of PR24. These arrangements provide strong financial protections against the risk of stranded assets, i.e. where the assets are used less than is planned. In the case of

DPC, the CAP will recover the tendered costs of the major project through the commercial arrangements established. Similarly, through the PR24 determinations, water companies recover the efficient costs incurred in delivering a major project. The determinations will include any arrangements to manage risks associated with cost overruns.

Establishing broadly equivalent arrangements for projects that are strategic water transfers would address a major barrier to such schemes.

This has implications for the pricing of the water resource. In particular, we propose that the central approach be that the efficient fixed costs are recovered through charges to the beneficiaries of the strategic transfer (which are ordinarily the importing companies), and are payable irrespective of whether the water resource is used (**fixed charges**). This is consistent with the approach for the Havant Thicket transfer.

We are not making proposals at this stage regarding whether and in what circumstances fixed charges might exceed fixed costs. We note that Welsh Government guidance states that customers of Welsh companies should get fair value for the use of resources consistent with competition law. The Defra guidance says that the distribution of costs should be fair and proportionate. Ofwat must have regard to this guidance when setting the applicable charging rules. We discuss issues around how the gains from trade are apportioned, and returns to companies, in section 2.6.3.

We also suggest the following should apply:

- Customers of importer water companies should pay a fair contribution, and generally this should be no greater than the next best water resource (or demand management) alternative.
- These fixed charges would ordinarily be passed through from the importing company to its customers' bills.
- The exporter's customers should be no worse off, and only pay if they receive a share of any new capacity.

For strategic water resources, given the lack of market and the regulatory structure, there is insufficient reason to expect water companies to put forward or reach agreement between themselves on efficient cost levels. Therefore we expect such schemes to be subject to Ofwat cost assessment consistent with its approach for other projects (including those delivered by DPC).

2.6.2 Volumetric charges

To give the right signals for utilisation of the water resource, where a water company is paying the fixed charges described above, volumetric charges should be set equal to variable costs.

In practice there may be other considerations and trade-offs. For example, Ofwat must have regard to government guidance when it sets charging rules. In particular, current guidance from both Defra and the Welsh Government emphasise, amongst other things, the importance of stable charges, which might suggest some averaging over time. In addition, amongst other things, the Defra guidance says that the distribution of costs should be fair and proportionate, and that de-averaging of network costs should be avoided; the Welsh Government guidance states that customers of Welsh companies should get fair value for the use of resources consistent with competition law.

There may be scenarios where an exporting company has surplus water that it wishes to trade with a third party; or where a third party may wish to use a water company's existing infrastructure, such as an interconnector. We anticipate that under such scenarios, where the third party is not liable to pay the fixed charges described in the previous section, the water company may set bulk charges that recover more than variable costs. An analogy is Ofwat's guidance on bulk supply charges to new appointees (NAVs, which are new water companies typically serving new housing estates). The guidance sets out that NAVs should be charged on the basis of wholesale charges minus avoidable costs, effectively meaning that the incumbent water company recovers an average of relevant fixed and variable costs.

2.6.3 Water trading incentives and returns

Under the commercial arrangements of a bilateral trade between water companies, there are four main parties to consider: the importing and exporting companies and their respective customers. Where charges are set to equal cost, all the benefits of the trade fall to the importing company and its customers. Under Ofwat's water trading incentive, all four parties may gain from the trade: the exporting gain is shared equally between company and its customers; the importing company may at least cover its set up costs by retaining 5% of the value of the trade for an initial period; and the importing customers gain to the extent that the trade is cheaper than the next best alternative.

Where the trade is with a third party (not a company or a CAP), the third party might be expected to seek to maximise their commercial gain.

The Havant Thicket trade has a variation on Ofwat's water trading incentive, where the parties have greater comfort in advance that they will be eligible for the incentive payment.

NERA suggested an alternative to the water trading incentive, where charges were set to reflect costs plus a return for the exporting water company.

We consider that key principles underpinning the incentive (and NERA's alternative), **that the exporting company should be incentivised to trade, and the importing company should at least be able to recover its costs**, are relevant for SROs as well as smaller trades.

Ofwat may make changes to its water trading incentive as part of PR24. We will work with Ofwat and wider stakeholders on how any trading incentive, or potential alternative, be applied to SROs.

2.7 Allocation and pricing of water during drought and operational events

The development of new shared water resources and strategic transfers are critical to the goal of ensuring a secure, sustainable, and affordable supply of water. To realise this ambition, there will need to be clarity around their operation in the event of drought, or where other operational circumstances limit the availability of water.

This relates to a key concern for companies, particularly in relation to bulk supply agreements: that an importing company may not be able to rely on a strategic water resource because, for example under drought conditions, the exporting company might prioritise its own customers.

For within-England or within-Wales trades, we propose that the approach to allocating water during drought and operational events should reflect the following principles:

- there should be good outcomes for customers of both water companies, the exporter and the importer (or potentially multiple water companies);
- the environment and society should be protected; and
- water companies should be incentivised to plan, manage and operate their assets effectively.

There may be separate arrangements for cross-border supplies between Wales and England, reflecting the policy and legislative context.

We have identified three ways that rights to share water resources could be defined within a new bulk supply agreement in drought or other unplanned operational circumstances:

- Guaranteed rights / best endeavours – rights are firm for the recipient. This is an approach favoured by some water companies;

- Interruptible supplies approach – the exporter is only required to make water available until such time as maintaining the bulk supply would increase the likelihood of drought measures or interruptions in supply to its own customers.
- Fair shares approach – the agreement would provide for allocation of water so as to take into account the circumstances in both the exporter’s supply area and the importer’s supply area with the aim that the customers of the exporter and importer receive a fair (potentially similar or equivalent) level of service.

We propose to develop a more collaborative fair shares approach between English water companies and between Welsh water companies because we consider this is the only one of the three approaches that is consistent with the principles set out above. This has strong analogies to arrangements if the water resource supplied a single water company, because the company would be considering how best to seek to supply all customers across its area.

There may be additional or separate considerations in relation to cross-border arrangements.

We envisage, in practice, that an agreement would include proportionate operating rules and prices for the allocation of water under a range of different anticipated scenarios consistent with the principles set out above. In the case of drought, the scenarios could be based on triggers in companies’ drought plans. The pricing arrangements should be such that they do not undermine water companies’ incentives to plan, manage and operate their assets effectively. These operating and commercial rules could be supplemented by a principles-based mechanism within the contract allowing companies to respond to unforeseen circumstances in a collaborative and flexible way. There could also be a mechanism to allow for the revision of operating rules, for example, in response to experience of operating a transfer.

We believe that this approach is consistent with the duties that water companies have under section 37 of the Water Industry Act 1991. Section 37 is a water company’s general duty with respect to supply in its own supply area. It requires the company to develop and maintain an efficient and economical system of water supply within its area and to ensure that arrangements are in place to meet its supply duties.

Section 37 is in essence, a planning duty. The positions of an exporting water company and an importing water company in entering into a bulk supply agreement adopting a fair shares approach are:

- an exporting water company will need to plan to meet its section 37 duty and to meet its contractual obligations to transfer water in accordance with operating rules under a bulk supply agreement; and
- an importing water company will be able to rely on the water that it receives under a bulk supply agreement in accordance with operating rules in meeting its section 37 duty.

It will be important that arrangements are clearly taken into account and described in company drought plans. Some of these principles may be applicable to more complex multi-party arrangements, for which we anticipate interruptible supply to, for example, industry, may also be important.

As the NERA study made clear, to be effective, a contract will need to set out arrangements, including compensation, for the scenarios under which issues and problems may arise. It seems likely that any arrangement would need to include rights to financial compensation (typically as liquidated damages) where supply is disrupted. Consideration should also be given to including provisions that allow the recipient company to apply to the Court for an interim injunction to require a physical supply to be made in certain circumstances.

2.8 Environmental regulation

Any transfer of water will be subject to legislation governing the abstraction of water from the source and the discharge of water, including operating agreements. The exporting and importing companies will need to comply with relevant legislation. The transfer should be reviewed as part of the option appraisal through regional planning and WRMP processes. The cost of adhering to legislation will need to factor into the cost of any transfer/bulk supply agreement. This should include cost of mitigation of ensuring the transfers are legally compliant.

Where an SRO faces constraints that potentially make it unviable this needs to be identified early to establish if they need to be removed or revised as solutions. In other cases, mitigations may be possible to maintain viability of the SRO and these measures, both short and long term, need to be understood and included as soon as possible. In some cases there may be difficult trade-offs to be considered across a range of risks and across a range of SROs, taking into account local risks versus wider national benefit at a larger scale in terms of resilient water supply, overall environmental gain and enhanced ecosystem resilience as well as overall benefits to society. It will also be necessary to consider the potential disbenefits that may significantly change a solution from the one initially proposed. All of these factors need to be thoroughly understood and worked through to secure the best value outcome overall.

Examples of relevant areas that may need considering by companies include:

- how to ensure no adverse impact to designated sites and features under the Habitats Regulation Assessment
- how best to ensure no significant effects under Strategic Environment Assessment – including wider society considerations, multi benefits for tackling issues such as flooding, water quality and overall carbon reduction (meeting water industry and statutory net zero targets)

- how to best balance the risk of spread of Invasive Non-Native Species (such as ‘Dikerogammarus villosus’ or ‘Killer Shrimp’) against maximising opportunity to keep water in the environment through the use of open water transfers;
- how to best manage the risk for solutions to alter river characteristics in a way that might result in deterioration of water body status under Water Framework Regulations classification, and whether this could be offset by greater environmental improvements in a different location; and
- how to ensure compliance with additional specific legislation where relevant, such as the Environment Wales Act and Well-being of Future Generations Act.

Many of the SROs involve taking water from sources of supply, such as rivers. These will need abstraction licences, granted by the Environment Agency or NRW.

Due to the long lead times of the SROs, there is a risk that other abstractors could apply to take water needed for the SROs. For water abstraction in England, the Environment Agency does not reserve water for future use as this ties up water ahead of need. The evidence that the Environment Agency requires to support a licence application, including having a ‘justification of need’, may be more difficult to obtain at an early stage in SRO development. Where there are competing demands for an abstraction licence, the Environment Agency will need to consider how to secure the greatest socio-economic benefit whilst they respond to changing water availability, environmental standards or improved scientific evidence on environmental impacts. Similar issues apply to water abstraction in Wales, within the context of Welsh policy and legislation. The Environment Agency and NRW will consider their future approach to potential licensing of the SROs and the needs of other water users.

There is the possibility that established water abstraction conditions in a system – which together define how much water can be taken or transferred – may need to change over time. The regulators will need to consider their future approach to potential licensing of the SROs and the needs of other water users whilst they respond to changing water availability, environmental standards or improved scientific evidence on environmental impacts.

The Environment Agency, in conjunction with Natural England and RAPID, is setting up a dedicated Environmental Regulation task and finish group with representatives from the water companies developing the SROs and from regional groups. The group will focus on fully understanding the environmental policy and operational risks associated with new water supply option development from all perspectives. It will collate the issues relevant for the SROs and work through them with the solution sponsors and other regulators. The group will produce an overall risk assessment across all SROs and build an understanding of which solutions are most sensitive to which issues. NRW will be a member of the group and lead on any issues within or affecting Wales. Where changes in guidance is recommended, the Environment Agency, Natural England and NRW (where relevant) will consider the appropriate changes.

2.9 Multi-sector solutions

One of the achievements of the National Framework and parallel policy development in Wales has been to improve consideration of water resource needs and supply from beyond the public water supply sector and potentially to encourage additional use of water resource assets, such as shared resources between sectors, or more generally integration of drought and flood planning.

This seems likely to lead to better value solutions, potentially better environmental outcomes and/or better value for water customers. This may be due to economies of scale, for example in the case of a reservoir, or due to complementary water resource requirements that allow industry to reduce its usage during times of water scarcity. Different sectors are likely to have different patterns of demand for the water resource. Understanding and modelling this utilisation, as well as establishing the expected financial contributions from different parties, would be important for appraising the value of the SRO. We expect that this will lead to some of the costs being funded from other sources (not just water customers) and for water customers to receive a fair share of any benefits relative to a single party option.

It may be possible to address most of the multi-sector commercial issues through side-contracts without fundamental change to the main commercial model. However, where the multi-sector aspects are material, this may not be sufficient and involvement in a joint venture may be more appropriate. It would be for the water companies concerned to ensure that they could still meet all their statutory and regulatory obligations and mitigate any risks that changes to the non-water company aspects of the project could impinge on the value to the water sector.

We support a partnership approach where water companies work together with other parties to deliver broader outcomes and additional value beyond their statutory functions, with water companies funding their fair share of the costs of any improvements, consistent with their statutory functions.

2.10 Solution development and delivery beyond 2025

Current developments in water resources are based on the developments of SROs funded in PR19 through a stage gate process operated by RAPID and through regional planning groups co-ordinated through a process overseen by RAPID. There are questions around what alternative approaches for planning strategic water resources might be effective in future but require less regulatory oversight, and also around the regulatory oversight required for current SROs beyond the existing RAPID gated process.

At present, water companies have a legal obligation to ensure they have sufficient water resources. The PR19 provision of funding for development of multiple options, combined with

RAPID's assessment of submissions through the gated process, has clearly improved the sector's ability to progress infrastructure. Already a number of new options have been brought forward which were not selected in previous plans. The challenge is to find a way to encourage this to happen more fully in future cycles, and at lower cost.

Effective financial incentives, together with other measures to mitigate barriers to collaboration, might be a substitute for the gated process in helping to address this.

Alongside a more conducive framework for identification of the best options, we recognise that decisions to select particular solutions may still be needed in a situation where there is considerable uncertainty, not just about need – balancing supply and demand interventions – but also about the cost and timing of individual projects as experience with the SROs has demonstrated. In this context, taking multiple alternative solutions through the early phases of development is likely to be a cost-effective approach, allowing lead times between decisions to proceed and need to be reduced. The regulatory framework enables this to happen, as demonstrated by PR19 (and water companies are in any case funded for the development of enhancement projects, not just for water resources), but we would expect the water companies to take the initiative in proposing such approaches in future.

We will draw on our experience of operating the RAPID gated process with the aim of developing a more streamlined approach, if one is necessary, recognising the value in making decisions to proceed with or stop developing projects as soon as the best option can be robustly determined rather than in a pre-determined five yearly cycle.

Beyond 2025, SROs that have completed the RAPID gated process will move from the development phase and enter the delivery/construction phase. Given the collective scale of the projects, it will be important to plan for the extent to which, and in what form, continued regulatory oversight will add value. A comparator is the Thames Tideway Tunnel, currently being constructed, where Ofwat and other regulators provide significant on-going regulatory oversight.

2.11 Co-ordinated operations

The regional groups within the National Framework are developing co-ordinated regional water resources plans. This is an important first step in achieving co-ordinated outcomes. Nonetheless, it is critical that the projects and systems envisaged in the regional plans can be delivered and, where appropriate, operated in an effective and co-ordinated manner. This includes with respect to some of the issues already highlighted in this section, such as standardised drinking water quality requirements and protocols.

Over time, to the extent that strategic transfers become more prominent, the benefits from effective coordination are expected to increase. This includes decisions around asset

utilisation, access to capacity and volumes of water supplied. Greater coordination of decision making will be required as we move to greater sharing of resources facilitated by the construction and operation of assets specifically designed to be owned and operated for the benefit of multiple parties across multiple sectors.

We expect to draw on the Baringa and Mott MacDonald consultancy study and the findings of the working group on co-ordinated operations to develop our approach as part of our consultation in late 2021.

Questions for stakeholders

We welcome views on our initial thinking set out in this chapter. In particular:

- Q1.** Which aspects of our initial thinking do you agree with or disagree with? What other approaches would you advocate and why?
- Q2.** What have we missed that also needs to be progressed?

Please provide explanations of your comments.

3. Next steps

We welcome responses to this discussion document by **Wednesday 21 July** from a broad range of interested parties and will take them into account as we develop RAPID's further thinking on the regulatory and commercial framework for strategic water resource solutions.

In parallel, the working groups on contract standardisation, pricing, incentives and risk and co-ordinated operations will continue to meet over the coming months for more detailed discussions. Issues relating to environmental policy and operational risks associated with new water supply option development will be picked up by the new Environmental Regulation task and finish group. The consultancy study on co-ordinated operations has recently commenced. We are looking to take forward work on commercial models, drawing on previous studies to recommend practical models for joint ventures and/or collaboration between water companies and organisations outside the public water supply sector.

We will continue to liaise closely with our partner regulators and NRW to work to improve the regulatory framework and to ensure that our advice is as useful as possible, while engaging with the water companies and other stakeholders to understand their issues and concerns.

Our current plans are for a consultation on policy options towards the end of 2021, prior to the consultation on regional plans in January 2022. This will subsequently feed into our advice to partner regulators in the first half of 2022, in advance of Ofwat's consultation on the draft methodology for PR24.

Questions for stakeholders

We have set out the work we are undertaking, how it interacts with the gated process, and our next steps.

Q3. We welcome views on our proposed next steps, including additional activities that we should be undertaking.

A1 NERA review of bulk supply agreements and pricing

In 2019 RAPID contracted NERA to investigate the role of contract design in promoting the efficient bulk trading of water in England and Wales. The study focuses on the trading of bulk supplies between incumbent water companies. We published NERA's report, [Review of Bulk Supply Contracts and Pricing in the English & Welsh Water Sector](#), in December 2020.

The study included a review of water companies' existing bulk supply agreements to identify areas for improvement, and to assess the potential role for standardised design of those agreements in reducing the transaction costs of trading.

Additionally the study considered the roles contracts play in supporting efficient trading in other sectors, and two important aspects of contract design as follows:

- The pricing of water transfers to promote efficient trade and infrastructure development, as parties will only trade when the price at which exchanges take place is at a price below/above the opportunity cost of the buyer/seller; and
- The mitigation and allocation of risks in the contract, such as credit risk, the uncertain ability of the seller to deliver water as agreed in the contract, variation in water quality, or environmental risks associated with the transfer. Poorly designed contracts may also create incentives for "hold-up" if one party makes a relationship-specific investment without sufficient commitments from the other party to pay for the share of the project from which it benefits. Contracts which fail to envisage future developments or value drivers such as quality-level, price, quantity, or time of delivery may also create inefficiency and deter trade.

The approach that NERA took was to firstly establish the regulatory background and context of the water industry in England and Wales, including current regulation with respect to the award and trading of abstraction rights and the water resource management planning process.

Secondly Ofwat's role and current trading incentives were analysed alongside the PR19 determination for water trading at Havant Thicket reservoir.

This was then set alongside an analysis of the economic theory of pricing of water trades and the role of contracts, including risks that contracts should address explicitly.

Having thus established this background NERA then undertook a review of current contracting practices for bulk transfers in the English and Welsh water industry, drawing on an analysis of current bulk supply agreements in England and Wales which were submitted by water companies to RAPID.

They also examine trading and the role of contracts in the following six case studies:

- trading of electricity in Great Britain;
- electricity interconnectors in Great Britain;
- upstream gas contracts in Europe;
- trading of water in Australia, in the Murray Darling Basin;
- trading of water in Nebraska, in the Central Platte River; and
- trading of water in California,

to understand good contracting practice and to draw lessons that may improve contracting in bulk water trading in England and Wales.

Evidence from both current bulk supply agreements in England and Wales and the role of contracts in the case study jurisdictions was used as the basis for NERA to make ten recommendations to improve bulk supply agreements.


Table 1.1 RAPID initial thinking on NERA’s recommendations

	Recommendation	Our response
1	Developing a Standardised Form of Bulk Water Contracts to reduce the transactions cost of trade	Standardisation working group (WG) to progress this.
2	Standardisation of Water Quality Management Protocols Trades for potable water should include references to DWI’s water quality standards and protocols	Agree with recommendation. Standardisation WG, with DWI input, to take forward. Consider extent to which updated version of Water UK’s protocol might satisfy this.
3	Enhancing Guidance on Contract Pricing & Theory suggests a pricing rule based on incremental cost (plus a margin) would encourage efficient trade	Accept industry sees guidance on pricing as a priority. Pricing incentives and risk working group progressing this. Consider more widely than incremental cost, emphasising difference between fixed and variable elements, and firmness of right to the resource. Discussed in this document.
4	Dividing the gains from trade: Ofwat has put in place incentives for companies to trade but they lack transparency and impose costs on selling companies’ customers	Working with PR24, we are considering role and specification of water trading incentive. Discussed in this document.
5	Advertising Trading Opportunities: We recommend that Ofwat enhances current obligations to advertise spare water resources.	Working with PR24, we are considering barriers to trade including improving transparency around trading opportunities.
6	Ofwat clarifies companies’ obligations in drought conditions in relation to bulk transfer customers	Have set this out as part of this document.
7	Penalty clauses are necessary to ensure contracts are “firm”. The only means by which the purchaser can receive compensation is through settlement or dispute process	Agree with principle that some financial penalties are needed in some circumstances. The complexity of such arrangements need to be proportionate to the context.
8	Uncertainty about Abstraction Licences Arrangements	Discussed in this document.

9	Third-party Access to Infrastructure Regulation prescribing that it was made accessible to third parties on non-discriminatory terms	Within scope of pricing guidance. It would sit within the framework of planned infrastructure subject to long term contractual rights to water resources and funding.
10	Prohibition of Destination Clauses (i.e. importers may sell water)	We agree with this recommendation, within the framework of processes around security of supply. Recognising that water is not homogeneous, there may be a need to preclude further transfers on environmental or drinking water quality grounds, but this should be governed by environmental or drinking water quality regulation.

Questions for stakeholders

Q4. We welcome views on NERA's recommendations and our initial thinking on them.



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