July 2022

Competition in strategic investment: a high-level stocktake

Ofwat

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1. Executive Summary

In January 2022, the Secretary of State for Business, Energy and the Industrial Strategy asked Ofwat to conduct a high level stocktake to identify both opportunities and barriers to unlocking more competition in strategic investment

This report sets out Ofwat's response to the Secretary of State's request

We set out some of the potential benefits of competition that we have observed in our work. These include:

- Lower costs
- Increased speed and effectiveness
- Wider benefits, such as environmental improvements and innovation

We also identify key barriers to further competition, and suggest key changes that could help remove these barriers

Barriers

1. Legislative restrictions to using the SIPR regime more widely
2. Limitations in our ability to regulate and enforce against third parties providing water treatment services
3. Inability for water companies to automatically apply for a development consent order under the Planning Act 2008

Recommendations

1. Remove scale and complexity test from Water Industry Act 1991 and SIPR
2. Amendment of the Water Industry At 1991 to make provision similar to that made in respect of licensed water suppliers on retail market opening
3. Review and update the definition of water NSIPs in the Planning Act 2008

We look forward to discussing these recommendations with Government

2. Introduction: Purpose of the competition stocktake

2.1 Background

In January 2022, the Secretary of State for Business, Energy and Industrial Strategy wrote to the chief executives of Ofcom, Ofgem and Ofwat to set out the Government's strategic priorities for the utilities sectors.

In that letter, the Secretary of State asked Ofwat to conduct a high-level competition stocktake:

> *We are grateful for your ongoing efforts to identify opportunities for competition to drive investment, innovation and lower prices for consumers, but believe more could be done. We welcome Ofgem's consultation looking to introduce greater competition in onshore electricity transmission networks and believe Ofcom's formal market review process has proved particularly effective in unlocking competition in their sector. We would like to see Ofwat undertake a similar, high-level, stocktake by Spring 2022, to identify both opportunities and barriers to unlocking more competition in strategic investment. Where appropriate, this will feed into a forthcoming consultation on economic regulation, which we expect to be published in 2022.*

This report sets out our response to the Secretary of State's request.

2.2 Scope of this report

This report focuses on the role of competition in strategic investment. By strategic investment, we mean the development of high value projects or programmes with broad benefits to customers, society as a whole, and / or the environment.

We believe that there is an important opportunity for competition to unlock further strategic investment in the water sector, primarily to support the delivery of **major infrastructure in water and wastewater**. This is the main subject of this report and informs its key recommendations.

In chapter 6, we also touch on other markets where competition has the potential to unlock further strategic investment: the **new appointments and variations (NAVs)** market; and the **bioresources** market.

While Ofwat regulates the water sector in both England and Wales, this report's recommendations relate to English water sector only. The Senedd Cymru has devolved legislative and executive competence over most matters of water policy in areas served by water companies operating wholly or mainly in Wales. In its Strategic Policy Statement (SPS) to Ofwat, the Welsh Government states that the further promotion of competition in the water sector in Wales is undesirable.

A glossary of terms is provided at Annex 2 of this report, and these terms are picked out in **red** in the report.

2.3 Status of this report

This report provides information on ongoing work to unlock further competition in the water sector. However, it also makes clear where there are barriers which may limit the potential benefits. In our recommendations we suggest some ways in which these barriers might be removed.

Ultimately, it is for the Government to decide whether and how to take these recommendations forward, and we look forward to discussing our recommendations with the Government in due course.

3. Background

3.1 Ofwat's role in promoting competition

Given their inherent nature, many parts of the water and wastewater value chain are subject to natural monopolies where there is limited scope for competition in the market. At the same time, Ofwat has a track record of looking for opportunities to promote competition as one important way of solving the key challenges facing the water sector. Indeed, promoting competition forms a significant part of Ofwat's statutory framework.

Under section 2 of Water Industry Act 1991 (as amended), Ofwat must carry out most of its work as an economic regulator in the way we consider will best further the consumer objective to protect the interests of consumers, wherever appropriate by promoting effective competition.

In addition, successive UK Governments have asked Ofwat to consider the use of competition in our regulation through their strategic policy statements (SPSs).[1] Both the 2017 and 2022 UK Government SPSs have encouraged Ofwat to use competition and markets to address key issues in the sector.

These statutory duties and strategic steers have laid the foundations for several major regulatory initiatives over recent years. This includes some programmes that go beyond the scope of this report's focus on strategic investment; for example, the opening of the business retail market to competition in 2017, and Ofwat's subsequent monitoring of that market.

3.2 Using competition to deliver major infrastructure investment

Within the water industry, major infrastructure projects are projects that are an order of magnitude larger than what a company would normally deliver as part of its business-as-usual operations, and may have different characteristics, such as a different risk profile or more complex commercial and operational arrangements. These projects are often strategically important for the company and its customers. For example: companies often deliver small projects in the tens of millions of pounds, but

[1] Alongside taking account of our statutory duties, Ofwat must act in accordance with the SPS when carrying out relevant functions.

less frequently need to deliver projects such as new large water treatment works, reservoirs, or interconnectors, which have capital costs in the hundreds of millions of pounds or more. In our draft methodology for our PR24 price review, we are indicating that major projects would be classified as those projects with whole-life total expenditure (**totex**) in the region of £200m upward.

Putting these major infrastructure projects out to competitive tender, for a third party to design, build, finance, and/or operate and maintain can deliver better value for customers and provide a wide range of benefits, as noted in section 4 of this report. To date we have introduced two competitive delivery models to the sector – a licensed model (under Part 2A of the Water Industry Act 1991 and the Specified Infrastructure Project (English Undertakers) Regulations 2013) (or **SIPR**), and a contracting model called Direct Procurement for Customers (or **DPC**).

3.2.1 The SIPR model

The first competition for a major project to be designed, built, financed, operated and maintained was the Thames Tideway Tunnel (**TTT**), a c.£4.2 billion sewer, which reached financial close in Summer 2015. The Water Industry (Specified Infrastructure Projects) (English Undertakers) Regulations 2013 (SIPR) were established for the project and the successful, competitive procurement resulted in an infrastructure provider being licensed to deliver the project. The original affordability envelope for the project was up to a £70-80 increase on Thames Water's customer bills. Following the competition the estimated average annual bill impact was reduced to £20-£25[2].

The success of the TTT procurement, as well as models in other sectors such as offshore transmission, led Ofwat to look for other opportunities to employ a similar approach. However, there are currently very restrictive limitations in the legislation as to when SIPR can be used, and to date we have been unable to use it for any other project. The current legislation limits the model's use where:

- the infrastructure project is of a size or complexity that threatens the water company's ability to provide services for its customers; and,
- specifying the infrastructure project is likely to result in better value for money than would be the case if the infrastructure project were not specified.

We saw the potential for SIPR to provide greater benefits for one of the current DPC pathfinder projects – the Haweswater Aqueduct Resilience Programme. In considering

[2] Defra – Creating a River Thames fit for our future - An updated strategic and economic case for the Thames Tideway Tunnel

the appropriate delivery model, United Utilities undertook a broad assessment of the SIPR requirements and was concluded that it did not meet the current tests in legislation and instead the project is being delivered under the alternative DPC route (see below).

3.2.2 The DPC model

In addition to SIPR, we have designed and implemented the DPC model, which uses a contractual approach between the incumbent water company and a competitively appointed provider. Under this approach we continue to directly regulate the water company for the delivery of the project, rather than licensing and directly regulating the competitively appointed provider as we would under the SIPR model. The DPC model is still in its nascent stage and we have three pathfinder projects:

- **United Utilities' Haweswater Aqueduct Resilience Programme:** a very large project to replace parts of United Utilities' 100km Haweswater Aqueduct which brings drinking water to Cumbria, Lancashire and Greater Manchester.
- **Dŵr Cymru's (Welsh Water) Cwm Taf Water Treatment Works:** a new, large water treatment works to serve c. 1.4 million people in Wales. Currently Dŵr Cymru is developing this on a design-build-finance only basis.
- **Southern Water's Hampshire Water Transfer and Water Recycling scheme:** a new water transfer from the planned Havant Thicket Winter Storage Reservoir and a water recycling scheme to ensure supplies to Southern Water's Hampshire region and enable it to meet 1 in 500-year droughts.

United Utilities launched its procurement process in June 2022, which is expected to be complete early 2024. Construction is expected to last eight years and finish in 2032. The other two projects are currently in commercial development, with Cwm Taf Water Treatment Works expected to be put out to tender later this year. Southern Water's project is at a much earlier stage and the company is expecting to apply for planning permission and initiate the procurement process in the latter half of 2023. Government has assisted in progressing the procurement process by making an exclusion order under the Housing Grants, Construction and Regeneration Act 1996 to ensure the Act does not adversely affect the structure and operation of project agreements for DPC projects.

Based on the current pathfinder projects, we estimate that delivering projects via DPC could deliver benefits for customers of between 6% and 40% of totex associated with delivery and operation over the lifetime of the asset.

There is also a strong pipeline of strategic water resource projects coming forward over the next 5-10 years to provide long term resilience to meet future water supply and

demand needs, and as much as £14bn of infrastructure could be required[3]. Many of these schemes are likely to be suitable for delivery via a competitive model.

Both competitive delivery models, DPC and SIPR, have an important role in supporting the delivery of strategic infrastructure projects. However, for some projects a licensed model such as SIPR may be a better approach and it is likely that it could have added benefits over and above that of a contractual model (DPC) for issues like obtaining a lower cost of capital and a more flexible approach to managing and dealing with risks. Although transaction costs are likely to be higher, this could create an opportunity to gain even greater benefits for customers.

[3] RAPID 2022/23 Forward Programme

4. The benefits of competition

There are several ways in which competition can support strategic investment in major infrastructure in the water sector.

Here we set out the different kinds of benefits that competition can bring, and then estimate the scale of these benefits for the provision of major infrastructure. We have grouped these benefits under three broad themes: **lower cost**, **increased speed and effectiveness**, and **wider benefits**.

4.1 Competition can help deliver major infrastructure at lower cost to customers

The primary benefit of competition that we have observed in the delivery of major infrastructure is that solutions can potentially be delivered at lower cost. The benefits of these lower costs can then be passed on to customers, either directly through lower bills or indirectly through other means (such as delivery of infrastructure more swiftly, or increasing innovation).

Competitive processes – for example, bidding for contracts – exert pressure on market participants to ensure the contract price more closely reflects their actual costs. In the case of the TTT, the winning bid for the financing of the project was over 100 bps lower than the cost of capital we allowed at the 2014 price review. This results in customers paying only for the marginal cost of financing the project at any point in time, rather than being awarded an allowance which reflects a portfolio of financings over time which may overcompensate a company if they were to finance in-house through a business-as-usual model as part of a price review. Similarly, the competitive process can also drive down the whole-life cost of delivering infrastructure.

Other sectors in the UK and internationally have demonstrated that there can be significant savings from using competitive delivery models. For example, competition in Offshore Transmission (OFTOs) is estimated to have driven up to £750m of benefits across rounds 2 and 3 of tenders. Ofgem is now running tender rounds 7-9, due to launch in the summer and further savings are expected. As a whole, the first three OFTO tender rounds estimated savings between 19-23% of tender revenue streams[4].

[4]Ofgem – Evaluation of OFTO Tender Round 2 and 3 Benefits

Ofgem is also now exploring how it can introduce greater competition for onshore transmission.

Additionally, on new nuclear the Government recently estimated that a licensed competitive delivery model (similar to that used for the TTT) could create £30bn of savings for consumers on each new large-scale nuclear power station compared to the existing Contract for Different (CfD) model. CfD is also a form of competitive delivery model and is a contractual model. Therefore, the estimated savings reflect the additional benefits that a licensed model could achieve over and above a contractual model such as CfD.

Another way in which competition can lower costs is through the process of **price reveal.** Under our normal price review process, Ofwat sets efficient allowances for companies to deliver services to customers, including the delivery of new assets. However, this can be challenging due to information asymmetry between Ofwat and companies. It is particularly difficult for large projects where there are few robust benchmarks as similar projects may not have been delivered in recent memory or in some cases since privatisation. Additionally, determining how a large project may impact the risk profile of the company (and its cost of finance) can be equally difficult. Competitive delivery models overcome this issue, as under these models customers benefit upfront from market tested finance and delivery costs through the procurement process.

These price reveal benefits can go beyond the scope of an individual project. It can provide wider benefits for the regulatory regime as it provides us with greater transparency on the costs of delivery and financing that we can use to inform our price review process. By growing our evidence base in this way, we will have a better sense of the efficient costs of company spending proposals, allowing us to make sure customers only pay for what's necessary.

The type of competitive delivery model can also affect the potential benefits. For example, licensed models such as those used for the TTT and being developed for new nuclear have the potential to deliver greater benefits than contractual models like DPC. This is because the regulatory certainty provided by a licensed model can reduce the **perceived level of risk** for the project and as a result attract a lower cost of finance than had it been procured under a contractual model. We discuss this further in section 5.1.

4.2 Competition can help deliver major infrastructure more quickly and effectively

As well as delivering solutions at better cost, competition can also help to deliver major infrastructure more quickly, than might otherwise be the case if delivered in house, and with reduced impact on the incumbent water company.

Competitive delivery models allow for major infrastructure projects to be isolated from the incumbent water company and focussed in special purpose vehicles, whose sole purpose and focus is to deliver the project to time and to cost. This enables a more tailored, ring-fenced approach to incentives and risk allocation, providing a clear focus for the project deliverer. This in turn leads to better outcomes (e.g. faster delivery) for customers than if the project were delivered in-house by the incumbent company, who have competing priorities and incentives to manage across its business.

Competition may also unlock other efficiency benefits, including within incumbent water companies. Major infrastructure projects are complex to manage and can have a significant impact on the organisation leading them. Where the project is in addition to a core business, it can be a **distraction for senior management** and Board and can have a serious negative impact on the company's ability to deliver business as usual, including delivering excellent operational performance for customers and the environment. Outsourcing the delivery and financing of the project can de-risk the monopoly service provision and allow the company to focus on the provision of core services to customers.

4.3 Competition can support the delivery of wider benefits

Competitive processes can also unlock wider benefits, either for the project or service itself, or for customers, the environment and society in the round.

Competition can help to increase **innovation** by bringing competitive pressure to market participants. In major infrastructure provision, competitive delivery models will increase innovation in how projects are delivered, as well as the type and design of the solution. This will be driven by bidders looking for opportunities to reduce whole-life costs while also meeting the water' company's requirements and environmental standards.

Supporting environmental improvements through competition

In our analysis of the benefits of competition, we have seen several examples of where competition can help to support improved environmental outcomes.

Competitive delivery of major infrastructure may help to support an increased use of innovative approaches, including **nature-based solutions,** across the delivery and operation of an infrastructure asset. While incumbent water companies already competitively procure the capital delivery of infrastructure projects, these are traditionally limited to "design and build" competitions where the incentives on the contractor are more heavily focussed on reducing capital delivery costs through value engineering rather than considering whole-life costs. Under a competitive delivery model such as DPC or SIPR, where the financing, operations and maintenance are also procured, there are sharper incentives on the competitively appointed provider to achieve efficiencies across the delivery and operations of the asset. They are therefore less likely to be influenced by established methods or processes favoured by the incumbent water company, and as such provide greater opportunity for innovation and may support the increased use of nature-based solutions to meet the water company's requirements.

We also foresee that a competitive delivery model may open up opportunities for a broader, more varied investor base and access to new sources of green finance which cannot be accessed through traditional funding models.

In new appointments and variations market (discussed in section 6.1 of this report), developers have repeatedly highlighted that a clear benefit of working with new appointees is their willingness to help them meet the Government's increased **environmental obligations**; for example, the introduction of the Government's Future Homes standards. The details of these standards are still being worked through by the housing sector; however, it is clear that new appointees have much to offer developers in terms of flexibility in design and enabling more sustainable and environmentally impactful solutions that incumbent companies are unwilling or unable to provide.

The earlier in the process the project is procured (e.g. pre-planning application), the greater the opportunity for innovation. However, there are challenges to competitively tendering strategic infrastructure projects at such an early stage and investors are generally unwilling to take planning and consenting risk. As a result, projects are likely to be developed to a minimum level of design before tendering them – reducing the opportunity for innovation.

4.4 What is the scale of these benefits?

The water sector is facing significant challenges which will require strategic infrastructure investment. Based on the pipeline of strategic water resource schemes alone being developed for delivery of the next 10-15 years, we are seeing the need for **up to £14bn investment in water resources**[5]. Other major infrastructure projects are likely to be identified at the 2024 Price Review, and future price reviews are likely to identify other opportunities.

As illustrated above, competitive delivery models have the potential to deliver significant savings for customers. Under DPC, when total savings are compared to total project costs, it is estimated that DPC **could save customers between 6%-40%**. For example, this equates to a saving of **between £300m and £2bn** on a hypothetical infrastructure investment of £5bn.

We consider a licensed model such as SIPR is likely to deliver towards the upper end of this benefits range and as shown on new nuclear, could provide significant additional benefits for customers. However, we expect there are higher transaction costs associated with the procurement of a project under SIPR (compared to procurement under DPC or delivery in-house) and these will need to be considered on a project-by-project basis when considering whether SIPR can offer best value for money for customers.

Additionally, there are some barriers which may prevent the DPC model being used, such as where there is a need for direct regulation of the project and infrastructure provider, e.g. for water treatment works and the Drinking Water Inspectorate's ability to regulate any competitively appointed provider. This may mean that for some projects these benefits could be at risk without the ability to use the licensed model under SIPR. As a result these benefits may be lost, in addition to the wider qualitative benefits we have identified above.

[5] RAPID - Forward programme 2022-23

5. What are the barriers and solutions to unlocking further benefits?

While progress has been made in using competition as a driver for strategic investment in major infrastructure, we see untapped potential to make further gains.

There are significant challenges to delivering strategic infrastructure projects within the current legal framework and this impacts the ability for:

- companies to use competitive delivery models for large infrastructure projects, where DPC may not be suitable;
- the Drinking Water Inspectorate (DWI) to regulate and enforce against third parties providing water treatment services; and
- use of the Development Consent Order (DCO) process to obtain planning permission for strategic infrastructure.

We consider each one below.

By removing these barriers, the benefits of competition laid out in section 4 of this report can be more fully realised, for the benefit of customers, the environment, and society as a whole.

To more clearly illustrate the barriers, solutions, and benefits described, in Annex 1 of this report we provide **'logic models'** – visual representations of how our recommended interventions can produce specific outcomes.

5.1 Ability for companies to use competitive delivery models where DPC may not be suitable

At present, the only competitive delivery model at our disposal for almost all projects is the DPC model. This is because, under the Water Industry Act 1991 and SIPR, the licensed infrastructure provider model can only be used where:

- the infrastructure project is of a size or complexity that threatens the water company's ability to provide services for its customers; and,
- specifying the infrastructure project is likely to result in better value for money than would be the case if the infrastructure project were not specified.

The first test is a high threshold to pass and prevents its use, even where the second test is met and it offers better outcomes for customers. At the time of its introduction, SIPR was intended to only facilitate the delivery of the TTT and there were concerns that it would be used for other projects, as incumbent companies have an incentive to grow their regulated asset base. As a result, the above tests and a sunset clause were included to allay that concern and secure passage of legislation so that the TTT could be delivered.

However, since the enabling provisions for SIPR were inserted in the Water Industry Act in 2010, the sector has changed considerably, and companies and government are increasingly identifying the need for large, strategic infrastructure projects. In 2020, following a post implementation review of SIPR, the Government amended SIPR to remove the sunset clause so that it could continue in force for use by future projects, where they met the legislative tests.

As noted in section 4.1, competitive delivery under a licensed model (like SIPR) has the potential to generate greater benefits for customers than under a contractual model like DPC – this is not limited to projects that threaten a companies' ability to provide services. We, therefore, see the potential for SIPR in the delivery of strategic infrastructure where it offers best value for customers.

There may also be some strategic projects in the future, where the need for direct regulation by ourselves or other regulators is so great that it might prevent the project from being delivered under DPC. This could result in customers losing out on sizeable potential benefits, as outlined in section 4. The ability to use SIPR more widely would allow us to overcome this and would ensure customers could still benefit from competitive delivery of projects where DPC may not be appropriate.

However, there is a balance between the benefits of a licensed model and the increased regulatory burden that the model would introduce, for example as a result of licensing the infrastructure provider, direct regulation of the project, setting price controls etc. As a result, we would expect its use to be limited to where it provides best value for money compared to DPC and companies' in-house delivery.

Where SIPR does not offer best value for money for customers but the DWI's direct regulation of the project is still needed, we would consider how DPC could be enhanced to support the delivery of the project (see section 5.2 below).

Key barrier:

Legislative restrictions to using the SIPR regime more widely.

Proposed solution:

Remove scale and complexity test from Water Industry Act 1991 and SIPR.

5.2 Ability to regulate and enforce against third parties providing water treatment services

As explained above, where a project requires or would benefit from direct regulation there may be a barrier to using DPC. For example: regulating a water treatment works with respect to drinking water quality, where the current legislative framework is focussed on regulating undertakers and licensed suppliers. This means the DWI's powers of investigation and enforcement may not be easily applied to a competitively appointed provider and as a result this may restrict the use of DPC for these assets.

While a licensing model under SIPR could address this issue, in practice there will be a regulatory cost to using SIPR, as well as higher transaction costs. This could limit its use to the larger infrastructure projects, where the benefits are more likely to outweigh the increased costs. The value for money case for using SIPR will need to be determined on a project-by-project basis, but we expect projects are likely to be considerably in excess of the PR24 threshold for DPC of £200m.

There is, therefore, a category of water projects where competitive delivery models could deliver benefits but neither the current DPC model nor a licensing model is suitable. For example, Dŵr Cymru's Cwm Taf Water Treatment Works is being developed on a design-build-finance basis due to concerns about the ability for a competitively appointed provider to operate and maintain the works. The size of the project, at more than several hundred million pounds, is unlikely to be large enough for a licensed model to be appropriate or value for money. However, by not including operations and maintenance within DPC, there is the potential that customers are losing out on significant benefits from:

- lower cost operations and maintenance; and,
- innovation – particularly around the whole life cost of the asset.

Given the potential lost benefits for customers, we think there is a need to consider how water quality regulations could be applied to a competitively appointed provider. This could be by amendment of the Water Industry Act 1991 to make provision similar to that made in respect of licensed water suppliers on retail market opening.

Alternatively, we consider that it would be possible to provide for direct regulation of competitively appointed providers in respect of drinking water quality obligations

through commencement of Chapter 2B of Part III of the WIA 1991 and subsequent making of regulations. Chapter 2B relates to arrangements for water undertakers to take water from persons other than another water undertaker.

Key barrier:

Limitations in our ability to regulate and enforce against third parties providing water treatment services.

Proposed solution:

Amendment of the Water Industry Act 1991 to make provision similar to that made in respect of licensed water suppliers on retail market opening.

Alternatively, it would be possible to provide for direct regulation of competitively appointed providers in respect of drinking water quality obligations through commencement of Chapter 2B of Part III of the Water Industry Act 1991 and subsequent making of regulations.

5.3 Ability for water companies to use the Development Consent Order process to obtain planning permission

Strategic infrastructure projects are often large and complex, impacting multiple stakeholders and local authorities, and needing a complex array of consents to be obtained. The Planning Act 2008 facilitates the delivery of these projects by providing a streamlined planning process for Nationally Significant Infrastructure Project (**NSIPs**), where project sponsors can apply directly to the Planning Inspectorate for planning permission and the other statutory powers and consents required for the project. This Development Consent Order (**DCO**) process avoids the need for scheme developers to apply to multiple authorities for various consents.

Underpinning DCO applications, is the sector's National Policy Statement (NPS) which establishes the need and government's policies for the development of NSIPs, and provides guidance for DCO applicants. It is the primary basis for preparing DCO applications, for the Planning Inspectorate's examination, and also for decisions by the Secretary of State in considering DCO applications. Currently, there no designated NPS for Water Resources Infrastructure, which creates some uncertainty around the DCO process.

In the absence of a designated NPS, the Secretary of State can have regard to a draft NPS[6], however, it will be only one factor that has to be taken into account. As a result, the position becomes less certain than it would be had the designation been made – creating uncertainty for scheme developers. We, therefore, consider designating the draft NPS should be a priority for government and it will provide clarity for scheme developers, reduce the risk of legal challenge, and will help streamline the subsequent consideration of projects during the Planning Inspectorate's examination.

In addition to the absence of a designated NPS, we consider the DCO process could be made more readily available for strategically important water and sewerage projects. Currently not all RAPID schemes qualify under section 28 of the Planning Act as an NSIP and this may be because:

1. the projects are of a different type to those included in the existing definition; examples of this are transfers of treated water and water recycling, which is a new and emerging technology in the UK;
2. the assets may be of a type included in the existing definition but do not meet the required thresholds despite being large and strategically important (e.g. they meet a national or regional need); or,
3. there is ambiguity as to whether a project is being carried out by one or more undertakers.

With regard to (1) and (2), the Infrastructure Planning (Water Resources) (England) Order 2019 recently amended the definitions of water resource NSIPs in the Planning Act 2008 to include desalination plants as well as amended the threshold for reservoirs and raw water transfers. However, there is still a gap between the current strategic water resource schemes being developed by companies and the definition of NSIP in the Planning Act. Based on the current definition of NSIPs in the Planning Act 2008 there may be between 7-10 strategic water resource projects that are unable to use the DCO process but would benefit from the streamlined process. While these projects can apply to the Secretary of State for a direction under section 35 of the Planning Act 2008 for the project "to be treated as a development for which development consent is required", it does raise questions as to whether the NSIP definitions are sufficient for the current pipeline of projects as well as future strategic infrastructure that may be identified in the water sector.

[6] Under section 105 of the Planning Act 2008, in the absence of a designated NPS the Secretary of State is required to have regard to any local impact report, any matter prescribed in relation to development of a description to which the application relates and any other matters which the Secretary of State thinks are both important and relevant to the Secretary of State's decision. The matters which the Secretary of State thinks are important and relevant can include a draft NPS.

With regard to (3), while we think an undertaker delivering a project via DPC or a licensing model should meet this definition (in the same way it would if an undertaker were using contractors to deliver the project), the lack of clarity around this could result in companies and competitively appointed providers being unsure whether projects fall under the definition of an NSIP.

We therefore consider it important to keep the definition of NSIPs under review so that they remain fit for purpose for future water sector projects and avoid the need for undue reliance on the section 35 process, which may create a risk to the delivery of the projects. This could be done via an order under section 14(3) of the Planning Act, which allows the Secretary of State to amend the definition of NSIPs in the Act. Updating the definitions will provide important clarity to scheme developers of the planning route to follow for future projects.

Key barrier:

Inability for water companies apply for a development consent order under the Planning Act 2008 without first making an application to the Secretary of State under section 35.

Proposed solution:

Review and update the definition of water NSIPs in the Planning Act 2008 and make corresponding updates to the draft National Policy Statement.

5.4 Going further

So far in this chapter we have set out some key barriers to using competition to unlock further strategic investment in major infrastructure. As well as removing these key barriers, there are a number of other areas where we hope that the competitive delivery models can be further developed and utilised.

Amending legislation to allow a licensed infrastructure provider model to be used for a wider range of projects will facilitate the competitive delivery of strategic infrastructure projects in addition to the DPC model. For some projects, a licensed model has the potential to deliver better value for money for customers than a contractual model such as DPC and therefore is an important tool to support the delivery of strategic infrastructure in the water sector.

Through the 2024 Price Review, we are taking steps to make competitive delivery models our default policy for major projects where they are greater than around £200m totex. At present, given the current legislation this is focused on companies using DPC, although in some cases a licensed model under SIPR may be more appropriate.

However, our experience to date of employing DPC is that companies can be less willing to use that model as they remain liable for the performance of the project while losing out on returns related to the investment e.g. the regulatory allowed cost of capital as well as the opportunity to grow their regulatory asset base which is attractive to investors due to the premium it attracts on any eventual sale of their shareholding in the company. Additionally, we have found information asymmetry between us and companies makes it difficult to overcome obstacles to delivering projects under DPC.

By contrast, our engagement with companies has found many are more supportive of the licensed infrastructure provider model compared to DPC. Many particularly favour its use for very large, complex projects such as the strategic water resource schemes we discussed earlier. This is likely to be because the licensed model provides a greater degree of separation between the company and the deliverer – with the infrastructure provider being held directly accountable by regulators. Therefore, wider use of this model may overcome some of the current bias against DPC and facilitate a wider range of strategic infrastructure to be competitively delivered.

6. Other areas of competition

This report has focused on the potential for further competition to unlock strategic investment around major infrastructure projects. However, there are also other areas where competition has already or could in future help to drive strategic investment: in the **new appointments and variations (NAVs)** market, and in the **bioresources** market.

Important progress has been made in both of these areas. In Annex 1 we provide logic models showing how these markets can be further developed for the benefit of customers, society and the environment.

6.1 New appointment and variations (NAVs)

New appointments and variations (NAVs) are limited companies which provide a water and / or sewerage service to customers in an area which was previously provided by the incumbent monopoly provider. In recent years, Ofwat has worked to reduce barriers to competition between existing water companies (referred to as 'incumbents') and new entrant companies (referred to as 'new appointees') in providing services to developers. This has resulted in strong growth in the new appointee market.

6.1.1 Background

The new appointments and variations framework was introduced in the 1990s and enables a company to replace an incumbent as the provider of water and / or sewerage services in a specific geographic area. New entrants to the sector or existing companies can seek to replace an existing company for a specific site by applying to Ofwat.

Once granted an appointment or a variation of its existing appointment by Ofwat, the new company becomes the monopoly provider of water and / or wastewater services for residential and business customers for that area. New appointees have the same statutory obligations as the large regional companies they replace.

Most new appointees compete with incumbents and other providers (such as developers who choose to lay infrastructure themselves) to provide **developer services** to new housing developments.

While the scale of the NAV market is still relatively modest, it is growing significantly. In 2017, we estimated that new appointees were the appointed water and / or sewerage

company for around 2% of all new properties. In 2021, we estimate that the new appointee market share has risen to around 20% (calculated by comparing the number of new premises we licensed in 2021 as compared with the number of new plots gaining planning permission) and is rising again substantially during 2022. This compares with independent network companies having around 80% of the share of new connections in gas and electricity.

6.1.2 Benefits of competition

Since Ofwat's last study of the NAVs market in 2017,[7] we have been evaluating the benefits of increased competition, including by engaging with developers. While some of these benefits accrue to a developer, rather than households or society as a whole, it is possible that the competitive pressure caused by NAVs providing better service at lower cost could lead to broader benefits for end customers of incumbent companies.

Key benefits include:

- **Economies of scale** – NAVs that operate on a national scale (for example, as part of an independent utility infrastructure provider operating across electricity, gas and water/waste water) may provide cost benefits to developers, as these providers operate at scale across many sites and utilities. They may have greater purchasing power than an incumbent for certain construction materials, meaning they procure materials and parts more cost effectively. They may also benefit from technical efficiencies associated with using the same components across a nationwide business, in contrast to water sector incumbents who may all use slightly different technical solutions and parts, such as valves, meters, and enclosures.

- **Better and quicker service** – Competition exerts natural pressure on market participants to ensure that their service is efficient and high quality. Many developers tell us that new appointees install assets (e.g. excavating trenches, back filling) around 25-50% quicker than incumbent companies. Developers tell us that they feel much more in control of the end-to-end construction sequence when using new appointees. Furthermore, when using new appointees they are more likely to be able to recover any losses from utility construction delays. Penalties are in place for such delays and new appointees are considered more accountable for delays than incumbents.

[7] Frontier Economics – Study of the NAVs Market, 2017

- **Reducing need for other investments** – New entrants could also reduce the need for major infrastructure by incumbents either by developing their own water or wastewater resources, or by putting in measures which reduce the impact of new developments. However, the ability of new entrants to develop such schemes is limited because of the difficulty of recovering the costs of the systems; new entrants are not permitted to charge end customers on the site more than the local incumbent would, and developers do not have to pay incumbents for new treatment capacity required to serve sites, so new entrants are largely unable to recover the costs from developers either. Conversely, incumbents are able to recover the costs of new capacity from across their large customer base.

6.1.3 Going further

Ofwat has been considering the constraints of the current NAV licensing approach, which cannot currently recognise the national and strategic impacts that some NAVs are having on developer services and wider housing market growth, and constrains Ofwat from considering these benefits in its regulatory approach. The approach focuses on ensuring future customers are no worse off, but does not reward innovation or incentivise better performance from new appointees.

The current process also requires Ofwat to comply with statutory consultation timescales, which could arguably be seen as disproportionate in cases where the economic impact of a new application is very modest. This holds up the process for developers while crucially, not allowing Ofwat to take account of the wider impacts of this activity nationally in reaching a decision.

Changes to primary legislation in the form of amendments to Section 8 of the Water Industry Act, which currently requires Ofwat to consult on all licensing applications, irrespective of the scale of the new development being applied for by new appointees, would provide Ofwat with more discretion to prioritise those applications with wider national benefit and greater innovation.

We would also encourage Government to work with Ofwat in exploring a range of ways to update the regulation of the NAV market, so it reflects the evolution present in the market and enables it to harness future opportunities to extend the scale of benefits of the market.

6.2 Bioresources

Bioresources (or sewage sludge) are the semi-solid by-products of wastewater treatment. Wastewater sludge transport, treatment, recycling and disposal are known

as bioresources services. The trading of bioresources between companies (i.e. transporting raw sludge to be treated and recycled by others) and the interaction of companies' bioresources services more generally provides an opportunity for economic and environmental benefits.

6.2.1 Background

Across England and Wales there are around 300 sludge treatment centres which produce one million tonnes of treated sludge per year[8]. The annual cost to customers for a typical household customer from bioresources ranges from £13 to over £32 depending on which sewerage company provides this service.

Traditionally, sewerage companies have undertaken bioresources services themselves as part of a vertically integrated business. However, this is not always the most efficient way of providing these services.

To help unlock these benefits, we have taken a number of steps to support the functions of the bioresources market over recent years. At the 2019 Price Review (PR19), we changed the way we regulate to create a separate binding price control for bioresources activities to create greater transparency. This aims to help drive more commercial arrangements for how different activities interact with each other. Due to the changes made at PR19, the water companies now receive revenue from customers to safely treat the bioresources they produce and are better incentivised to look for the most efficient option for dealing with bioresources.

6.2.2 Benefits of competition

There are a number of actual or potential benefits that arise from the trading of bioresources. These include:

- **Economies of scale** – Large-scale procurers of bioresources can increase the scale of production to lower the average production cost. There may be synergies in production from collation, where two different treatment streams are brought together on a single site to take advantage of shared assets. This lowers average cost of production by reducing the need for separate large facilities to treat sewage sludge. Competition, therefore, has the potential to encourage development of

[8] Source: bioresources market dashboard.

larger treatment works which serve more than one company (joint capacity), lowering costs and reducing bill burdens on customers.

- **Innovation** – As the market develops, we expect participants will use technological innovation to find ways to treat and transport sewage sludge more cheaply. The most ground-breaking technological innovations may eventually have sector-wide benefits if they have wider application. Again, if this results in lower overall costs then there may be economic benefits for customers.

- **Environmental benefits** – Bioresources can stimulate a circular economy as they can be used to create renewable energy and spreading of sludge to land sequesters carbon and acts as a fertiliser used for farming. Bioresources can therefore play a role in helping to meet the government's 2050 net zero target.

The scale of potential benefits in the bioresources market can be demonstrated through the estimated benefits of the proposals we made at PR19. In our 2017 impact assessment we estimated that the potential benefit of these changes would be between £400m and £1,400m over 30 years. However, these estimates related just to the benefits in terms of operating costs and so do not include the benefits from more efficient capital expenditure.

6.2.3 Going further

We undertook a review of the bioresources market in 2020 to look at the current market model, assess barriers to competition in the market and assess the steps needed to overcome any barriers. We identified a number of market barriers including regulatory barriers such as uncertainty, cultural and organisational barriers such as differences in approaches and lack of synchronisation, and technical barriers such as transportability of sludge.[9] While we have already addressed a number of these barriers, a key remaining issue is our approach to regulating at price controls, so we are proposing a new approach to funding sewerage companies' bioresources activities at PR24.

Water companies have commenced an initiative to develop a national bioresources strategy, which Ofwat commends. We understand that the Chartered Institution of Water and Environmental Management (CIWEM) will act in an independent capacity to coordinate the development of a long-term bioresources strategy. We support working with the sector and will engage with the CIWEM work.

[9] Jacobs – Bioresources market review

There are opportunities to make better use of synergies in the market and increase efficiency. Increasing coordination in the market and having parties sharing capacity in a geographically optimal location is one example. This is likely to yield greater efficiency through rationalising sites at regional level, rather than company level. This could help reduce exposure to costs arising from the Industrial Emissions Directive, reduce the length of transport routes and develop opportunities for economies of scale. Maximising utilisation of assets by expanding cotreatment operation or collating assets onto a single site would also increase efficiency, and we are keen to see more of this in future.

7. How might success be measured?

Our commitment to evaluating the effectiveness of our interventions and demonstrating our impact as a regulator is set out in both our Ofwat Strategy, *Time to Act, Together*, and our 2022-23 Forward Programme.

We routinely monitor and report on the growth and development of markets across the water sector, including the Business Retail Market, the Developer Services market and the Bioresources market.

Looking forward, specifically concerning measuring the success of the initiatives discussed in this document, we plan to monitor the outputs and outcomes associated with increased competition with a view to unlocking further strategic investment across the water sector. Whilst achieving greater levels of competition is an intended deliverable output, our longer-term outcomes and success metrics for these schemes relate to our overall objectives for the sector concerning securing better value for money for customers, improved environmental and social outcomes and ensuring that companies are resilient in the long term.

We plan to undertake proportionate and targeted evaluations of these schemes and initiatives. However, we recognise the challenges in identifying evidence that demonstrates cause and effect in this context. In addition, there are further challenges such as that some benefits, e.g. environmental benefits, may not be realised until several years in the future. However, our evaluation approach, which draws on the National Audit Office guidance on Performance Measurement for Regulators, will be used in order to measure and demonstrate our success.

Therefore, by developing and drawing on the logic models underpinning the initiatives as shown in Annex 1 we intend to identify indicators across the three areas that will provide initial evidence as to the level of success in terms of unlocking more strategic investment through competition.

Annex 1: Logic models

Figure 1: Logic model for major infrastructure projects

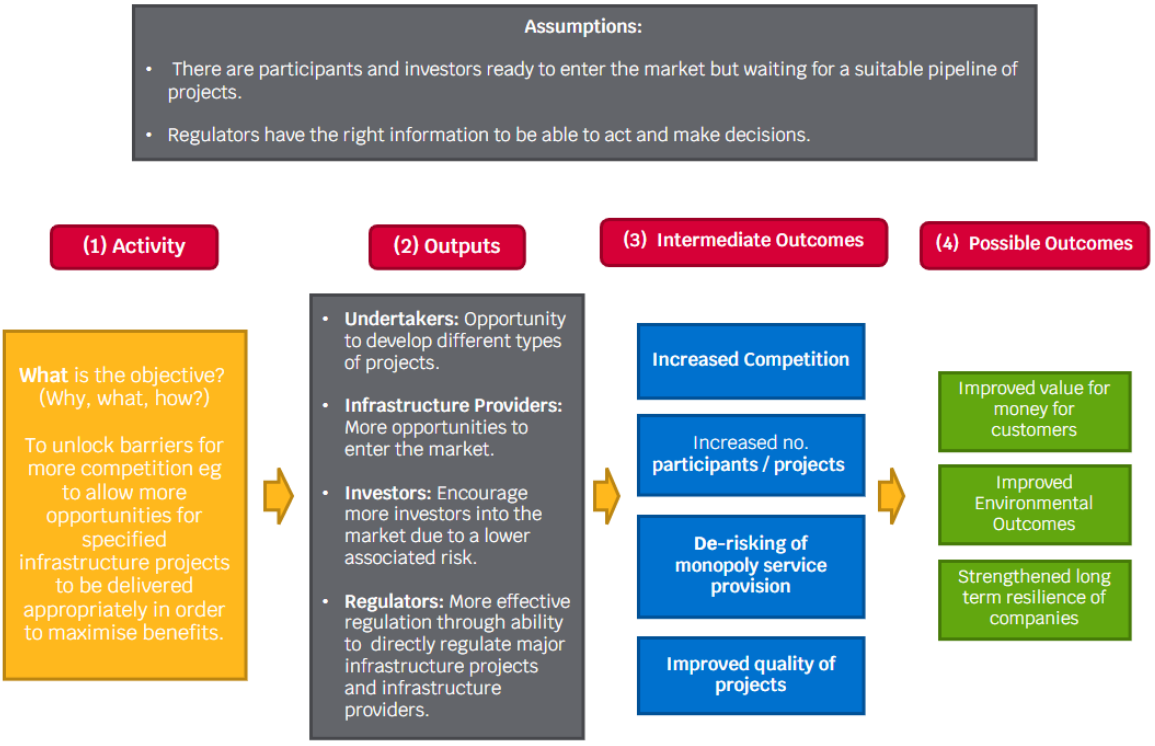


Figure 2: Logic model for NAV market

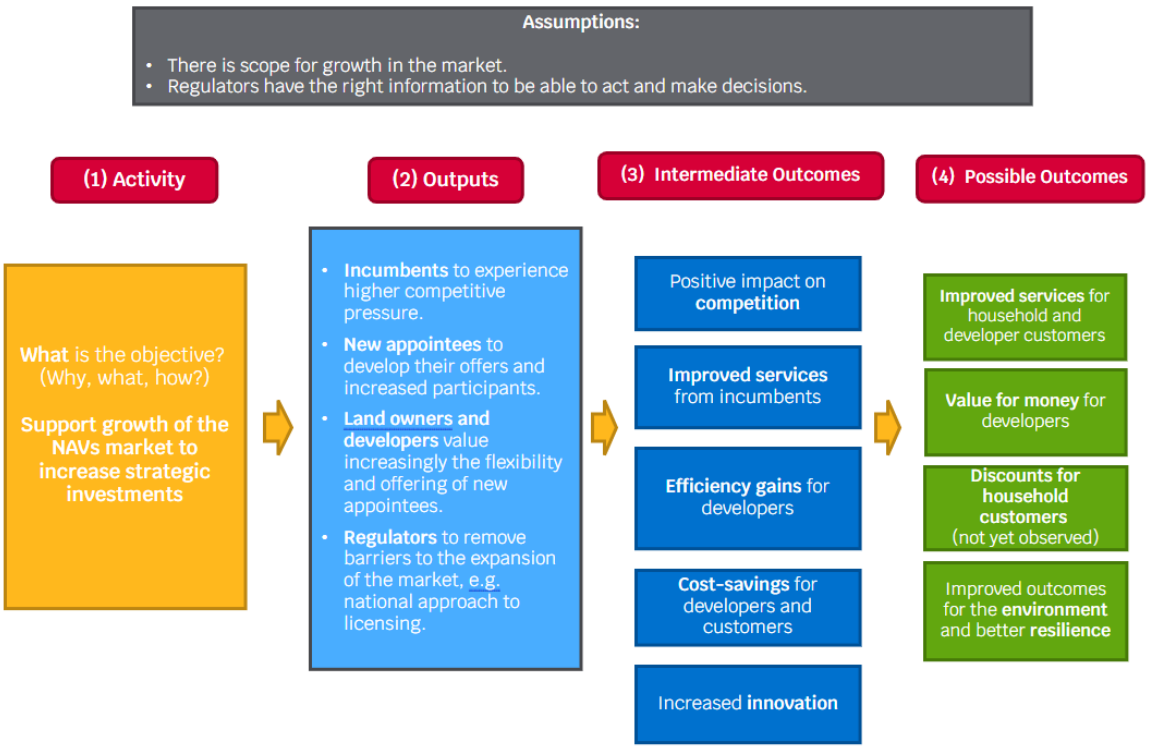
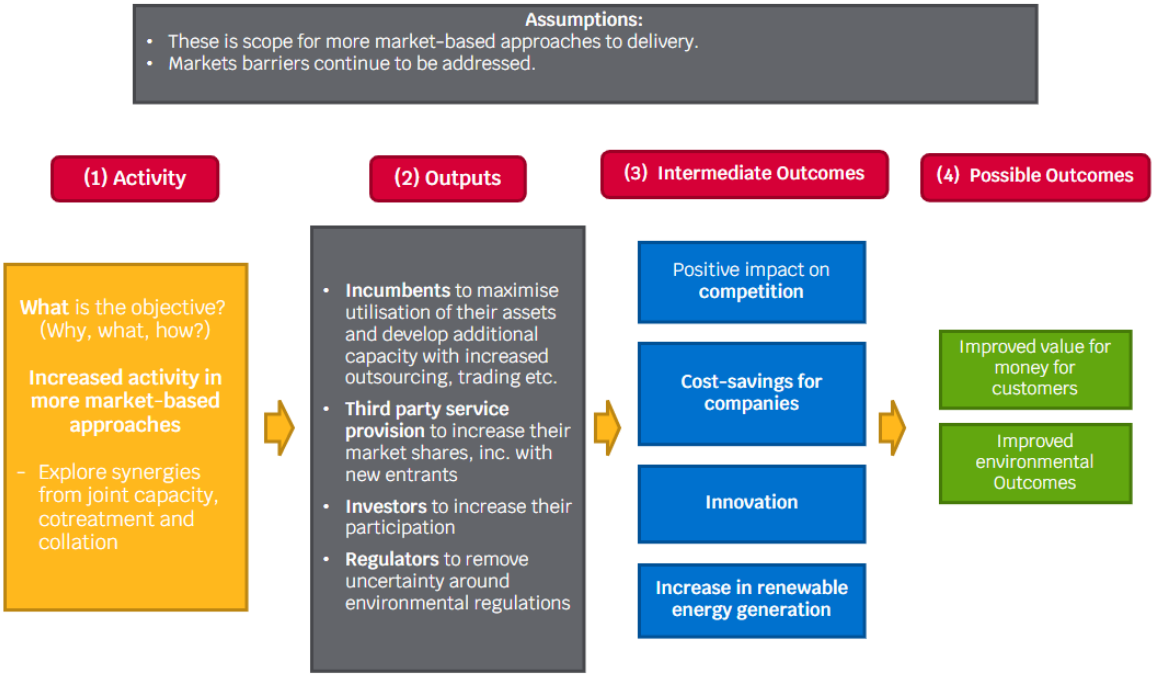


Figure 3: Logic model for the bioresources market



Annex 2: Glossary

Bioresources – By-products of wastewater treatment, which may require services including transport, treatment, recycling and disposal.

DCO – Development consent order; the means of obtaining permission to construct and maintain developments categorised as NSIPs.

Developer services – Services provided to developers and builders, principally new connections to the water and / or wastewater networks.

DPC – Direct procurement for customers; where a water or wastewater company competitively tenders for services in relation to the delivery of certain large infrastructure projects, resulting in the selection of a third-party competitively appointed provider.

NAVs – New appointments and variations; limited companies which provide a water and / or sewerage service to customers in an area which was previously provided by the incumbent monopoly provider.

NSIPs – Nationally significant infrastructure projects; large scale projects subject to special planning rules as established in the Planning Act 2008.

SIPR – Water Industry (Specified Infrastructure Projects) (English Undertakers) Regulations 2013 (SIPR); secondary legislation established to facilitate the competitive procurement of the Thames Tideway Tunnel project.

Totex – total expenditure; i.e. including both capital expenditure (capex) and operating expenditure (opex).

TTT – Thames Tideway Tunnel; a major new sewer for London which is the largest infrastructure project undertaken by the UK water sector since privatisation. Competitively procured via the SIPR model.

Ofwat (The Water Services Regulation Authority) is a non-ministerial government department. We regulate the water sector in England and Wales.

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