Chapter 15

Direct Procurement for Customers

Summary

This chapter sets out our position on Direct Procurement for Customers (DPC), describing how we have assessed our plan for suitable schemes and how we are proposing to make a final decision.

We are committed to delivering a resilient water future in the South East, and to do so cost-effectively. Meeting these goals requires us to innovate in the way we build and operate our assets. For PR19, Ofwat has introduced a new delivery mechanism, DPC, enabling water companies to allow a Competitively Appointed Provider (CAP) to build, operate, maintain, and finance specific assets for the benefit of customers.

This is similar to a Public Private Partnership (PPP), an approach used around the world by the public sector to enable private sector companies to deliver services on their behalf. We are in favour of using this approach, as well as other innovative procurement mechanisms, in cases where it will save money and/or deliver greater benefit for our customers.

The outcome of our assessment has identified one potential viable DPC scheme, Fawley Desalination plant. We will continue with our value for money assessment and market testing of this scheme over the next 12 months. Our final decision on whether to use DPC as a route for delivery will be confirmed prior to Final Determination.

Chapter headlines at a glance

- We carried out an evaluation of our proposed AMP7 capital programme to look for projects which would be suitable for DPC delivery
- We tested candidate projects against a set of nine screening criteria derived from Ofwat's methodology and our own thinking around market feasibility
- One project, a proposed desalination plant at Fawley, is suitable for DPC from a technical point of view. It is a new plant, with a simple set of physical and contractual interfaces to the rest of our network and has a Totex value of more than £100 million. However, we are not yet in a position to make a decision on whether DPC is the preferred procurement route
- The Portsmouth Water and Southern Water co-promoted water supply scheme 'Havant Thicket Reservoir Resilience Project' has undertaken a similar assessment under the direction of Portsmouth Water for inclusion within their business plan. As such we are not specifically including this as a potentially viable DPC option within our plan.
- We have a plan to further develop our understanding of the value to customers of using DPC for Fawley, through ongoing market engagement. We aim to make a decision on whether Fawley will be procured through a DPC route in time for that decision to be incorporated into our Final Determination.

15.1 Screening our programme for suitable projects

We used a staged, filtering process starting with 117 candidate projects to arrive at a longlist of 26 and finally a shortlist of five. We found that one of the shortlisted projects was a sufficiently-strong candidate for us to carry out a value-for-money assessment to determine if delivering the project using DPC would provide best value for customers.
(Details on the filtering process can be found in TA.15.1)

Figure1: Our process

At each stage in our iterative, decision-making process we followed the principle of “if in doubt – include”. This means that projects remained in the selection process as long as possible to ensure that we did not dismiss potentially-viable projects prematurely.

For each of the 117 distinct projects we reviewed, we determined whether their whole life costs were likely to be higher than £100 million. Of these, 22 projects passed this screening stage and were added to the project longlist. When we also considered whether there were projects that could be candidates for DPC if aggregated into larger programmes of work, we found four of these, giving us a total of 26 potential schemes. We then evaluated these schemes through a series of cross-discipline workshops led by our external advisors using the screening criteria in Table 1. Each criterion was scored.

Table 1: Project screening criteria

Category	Criteria
Materiality	Is the lifetime Totex greater than £100 million?
Separability	How simple is the physical interface between the new asset and the rest of our network? How simple would the operational and contractual interfaces be between the CAP and Southern Water?
Economies of scale and scope	Is the project different enough from other Southern Water projects that it would be challenging for us to manage construction – and are there contractors with more experience and for whom it would be easier? Is the project different enough from our existing assets that it would be challenging for us to manage operations -– and are there contractors with more experience for whom it would be easier?
Attractiveness to partners	How easy is it to define and manage the project’s risks? How easy is it to measure project outcomes? How stable are the operating costs of the asset? How insulated is the DPC contractor’s revenue stream from changes to the usage of our network?

Any project which did not score four (or above) out of eight on the separability criteria was dropped from further evaluation as it was considered insufficiently separable to be technically suitable for DPC. The remaining five shortlisted projects were evaluated and scored through a series of workshops to determine which were the best candidates for DPC. Our analysis indicated that only the Fawley desalination plant should be considered as a potential candidate for DPC. However, we also decided to keep open the option of including two smaller desalination schemes in a combined DPC scheme with Fawley. In addition to the Fawley desalination plant scheme, we are also co-

promoting another strategic water supply scheme 'Havant Thicket Reservoir Resilience Project' with Portsmouth Water. The expenditure for this scheme will be recognised within Portsmouth Water's business plan submission. Whilst this has been identified as a potential DPC candidate by Portsmouth Water, following recent tripartite conversations with OFWAT, we have not made specific reference to this within the DPC section of our plan.

15.2 Our assessment of DPC for Fawley

The proposed desalination scheme at Fawley includes the construction of a desalination plant to provide capacity of 75 Ml/d of treated, desalinated water. Under non-drought conditions we anticipate that it will initially be run at a lower output of 25 Ml/d. It also includes the installation of distribution pipes, to Mopley booster station to enable transfer from the mainland to the Isle of Wight, and to an Esso refinery. Fawley would be a sea water reverse osmosis (SWRO) plant, which is the international standard for newly-constructed desalination plants, and would cost £255 million to construct, of which £89.4 million would be spent in AMP7, with the balance in AMP8.

As part of the Water Resources Management Plan (WRMP) process, we carried out customer preference research to understand their views on different options for maintaining water supply resilience. Our customers told us that they consider desalination to be a last resort – it was ranked 10th out of 10 options, although they also recognised that it might be needed. We evaluated the effects of our water efficiency measures, water re-use schemes, regional transfers (such as those from South West Water and Portsmouth Water), and other measures. Our conclusion was that the supply deficits we face in Hampshire are so great (180 Ml/d) that the only viable option that allows us to supply drinking water during drought conditions, while complying with the Water Framework Directive and other regulations within the timescales required, is a desalination scheme.

This scheme is still in the early stages of development and the abstraction licence reductions which make Fawley necessary have recently passed through a phase of public inquiry, with agreement reached with the Environment Agency (EA) on the EA-required reductions[1]. Fawley will need to be operational in 2027/2028 to ensure that we can supply enough drinking water during drought conditions, despite the abstraction licence changes.

Our delivery options

We are considering two delivery mechanisms for the Fawley desalination plant – a two-stage Design and Build with Early Contractor Involvement (ECI) as our non-DPC option, and an Early Tender as our DPC option.

A Design and Build contractor is able to design an asset which will be lower cost for them to build. Early Contractor Involvement brings the contractor in even earlier on a limited basis so that they can input into the optioneering process. In this model we would use a multi-stage incentivisation scheme so that the appointed contractor is incentivised to produce the most cost-effective design that can be delivered as efficiently as possible. As part of market testing, we would also explore whether to include the operation of the plant in the same procurement.

Under our supply chain arrangements, we have the option of delivering large projects like this either through our existing supply chain or through an external competitive tender. Given the expertise available internationally in utility-scale desalination plant construction, we intend to put this project out to external tender, whether or not we use DPC to deliver it. We expect to receive bids from international engineering companies with relevant expertise, possibly partnering with companies with specific UK water industry experience. We expect many of these companies to bid for either the DPC or the non-DPC delivery options. We will test this as part of our market engagement.

Ofwat left the choice of DPC tender models to companies in its DPC guidance. A balance exists between the risks and benefits of a late or early DPC. A CAP appointed late faces less risk and can offer a lower cost of finance, but has less scope for innovative delivery to reduce Totex. On balance, we believe that, if there are savings from DPC, these are more likely to come from innovative delivery, driving lower whole life Totex, and so we are therefore considering an early-DPC option.

Costs of finance

We considered the range of costs of finance that a CAP may face during construction and operation. These are likely to be higher during the construction phase, as the CAP will face more risks during this period. We considered the available information on costs of capital from utility-scale desalination projects internationally, comparable UK utilities projects such as the Interest During Construction allowed for the Offshore Transmission Owner (OFTO)[2] and interconnectors, the costs of capital for OFTOs, and the cost of finance for the construction industry more generally.

Our own allowed costs of finance for the AMP7 period are expected to be set by Ofwat at historically low levels compared to previous AMPs and our current view is that a CAP is likely to pay the same or more than we do for each of their costs of equity and debt. Many international SWRO PPP projects have been around 80% debt financed[3].

However, Ofwat has set the cost of capital allowance for the regulated water industry using a notional gearing of 60% and views substantially-higher gearing for water companies as leading to inappropriate risks. An unregulated alternative provider would be able to manage its financing independently, including using a significant amount of debt to finance construction and operation. It is, therefore, quite possible that a CAP could have a lower cost of capital than we do, but we have not yet carried out market testing to establish whether this is the case.

In either the DPC or the non-DPC case, we would run a competitive procurement and seek to attract experienced delivery partners. In the non-DPC case, we would seek to use a two-stage Design and Build with an ECI contract, as detailed above. This will incentivise our selected delivery partner to find and deliver capital cost efficiencies. To optimise whole-life expenditure, we will expect the plant to meet standards we set for energy efficiency[4] and will incentivise our selected delivery partner to deliver a plant which meets or exceeds international norms[5]. While our non-DPC procurement strategy could deliver efficient Capex and energy costs, it is possible that a CAP would be able to deliver more cheaply. Again, this needs to be tested with the market to establish whether this is the case.

In the DPC case, the CAP would be incentivised to minimise lifecycle maintenance costs. In the non-DPC case, we will expect our selected contractor to design a plant which is efficient to maintain. However, they will be less directly incentivised than if they were a partner in a CAP. We may therefore be able to realise savings in this area.

Other options, such as including the Shoreham Harbour and River Arun desalination projects in the DPC analysis, were also considered but do not change the need for additional market evidence. These will also be tested as part of our market engagement.

There are additional factors in our decision-making process, other than the economic and financing aspects considered above. These are briefly described here:

Table 2: Other factors to be considered

	Issues	Conclusion
Strategic considerations	Delivering through DPC could lead to a lack of future flexibility in the operation of the site. We believe that this risk could be handled through appropriate contract mechanisms to deal with volume risk. Delivering through DPC could lead to procurement delays due to the novelty of the arrangement. However, we are confident that there is sufficient international experience of PPP desalination plants that we could deliver the plant on time, in either scenario.	No clear preference between DPC and non-DPC.
Commercial considerations	We will not be able to make a confident assertion on the commercial case for DPC until more information is collected and market engagement has been carried out. Our initial research has indicated that Fawley is smaller than the large, utility-scale desalination plants that have been delivered through PPP mechanisms in Australia and the Middle East. However, it is not so small that we would be unable to secure a delivery partner. What is not clear is whether we would realise savings from the procurement. This is for three reasons: 1. Fawley is at the lower end of capacity and cost by international PPP standards. 2. Many Middle Eastern desalination plants are thermal plants, co-located with power generation which means our most likely PPP partners have less experience of delivering plants such as Fawley. 3. The number of schemes that have been built and operated in the Middle East means that there is a very mature supply chain in the region, which is able to realise efficiencies of scale – this may not be the case in the UK.	Insufficient evidence to determine whether DPC is superior.

15.3 Our decision on DPC

We have been running our decision-making process for DPC at Fawley in parallel with the WRMP and abstraction license changes but cannot make a final decision on Fawley until the regulatory processes have concluded. We considered it would not be efficient to engage the markets for construction and funding while the necessity for the project was going through a public enquiry and before the Secretary of State had made a decision. In the absence of these market inputs, the likely ranges of the key inputs for a value-for-money assessment of DPC versus non-DPC delivery were so wide that we were not able to make a well-evidenced decision in time to include in the PR19 submission. We will continue to complete our market testing and value-for-money assessment, following our Business Plan submission, and will reflect the outcome of this in our final plan prior to Final Determination.

We need to engage the market before we can make a final decision on DPC for Fawley. Fawley forms a key part of our WRMP and we are due to submit our updated WRMP on the same day as our PR19 business plan. We expect the Secretary of State to approve our final WRMP in Q1 of 2019 and to approve changes to our abstraction licences before then, or at the same time. We will make a final decision on DPC for Fawley after both the WRMP and abstraction licence changes have been approved.

We did not consider it would be economically efficient, or beneficial to customers, to force a decision on a procurement route at this point, purely in order to include it in our PR19 submission. The scheduled Gateway 0 review (this is the stage in our procurement process where we make a decision on delivery route) for Fawley is in October 2019. However, we consider that it is more appropriate for us to make a decision and communicate this to Ofwat before final determinations are released and we will therefore bring this forward.

We are therefore proposing that:

- we commence market sounding in Q3 of 2018 to develop our Value for Money assumptions
- we use this additional information to iterate the business case process and develop an Outline Business Case[6] which we will share with Ofwat and the public as if it formed part of our original business plan submission
- we intend to notify Ofwat of our decision on DPC for Fawley before we receive our Final Determination
- if we decide to opt for DPC, Ofwat will remove the AMP7 expenditure associated with the project capital works from the appropriate wholesale allowance and add instead the proposed payment stream to the CAP and our development and contract management costs (subject to Ofwat efficiency review)
- our Final Determination will therefore reflect the use of DPC, if that is our decision.

Technical Annexes:

TA.15.1 DPC Screening Process

References:

1 The Environment Agency (EA) proposed a series of changes to our Testwood, Otterbourne, and Twyford abstraction licences. These are designed to protect the environment during drought conditions and as such they reduce the amount of water that we can take from these sources. As a result, we must use the water we have more efficiently, and develop new sources of water. One of these sources is a desalination plant. A public inquiry regarding these licence changes concluded in March 2018 with Southern Water and the EA reaching an agreement on how these licence changes could be implemented immediately, on the basis that adjustments are made to the drought permit process and the inclusion of force majeure clauses being included in the licence in order to protect public water supplies. This agreement and the proposed licence changes were put before the Planning Inspectorate who have made a recommendation to the Secretary of State for approval. The Secretary of State is yet to make his decision. Our plan has been developed on the basis that he will approve both the licence changes and the proposed amendments.

2 Offshore Transmission Owner – a scheme that transfers the electrical transmission links for offshore wind farms to the bidder which will charge the least to finance and operate them.

3 Based on InfraNews transaction data on Victoria Desalination (Australia), Maqtaa (Algeria), Carlsbad (US).

4 Energy is the largest component of variable plant cost by a substantial margin.

5 As Fawley is being built for resilience it will not be used 100% of the time and capex vs opex trade-offs will therefore be different in this case than they would be for Middle Eastern plants which are used for baseline supply.

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