IAP Response

Ref B2.WSH.CMI.A6

DPC Suitability Assessment Gwili Gwendreath

1 April 2019

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1. Introduction

In response to its PR19 business plan submission, Ofwat's Initial Assessment of Plans (IAP)[1] included a number of actions that it required from Dŵr Cymru (the "company") in relation to its DPC projects.

This note is intended to address the action WSH.CMI.A6 with respect to the Gwili Gwendreath Wastewater Treatment (GTW) scheme in the IAP. Ofwat require Dŵr Cymru to supply them with the following information:

- A full explanation as to why under the DPC assessment the gearing level for GTW works was considered "optimal" despite being lower than for Merthyr Water Treatment scheme (MTW); and

- For GTW, an economic analysis of the scheme including a Net Present Value analysis using the same gearing assumptions as the MTW scheme assessed under the DPC scenario. The analysis should clearly identify any additional benefit to customers of progressing this scheme outside of DPC.

This note reviews and comments on gearing optimisation in a DPC financing structure with respect to GTW and MTW schemes presented in the company's business plan submission. This includes

  - The financing mechanics and assumptions under the DPC model;
  - The constraints to increasing gearing under that model; and
  - The gearing optimisation for GTW scheme

[1] Ofwat, Dŵr Cymru: Direct procurement for customers detailed actions

2. Gearing optimisation in a DPC financing structure

2.1. The financing mechanics and assumptions under the DPC model

The VfM model assumes that under the DPC delivery model the third party, the competitively appointed provider ('CAP'), would finance the project via project financing through a combination of equity and debt:

i. Equity (sub-debt and share capital)

Equity is provided by the investors purely in order to realise return on their investment. The expected level of return is one of the key drivers of the revenue expected for the CAP under the DPC delivery route.

Equity providers are assumed to provide the equity at the start of the construction period in the form of share capital and sub debt. Sub-debt is repaid during the contract period (subject to free cash generation in any year after debt servicing) whilst share capital is redeemed in full at the end of the period.

Distributions to equity occur throughout the contract period from two different sources: (i) an annual revenue stream subject to cash availability after servicing all debt obligations and (ii) the asset sale at the end of the concession period (where there is a residual value assumption at the end of the contract).

ii. Senior Debt

Senior debt is the primary source of financing under the DPC delivery model and is assumed to occur in three tranches: (i) Bank finance during the construction phase; (ii) 'RCV' bond, which is assumed to be either a public or private placement bond, used to refinance the construction debt and is sized by the forecast sale value of the asset at the end of the contract period; and (iii) an amortising loan, which is assumed to be either a bank debt or a bond, which refinances the debt drawn down during construction that is not covered by the RCV bond.

For the purposes of our analysis we have used a bank finance for construction period and bond finance for both RCV bond and amortising loan.

During the construction period the project will draw senior bank finance. Debt raised during construction will have a higher margin when compared to the operational period given the increased risk profile associated with construction. At the end of construction, the project enters a reduced risk period offering the opportunity to the CAP to refinance existing debt facilities at a cheaper rate with lower interest payments leading to lower overall costs to CAP.

The bank finance drawn down during the construction period is refinanced at the beginning of the operations period by a combination of the 'RCV' bond and amortising debt. The RCV bond is sized based on the sale of the asset at the end of the period as it is assumed that any proceeds from the asset sale can be used in entirety to repay the RCV bond with a bullet repayment profile. Where there is a need for additional debt financing on top of the RCV bond, amortising bank finance is assumed in our

analysis. The interest and principal payment of the amortising senior debt occur on an annual basis (or more frequently as per the financing agreements) through cash flow sculpting (i.e. based on cash flows available for debt service).

The project's total funding requirement represents the sum of all project costs incurred by the CAP when delivering the scheme and includes opex, capex and financing costs, such as bank arrangement fees, senior debt interests, costs associated with reserve accounts. The percentage of Senior Debt as a portion of the project's total funding requirement establishes the **gearing** level. The level of debt senior lenders will provide relative to the level of equity (i.e. gearing) is determined by the variability and certainty of the projects cashflows.

The **gearing level** depicts the capital structure of the project and determines the financing costs of delivery under project finance. Therefore it ultimately determines the DPC model's competitiveness to an in-house delivery route under the PR19 framework. The model at a high level assumes that the costs of equity does not change with gearing and as senior debt is less expensive that other forms of financing, higher gearing translates into lower financing costs under DPC.[2] However, as noted later in this report, a higher gearing increases the financial risk and reduces the ability of the project to meet downside risks. This would imply an increased cost of debt and cost of equity to reflect the increased risks at higher gearing.

2.2. The constraints to increasing gearing under the DPC model

In order to provide the best value for money to customers under the DPC delivery route the VfM model is optimised to achieve the most beneficial financing structure. As a general assumption, the higher the gearing of a project, the lower the costs of financing as senior debt is typically less expensive than other forms of financing. This however ignores the impact of higher gearing in the form of higher financing risk and the lower ability of the project to withstand downside risks. As the VfM model assumes an equity IRR of 10% and the interest rates of 3.5% for Senior Debt during construction and 2.9% during operation, a financing structure with the highest optimal level of gearing will deliver the lowest costs to customers.

However a number of constraints limit the ability of a project to continuously increase the gearing, even if the cost of debt and equity are not assumed to increase to reflect the higher financing risk. As the gearing increases beyond the optimal level the project's cash flows will be insufficient to cover the debt servicing costs, for example. This will require a higher revenue resulting in a sub optimal outcome as the cost to consumers increase and the return to equity investors are more than required.

The VfM model was optimised for GTW by increasing the gearing to the maximum level allowed subject to the constraints summarised in the table below.

Table 1: Model gearing limitations

Limitations imposed on gearing		
I.	**Ceiling on gearing imposed by debt providers**	90%
II.	**Debt Service Cover Ratio**	1.25

[2] https://www.eib.org/epec/g2g/annex/1-project-finance/index.htm#_ftn1

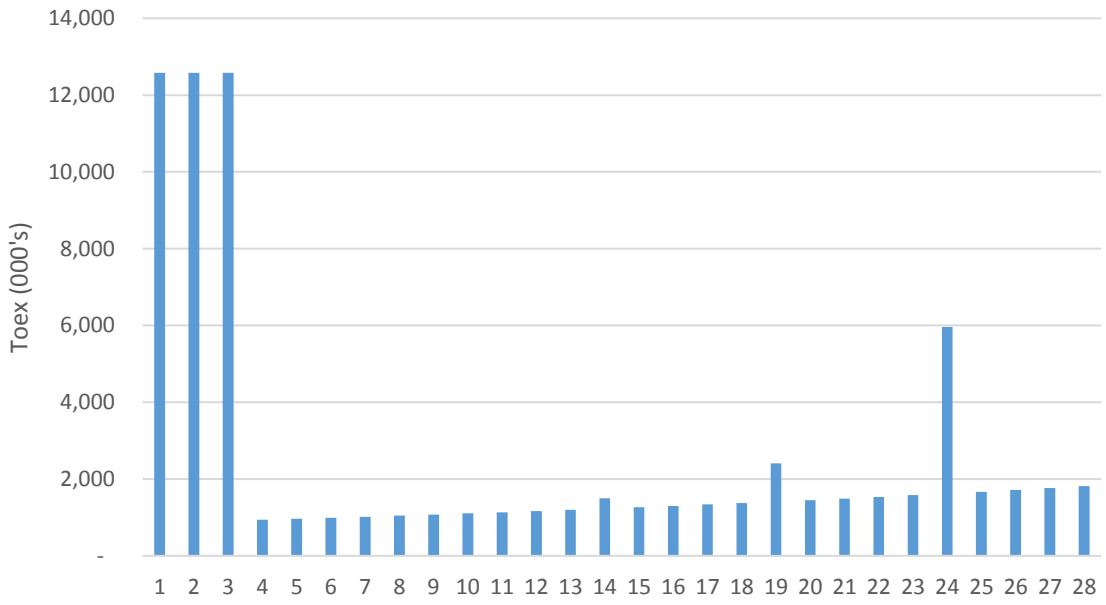
III.	**Reserve requirements for the lifecycle costs of the project**	Initial capex: £37m Construction: 3 yrs Recurring during contract; c.20%
IV.	**Equity Internal Rate of Return ('IRR')**	10%
V.	**Minimum cash balance requirement**	£1m
	Gearing	76%

The table above highlights that the minimum cash balance, ceiling on gearing imposed by debt providers, DSCR and EIRR assumptions act all as constraints for gearing.

2.3. Gearing optimisation for GTW scheme

The chart below shows the totex profile of the GTW scheme.

Chart 1 Totex profile of GWT over the contract period



The totex profile restricts the maximum possible gearing that could be achieved under the Base Case assumptions for GTW to 76%. Beyond this level of gearing the limitations set out in table 1 above are not met. We consider that the requirements set out in table 1 are reasonable and hence we cannot complete the cost benefit analysis for GTW assuming the same gearing assumptions as for MTW.