October 2019

CHARGING ARRANGEMENTS FOR NAVS

An assurance note prepared for Severn Trent Water

Frontier Economics has been commissioned by Severn Trent Water (SVE) to review SVE's bulk supply charging schedule for NAVs for 2019/20. The scope of this review was to consider whether SVE has taken into account the relevant guidance set out by Ofwat and the economic principles of competition law. This note summarises our findings.

1. INTRODUCTION

1.1 Background

Over the last couple of years, Ofwat has revised its guidance on "developer charges" and bulk supply charges for New Appointments and Variations (NAVs). For developer charges, Ofwat set out new charging rules that apply from 2020 onwards.[1] Water companies need to demonstrate that their charges promote competition and are easy to understand. The charges need to be published in a single document that demonstrates clearly how different charges are set.

Similarly, new guidance for bulk supply charges for NAVs set out a "wholesale-minus" approach that is intended to facilitate efficient market entry for NAVs.[2] Both guidance documents are aimed at creating a level playing field as Ofwat's overall objective is to ensure that an efficient operator can compete effectively with incumbent water companies, particularly in serving new developments. SVE has developed its approach to developer charges and bulk supply charges for NAVs in line with Ofwat's guidance. We expand on the Ofwat guidance in more detail in Section 2 of this report.

In parallel, Ofwat has sent three letters to water companies this year[3] [4] [5] indicating that it is not satisfied with the way water companies have implemented the guidance and seeking clarification on what steps companies are taking to address the issues raised.

1.2 Scope of the review

The scope of this review was to evaluate SVE's approach to NAV charging to ensure that it facilitates market entry by efficient operators. In particular, we:

1 https://www.ofwat.gov.uk/wp-content/uploads/2017/11/New-connections-charges-rules-from-April-2020-%E2%80%93-England-Decision-Document.pdf

2 https://www.ofwat.gov.uk/wp-content/uploads/2018/05/Bulk-charges-for-NAVs-final-guidance.pdf

3 https://www.ofwat.gov.uk/wp-content/uploads/2019/04/19-04-29-Letter-to-water-companies.pdf

4 https://www.ofwat.gov.uk/wp-content/uploads/2019/05/20190528-ltr-Incumbent-water-companies-and-the-development-of-effective-markets-1.pdf

5 https://www.ofwat.gov.uk/wp-content/uploads/2019/09/Letter-from-Emma-Kelso-to-incumbent-water-company-CEOs.pdf

- Reviewed SVE's approach to developer charges and NAV bulk supply charges. This included reviewing:
  - The type of costs that are reflected and how they have been included or excluded;
  - The rationale for including costs in different ways; and
  - How the intended approach has been implemented;
- Assessed to what extent the approach is aligned with Ofwat's guidance and the economic principles of competition law; and
- Assessed to what extent SVE's charging documents are clear, easy to understand and transparent.

We have followed an iterative process. We first reviewed a draft version of SVE's wholesale charges for 2019/20, its Scheme of Charges document. We then provided comments and feedback based on our understanding of Ofwat's guidance and competition law. SVE incorporated our comments into the final version of its wholesale charges for 2019/20. Finally, we produced this report to assure the final document and approach.

The SVE documents we have reviewed are:

- The Scheme of Charges;
- The NAV Approach document – which describes the underlying methodology and details; and
- The NAV Charges Calculator (Excel spreadsheet).

Our review has focused on the methodology used by SVE in setting its charges. We have not validated any input data that feeds into the underlying calculations, nor have we carried out a formal audit of the relevant calculations. These elements were outside the scope of this project.

1.3 The structure of this report

The rest of this report is structured as follows:

- In **Section 2** we provide a high-level summary of the relevant **competition law** issues that bulk supply charges need to be consistent with;
- In **Section 3** we describe **Ofwat's guidance** in more detail;
- In **Section 4** we describe **SVE's approach** and whether it aligns with Ofwat's guidance; and
- In **Section 5** we provide our overall **conclusions**.

2. RELEVANT COMPETITION LAW ISSUES

2.1 Introduction

In order to assess whether SVE's bulk supply charges are likely to be consistent with the economic principles of competition law, we first need to establish the relevant competition law issues that could arise. The principles of competition law are reflected in the licence conditions that incumbent water companies must meet and in Ofwat's charging scheme rules. For example, licence condition E states:

> "*It shall be the duty of the Appointee in fixing or agreeing charges…that no undue preference is shown to, and that there is no undue discrimination against, any class of customers or potential customers".*[6]

We further note that licence condition R more generally requires that incumbent companies do not engage in any anti-competitive behaviour.

We have identified the following aspects of competition law principles that SVE's bulk supply charging regime should meet.

- First, prices should be cost reflective, including a reasonable basis for the allocation of joint or common costs.
- Second, the profit level or margin should reflect the reasonable return expected by investors, taking account of the risks involved. A margin that is too high relative to this level could be considered to be excessive pricing. A margin that is too low relative to this level could be considered to be anti-competitive by restricting efficient entry (a margin squeeze).

We describe these two points in more detail below.

2.2 Cost reflective charging

The principles of cost reflective charging are as follows.

- All costs that can be directly attributed to a service should be attributed to that service. For example, the cost of a member of staff that works exclusively with large retail customers should be assigned to that group.
- Joint or common costs should be allocated between the relevant services using a metric that reflects the relative scale of the different services.
- The sum of direct costs and allocated common costs for any service should not be greater than the stand-alone cost or less than the incremental cost. These conditions set the boundaries around the allocation of common costs and provide an important cross-check on the method used.

Ofwat has provided guidance on the identification of direct costs and the allocation of common costs. One key question for our work therefore is whether this guidance has been followed and, if not, whether there is a clear justification (either in terms of data availability or objective rationale) for the decision to depart from the guidance.

[6] Department of the Environment (2015): Instrument of Appointment by the Secretary of State for the Environment of Severn Trent Water Limited as a water and sewerage undertaker under the Water Act 1989, p. 69

2.3 Margin squeeze

The issue of margin squeeze arises when an incumbent firm is vertically integrated so it provides upstream (wholesale) services and downstream (retail) services. The wholesale services are essential for the provision of downstream services. If a competitor wants to enter the market to provide retail services, it has to buy the wholesale inputs from the incumbent. To avoid entry, the incumbent can lower its retail margin and increase its wholesale margin so that the potential new entrant cannot operate profitably at the new retail margin. We note that it is beyond the scope of this review to test explicitly for margin squeeze.

3. OFWAT'S GUIDANCE

3.1 Introduction

In this section we summarise Ofwat's guidance on bulk supply charges for NAVs. This is split in two parts:

- First, we describe Ofwat's guidance on the "wholesale-minus" approach; and
- Second, we describe Ofwat's guidance in terms of how the charges should be presented (e.g. how they are described in companies' charges document).

3.2 Overview of Ofwat's guidance

Ofwat's guidance indicates that bulk supply charges should be flexible and relate solely to the services a NAV requests from the incumbent. This is because NAVs should be free to choose which services they wish to purchase from the local incumbent water company. For example, a NAV may choose to self-provide the on-site infrastructure only, and need to rely on the incumbent for all off-site services and infrastructure. Alternatively, it could choose to also self-provide some off-site infrastructure and services too, meaning that it relies on the incumbent for fewer of those services, and as such it should pay lower wholesale charges.

3.2.1 Wholesale-minus approach

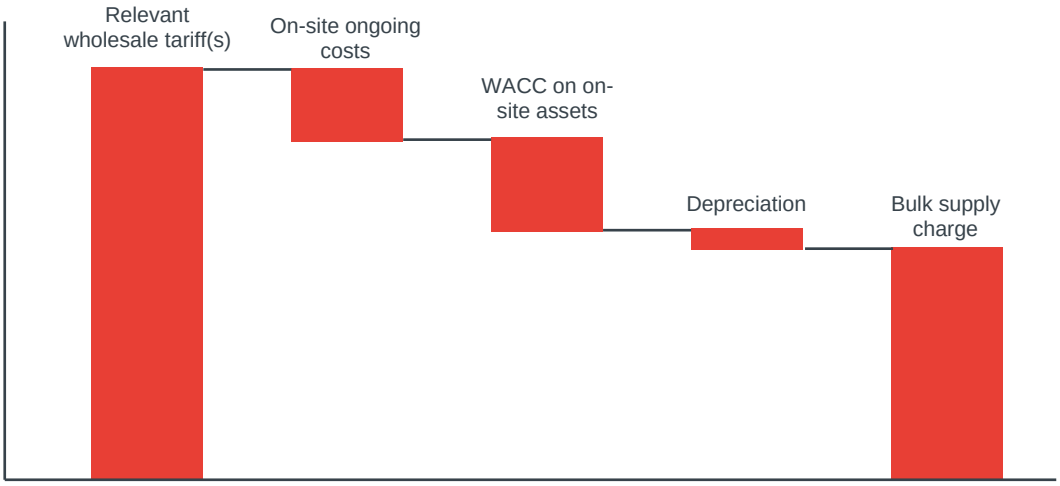
Ofwat adopts a wholesale-minus approach to determine the bulk supply charge an incumbent water company should offer a NAV.[7] This starts from the relevant wholesale tariff(s) and deducts the costs that the incumbent water company would no longer incur if a NAV supplied the new development instead. These costs are:

- On-site ongoing costs;
- WACC on on-site assets; and
- Depreciation of on-site assets.

The remainder is the bulk supply charge, illustrated graphically in Figure 1 below.

[7] This approach is also used to determine the appropriate bulk supply charge in the event of a dispute about bulk charges between an incumbent water company and a NAV.

Figure 1 Relevant starting point for wholesale-minus approach and costs to be deducted



Source: Frontier Economics, based on Ofwat – Bulk charges for NAVs: final guidance

We now describe each of these components in turn in more detail.

Relevant starting point

The relevant starting point is the set of the incumbent water company's wholesale tariffs that reflects the NAV's potential end-customer base. This would be the number of properties multiplied by the standing charge, plus the total volume of water demanded multiplied by the volumetric charge. Figure 2 below provides an illustrative calculation from Ofwat.

Figure 2 Ofwat illustrative example on deriving the relevant starting point

Box 1: An illustrative example on how to derive the starting point

This example illustrates how to obtain an "overall weighted average" tariff when a NAV supplies a mix of end-customers. In this illustrative example, we consider a set of residential and business end-customers. However, there could be further variations within each type of end-customers, e.g. large or small businesses, but also residential, end-customers.

Suppose the new developments included:

- *10 residential end-customers, each on the following wholesale residential tariff:*

  $P_{(R)} = 10 + 1*q$, *where q = the volume of water consumed*

- *5 business end-customers, each on the following wholesale tariff:*

  $P_{(B)} = 8 + 0.5*q$, *where q = the volume of water consumed*

The starting point overall weighted average tariff ($P_{(Bulk)}$) could be set up as follows:

$P_{(Bulk)} = (10*10 + 8*5) + [1*(10/15) + 0.5*(5/15)]*q$

$= 140 + 0.83*q$

Source: Ofwat – Bulk charges for NAVs: final guidance

As Ofwat states, "*[t]his requires creating an "overall weighted average" tariff (or providing all the tariff elements for a NAV to construct it) that would reflect the combined wholesale charges of all the NAV's customers*".

Ofwat outlines two ways to construct an appropriate relevant starting point

- Incumbent water companies can publish the relevant tariff for typical new development(s) and, for example, highlight how bulk supply charges may change depending on the number of premises on the site.
- Incumbent water companies can publish a menu of all the relevant tariff components that would allow a NAV to build up its own bulk supply charges for the site it is considering bidding for – i.e. the building blocks for a NAV to estimate its own bulk price.

On-site ongoing costs

Ofwat does not specify which types of costs should be included under the term "on-site ongoing costs". However, the costs to be subtracted from the relevant starting point must reflect the activities that the NAV is expected to perform on-site, or in other words these are the costs that the incumbent would avoid needing to incur if a NAV served the development instead. These include:

- Operation and maintenance of infrastructure;[8]
- Additional services such as:
  - Emergency responses to faults such as burst pipes; and
  - Boundary meter installation and responsibility for meter reading.

Incumbent water companies may set up tariffs that take into account services that NAVs may or may not offer. Ofwat provides two illustrative examples here. First, a NAV may undertake emergency responses to faults such as burst pipes on the site. Second, the NAV may install boundary meters and have responsibility for meter reading. If the NAV undertakes activities such as meter reading and emergency responses, the costs of these activities should be deducted from the wholesale tariff.

The on-going costs of operating and maintaining the on-site assets should be those of the incumbent water company. Ofwat notes that the incumbent's historical costs can be a reasonable proxy for estimating ongoing costs (both maintenance and leakage, for example). However, this is not prescriptive and water companies have scope to estimate ongoing maintenance costs differently, provided this is supported by evidence. As stated by Ofwat, *"[t]he incumbent's historical costs could be a reasonable and practical proxy for estimating the ongoing maintenance costs. These costs will cover infrastructure built at different historical times and thus the average maintenance costs could be a reasonable proxy for the lifetime on-site maintenance costs of newly-built assets".*

Incumbent water companies should also reflect any leakage assumptions. To the extent that wholesale charges are set on the basis of estimated leakage, the incumbent water companies would not incur any leakage costs that occurred in the on-site infrastructure. NAVs should not pay for leakage costs that occur in the on-

[8] This should not include capital costs, where the costs are recovered throughout developer charges.

site infrastructure and an appropriate allowance should be made in the bulk supply charge.

WACC on on-site assets and depreciation

Ofwat notes that "*[t]he risk profile of new developments and the overall business of the incumbent water company are likely to be different, implying a cost of capital which will also be different*". It therefore suggests that the NAV would likely face a different WACC to that of the incumbent, and as such it would not be appropriate to use the incumbent's own WACC in calculating NAV charges. Ofwat gave two examples as to why the NAV's WACC may be different to that of the incumbent :

- The fact that the incumbent water companies enjoy a degree of regulatory protection. Ofwat provides the example of water companies revenues being protected partially from demand variations and associated risks. Therefore, incumbent water companies' WACC should be adjusted to mimic that of an incumbent without regulatory protection; and
- The risk profile of NAV activities may be different from the risk of the overall business.

To the extent that the incumbent water company would, if it undertook the development instead of a NAV, accrue the on-site assets to its Regulatory Capital Value, depreciation of onsite assets should be included in the costs to be deducted.

Ofwat presented the illustrative example below setting out how the NAV's WACC could be estimated by adjusting the incumbent's WACC.

Figure 3 Estimating the NAV's WACC

WACC component	PR14 Final Determination	Bulk supply
Notional Gearing	62.5%	50%
Asset Beta	0.30	0.45
Equity Beta	0.80	0.90
Cost of equity (post tax)	5.65%	6.20%
WACC (vanilla)	3.74%	4.39%
WACC (fully pre-tax)	3.97%	4.74%

Source: Ofwat's guidance

3.2.2 Presentation of tariffs

Ofwat's guidance is that incumbent water companies should provide as much information as possible about their bulk supply charges. The publication of bulk supply charges is key for NAVs, as the latter need to secure a bulk agreement, at least in the form of a quote, before deciding whether to serve a new development.

Therefore, NAVs ought to have access to clear information on bulk charges ahead of bidding for developers' work in order to ensure a level playing field.

Ofwat suggests two options for incumbent water companies publishing bulk charges. These are:

- Provide information covering each element a bulk supply charge is made of. This allows a prospective NAV to calculate the bulk supply charge for the site it is considering bidding for. In this case, Ofwat also recommends publishing an explanation of the methodology a NAV should use to estimate the overall bulk supply charge.
- The incumbent water company could also publish bulk water and wastewater tariffs for residential, business or mixed development sites that vary solely according to the number of premises.

4. OUR REVIEW OF SVE'S APPROACH

4.1 Introduction

In this section we describe SVE's bulk supply charges and then discuss our findings on whether we believe SVE has reflected Ofwat's guidance when setting its charges. We have reviewed the following:

- The Scheme of Charges – this is a standalone document which provides all the background and information on how SVE calculates wholesale charges. In the context of NAVs it provides a set of charges based on an illustrative development. SVE has also provided a charges calculator to enable NAVs to calculate a bespoke quote.
- The NAV Approach document – this document provides more detail on the underlying approach that SVE has taken with respect to NAVs specifically.
- The NAV charges calculator – this enables a NAV to input its own parameters to produce an estimated bespoke quote for its bulk supply (Excel spreadsheet).

We first review SVE's overall approach, split out by (i) the relevant starting point, (ii) ongoing costs, and (iii) WACC on on-site assets in turn. This is based on the NAV Approach document and the NAV charges calculator. We then discuss the presentation of tariff information, which is based on the Scheme of Charges document and the NAV charges calculator.

4.2 SVE's bulk tariffs

We have reviewed SVE's NAV charges calculator and NAV Approach document and found that these comply with the wholesale-minus approach. The rest of this sub-section outlines SVE's approach against each of the components and relevant sections of Ofwat's guidance and our evaluation of it.

4.2.1 Time horizon

Ofwat's wholesale-minus approach does not specify whether it should be calculated in just one year, or over a multi-year horizon. SVE has selected the multi-year approach because it notes that the profiles of costs – such as maintenance and leakage – change over time. Moreover, variables such as the occupancy of homes are also likely to change over time. Therefore, SVE has estimated costs and maintenance over an 80-year time horizon. We understand that SVE will be updating its cost estimates (such as meter maintenance) whenever it obtains new information, for example, when SVE enters into a new contract. For its infrastructure maintenance data, given the length of the time periods considered, an uplift for inflation is taken into account and SVE will make periodic updates. In the case of leakage, the data is gathered on an annual basis and will therefore be updated accordingly.

We believe that this approach is reasonable.

4.2.2 Relevant starting point

As discussed in Section 3, Ofwat guidance states that NAVs should be free to choose the services that they wish to purchase from the incumbent.

SVE has calculated the charges assuming that the NAV only provides its own on-site services and infrastructure, and as such is reliant on SVE for all of the off-site services and infrastructure. Therefore SVE has not explicitly provided unbundled services as an option. We understand that there is currently no take-up of more unbundled services, and SVE has indicated that any interested parties should contact it for a bespoke quote, noting that a more flexible set of unbundled services would be bespoke in nature. We believe that SVE's approach here is not unreasonable and is pragmatic.

As discussed in Sub-section 3.2.1, Ofwat recommends that the relevant starting point for water services is the weighted average volumetric rate for all users on-site and the relevant standing charge(s).

In the context of SVE, these would be the charges received if SVE were to serve the site directly. This is in-line with Ofwat's guidance that on a NAV site, the relevant starting point is based on an appropriate wholesale tariff depending on all the properties on the development site.

As with the relevant starting point for water, bulk discharge volumes are also based on customer meters. Household standing charges are included in the starting point for the NAV charge.

We find that SVE is selecting the appropriate relevant starting point for both water and wastewater services.

4.2.3 Costs to subtract

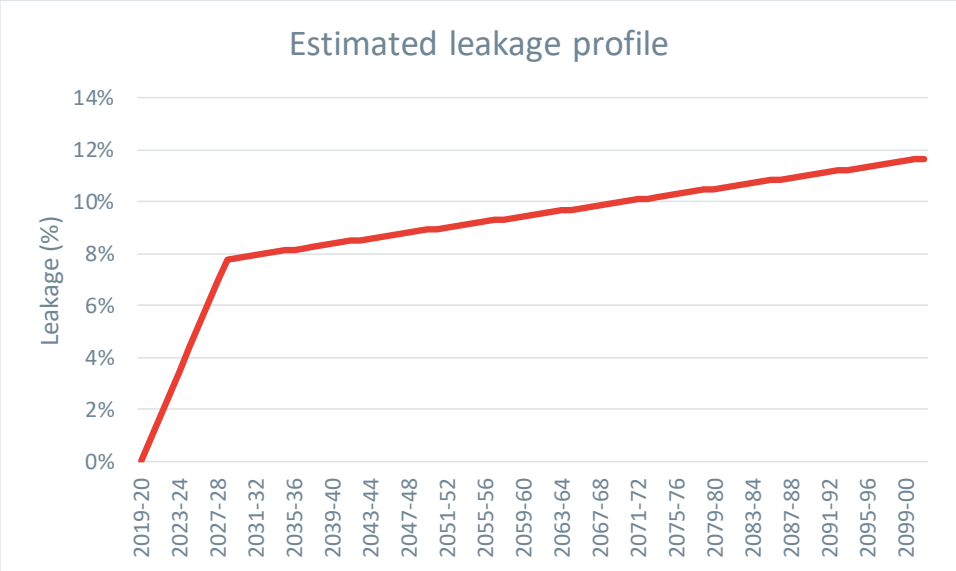
As outlined above, Ofwat does not specify all the types of costs that should be subtracted when calculating a bulk tariff for NAVs. We note that in AMP7, all new assets (water or wastewater) would be funded by developers through developer charges. Therefore, only maintenance and operating costs are subtracted from the relevant starting point to arrive at the discount. SVE subtracts a number of costs – some quite granular and specific – from the relevant starting point when calculating the discount for water and wastewater. We believe this to be positive because, in the context of margin squeeze, companies should not be understating the costs that NAVs will incur. For water, SVE has included:

- **Losses** – water is generally measured at the boundary of a site for the purpose of bulk supply. As such, there would be a difference between this volume and the amount charged to customers on-site because of losses. The cost is calculated based on the volume that cannot be charged multiplied by the weighted wholesale volumetric rate. The costs being subtracted as losses no longer incurred by the incumbent are the following:
  - *Distribution losses (leakage)*[9] – Ofwat suggests that these should be estimated based on an incumbent's own historical leakage. SVE has not used its own historical leakage across its entire network. Instead, it uses estimated leakage for new pipes, based on research into the leakage profile over time in a new development within its network. The details of this are included in the NAV Approach document. SVE's leakage assumptions are based on the average Natural Rate of Rise (NRR) observed in 265 District

[9] This would not include supply pipe leakage because metering would occur at the boundary box, meaning supply pipe leakage would be chargeable.

Metering Areas (DMAs) with ages of up to 72 years and where polyethylene pipe was the predominant material. Based on this data, SVE takes account of the growth in leakage and the average age of the DMAs. SVE applies a scaled volumetric value for losses.[10] This ensures that the water a NAV is paying for but loses on-site is being paid for at the discounted rate – in itself, partly attributable to the cost of the losses. Figure 4 below illustrates the estimated leakage profile over time.

Figure 4 Estimated leakage profile over time



Source: Severn Trent

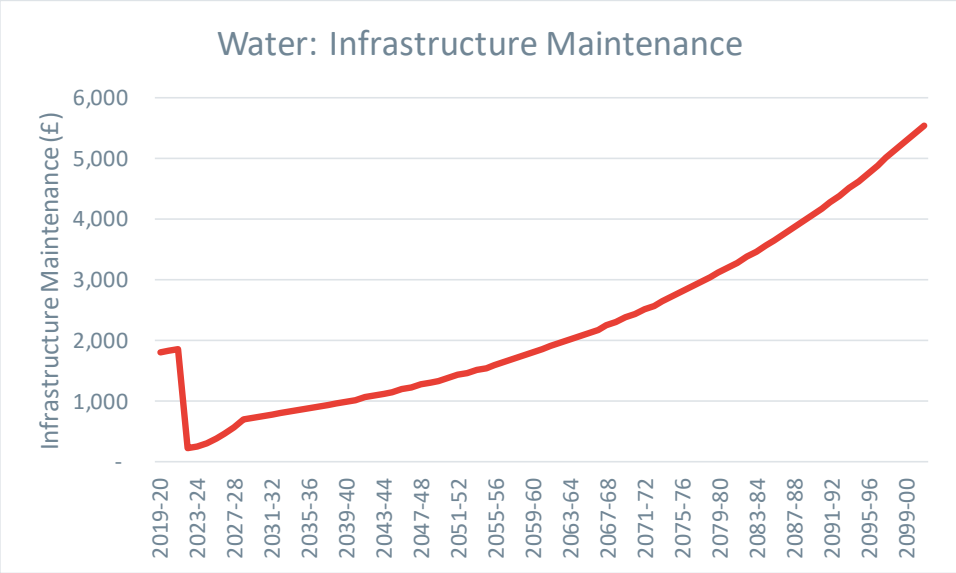
- *Water taken unbilled* – this is based on company averages from SVE's water balance calculations. It includes use for fire-fighting, theft and other items that are included in annual returns. Since it is based on the whole of the network it is likely to err on the high side as we understand that unbilled water is frequently taken for commercial purposes – most new appointees serve housing developments where such activity is considered less likely to occur.
- *Meter under-registration* – the rate of meter under-registration is based on average company data. For the purpose of calculating meter maintenance costs on the new site, SVE allows for replacement at the end of the accounting life (15 years) rather than a fix on fail approach. Under-registration is assumed to grow from the manufacturer's specification (1% on installation) to typical company rates before replacement.

- **Operating costs and maintenance** – for the pipe maintenance costs and leakage we note that SVE uses a forward-looking estimate based on a new entrant. Ofwat's guidance as outlined above is that these assumptions should be based on the incumbent's own historical average data, but it does allow companies to deviate from this as long as they provide strong evidence. We note that SVE has included details on this approach in its charging document.

[10] The scaled volumetric value has the effect of reducing the discount attributable to the costs and the % losses in a year and broadly reflects the price of the water that the NAV pays for but cannot charge to its customers.

- *Water infrastructure maintenance* – these costs are based on SVE data for the number of repairs for bursts and other reactive jobs on pipes in the SVE area by age of pipe. The general trend is for the cost per metre of pipe to increase as pipes age. The intervention data is grouped for pipes installed over 10 year periods (for example, pipes between 2005 and 2015 and for each decade going back over the 20th Century). While there is a rising trend for maintenance on pipes over 10 years old, the number of jobs in the first 10 years is above trend. SVE judges this to be a result of correcting initial problems on installation. Accordingly, SVE front-loads the average maintenance costs for the first 10 years into the initial 3-year period; SVE then trends to the modelled rate. The maintenance profile is illustrated in Figure 5 below. We believe this approach is reasonable and well-evidenced, and therefore is in line with Ofwat guidance.

Figure 5 Infrastructure maintenance profile – water



Source: Severn Trent

Regulatory fees, sampling and testing – fees to Ofwat and CCWater are based on their budgets and the site's revenue as a proportion of industry turnover. As SVE only considers a discount to wholesale rates, this is based on the site's wholesale revenue only. For sampling and testing, SVE has deviated from the Ofwat guidance in that it is not subtracting the costs that it would incur if it served the area, but rather the costs that a NAV would incur – which in this instance would be greater than SVE's costs. This is because if SVE served the site then it would need to take at least 4 samples for population sizes less than 100, or 12 samples for sites of up to 5,000 inhabitants. For SVE, this cost would spread out across its entire customer base. However, for NAVs, a small area with more than 100 inhabitants would still require 12 samples, and as such the average cost per inhabitant would be much higher. SVE notes that understating the cost could potentially result in margin squeeze, and so it has deviated from the Ofwat guidance in this instance. We believe this is reasonable.

For very small development (up to 10 plots) SVE has not factored in sampling and testing costs. Instead, SVE offers to provide this service itself

since there would be little or no local network between its own network and the customer's meter at the boundary. Depending on the size of sites above 10 plots level, SVE notes that it might be more practical for it to provide this service and to adjust the discount accordingly. In these circumstances there would be no charge for the service (any charges SVE made would simply have to be reflected in the discount offered).

- *Meter maintenance* – SVE allows for replacement at the end of accounting life (15 years).

For wastewater, the costs being subtracted include:

- **Operating costs and maintenance**
  - *Sewerage infrastructure maintenance* – as mentioned above, in AMP7, all new assets (water or wastewater) would be funded by developers. Therefore, only maintenance and operating costs are subtracted from the relevant starting point to arrive at the discount. From the data available to SVE, it appears that there is no clear link between age and sewer maintenance costs.[11] SVE has therefore applied an average unit rate (£/m) for both blockages and collapses.
  - *Wholesale element of regulatory fees*

We believe that SVE's approach is reasonable, and deviating from the Ofwat guidance in some instances amounts to erring on the side of caution to avoid margin squeeze.

4.2.4 WACC on on-site assets

We have also reviewed SVE's calculations for the adjusted WACC to reflect the regulatory protection incumbents enjoy as well as the risk profile faced by NAVs. SVE has followed the same approach which Ofwat used in its illustrative example (see Figure 3 above), updating the inputs using its PR19 WACC and assuming a notional gearing for the NAV at 50%, and the effective tax rate at 10%. This results in a pre-tax WACC of 4.24% for the NAV, compared to a WACC of 3.27% for SVE (for a "vanilla" WACC these are 3.93% and 3.08%, respectively). We find that this approach is reasonable.

4.2.5 Provision of tariff information

We have reviewed SVE's published Scheme of Charges and its NAV Approach documents. The NAV approach document:

- Describes the relevant starting point taken when calculating the discount on bulk charges;
- Provides a comprehensive discussion of how the costs subtracted from the relevant starting point are treated; and
- Refers to the online charges calculator that SVE has published on its website and which prospective NAVs can use to estimate the discount for a bulk charging agreement. The main body of text also includes a hyperlink to the calculator.

[11] This is expected for sewer blockages, but the correlation between age and sewer collapse is also insufficiently strong.

We also believe that the NAV charges calculator published online strikes the necessary balance between flexibility (enabling NAVs to produce a more bespoke quote depending on its site-specific requirements) and ease-of-use, thereby helping the NAV to estimate its own bulk charges. Moreover, a simple "one size fits all" approach is not efficient – for example, some NAVs may have a development which is more costly than that assumed under the one size fits all approach. Therefore this is more cost reflective and in accordance with the objectives of competition law. The calculator:

- Includes a guide for users, indicating the relationships between inputs, outputs and processing/calculation sheets;
- Contains notes and comments alongside relevant input cells explaining the basis for certain variations that might be made to the inputs or providing some detail on, for example, the costs being subtracted; and
- Has clearly labelled input cells for the relevant information to be fed into the calculator. For example, this includes:
  - The size of the site (differentiating between sites of fewer than 10 plots and those with 10 plots or more);
  - Length of mains;
  - The types and mix of properties, as well as number of properties per plot;
  - Estimated household occupancy and consumption;
  - Inputs for non-households located on the site; and
  - Inputs for non-standard water and wastewater operating costs (such as pumping costs).

We believe that when taken altogether the three documents (Scheme of Charges, NAV Approach and charges calculator) provide all the information that a prospective NAV requires to estimate its bulk supply charges and that this information is clearly communicated.

5. CONCLUSION

We have been commissioned by SVE to review its approach to NAV charging to ensure that it facilitates market entry by efficient operators. Our assessment considered whether SVE's bulk supply charge schedule is likely to enable fair access to competition for NAVs. We have considered whether its charges comply with the principles of competition law and Ofwat's final guidance for setting bulk charges for NAVs. The scope of this project was to focus on the design and communication of the charges, and whether SVE has reflected all of the relevant Ofwat guidance and competition law when setting and publishing them.

We have followed an iterative process. We first reviewed the current version of SVE's wholesale charges for 2019/20 and provided feedback based on our understanding of Ofwat's guidance. SVE then made edits based on our feedback, and we then produced this report to assure the final document and approach.

Overall, we have found that SVE's bulk supply charges are designed in line with Ofwat's guidance and competition law and are reasonable and robust. Where SVE has deviated from the preferred method for detailed cost assessment in its guidance we considered that it has provided evidence to support its approach. We believe that they are presented in a clear way such that a prospective NAV would find them sufficiently accessible to facilitate market entry by estimating the discount it could expect to receive for the services it requires.