

May 2018

Trust in water

Bulk charges for NAVs: final guidance

About this document

Water companies can offer 'bulk supplies' of water, receive 'bulk discharges' of waste water or both (we referred these together as 'bulk services') from other water companies.

Water companies can draw up a contract between them that sets out the terms and conditions of supply of bulk services (we termed these 'bulk agreements'), including the price (we referred this as 'bulk supply charges'). Bulk services can be categorised as being between an incumbent water company and:

- another incumbent water company; or
- a water company created through the 'New Appointments and Variations' process (NAV).

If water companies fail to agree on the terms of their bulk agreement, including the charges, they can ask us to make a decision (a 'determination') about what the terms and conditions should be.

We have consulted on our [draft guidance](#) on the 8 November 2017 and stakeholders' responses were received by the 8 January 2018. In producing this final guidance we have taken into account all the relevant stakeholders' responses and arguments. We have separately published a) [all of the non-confidential stakeholders' responses](#); and b) [our summary of the main relevant issues raised by stakeholders and our responses](#). This document is our final guidance to supplement the [bulk supply pricing principles](#) we published in 2011. We will use the approach in this guidance when determining **bulk charges set by an incumbent water company for bulk services provided to a NAV in England and Wales**.

This document needs to be read in the context of the relevant provisions of the Water Industry Act 1991.

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1. Background

In this section, we provide background to our final guidance:

- our current policy towards NAVs;
- the link between bulk supply services and the NAVs;
- our legal powers;
- overview of our previous guidance;
- scope of this guidance;
- the NAV Strategic Review; and
- charging rules and Guidance from Defra and the Welsh Government.

Our current policy towards NAVs

The NAV regime in England and Wales provides a mechanism to facilitate new entry into the sector and to allow those water companies¹ already present to expand into other geographic areas. The introduction of this form of competition “for” the market is intended to challenge incumbent water companies², drive efficiencies and stimulate innovation. Its aim is to benefit developers and end-customers through lower prices, better quality of services, innovative and environmentally friendly solutions and more choice.

¹ In this document, we use the term ‘water company’ to refer to a company holding an appointment as a water and/or sewerage undertaker under the Water Industry Act 1991.

² In this document we use the term “incumbent water company” to refer to a water company for whom we directly set individual price controls. Although sizes vary, an incumbent water company will normally be significantly larger than a NAV. We also set price controls for NAVs, though these are set indirectly via the ‘no-worse-off’ principle. According to the latter, the tariffs set by a NAV cannot make customers worse-off than if they were supplied by the relevant incumbent water company. All incumbent water companies have their own water resources and treatment facilities. Where the distinction is necessary, we also use the term a) “English incumbent water company” to refer to a water and/or sewerage undertaker whose area is wholly or mainly in England; and b) “Welsh incumbent water company” to refer to a water and/or sewerage undertaker whose area is wholly or mainly in Wales.

Under the existing legislation, we can appoint a new water company for a site (for water supplies, waste water services or both), if one of three qualifying criteria is met:

- i) **unserved** - the site is not connected to the water and/or sewerage infrastructure of the existing water company;
- ii) **consent** - the existing water company consents to the application; or
- iii) **large user** - the premises comprising the site use at least 50MI in any year (or 250MI for end-customers of Welsh water companies) and the customer consents.

Most NAV³ sites to date have been under the ‘unserved’ criterion and relate to new residential and mixed use developments. While in this document we discuss bulk charges in relation to new developments (i.e. unserved sites), this guidance applies also to sites for which the incumbent water company has given consent and large users. Equally, for ease of exposition, although we often only refer to water services, this guidance also applies to waste water services.

A new development requires the roll-out of on-site infrastructure which needs to be connected to the incumbent water company’s existing water and/or waste water mains. A developer can do this work itself or sub-contract it to a third party. The latter could be the incumbent water company, a Self-Lay Organisation (SLO⁴) or a NAV. If the developer chooses a NAV, the latter not only builds (or takes responsibility for building by sub-contracting the construction of) the on-site infrastructure, but also provides services to the end-user customers on the site. These can include retail, other on-site services, such as maintenance of the infrastructure, and in some rare instances also water and waste water treatment services. NAVs therefore compete to provide services to:

³ In this document we use the term “NAV” to refer to a water company that (either directly or indirectly) has replaced, or will replace, one or more incumbent water companies in relation to specific sites and for whom we do not currently set individual price controls. All new companies must apply to us to be licensed to replace another water company in a specific area (a ‘new appointment’). Water companies (both incumbent water companies and NAVs) must also apply to us to change their licence if they wish to extend the area that they service (a ‘variation’).

⁴ Developers can choose to use a SLO to install or ‘self-lay’ new water mains and/or service connections.

- **developers**. NAVs compete with incumbent water companies, SLOs and developers to provide services, such as building the on-site infrastructure and connecting new dwellings to an existing water and waste water network,⁵ and
- **end-customers**. NAVs also compete with incumbent water companies for retail services (also competing with other retailers in the retail business market), the operation and maintenance of these on-site assets and in some rare cases also for the provision of water and/or waste water treatment services. This is a form of competition for the market to provide services to end-customers.

This form of competition helps to deliver our strategy of ensuring trust and confidence in the provision of water and waste water services, by delivering the following potential benefits:

- **developers** get more choice in the provision of on-site infrastructure, potentially allowing them to benefit directly from **cheaper and more quickly delivered connections** and **better quality** and **better tailored services**. NAVs frequently offer a multi-utility service, potentially making development easier and reducing administrative costs, by dealing with a single provider, rather than several utility companies.

If NAVs offered lower retail prices and better services to end-customers, as discussed below, developers could benefit too, as they will be able to sell a more valuable housing product to home buyers.

- **end-customers**, such as households and businesses, may benefit from **lower charges**. Under the no-worse-off principle, NAVs must at least match the incumbent water company's charges as a condition of their licence, but they often offer initial discounted charges to end-customers. The latter may also benefit from **better services**, for example, better retail or more efficient and environmentally friendly services.
- **innovation** which can benefit **end-customers, developers** and **incumbent water companies**. For example, this can take place through innovative environmentally friendly services/solutions that lead to lower water consumption and less production of waste water, lower cost ways of

⁵ NAVs may also subcontract the building of on-site infrastructure to third parties.

developing infrastructure and savings in the provision of multi-utility infrastructure. These could include, for example, Sustainable Urban Drainage Solutions (SUDS). All end-customers benefit from innovations that preserve or improve the environment.

We are currently reviewing our policy towards NAVs. This follows work done by [Frontier Economics](#) which reviewed NAV activity and identified a number of barriers faced by NAVs (including bulk supply pricing). [We subsequently committed to undertake a number of actions](#) (in addition to this guidance of bulk supply) to lower barriers. But we also said we would review the strategic role that NAVs could play in the sector in future years; the benefits that a successfully functioning NAV market could deliver to customers in terms of competitive diversity, efficiency and innovation; and the way that we regulate the sector to ensure an appropriate balance between facilitating and promoting effective competition and protecting customers. We expect to publish this in the course of 2018 and may update our policy following this review.

The link between bulk supplies and the NAVs

There are two types of bulk services:

- **Bulk services between one incumbent water company and another.** These are often referred to as ‘water trades’ and often consist of transfers of large volumes of water. For example, the providing company might expand one of its existing water resources to provide a large volume of water to supply the receiving company’s customers.

To encourage water trading in our final PR19 methodology we [maintained the water trading incentives from PR14](#), both export and import, for new water trades agreed in 2020-25. To qualify for the incentive, the water company would have to show that its trade complies with an Ofwat [approved trading and procurement code](#). This code ensures that only economically and environmentally beneficial trades will receive an incentive payment.

- **Bulk services from an incumbent water company to a NAV.** These usually involve the trading of relatively small volumes of water or waste water between a water incumbent and a NAV. For example, a NAV might supply a new housing estate using a bulk supply of potable water from an incumbent water company.

This guidance only applies to the latter type of bulk service. Bulk charges are a critical part of a bulk agreement. This is because bulk charges influence the on-going margin and, therefore, whether a NAV can compete to offer water and waste water services to a site. For the most common type of NAV, its overall margin depends on the:

- **on-site development margin** – the one-off margin they make on building or sub-contracting the construction of the on-site infrastructure for the developers; and
- **margin on the services provided to end-customers** – this on-going margin is determined by:
 - **end-customer prices** - these are constrained by the “no worse off” principle, i.e. they cannot charge end-customers more than the incumbent water company would charge;
 - **bulk charges** – this is the charge for the bulk services in the bulk agreement; and
 - **on-going costs** – these are the costs of providing the on-site services and retailing costs; and
 - **appropriate WACC** – this is the return that is appropriate for the on-site assets.

Some NAVs also compete with incumbent water companies for other services. For example, they may have access to their own water resources and may treat their own waste water. These NAVs are less reliant on bulk services from incumbent water companies. At the end of the spectrum full service NAVs would not be reliant on any services from the local incumbent water company.

Our legal powers

Our role in determining the terms of bulk supply agreements is limited to situations where the parties – i.e. an incumbent water company and a NAV - are unable to reach an agreement. In general, we expect water companies to negotiate bulk supply agreements themselves without our intervention.

However, the parties may fail to agree on:

- the terms of a proposed bulk supply agreement;
- how the terms of an existing agreement should be changed; or
- whether an existing agreement should end.

These disputes can therefore be about prices, duration or other terms of supply. When parties fail to agree they can ask us to determine the terms of the bulk supply. We can determine the contractual terms of actual or proposed bulk supply agreements if certain conditions are met (see sections 40, 40A, 110A and 110B of the WIA91⁶). We can only make these determinations if we are satisfied that the various parties cannot reach agreement. Before we make a determination we must also decide that the proposal or, where appropriate, the variation or termination of the existing agreement⁷ is necessary or expedient in the case of a:

- a bulk supply of water, to secure the efficient use of water resources or the efficient supply of water; or
- a bulk discharge of waste water, for the purposes of Part 4 (Sewerage Services) of the WIA91.

Ofwat also has concurrent powers with the Competition and Markets Authority (CMA) to apply competition law with respect to water and waste water activities in England and Wales. Where appropriate, we can use our competition law powers in relation to existing markets for bulk supplies to ensure they are working for the benefit of all customers. We have published [guidance](#) on our approach to the application of competition law. Decisions on whether to open or continue

⁶ Sections 8 and 9 of the Water Act 2014 will make changes to the WIA91 that are not yet in force for all purposes. In particular (and see further below):

- section 8 of the Water Act 2014 has (to date) only substituted new sections 40 and 40A for those currently in the WIA91 in relation to relevant agreements between English water companies; and
- section 9 has (to date) only substituted a new 110A, and inserted a completely new section 110B, in relation to relevant agreements between English water companies.

⁷ Until the changes made by section 9 of the Water Act 2014 are brought into force for this purpose we do not, unless we determined the terms of the original agreement, yet have the power to determine disputes about the terms of bulk discharge agreements involving at least one Welsh water company.

investigations under the Competition Act 1998 (CA98) and whether and what enforcement action we should take under the CA98 will be made using our [prioritisation principles](#).

Overview of our other relevant guidance on bulk supply

Bulk supply pricing – a statement of our policy principles

In July 2011, we published '[Bulk supply pricing – a statement of our policy principles](#)'. Our 2011 pricing guidance covers both types of bulk supplies, so it does not apply solely to the bulk charges offered by incumbent water companies to NAVs.

The document set out the principles we use when making determinations on bulk supply agreements. These principles were intended to provide us with a clear basis for making decisions on individual agreements and provide stakeholders with greater clarity on how we reach our decisions. We also set out the types of information that we would likely need from relevant parties when making a determination.

In our 2011 pricing guidance, we said we would determine bulk charges so that those prices:

- reflect the costs reasonably associated with the provision of the relevant services;
- facilitate the efficient use of resources and effective competition, where appropriate; and
- are consistent with the discharge of the relevant duties and obligations of the relevant supplier.

Our 2011 pricing guidance also provides guidance on:

- the relevant services; and
- assessing the costs reasonably associated with the provision of the relevant services.

Negotiating bulk supplies – a framework

In August 2013, we published '[Negotiating bulk supplies – a framework](#)' for incumbent water companies as they consider negotiating suitable bulk supply agreements. We provided a checklist of 14 areas a bulk supply agreement could cover. This guidance was separate to our 2011 pricing guidance. Pricing was not the main focus of this document, although it did discuss:

- the **price terms** which could be included in a bulk supply agreement, such as the structure of charges and the kinds of ancillary charges that could be covered; and
- **how prices could be adjusted**, e.g. by inflation, volume or periodically review.

Online guidance related to NAVs

At the time of [consultation on this guidance](#) our [website](#) also included further guidance for NAVs regarding the negotiation of bulk supplies. This was not updated since it was first drafted and predates the introduction of competition in the retail business market in England in April 2017. We said that a NAV may often share the same cost characteristics as a large user from the relevant incumbent water company's point of view, such as:

- the delivery of a large amount of water to a single point of supply;
- one customer to manage; and
- no use of the local distribution network.

Therefore, we considered it was sensible for parties to use the relevant Large User Tariff (LUT) as a basis for negotiations⁸ where the NAV's forecast demand qualifies. Any costs that the relevant incumbent water company would incur or not incur as a result of the NAV serving the site should be added or deducted respectively from the bulk price.

⁸ We also state this in our '[New Appointments and variations – a statement of our policy](#)'.

However, we also noted that other approaches have been successfully used. For example, in previous negotiations, offers by incumbent water companies have included tariffs based on:

- the relevant full standard volumetric tariff; and
- a retail-minus approach to costs.

We have now updated the website to reflect the content of this guidance.

Scope of this guidance

This guidance highlights the approach we will take when determining **bulk charges set by an incumbent water company for bulk services provided to a NAV in England and Wales**.

This guidance supplements the bulk supply principles we published in 2011, the August 2013 'Negotiating bulk supplies – a framework' and guidance currently on Ofwat's website. However, specifically in relation to bulk supply prices, this new guidance replaces any guidance in those prior documents related to charges.

Powers to issue charging rules and Guidance from Defra and the Welsh Government

Changes to be made to the WIA91 by the Water Act 2014 empower us to issue charging rules in relation to bulk agreements.⁹ It is for Defra and the Welsh Government to decide when to bring those powers into force. The Water Act 2014 also amends the WIA91 to give the Secretary of State and the Welsh Government the power to issue guidance to us about the principles to be applied by us in determining the provisions of charging rules and as to the content of charging rules.

⁹ Section 40E of the WIA91 (inserted by section 8 of the Water Act 2014) in relation to bulk supplies of water and section 110F of the WIA91 (inserted by section 9 of the Water Act 2014) in relation to bulk discharges of waste water. These provisions are currently only in force in relation to bulk agreements between English water companies.

Ofwat's powers to issue charging rules

Defra has given us the powers to issues charging rules for agreements between English water companies on bulk supply from the 1 April 2018. The Welsh Government has enabled us to do so for bulk agreements between Welsh water companies from the 1 April 2019.

Guidance from Defra and the Welsh Government

Defra issued overarching [charging guidance](#) in January 2016. This set out Defra's four objectives for charges:

- fairness and affordability;
- environmental protection;
- stability and predictability; and
- transparency and customer-focused service.

In April 2018 Defra also issued additional guidance to Ofwat in relation to [water bulk supply charges](#). This covers both bulk agreements between two incumbent water companies and between a NAV and an incumbent water company. The latter is the focus of this document. Of particular relevance is the reference to charging rules that allow appropriate margins that ensure that there is a level playing field between incumbent water companies and the NAVs and eventually lead to benefits to developers and consumers.

In 2017 the Welsh Government issued [guidance](#) which, inter alia, also covers bulk supply charges. In relation to bulk supply charges from incumbent water companies to NAVs it states that:

- these should ensure a level playing field and not actively encourage NAVs and that the charging framework should be neutral when promoting competition;
- charges should be transparent and predictable;
- transitional arrangements should be considered; and

- companies should understand and engage with their customers via effective, timely and proportionate consultation

2. Our purpose and objectives

Purpose

This document sets out our approach to future determination requests related to the charges in a bulk agreement between an incumbent water company and a NAV. The aim is to contribute to the creation of a **level playing field in the provision of developer services and the provision of water services to the end-customers in new developments**.

Our guidance is **only concerned with disputes which we deal with using our determination powers under the WIA91**. It does not constitute guidance on the application of competition law. Incumbent water companies remain separately responsible for managing their own compliance with competition law. For example, incumbent water companies which have a dominant position must ensure that their actions do not constitute an abuse of dominance. Of particular relevance in this context are exclusionary behaviours, for example, setting prices which could be considered to lead to a margin squeeze.

Our objectives

We believe this guidance will help to deliver our **strategy of ensuring trust and confidence in the sector** by:

- providing a level playing field between incumbent water companies, SLOs, developers and NAVs;
- ensuring that, as far as possible, the increased choice for developers leads to more intense competition and the benefits are passed on to both developers and end-customers in the form of lower prices, better quality services and more innovation;
- encouraging the adoption of innovation that also benefits the environment;
- being simple to apply by providing: (i) incumbent water companies with sufficiently detailed guidance to set their charges at the appropriate level to reduce the risk of triggering a request for determination; and (ii) NAVs with

the confidence that they have sufficient and timely information on which to bid for developers' work;

- being sufficiently flexible to cater for differences in the types of sites and the types of services required by NAVs; and
- being sufficiently general and flexible to make it reasonably future-proof - this proposed guidance should remain broadly relevant, applicable and easy to interpret, even if a range of unexpected market and regulatory developments took place.

3. Our guidance

Scope of bulk supply services

We will apply this guidance to any dispute about bulk charges between an incumbent water company and a NAV using our powers under the WIA91. The scope of disputes which can be referred to us includes charges for any range of bulk services required by NAVs to provide their services to their end-customers.

The scope may cover both water and waste water or, depending on the needs of the NAV, only a subset of these services. For example, some NAVs may not require waste water bulk services in whole or in part, because they might treat their end-customers' waste water themselves and, where possible, recycle it for uses that do not require potable water (e.g. toilet flushing). Distinct waste water networks could collect grey water separately from black water. The former would be reusable as non-potable water. NAVs may also capture all of their surface water through a SUDS, partially reducing the demand for waste water bulk services.

Alternatively, some NAVs may decide to rely on water resources, either treated or untreated, from providers other than the local incumbent water company. If the new development is sufficiently large, some NAVs may also self-supply water treatment services. Furthermore, some NAVs may have their own proprietary water resources and not require treated bulk water from the local incumbent water company. As technology evolves, the range of services required by NAVs may also change over time.

NAVs must be free to choose which services they wish to purchase from the local incumbent water company. Therefore, bulk charges should be flexible and relate solely to the services a NAV requests from the incumbent water company. This is particularly important going forward, as ongoing reforms in opening up markets in England may provide more opportunities for NAVs to source services from providers other than the water incumbent.

Our wholesale-minus approach

In case of a dispute we will apply a **wholesale-minus approach**. This approach starts from the relevant wholesale tariff(s) and **deducts costs that the incumbent**

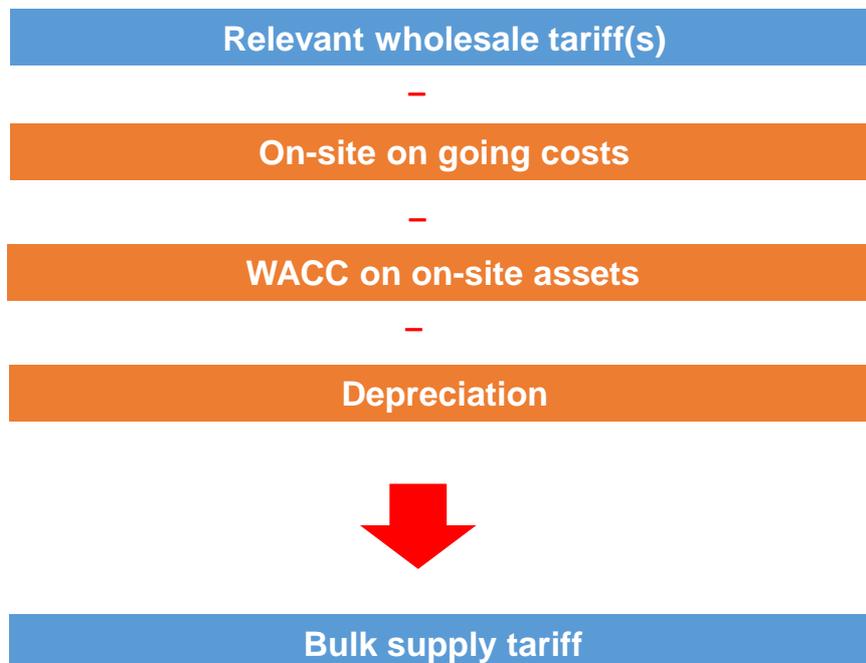
water company would no longer incur if a NAV supplied the new development instead.

There are four essential elements in this approach:

- The **wholesale tariff or set of tariffs** as the relevant starting point from which to deduct the relevant costs.
- The “minus” or the costs to be deducted. There are three categories :
 - **On-site ongoing costs**,
 - Weighted Average Cost of Capital (**WACC**) on the on-site assets, and
 - Depreciation

Figure 1 provides a graphical illustration of how we propose to implement our wholesale-minus approach. The rest of this section provides further details on the four key elements in our wholesale-minus approach.

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



The relevant starting point

Under a wholesale-minus approach bulk charges should closely relate to the services a NAV provides to its end-customers. In broad terms, 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 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. Some sites may just have residential, while others may focus on (small and/or large) business or have a mix of end-customers. In addition, NAVs may require either bulk water, waste water or both services. Some NAVs may require services for less than the demand that would be implied by the number of premises on-site – e.g. because they have their own water resources and/or they partially recycle their waste water.

An advantage of a starting point based on the incumbent water companies' wholesale tariffs is that the bulk charges can change over time to reflect changes in incumbent water companies' wholesale tariffs. This ensures that an appropriate margin to provide the on-site services is retained over time. For example, wholesale charges will change depending on the outcome of price reviews or incumbent water companies adjust their tariffs on a yearly basis. NAVs' retail (and wholesale) tariffs are also bound by the "no-worse-off" principle that requires them to set their tariffs no higher than those of the relevant incumbent water company. Adjusting the bulk supply charges to changes in the incumbent water company's wholesale tariffs facilitates that the wedge between NAVs' retail charges and its bulk supply charges ensures a level playing field. This flexibility is required also to take into account any changes that take place in the composition of the NAV's end-customers – e.g. in case some residential are substituted by business end-customers.

As discussed further below, there are two ways to construct an appropriate relevant starting point. We refer to an illustrative example in Box 1. Incumbent water companies could publish either:

- 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 – i.e. P_{Bulk} in Box 1; or

- a menu of all the relevant tariff components that would allow NAVs 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 $P_{(Bulk)}$.

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:

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

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

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

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

$$\begin{aligned} P_{(Bulk)} &= (10*10 + 8*5) + [1*(10/15) + 0.5*(5/15)]*q \\ &= 140 + 0.83*q \end{aligned}$$

Relevant costs

The cost to deduct from the relevant starting point fall into two main categories – i.e. on-site ongoing costs and the WACC (Figure 1). The discussion below is illustrative referring to the type of costs that are most likely to arise under each category. However, in some circumstances either not all costs mentioned may be relevant or it may be necessary to deduct additional costs.

On-site ongoing costs

The first set of costs to deduct relates to the **ongoing costs of operating and maintaining the on-site assets**. These must reflect the activities that the NAV is expected to perform on the site. Most NAVs will have to maintain and operate the on-site infrastructure. They may also perform additional services. Two illustrative examples. 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. To reflect these options, incumbent water companies may set up tariffs (or menus of tariffs) that take into account services that NAVs may or may not self-supply.

The on-going costs of operating and maintaining the on-site assets should be those of the incumbent water company. While new assets are, initially, less likely to require the same level of maintenance as older assets, in later periods maintenance costs would be higher. Therefore, as a general principle it would be inappropriate to assume that the new assets, such as the on-site infrastructure for a new development, will have very low maintenance costs simply because they would be newer than any of the assets currently in the ground.¹⁰ Conceptually one should consider the level, timing and profile of all the costs incurred over the lifetime of the asset and estimate an equivalent annuity. The 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.

While we are not prescriptive in terms of which types of costs should be included under the term “on-site ongoing costs”, we consider that incumbent water companies need to also reflect any **leakage** assumptions. To the extent that the wholesale charge(s) were set on the basis of estimated leakage, the incumbent water companies would not incur any leakage costs that occurred in the on-site infrastructure. Therefore, NAVs should not pay for these costs and an appropriate allowance should be made in the bulk supply charge. Evidence as to where in the distribution network leakage occurs could be particularly relevant in this regard – i.e. this allowance should be larger the higher the proportion of leakage that is likely to occur in the on-site infrastructure.

¹⁰ However, we would be prepared to consider substantial, reliable and robust evidence that new technology would require lower maintenance costs over the lifetime of the assets compared to the existing set of assets.

The WACC for on-site assets

Incumbent water companies also need to deduct an appropriate level of reasonable return or the Weighted Average Cost of Capital (WACC) on the on-site assets. Conceptually we consider that the **Incumbent water companies' WACC should be adjusted to reflect two main features**. Both adjustments aim at levelling the playing field:

- **the WACC should be adjusted to reflect the fact that the incumbent water companies enjoy a degree of regulatory protection** which is not available to a NAV. For example, and only as an illustration, their revenues, once set as part of the revenue cap determination, are, at least partially, protected from demand variations and associated risks. This means that any entrants such as NAVs that do not enjoy that regulatory protection face a higher degree of risk and they would be unable to replicate an incumbent water company's offer irrespective of their relative efficiency. There is, therefore, a case for adjusting the incumbent water companies' WACC to mimic that of an incumbent without regulatory protection; and
- the incumbent water companies' WACC that Ofwat sets in periodic reviews reflects the risk of the companies' entire regulated business. However, for bulk supply we are interested in creating a level playing field for new development services. The risk profile of these activities may be different from the risk of the overall business. Hence, **the incumbent water companies' overall WACC should be adjusted to reflect the risks of the relevant on-site activities**.

Our conclusion is that it would be proportionate and there are considerable practical advantages in adopting a simple methodology to establish the appropriate WACC for the purpose of setting bulk supply charges. **Annex 2** expands on this point and:

- lists the factors that it is conceptually appropriate to take into account in adjusting the incumbent water incumbents' WACC;
- provides a practical methodology for adjusting the incumbent water companies' WACC to reflect these factors as far as it is possible and proportionate; and
- puts forward our estimation of the WACC to use to set bulk supply charges during PR14.

We consider that the value estimated and reported in Annex 2 is an appropriate estimate for the incumbent water companies to set bulk supply charges for the remaining period of PR14. As for all aspects of this guidance, in case of a dispute brought to us we would need to assess any evidence that is brought to us including any alternative estimates for the appropriate WACC.

The WACC estimated in Annex 2 should be applied to the Regulatory Capital Value (RCV) which is related to the on-site assets. To the extent that the incumbent water company accrued the on-site assets to its RCV, if it undertook the development instead of a NAV, the WACC should be applied to the same type and value of assets.

Depreciation

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

Costs not to be reflected in bulk charges

This guidance does not list all the costs that should be included or excluded in setting bulk charges. However, for clarity, we consider it is helpful to specify two types of costs that should not be factored into estimating bulk charges. These are:

- **Costs recovered from developers:** The type of costs that need to be deducted from the relevant starting point are those that an incumbent water company would have recovered from their end-customers had it won the contract to run the site, instead of a NAV. This is an important consideration as in any new development upfront one-off costs are recovered from developers. For example, developers pay for the costs of rolling-out the on-site network, connecting the latter to the local incumbent water company's nearby network and for any network reinforcement the latter needs to undertake. The upfront costs of these services are already recovered from developers and, therefore, should not be recovered from end-customers. They should, therefore, not be considered for the purpose of setting bulk charges.
- **Offsite costs:** Incumbent water companies might incur incremental, on-going costs that are driven solely by the new development. For example, suppose the site of the new development requires the installation of additional pumps

to maintain water pressure for the site's end-customers - e.g. on the top of a hill. In this example, the upfront costs for the pumps should be recovered from developers via the infrastructure charge, while any ongoing running costs, such as the energy used to operate these pumps, are recovered from end-customers. However, the geographically averaged nature of retail charges means that these costs are recovered from all existing customers of the incumbent water company, both on- and off-site. Therefore, these costs should not to be added to the relevant starting point.

The provision of tariff information

We consider that there are benefits from incumbent water companies publishing relevant charging information. This principle and the reasons behind this are explained and set out in our charging rules for [new connections](#), [retail](#) and [wholesale](#) charges.

Publication of bulk charges is key for NAVs, as the latter need to secure a bulk agreement, at least in the form of a quote, before bidding for developers' jobs. 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.

We appreciate that incumbent water companies will only be subject to obligations to publish their bulk charges if, and when, we publish charging rules on bulk supply. However, we expect incumbent water companies to adopt best practice and consider publishing bulk charges to provide as much information as early as possible from the date of publication of this guidance.

The type and scope of bulk services a NAV needs to purchase from the incumbent water company may vary depending on the approach the NAV adopts on the site and the local circumstances. Therefore, potentially each site could have its own bespoke bulk charges. The latter have the potential to cater for the exact needs of each site. However, setting tariffs on a site-by-site basis would be complex, time consuming and provide no or limited information to NAVs. As a result, in the largest majority of cases incumbent water companies should publish tariff information. It is possible though that, in some (rare) cases, some elements of the charge in relation to a particular site may need to reflect the site's features and/or circumstances and may therefore need to be customised or bespoke.

In terms of how and what information is published there are at least two possible ways of achieving transparency as illustrated by the example in Box 1. Incumbent water companies could publish charges covering either:

- each element a bulk supply tariff is made of. This would allow a prospective NAV to easily calculate the bulk supply charge for the site it is considering bidding for. For example and purely for illustration purposes, suppose the site consisted of 300 residential and 50 business premises, the NAV needed bulk water and bulk waste water discharge consisting of 50% of its water consumption (the remainder being recycled on the site), water consumption per premise was estimated to be X because of the water fittings meeting standard Y, the on-site network infrastructure extended for Z miles and no emergency services from the incumbent were required. On the basis of these features a NAV should have sufficient disaggregated tariff information to be able to estimate the overall bulk charge it would face in a relatively simple way; or
- sites with different features. For example and also for illustration, the incumbent water company could publish a bulk water and waste water tariff for a residential development that varies solely with the number of premises. It could also publish a tariff that covers solely business developments and/or typical mixed developments.

Both approaches can provide transparent information. However, particularly in relation to the first approach, it will also be appropriate to publish an explanation of the methodology a NAV should use to estimate its overall bulk supply charge.

Updating the bulk supply charges

We expect water companies to promptly adjust their bulk charges to reflect any material changes. There are a number of factors that may trigger changes. We mention a few for illustration.

First, there may be changes in the wholesale tariffs' constituent parts that affect the level of bulk supply charge(s). For illustration only, and not an exhaustive list, the following factors may affect the bulk charges. A change in the:

- level of the wholesale revenue cap as a result of a periodic review determination may affect the level and/or the structure of the incumbent water company wholesale charges. A wholesale-minus approach means that the relevant starting point would change and so will the bulk supply charge(s);

- structure of wholesale tariffs within a periodic review will have the same effect as the change highlighted above;
- incumbent water companies' WACC set in a periodic review determination will result in changes in the overall level of deducted costs. This will affect the bulk supply charge(s) even if the adjustment to the incumbent water companies' WACC (Annex 2) remains unchanged; and
- type and/or degree of regulatory protection for incumbent water companies will affect the appropriate adjustment to the WACC and through the WACC the bulk supply charge(s).

In these cases we expect the incumbent water company to take the initiative and tailor the charges to the new circumstances as soon as possible.

Second, a change in the number and composition of the premises in a development will also affect the bulk supply charge(s). The most likely circumstance is when a development is gradually built with some blocks of premises being added and connected to the network at discrete times. In some cases, the composition of premises in a development may materially change over time – i.e. some business being converted into residential premises or vice versa. The bulk supply charges will need to be adjusted accordingly. Given that the NAVs have this information, they should promptly inform and provide evidence to the incumbent water company of the incoming changes and their timing so that the relevant bulk supply charge could be amended. This should be a simple process given the tariff information that incumbent water companies are expected to publish.

Lastly, we expect that in most cases when this guidance comes into force the incumbent water companies will have to create and publish new bulk supply charges. These will supersede existing agreements between the incumbent water companies and the NAVs and prompt a number of changes. It would be good practice for incumbent water companies to take the initiative and update the bulk supply charges with their existing NAVs to reflect such changes, but in any case they should do so promptly when an existing NAV requests the bulk charges to be updated to reflect this guidance. Failing to do so would open up the risk of a NAV requesting a determination.

Future changes in regulatory regime

We consider that our approach is sufficiently flexible to be adapted to changes to the existing circumstances. A possible example is the new water resources and network

plus controls for wholesale water and waste water in PR19. Some NAVs already self-supply water resources or other elements of wholesale services and in the future they may take advantage of market reforms in England. The new wholesale controls will provide greater transparency of incumbent water companies' costs and so will allow bulk charges to better reflect the avoided costs.

This guidance should not be seen as exhaustive in terms of possible current or future scenarios. Future reforms may impact the types of services that NAVs could source and from which provider. If this is the case, the proposed wholesale-minus scenario could and should be adapted to reflect the new circumstances.

The treatment of the income offset

An 'income offset' is a discount on an incumbent water company's charge for providing a sewer or water main. It reflects the income the incumbent water company will receive from a new development. It can therefore reduce the cost of connecting new housing developments to the water network.

In our October 2017 Decision "[New connection charges for the future – England](#)", we concluded that the current treatment of the 'income offset' was an impediment to a level playing field for NAVs, as currently they rarely benefit from it. To address this concern, we decided to net-off the 'income offset' from the infrastructure charge, rather than against the requisition charge as is currently the case. In future bulk agreements, NAVs would only be required to pass back the 'net infrastructure charge' to the incumbent water company, thus ensuring they are not disadvantaged. This change will come into effect from 1 April 2020.

To benefit from a more even playing field as soon as possible, as a temporary measure, we have decided that incumbent water companies should include the payment of the 'income offset' in their new bulk agreements from 1 April 2018 to 31 March 2020. Hence, bulk supply charges related to new NAVs that start operation within that period may also include the 'income offset'.

4. Next Steps

This guidance takes immediate effect from the date of its publication and it does not have retroactive effect – i.e. it will only apply to existing or new agreements that are referred to us for a determination after the date of publication of this guidance.

We also anticipate issuing charging rules on bulk services in the future, but this is unlikely to happen before all the relevant changes made by WA14 are fully in force.

We will consult before issuing any charging rules, but currently anticipate incorporating a significant proportion of the relevant elements of this guidance into future charging rules. We will have regard to the relevant charging guidance from Defra and the Welsh Government in making charging rules, as required by legislation.

Annex 1 – Glossary

Incumbent water company	A water company for whom we set individual price controls. Although sizes vary, an incumbent water company will normally be significantly larger than a NAV. All incumbent water companies have their own water resources and treatment facilities.
Water company	A company holding an appointment as a water and/or sewerage undertaker under the Water Industry Act 1991. It includes incumbent water companies and NAVs.
NAVs	A water company that (either directly or indirectly) has replaced, or will replace, one or more incumbent water companies in relation to specific sites and for whom we do not currently set individual price controls. Although a NAV can operate its own treatment facilities, a NAV normally obtains a bulk supply of water from, and/or agrees a bulk discharge of waste water to, an incumbent water company.
NAV site	A site for which a NAV is the water company.
End-customers	Household retail customers and business retail customers.
Bulk supply	Supply of water from one water company to another.
Bulk discharge	Supply of waste water from one sewerage company to another.
Bulk services	Bulk supplies and bulk discharges.

Bulk supply agreement	A contract setting out the terms and conditions for bulk supply.
Bulk discharge agreement	A contract setting out the terms and conditions for bulk discharges.
Bulk agreements	Bulk supply agreements and bulk discharge agreements.
Bulk charges	The charges for bulk services, i.e. bulk supplies and bulk discharges.

Annex 2 – Setting the WACC for bulk supply

In Section 2 we concluded that there are practical advantages to a simple methodology for calculating a WACC for setting bulk supply charges. Our proposed methodology and estimation covers the adjustment to the incumbent water companies' WACC for the remaining period of PR14. We plan to use the WACC estimated in this Annex if and when we are asked to make a decision (a 'determination') about the terms and conditions of a bulk supply agreement between a NAV and an incumbent water company. As for other elements of this guidance, in a determination we will also examine any evidence that will be put to us before reaching our final view.

In Section 2 we concluded that the incumbent water companies' WACC should be adjusted to reflect two main features:

- 1) The (higher) degree of regulatory protection enjoyed by incumbent water companies'; and
- 2) The risk profile of new development services, which may be different from the risk of the incumbent water companies' overall business.

The 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. While it would in theory be possible to systematically consider differences on this risk differential, incumbent water companies do not currently submit data to us broken down into this category of activities, which makes any comparison against their overall risk profile particularly difficult. This Annex therefore only estimates the difference in the required WACC which is driven by the degree of regulatory protection enjoyed by incumbent water companies'.

Our long-running practice at price reviews when calculating the cost of equity is to use the Capital Asset Pricing Model (CAPM), which expresses the cost of equity as a function of the Risk Free Rate, Total Market Return, and asset beta. As the first two of these inputs are economy-wide, under the CAPM framework, we consider that differences in risk between the incumbent water company and our counterfactual "unprotected" incumbent water company is reflected in a different value of the asset beta. Table A.1 sets out the factors which we consider to be most material.

Table A.1 – The impact of regulatory protections on the incumbent water companies' asset beta¹¹

PR14 regulatory protection enjoyed by incumbent water companies, but not NAVs	Why the incumbent enjoys better protection compared to a NAV	Impact on the incumbent water companies' asset beta
Wholesale Revenue Forecasting Incentive Mechanism (WRFIM)	The WRFIM removes much demand and occupancy risk from incumbent water companies by allowing companies to recover losses due these factors in future periods.	Its removal will tend to increase the asset beta for the incumbent water companies, as it will lead to greater exposure to demand and occupancy risk.
Totex cost sharing rates	Incumbent water companies benefit from sharing of totex cost overspends with customers – they recoup a proportion of the difference between forecast and outturn costs.	Its removal will tend increase the asset beta for the incumbent water companies, as they will be more exposed to input price volatility from non-diversifiable sources.

We consider that the increased demand risk resulting from the absence of WRFIM to be the dominant driver of risk differential. Quantifying the uplift to asset beta which this represents relative to the PR14 estimate of 0.3 necessitates a considerable degree of regulatory judgment, due to the difficulty in identifying the appropriate benchmarks with directly comparable risk characteristics. This difficulty notwithstanding, estimates of asset beta from companies in regulated sectors which are more subject to demand risk represent useful benchmark. We consider that a

¹¹ Under the CAPM framework, investors are deemed to require higher returns only to compensate for higher systematic (i.e. hard to diversify) risk.

lower bound may be the estimates of beta from incumbent water companies (for which we assumed an asset beta of 0.30 at PR14), and an upper bound, by regulated sectors which are exposed to more demand risk, such as airports. The Civil Aviation Authority (CAA) in 2013 assessed that a plausible post-2014 range for Heathrow and Gatwick Airport's asset betas was 0.42–0.52 and 0.46–0.58, respectively.¹² This range is comparable with our own estimation of historical asset betas for Fraport, one of the few listed European airport companies.¹³ Based on this range, we consider that an asset beta of 0.45 approximately reflects the exposure to systematic risk which investors face, over holding equity in a notionally geared incumbent water company. We recognise that this estimate is subject to considerable uncertainty, however, and welcome suggestions setting out potential alternative approaches in advance of us revisiting this issue for the PR19 control period (2020-25).

In order to come to a more precise estimation of the adjusted WACC due to regulatory protections we have also made other changes to the WACC which we set for incumbent water companies at PR14:

- **Notional Gearing:** Traditional corporate finance theory suggests that greater exposure to risks makes it appropriate to adopt lower gearing to provide greater financial headroom. We consider that 50% notional gearing is broadly consistent with the additional risks in this case; and
- **Treatment of taxation:** The regulatory framework for incumbent water companies provides for a separate allowance for corporation tax costs as a separate building block, thus the applicable WACC used to calculate returns is 'vanilla'.¹⁴ The regulatory framework for NAVs does not provide a separate building block for tax costs, therefore it is necessary to provide for these in the WACC by setting a fully pre-tax WACC. We assume that the effective tax rate

¹² CAA (2013), *Estimating the cost of capital: a technical appendix to the CAA's Final Proposal for economic regulation of Heathrow and Gatwick after April 2014*, p 89.

¹³ We estimate 2 year daily asset betas and 5 year monthly asset betas for Fraport as being 0.43 and 0.61, respectively, in periods terminating in October 2014.

¹⁴ i.e. based on a pre-tax cost of debt, and post-tax cost of equity.

to estimate the adjusted WACC is 10%, based on analysis conducted by PwC at PR14.¹⁵

We have left other assumptions from the PR14 final determination unchanged. Table A.2 compares our assumptions for an adjusted WACC with the PR14 final determinations.

Table A.2 – Differences in assumptions between PR14 final determination and for the purpose of setting bulk supply charges

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%

On the basis of our calculations in Table A.2 we consider that the appropriate central estimate for an adjusted WACC relevant to bulk supply agreements is 4.74%. This will apply for the remaining period of PR14.

¹⁵ PwC (2014), *Updated evidence on the WACC for PR14*, December 2014, p35.

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May 2018

ISBN 978-1-911588-37-5

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