

EXECUTIVE SUMMARY

The 2009 Periodic Review

This is a summary of Dee Valley Water's Business Plan for the five year period commencing on 1 April 2010. The Business Plan is submitted to the economic regulator for the water industry, Ofwat, to determine the price limits that Dee Valley Water can charge customers. Ofwat's determination will be made in November 2009.

As a regulated water company, Dee Valley Water has a legal obligation to ensure that it invests sufficiently in its assets to maintain their serviceability. We also have to comply with existing and new legal standards as set by Government. Ofwat has the responsibility for setting the level of prices but must ensure that they are sufficient to enable an efficient company to finance its obligations. This means that companies have to be allowed to make a profit to ensure that they can attract the necessary financing.

Our strategy

We consulted our customers to understand their attitudes and opinions and to inform our investment proposals for the five year period. The messages that we have received to date are:-

- customers are generally happy with the level of service they receive

- customers are not prepared to pay more to improve the current level of service
- customers expect us to ensure that we invest sufficiently to maintain our assets.

We have also consulted on a draft of our Business Plan, which was published in August 2008.

We have taken account of the messages from our customers in our planning and consequently our investment proposals are limited to those required to maintain the current serviceability of our assets and to comply with legislation.

Capital investment (2007/08 prices)	2005-2010	2010-2015
Asset maintenance	£28.3m	£30.4m
Security improvements	£0.6m	£1.4m
New development/growth	£2.7m	£1.4m
Flood protection	£0m	£0.8m
Total	£31.6m	£34.0m

Asset maintenance investment will consist mainly of two schemes:–

- a scheme of £16.3m to replace our largest treatment works at Llwyn Onn
- the replacement of 50.1km of water mains at a total cost of £5.6m.

Optional meters are for customers who choose to switch from unmeasured to measured charging. We have estimated that we will need to install 8,500 new meters over the five years.

Security improvements are required at most of our installations to comply with new standards stipulated by Government.

Flood protection work is required at our two river intakes on the River Dee.

Operating costs

Our projected operating costs will increase to cater for the effects of higher power costs and for our succession plan aimed at replacing key employees as they come up to retirement.

Falling industrial demand

The recent announcement by our second largest customer, Flexsys, that they intend to close their factory at Acrefair by 2011, coupled with a general decline in demand by other customers, has been

taken into account in our plans. Loss of revenue from reduced consumption of water during the recession is a major factor in the proposed increase in bills.

Impact on bills

The net effect of the various pressures on bills is that we estimate that the average household bill will increase from £119.66 in 2009/10 to £130.27 in 2014/15, excluding the effects of inflation. This is an overall increase of 9.7% over the five years at an average increase of 1.88% per year.

BUSINESS PLAN

OVERVIEW

Dee Valley Water was formed in 1997 with the merger of the former Chester Waterworks Company and Wrexham Water Company. Both of these former companies had roots stretching back to the 1860's.

Dee Valley Water supplies water only and does not deal with sewerage although we do collect sewerage charges on behalf of the sewerage companies in our area. We are the 3rd smallest of the 22 water companies in England and Wales in terms of the population supplied. The area supplied covers 831 square kilometres in north-east Wales centred around Wrexham, and in north-west England centred around Chester. A population of 259,000 and many local industries rely on us for a safe, reliable supply of water.

About 80% of our raw water is derived from the River Dee; 15% is from our own reservoirs situated in the nearby Welsh hills and the remaining 5% is from two underground sources. We operate 6 treatment works and utilise almost 2,000 kilometres of water mains to distribute the water to our customers; we also utilise 37 treated water storage reservoirs and 37 pumping stations to ensure that sufficient capacity is available to supply the daily and summer peak demands.

Dee Valley Water's area of supply

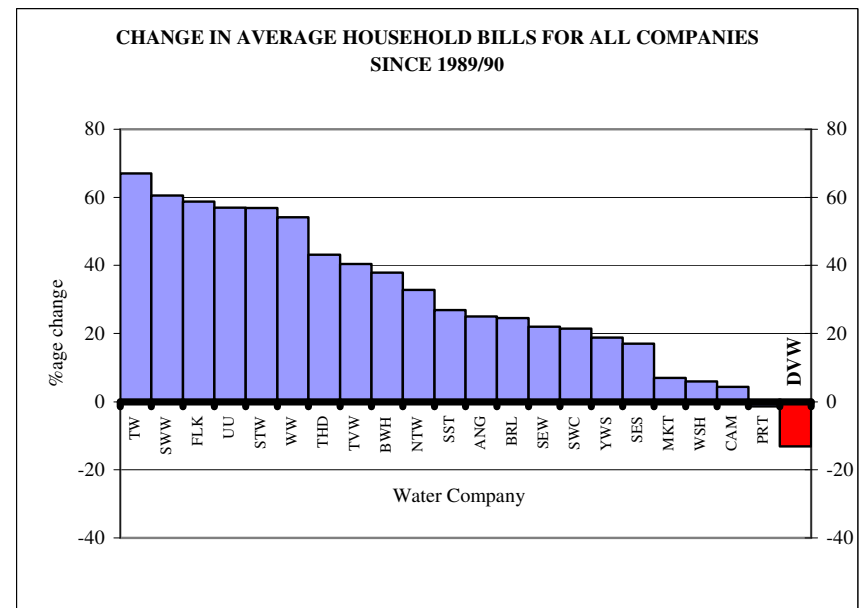
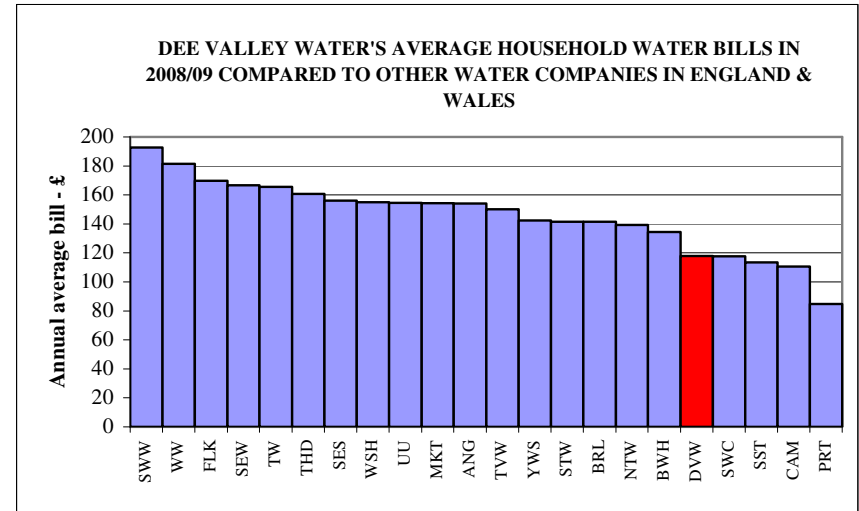


PROGRESS TO DATE

Since privatisation of the water industry in England and Wales in 1989, we believe that we have delivered significant benefits to our customers whilst at the same time actually reducing prices in real terms. We are proud of the fact that Dee Valley Water is one of only two water companies to have achieved this – a reduction of 13% compared to the average of all water companies of a 32% increase over the same period.

In terms of the service we provide, the most recent statistics reveal significant improvements in all areas of the business:-

- water quality – 99.92% compliance at customers’ taps
- leakage – at 5.3 m³/day per kilometre of water mains is the lowest in England and Wales
- water pressure – only 0.05% of our customers are at risk of low water pressure
- interruptions – on average only 0.1% of our customers suffer with supply interruptions of longer than 6 hours
- security of supply – no hosepipe bans in the area since 1989
- customer care – we have significantly improved our performance in all areas where we have an interface with customers including our response to queries and complaints about service and billing matters.



REGULATORY REVIEW OF PRICE LIMITS

In common with the other water companies in England and Wales, we are regulated by statute. The economic regulator is the Water Services Regulation Authority, known as Ofwat, which is responsible for setting limits to the prices that we can charge our customers for water. Ofwat is also responsible for monitoring our performance and compares economic and other performance levels between the companies across the industry.

Price limits are reviewed every five years as set out in companies' licences. The next determination of price limits is in November 2009 and is based on a business plan that each company produces setting out its strategy for the future. These business plans have to be detailed and technical in order to provide all the information that Ofwat requires to reach its decision.

This document is an abridged version for the public domain of the full business plan that has been submitted to Ofwat. It summarises the key issues and challenges for Dee Valley Water and our proposals for dealing with them with particular focus on the period from 2010 to 2015 (referred to as the AMP5 period). A draft of our business plan was submitted to Ofwat in August 2008 with a public domain version released at the same time to all stakeholders for consultation.

In compiling our business plan, we have taken note of the guidance issued by various stakeholder groups such as the Consumer Council for Water, Drinking Water Inspectorate, Countryside

Council for Wales, Natural England, Environment Agency and Welsh Assembly Government. Feedback from consultees on a draft of our *Strategic Direction Statement*, which is referred to below, and on our *Draft Business Plan* has also been noted. It is not possible to satisfy every requirement and obligation, but we have tried.

In December 2007, we published a *Strategic Direction Statement* setting out our vision and overall objectives for Dee Valley Water and our customers over the next 25 years or so. This business plan provides the details for the period 2010 to 2015 of how the objectives will be achieved. As set out in our *Strategic Direction Statement*, our key objective is **'to maintain a consistent supply of wholesome water that gives customers good value for money'**.

Our *Strategic Direction Statement* was informed by our customer research carried out in July and August 2007 by qualified market researchers. The attitudes and opinions of domestic and industrial customers were investigated on a range of issues including water resources, drinking water quality, customer service and pricing.

We found that the vast majority of our customers were happy with the service that Dee Valley Water provides. Although domestic customers wanted to see some improvements to some of the services we provide (longer customer service opening hours and more frequent meter reading, for example), there was generally no appetite for any increase in customer bills either for these improvements or for any of the other improvements suggested.

Whilst the industrial customers surveyed had some different priorities from domestic customers, they also had no desire to see services improved. Their top priority was reliability of supply.

The results of a national survey organised jointly by all the interested stakeholder bodies and carried out in November 2007 agreed with the conclusions from our survey. The findings of the customer research have had a major influence on the strategy set out in our *Strategic Direction Statement* and developed in our business plan, particularly customers' desire for stable prices.

No additional investment is proposed to provide for a stepped improvement in levels of service to our customers. This is not to say that improvements will not be made over the AMP5 period because, as in the past, gradual improvements in our services will be made when opportunities arise.

We have thoroughly reviewed our proposed investments over the AMP5 period and where we consider that the need for investment in our assets can be deferred without increasing the risks to levels of service then we have moved these investments to the following five-year period.

All of our proposed investments are therefore driven by either our statutory duty to maintain the serviceability of our assets or by some other legal requirement such as improving security at our installations.

A second national joint stakeholder customer survey was carried out between September and November 2008 to assess customers' acceptance of the proposals we have set out in our *Draft Business Plan*. 85% of our customers thought that our draft proposals, with an overall price increase over the next five years of 5.2%, were acceptable. However, we are aware that the economic recession may have changed this level of acceptability.

A summary of some of the other findings are shown below:

- 93% of customers are satisfied with levels of service
- 71% of customers think that the service we provide is good value for money
- the mean value for money rating (scale 1 to 5) was 3.66 for our services.

KEY INVESTMENT DRIVERS

Capital maintenance

The total capital investment proposed during the AMP5 period is £34m of which by far the largest part, £30.4m, is for the replacement of existing assets as they approach the end of their useful lives. Without this investment we judge that there is an increased risk of a reduction in the levels of service to our customers

The art of efficient asset management planning has advanced significantly in recent years. We used the new techniques and our detailed knowledge of the assets for our investment programme for the current 2000-2005 (AMP4) period and we have built on this to develop a programme of schemes for 2010 to 2015 that ensures the assets continue to function properly.

We had known that our two largest treatment works, at Boughton in Chester and Llwyn Onn just outside Wrexham, were in urgent need of major refurbishment work if serious supply interruptions to customers were to be avoided. Both works were old and beyond the point where continuing piecemeal refurbishment of the various components would address the fundamental problems economically or effectively.

Refurbishment of the Boughton works was completed recently as the major part of the current AMP4 programme through a successful £15m contract, the largest single contract ever for Dee

Valley Water. The result is a modern, reliable works capable of treating River Dee water to the highest standards expected today.

Refurbishment of the Llwyn Onn works is now proposed for the AMP5 period. The Llwyn Onn works was built in the late 1930's by the then Ministry of Works to supply water to the munitions factory on what is now known as the Wrexham Industrial Estate. The works was acquired in the 1950's and is the largest water treatment works operated by Dee Valley Water. The main problem at this works is that the structural concrete in the foundations and forming the water retaining tanks has reached the end of its useful life. There is no alternative to a major reconstruction of the works, which will have to be achieved whilst the existing works is kept running. At an estimated cost of £16.3m, this is by far the largest single scheme proposed in our AMP5 investment programme. The outcome will be the assurance of a reliable treatment works producing water to modern standards.

The second major item of expenditure on the maintenance of assets is for renewal of our water mains, the oldest of which date back to pre-1870. As the mains age, the frequency of bursting increases which disrupts supply to customers and increases leakage. Our objective is to renew the mains as cost-effectively as possible to prevent the numbers of bursts from rising. The rate at which we have renewed mains since 2005 has successfully achieved this objective. We can maintain the same rate of renewal through the AMP5 period but it will have to increase in the future until it levels off in about 2025.

The estimated cost for renewing mains in the AMP5 programme is £5.6m. Techniques such as pipe insertion (threading a new smaller pipe inside the old pipe) are used to replace pipes wherever possible to minimise cost and disruption to the public.

Proposed asset maintenance investment by asset type

Asset Type	Asset Value (£m)	Proposed Investment AMP5 (£m)
Impounding reservoirs	31.3	0.5
Treatment works	51.7	16.8
Water distribution (mains, meters, etc)	334.3	7.9
Pumping stations	12.7	0.7
Storage reservoirs	25.0	1.0
Other assets (IT/telemetry systems etc)	9.2	3.5

The Llwyn Onn scheme and the mains renewal programme together account for about 72% of the entire investment proposed for maintaining assets in the AMP5 period. The remaining £8.5m or so comprises a series of smaller items of work on the various assets to ensure that they continue to function properly. It will typically cover such work as:-

- maintaining reservoirs and dams
- replacing pumps
- replacing waterproofing membranes on service reservoirs
- maintaining and renewing IT systems such as the billing system
- maintaining, renewing and extending the telemetry system
- replacing vehicles.

Other investment schemes

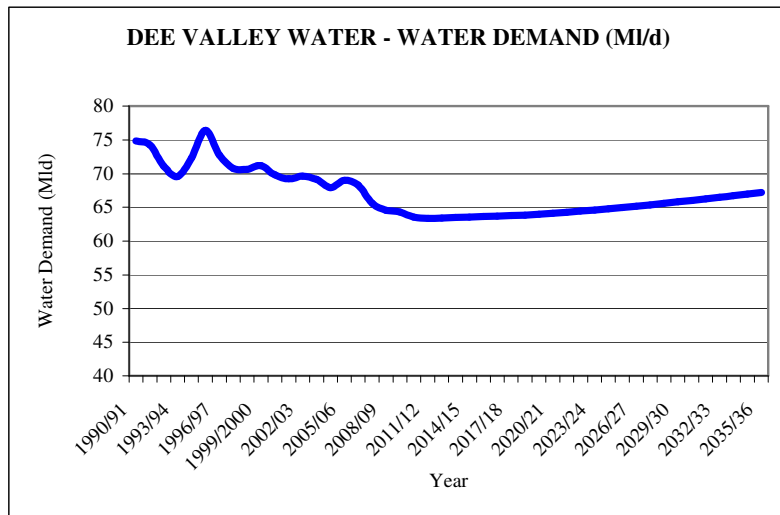
Capital expenditure other than for maintenance is termed ‘enhancement expenditure’ although it does not always result in an improvement that directly benefits customers.

Supply/demand balance expenditure is for schemes that ensure available water resources are sufficient to meet the growth in demand from existing and new customers. We have assessed our supply/demand balance for the next 25 years and set out our findings in a *Water Resources Management Plan*, which was released for consultation in February 2009.

Our assessment is that the margin between available supply and demand will continue to be adequate without any major new schemes and without resorting to frequent restrictions on the use of water by customers, through hosepipe bans for example. Consumption of water is expected to stay about level overall over the 25 years of the forecast despite the predicted high increase in housing and uncertainties about the effects of climate change.

Dee Valley Water has the lowest level of leakage from its water mains of all the water companies in England and Wales. Continuing low levels of leakage, an optional metering scheme and increased promotion of water efficiency all help to keep the overall consumption of water down.

Future water consumption will also be significantly affected by a reduction in demand from our major industrial customers as a result of action by them to increase water efficiency and due to closure of one of our largest customers. The projected impact of the recession, which is already evident through reducing water consumption, has also been taken into account in our forecast.



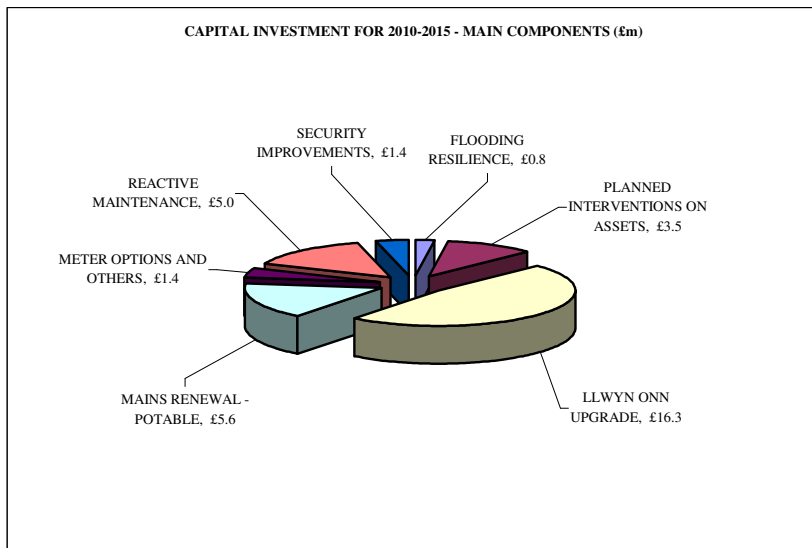
As stated above, part of our strategy to minimise expenditure to satisfy higher demand by existing customers and to cater for new customers in the area is the optional metering scheme which allows customers that are not metered to have a meter installed at no charge. Our forecasts suggest that the demand from customers to switch to metered charging will result in additional capital investment of about £1.6m over the AMP5 period.

Laying mains and connecting pipes for new housing is the other large activity in the supply/demand balance expenditure category. It has minimal impact on investment requirements and prices as the cost is covered by contributions from the developers and increased revenue from the new customers.

A second category of enhancement is quality enhancement, which is for new assets or enhancements to existing assets to comply with legal obligations or guidance by the Secretary of State or the Welsh Assembly Government.

One area where a large investment is required and which is treated as a 'quality enhancement' is improving security at most of our sites. The driver for this is the *Security and Emergency Measures Direction (SEMD)* reinforced by the Welsh Assembly Government in its *Social and Environmental Guidance to Ofwat* in which it states that it expects companies to 'carry out security work on vital installations, and protect other installations and facilities according to guidance issued by Government to water companies'.

The Government guidance comes in the form of a series of Advice Notes issued by the Department for Environment, Food and Rural Affairs (Defra). We have estimated the total cost of complying with all the Advice Notes that have been issued to date as £1.9m. We are deferring as much of this work as possible but even so, expenditure on security work during the AMP5 period is estimated to be about £1.4m.



The third category of enhancement is service enhancement, which is an identifiable, measurable, and permanent stepped improvement in service levels to customers. There are two schemes that we are proposing in this enhancement category. They are to reduce the

vulnerability of our two intake pumping stations on the River Dee to flooding which could cause widespread disruption to the supply of water. We are proposing to improve the flood defences at these intakes, at an estimated total cost of £0.8m.

Operating expenditure

Until the end of the latest financial year in March 2008, our aggregate operating costs for the three years of the current AMP4 period have been less than that allowed by some 2.2%. This is in spite of us having to absorb significant increases in some costs for which no allowance was made by Ofwat in its previous determination of price limits in 2004.

For the remainder of the current AMP4 period, we are forecasting significant increases in costs. By the end of March 2010, our year on year performance will have deteriorated significantly so that actual costs will be almost 10% higher than was allowed for in 2004. These additional costs, most of which are outside our control and outweigh any potential efficiency savings, are being absorbed by us but after 2010/11 they will have to be passed on to customers in the form of higher bills.

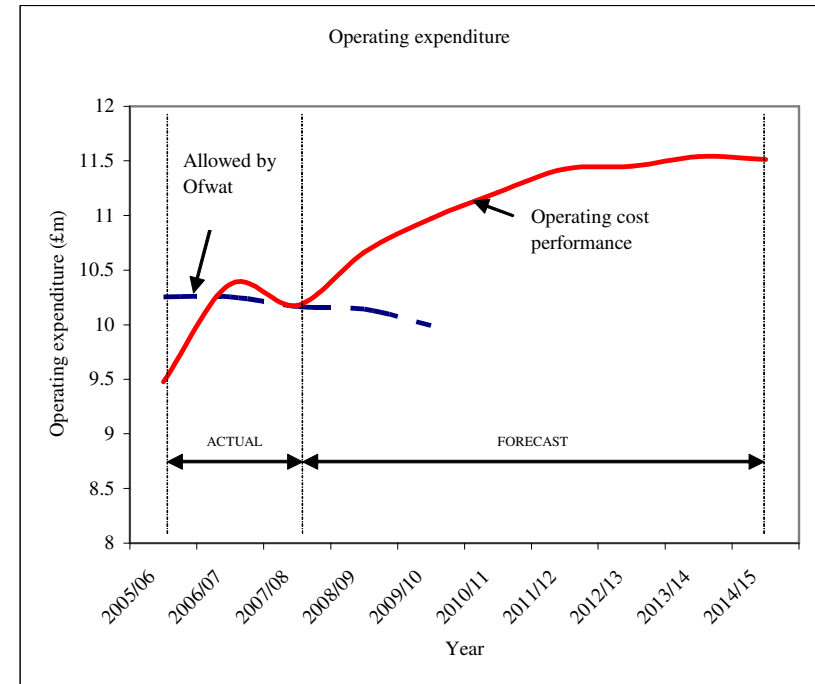
The single highest contribution to the increase in operating costs both up to today and to the end of the AMP5 period is power. This will have increased by 64% in 2009/10 above that allowed in 2004 and we are forecasting a further 40% over the next five years, so that by March 2015 power costs will have doubled compared to

expectations in 2004. Other significant cost increases that we are forecasting include:-

- higher pension contributions
- higher costs due to new regulations, including Ofwat charges, costs arising from the Traffic Management Act, costs associated with the move to competition in the water industry and costs for increased monitoring of our water resources
- costs associated with our sustainable staff succession plan which requires that we allow for the replacement of our ageing workforce
- higher costs paid to the Environment Agency for abstraction charges.

There is a great deal of uncertainty in forecasting our operating costs up to 2015. In particular, the effect of a possible period of deflation will tend to reduce our income whilst operating costs, especially manpower costs, cannot be expected to reduce. It will also require considerable effort on our part to persuade our suppliers to reduce their prices through this period.

Additional costs will also be incurred as a result of the capital expenditure required, for example as more customers are connected to the supply system so additional resources will be required in terms of meter reading, billing etc.



FINANCIAL PROJECTIONS

As part of our operating licence, we are required to ensure that we can adequately finance our functions. To ensure that we achieve this, it is vital that when proposing our new charges we allow for adequate returns to the providers of capital, both debt capital and equity capital. However, a fine balance has to be achieved to make sure that the share of risks between customers and the Company is reasonable.

In essence, this does not mean that returns on capital are achieved in every eventuality but that they are achieved under most adverse circumstances in order to allow Dee Valley Water to have access to sufficient capital to finance capital expenditure.

During the current five-year AMP4 period, there has been a significant shift of risks away from the customer to Dee Valley Water and the Company has had to absorb significant adverse factors. In particular, we have absorbed the high volatility of power costs and the adverse effect of the recession on our sales volumes.

We are proposing a significant increase in charges in the first year of the next price control period in order to redress the balance of risks between Dee Valley Water and our customers. This increase is not intended to recover the loss of returns in the past but purely to redress this imbalance going forward.

Key to achieving this is the decision on the cost of capital applicable to Dee Valley Water.

In our proposals, we have used a pre-tax cost of capital of 6.7%. This value has been arrived at after making assessments of the significant risks facing Dee Valley Water over the next five years. To cushion the Company against the most severe of these risks would required a significantly higher price increase from that proposed.

However, by proposing that these potential risks are only catered for if they actually materialise in the future, the Company has been able to moderate any price increases. On the other hand, we do not want to be going back to Ofwat on a regular basis for price increases for every unforeseen eventuality.

We consider that taken together, the cost of capital and the package of proposed notified items chosen and listed in the following section provide the right balance of risks going forward.

Based on an actual gearing level of 60% debt to 40% equity, we have incorporated the following key assumptions into this plan:-

Pre tax cost of debt	4.3%
Cost of equity	10.2%
Pre tax cost of capital	6.7%
Post tax cost of capital	5.97%

UNCERTAINTIES

The investment programme set out in this Business Plan is based on investment drivers about which there is a reasonable degree of certainty and for which the costs can be reliably assessed. There are, however, some other potential investment drivers about which there is less certainty or which might only emerge after the price limits have been set.

We have not allowed for uncertain investment drivers in the investment programme. It is expected that they will be handled through Ofwat's protocol for dealing with significant changes that occur after price setting. This protects customers from unnecessary bill increases for investment risks that might not materialise.

Significant changes or new issues which we expect would be handled through Ofwat's protocol include:-

- **Power costs.** As already explained, power costs have a significant affect on our operating costs and hence our charges in the future. Whilst we have made a reasonable central estimate, an adjustment would be required for large fluctuations in power costs.
- **Traffic Management Act and lane rental.** The full cost implications of the Traffic Management Act are not yet known. Also, no allowance has been made in our estimates for the possible introduction of lane rental charges.

- **Changes to taxation.** This would cover the possibility of a change in taxation due to changes in the accounting treatment of infrastructure renewals.
- **Optional meter numbers.** The investment programme assumes that customers continue to opt to have meters installed at the current rate. This item would cover significant variations from the forecast rate of uptake.
- **Bad debt.** This would cover any increase in bad debt or debt management costs above the levels assumed.

Another area of uncertainty is competition in the water industry and how it will develop. We will continue to engage in consultations on competition constructively and await with interest the outcome of the Cave Review on competition and innovation in the water industry.

We would expect any significant additional costs that we incur to facilitate the introduction of competition to be allowed under Ofwat's change protocol.

If competition does develop, we will respond positively to the challenge and trust that continued value for money and a top quality service for customers will be adequate defence against the loss of Dee Valley Water's customers to competitors.

THE ENVIRONMENT AND CLIMATE CHANGE

We fully recognise our responsibilities for protecting the environment from the effects of our activities. In particular, we can minimise the amount of water we take from rivers by keeping our leakage level low and reducing consumption of water by customers through measures such as the promotion of water efficiency. This not only benefits the environment but it also reduces the amount of water we have to pump through our pipes, thereby minimising our energy consumption and our carbon footprint.

We also recycle excavated materials in conjunction with local authorities, which has the dual benefit of reducing our usage of natural resources such as crushed stone and reducing the amount of waste.

We expect the ramifications of climate change for the business to increase in the coming years.

We have factored the latest predictions of the effects of climate change on the availability of water resources and consumption of water into our supply/demand forecasts and will keep them under review as better information becomes available.

We have also made allowances for the effects of climate change on the flood protection works we are proposing at our river intakes.

We will continue to endeavour to reduce, as far as practicable, our impact on the environment. The message from our customers on this point is clear though; whilst they expect us to take steps to minimise our environmental impact, they expect any changes to be incorporated with other works so that there is no increase in prices.

PRICE LIMITS FOR 2010-2015

The factors driving the changes in bills are summarised in the table below. Loss of revenue from reduced consumption due to the recession is the largest single factor and accounts for 50% of the increase. Increases in operating costs, particularly for power, account for a further 40% of the increase.

WHAT IS DRIVING CHANGES IN BILLS? (2007/08 PRICES)		£
Average household bill in 2009/10		119.66
Plus	(1) Effect of reducing industrial demand	5.26
	(2) Changes in operating costs	4.31
	(3) Higher costs of maintaining assets	0.36
Less	(4) Reduced financing costs	-0.65
Plus enhancements	(5) Optional meters and new developments	1.01
	(6) Security improvements	0.21
	(7) Flood protection	0.11
Average household bill 2014/15		130.27

The net effect of the various pressures on bills, which have increased since the Draft Business Plan, is that an increase is unavoidable over the period from 2010 to 2015. We have kept the increase to a minimum but even so, we are proposing that average bills will have to increase by 9.7% over the five years at an average of 1.88% per year.

We know that our customers would prefer any changes in their bills to be introduced gradually from year to year rather than as a step change. However, because of the lower starting point on revenue resulting from the recession, we have not been able to avoid a larger increase in the first year. We looked at the alternative of smoothing the increase evenly over the five years but the overall increase would have been some 6.8% higher than our proposal, which we felt would be unacceptable.

The profile of the average percentage increase relative to inflation (called the K Factor) and what it means for household customers' bills at 2007/08 prices is as follows:-

	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
K	1.3%	7.9%	0.5%	0.8%	0.4%	0.0%
Average household bill	£119.66	£129.61	£130.01	£130.45	£130.65	£130.27
Measured household bills						
- 60m ³ annual consumption	£78.43	£82.33	£82.60	£83.20	£83.51	£83.67
- 110m ³ annual consumption	£123.25	£128.77	£129.16	£130.09	£130.56	£130.85
- 160m ³ annual consumption	£168.06	£175.22	£175.72	£176.98	£177.62	£178.03
Unmeasured household bills						
-£100 RV	£107.87	£119.58	£120.41	£121.37	£121.89	£121.59
-£200 RV	£157.78	£176.62	£177.97	£179.40	£180.17	£179.58
-£300 RV	£207.69	£233.66	£235.53	£237.42	£238.45	£237.58