PR24 Collaborative customer research steering group(s) meeting

10 October 2022

Ofwat

CCW
The voice for water consumers
Llais defnyddwyr dŵr

Agenda

Welcome and introduction

Actions from last meeting

ODI rates research, modelling and mapping
- ODI rates update
- Mapping

Affordability and acceptability testing
- Recap on 4 October meeting with companies
- Update
- Single social tariff

Next steps

Actions from last meeting

Actions from prior meetings and 12 September 2022

Action	Update
All companies were invited to approach Ofwat/CCW if more specific discussion is needed on key points.	Ongoing
Mapping: more information needed on timeline and data requests	On today's agenda
All other actions from the 12 September 2022 meeting are completed.	

ODI rates research, modelling and mapping

Update on ODI rates research – Fieldwork

Household

- Fieldwork is now complete with no quota shortfalls

- Dataset will be provided to companies this week with:
  - Anonymised dataset in Excel
  - Weights included in the dataset
  - Verbatim responses to open ended questions (anonymised where necessary)
  - Derived variables from back-coding
  - Weights
  - Variable descriptions

Non-household

  - 85 interviews outstanding
  - Modelling will precede with near complete dataset

Reporting

- Next stage is to write up sampling, fieldwork, response rates, anonymisation, weighting in detail in a report to be shared with companies

Invoicing

- Next tranche not until NHH fieldwork complete

Update on ODI rates research – Analysis and modelling

Joint works with PJM Economics

Contract is in place between Ofwat and PJM Economics covering:

- Econometric modelling of the survey datasets to estimate values for each of the incidents in the survey
- Company and national models
- National models to include analysis of sub-populations (e.g. vulnerable consumers)
- Report on survey findings and modelling
- Analysis and methodological advice on mapping

Peer Review

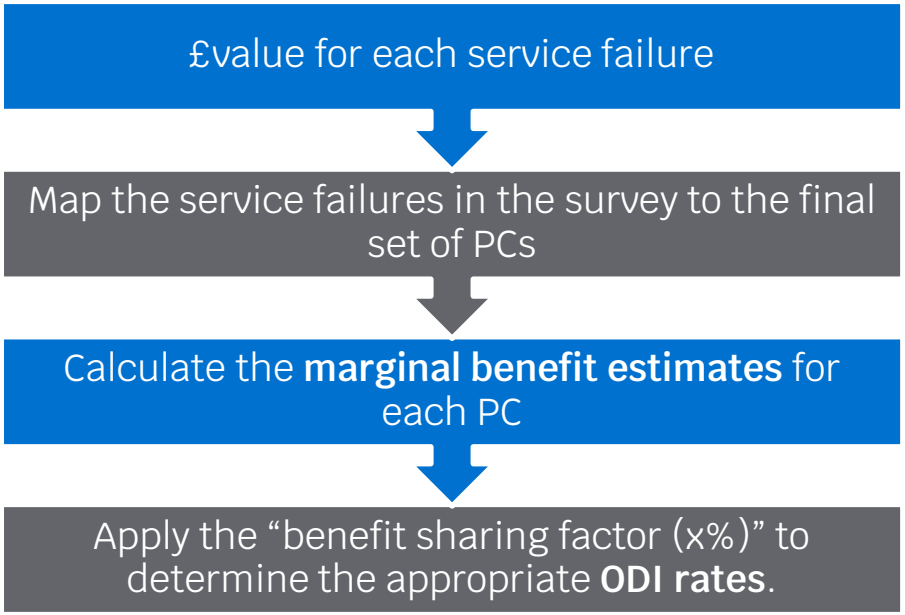
Our peer reviewer, Professor Stefan Hess will be involved at each stage of the modelling work.

Mapping

Context and background

We jointly commissioned Accent and PJM Economics to undertake research into the value water customers place on different service failures. Fieldwork is now complete and analysis of the results has begun.

We plan to use the valuations produced from the analysis of the survey to derive ODI rates for the Performance Commitments (PCs) as set out below:



The final PC definitions are still evolving as we review and consider the draft methodology consultation responses. So we are developing our mapping approach in parallel.

Indicative mappings for PR24 PCs

Customer facing PCs	Customer research valuations
Total water demand (leakage, PCC, business demand) Ml/d	Hosepipe bans Emergency drought restrictions Low flows in rivers nearby Low flows in rivers elsewhere
Customer contacts about drinking quality Per 10,000 population	Discoloured water – 6 hours Discoloured water – 24 hours Taste or smell of water – 6 hours Taste or smell of water – 24 hours Boil water notice Do not drink notice
Compliance risk index %	As above
Water supply interruptions HH:mm:ss per customer	Planned interruption – 6 hours Unplanned interruption – 6 hours Unplanned interruption – 24 hours
Internal sewer flooding Per 10,000 connections	Internal sewer flooding
External sewer flooding Per 10,000 connections	External sewer flooding

Other PCs	Other valuation techniques
Biodiversity Units tbc	Expect to use external valuations
Operational greenhouse gas emissions tCO2e or %	Expect to use external valuations or marginal costs from bidding competition

Environmental PCs	Customer research valuations
Pollution incidents Per 10,000km of sewer	Minor pollution incident – nearby Minor pollution incident – elsewhere
Serious pollution incidents nr	Significant pollution incident – nearby Significant pollution incident – elsewhere
Discharge permit compliance %	River water quality not high – nearby River water quality not high - elsewhere
River water quality Units tbc	River water quality not high - nearby River water quality not high - elsewhere
Bathing water quality Units tbc	Bathing water quality - not excellent Bathing water quality - not good
Storm overflows Units tbc	Storm overflow - nearby, 2 days Storm overflow - elsewhere, 2 days

Asset health PC	Other valuation techniques
Mains repairs Per 10,000km of mains	Approach under review
Unplanned outage %	Approach under review
Sewer collapses Per 1,000km of sewer	Approach under review

Example mapping: supply interruptions

PC Definition	The average number of minutes lost per customer for the whole customer base for interruptions that last three hours or more.
Service failure descriptions in survey	Your water supply stops working without warning affecting taps, dishwashers etc. It stops for 6 hours on a Wednesday afternoon. Your water supply stops working without warning affecting taps, dishwashers etc. It stops for 24 hours. Your water company inform you that your water supply will stop for 6 hours in 2 days time. It stops as planned.

- Customers valued three different failures – all of which are linked to the interruptions PC.
- Customers will place a different value on each of these failures.
- We need to combine these values to calculate the marginal benefit for the PC overall
- We need to estimate how much each of the service failures contributes to the overall PC – these are shown by the weights “a”, “b” and “c” below. We will estimate these weights using existing data

Supply Interruptions PC Marginal Benefit = a x Customer valuation of planned 6 hour interruption (£ per minute) + b x Customer valuation of unplanned 24 hour interruption (£ per minute) + c x Customer valuation of unplanned 6 hour interruption (£ per minute)

High level approach

The complexity of the mapping differs across the PCs. We will require support from other regulators and the industry.

We are taking a **proportionate** approach and will consider the appropriate level of analysis and regulatory burden for each PC.

We will consider:

- What data do we already hold?
- What data do other regulators hold that we can access? e.g. EA, NRW, DWI
- What other published data is available?
- What can we learn from discussions with SMEs (internal and external)?
- How different are the valuations that need to be mapped to the PC?
- What additional data could we request from companies?

Worked example: Internal sewer flooding (1)

PC Definition	The number of internal sewer flooding incidents per 10,000 sewer connections.
Service failure description in survey	Flooding from the sewer gets inside your property affecting your living areas

The analysis of the survey results give the value that customers place on *one* sewer flooding incident.

The PC uses a normalised measure which takes account of the size of companies sewerage networks.

In this example there is direct link between the survey question and the PC definition.

But the valuation derived from the survey needs to be adjusted to reflect the difference in units to calculate the marginal benefit.

The equation below shows how to do this.

Equation

$$\text{Marginal Benefit} = \frac{£\text{valuation} * \text{number of sewer connections}}{10{,}000}$$

Worked example: Internal sewer flooding (2)

Data extracted from APR BN2710

Data extracted from analysis of survey results

Payment for one additional (or fewer) sewer flooding incident per 10,000 connections relative to the Performance Commitment Level

Company	Number of sewer connections	Customer valuation *per sewer flooding incident*	Marginal benefit	ODI Rate	ODI Rate
	nr	£	£ per 10,000 connections	£	£m
Company A	1,480,000	19,000	2,802,000	1,961,000	1.96
Company B	2,020,000	19,000	3,823,000	2,676,000	2.68
Company C	3,434,000	19,000	6,500,000	4,550,000	4.55

Calculated as:

Number of sewer connections * customer valuation /10,000

Calculated as:

Marginal benefit * Benefit sharing rate (assumed to be 70%)

Calculated as:

ODI Rate in £s divided by 1,000,000

Worked example: Internal sewer flooding (3)

Notes on the sewer flooding example

- This is a simple worked example with limited mapping needed
- Number of sewerage connections has been extracted from 2021-22 APRs
- We have calculated an estimated customer valuation for sewer flooding from the findings from the pilot study
- We have used the same customer valuation for all companies [But note this does not mean the ODI rate is the same for all companies to reflect the normalisation of the PC by size]

Implications for mapping of other PCs

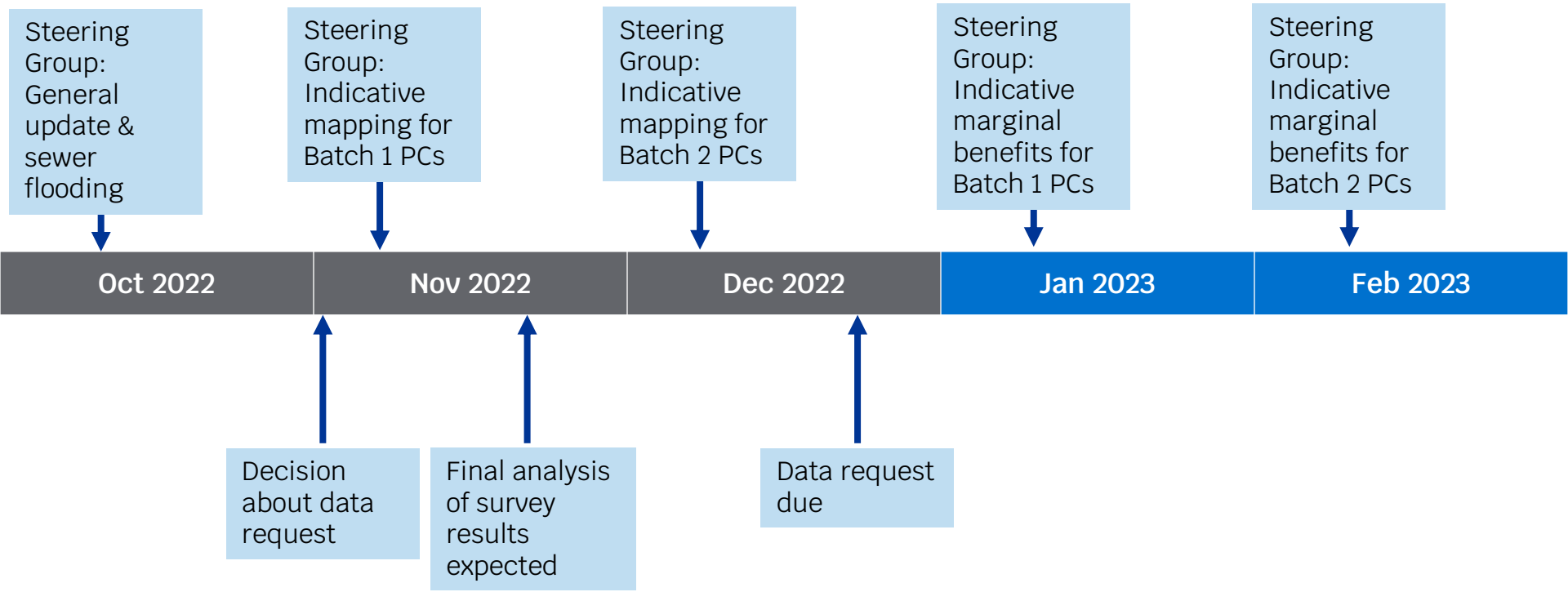
- We will start with industry-level customer valuations for simplicity, but will make a judgement for each PC whether this is appropriate or reasonable for every company.

The next slide sets out our progress and planned next steps for other PCs.

Current progress and next steps by PC

PC	Key question	Progress and next steps
Water demand	What is the impact of a 1Ml/day change in demand on the likelihood of the service failures included in the survey? (e.g. hosepipe bans)	• Reviewing data from latest WRMPs. • PC definition(s) will be finalised in final methodology • May require additional data from companies to identify the impact of a change in Ml/day of water.
Customer contacts	How likely is a customer to contact a company if it experiences any of the service failures included in the survey? (e.g. taste, odour)	• Will extract proportion of customers experiencing the different service issues from the survey results once these have been analysed. • Working with CCW to obtain total number of complaints.
CRI	How likely is a change in CRI to cause each of the service failures included in the survey?	• Currently reviewing the CRI index and using Subject Matter Experts to weight the components and building on a previous mapping done at PR19.
Interruptions	How do different types and different length interruptions contribute to the total number of minutes lost?	• Reviewing available previous data (e.g. APR commentaries and consultation responses) on types and durations of interruptions. • May require additional data from companies on the length and type of interruptions that have been experienced historically.
Environmental PCs	What “nearby” population is impacted by each type of event and what “elsewhere” population is impacted by each type of event?	• Working with EA and NRW to review existing datasets for these measures, including extracting the geographical location of historic events. • We will need to use GIS mapping to weight “nearby” and “elsewhere” for each of the measures. • We will review whether valuations for “nearby” and “elsewhere” are statistically different once survey results have been analysed. • PC definitions will be finalised in final methodology.

Indicative timeline and planned engagement



Notes:
We intend to batch the PC updates based on the progress we make over the next month. Our work developing the mapping equations will not wait for the survey results to be finalised.

Affordability and acceptability approach

Recap on 4th October meeting with companies

Thanks to all those who were able to attend – we really value these discussions and are actively considering the points raised.

For those who were unable to be there – here is a recap on the key points:

- guidance with some prescription
- business plans to have been tested at least once, retested if a material change
- qualitative research looks at preferred plan vs the least cost version, including phasing
- quantitative research will identify views on affordability and acceptability of the revised preferred plan and potentially phasing
- sampling/recruitment from customer lists for HH customers, commercial and company lists (in Wales) for NHH, recruitment agencies for non bill-payers.

Recap on 4th October meeting with companies (continued)

We also talked about:

Sample size for the qualitative –

- 64 household participants for deliberative sessions
- Plus a minimum of 12 depths with vulnerable customers
- Plus 30 non-households engaged via group discussions and depths.

Sample size for the survey -

- At least 800 HH bill-payers per WaSC (except Hafren Dyfrdwy)
- Proportionate number for WoCs.

A push-to–web approach for the survey, using real customer bills to create bill profiles for 25-30.

The water service provider leading on research in their area to test the impact of the whole bill on affordability and acceptability.

No major objections voiced at the meeting – we therefore propose to adopt the approaches outlined above.

Update on affordability and acceptability testing

Including principles for good design of stimulus materials

We are exploring the possibility of including a set of design principles for the way data is presented. These are likely to be high level and would be applied to:

- business plan showcards
- comparative company performance data.

Testing inflation and affordability questions with customers

- Qualitative testing with Yonder is being developed
- This will look at ways of presenting inflation and test the affordability questions under consideration.

Single social tariff

Testing of affordability and acceptability with and without the SST is challenging:

- Uncertainty about the design of the SST
- Eligibility criteria likely to be different between existing schemes and the SST
- Levels of support likely to depend on bill/income ratio which is unknown for any individual research participant and difficult to collect.

Pragmatic solution

- Half the sample of research participants are shown future bill amounts with the SST and half without:
  - Quantitative survey – sample randomly split
  - Qualitative research – whole focus groups shown bills with or without SST
  - Invisible to the participant which version they are seeing.

- 'Without SST' recipients are shown tariffs based on existing schemes.

- 'With SST' recipients:
  - Current recipients of support are shown tariffs based on the existing scheme
  - Current contributors are shown a tariff which removes their current contribution (may be a company average) and replaces it with £20
  - For testing of water or wastewater only plans, remove the relevant existing contribution and replace with £10.

There remains an expectation that changes to company schemes will be tested with customers in separate research.

Next steps

Next steps

[Close of ‘charging’ consultation – 3 November]

Outputs/RFIs from ODI rates fieldwork, modelling, mappings – as described earlier

Ofwat/CCW share guidance on standardised approach to affordability and acceptability research

Next steering group meeting – 14 November

Publication of PR24 final methodology – December 2022