

Targeted Charging Review: The case for change

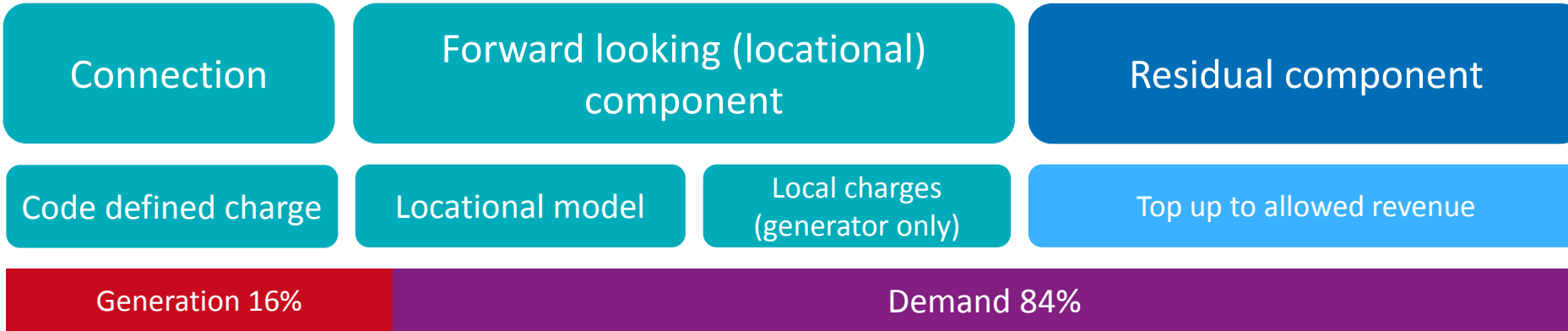
Andrew Self, Ofgem



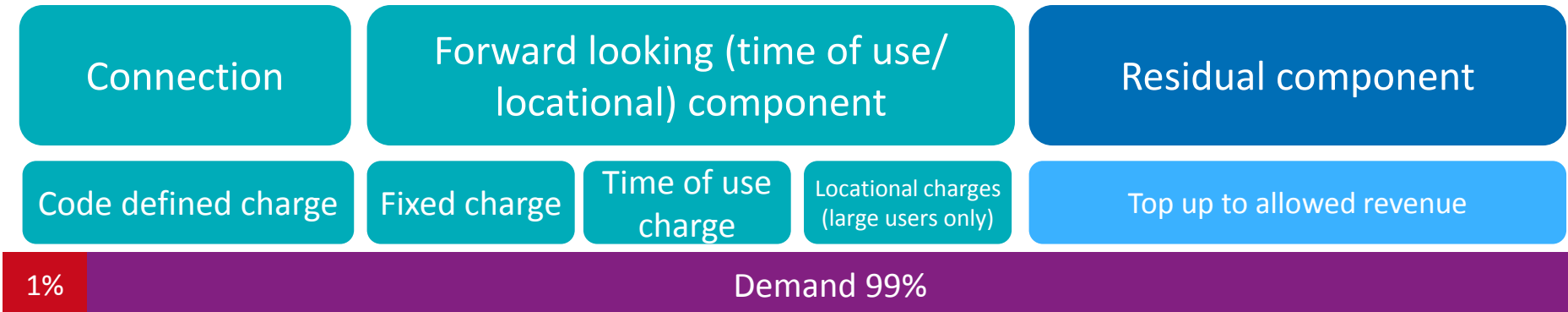
The components: a reminder

The current levels of network and SO charges are c£10 B per year, of which about 50% is connection/ forward-looking and 50% is residual/cost recovery charges

Transmission Charges



Distribution Charges





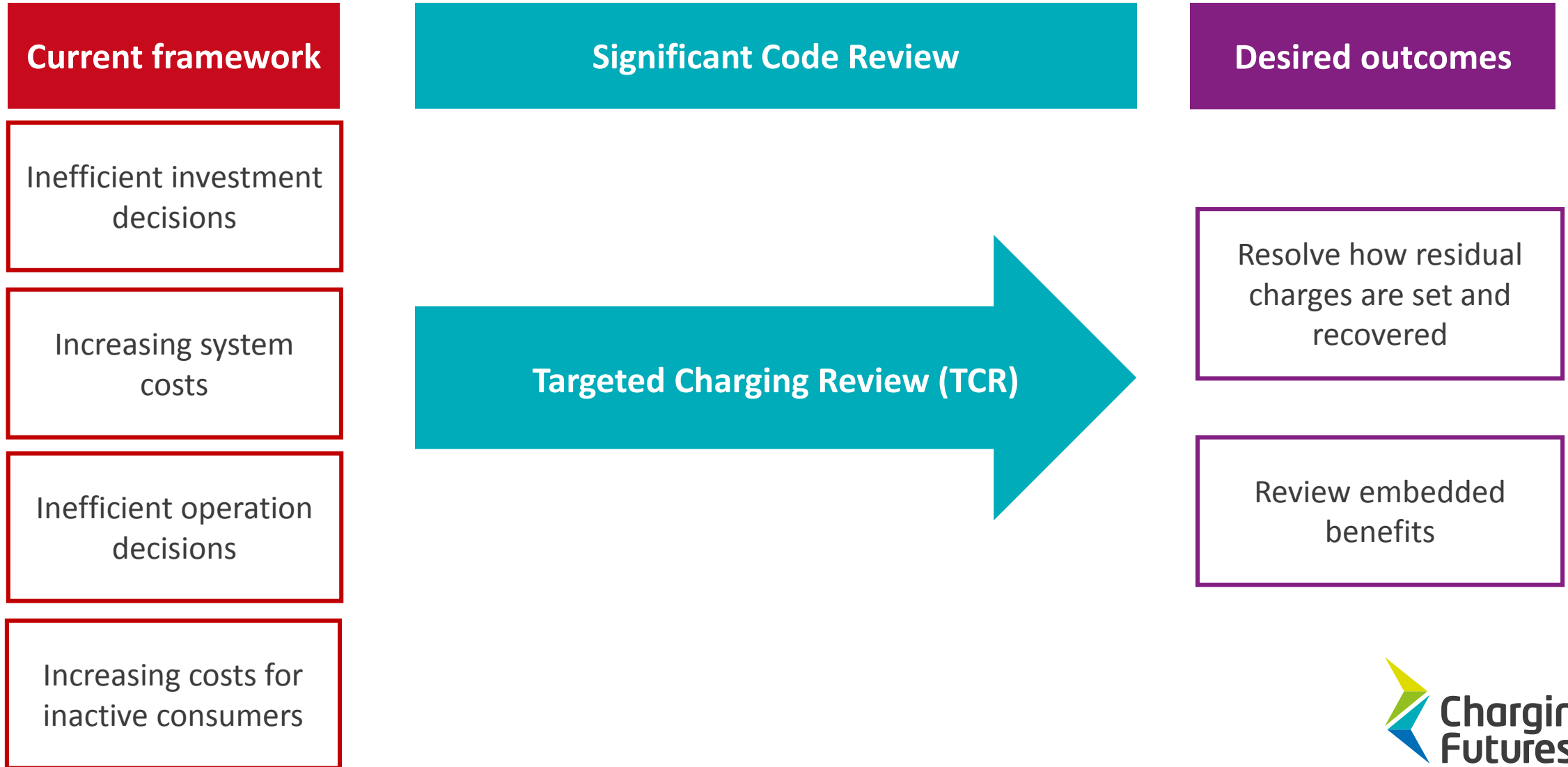
Why reform residual network charging framework?

We think that residual network charges should be reviewed in order to reduce harmful distortions, and so that everyone pays a fair share.

Under the current system, we believe:

- Some users may make decisions based (in part) on residual charges, and pay lower charges as a result, although their actions have **not reduced the total level of costs** which need to be recovered.
- The increase in availability and affordability of smaller scale generation means that **some consumers can more easily reduce their net demand**.
- The current way that residual charges are set creates some incentives that could lead to a **more expensive system overall**.
- Current **residual charges fall increasingly on groups of customers who are less able to take action**.

Targeted Charging Review overview





What we said in November

Our Principles

Reducing Harmful Distortions

Practical Considerations

Fairness

Our work

Who should pay residual charges?

How should residual charges be recovered?

How should that mechanism be implemented?

Initial view

✓ Demand

✗ Generation

✓ Gross

✓ Fixed

✓ Ex ante

✓ Ex post

✗ Net volumetric

✗ Net import and export

✗ Peak import or export

? Triad

? Individual peaks

? Ratchet charges

? hybrids

?



Our Analytical work

To date, we narrowed down our shortlist of options to four high level recovery mechanisms. We intend to conduct further analysis. Our work will focus on:

1) Distributional impacts

- I. Static analysis
- II. Behavioural response

2) Whole systems impact

- I. Vanilla options
- II. Detailed policy design
- III. Transitional arrangements

3) Proportionality and practical considerations

- I. Costs of reform
- II. Implementation timelines
- III. Impact on different industry users



Stakeholder Workshop Feedback

- In late April we held stakeholder workshops in Glasgow and London to allow participants to feed in views on our proposed approach to the analytical work.
- The stakeholder feedback will help inform the analytical work that will support GEMA's decision on the TCR.
- Stakeholders shared many views and provided useful insights into the our proposed approach. Some of those shared views are captured below:

Support for the proposed approach to the modelling

Wider range of user groups

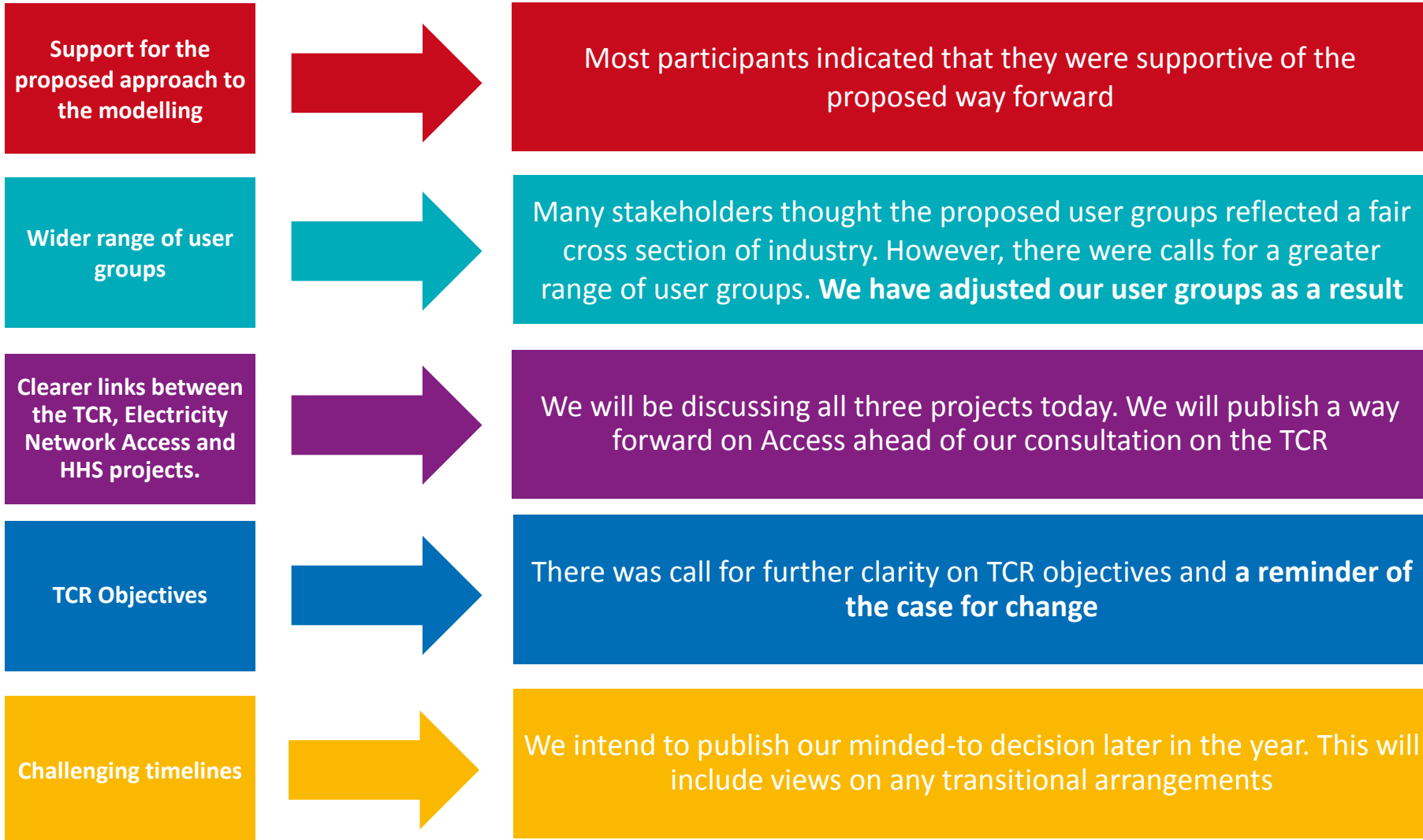
Clearer links between the TCR, Electricity Network Access and HHS projects.

Reminder of the reasons for the review

Challenging timelines



Stakeholder Workshop Feedback





Next steps

- We intend to press the 'go button' on our modelling activities very soon
- If you have any further comments please send them to TCR@Ofgem.gov.uk
- We will be doing work over summer to progress:
 - Quantitative assessment
 - Practical considerations
 - Fairness
- This will feed into our final policy design options
- We are due to take these to GEMA in autumn, and plan to publish a minded to decision later in the year.

Targeted Charging Review: Update on Frontier's analytical work

Sam Street & Abbas Hussain,
Frontier Economics

Targeted Charging Review

Project update to the Charging Futures Forum

23 May 2018

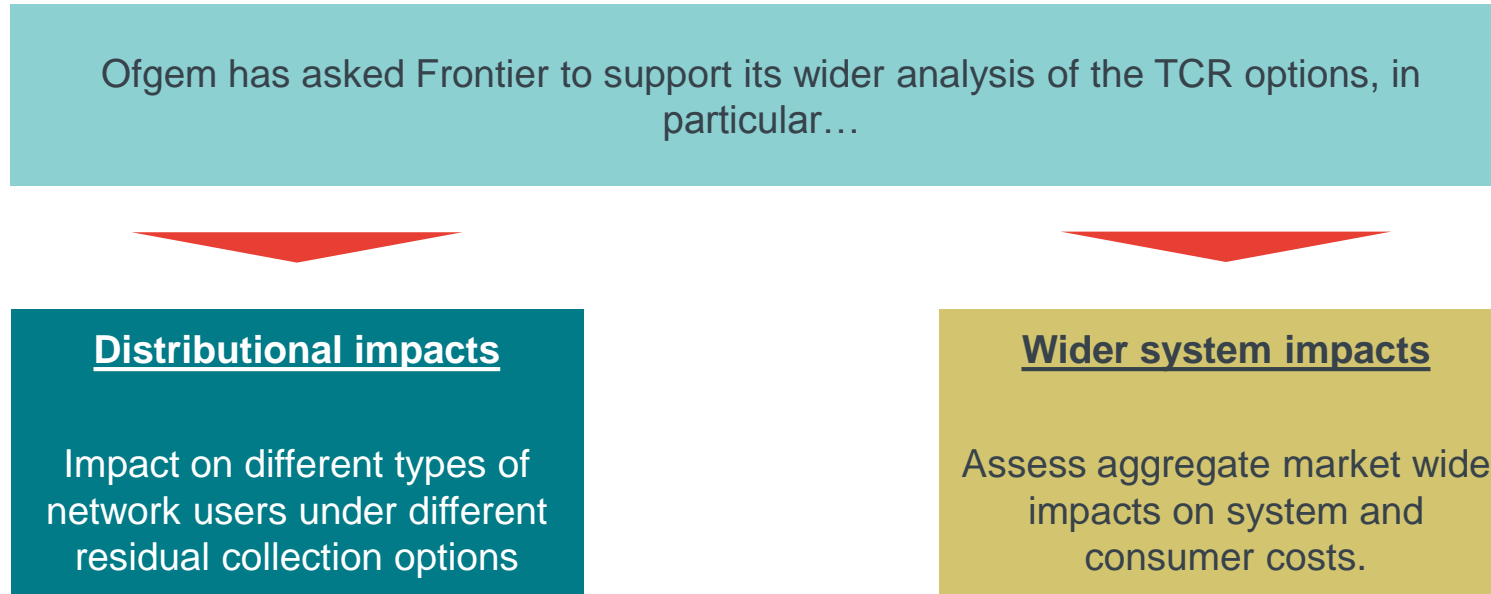


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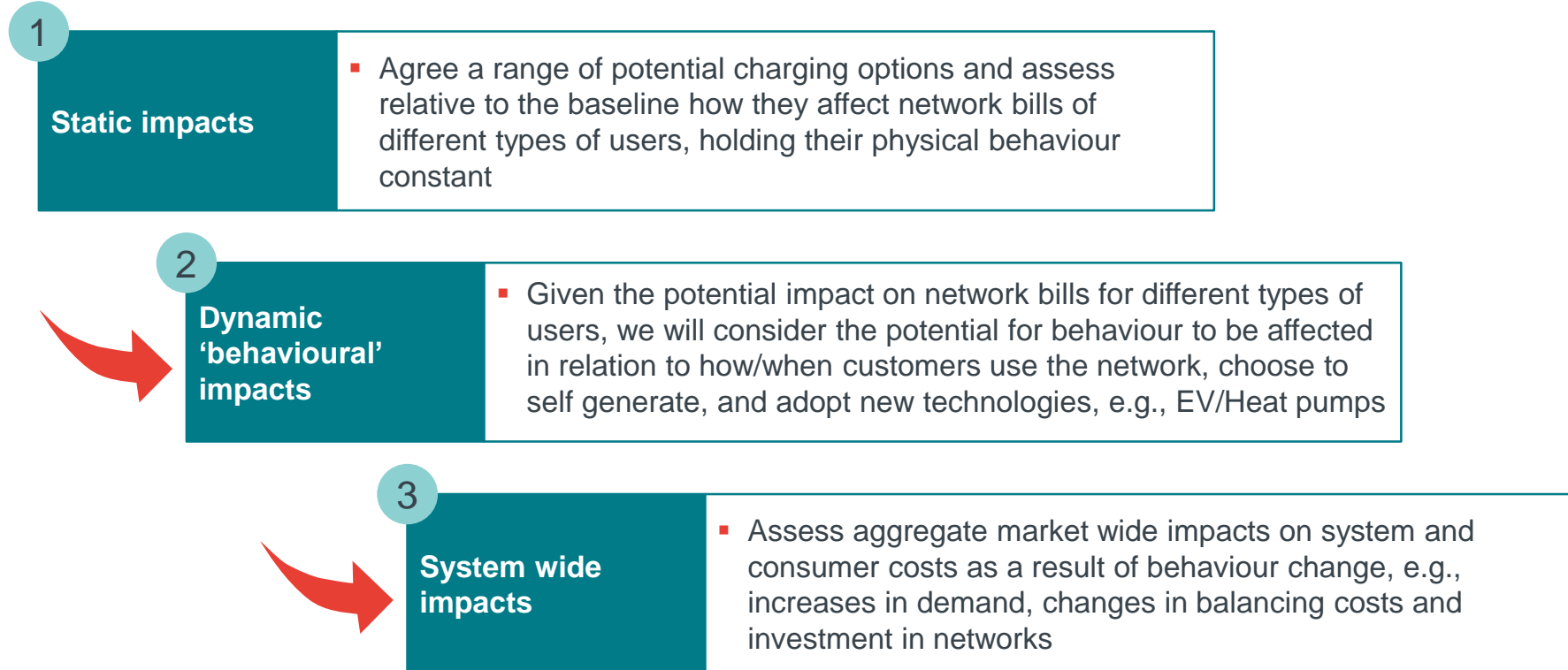
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Purpose of the study

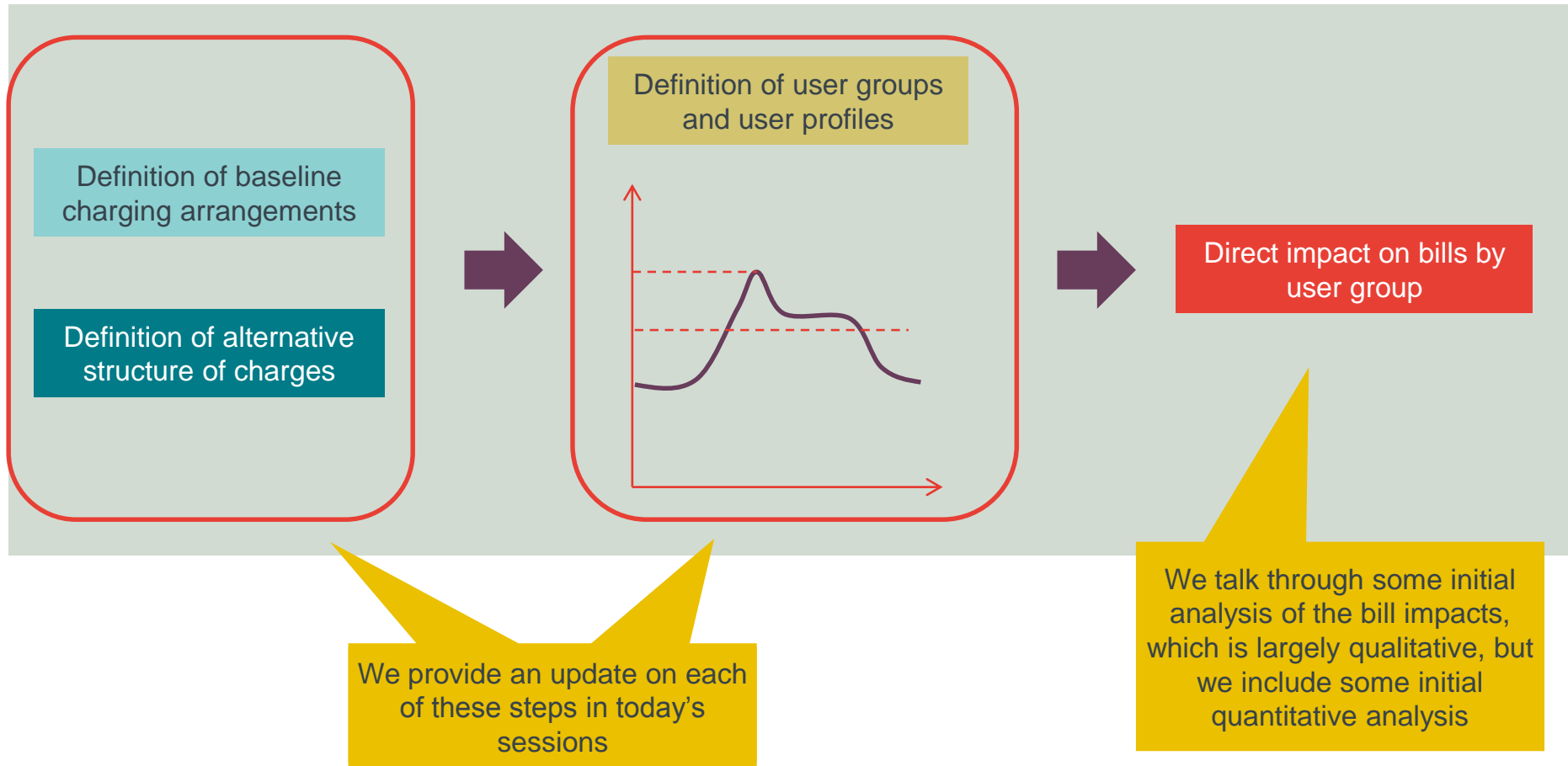


This pack contains an overview of our current work/views with respect to certain aspects of this project. Some of the content will change following further consultation with Ofgem and feedback from stakeholders. Any results presented are meant to illustrate the potential impacts and do not reflect Ofgem’s current policy thinking.

At a high-level there are 3 steps to the analysis



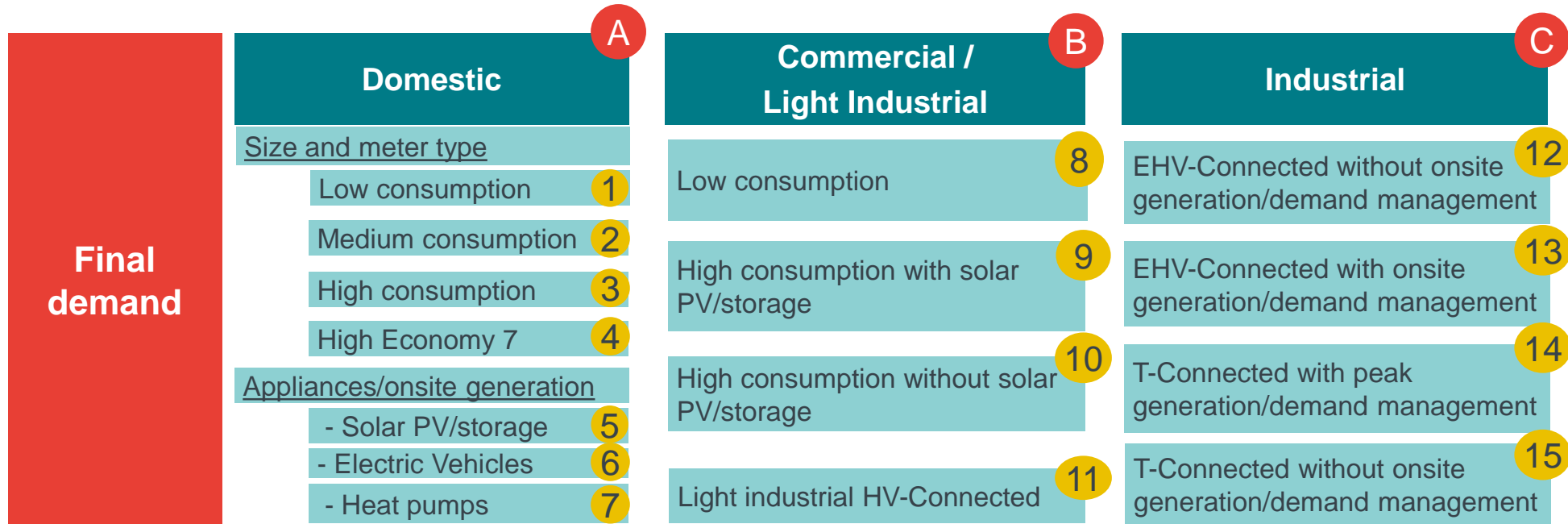
In the first phase of the project we are aiming to understand the direct (static) impact on bills (holding physical behaviour constant)



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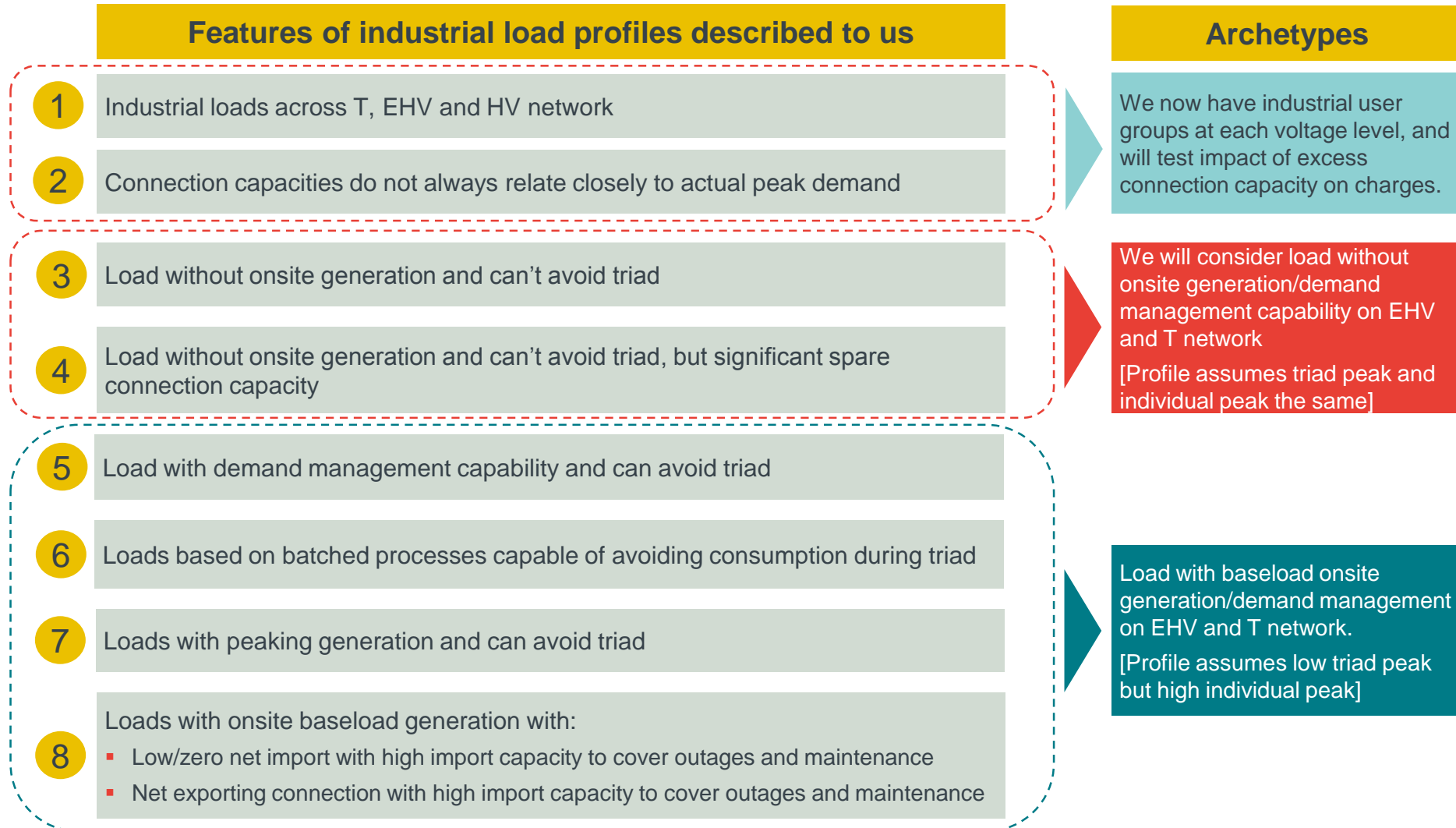
In total we have identified 15 final demand user groups spread across domestic, commercial and industrial categories

The user groups have been updated following feedback from stakeholders and further discussions with Ofgem



In reality the boundaries between users may overlap. For example, small Commercial profiles will also be captured by our analysis of the larger domestic profiles

Information provided by industrial stakeholders has helped inform our industrial user groups



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Update on bill impact analysis

Qualitative

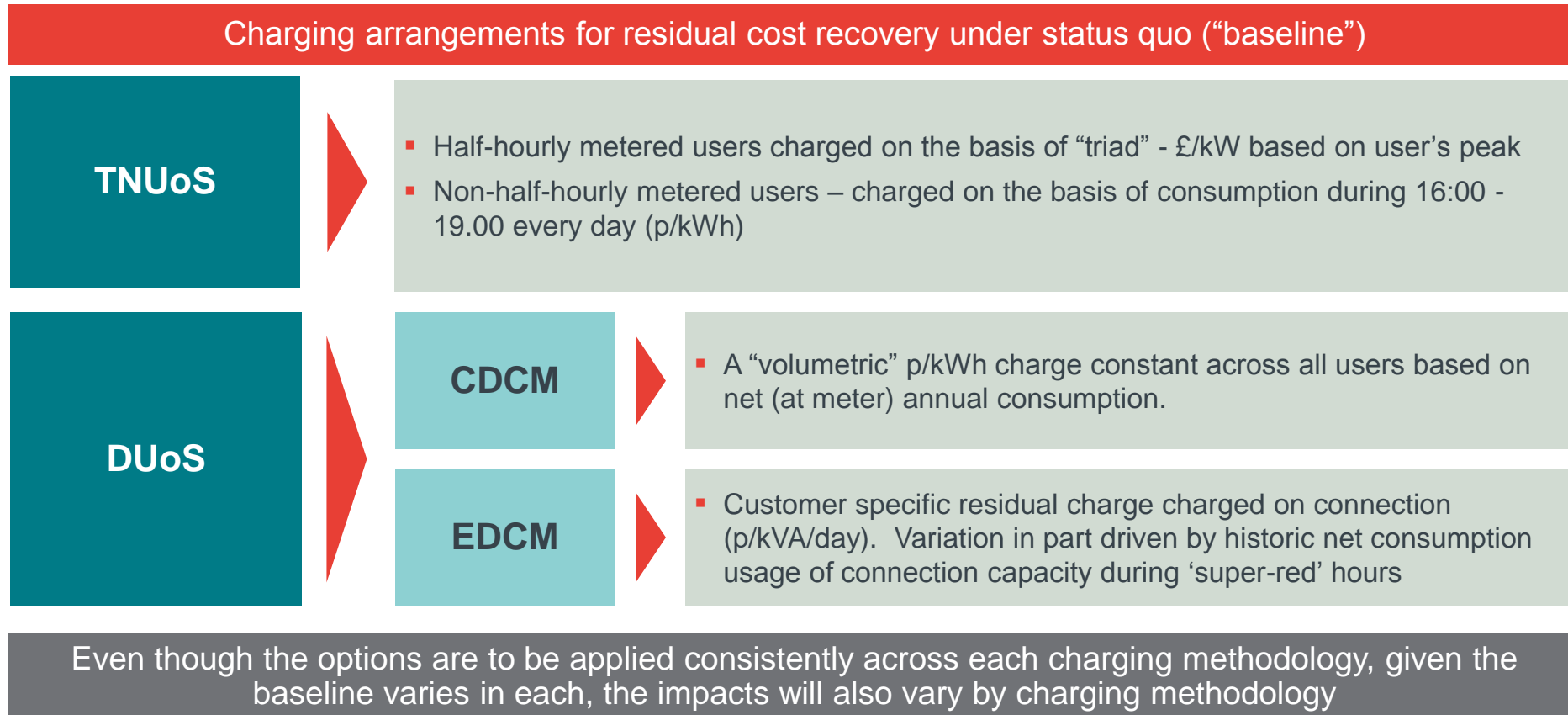
- Our initial work has focused on a qualitative assessment of the impacts on different types of users
- This supports understanding of the quantitative impacts and helps to draw out more general points around the dynamics of expected impacts

Quantitative

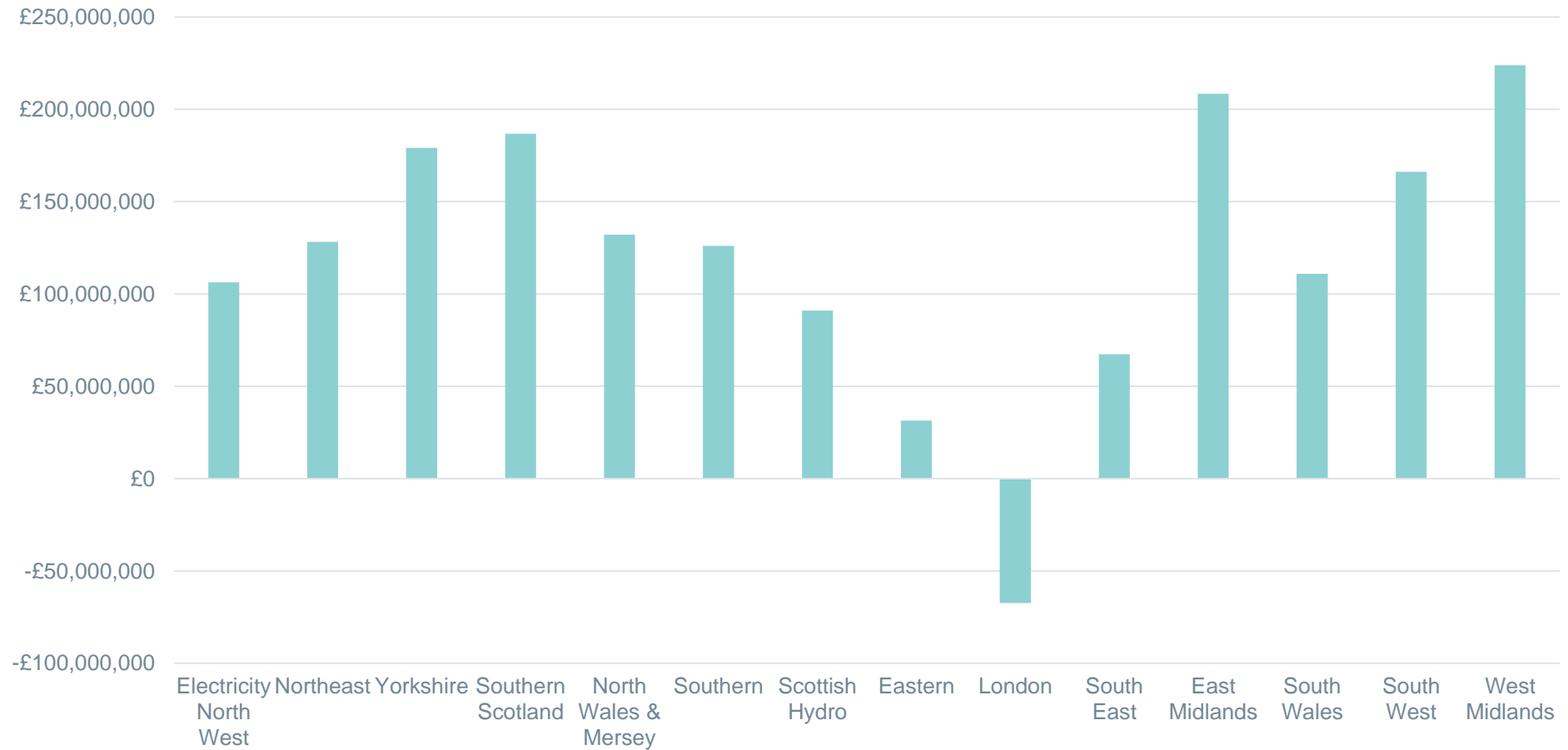
- We have developed the bill impact model across each of the charging methodologies (i.e., CDCM, EDCM, TNUoS).
- We do not yet have sufficient data to calculate the charges for each of the methodologies, however, we have requested further data from the industry.
- Our initial analysis has focused on CDCM charges, some of which we present today.

In the following section, we set out our understanding of the baseline charges, and then consider qualitatively the impact of each of the ‘vanilla’ charging options separately. Where relevant we provide illustrative CDCM bills analysis for different user groups

Residual cost recovery arrangements vary across the three residual charging methodologies



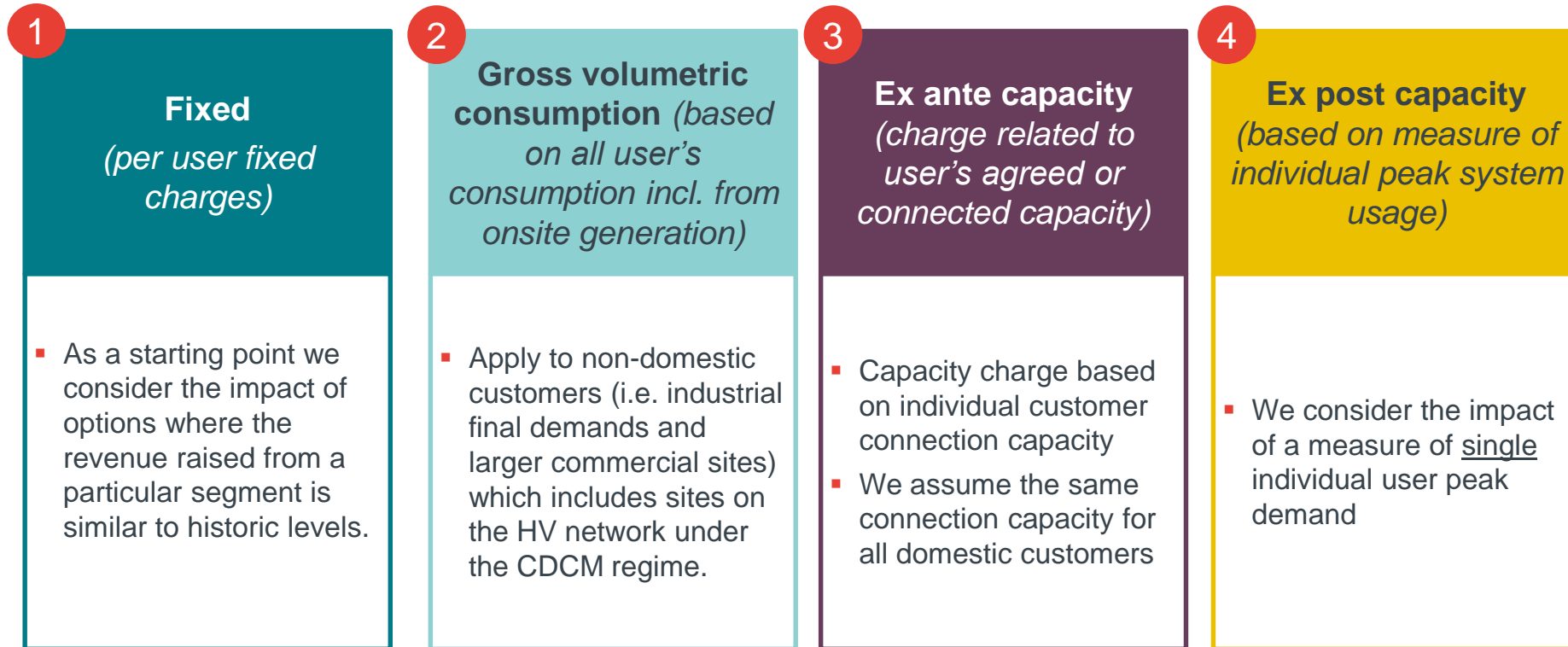
The total residual to recover varies widely across the different DNOs



There is a wide distribution of DNO fixed adders. To illustrate the impacts we use the Northeast as a ‘representative DNO’

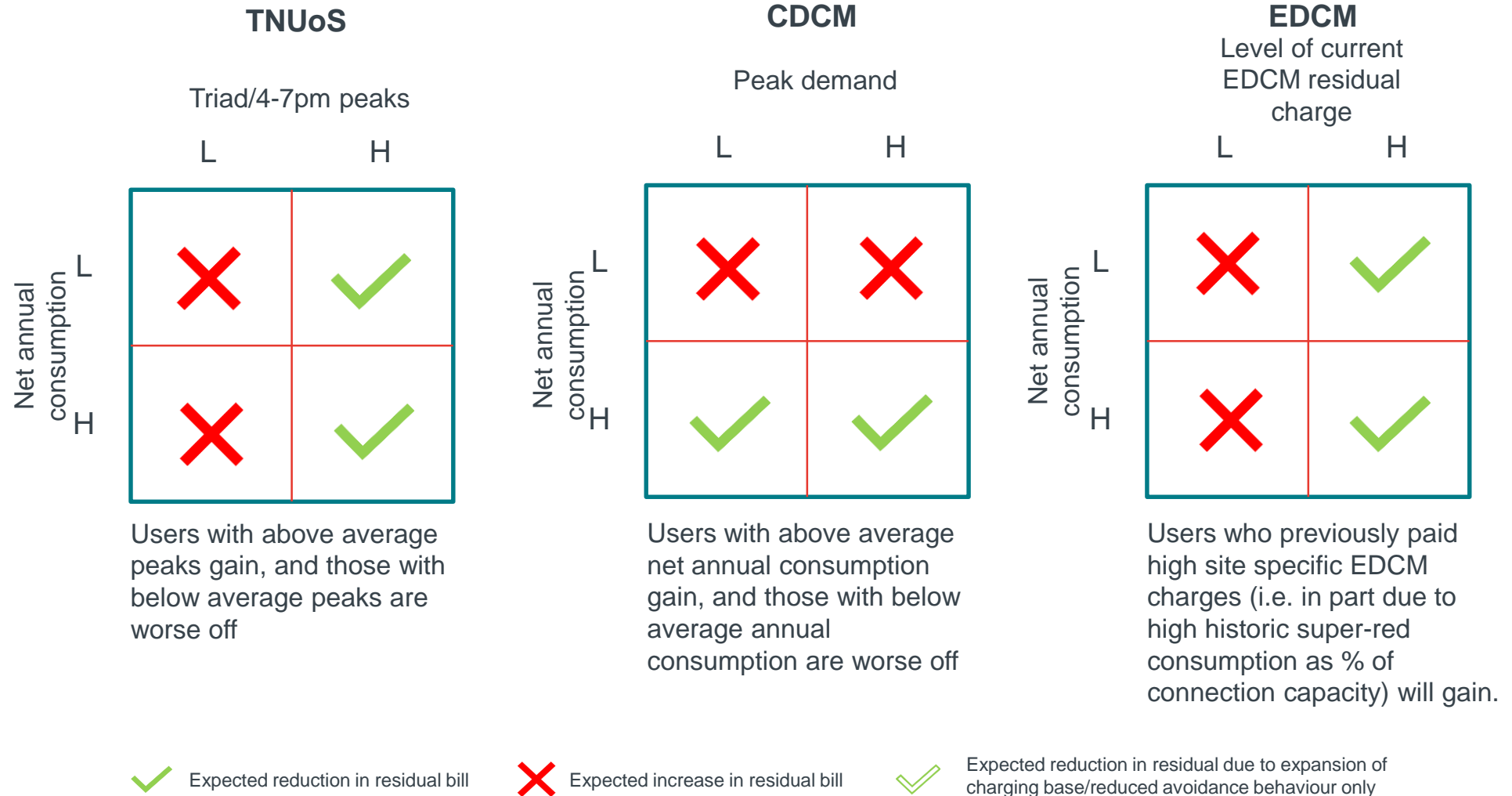


Relative to the baseline we assess the impact of moving to each of the four alternative ‘vanilla’ charging options

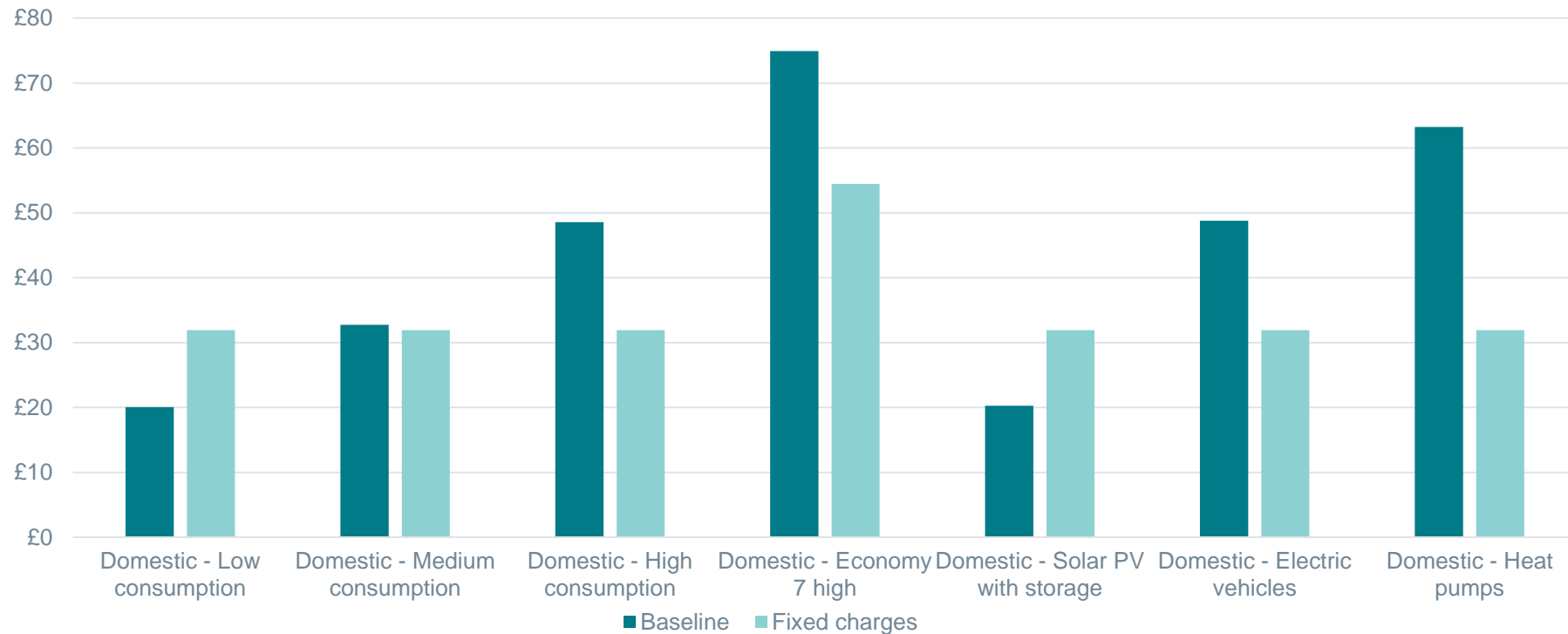


- The impacts set out in this section are ‘static’ i.e. they do not consider behaviour change.
- The options we consider are illustrative examples only and not indicative of final policy options

Distributional impact matrices: Fixed charges

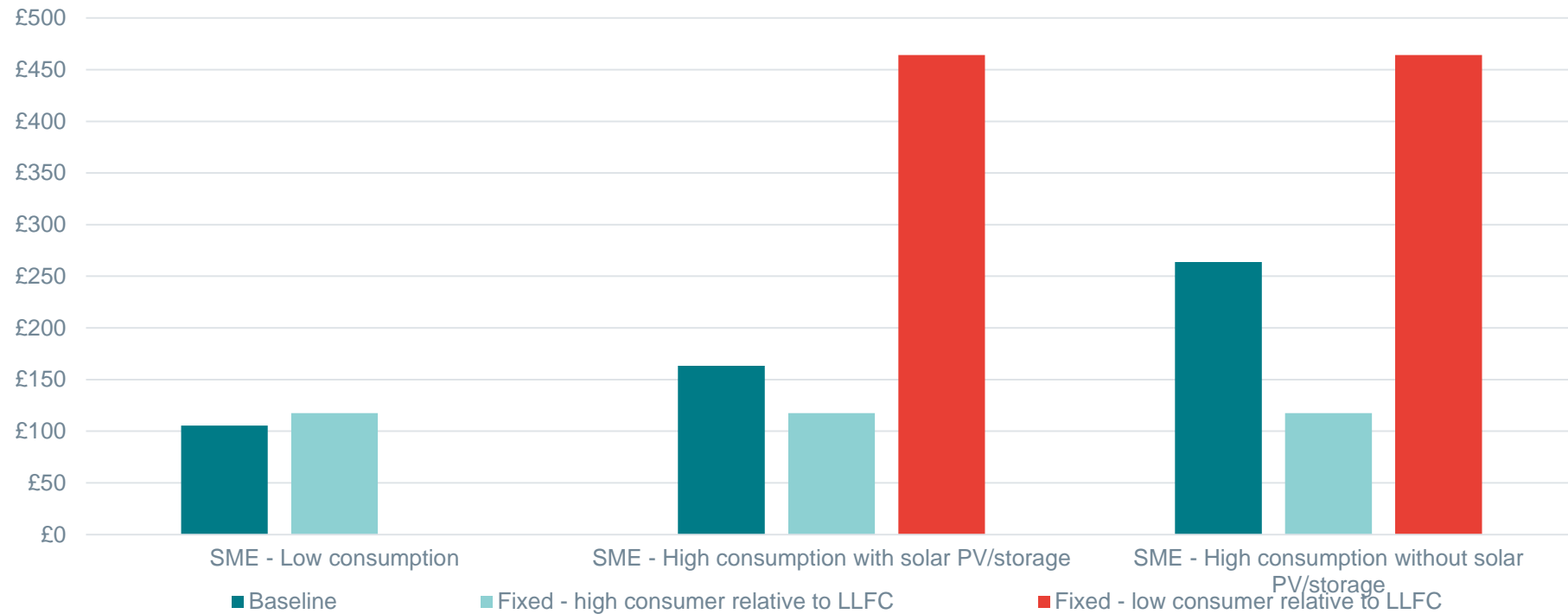


Domestic user groups – fixed charge bill impact



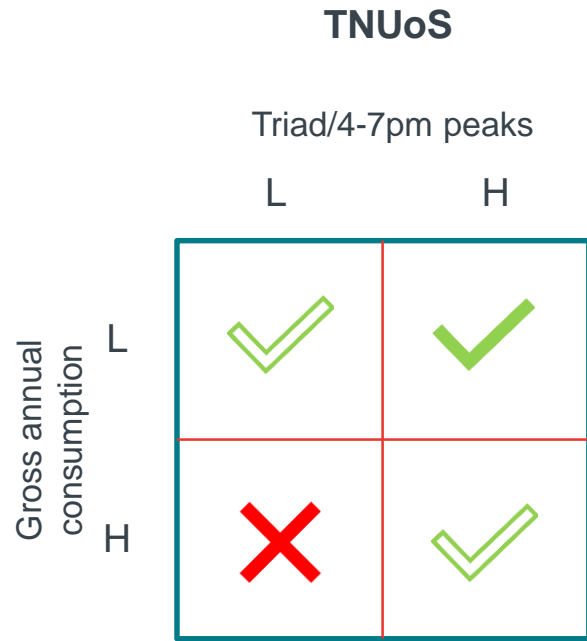
- Results are driven by the particular approach/assumptions adopted and are meant as an illustration of potential drivers of impact.
- The total residual recovered from each line loss factor class is divided by the number of customers in that class, leading to one charge per LLFC.
- This information is provided in each CDCM model.

Commercial user groups – fixed charge bill impact

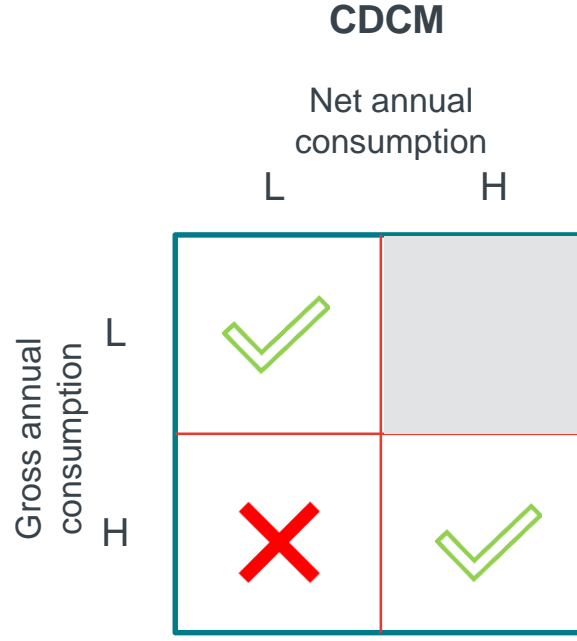


- Results are driven by the particular approach/assumptions adopted and are meant as an illustration of potential drivers of impact.
- The total residual recovered from each line loss factor class is divided by the number of customers in that class, leading to one charge per LLFC. As such, results are sensitive to the choice of LLFC.
- This information is provided in each CDCM model.

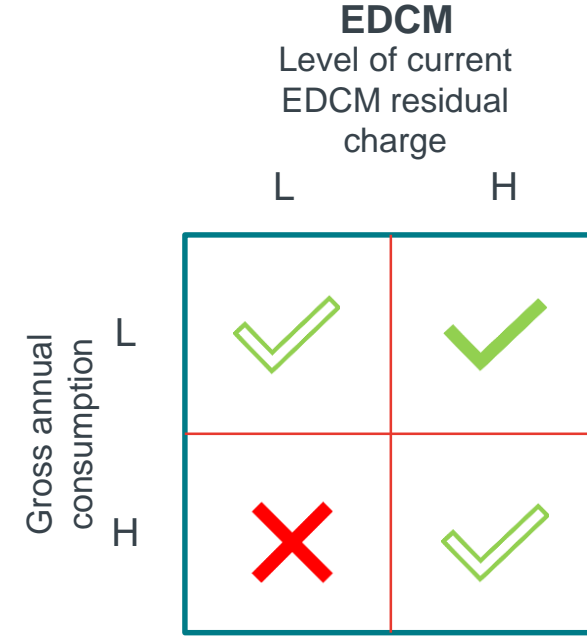
Distributional impact matrices: Gross volumetric



Users with “peaky” profiles gain, and those with high consumption but with low peak (incl. due to onsite generation/DSR) are worse off. Users with high charges before and after change still benefit due to expansion of charging base.



Users with low net annual consumption but high gross consumption due to baseload onsite generation are worse off. Users with high charges before and after change benefit due to expansion of charging base.



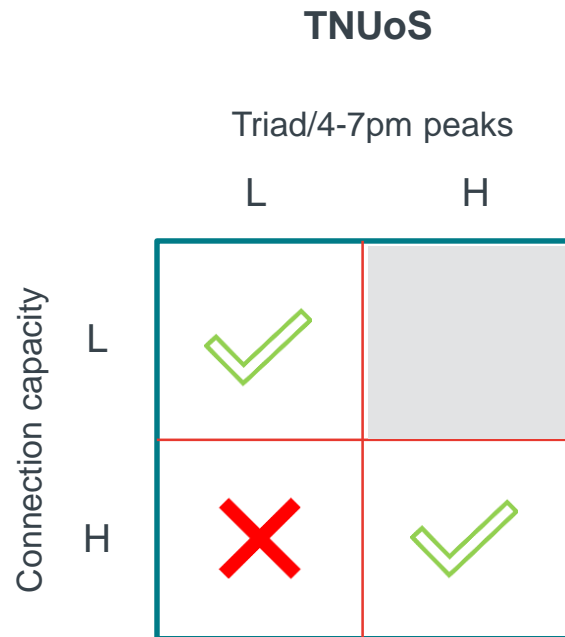
Users who previously paid high site specific EDCM charges (i.e. in part due to high historic super-red consumption as % of connection capacity) will gain. Users with high charges before and after change benefit due to expansion of charging base.

✓ Expected reduction in residual bill

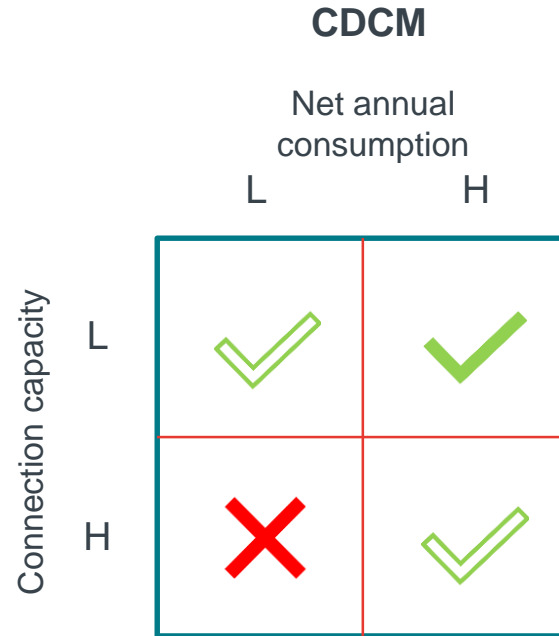
✗ Expected increase in residual bill

✓ Expected reduction in residual due to expansion of charging base/reduced avoidance behaviour only

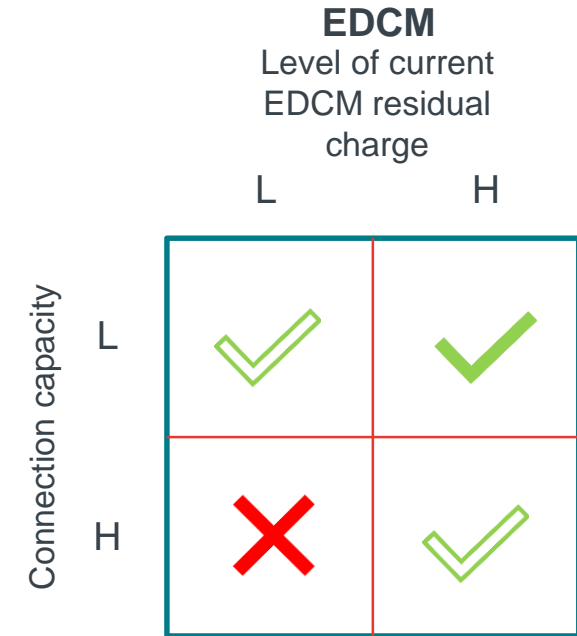
Distributional impact matrices: Ex ante capacity



Users with high connection capacity relative to their triad peak demand are worse off. Users with high charges before and after change benefit due to reduced avoidance behaviour.



Users with high connection capacity relative to their net annual consumption are worse off. Users with high annual consumption, fully utilising their connection capacity gain. Users with high charges before and after change still benefit due to reduced avoidance behaviour.



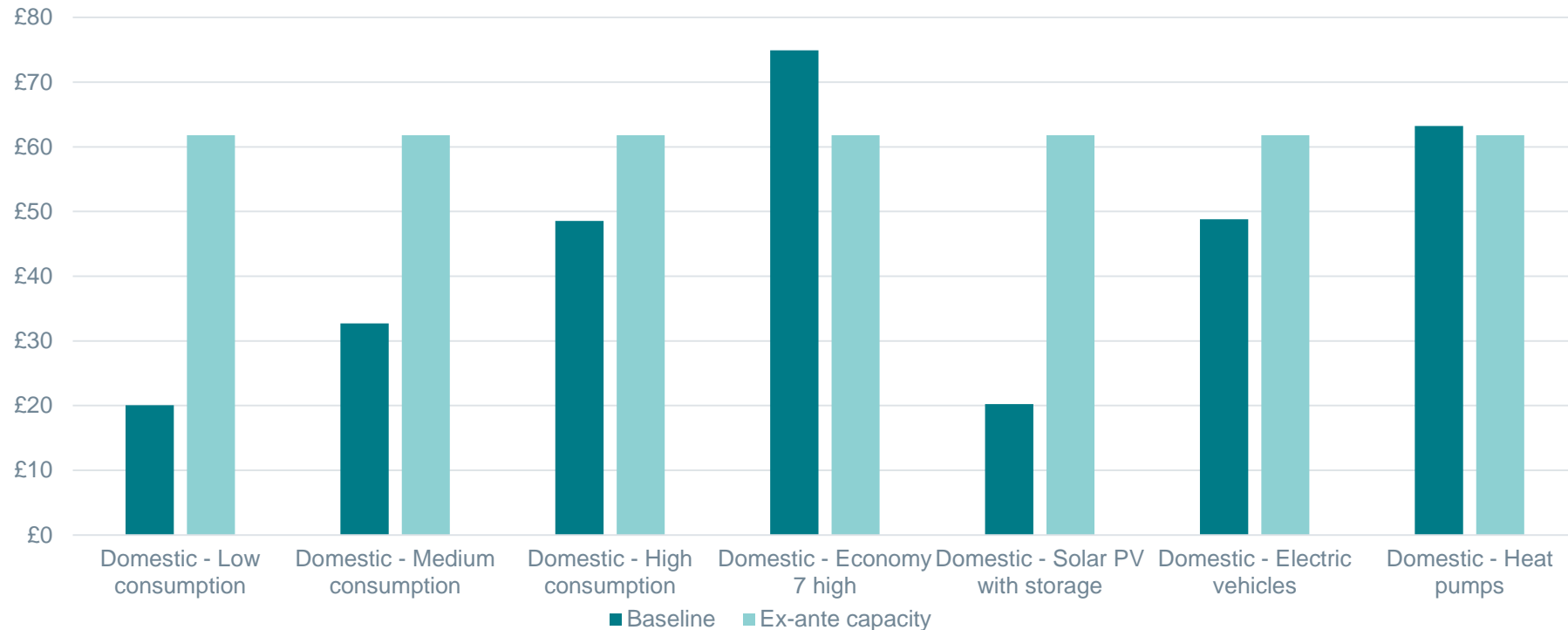
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✓ Expected reduction in residual bill

✗ Expected increase in residual bill

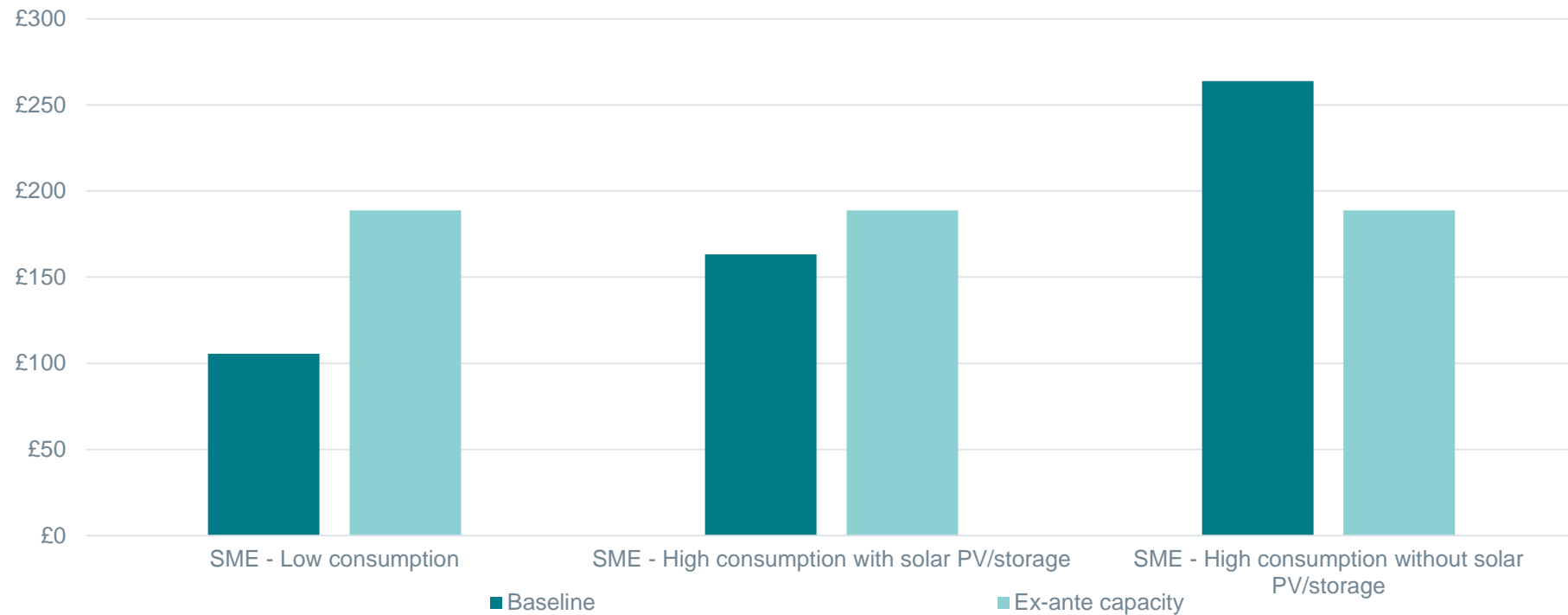
✓ Expected reduction in residual due to expansion of charging base/reduced avoidance behaviour only

Domestic user groups – ex-ante capacity charge bill impact



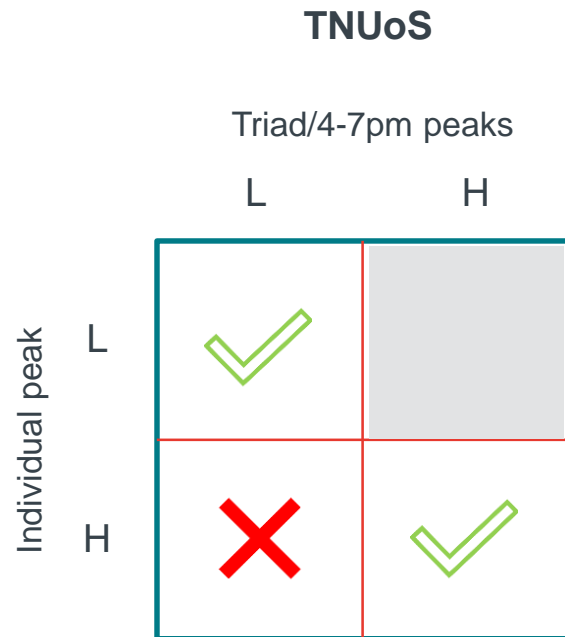
- Results are driven by the particular approach/assumptions adopted and are meant as an illustration of potential drivers of impact.
- The total residual recovered within each DNO is divided by the assumed total connection capacity of DNO customers.
 - We have used connection capacities available in the CDCM models for HH customers.
 - Otherwise, we have made assumptions based on conversations with DNOs.

Commercial user groups – ex-ante capacity charge bill impact

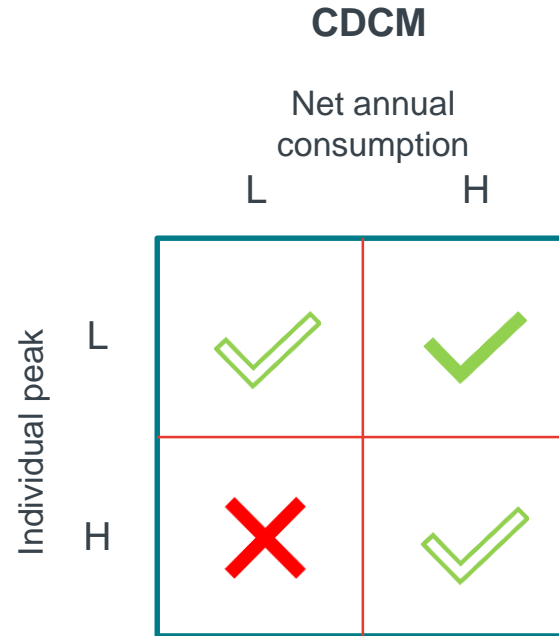


- Results are driven by the particular approach/assumptions adopted and are meant as an illustration of potential drivers of impact.
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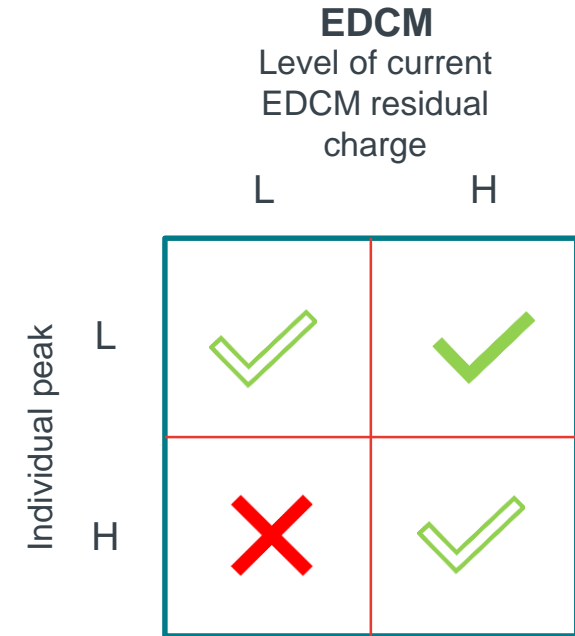
Distributional impact matrices: Ex post capacity



Users with high individual peak not aligned with system peak are worse off. Users with high/low charges before and after change benefit due to expansion of the charging base.



Users with “peaky” profile are worse off relative to flat profiles. Users with high/low charges before and after change benefit due to reduced avoidance behaviour.



Users who previously paid low site specific EDCM charges (i.e. in part due to high historic super-red consumption as % of connection capacity) but have high individual peaks are worse off (e.g. site with onsite generation but with maintenance periods resulting in high individual peak).

✓ Expected reduction in residual bill

✗ Expected increase in residual bill

✓ Expected reduction in residual due to expansion of charging base/reduced avoidance behaviour only



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Forum

Coffee break

11:20 – 11:35



Targeted Charging Review: Breakout discussions

Andrew Self, Ofgem



Questions to consider

- > Frontier's analytical work will be published with our Impact Assessment.

Do you feel this type of material will help you understand the implications of the final set of residual charging options for you or your business?

What could be done to improve the information set?

- > Given the initial views on distribution impacts, what should this mean for the final policy options, and potential hybrid approaches?