

Initial findings from the Energy Price Signals Study

Stakeholder workshop

CEPA and the Energy System Catapult for BEIS
17 November 2021



- Technical issues: please use the chat function in Teams or email:
Tabitha.Dunn@es.catapult.org.uk
- Questions about the wider AEM programme and trials:
AlternativeEnergyMarkets@beis.gov.uk
- Audience participation:
 - Join at Sli.do **#EPSS_17Nov**
 - Any clarification questions on the presentation, please use the chat function in Teams

Agenda

- Introductions & aims of today's session
- Icebreaker quiz
- Context to our study
- Our findings to date
- How you can get involved

With you today...



Gary Keane
Project Director



Sarah Keay-Bright
Policy & Regulation Specialist



Oliver Bubb-Humfryes
Tariffs Expert



Ben Shafran
Project Manager

Aims for today

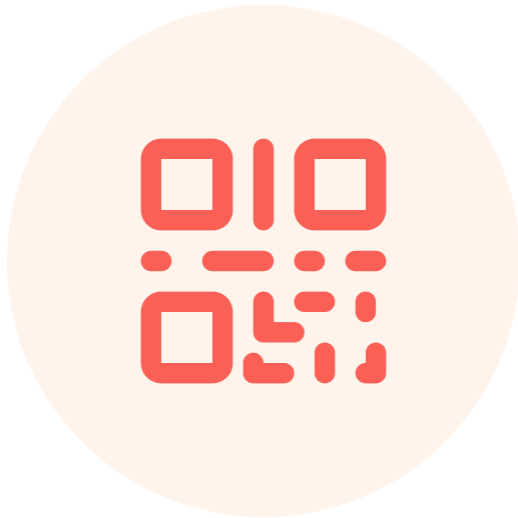
Introduce the Energy Price Signals Study and our findings so far

Gather your initial views on some of the main questions we will be exploring in the next part of the study

Highlight opportunities for you to be involved in the next part of the project



slido



Join at Sli.do
#EPSS_17Nov

① Start presenting to display the joining instructions on this slide.

slido



What category best describes you or your organisation?

① Start presenting to display the poll results on this slide.

slido



Did you participate in our online survey for the Energy Price Signals Study, which ran in June/July?

① Start presenting to display the poll results on this slide.

slido



Environmental and social policy costs make up what share of the typical electricity bill for households?

① Start presenting to display the poll results on this slide.

slido



In which one of these countries are environmental and social policy costs recovered through general taxation?

① Start presenting to display the poll results on this slide.



The AEM programme

BEIS' Alternative Energy Markets (AEM) programme is exploring what an alternative system of **network** and **policy price signals** to better enable cost-effective decarbonisation might look like.

Energy Price Signals study

BEIS appointed CEPA and the Energy Systems Catapult under the AEM programme to carry out an Energy Price Signals Study (EPSS) to explore price signals sent to **domestic consumers** through **recovery of policy costs** and **forward-looking electricity network tariffs**.

AEM trial(s)

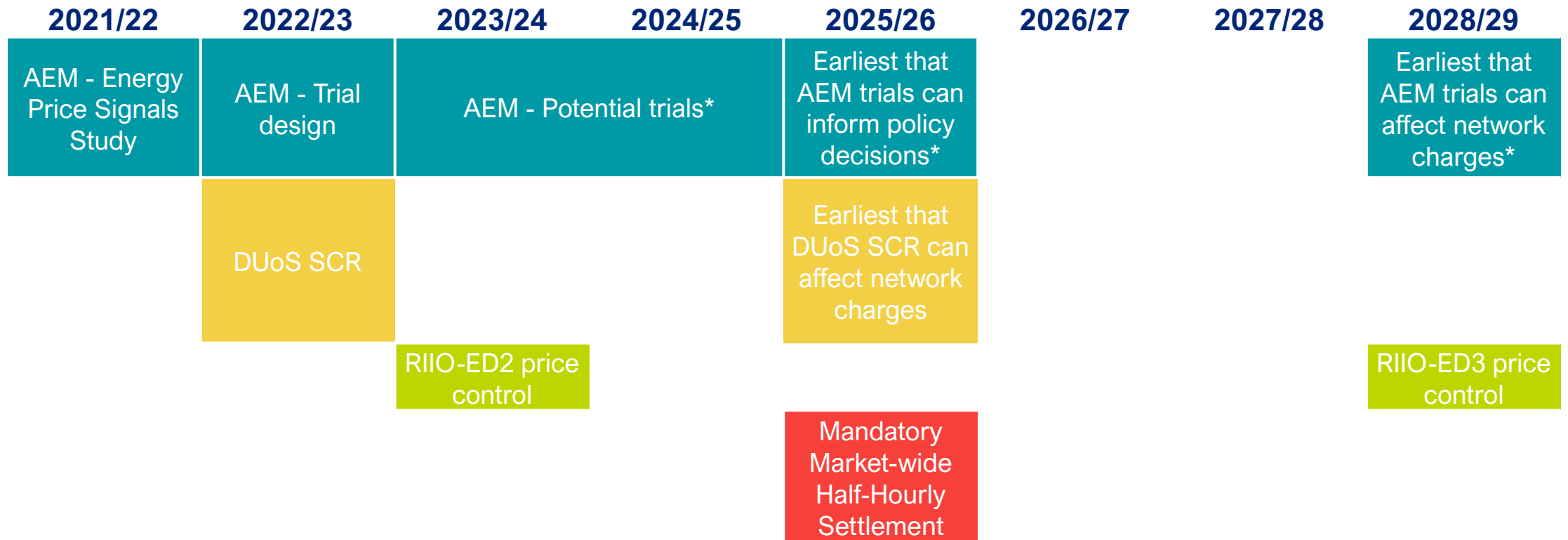
Subsequently, the AEM will explore whether and how those signals could be trialled in a real-world environment.

Scope of the Energy Price Signals Study

- The **forward-looking component** of electricity network use-of-system tariffs (excluding tariffs for balancing services, and excluding how residual charges are recovered).
- The following **policy costs**:
 - Renewable Obligations Certificates
 - Feed-in Tariffs
 - Contracts for Difference
 - Capacity Market payments
 - Assistance for Areas with High Electricity Distribution Costs (AAHEDC)
 - Warm Home Discount
 - Energy Company Obligation

We will be focusing on these costs in the next stage of work

AEM & industry timelines



- EPSS is exploring options worth **trialing** that may be enabled by **future** technological & strategic pathways.
- Current industry processes (such as Ofgem’s Access SCR) are assessing options to implement **now**, given technologies available in the **near-term**.

* Reflects CEPA / ESC’s own assumptions

Energy Price Signals Study overview

PHASE 1

“Gap analysis”

- Assessed barriers, principles and high-level reform options
 - Informed by stakeholder survey & literature review
- Interim report (to be published shortly)

PHASE 2

“Options for bridging the gap”

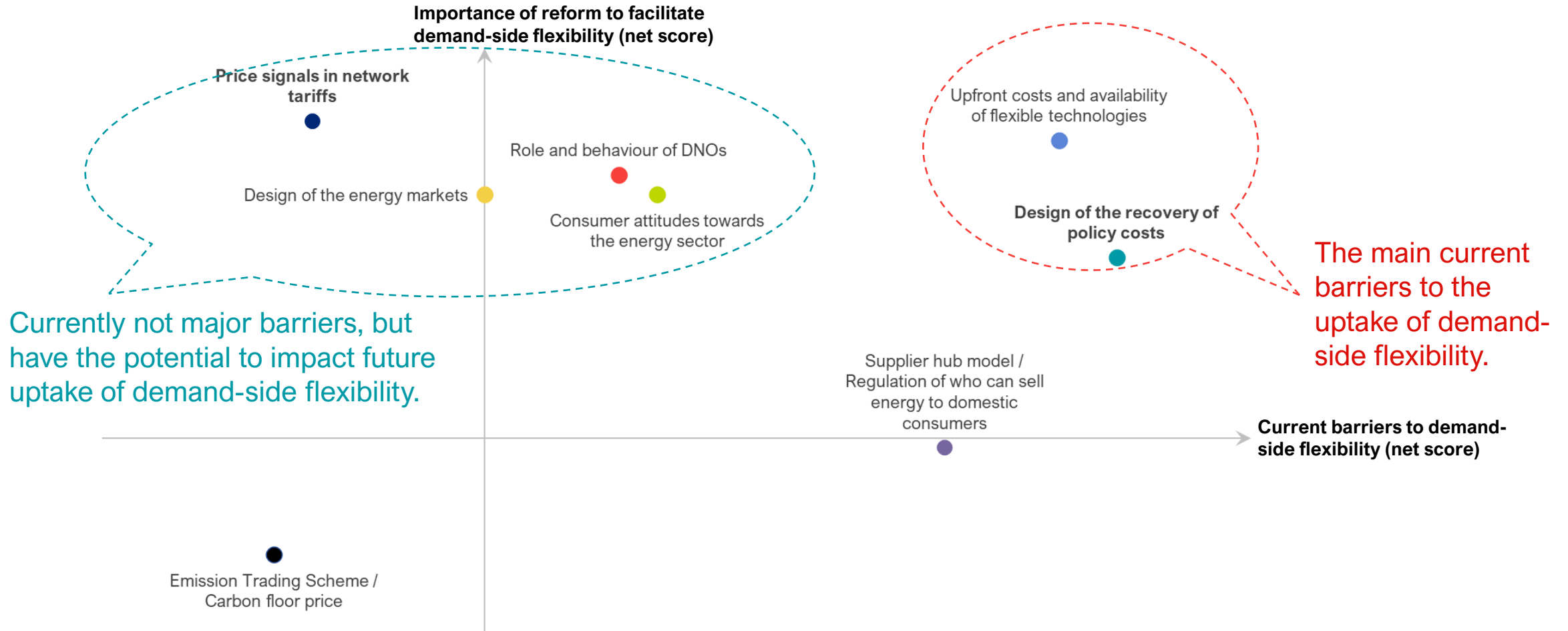
- Stakeholder workshop
 - Shortlisting & assessing options for trial
 - Focus groups
- Final report & recommendations for trial

We're here





Stakeholders' views of current barriers



Source: CEPA / ESC analysis of 46 survey responses.

Note: Net Score is calculated as % of respondents who answered “Strongly support” or “Somewhat support”, less % of respondents who answered “Strongly inhibit” or “Somewhat inhibit”. Respondents could also answer “Neither support nor inhibit”, which are omitted here.

Price signals are necessary but not sufficient for cost-effective decarbonisation

Illustrative example using heat pumps:

Total number of energy consumers

...of which could install a heat pump
(have sufficient outdoor space, home insulation)

...of which could respond flexibly
(have smart meter, half-hourly settlement)

Smart meter rollout & settlement reform

...of which can afford the upfront cost of a heat pump

Lower technology costs & access to government grants

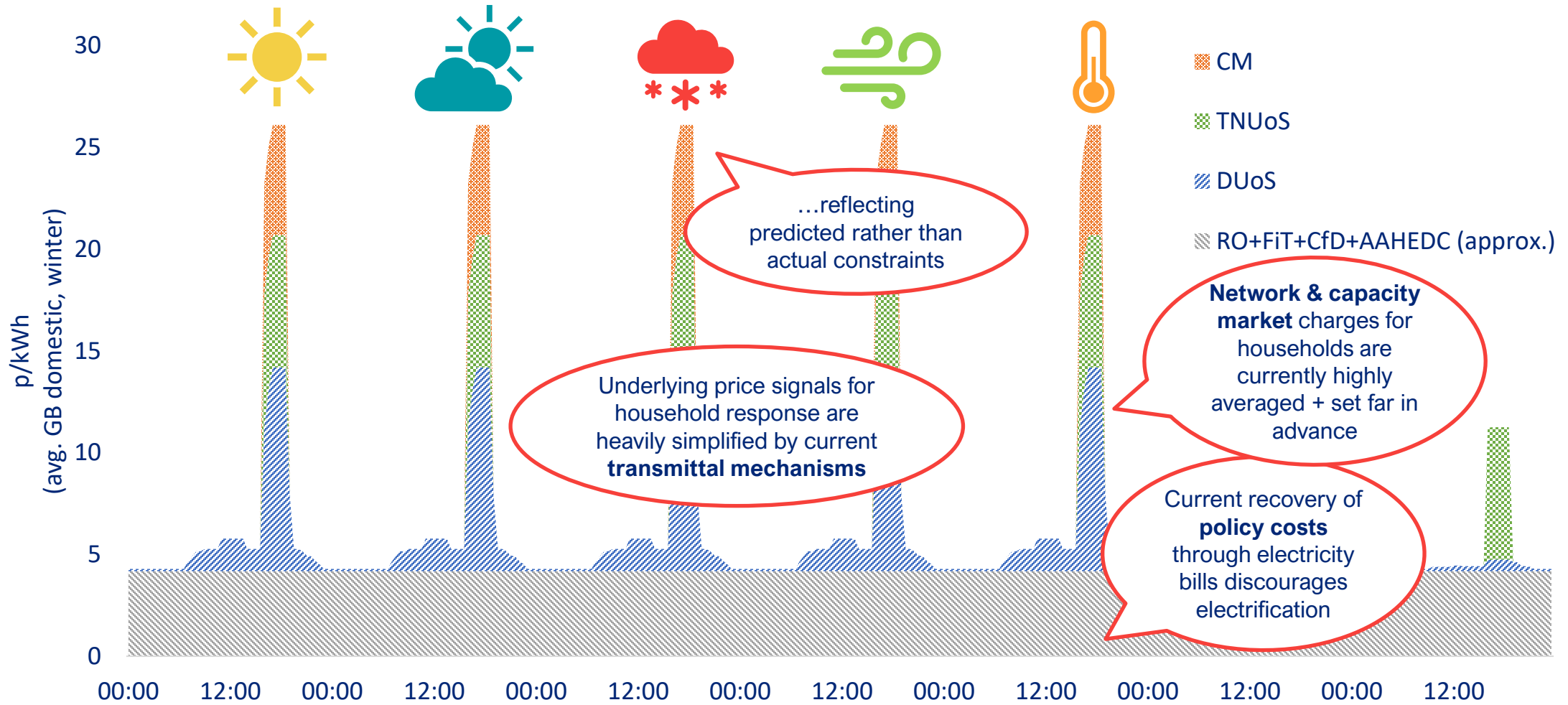
...of which would switch to a heat pump under current price signals

Reform of underlying price signals

Principles for cost-effective decarbonisation

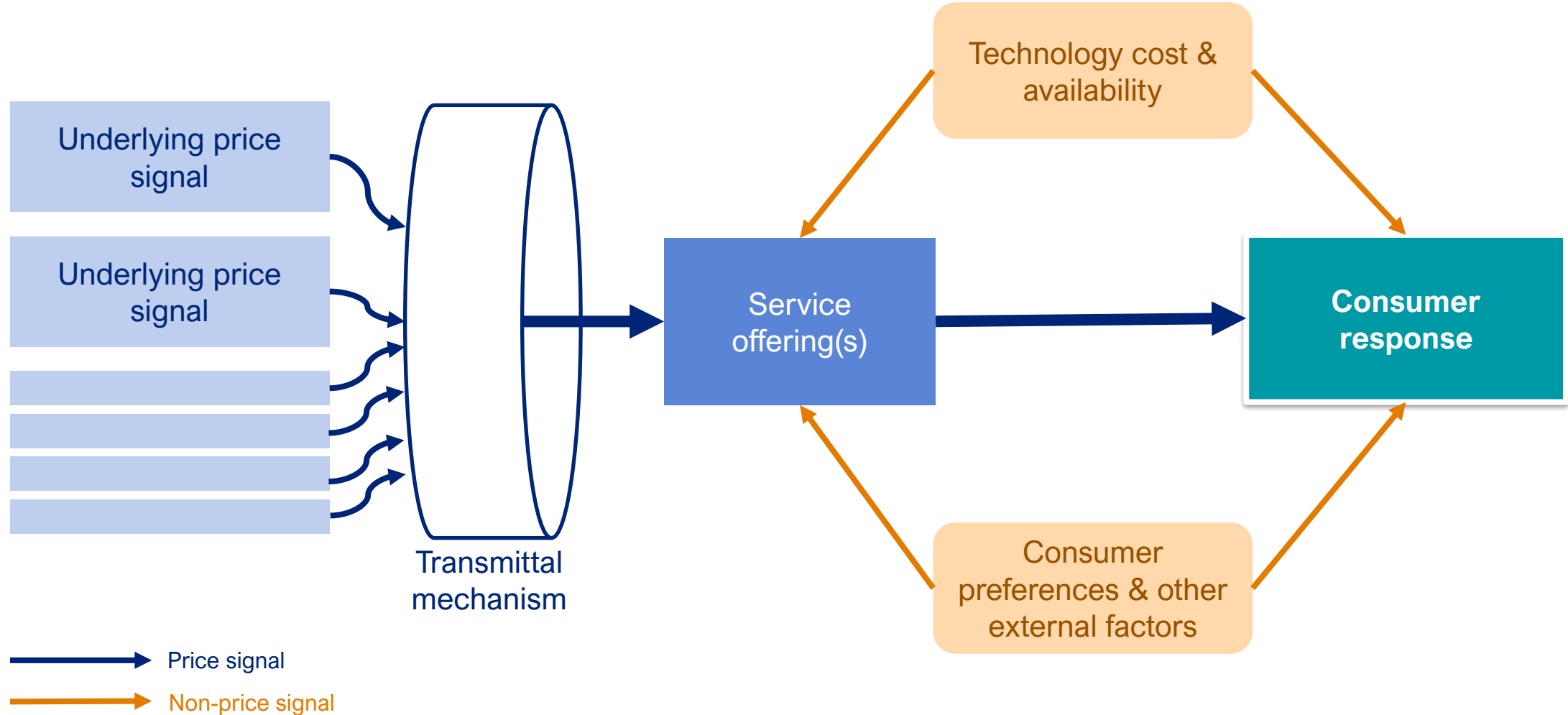
- There is broad agreement in the literature on the **principles that should inform economically efficient allocation of energy costs** and the price signals provided in relation to those costs.
 - Price signals should be **cost-reflective**
 - Price signals should result in an **equitable** cost allocation
 - Aspects such as **simplicity, transparency** and **stability** may improve the strength of response
- There will inevitably be **tension between these principles**.
- Principles are **not straight-forward to apply in practice**.
- The net zero emissions target and new technologies are **changing the context** in which these principles are applied.
- Impact depends on how underlying price signals are **transmitted** to users.

Underlying policy & network price signals



Note: Excludes supplier costs, BSUoS, VAT, and potential revenue from exports or flexibility markets.
 Source: CEPA analysis of distribution use of system charges for a “Domestic Aggregated” tariff 2022/23 (published DNO charging statements); non-half-hourly transmission network use of system charges 2021/22 (published by National Grid ESO); capacity market charges 2021/22 (published by EMR Settlement Limited); and other policy charges as reported by Cornwall Insight (2021)

AEM is interested in how intermediaries will innovate in response to new price signals...

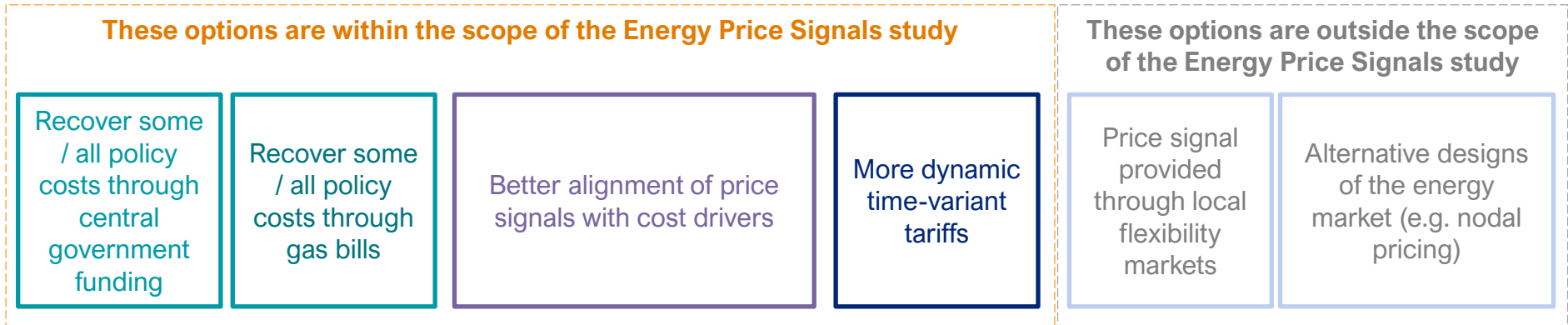


Main messages from Phase 1

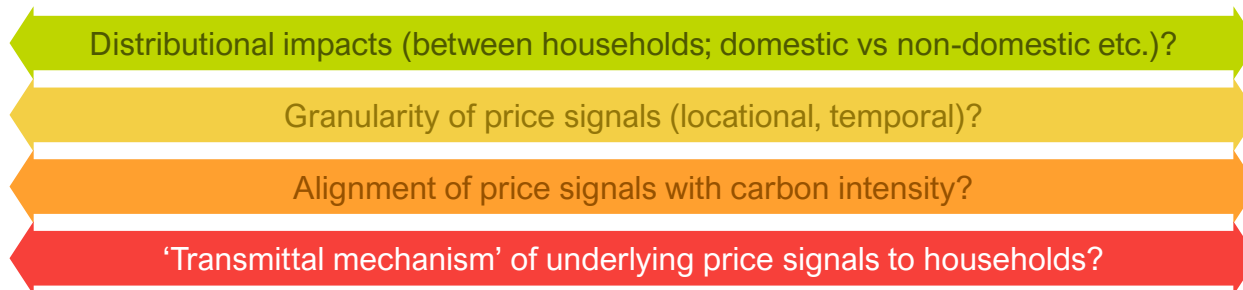
Current price signals contribute to **barriers** to cost-effective decarb. in three main ways:



We identified **potential solutions** that could be considered further under the EPSS:



And some **cross-cutting questions** relevant to all these potential solutions:



- 
- Introductions & aims of today's session
 - Icebreaker quiz
 - Context to our study
 - Our findings to date
 - **How you can get involved**

Opportunities to get involved in Phase 2

Online survey: help us identify the main factors we need to consider in developing pricing options that could be trialled under the AEM
Survey open now until 5pm this Friday

Focus groups: help us answer some of the detailed questions about the pricing options. Dedicated sessions for each of: consumers, suppliers, network companies, aggregators / flex. platforms, thought-leaders
To take place in late-November and early December

Workshop: opportunity to comment on our advanced thinking before we finalise our recommendations
To be scheduled for early-2022

Help us shape focused conversations

We are looking for your views on:

How policy support costs should be recovered

How to improve the price signals for demand-side flexibility in operational timeframes

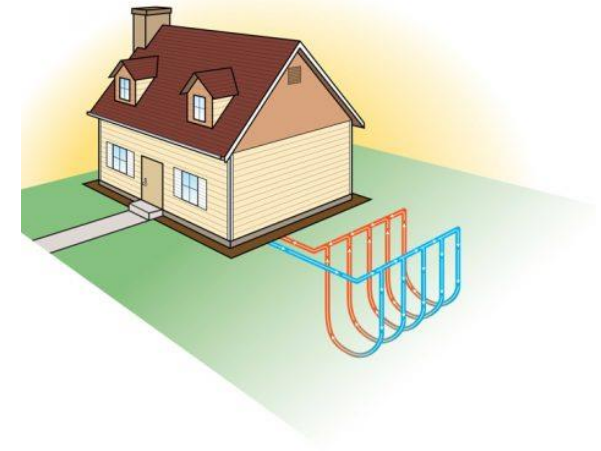
How intermediaries (e.g. suppliers) pass-on or package underlying price signals

What pricing options would offer the greatest new insights by being trialled

Policy costs allocation

For the AEM trials, we want to explore the allocation of RES support costs between electricity and gas consumers.

Our online survey asks what factors would need to be considered in allocating these costs – for example, should this be a fixed allocation or should we account for the relative carbon intensity of electricity and gas supply?



Price signals in operational timeframes

For the AEM trials, we want to explore options for the price signals relating to the recovery of policy support costs, and of forward-looking network tariffs to be:

- set closer to when the charges are incurred
- more temporally granular
- more locationally granular

Our online survey asks:

How best to achieve the above aims?

What factors need to be considered in setting the charge designs?

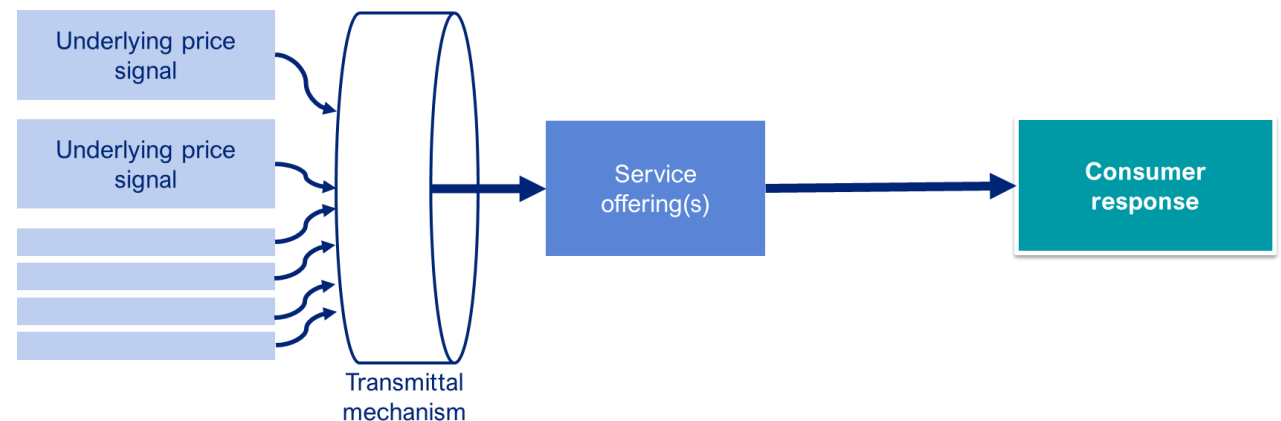
Is there a benefit in linking charges to emissions intensity on the system? If so, what factors need to be considered in creating that link?

Transmittal of underlying price signals

For the AEM trials, we want to explore different options for how the underlying price signals for policy support costs and for forward-looking network tariffs could feed through to households.

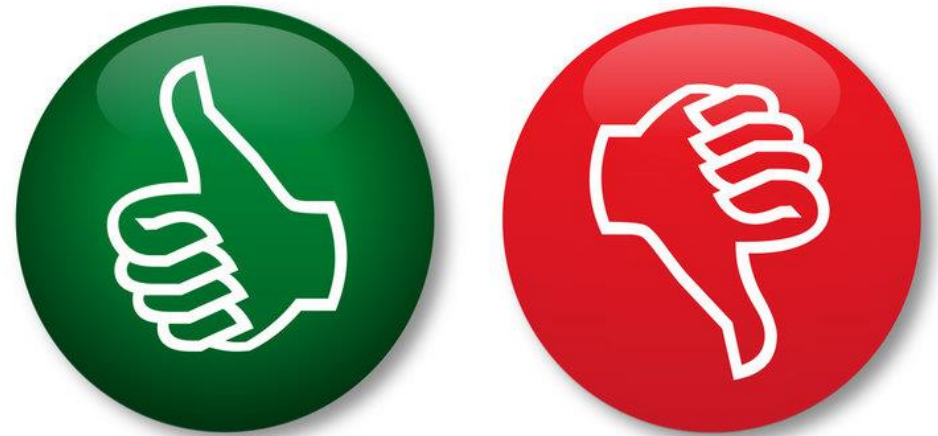
Our online survey asks what we need to consider in terms of how underlying price signals may affect:

- The tariffs and services that intermediaries (e.g. suppliers) would offer?
- Consumers' response to the price signals (either the underlying signals if passed through or signals packaged by intermediaries)



Insights to be gained from trials

The AEM trials would offer the greatest benefit to future policy-making and to energy sector participants' decisions if they were able to offer *new* insights that supplemented existing knowledge. Our online survey asks what pricing options would offer *new* insights from live environment trials.



Please complete our online survey by 5pm this Friday (19 November)

<https://bit.ly/3Cj0GGL>



Important information

This document was prepared by CEPA LLP (trading as CEPA) for the exclusive use of the recipient(s) named herein.

The information contained in this document has been compiled by CEPA and may include material from other sources, which is believed to be reliable but has not been verified or audited. Public information, industry and statistical data are from sources we deem to be reliable; however, no reliance may be placed for any purposes whatsoever on the contents of this document or on its completeness. No representation or warranty, express or implied, is given and no responsibility or liability is or will be accepted by or on behalf of CEPA or by any of its directors, members, employees, agents or any other person as to the accuracy, completeness or correctness of the information contained in this document and any such liability is expressly disclaimed.

The findings enclosed in this document may contain predictions based on current data and historical trends. Any such predictions are subject to inherent risks and uncertainties.

The opinions expressed in this document are valid only for the purpose stated herein and as of the date stated. No obligation is assumed to revise this document to reflect changes, events or conditions, which occur subsequent to the date hereof.

CEPA does not accept or assume any responsibility in respect of the document to any readers of it (third parties), other than the recipient(s) named herein. To the fullest extent permitted by law, CEPA will accept no liability in respect of the document to any third parties. Should any third parties choose to rely on the document, then they do so at their own risk.

The content contained within this document is the copyright of the recipient(s) named herein, or CEPA has licensed its copyright to recipient(s) named herein. The recipient(s) or any third parties may not reproduce or pass on this document, directly or indirectly, to any other person in whole or in part, for any other purpose than stated herein, without our prior approval.



UK

Queens House
55-56 Lincoln's Inn Fields
London WC2A 3LJ

T. **+44 (0)20 7269 0210**

E. info@cepa.co.uk

www.cepa.co.uk



cepa-ltd



@cepald

Australia

Level 20, Tower 2 Darling Park
201 Sussex Street
Sydney NSW 2000

T. **+61 2 9006 1308**

E. info@cepa.net.au

www.cepa.net.au

