

Open Networks advisory group meeting – Tuesday 4th December

Conflicts of interest and unintended consequences workshop

The ENA has developed a range of Future DSO Worlds which act as stylised models of future system operation. We are undertaking an impact assessment of these Worlds, looking at the cost and benefits and how each performs under a range of qualitative criteria.

As part of this assessment, we want to understand the risk and issues associated with each World. To help with this, we want to stress-test how actors across the value chain (including customers) will behave – particularly from a commercial perspective. This will help to identify potential issues in the operation of the Worlds, particularly the unintended consequences and conflicts of interest which hadn't been considered when the Worlds were designed. This can be used to consider the mitigation measures required to solve these issues and scale of those measures.

As part of the next advisory group meeting, we will be running a workshop on this topic to gain your input. Below we set out some initial hypotheses that the team have developed to help guide the breakout sessions, as pre-read.

Scope

The scope of this workshop will be focussed on how the future worlds may lead to conflicts of interests for different actors, the potential impact of these conflicts, and the potential mitigating actions, including changes to the current regulatory framework.

Objectives

1. To identify potential conflicts of interest and unintended consequences

- To understand what conflicts of interest could exist across the Future Worlds
- To understand how different actors might seek to game the Future Worlds
- To consider what behaviours the incentives, feedback loops and delays may trigger

2. To develop high level options/approaches for their mitigation

- To assess where existing rules and regulations mitigate these conflicts and any gaming and identify where there may be insufficiencies and/or gaps
- To identify new mitigations, or changes to existing arrangements, that mitigate these conflicts and unintended consequences.

Approach

We have developed initial hypotheses (set out below) under the following six themes: (1) network company conflicts; (2) market power / gaming; (3) system security / resilience; (4) distributional customer impacts; (5) operational viability; and (6) risk of regret.

Each of the topics are complex, and so we will be running focussed breakout groups, and as a result you will not be able to review all the themes in detail. We would appreciate it if you could register two theme preferences using the Doodle poll below to allow us to plan and size the breakout groups. Please select two topics that you have most insight on, so we can get the most value from the discussions:

- <https://doodle.com/poll/irakugdvvvfzhvs2>

Please note that each group has been capped at 10 to keep numbers manageable, and we may also need to ask some people to be flexible.

Please also read the pre-read in advance for your chosen themes so that you can come prepared.

Output

- An identified list of potential conflicts of interest / unintended consequences
- Descriptions of the impacts, materiality, and mitigations that could be employed for each key conflict of interest / unintended consequence

Initial hypotheses

The below are an initial set of potential conflicts of interest and unintended consequences. This list is intended as a pre-read to help you see the type of thing we are looking for. In the breakout groups we will work on an improved list, and also discuss potential mitigations.

Network company conflicts

- ▶ Lack of incentives for investment in technical solutions, risking de-prioritisation
- ▶ Transparency of Capex vs. Opex solution decisions within DSOs
- ▶ DNO provision of services from funded assets (e.g. storage / CLASS)
- ▶ DNO / TO quoted connection timelines can erode the business case for services
- ▶ Use of Opex solutions could see network company revenues nosedive
- ▶ Conflicts between "mandated" vs. "procured" flexibility (i.e. DSO market power due to flexible connections agreements)
- ▶ DNO ability to step in and interrupt the market in a "control-led" way when network thresholds are breached may lead to less efficient / risk-averse decisions
- ▶ Regulatory claw-back of asset allowances following flexibility procurement may impinge on network investment longer-term
- ▶ Use of Opex solutions could see network company revenues nosedive
- ▶ iDNO revenue driven by demand so no incentive exists to encourage alternate solutions

Market power / gaming

- ▶ Changes to system needs driving contract "regret" with low utilisation of contracted service assets
- ▶ Provision of network for exporting services in micro-grids is not paid for
- ▶ Locational market power - how to ensure fair service pricing and cost, e.g. if limited competition exists in a given location
- ▶ Incumbent power - e.g. existing funded assets, existing connections, largest voices
- ▶ Ability to neutrally frame network needs in order to avoid excluding new technologies and players
- ▶ Enabling whole system and cross-vector decisions
- ▶ Visibility of emerging constraints, and the ability to cause constraints that you are then paid to resolve

- ▶ Risk of existing mandatory requirements becoming “paid services” (e.g. ROCOF / power quality) therefore increasing costs to consumers
- ▶ Customer inertia and legacy connections / capacity hoarding inhibiting transition to flexibility

System security / resilience

- ▶ Risk of reduced clarity of accountabilities across DNO/DSO and TO/ESO, in particular for system security / resilience
- ▶ Uncertain response to price signals, impacting the ability of SOs to manage their networks (e.g. over-procurement of flexibility, or creation of new peaks)
- ▶ Arbitraging of different non-delivery penalties – i.e. flex providers may prioritise services that have higher penalties for non-delivery
- ▶ Risk of unclear responsibilities for cyber-security behind the meter
- ▶ New operational solutions are increasingly reliant on high availability comms, leading to new security of supply risks
- ▶ Specific focus on thermal constraints only by DSOs may put wider system balance at risk
- ▶ Impact of gaming in system security
- ▶ The ability to deploy flexibility will reduce headroom, which would save on investment costs but could lead to less resilience in the system
- ▶ How do assess generation adequacy in a world of decentralised energy and flexible demand?

Distributional customer impacts

- ▶ Ability to avoid network charges through net metering arrangements at GSP
- ▶ Inability for customers to participate due to lack of technology or specific assets
- ▶ A move away from 'vanilla' pricing may be seen as unfair on customers – e.g. if geographical differences drive differences, such as rural networks with limited embedded flexibility
- ▶ Third party intermediaries may not act in consumer interest – e.g. retaining incentives (reducing behavioural incentives on the end customer), mis-selling service contracts, and impacting customer engagement
- ▶ There may be insufficient value in services to stimulate the market, leading to sunk cost of developing market arrangements which do not deliver
- ▶ Customers may not want to engage with new parties and this could restrict liquidity in flexibility markets and reduce the benefits to consumers
- ▶ Local energy markets might negatively impact consumers by reducing choice and competition, leading to higher price outcomes

Operational viability

- ▶ Market oscillation – different timeframes for markets and (increasingly dynamic) price signals, could lead to instability and requirement for SOs to take multiple corrective actions
- ▶ New platforms and local energy markets could lead to operational issues if they do not reflect underlying network topology correctly in how they are designed

- ▶ Conflicting price signals and different time horizons could lead to sub-optimal dispatch
- ▶ If new markets are added alongside existing markets, all required to interface, there is a risk that it all becomes too complex
- ▶ Where DER is providing multiple services to different SOs it is possible that control systems may send conflicting dispatch signals

Risk of regret

- ▶ Providers may gain monopoly power over parties in the energy industry, increasing cost/slowing down DSO transition
- ▶ Network companies spend money building out SO functions which aren't needed in the medium/long term because better charging signals are in place
- ▶ Little financial return for SO taking on new risk associated with DSO, which may drive network operators to revert to asset solutions to provide certainty of meeting outputs
- ▶ There may be no customer benefit in using flexibility to manage LV networks
- ▶ Sudden technology advances drastically change assumptions on which decisions are made e.g. cheap in-home storage makes flexibility very cheap
- ▶ Lack of clarity on future market design and arrangements delays or prevents investment
- ▶ Industry is too focussed on markets and overlooks the benefits of technical solutions