

Challenge Group ENA Open Networks

4th May 2023

| Item | Start | Finish | Time | Item | Presenter |
|------|-------|--------|------|---|---|
| 1 | 14:00 | 14:05 | 5 | Welcome and apologies | Maxine Frerk (Challenge Group Chair) |
| 2 | 14:05 | 14:15 | 10 | Recent industry developments and ON impact Open discussion on industry developments and their potential impact on Open Networks | Maxine Frerk (Challenge Group Chair) & All |
| 3 | 14:15 | 14:30 | 15 | Feedback from Challenge Group only meeting on Ofgem CFI and consultation | Maxine Frerk (Challenge Group Chair & All) |
| 5 | 14:30 | 14:40 | 10 | Challenge and Feedback Log Update on key feedback logged | Avi Aithal (Head of ON, ENA) |
| 6 | 14:40 | 15:00 | 20 | ON Success Framework Initial view of ON success criteria and implementation tracking framework | Avi Aithal (Head of ON, ENA) |
| 7 | 15:00 | 15:10 | 10 | Break | |
| 8 | 15:10 | 15:30 | 20 | Primacy Rules Iteration 2 supporting analysis | Luke Harker (NG ED) & Stuart Fowler (NG ESO) (Technical working group co-Leads) |
| 9 | 15:30 | 15:50 | 20 | Procurement Processes Early view of pre-qualification standardisation recommendations | Helen Sawdon (NG ED) (Technical working group Lead) |
| 10 | 15:50 | 16:15 | 25 | Dispatch Systems Interoperability | Tim Manandhar (UKPN) & Joe Davey (NG ED) (Technical working group co-Leads) |
| 11 | 16:15 | 16:25 | 10 | Focus Group Engagement | Reece Breen Begadon (ON Technical Advisor, ENA) |
| 12 | 16:25 | 16:35 | 10 | Agreeing Next Challenge Group Agenda | Avi Aithal (Head of ON, ENA) & All |
| 13 | 16:35 | 16:40 | 5 | Recent and Upcoming ENA Events | Reece Breen Begadon (ON Technical Advisor, ENA) |
| 14 | 16:40 | 16:45 | 5 | AOB NDP, Whole Electricity System Co-ordination Register and C31E publications (Avi Aithal, Head of ON) | Maxine Frerk (Challenge Group Chair) |

Recent industry developments and ON impact

Open discussion on industry developments and their potential impact on Open Networks

Maxine Frerk (Challenge Group Chair) & All

Feedback from Challenge Group only meeting on Ofgem CFI and Consultation

Maxine Frerk (Challenge Group Chair)

Challenge and Feedback Log

Avi Aithal (Head of Open Networks, ENA)

Challenge and Feedback Log

| Feedback | Response | Status |
|---|--|-----------|
| Challenge Group flagged open Ofgem CFI on the Future of Distributed Flexibility and consultation on Local Energy Institutions and Governance. | ENA are developing a detailed response but agree that ON work is needed regardless of the outcomes and is a path of least regret. | Closed |
| The Group would like an update on ENA's response to Ofgem CFI on the Future of Distributed Flexibility and consultation on Local Energy Institutions and Governance. | ENA response will be shared with the Challenge Group via email after the response deadline later in May. | Initiated |
| Challenge Group are looking to confirm ways for stakeholders to engage with groups across the wider ENA. | ENA will be moving to a new newsletter format with stakeholders able to select categories of interest across ENA for regular updates, including events and other engagement opportunities. | Closed |
| Capacity to deliver a service can change closer to delivery time where services have been procured long in advance. Providers may find it helpful to have more clarity on when liabilities for service failure kick in. | Standard Agreement technical working group have taken this feedback into consideration as part of Ver 2.1 development. | Initiated |

Challenge and Feedback Log

| Feedback | Response | Status |
|---|---|-----------|
| <ul style="list-style-type: none"> •Separate flex product definitions should be created where there are large differences, however, this should be balanced with not creating too many individual products. •A set of standard products will allow providers to more easily set up operational systems for engaging with different products and providers. •Community Energy organisations are still in the process of defining how they will participate as providers. It is likely that additional feedback on how product specifications affect them will emerge later. | <p>The technical working group has taken on the feedback and will look to align all products. Where an existing flex-service is deemed valuable for the network but doesn't fit into the new definitions, new products will be created to ensure sufficient diversity of services for network needs.</p> <p>Further updates will be included in the next Challenge Group meeting in July.</p> | Initiated |
| <p>The Primacy Rules working group should keep the Ofgem CFI on Distributed Flexibility in mind in case this has implications for Primacy.</p> <p>The Group noted speed of deployment as a priority.</p> | <p>Primacy will keep an eye on any relevant outcomes of the CFI. They are keen to engage with Ofgem throughout the development of further primacy iterations. Discussions are currently underway at Steering group, with regards to resources required to accelerate the development of further Primacy Rule iterations.</p> | Initiated |

ON Success Framework

Initial view of ON success criteria and implementation tracking framework

Avi Aithal (Head of Open Networks, ENA)

Break



Primacy Rules

Luke Harker (NG ED) and Stuart Fowler (NG ESO)
Technical working group co-Leads

Primacy Updates

The working group has been progressing with a focus on two core workstreams and planning:

Rules Development Increment 1

- This increment has progressed work on implementation of Rules for the following Use Cases:
 - The new Regional Development Programmes (RDP) Transmission Constraint Management service (TCM) vs. DNO Flexibility Services (on different assets in same area).
 - A subset of Balancing Mechanism (BM) actions (covers constraint management, inertia management and voltage management) vs. DNO Flexibility Services (on different assets in the same area).
- The BM Rule has been approved and implemented, TCM will follow later this year

Ruled Development Increment 2

- Focussing on Short-Term Operating Reserve (STOR) vs. DNO ANM (on different assets in the same area).
- Resourcing has been a key focus area and additional resource has been committed to “increase the pace”
- Results of the Counterfactual and STOR vs ANM have been completed- will share that shortly
- Comms planning will commence now as part of a reassessment of way forward

Modelling the Counterfactual

- In consultation with NGESO, the conclusion was that if a STOR action is counteracted, the imbalance will be corrected by dispatching additional BM units
- The counterfactual model will analyse the conflicting settlement periods where STOR was utilised and replace the conflicting STOR volume with BM units
- NGESO have shared the logic behind the control room actions to procure extra reserve capacity in the BM, which consisted of two steps:
 1. In the first 60 seconds, choose the fastest unit to bring the frequency back to the safe operational boundary
 2. Then, look for units that offer longer duration to cover the rest of the curtailed STOR unit volume at lower costs
- NGESO noted that these actions are mainly driven by human decisions, therefore it is very hard to predict the exact outcomes
- As our main goal is to understand the order of magnitude of costs caused by the conflict if no party has a priority (no rule implemented), we used monthly average prices of previously rejected offers to calculate total costs
 - Note, more detailed analysis of actions per settlement period has not been performed. The aim is to validate our modelling and perform more detailed analysis, if requested
- We started with modelling the ‘extreme’ cases – Scenario 2 (the most expensive) and Scenario 3 (the least expensive)

Calculation of the counterfactual costs:

1. Create two groups from the list of all BOAs for the period of June 2021- May 2022. These groups are:
 - **Group 1**= online units that are assumed able to provide response fast
 - **Group 2** = units with outputs generating below SEL
2. Calculate monthly average offer price for Group 1 and Group 2
3. Calculate volume of ANM conflict for each Scenario
4. Calculate total costs

| | % of distributed STOR covered by ANM | ANM, Likelihood of curtailment |
|------------|--------------------------------------|---------------------------------------|
| Scenario 1 | Current coverage – 16% coverage | Curtailment 11% of settlement periods |
| Scenario 2 | 50% coverage | Curtailment 11% of settlement periods |
| Scenario 3 | Current coverage – 16% coverage | Curtailment 5% of settlement periods |
| Scenario 4 | 50% coverage | Curtailment 5% of settlement periods |

Scenarios framework

Results

Results:

- **Disclaimer 1**, the results for Rules 1-4 are based on the old curtailment matrix and do not include wider societal costs (opex and capex). Once the updated curtailment matrix is shared with us, we expect the costs to be higher but remain in similar magnitude, therefore unlikely to affect conclusion of this analysis.
- The table summarises the results for Rules 1-4 from the 2hr regional model and the reference case.
- Reference case estimates are significantly lower than the results from any of the rules, implying that the ‘do nothing’ option could be the most economic approach given our assumptions
- However, it is important to consider the impact of this option on system reliability. As the level of renewable generation connected at distribution level grows, the risk of conflict also increases, hence a new rule might be necessary in the future
- This task assumes low list of STOR curtailment hence it considers that NG ESO will have enough options to replace the STOR unit being curtailed. What drive the cost in Rule 1, 2, 3 and 4 is the extra cost of STOR that need to be contracted to comply with the minimum cost of STOR to be procured as the cheaper STOR units might be part of an ANM area.

| | Scenario 2 | Scenario 3 |
|-----------------------|------------|------------|
| Reference case | £1m | £0.0089m |
| Rule 1 | £37m | £0.91m |
| Rule 2 | £22m | £0.79m |
| Rule 3 | £41m | £0.97 |
| Rule 4 | £33m | £1.2m |

Steps undertaken next

It was important for NG ESO to consider the following:

- Review and approve the methodology used to model task 5 including the assumptions taken to calculate the cost of ‘do nothing’.
- Assess compliance with the amount of STOR that NG ESO is required to procure. It is expected in the future that more STOR is required to be procured as some of these STOR might actually be part of an ANM areas
- Consider if it is beneficial to run a model detailed analysis however as the current cost is considerably lower compared to implementing the rules, we still expect that ‘do nothing’ will still be cheaper than implementing any of the rules.

Update:

- ESO considered the results and expects that the risk of conflict will increase next year
- Therefore whilst it is not wholly unsurprising that “do nothing” is least cost today this will not always be true
- Therefore implementation of the rules for 2024 and beyond will prove beneficial to consumers over the medium to longer terms

New Proposed Approach

- ESO and DNO's have committed more resource to Primacy
- Planning will commence this week
- Will focus efforts on:
 - Enabling work- dataflow and exchange (speak the same language)
 - Codification (where appropriate)
 - Comms/Messaging
 - Focus Groups
 - Increased release of rules at a faster pace
 - Review support needs to focus efforts on implementation

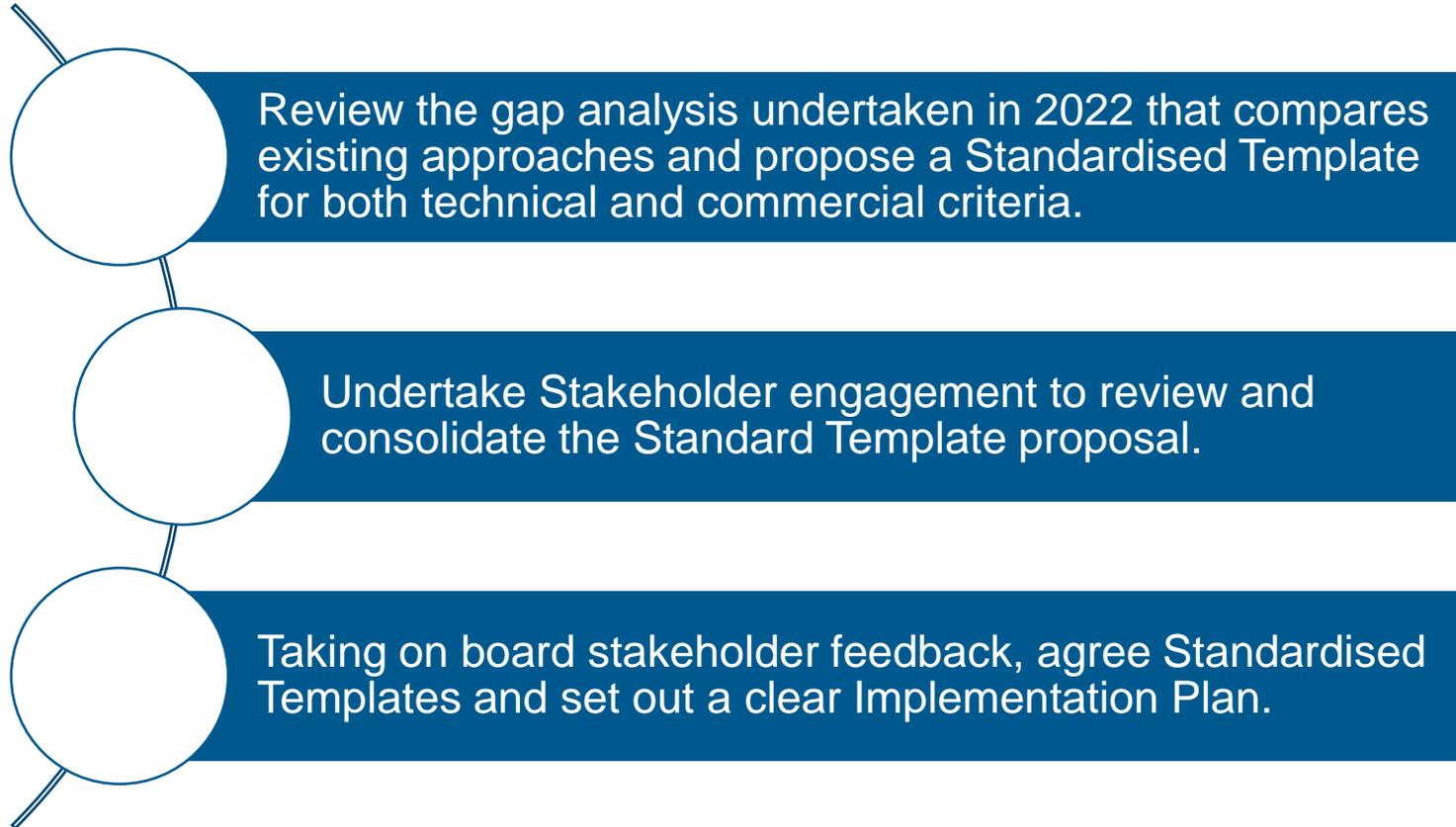
Any Questions?

- Does the new approach make sense?
- Is there anything else that we should be doing?

Procurement Processes

Helen Sawdon (NG ED)
Technical working group Lead

2023 Objectives



Success criteria;

A standard data layer for both Commercial and Technical Prequalification

Agreed via engagement with external and internal stakeholders

An achievable and measurable implementation plan per DNO

Remove barriers to achieve prompt internal implementation

Progress

- **Collation and updates of existing criteria complete.**
- **Agreement of proposed fields; Technical - Complete Commercial - Ongoing.**
- **All proposed criteria is considering current needs, but,**
 - Targeted on **future needs** – move to framework style contracts to enable closer to real time procurement.
 - Key implementation differences will depend on whether DNOs adopt a Framework or bi-lateral approach to contracting.
 - Implementation plan must look at each DNOs current/future contracting approach.



Gap Analysis - Technical

In Scope

| | CATEGORY | EXAMPLES |
|------------------|----------------|--|
| DER Registration | CONNECTION | Connection status – i.e; energized |
| | SITE/LOCATION | MPAN, coordinates, postcode, metering location |
| | TECHNOLOGY | Type, group i.e. Wind, on-shore |
| | DER PARAMETERS | max-min run times, capacity, response times |

- GDPR compliance - domestic location information.
- Technology Groupings must reflect reporting requirements, i.e. C31e.
- Asset capacities must include for response direction and service type i.e. Active, Reactive.

Out of Scope

| | | |
|--------------------|---|--|
| SERVICE PARAMETERS | Response to the auction/trade/tender i.e. windows | Done at point of bid; bid criteria |
| METERING | Granularity | Covered in contract, or part or bid criteria |
| DISPATCH | Method i.e. API compatible | |

Gap Analysis - Commercial

In Scope

| CATEGORY | EXAMPLES |
|--------------------|--|
| COMPANY INFO | Address, Registration No., Contact |
| SETTLEMENT INFO | VAT No., Account details |
| COMPLIANCE - TERMS | Acceptance of Standard Terms, UCR requirements |
| COMPLIANCE - OTHER | Good standing and due diligence |

- Greatest variance in questions.
- Differing methods of demonstrating UCR compliance.
- Work ongoing with TWG to consolidate.

Out of Scope

| | | |
|---------------------|---|--|
| DNO SPECIFIC POLICY | Cyber security, Data Protection, Insurance etc. | Covered in contract, |
| DELIVERY CRITERIA | Dispatch methods etc. | Covered in contract, or part of bid criteria |

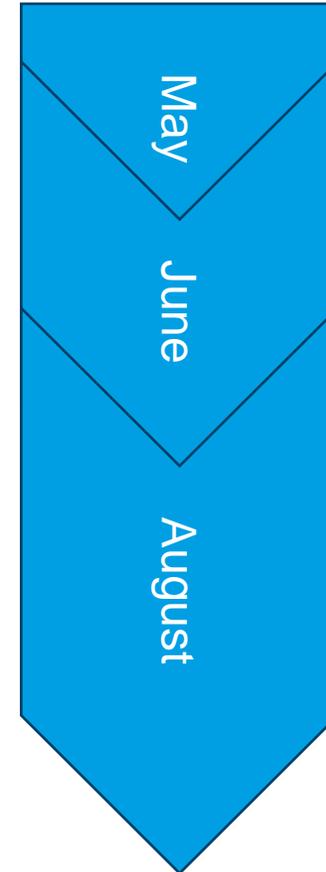
Next Steps

Now

- Complete Commercial criteria proposal.
- Moved proposed criteria in an excel based draft Standard Template.
- Co-ordinate with the ENA to engage stakeholder feedback.

Next

- Finalise Standard Template.
- Produce Implementation Plan.



Questions to Challenge group:

1. MPAN data is our most accurate way of confirming an assets validity, are there any barriers to providing from a providers perspective i.e. GDPR?
2. Regarding commercial data, do providers have any specific examples of the qualification questions asked currently that they've experienced an issue with providing a response to?

Dispatch Systems Interoperability

Tim Manandhar (UKPN) & Joe Davey (NG ED)
Technical working group co-Leads

Agenda

- **Scope of work**
- **2022 product and Consultation**
- **Key updates**
- **Delivery**
- **Key questions to Challenge group**

Scope of work (as published on Jan 2023)

Main outputs

- Technical specification for API standards for system interoperability (Nov 2023)
- Rollout use of the standardised API by Dec 2023, for the summer 2024 flexibility tender

Public consultation: Yes

Focus Group: Yes

Consultancy support: Yes

Background

An action plan was developed in 2022 to deliver interoperability across systems (incl. ESO, DSO, and third-party platforms) in the short, medium, and longer term, with considerations to include the development of common systems, processes, standards, and APIs.

Activity for 2023

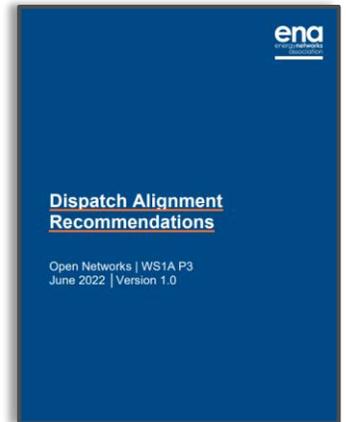
This working group will deliver the plan set out in 2022 by developing a detailed technical standard for a common API that allows for dispatch system interoperability across ESO, DSO (and non-network company systems).

Following the recruitment of an appropriate external consultant, the working group will work closely with industry stakeholders to develop these standards. The working group will then support the rollout use of the standardised API by individual networks companies' dispatch systems, for the summer 2024 flexibility tender.

2022 product and Consultation

Summary of 2022 outputs:

- **Key service parameters** – Standard data set agreed in excel format
- **Requirements:** General requirements identified
- **General alignment** already in terms of the phases of dispatch by Network & System Operators
- **Dispatch alignment recommendations (report)** –
 - Alignment of current processes
 - Adoption of common API across the UK system operators and service providers
 - Explored 3 relevant industry standards for dispatch – USEF, IEEE 2030.5 and OpenADR 2.0

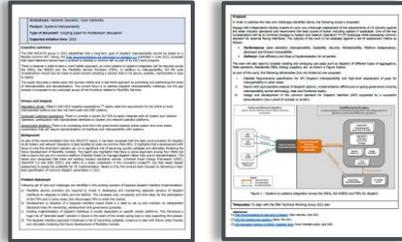


2022 report

Summary of 2022 consultation feedback and actions

| You said.... | We will.... |
|--|--|
| <ul style="list-style-type: none"> • The proposal for a common API was welcomed • Need for reliability and ease of implementation • Alternative routes would need to be maintained. | <ul style="list-style-type: none"> • Design of a common API should ensure reliability and ease of implementation. • The design of the API should not exclude alternative routes of participation in flexibility markets and should be based on the capability of system operator and service providers |
| <ul style="list-style-type: none"> • Some respondents expressed interest in engaging in the design. | <ul style="list-style-type: none"> • Dedicated Focus group will be setup to co-design with the industry. Work will look to build on existing standard or best practice rather than developing a new standard |
| <ul style="list-style-type: none"> • Suitable transition period for FSPs to move to a new version of an API ranged from 6 months to 18 months. • Transition would depend on the scale of changes between versions and capabilities of system operators and service providers | <ul style="list-style-type: none"> • Consideration will be given to governance of the API and change management. • Engage with the industry in determining an appropriate timeframe for transition periods that reflects the complexity of implementing the changes and maintaining both versions in parallel. |
| <ul style="list-style-type: none"> • There was a range of views on interim steps ahead of a common API. | <ul style="list-style-type: none"> • In the interim we suggest to continue to maintain existing solutions and focus our efforts on delivering for long term alignment. |
| <ul style="list-style-type: none"> • Need for greater standardisation around the use of start and stop instructions. | <ul style="list-style-type: none"> • 2022 work has produced key service parameters for dispatch. The usage of different dispatch messages will be covered in future work. |
| <ul style="list-style-type: none"> • Should be a common platform for dispatch with one respondent calling for this to be used across DNOs and ESO. | <ul style="list-style-type: none"> • ENA recognises the potential benefits from a common dispatch platform, but ENA is not best placed to comment on this. The approach of the ENA systems interoperability work will only focus on the interface standardisation and importantly, be agnostic to whatever technologies or platforms will be adopted by the industry (Platform independency is a key criteria). |

Key updates



2 page paper

- ### Technical Working group progress - 2023
- Produced a 2 page paper for scope discussion
 - Agreed approach on project phases and deliverables
 - Issued Invitation to Tender (24th April 2023)
 - Engagement with ENA DDSG and DESNZ SSES

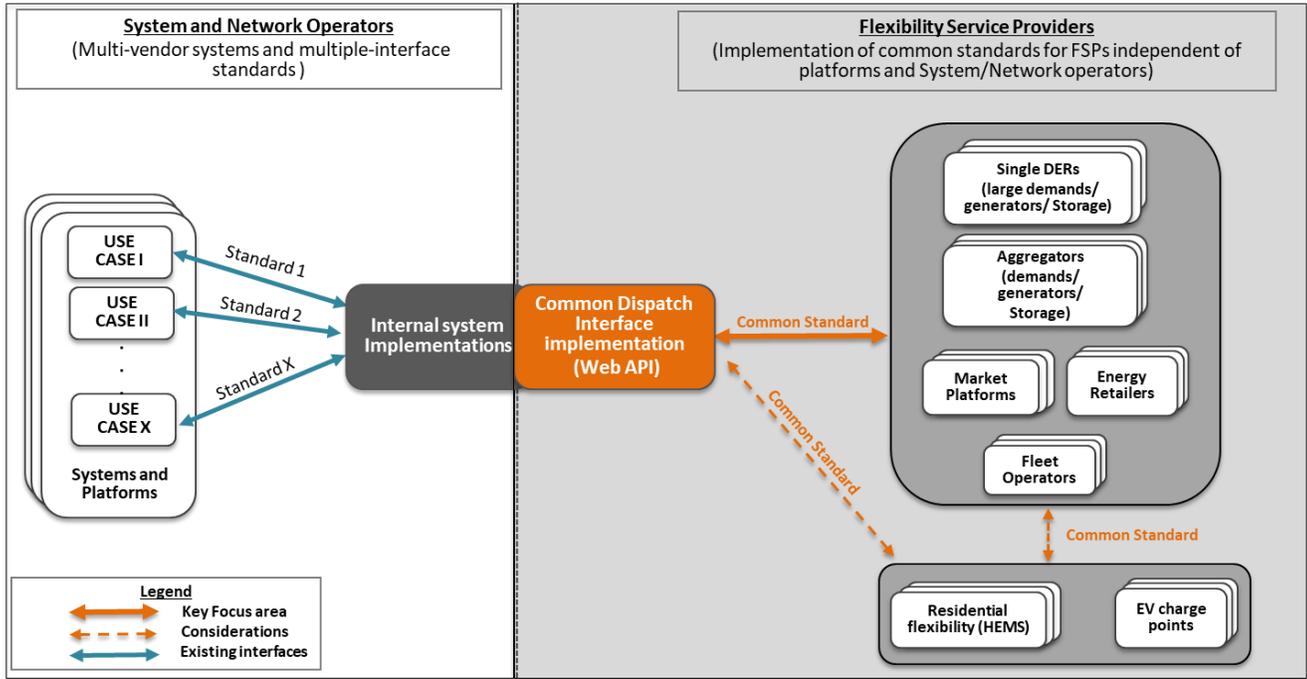


Diagram showing key focus area for 2023

- ### Agreed approach:
- Define Drivers, Impacts and Problem statements
 - Engage Independent industry experts via Tender
 - Assessment based on a set of criteria:
 - ✓ **Performance:** Open standard, Interoperability, Scalability, Security, Maintainability, Platform independency, Backward and forward compatibility
 - ✓ **Delivery:** Cost efficiency and Ease of implementation for all parties.

Delivery: Phases and deliverables

Summary: 3 phases: 2 phases covered by ITT. Holistic gap analysis but focus on delivering for dispatch in 2023

- **Phase 1: Gap analysis and Dispatch requirements**
 - **Deliverable 1:** high-level assessment of gaps for systems interoperability in all areas for the implementation of Flexibility services
 - **Deliverable 2:** detailed assessment of requirements in the area for the dispatch of flexibility services including a methodology to select dispatch options
- **Phase 2:** Comparative analysis of all dispatch options (Consultant not to recommend to de-risk any bias. Report to provide scores while ENA to use weighting and decide)
- **Deliverable 3:** Objective assessment with scores against each option using the evaluation methodology.
- **Phase 3:** Not part of the ITT. This will be informed by Deliverable 3 and involve implementing the selected option for open dispatch standard.

Delivery: Timeline

| ID | Task Name | Start | Finish | Q1 23 | | | Q2 23 | | | Q3 23 | | | Q4 23 | | | Q1 24 | | | Q2 24 | | | | |
|----|--|------------|------------|-------|---------------------------------------|------------|------------|-----|-----|-------|-----|-----|-------|-----|-----|-------|-----|-----|-------|--|--|--|--|
| | | | | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr | | | | |
| | | | | 1 | Invitation to tender - Scope document | 02/01/2023 | 01/03/2023 | █ | | | | | | | | | | | | | | | |
| 2 | Recruitment of consultant- Review of existing practices and gap analysis | 01/03/2023 | 01/06/2023 | | | | █ | | | | | | | | | | | | | | | | |
| 3 | Specification development – Proposed Technical Specifications | 01/06/2023 | 01/12/2023 | | | | | | | █ | | | | | | | | | | | | | |
| 4 | Implementation | 01/12/2023 | 01/05/2024 | | | | | | | | | | | | | █ | | | | | | | |

Key Questions to Challenge Group:

1. **Wider alignment:** Do you agree with us carrying a holistic gap analysis across all areas while focussing on delivering for dispatch in 2023.
2. **Approach for Dispatch:** Do you agree with our approach of focussing on delivering for long term alignment rather than delivering something (API) for short term that may soon be obsolete?
3. **Industry Engagement and co-design** – Apart from the proposed approach of a dedicated industry Focus group, do you see value in additional methods of industry engagement and collaboration? If so, what are they?
4. **Industry Standards:** Do you have a view on how best we collaborate with the relevant industry standardisation bodies (For e.g USEF, IEEE 2030.5, OpenADR 2.0)?
5. **Focus group:** Do you see any other parties to engage for focus group than the categories identified – Flex Service Providers, Energy suppliers, Market platform operators, IDNOs, Software vendors, Academia.

Focus group engagement

Reece Breen Begadon
(Open Networks Technical Advisor, ENA)

Focus Groups

- As requested by challenge group, we are setting up focus group sessions to allow relevant non-network stakeholders to feed into Open Networks via more in-depth discussions with the technical leads.
- Technical leads will come to the session with a specific set of questions for the attendees
- All focus group feedback will be considered by the working group and reported according to Open Networks governance



| Technical Working Group | Session focus (may be subject to change) |
|-----------------------------------|--|
| Carbon Reporting | Engage with providers to incorporate asset specific information or calculations to improve exiting carbon reporting methodologies accuracy |
| Operational Data Sharing | Investigate the operational data sets wider market participants are interested in seeing and identify what their intended use for the data is |
| Primacy | Seek wider stakeholder feedback on previously implemented primacy use cases, and discuss development of further use cases |
| Dispatch Systems Interoperability | To engage with non-network company flex service providers to get their views and requirements on the technical standard for a common API for dispatch |
| Procurement Process | To review and consolidate the pre-qualification proposal |
| Flexibility Products | Explore the markets views newly defined flex-products, particularly on what specification parameters would be most beneficial for the market to align on |
| Settlement | To review and consolidate parameters of flexibility services settlement process |

Logistics

- Propose two consecutive virtual stakeholder days in mid-June (13th,14th or 14th,15th)
- Three focus group sessions per day
- Each session will be a 90mins, with a 30min break in-between
- Background reading material will be circulated to attendees ahead of the meeting
- We will look to keep the number of attendees between 5-20; with the option to arrange follow up sessions when appropriate
- Please share with us the contact details of any other interested and relevant non-network stakeholders
- Form to be circulated where you can indicate your interest in attending the sessions listed on previous slide



Agreeing the next Challenge Group agenda

Avi Aithal
(Head of Open Networks, ENA)

The next Challenge Group agenda

At our next meeting on 06 July we're looking to seek your feedback and early input on:

- **Carbon reporting** – improvements to the common reporting methodology
- **Network Development Plan** – Updates to the NDP Form of Statement
- **Implementation of DER visibility** – impact assessment of 2022 recommendation
- **Primacy Rules** – Iteration 2 Rules
- **Flexibility Products** – updated active power product definition
- **Mid-year progress update**

Recent and upcoming ENA events

Reece Breen Begadon
(Open Networks Technical Advisor, ENA)

Recent and upcoming ENA events

Open Networks Insights Forum

22 June 2023, 10:00 – 13:00

The next Open Networks Insights Forum will be held in June. [Sign up online](#) to join the Forum and be notified of future meetings.

Safety, Health and Environment (SHE) Management Conference

24 – 25 May 2023

The 32nd annual SHE Management Conference will take place on 24-25 May 2023 at Croke Park, Dublin and is hosted by ESB Networks. [Register online](#).

Energy Innovation Summit

31 October – 01 November 2023

Join us in Liverpool for this year's Energy Innovation Summit (and Halloween!). Registration will open on the [ENA website](#) in Summer.

AOB

Useful Links

ON 2023 launch
document

2023 Detailed
work plan

2023 Strategic
Roadmap for
Flexibility

Stakeholder
events

We welcome feedback and your input

Opennetworks@energynetworks.org

Click [here](#) to join our mailing list



Energy Networks Association

4 More London Riverside

London SE1 2AU

t. +44 (0)20 7706 5100

 @EnergyNetworks

[energynetworks.org](https://www.energynetworks.org)

© ENA 2020

Energy Networks Association Limited is a company registered in England & Wales No. 04832301
Registered office: 4 More London Riverside, London SE1 2AU

The voice of the networks