

Interactive Breakout Session

+ tea & coffee

- We have seven short presentations / posters around the Centre
- In the next hour or so, please try to visit all of them
 - We suggest listening in groups of 3-5 people
- The idea is to support networking and prompt discussion
- Refreshments remain available throughout
 - But please, **no drinks past the double doors**

- We also have questions for you
 - Please take a form and mark it with your answers (A/B/C + tiebreaker)
 - Then add your name and hand-in to one of the Centre team
- We will compile the responses and discuss in the panel session later

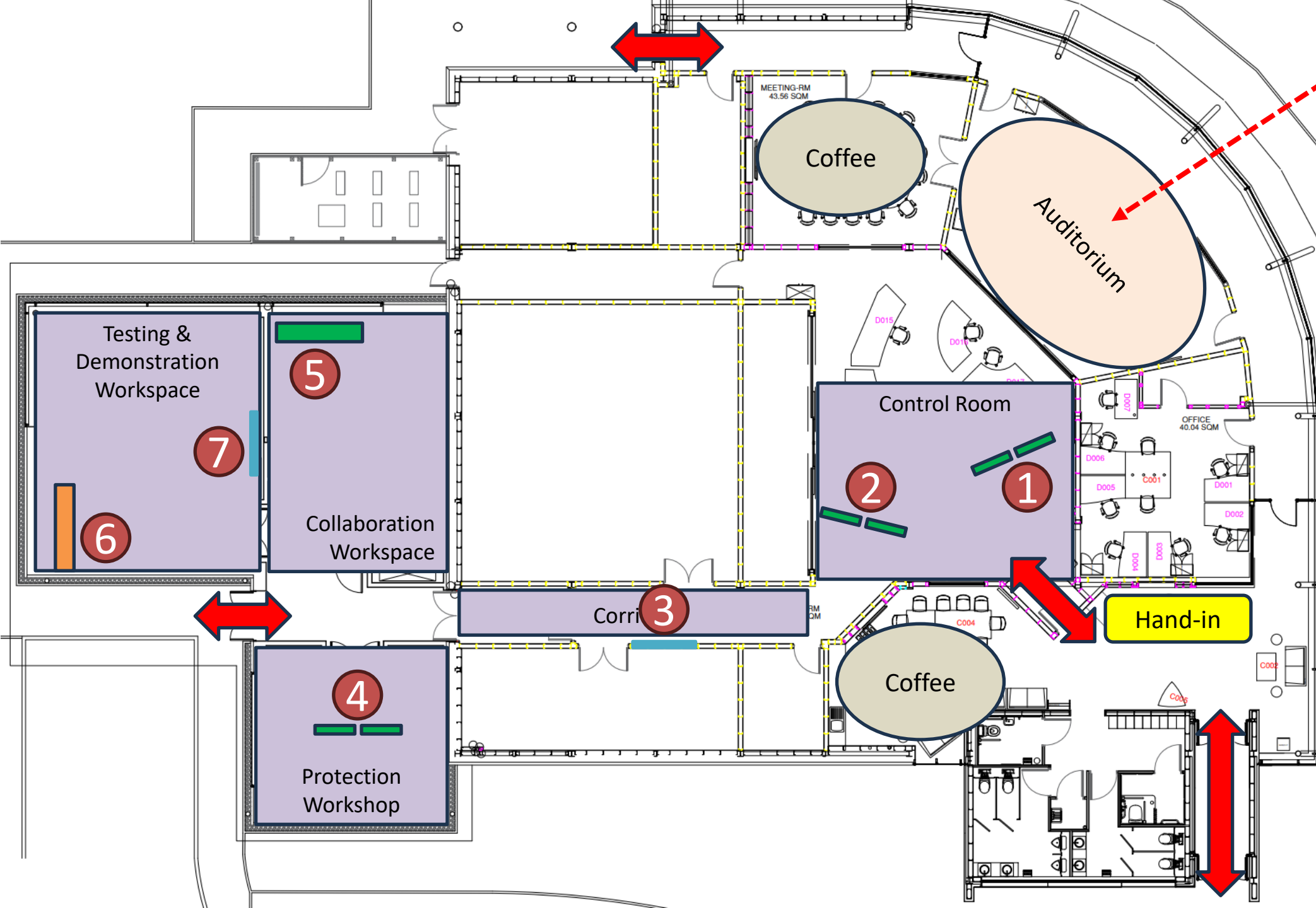
A prize for whoever matches the most popular answers!

Presenters and Topics

1. Adam Scott
 - Future Restoration Scenarios in Great Britain
2. Ruiqi Li
 - Single Converter Test Harness
3. Fabian Moore
 - Real-time Power System Simulation
4. Asif Khan
 - Network DC – Application of DC Circuit Breakers
5. Callum Henderson
 - Small-Signal Stability
6. Wasim Ahmad
 - Multi-Purpose Interconnectors
7. Peach Phurappa
 - De-Risking Multi-Terminal Control for Multi-Vendor HVDC Grids



You are here



Coffee

MEETING-RM
43.56 SQM

Auditorium

Testing &
Demonstration
Workspace

5

Collaboration
Workspace

7

6

Control Room

2

1

OFFICE
40.04 SQM

Corri 3

4

Protection
Workshop

Coffee

Hand-in

Return at 16:25

- Please fill out an answer form and return to one of the team
- We'll compile the results and report at the panel session
- Please return to the Auditorium for 4:25pm

Name:



2024 Operators Forum Interactive Breakout Session

Please record your answers to all the questions posed in the breakout session.

Please put your name at the top if you would like to enter the competition to win a prize.

1. Can offshore wind farms restore the GB power system from a blackout?

A	B	C
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2. How soon will we have standardised or agreed approaches for testing converter models for DC grid connections?

A	B	C
---	---	---

3. Do you think we will still use physical hardware replicas in 10 years' time?

A	B	C
---	---	---

4. When do you think DCCBs can be practically applied in the GB transmission system?

A	B	C
---	---	---

5. What do you see as the biggest cause of power system interactions?

A	B	C
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6. What do you think is the biggest challenge of implementing Multi-Purpose Interconnectors?

A	B	C
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7. What is most essential to deliver multi-vendor-multi-terminal projects while protecting vendors' Intellectual Property (IP)?

A	B	C
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Tiebreaker question: How many people do you think have registered for our webinar on small-signal stability on 18 June?

Tea & Coffee

**Presentations spread around the Centre
(with multiple choice questions)**

Back here at 4:25

Results

Future Restoration Scenarios in Great Britain

Can offshore wind farms restore the GB power system from a blackout?

A: Yes, given they can be grid-forming controlled

B: Yes, *but* only with the support of energy storage

C: No, we cannot rely on wind power as the primary source for restoration

13
22
5

Single Converter Test Harness

How soon will we have standardised or agreed approaches for testing converter models for DC grid connections?

- A: Within 2 years.
- B: Within 5 years.
- C: Over 5 years, maybe never.

4
21
15

Real-time Power System Simulation

Do you think we will still use physical hardware replicas in 10 years' time?

A: **No** - Alternative tools (SiL and offline EMT) combined with increased industry experience will make hardware replicas obsolete.

B: **In specific cases only** – Alternative tools (SiL and offline EMT) will be sufficient for most projects.

C: **Yes** - Increased complexity of equipment connected to “The Grid” will increase the need to use and maintain hardware replicas across the life-cycle.

3
18
19

Network DC – Application of DC Circuit Breakers

When do you think DCCBs can be practically applied in the GB transmission system?

- A: Before 2035
- B: After 2035
- C: Never

21
16
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Small-Signal Stability

What do you see as the biggest cause of power system interactions?

A: Reduction in synchronous generation

B: Increase in power electronic connected devices

C: Limitations of traditional analysis and design techniques

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15
19

Multi-Purpose Interconnectors

What do you think is the biggest challenge of implementing Multi-Purpose Interconnectors?

A: Technological readiness.

B: Businesses (offshore wind, interconnectors) willing to connect to more complicated arrangement.

C: Regulatory or other challenges.

4
9
27

De-Risking Multi-Terminal Control for Multi-Vendor HVDC Grids

What is most essential to deliver multi-vendor-multi-terminal projects while protecting vendors' Intellectual Property (IP)?

- A: A series of test procedure guidelines by vendors
- B: A standardised system stability indicator by TSOs
- C: A regulation or policy by a national body, e.g., Ofgem

4

24

11

Tiebreaker Question

How many people do you think have registered for our webinar on small-signal stability on 18 June?

414