Appendix C

Contents

To demonstrate the impact of future changes on the transmission network a set of winter peak power flow diagrams are presented in Appendix C. These show snapshots of present and future power flows along major circuit routes for the Two Degrees Scenario.

Appendix C

C1 – GB Power Flow Diagram Two Degrees 2018/19..........2
C2 – GB Power Flow Diagram Two Degrees 2020/21..........3
C3 – GB Power Flow Diagram Two Degrees 2022/23..........4
C4 – GB Power Flow Diagram Two Degrees 2024/25..........5
C5 – GB Power Flow Diagram Two Degrees 2027/28..........6
Note 1: The power flows shown in this diagram represent the Economy planned transfer conditions as specified in appendix E of the NETS SG/SS.
Note 2: The network is intact and no boundary constraints applied.
Note 3: Geographic drawings of the NETS are to be taken as an approximate location of assets.
Note 4: The future reinforcements shown in pink are based on NOA 2017/18.
Note 5: Connection year for Interconnectors and offshore wind farms are based on Interconnector Register and TEC register contracted dates.
Figure C2: GB Power Flow Diagram Two Degrees 2020/21

Substation:
- 400kV Substations
- 275 kV Substations
- 132kV Substations

Circuit:
- 400kV
- 275kV
- 220kV
- 132kV
- Offshore AC Cable
- Offshore DC Cable
- Interconnector (as of Nov 2018 IC register)

Offshore Wind Projects:
- Round 1
- Round 2
- Round 2.5
- Round 3
- Scottish Territorial Waters Sites

Network Information:
- Reconductor Circuit
- New Circuit / Network changes
- Power Flow MW
- Flow Direction

Notes:
1. The power flows shown in this diagram represent the Economy planned transfer conditions as specified in appendix E of the NETS SQSS.
2. The network is intact and no boundary constraints applied.
3. Geographic drawings of the NETS are to be taken as an approximate location of assets.
4. The future reinforcements shown in pink are based on NDA 2017/18.
5. Connection year for interconnectors and offshore wind farms are based on Interconnector Register and TEC register contracted dates.
Figure C3: GB Power Flow Diagram Two Degrees 2022/23

Substation:
- 400kV Substations
- 275 kV Substations
- 132kV Substations

Circuit:
- 400kV
- 275kV
- 132kV
- Offshore AC Cable
- Offshore DC Cable
- Interconnector (as of Nov 2018 IC register)

Offshore Wind Projects:
- Round 1
- Round 2
- Round 2.5
- Round 3
- Scottish Territorial Waters Sites

Network Information:
- Reconstructor Circuit
- New Circuit / Network changes
- Power Flow MW
- Flow Direction

Note 1: The power flows shown in this diagram represent the Economy planned transfer conditions as specified in appendix E of the NETS SQSS.
Note 2: The network is intact and no boundary constraints applied.
Note 3: Geographic drawings of the NETS are to be taken as an approximate location of assets.
Note 4: The future reinforcements shown in pink are based on NDA 2017/18.
Note 5: Connection year for interconnectors and offshore wind farms are based on Interconnector Register and TEC register contracted dates.
Note 1: The power flows shown in this diagram represent the economy planned transfer conditions as specified in appendix E of the NETS SGSS.

Note 2: The network is intact and no boundary constraints applied.

Note 3: Geographic drawings of the NETS are to be taken as an approximate location of assets.

Note 4: The future reinforcements shown in pink are based on NOA 2017/18.

Note 5: Connection year for interconnectors and offshore wind farms are based on Interconnector Register and TEC register contrated dates.

Figure C4: GB Power Flow Diagram Two Degrees 2024/25