Energy Networks Association

WS1B Product 2 - Whole System FES Coordination of National and Regional FES Deliverables A, B & C

Approved for publication 15th October 2020
These slides report updates to the Building Blocks and Information Exchange process following completion of the 2020 GB FES delivery. They address P2 deliverables A, B & C.

### Extract from 2020 PID:

<table>
<thead>
<tr>
<th>Ref</th>
<th>Product Element</th>
<th>Activities</th>
<th>Timeline</th>
<th>Deliverables</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Review and revise the “Building Blocks” (BB) once the information exchange process is completed for GB FES 2020.</td>
<td>Review ongoing use of BB’s and processes to support GB FES 2020. Review the quality of the data provided for BBs in GB FES 2020 and the processes for submission and quality checking. Agree adequate level of granularity required. Amend BBs if required.</td>
<td>Jan 20 – Jul 20</td>
<td>Revised version of BBs included in an updated version of final report.</td>
</tr>
<tr>
<td>C</td>
<td>Licence and code changes to support data exchange and ongoing FES delivery.</td>
<td>Review need for code changes to support ongoing GB FES work. Draft code modification proposals as needed.</td>
<td>Oct 20 – Dec 20</td>
<td>Proposal for the code change.</td>
</tr>
</tbody>
</table>
Effectiveness of 2020 Process

1. For the 2020 GB FES process, all DNOs provided regional forecasts using the set of FES/DFES Building Blocks agreed as part of the 2019 Whole System FES work.
   • In some cases, where data was not available, not all Building Blocks were used. For example, there are some Building Blocks where levels are very small and not known (e.g. MicroCHP), or where the starting positions are not yet known (e.g. EV).

2. In July, after publication of the GBFES, the ESO provided data to DNOs for the 2020 scenarios based on the agreed Building Blocks. These outputs have been reviewed and agreed by the Product 2 team.
Key Changes to the Building Blocks/Timeline

Following the 2020 review of Building Blocks the following changes were agreed:

• New Building Blocks for coal, interconnectors, hydrogen fuelled generation and off-grid offshore-wind. (These are mainly relevant at Transmission level).

• The breakdown of domestic and I&C demand to numbers, MW and square metres.

• New Building Blocks for EV charging units covering numbers & installed capacity.

• A new Building Block for air-conditioning units.

These changes are being implemented by network companies. In some cases, not all Building Blocks will be used to begin with (e.g. data may not be available to express I&C demand in all of the units). This doesn’t impede delivery of GBFES & DFES.

The timeline for information exchange remains the same with no changes.

The updated Building Blocks and the timeline are summarised on the next 2 slides.
## Key Changes to the Building Blocks

<table>
<thead>
<tr>
<th>Technology</th>
<th>Building Block ID Number</th>
<th>Technology Detail</th>
<th>Units</th>
<th>Detail</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coal</td>
<td>Gen_BB021</td>
<td>COAL</td>
<td>MW</td>
<td>Installed capacity</td>
<td>Transmission connected coal fired generation</td>
</tr>
<tr>
<td>Interconnector</td>
<td>Gen_BB022</td>
<td>IC</td>
<td>MW</td>
<td>Installed capacity</td>
<td>Transmission connected interconnection of other Transmission networks</td>
</tr>
<tr>
<td>Hydrogen fuelled generation</td>
<td>Gen_BB023</td>
<td>Hydrogen</td>
<td>MW</td>
<td>Installed capacity</td>
<td>Hydrogen fired generation</td>
</tr>
<tr>
<td>Offshore-Wind (off-Grid)</td>
<td>Gen_BB024</td>
<td>NC_GEN</td>
<td>MW</td>
<td>Installed capacity</td>
<td>Offshore wind capacity not connected to NETS</td>
</tr>
<tr>
<td>Demand</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dem_BB001a</td>
<td>Domestic</td>
<td>Number of</td>
<td></td>
<td></td>
<td>Number of domestic customers</td>
</tr>
<tr>
<td>Dem_BB001b</td>
<td>Domestic</td>
<td></td>
<td>MW</td>
<td></td>
<td>Annualised Peak Demand MW (TBC)</td>
</tr>
<tr>
<td>Dem_BB002a</td>
<td>I&amp;C</td>
<td>Number of</td>
<td></td>
<td></td>
<td>Number of I&amp;C customers</td>
</tr>
<tr>
<td>Dem_BB002b</td>
<td>I&amp;C</td>
<td>Metres squared</td>
<td></td>
<td></td>
<td>Area of I&amp;C customers</td>
</tr>
<tr>
<td>Dem_BB002c</td>
<td>I&amp;C</td>
<td></td>
<td>MW</td>
<td></td>
<td>Annualised Peak Demand MW (TBC)</td>
</tr>
<tr>
<td>Electric Vehicle Charging units</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lct_BB010a</td>
<td>Domestic</td>
<td>Number of</td>
<td></td>
<td></td>
<td>Number of domestic charging units</td>
</tr>
<tr>
<td>Lct_BB010b</td>
<td>Domestic</td>
<td></td>
<td>MW</td>
<td></td>
<td>Installed capacity of domestic charging units</td>
</tr>
<tr>
<td>Lct_BB011a</td>
<td>Workplace</td>
<td>Number of</td>
<td></td>
<td></td>
<td>Number of Workplace charging units</td>
</tr>
<tr>
<td>Lct_BB011b</td>
<td>Workplace</td>
<td></td>
<td>MW</td>
<td></td>
<td>Installed capacity of Workplace charging units</td>
</tr>
<tr>
<td>Lct_BB012a</td>
<td>Public Slow/Fast</td>
<td>Number of</td>
<td></td>
<td></td>
<td>Number of Public Slow/Fast charging units</td>
</tr>
<tr>
<td>Lct_BB012b</td>
<td>Public Slow/Fast</td>
<td></td>
<td>MW</td>
<td></td>
<td>Installed capacity of public Slow/Fast charging units</td>
</tr>
<tr>
<td>Lct_BB013a</td>
<td>Public Rapid</td>
<td>Number of</td>
<td></td>
<td></td>
<td>Number of Public Rapid charging units</td>
</tr>
<tr>
<td>Lct_BB013b</td>
<td>Public Rapid</td>
<td></td>
<td>MW</td>
<td></td>
<td>Defined as &gt;=43kW</td>
</tr>
<tr>
<td>Airconditioning units</td>
<td>Lct_BB014</td>
<td>A/C units</td>
<td>Number of</td>
<td></td>
<td>Installed capacity of public Rapid charging units</td>
</tr>
</tbody>
</table>
The existing timeline for FES/DFES coordination between ESO and DNOs can be employed to incorporate the standardisation discussions.

1st touchpoint/meeting to:
• Check and justify major differences in 2020 FES and DFES publications both BB volumes and projections (MVA)
• Update models and assumptions

This will be materialised through an initial interaction between DNOs and ESO and then with a meeting with all DNOS and ESO representatives

2nd touchpoint/meeting point to:
• Receive and debate the high level assumption and levers for FES 2021

1st touchpoint/meeting to:
1. Check and justify major differences in 2021 FES and DFES publications both BB volumes and projections (MVA)
2. Update models and assumptions
This will be materialised through an initial interaction between DNOs and ESO and then with a meeting with all DNOS and ESO representatives
Conclusions

1. **Implementation of Revised Building Blocks** - DNOs aim to implement the revised Building Blocks as part of their 2020 DFES publications. However, as not all DNOs have the required data to populate all of the new Building Blocks, these will not be fully populated.

2. **Ongoing review of Building Blocks and Information Exchange** – Further updates to Building Blocks and Information Exchange processes will be part of “business as usual” FES processes going forward. Further work by the Product 2 team on deliverables A (Building Blocks) and B (Information Exchange) is not proposed.

3. **Deliverable C, related licence and code changes** – Given that all network companies are implementing the processes for Building Blocks and Information Exchange, and that these are largely effective, it is not proposed to take forward code changes at this time.

4. **Remaining 2020 Product 2 work** – Work is ongoing to agree how a “central” or “best view” forecast should be produced to support the Capacity Signposting report and the subsequent implementation of NDP requirements. This would also be based on Building Blocks.