MINUTES OF THE
ELECTRICITY NETWORKS STRATEGY GROUP (ENSG)

THE WESTMINSTER CONFERENCE CENTRE, 1 VICTORIA STREET, LONDON

10AM THURSDAY 27th MARCH 2014

Present:

Co-Chairs (Rotating)

DECC	Sandy Sheard (Chair)
Ofgem	Kersti Berge

Members

National Grid	Mike Calviou
National Grid	Andrew Hiorns
Scottish Hydro Electric Transmission plc	Dave Gardner
Scottish Hydro Electric Transmission plc	Andy Huthwaite
Scottish Power Transmission Limited	Alan Michie
UK Power Networks	Barry Hatton
Transmission Investment LLP	Chris Veal
EDF	Paul Mott (for Mark Cox)
Renewable Energy Systems	Joe Duddy (for Patrick Smart)
Renewable-UK	Zoltan Zavody
Scottish Renewables	Michael Rieley
The Crown Estate	Chuan Zhang
Energy Networks Association	Paul Fidler (for David Smith)
Scottish Government	Dermot Rhatigan

Also in Attendance

DECC	Paul Hawker
Ofgem	Geoff Randall
Ofgem	Adam Lacey

Apologies

Northern Power Grid	Mark Drye
RWE Npower	Charles Ruffell
Centrica	Philip Davies
Welsh Government	Ron Loveland
Vattenfall	Robert Hensgens

1. Welcome and Introduction including minutes and actions from last meeting.

1.1 The Chair welcomed the participants to the meeting. The minutes of the last meeting had been published on the ENSG part of the Government website. All but one of the actions from the previous meeting had either been completed or would be covered later in the agenda. The exception was *Action 2: Renewable-UK to work with The Crown Estate, Transmission Owners, Offshore Transmission Owners, Developers and others as deemed appropriate to identify 2-5 specific issues to be fed back to the ENSG at the next meeting.* Renewable-UK was invited to give an update on this work.

1.2 Renewable-UK referred to a one page table on the "End-to-End Grid Investment Process" which had been circulated to ENSG ahead of the meeting. It listed 10 potential issues and presented an estimated impact on network investment and a status update for each issue. It said that the issues needed to be prioritised and a decision made on which were for ENSG to consider and which for other bodies. Although there had been some discussion of the issues with Transmission Owners, Renewable-UK said that there had not been as much progress as hoped. In discussion it was agreed that the list provided a useful stocktake of issues but that further discussion was needed to prioritise them. It was also noted that some ENSG members did not agree with the status of the issues listed in the table.

ACTION 1: Renewable-UK to continue to engage with ENSG members on assessing and prioritising the identified issues, so it is in a position to report back at the next ENSG. ENSG members were invited to feed in to Renewable-UK comments on the issues in the table.

2. Transmission Owner (TO) network development and discussion including TO Major Projects Updates

2.1 National Grid (NG) reported that many generation projects, particularly nuclear and offshore wind, were not progressing as previously expected. This was causing its projects in North Wales (uncertainty over Irish wind also a factor), East Anglia, the South West, London (slower progress than expected on interconnection too) and the East Coast (Eastern HVDC joint project with the other TOs) to be pushed back. In some cases, smaller incremental works were being progressed until the situation was clearer. The Western HVDC link was progressing on schedule.

2.2 Scottish Power Transmission (SPT) reported its projects were generally on track. The exceptions were the Western HVDC which had been pushed back one quarter due to land access issues (now resolved) and the Central Upgrade which is still at the design stage due to changes in the needs case (currently estimating a 2019 delivery date but with scope to bring this forward). More widely it noted that gaining system access to allow construction of projects to proceed remained a challenge.

2.3 SHE Transmission reported that its construction programme was on track and it was working well with the other TOs and the System Operator. On the Caithness-Moray project it was working with Ofgem with a view to ensuring sufficient certainty

for it to place an HVDC contract in July. The Scottish Island connections remained a challenge. On the Western Isles, SHE Transmission continued to work with developers on developing the needs case. On Orkney, there were challenges such as grid access and timing. It was consulting on potential short and long term network solutions to meeting these challenges. On Shetland it was noted that the Viking development which drive the need for a link was currently in a Judicial Review process. SHE Transmission had received a number of requests from generation projects to accelerate their connection dates, however this was a challenge. Outages were a problem particularly with Peterhead reducing its capacity. In addition, a reduction in reactive power demand was creating challenges in managing the system.

Discussion

2.4 SHE Transmisison was asked when it expected to resubmit its needs case for the Western Isles to Ofgem. SHE Transmission reiterated that this was being prepared but listed a number of uncertainties including strike prices for the islands and TransmiT. On TransmiT, Ofgem stated that it planned a short consultation in the Spring and hoped to conclude the project soon after. This should help provide clarity to developers on the islands.

2.5 A question was raised on whether projects overall were collectively 'on track' to deliver a long-term vision, and the oversight of this. DECC noted that, importantly, the TOs were delivering what was needed on time. The reported delays were nearly all for projects at pre-construction stage. Low underwriting commitment for new investment and queue management were also raised as issues for network delivery.

2.6 It was noted that generation uncertainty was a common theme for a number of projects and the ENSG was interested in learning more about how the TOs managed this uncertainty for example through an incremental approach to network reinforcement. It was also noted that the TO Major Project Update may need updating to include possible network investment projects which have been identified since the ENSG 2020 Vision Update was published in February 2009.

Action 2: NG to lead on reporting back to ENSG the TOs approach to managing generation uncertainty.

Action 3: The TOs to propose any other projects that they feel should be included on the TO Major Project Updates for ENSG to agree.

3. IET Study and ENSG Cross Networks Project: Gap analysis and proposed way forward

3.1 As agreed at the previous ENSG, NG gave a presentation on the ENSG Sub Group's comparison of the outcomes of the ENSG Cross Networks Project with those of the IET Study (which looked at future challenges for the electricity system). In addition NG gave a presentation on its Strategic Operability Framework (SOF).

3.2 NG gave a summary of the ENSG Cross Networks Project. The project had considered the extent and type of challenges facing electricity networks over the coming decades that would require interaction between networks. It had then identified gaps where there was insufficient interaction between the networks to reach the right solution. NG explained that as a result of the ENSG Cross Networks Project it is developing the SOF to investigate the impact of future energy scenarios on the transmission network including changes in the generation mix, accommodation of new technology such as HVDC links, changes to network performance requirements such as accommodating larger infeeds, operational challenges such as system inertia, and use of operational solutions such as demand side response. SOF would study the changes to system behaviour over the next twenty years. It would be an ongoing process with a summary to be published every year in the Electricity Ten Year Statement (ETYS).

3.3 The IET Study had recommended the following to address future system challenges:

- the establishment of a system architect role to deliver a whole systems approach to managing the impacts on the system;
- more effective interactions between engineering, market and regulatory aspects to determine what changes were needed;
- regulatory arrangements to enable demand side response and storage to contribute to whole system solutions;
- network companies to work more closely, particularly on data exchange;
- procurement arrangements to allow specialist providers to bring benefits in smart grids, demand management and customer services; and
- the addressing of requirements for increasing engineering, commercial and business complexity.

3.4 The IET had secured funding to take the project forward. It would be looking for further evidence supporting the need for a system architect, what benefits this would bring, and any lessons from other sectors and/or countries. The IET aimed to have an interim report in June on the further evidence and a full report by the end of the year. It planned to hold a workshop in September and had invited ENSG members to participate.

3.5 NG reported that the ENSG Sub Group had met on 17 March. It had concluded that the ENSG Cross Networks Project and IET Study had identified similar gaps in addressing future system challenges. The ENSG Cross Networks Project had recommended direct interaction between parties to address the gaps whereas the IET Study had recommended a system architect role. It had also discussed relevant work being undertaken by the Smart Grid Forum Work Stream 7 on distribution network impacts of future scenarios and challenges and Ofgem's ITPR project.

3.6 It was agreed at the Sub Group that the different work streams were probably covering all of the issues for parts of the network, eg SOF looking at impacts on transmission only, but that there was nothing to pull this together into a system-wide approach. However, it was not clear to Sub Group members what value ENSG could

add at this stage, eg undertaking its own analysis. The Sub Group had agreed to recommend that, for now, the ENSG Sub Group would monitor developments, participate in the IET workshop, and identify any areas where ENSG could usefully contribute or lead. NG would continue to report back to ENSG.

Discussion

3.7 It was agreed that discussion on how this work might be taken forward in ENSG would be held under item 4. NG was asked for further details on the SOF. NG explained that it had recently begun sharing its thinking in this area and planned to have a consultation in July and publish the outcome in the November ETYS. This process would be repeated annually. NG stressed that it was not looking for a deeper SO role through this work and that it was being conducted within its existing responsibilities. It was suggested that clarity on the scale and timing of changes would be helpful in the SOF. It may take time to address issues given the number of stakeholders involved and the various regulatory and industry processes that would need to be followed. NG agreed and said that the SOF would look at timing issues to develop robust enduring solutions.

4. ENSG Topics of Interest 14/15

4.1 Following the previous ENSG, members had provided views to the Secretariat on areas they felt ENSG should focus on going forward. These preferences were then voted on by ENSG members to help inform a paper on ENSG Topics of Interest circulated ahead of the meeting. The discussion in the ENSG followed the structure of that paper with DECC providing a short introduction to each topic.

Role of the ENSG

4.2 The Chair set out the role of the ENSG which is divided into three areas:

- **Network delivery** to provide transparency on the progress of major transmisison projects. Also to give the opportunity to discuss barriers/risks to project delivery and decide if any action is required;

- **Proactive analysis / horizon scanning** which allows the ENSG to consider strategic issues and take forward discreet areas of work to help support Government objectives;

- **Critical friend** the ENSG is a useful stakeholder forum and can offer a valuable review and challenge function, where appropriate, to help inform and support policy, regulation and project development and implementation.

ENSG members were asked whether they felt this role remained fit for purpose.

Discussion

4.3 Discussion centred on the balance in the ENSG between strategy and delivery. Some members felt that more effective scrutiny by ENSG of TO major projects would be helpful. They questioned whether there was any other forum or

group at a national level which provided any tangible oversight of the transmission delivery. It was suggested that the ENSG should pick up this responsibility, in addition to looking at strategic network visions. However, others argued that there was sufficient transparency on major projects and that the ENSG, while discussing major issues affecting project delivery, should focus more on strategic issues. The TOs stated that they were happy to discuss individual projects with ENSG members outside of ENSG meetings. Other than this issue, ENSG members were content with the current role of the ENSG.

Action 4: DECC and Ofgem to consider whether there was a way to provide the scrutiny that some ENSG members had requested but without impinging on ENSG's consideration of strategic issues.

Action 5: Transparency on major transmission projects to be added to Renewable-UK's list of issues. This would allow consideration of the communication that does take place on major projects and whether this was sufficient.

System Operating Framework (SOF)/IET Study

4.4 Following on from the discussion under item 3 DECC stated that this was a strategic and important area that seemed an area ENSG should be involved in. However, the question was what engagement should ENSG have at this stage given the work being undertaken by NG, IET, Smart Grid Forum, DECC and Ofgem? Should ENSG input into ongoing work or take a more active role in understanding the issues and contributing to their resolution?

Discussion

4.5 It was felt that more engagement by ENSG in the SOF and IET work in particular would be helpful. NG agreed that ENSG would be a useful group for it to discuss the SOF with in more detail. It would also be useful for the ENSG to map the bigger picture and draw the various strands of work together.

Action 6: NG to provide more detail to ENSG on the IET timetable going forward.

Action 7: NG to lead more detailed discussion of the SOF at the next ENSG

Future generation onshore, offshore & interconnection to 2030 (scenarios, profile impacts and solutions, role of Europe)

4.6 DECC said that this topic had been proposed in the context of longer term uncertainties in generation, market and European scenarios which presented a key challenge for network companies to manage. The proposal was that the ENSG might play a role in facilitating discussions on high level issues likely to impact on these scenarios. Again, this seemed a strategic area that ENSG should have an interest in but the question was where could it add value particularly given the work being taken forward by DECC, NG and others on future scenarios?

Discussion

4.7 ENSG members recognised this as an important area and TOs highlighted that forecasting the location of future demands on the networks was a particular challenge. It was acknowledged that work was being undertaken elsewhere in this area and was being covered well. ENSG members already had opportunities as individual organisations to input their views. NG's Future Energy Scenarios (FES) and ETYS were mentioned in particular in this respect. NG agreed to provide ENSG with updates twice a year on NG's FES and give ENSG the opportunity to discuss, as a group, the scenarios and implications for networks. This would happen in mid-year when NG was consulting on that year's FES and again at the end of the year after the ETYS had been published.

Action 8: NG to provide twice yearly updates to ENSG on FES and the ETYS

Grid Access issues

4.8 In introducing this topic DECC said that ENSG members had highlighted this as an important strategic issue which was having and practical effects. There were a number of elements within grid access that were causing concerns including non-firm connections, queue management and allocation of capacity. It had been suggested by some ENSG members that this was a topic that ENSG might wish to understand in more detail, to decide if it should be an area for ENSG to focus on.

Discussion

4.9 ENSG members agreed this was an important and wide topic. It was noted that this issue was included on Renewable-UK's list of issues on the "End-to-End Grid Investment Process" work it was leading. It was agreed that this issue should be considered under that work.

Action 9: Grid access issues to be considered under Renewable-UK's "End-to-End Grid Investment Process" work.

Interconnection

4.10 DECC reported interest from ENSG members in understanding more about this important area, particularly with work being undertaken by DECC, Ofgem and NG in the policy and regulatory frameworks for and potential impacts of interconnection. It had been proposed that ENSG look at this issue and the various studies, perhaps starting with a presentation on NG's analysis to help establish whether there is any value that ENSG can add to the area.

Discussion

4.11 ENSG agreed that this important topic should be considered in a wider European network context, of which interconnectors were a part. It was suggested that ENSG needed to understand the European Ten Year Development Plan to

provide context for interconnection. DECC offered to share its work on interconnection with the Group. Ofgem added that it could present on its interconnection policy paper due to be published in the Spring. It also felt ENSG would benefit from understanding what the European Ten Year Development Plan meant for GB as a whole.

Action 10: DECC, Ofgem and NG to work together in providing a European network update to ENSG which also included interconnection

EU Network Codes

4.12 DECC said that feedback from ENSG members showed EU Network Codes were an important area which they felt would have a significant impact on the network and wider energy system. However, most members felt that ENSG was not the place for detailed discussions but some had suggested that an overview might be useful. It was proposed that an information note could be circulated to ENSG members setting out the current position and presenting opportunities for individual ENSG members to input into the development of the Codes.

Discussion

4.13 The ENA reported that it was already undertaking work in this area to summarise the Codes and present the timetable for development and delivery. It was agreed that it would be helpful for ENSG members to receive a copy of this note when available. It was also agreed that ENSG members should be mindful of EU Network Codes when presenting and discussing network issues.

Action 11: ENA to share its summary of the EU Network Codes with the ENSG when available (expected end of April)

Transmission Owner Major Project Status Updates

4.14 DECC briefly introduced this topic. ENSG members had said that they find the TO updates useful, but it was important to ensure they remained an effective means of communication. It was noted that this topic had been discussed under item 2 and the ENSG Role earlier in this agenda item. There were already two actions (Actions 2 and 5) which related to this.

Discussion

4.15 It was agreed that the actions already agreed at the meeting in this area were sufficient.

Supply Chain issues

4.16 DECC explained that ENSG had previously received a presentation on this topic triggered by discussions on delays to some major projects in Scotland. Feedback from ENSG members had been that TOs were best placed to manage

supply chain issues and that this was not a priority for ENSG with only HVDC being cited as a possible supply constraint.

Discussion

4.17 There was some interest in learning more about TO supply chains and potential issues. It was suggested that, as well as HVDC supply constraints, other supply chain issues could arise if currently delayed major transmission projects were required in a short period of time in the future. The TOs offered to provide an information note on supply chains to ENSG.

Action 12: NG to lead on providing an information note to ENSG on TO supply chain management and potential issues.

Planning Consents

4.18 DECC said that the original proposal was for TOs to share best practice on planning consents. In response ENSG members had recognised this as an important area and critical to delivery of projects. However they had felt that the sharing of best practice was a matter for the TOs and not an area where the ENSG needed to get involved. It was therefore proposed that the ENSG did not focus on this topic.

Discussion

4.19 The TOs gave examples of where they were working closely with each other, for example on joint projects such as the Western HVDC, and with external stakeholders such as the Energy and Consents Forum in Scotland. The TOs were happy to draft a note for ENSG setting out how they currently work together on planning consent issues.

Action 13: Scottish Power to lead on providing an information note for ENSG on how the TOs work together, and with other stakeholders, on planning consent issues

5. Smart Grid Forum

5.1 Due to time constraints it was agreed that DECC would circulate an update on the work of the Smart Grid Forum, including the Vision and Routemap published in February. It was suggested that the important work on smart grids should have more visibility to the ENSG. It was agreed that rather than have a smart grid specific discussion in ENSG that this should form part of the planned discussion on SOF and the IET work.

Action 14: DECC to circulate an update to ENSG members on the Smart Grid Forum

Action 15: Smart Grid to be included in future ENSG discussion on SOF and IET Study

6. AOB and Next Meeting

6.1 It was agreed that the ENSG Secretariat would look at the actions agreed during the meeting and propose how they might best feed into future ENSG agendas.

6.2 It was agreed that the next ENSG should be held in June, which would be in line with NG consultation timeline for the SOF. Ofgem to host and chair the next meeting.

Action 16: ENSG Secretariat to propose a plan for future ENSG agendas

Action 17: Ofgem to arrange a date for the next ENSG