Traditionally, in determining the impact of large scale generation connections on National Grid’s transmission system, it has been necessary for UK Power Networks to apply to National Grid (NG) for a Statement of Works (SoW) following acceptance of the offer. Stage 1 of this process has a 28-day duration and provides an initial assessment of the need for any transmission system works required to facilitate the proposed connection. If the SoW determines the necessity for transmission works, to confirm the exact nature of the works and their cost, we would then move into Stage 2 of the process which is to apply to National Grid for a modification application (Mod-app). This stage has a 90-day duration from receipt of the full submission to National Grid.

The significant increase of generation connections and the aggregated impact of smaller generation schemes has put a strain on the above processes in recent years, the impact of which has been a delay in the works.

In order to improve the response times, and through collaboration with industry stakeholders, UK Power Networks and National Grid agreed and implemented the new Appendix G process. Under the Appendix G process National Grid confirm materiality limits for each of the grid supply points (GSPs), which reflect the available capacity on the transmission system without need for further assessment. Where total generation capacity (including connected and accepted offers) remain within these limits, Connection Offers can be made to customers without the need to submit a SoW to National Grid, saving the need for the 28-day submission process. This process has been trialled at a number of GSPs (see below) in the SPN network where we have seen significant movement in generation. GSPs outside of the new process have continued to utilise the existing SoW methodology.

The original target was to reduce the length of the process by 10%. The refined process has resulted in fewer applications to National Grid, the benefit of which is that a number of customers have experienced little or no delay in progressing their projects. Since the implementation of this process, 17 offers have been accepted, all of which have benefitted from a saving of 30-120 days, well within our 10% target. In addition, there has been a risk reduction resulting from potential additional NG costs confirmed during the previous process.
The new Appendix G process has been in place since mid-2016 and has expanded to other GSPs across the network. During that time, National Grid have undertaken a number of adjustments to the materiality limits across a number of the GSPs. These adjustments have been driven by the significant number of acceptances for the connection of generation and battery storage to UK Power Networks distribution system.

In a number of instances, National Grid have confirmed that the materiality limit cannot be increased further due to the adverse impact on the transmission system. In these instances, and in order to avoid major reinforcement, we have, where possible, agreed with National Grid to utilise Active Network Management (ANM). In areas where the challenges on the transmission system have been more complex, UK Power Networks has been working closely with NG to derive an approach that will ensure that low carbon technologies can continue to connect to the system without the need for costly reinforcements. The area of focus, to date, has been in the South East, and through collaborative working with both National Grid and other industry stakeholders we have developed a further improvement to the connections process. This went live in June 2017 for 4 GSPs across the South East. This new process means that UK Power Networks no longer makes offers in these areas subject to statement of works and customers now get all the distribution and transmission contractual terms in their offer within 90-days, an improvement of 6-12 months in some cases.

Work is continuing through the Open Networks Project: WS1: Product 7, to further refine and improve the process, which going forward will be referred to as the Transmission Impact Assessment (TIA).

This new process will continue to be rolled out across UK Power Networks GSPs and we currently anticipate that this will completed by Q3 2019.