

# Kells 275 kV Substation Rebuild Project

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## Summary of Part 1 Stakeholder Engagement

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February 2026



## **Introduction**

SONI Engagement and Communications Team have carried out the required stakeholder engagement during Part 1 of the Grid Development Process for the Kells 275 kV Substation Rebuild Project. This document is intended to provide a summary of the feedback received from key stakeholders who have been engaged.

The preliminary preferred option for the project includes converting the substation from a mesh to a breaker and a half arrangement, building four outer diagonals (including two new transformers and space for a third), removing four existing central diagonals and replacing them with two new diagonals and the turn in of the Ballylumford – Magherafelt 275kV circuit.

The existing substation is within the South Antrim Parliamentary / Assembly Constituency and Antrim & Newtownabbey Borough Council. As such, for this period of engagement, meeting requests were issued to the MP and MLAs within the South Antrim Parliamentary / Assembly Constituency, and the Antrim & Newtownabbey Borough Council Planning Team.

All the political parties, which represent South Antrim either at Parliament or the Northern Ireland Assembly were engaged with during this process and offered individual briefings on the proposals. Where meetings could not be facilitated with a party, a briefing note providing a summary of the project was issued to the representative. An overview of this engagement is included below.

<b>Representative</b>	<b>Party / Organisation</b>	<b>Type of Engagement</b>	<b>Date of Engagement</b>
Barry Diamond	Antrim & Newtownabbey Borough Council	Microsoft Teams Briefing	15 <sup>th</sup> August 2025
John Blair MLA	Alliance	Microsoft Teams Briefing	2 <sup>nd</sup> September 2025
Steve Aiken MLA	UUP	In Person Briefing	17 <sup>th</sup> September 2025
Pam Cameron MLA	DUP	Microsoft Teams Briefing	24 <sup>th</sup> September 2025
Declan Kearney MLA	Sinn Féin	Briefing Note Issued	5 <sup>th</sup> December 2025
Robin Swann MP	UUP	In Person Briefing	9 <sup>th</sup> January 2026

This report outlines a summary of the meetings held to date and the feedback that was received during this phase of SONI's Grid Development Process.

To support our engagement a slide deck was shared during each meeting, this is appended to this report. The briefing note issued to parties who were unable to attend a briefing is also appended to this report.

## **Meeting with Barry Diamond – Antrim & Newtownabbey Borough Council Head of Planning**

15<sup>th</sup> August 2025, via Microsoft TEAMS

### **Summary of feedback**

- Raymond Smyth and Heather Henry-Wilson presented on the Kells Substation Rebuild Project. Engineers from Mott MacDonald were also present at the meeting to respond to any specific queries.
- Barry Diamond made the following comments and raised the following queries:
  - Kells Substation has historically had issues with noise levels and asked if this project would address this issue.
  - The large number of Battery Energy Storage System (BESS) developments in the vicinity of Kells Substation and whether this project was future-proofed or based on new developments wanting to connect to the grid.
  - Replacing the infrastructure is fine, however, Barry asked SONI to consider the noise, visual and electromagnetic impacts.
  - Foresees noise and visual impacts being the main concerns on this project.
  - The preferred option for this project shouldn't cause many issues for the council, however if SONI were moving forward with any extension (proposed in other shortlisted options), this may raise ecological issues.
  - Presumed this project would exceed the threshold for a 'major' application. If the project is determined to be 'major' and PACC is required, then SONI would be required to submit a Proposal of Application Notice (PAN) to the Council to tell what engagement is planned. Whether the project is 'major' or not would be determined by the site area.
  - The Council have no issues with any of the options at this stage and once the option is finalised, then the Council can advise on any requirements for example, noise and visual assessments.
  - Queried whether there was another new line coming into Kells from an offshore windfarm in Donegal.

## **Meeting with John Blair – South Antrim MLA (Alliance)**

2<sup>nd</sup> September 2025, via Microsoft TEAMS

### **Summary of feedback**

- Balazs Kiss and Daniel Donnelly presented on the Kells Substation Rebuild Project. Engineers from Mott MacDonald were also present at the meeting to respond to any specific queries.
- John Blair made the following comments and raised the following queries:
  - He has been supportive of a number of renewable infrastructure projects in the area and therefore was unlikely to have any issues with this project.
  - There have been some objections to new infrastructure and renewables in the Kells area
  - Other options that were considered when determining the shortlisted options.
  - Will there be any difference (in height) between the new towers and existing towers?
  - How will this project impact on renewable generation and facilitating grid connections?
  - How will electricity supply be affected during construction?
  - What materials are being used to replace what is currently in place at the substation and how will these be more sustainable?
  - Appreciated the early engagement on the project

## **Meeting with Steve Aiken – South Antrim MLA (UUP)**

17<sup>th</sup> September 2025, Parliament Buildings, Stormont

### **Summary of feedback**

- Raymond Smyth and Heather Henry-Wilson presented on the Kells Substation Rebuild Project.
- Steve Aiken raised the following comments and queries:
  - Visual amenity and the size of the replacement towers.
  - Have there been any previous outages at Kells?
  - The location of the project and whether part of the project would be in Mid & East Antrim Borough Council.
  - Is there going to be any extension of the existing site?
  - There are a large number of renewable projects in the local area and there is a need to decouple this project from those.
  - Noted some objections to projects in the local area.
  - Noise issues in the vicinity of Kells substation.
  - How will the project be constructed and will there be disruption during this process?

## **Meeting with Pam Cameron – South Antrim MLA (DUP)**

24<sup>th</sup> September 2025, via Microsoft TEAMS

### **Summary of feedback**

- Balazs Kiss and Daniel Donnelly presented on the Kells Substation Rebuild Project. An engineer from Mott MacDonald was also present at the meeting to respond to any specific queries.
- Pam Cameron's main queries were around engagement and community consultation, however this was outlined throughout the presentation.
- The following points were raised during the meeting:
  - The project is quite far away from completion.
  - What the main issues would be and what potential objections would come forward as part of this project.
  - Although the substation is in the South Antrim Constituency, a number of those affected and who may have concerns would be in the North Antrim Constituency.
  - Suggestion of engaging with representatives in the North Antrim Constituency in addition to South Antrim.

## **Meeting with Robin Swann – South Antrim MP (UUP)**

9<sup>th</sup> January 2026 September 2026, UUP Constituency Office, Antrim

### **Summary of feedback**

- SONI representatives met with Robin Swann and his Constituency Office manager, Stephen Nicholl, as part of the Kells 275 kV Substation Rebuild Project as well as the Mid Antrim Upgrade Project.
- Neither Robin Swann nor Stephen Nicholl raised any concerns regarding the proposals for the Kells 275 kV Substation Rebuild Project.
- With regard to the Mid Antrim Upgrade Project, Stephen Nicholl asked about BESS applications and if the project would initiate an increase in BESS applicants and what work had been done with councils around storage.

## **Summary of Key Feedback**

Feedback collated from the stakeholder engagement meetings was analysed and key themes have emerged. These themes, including extracts from the meetings with the stakeholders, are outlined below.

### **Key Theme 1: Noise, Visual & Ecology**

- *Kells substation has historically had issues with noise, will this project do anything to address this issue?*
- *I would ask that SONI consider the noise, visual and electromagnetic impacts of this project.*
- *Any extension, as highlighted in the shortlisted options may raise ecological issues.*
- *I foresee noise and visual impacts being the main concerns on this project.*
- *Will there be a height difference between the old and new towers?*
- *What will the replacement towers look like and what size will they be?*
- *There have been noise issues experienced from Kells substation.*

### **Key Theme 2: Project Detail**

- *What were the other options considered when determining the shortlist of options?*
- *What materials are being used to replace what is currently in place and how are these materials more sustainable?*
- *Will any part of the project be in Mid & East Antrim Borough Council?*
- *Is there going to be any extension of the existing site?*
- *What are the main issues and the potential objections with the project?*

### **Key Theme 3: Other Renewable Projects**

- *There are a number of Battery Energy Storage System developments around Kells substation, is this project future-proofed or is the upgrade based on new developments wanting to connect to the grid?*
- *Is there another line going to be coming into the Kells substation from an offshore windfarm in Donegal?*
- *What way does this project impact on renewable generation and grid connections?*
- *There are a large number of renewable projects in the local area and there is a need to de-couple this project from these projects.*

### **Key Theme 4: Planning Process**

- *I presume this project will exceed the threshold for a 'major' application.*
- *If the project is determined to be 'major' and PACC is required, then SONI would be required to submit a PAN form to the council to tell what engagement they plan to do.*

- *The council can check whether the project is 'major' or not. This will come down to whether the site area is over 1 hectare or if the megawatts threshold is exceeded.*
- *Once the option is finalised, then the council can advise on any requirements, for example noise and visual assessments.*

#### **Key Theme 5: Construction / Disruption**

- *What way will electricity supply be affected during construction?*
- *Have there been any previous outages at Kells?*
- *How will the project be constructed and will there be any disruption during this process?*
- *We are quite a long time away from project completion.*

#### **Key Theme 6: Engagement**

- *I appreciate the early engagement on this project and happy to support if there any issues.*
- *My main queries were around engagement and community consultation which have been addressed through the presentation.*
- *Kells substation is in the South Antrim Constituency, however, a number of constituents would be in the North Antrim Constituency. I would suggest engaging with representatives from this constituency.*

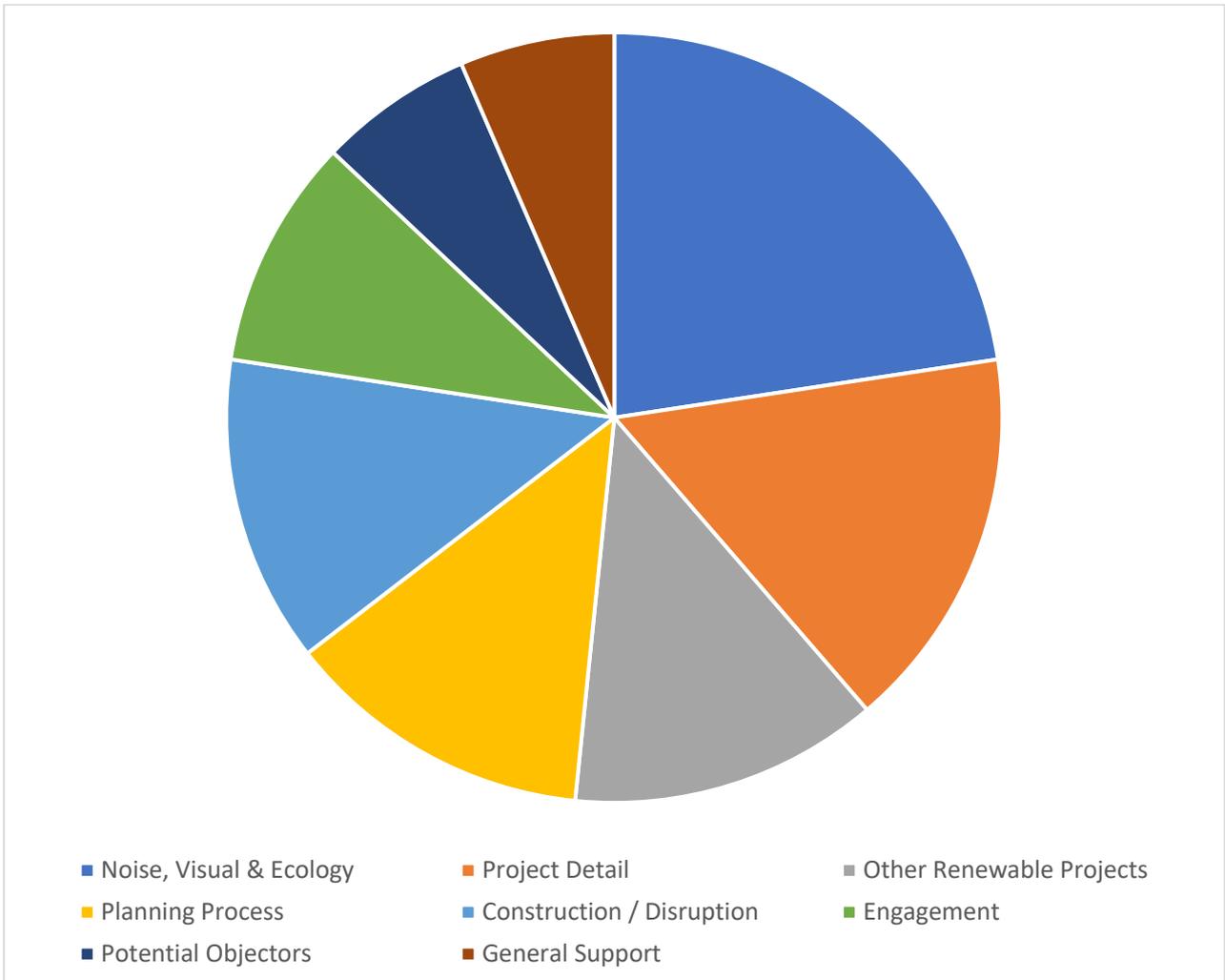
#### **Key Theme 7: Potential objectors**

- *There have been objections to other projects in the area*
- *Renewable projects in the area have led to some objections*

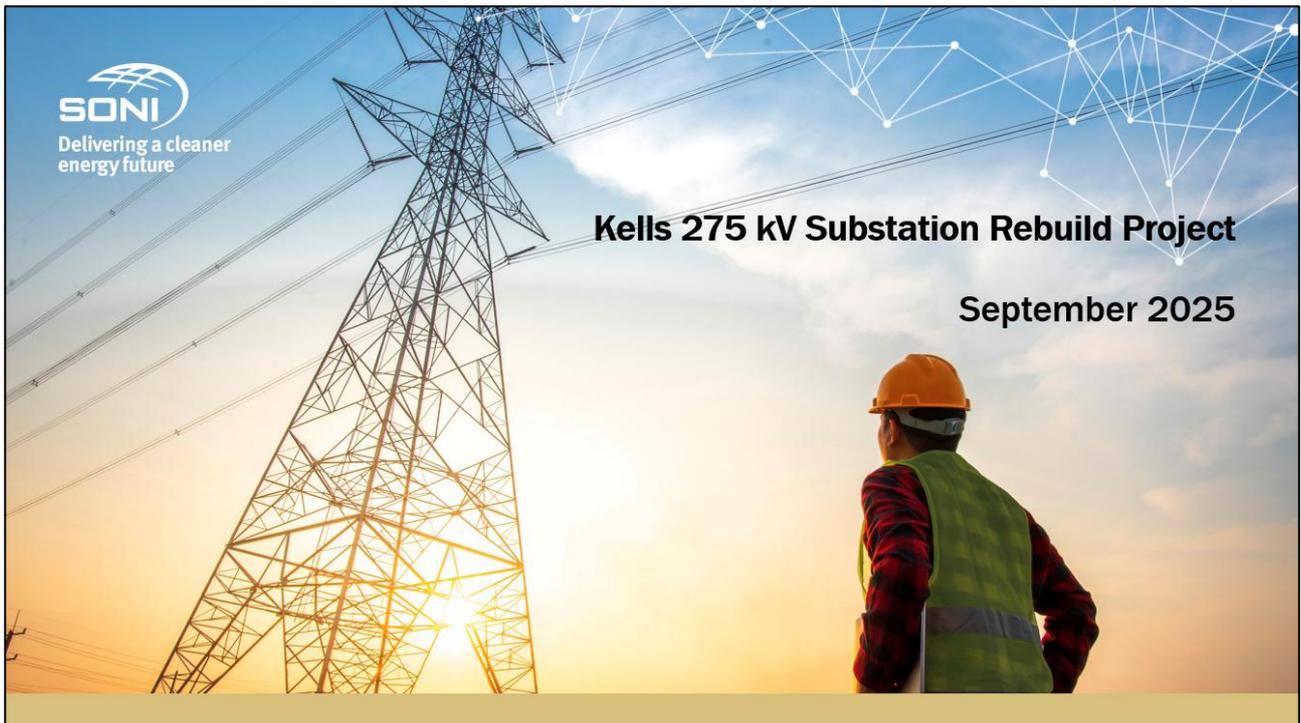
#### **Key Theme 8: General Support**

- *This project shouldn't cause many issues for the Council.*
- *I have been supportive of a number of similar renewable infrastructure projects in the area and therefore unlikely to have any issues.*
- *I am content with the project and wish SONI all the best.*

**Appendix 1: Frequency of Feedback Following Part 1 Engagement**



**Appendix 2: Slide deck shared during stakeholder meetings**

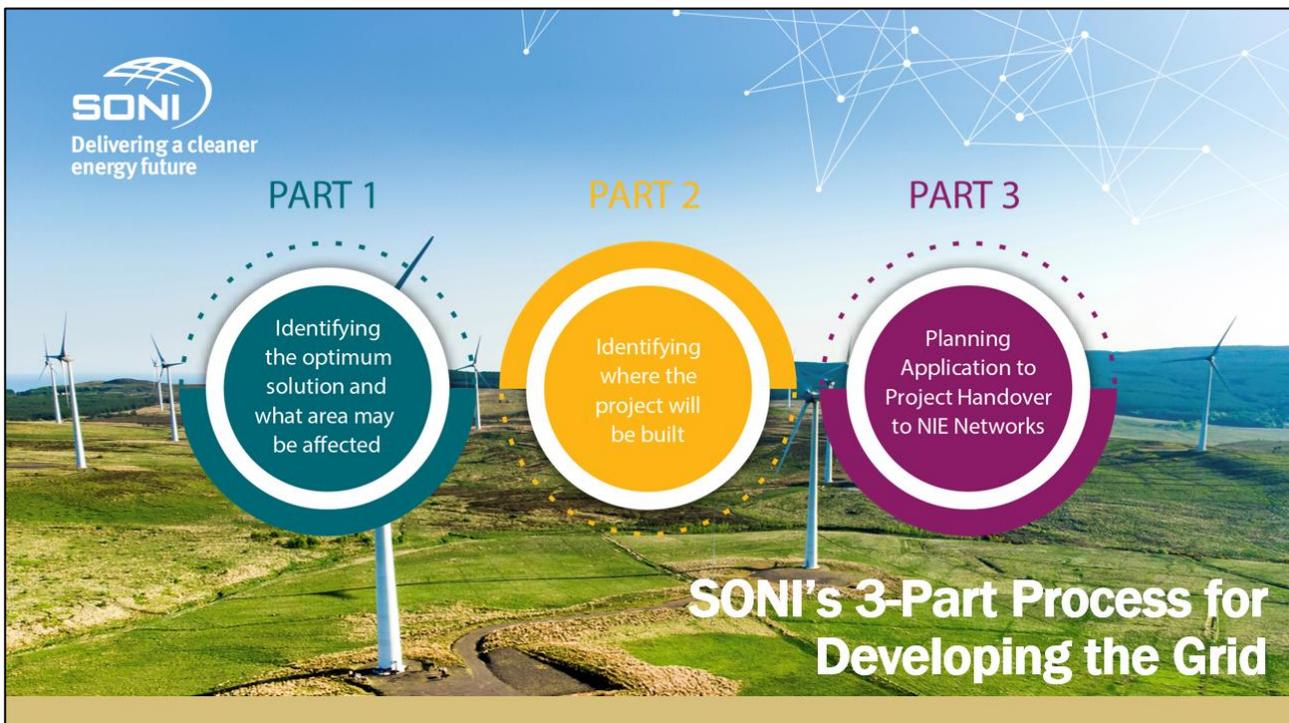




## Managing a power system in transition

The process to reach NI's Energy Strategy targets is both complex and ambitious.

- Significant upgrades to the current system
- Extensive programme of new development to meet our changing energy needs
- Ensuring secure flow of electricity for consumers 24/7/365
- Broader challenges (local acceptance, landowner agreement).



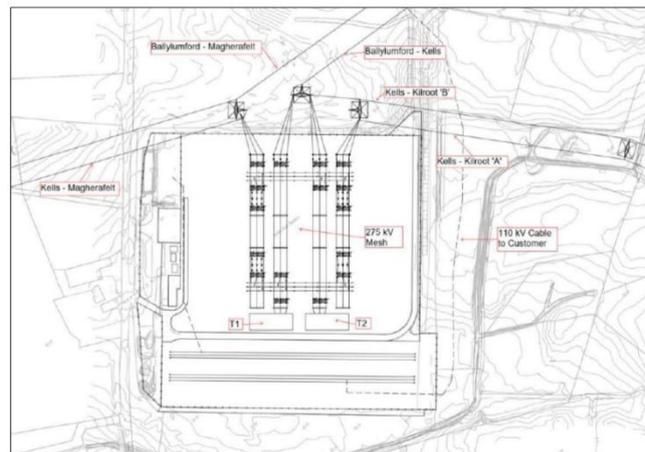
## Kells 275 kV Substation

- 275/110kV Substation located on the Maxwells Road near Kells
- Constructed in the 1970s
- Due to the nature of the site, there are limitations of the existing substation and future performance requirements
- We have identified several requirements resulting in the need to redevelop the existing 275kV substation



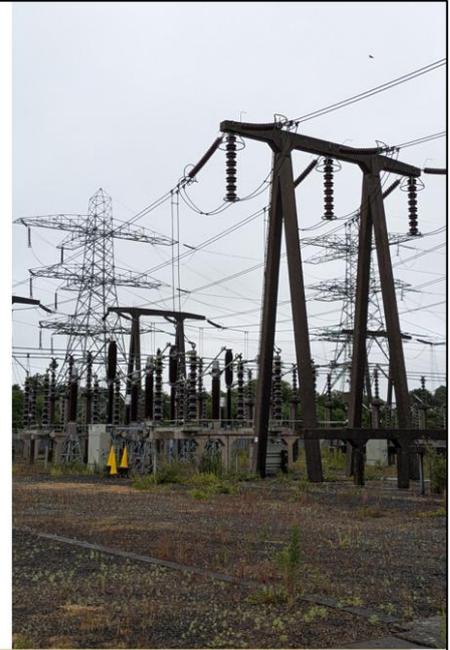
## Existing Layout

- Constructed in the early 1970s
- Original design for breaker and a half
- Reduced at delivery stage to a mesh connecting four circuits and two 1970s transformers
- Two main busbar sections
- Four high level diagonals
- Ballylumford–Magherafelt 275 kV circuit also passes north of the substation



## Project Drivers

- 1 — Aging Infrastructure
- 2 — Structural Standards
- 3 — Outdated Configuration
- 4 — Capacity and Operational Limitations
- 5 — Future Network Needs



## Outline of Shortlisted Options

- **Option 1: Status Quo** (as required by SONI)
- **Option 3B: Breaker and a half arrangement** (including change in circuit arrangement)
- **Option 4: New 275 kV GIS Substation**
- **Option 6: New 275 kV AIS Substation** partially using existing AIS Substation land





# Preliminary Preferred Option

## Option 3B



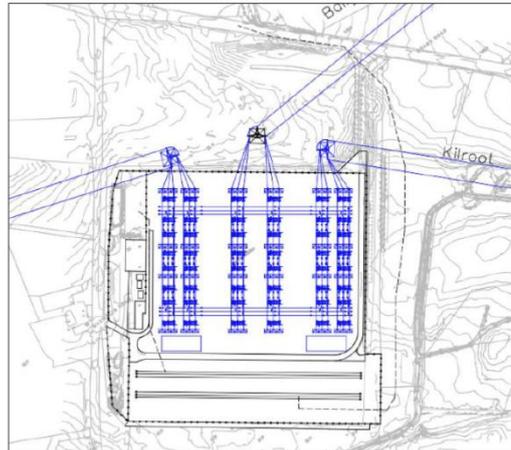
### Option 3B – Breaker and a half arrangement

#### Description

- Build four outer diagonals offline, including two new 275/110 kV transformers and space for a third
- Divert circuits across over a four-year project delivery period, need for several temporary towers in wooded area.
- Remove four existing central diagonals and replace them with two new diagonals
- Convert substation from mesh to breaker and a half arrangement
- Turn in of Ballylumford – Magherafelt 275 kV circuit
- Planning permission required for new tower locations
- Works within the substation are considered permitted development

#### Appraisal

- Much improved security of supply to the wider area
- Within existing substation boundary
- Minimises outages
- Utilises the full compound
- Conventional, well-established technology
- Spare bays



Criteria	Option 3B
Economic	Moderate Risk
Technical	Low-Moderate Risk
Deliverability	Low-Moderate Risk
Environmental	Low-Moderate Risk



## Project Benefits

- Replaces aging infrastructure with equipment to meet modern design standards
- Improves operational flexibility and reliability
- Limits the impact of any faults on the Ballylumford – Magherafelt 275 kV circuit
- Improves grid strength and stability in the Mid Antrim area



## Next Steps

1

### Stakeholder Engagement

Conduct stakeholder engagement in Autumn 2025.

2

### Options Report

Finalise the Options Report and decide on the Preliminary Preferred Option.

3

### Internal Governance

Continue with internal reviews and approvals.

4

### Utility Regulator Submission

Submit the funding application (TNPP) to the Utility Regulator for approval.

5

### Public Consultation

Carry out public consultation, scheduled for 2026.



**Thank you!**  
**Any Questions?**



**Appendix 3: Briefing Note**



# Kells 275kV Substation Rebuild Project

## Briefing Note

### **About SONI**

SONI (System Operator for Northern Ireland) is Northern Ireland's Transmission System Operator (TSO). We manage the electricity grid to ensure that power can flow safely, securely and reliably from where it is generated to where it is needed. We are also transforming the electricity system to deliver a cleaner, cheaper, more secure energy future for homes, farms and businesses across Northern Ireland.

### **SONI's Engagement Process**

Each of SONI's network projects have a communications and engagement plan underpinned by our 3-Part Process for Developing the Grid, which places public engagement at the heart of transmission development. The Kells Substation Rebuild Project is currently in Part 1 of this process where we are engaging with elected representatives and local planning officials to finalise the 'best performing technology solution' for the project.

### **Need for the Project**

The existing 275kV Substation located on Maxwells Road near Kells was constructed in the early 1970s and is made up of aging infrastructure. Due to the nature of the site, there are limitations of the existing substation and future performance requirements. As a result, several requirements have been identified that result in the need to redevelop the existing substation.

### **Kells 275 kV Substation Rebuild Project**

The preliminary preferred option for the project includes converting the substation from a mesh to a breaker and a half arrangement, building four outer diagonals (including two new transformers and space for a third), removing four existing central diagonals and replacing them with two new diagonals and the turn in of the Ballylumford – Magherafelt 275kV circuit.

### **Project Benefits**

- Replaces aging infrastructure with equipment to meet modern design standards
- Improves operational flexibility and reliability
- Limits the impact of any faults on the Ballylumford – Magherafelt 275kV circuit
- Improves grid strength and stability in the Mid Antrim area
- The rebuild can be facilitated in the existing footprints of the substation – no extension is required

### **Next Steps**

- The funding application (TNPP) for the project will be submitted to the Utility Regulator in early 2026
- A period of public consultation will be carried out in late 2026
- A planning application is expected to be submitted in early 2027
- Construction will commence in 2028
- Energisation is planned for 2030