

DER Bulletin 2025-001: Enhanced Islanding Criteria

FortisAlberta is pleased to share an update on our islanding criteria for Distributed Energy Resources (DER). This initiative reflects our commitment to enabling safe, reliable, and efficient integration of DERs across our distribution system.

WHY THIS MATTERS

As DER adoption grows, so does the need to manage the risk of unintentional islanding—where local generation continues to power a portion of the grid after utility supply is lost. Traditionally, mitigation relied on costly methods such as Direct Transfer Trip (DTT) and Live Line Reclose Blocking, which can be burdensome for smaller projects.

WHAT'S NEW

Our Advanced Power Systems team undertook a comprehensive internal evaluation to characterize FortisAlberta's distribution system and apply industry research appropriately. This effort was essential to determine which risks are critical and which are not, ensuring that mitigation strategies are both practical and feasible.

The team reviewed current best practices and research from:

- Electric Power Research Institute (EPRI)
- Interstate Renewable Energy Council (IREC)
- Sandia National Laboratories
- Peer utilities across North America

We also leveraged advanced tools and models, including:

- IPRAT (Islanding Prevention Risk Assessment Tool) – used to evaluate islanding risk across DER projects.
- Electromagnetic Transient (EMT) Simulation Models – to assess system behavior under islanding conditions.

EFFORT BEHIND THE UPDATE

This initiative involved a combination of technical outreach and research review. We engaged with DER proponents from both in-flight projects and existing sites that share feeders with those projects. This helped identify which installations could materially impact interconnection studies.

We requested key technical details, including the anti-islanding method group, which allowed us to:

- Identify DER sites with potential influence on feeder-level studies

- Refine assessments for projects previously flagged for live line reclose block requirements
- Quantify islanding risk more accurately across the system
- Make informed decisions about where traditional mitigation may or may not be necessary

In parallel, our team reviewed extensive industry research and guidance from parties cited above. This ensured our criteria are grounded in both practical system data and current best practices.

KEY BENEFITS

- Reduced interconnection complexity for most DER projects
- Fewer requirements for live line reclose blocks
- Improved alignment with industry standards and research
- Continued focus on system safety and reliability

KEY LEARNINGS AND RECOMMENDATION

Our review of DER projects highlighted that inverters equipped with Sandia Group 1 or 2A anti-islanding methods can help streamline interconnection by reducing the need for more complex system upgrades. Leveraging these available technologies supports efficient integration while maintaining safety and reliability.

We recommend DER proponents consider these inverter configurations early in the design process to facilitate smoother interconnection with FortisAlberta's distribution system.

WHAT REMAINS

In specific cases—such as high-penetration synchronous generation or passive anti-islanding methods—traditional mitigation may still be required. These are assessed on a project-by-project basis.

OUR COMMITMENT

This update is part of FortisAlberta's broader effort to support Alberta's evolving energy landscape. We're working to streamline interconnections, reduce unnecessary barriers, and ensure our distribution system remains safe, resilient, and future-ready.

Project-specific details will continue to be addressed directly through our Stakeholder Relations Managers and Project Engineers. This bulletin is intended to provide transparency and highlight the efforts behind our evolving criteria.

If you have questions or would like to discuss how this update affects your project, please contact your FortisAlberta representative.