
Project QC-2017-02

Scope of application of standards PRC-004-5(i), PRC-005-6 and PRC-026-1

1. Context

The public consultation QC-2017-02 consists of two phases. This first phase of the public consultation project consists in assessing the impact of extending the scope of application of standards PRC-004-5(i), PRC-005-6 and PRC-026-1 to the Main Transmission System (RTP). The second phase addresses the reliability standards impacted by the notions of Dispersed power producing resources and Remedial action schemes.

With respect to standards PRC-004-5(i) and PRC-026-1, the Régie has already adopted these standards in its decisions [D-2017-015](#) and [D-2017-076](#) respectively. In its decisions, the Régie has nevertheless requested from the Reliability Coordinator (the “Coordinator”) an analysis of the scope of application, based on technical arguments, for these standards and any standards within the PRC family that will be filed in the future. In its analysis request for the scope of application of standards PRC-004-5(i) and PRC-026-1, the Régie questions:

- the difference in the scope of applications between standards within the same family with the common objective of ensuring the “smooth” operation of facilities’ protective systems
- the relevance of not extending the standards’ scope of application to the RTP.

In anticipation of the requested analyses, the Coordinator requests that entities comment the scope of application and the impact of extending the scope of application to the Main Transmission System (RTP). In the light of this public consultation phase’s results, the Coordinator will assess the relevance of potentially filing these standards with a new scope of application.

Standard PRC-005-6 will be part of both phases of the consultation. In this phase, the Reliability Coordinator requests that entities comment and assess the impact to setting the scope of application as RTP. In the second phase of the public consultation project QC-2017-02, the Reliability Coordinator will ask the entities to comment on the entire standard (where only the scope of application of the standard could be modified as an outcome of the first phase), including the concepts of Dispersed Power Producing Resources and Remedial Action Scheme (RAS), as well as the new components covered by maintenance (i.e., Automatic Reclosing and Sudden Pressure Relaying).

2. History of the scope of application

2.1. PRC-004-5(i)

The standard PRC-004-5(i) focuses on the identification and correction of the protection systems' malfunctions. In the decision [D-2011-068](#), the Régie acknowledges the relevance and accepts the content of the standard PRC-004-1 as filed by the Coordinator without, however, adopting it. The Régie adopted the standard PRC-004-5(i) in its decision [D-2017-015](#) because no PRC-004 standard had been adopted but mentioned that it would be appropriate to reassess the scope of application of PRC standards for the RTP or BPS at the closure of R-3952-2015. In the decision [D-2017-076](#), the Régie emphasized the necessity to analyse the scope of application of PRC-004-5(i) and to submit a revised appendix, if needed.

2.2. PRC-005-6

The standard PRC-005-6 focuses on the maintenance of the Protection Systems, Automatic Reclosing, and Sudden Pressure Relaying. The Régie adopted the standard PRC-005-2 with the scope of application limited to the BPS network in its decision [D-2016-150](#). In this decision, it referred to the decision [D-2011-068](#) in order to specify the scope of application. In this public consultation, the Coordinator will file version 6 of standard PRC-005, which is currently in effect in the United States.

2.3. PRC-026-1

The objective of standard PRC-026-1 is to ensure that load-responsive protective relays differentiate between the faults and stable power swings, and do not trip in response to stable power swings. The Régie adopted, in its decision [D-2017-076](#), standard PRC-026-1 but partially suspended its enforcement. In fact, the standard is enforceable only for the RTP facilities connected to the RTP, but the application of E2, E3 and E4 requirements is limited to BPS facilities and suspended for non-BPS RTP facilities connected to the RTP. Also, the Régie asked the Reliability Coordinator to re-submit the standard following the completion of the analysis by the Planning Coordinator to identify the standard's scope of application. It should be noted that an analysis of the scope of application of standard PRC-026-1 is expected to be completed by the Planning Coordinator by early 2018, as mentioned in [response 2.2 to DDR-1](#) in the file R-3997-2016.

3. Scope of application proposals

3.1. PRC-004-5(i)

Standard PRC-004-5(i)'s scope of application is as follows in the Quebec appendix of the standard: "This standard only applies to the Facilities of the Bulk Power System (BPS)." In the current consultation, the Coordinator invites the entities to comment the relevance and the impact of the following scope of application: "This standard only applies to the Facilities of the RTP." Standard PRC-004-5(i) and its appendix are included as adopted by the Régie for reference purposes.

3.2. PRC-005-6

In preparing to file standard PRC-005-6, the Reliability Coordinator invites the entities to comment the proposal of a Quebec appendix specifying that the standard applies to RTP facilities. It should be noted that the new version of the standard modifies other elements, including the replacement of the concept of SPS by RAS. The standard PRC-005-6 and its appendix are included for reference purposes as they will be proposed in phase 2 of the public consultation (unless the scope of application changes following the first phase of the consultation). Phase 2 of the public consultation will focus on: the concept of RAS, the maintenance of the Automatic Reclosing and the Sudden Pressure Relaying, and the Dispersed Power Producing Resources.

3.3. PRC-026-1

The scope of application of PRC-026-1 standard is stated as follow in the Quebec appendix of the standard: “This standard only applies to the facilities of the Main Transmission System (RTP) connected to the RTP. However, the application of the requirements R2, R3 and R4 of this standard is suspended for the non-BPS RTP facilities connected to the RTP.” In the current public consultation, the Reliability Coordinator invites the entities to comment the relevance and the impact of the following scope of application: “This standard only applies to the Facilities of the RTP network.” The standard PRC-026-1 and its appendix are included as adopted by the Régie.

4. Preliminary impact assessment of the scope of application

The Coordinator acknowledges that these standards replace standards currently in effect. However, the extension of the scope of application will have an impact on the entities. The following table presents preliminary estimates of the impact on all Quebec entities.

Standard	Impacts		
	Implementation	Enforcement	Monitoring
PRC-004-5(i)	Moderate	High	High
PRC-005-6	High	High	High
PRC-026-1	Moderate	Moderate	Moderate

Definitions

Low:	Normal industry practice that only requires minor adjustments to existing processes or practices.
Moderate:	Change that requires allocation of some physical, human or financial resources to implement, enforce and monitor compliance with the proposed standard.
High:	Change that requires allocation of significant physical, human or financial resources to plan, implement, enforce and monitor compliance with the proposed standard.

5. Final impact assessment of the scope of application

During the assessment of the relevance to potentially file the standards PRC-004-5(i) and PRC-026-1 with a new scope of application, the Coordinator will take into account the impacts submitted in the phase of the public consultation.

Regarding standard PRC-005-6, the Coordinator plans to file it for adoption with the scope of application arising from this first phase of the public consultation. This phase will allow the assessment of the impact of the standard's scope of application before its complete assessment, with other standards, in phase 2, before its filing at the Régie.

6. References

In addition to the adopted and proposed standards and their appendices, the glossary is appended for reference purposes in this first phase of public consultation in order to allow the assessment of the relevance of the scope of application.