

# Standards Committee of the Board (SCB) MEETING MINUTES

**PLACE OF MEETING:** Online  
Meeting Link: <https://global.gotomeeting.com/join/181072717>  
Dial-In: 1 872 240 3311  
Code: 181 072 717

**DATE OF MEETING:** Wednesday, April 16, 2025  
3:00 PM – 4:00 PM (Eastern Time)

**PRESIDING OFFICER:** George Kelly

## I. ADMINISTRATION

- A. Chair's Introductions & Announcements
- B. Review of Antitrust & Meeting Guidelines

The secretary read the ARESCA guidelines which are applicable:

*The purpose of antitrust laws is to preserve economic competition in the marketplace by prohibiting, among other things, unreasonable restraints of trade. In ARESCA activities, it is important to recognize that participants often represent competitive interests. Antitrust laws require that all competition be open and unrestricted.*

*It is ARESCA's policy, and the policy of each of its committees and subcommittees, to conduct all business and activity openly and transparently, and in full compliance with international, federal and state antitrust and competition laws.*

- C. Quorum Determination and Roster Review

The committee presently consists of 15 voting members. One more than 50% of the voting members need to be present to constitute a quorum to establish a duly constituted meeting for the purpose of conducting business.

Present: Brian Hill, Ryan O'Connor, Taylor Geer, Toby Gillespie, Steve Hogan, Bob Sherwin (ex officio), Kyle Wetzel, Alton Payne, John Bosche, George Kelly (secretary)

Absent: Jonathan Colby (chair), Linkesh Diwan, Lars Samuelsson, Gabe Alsenas, Callum McSherry, Brian McNiff, Eric Parker

A quorum was present (8 of 15 voting members).

D. Review/Approve Agenda

The meeting agenda was accepted without changes.

E. Acceptance of Previous Minutes

The minutes from March 19 were accepted without changes.

**II. OLD BUSINESS**

A. SCB Membership:

- i. Replacement of Arielle Cardinal by Eric Parker (new TC114 TAG Secretary) – approved by all 9 members present; George provided 2-week notice to members not in attendance last month. No more votes received; membership is approved.
- ii. Selection of Vice Chairs
  1. Linkesh and Kyle both expressed interest. Deferred for now.
  2. Jonathan and George drafted new rules. (see C.ii below)
- iii. Toby accepted new position as CAB Secretary; may affect his participation here.

B. Microgrid Standards

- i. Potential US adoption of SC8B standards
  1. So far Callum has not identified any conflicting requirements but needs more input from other experts.
  2. Callum will review further and make recommendations about whether we should proceed with national adoption of SC8B standards.
  3. The SCB needs to decide if we should form a different body or just expand the NAS with additional microgrid experts (perhaps 6-10, from different stakeholder groups).

C. National Adoptions Subcommittee:

- i. Ballot to submit PINS for 61400-1 AMD1 and 61400-3-2 (new edition) was circulated by correspondence on March 21. Closing date is April 21. Everyone in attendance today voted yes. (Total 10-0 so far).
- ii. George and Jonathan prepared a new version of Standards Development Procedures to specify 21 days notice. Approved by

ARESCA board of directors. **ACTION:** George to submit tracked-change version to ANSI.

- iii. **OPEN ACTION:** George and Kyle will review the TC88 work program to see if there are any others coming soon.
  - 1. 61400-4 Gearboxes - new edition 2 - was published by IEC yesterday.
  - 2. AGMA published old edition, which they have withdrawn but no PINS recorded for new edition. George following up with Brian McNiff to see if AGMA intends to publish. If not, we should probably do so.
  - 3. There is an effort in TC88 to split -4 into multiple parts, but these are still in progress.
- iv. **OPEN ACTION:** George to eventually submit pdf files and new price list to ANSI. Still discussing pricing strategy with ARESKA board.

D. New ARESKA Standards:

- i. Andy Chang has volunteered to chair a subcommittee to work on the two site calibration standards. All our other SMEs who worked on the abstracts volunteered to assist with the work.
- ii. Andy updated the abstracts as requested (see below), providing the motivation for developing these as new standards.
- iii. John noted that we received an objection from DNV, stating that there is not an obvious market need and this would divert attention from the SMEs that are working on the 61400-12 documents. We believe we should proceed anyway and expect they will eventually get involved.
- iv. Eventually the ARESKA standards could be proposed as NPs in TC88. We can probably publish them much more quickly than IEC.
- v. We will have two ballots at next month's meeting:
  - 1. To establish the new subcommittee.
  - 2. To submit PINS for the two new standards.

### III. NEW BUSINESS

A. Cybersecurity standards

- i. TC82 inputs – recognize the need but no expertise in the TC. Recommend collaboration with other TCs.
- ii. Participation by TC57 experts – George initiated discussions and has 2 calls scheduled in the coming weeks.
- iii. Potential PINS submissions:

1. Might be something in TC57 to nationally adopt. George will discuss with the TAG next week.
2. Also would need something new (Bob's hot topic) that references existing standards but would need new content regarding "distributed assets".
3. TC88 could be the first test case for this kind of standard (possibly part of -26 series). It is definitely on their agenda now.
4. Would not submit PINS for this until there is a TC88 project.
5. Bob is trying to focus effort on the specific parts where there is a gap. Expects insurance companies will be interested.
6. George will distribute DoE workshop presentation with the minutes.

B. ACP adoptions

- i. 61400-6 Tower and foundation design requirements
- ii. 61400-23 Full-scale structural testing of rotor blades
- iii. ACP discussed reaffirming the old editions; Kyle thinks we should take back the authority to adopt. If not, there may be confusion about which edition is current.
- iv. Bob confirms that several people do not want ACP to continue with these due to their slow and cumbersome process. We should confirm we have the support of the relevant project teams.
- v. Can we force ACP to withdraw old ones? Can we object to their reaffirmation, or to take any other further action? **ACTION:** George to confirm with ANSI that we have this authority.

IV. **ACTION ITEM REVIEW**

- A. George to submit tracked-change version of SDP to ANSI.
- B. George and Kyle will review TC88 work program to see if there are any others coming soon.
- C. George to eventually submit pdf files and new price list to ANSI.
- D. George to confirm with ANSI that we have authority to prevent ACP from taking any further action on 61400-6 and 61400-23.

V. **ADJOURNMENT** 4:00 PM - Next meeting 21 May at 3pm EDT

## Proposed Standard #1: Power Performance Testing (PPT) for Wind Turbine Repowering Projects

The proposed standard focuses on establishing guidelines and methodologies for power performance testing specific to wind turbine repowering projects. The IEC 61400-12-1 standard provides detailed guidelines for measuring the power performance of individual wind turbines, with a focus on accurately determining a measured power curve through standardized measurement and testing procedures. However, this standard was not originally written with the intent or understanding of the unique complexities introduced when conducting power performance testing at wind turbine repowering sites. Repowering often involves replacing or upgrading turbines with newer technologies, presenting unique challenges in calibration and performance testing, especially in complex terrain or when existing site calibration data is limited. This standard aims to provide a consistent approach to adapting test methodologies to account for project realities of repowered installations which are outside the scope of IEC 61400-12-1. The scope covers guidance on using or adapting site calibration data from original wind projects, criteria for deploying wind measurement devices relative to repowered turbines, decision frameworks for when to use measured SC versus NSC. Additionally, it addresses considerations for changing terrain types, including transitions from flat to complex terrain, and the continued use of existing met masts with respect to spacing and potential blockage effects.

The creation of a new standard focused specifically on establishing guidelines and methodologies for site calibration and power performance testing of wind turbine repowering projects is a more appropriate approach than attempting to amend the existing IEC 61400-12-1 standard. The unique complexities introduced by repowering, such as replacing or upgrading turbines with newer technologies, especially in complex terrain or with limited existing site calibration data, would necessitate provisions that could conflict with the broader scope and intent of the original standard, which was not written with these specific challenges in mind. Additionally, as wind turbine repowering is more prevalent in certain regional contexts, like the United States, a dedicated standard would be better suited to address these localized considerations rather than incorporating them into the internationally-applied IEC 61400-12-1. While some of the proposed elements may be under discussion with the IEC committee, the deliberative nature of standards development means a new, focused standard can more effectively and expeditiously address the pressing needs of the wind turbine repowering industry. By providing comprehensive guidelines for these scenarios, this standard seeks to bridge gaps not addressed in current IEC 61400-12 and -50 standards, ultimately enhancing the reliability and consistency of power performance assessments for repowered wind farms.

## Proposed Standard #2: Numerical Site Calibration (NSC) for Complex Terrain Sites

The proposed standard aims to establish robust methodologies for numerical site calibration (NSC) specifically tailored to wind energy projects located in complex terrain. The IEC 61400-12-1 standard, which is the International Standard for power performance measurements of electricity producing wind turbines, specifies that in complex terrain, a site calibration measurement (SCM) is required to find the relation in flow characteristics between the measurement location and the test turbine. This SCM approach necessitates the deployment of meteorological masts with sensors – namely cup anemometers for wind speed – for a short-term measurement campaign prior to wind turbine construction, a resource-intensive requirement. With the rapid advancement and adoption of wind technology across diverse topographies, traditional site calibration using cup anemometers is often impractical or infeasible.

IEC TR 61400-12-4 is a technical report that summarizes the current state of the art in numerical flow modelling and existing guidelines for using flow simulation over terrain for wind applications, but it has not provided a comprehensive, standardized framework for numerical site calibration that can be readily applied in industry. This standard will refine and advance the existing work to offer comprehensive, consistent, and accurate calibration guidance for these challenging environments. The scope of this standard encompasses three main areas: the development of detailed NSC methodologies, validation and acceptance criteria for modeling methods, and application protocols for NSC corrections with consideration for uncertainty quantification. The overarching goal is to ensure accurate wind measurements and reliable power performance testing (PPT) results in complex terrain settings.

Despite growing industry adoption and interest in numerical site calibration approaches, precisely defining the framework to meet the level of detail and rigor established in the IEC 61400-12 and IEC 61400-50 series of standards has proven challenging. This proposed standard aims to provide a tailored, comprehensive guidance that can more effectively address the commercial needs, particularly for wind turbine repowering projects in regions like the United States where this technology is already being utilized.