

Subject 6171

May 19, 2010

SUMMARY OF TOPICS

The following topics were discussed at the meeting of the Standards Technical Panel for Wind Turbine Converters and Interconnection Systems Equipment, STP 6171:

- 1. Low Voltage Ride Through (LVRT)***
- 2. New Marking Requirements***
- 3. Potential Expansion of Scope to Include Offshore Wind Turbine Converters***
- 4. Input and Output Operating Voltages***
- 5. CSDS Comments regarding the Proposed First Edition of UL 6171***

A meeting of the Standards Technical Panel of UL for Wind Turbine Converters and Interconnection Systems Equipment, was held on April 27 and 28, 2010 at UL's Northbrook, Illinois office. The purpose of the meeting was to discuss the Proposed First Edition of the Standard for Wind Turbine Converters and Interconnection Systems Equipment, UL 6171.

The purpose of the STP meeting report is to briefly summarize discussions held during the meeting, and to document any resulting outcomes, including planned future action.

CALL TO ORDER, ANNOUNCEMENTS, INTRODUCTION OF MEMBERS, GUESTS, AND OBSERVERS

After an introduction of STP members and guests, the STP Chair, Brad Schmidt, explained the STP Process, UL's Patent Policy, and STP 6171 balance.

The current balance of the STP is shown in the following table:

Interest Category	Number of Members	Interest Category	Number of Members
Producers	8	Government	3
Testing & Standards Organizations	6	Consumer	0
Supply Chain	2	General Interest	5
AHJs	6	Commercial/Industrial User	1

Additional information regarding the STP process and UL's patent policy can be found on UL's Standards Technical Panel home page at the following link:

<http://ulstandardsinfolnet.ul.com/stp/>

This link can be accessed from a user's CSDS home page by clicking on "STP Info" from the info bar and then "Standards Technical Panels (STPs)" from the drop-down list.

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FUTURE MEETING SCHEDULE

The STP noted it is advantageous to schedule any future STP meetings with previously announced trade shows to ease travel costs and scheduling conflicts. While the next meeting has not yet been scheduled, the STP acknowledged that a future meeting could be scheduled in conjunction with Windpower 2011, the wind turbine trade show that will be held at the Anaheim Convention Center on May 22 – 25, 2011. Additional information will most likely be provided after the UL 6171 PFE is submitted for ballot and comments are received. UL's goal is to ballot the standard in late summer and, if consensus is achieved after STP review, publish the first edition of UL 6171 by the end of 2010.

DISCUSSION OF AGENDA TOPICS

1. Low Voltage Ride Through (LVRT)

DISCUSSION

Discussion item submitted by: Tim Zgonena, UL

The STP examined LVRT issues and discussed the pertinent documents and references that might be required for inclusion into UL 6171. UL asked if evaluation methodologies were specifically needed or if it was more appropriate for manufacturers to arrange this evaluation with the utilities.

STP members noted that the various configurations of inverters, multiple turbine installations, and other components make it difficult for the industry to devise standardized evaluation and test procedures. A few members thought that referencing the Standard for Inverters, Converters, Controllers and Interconnection System Equipment for Use With Distributed Energy Resources, UL 1741, along with IEEE 1547, Interconnecting Distributed Resources with Electric Power Systems, might help clarify requirements, although there were some questions regarding the standard's compatibility with trip settings. (One member mentioned that UL 1741 has been adopted by most states and Canada, while others noted that the nature of IEEE 1547 is to protect the distribution system.) The STP also needs clarified requirements regarding LVRT and distribution interconnections, voltage tripping, and anti-islanding testing. Other members noted that utilities often determine the tests that are required (typically abnormals done by the manufacturer).

Members noted it was a question of methodology versus limits, adding that utilities often have issues with grid systems, hence complicating matters. In the meantime, Michael Edds from DeWind volunteered to provide UL with additional LVRT information for review.

2. New Marking Requirements

DISCUSSION

Discussion item submitted by: Tim Zgonena, UL

The STP determined that a reference to UL 508C, the Standard for Power Conversion Equipment should be added to the marking section (since UL 508C is referenced elsewhere in the UL 6171 draft). Additionally, the STP contemplated the use of markings to address LVRT and distribution issues and whether IEEE 1547 markings should be considered. UL intends to review these items and will devise a revision to the draft if necessary.

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