

2nd Survey

Name	Organization	C57.12.00			C57.12.90			Comments
		Approve	Reject	Abstain	Approve	Reject	Abstain	
Hugo Flores	Hitachi Energy	X			X			
Onome Avanoma		X			X			
Peter Heintzig	Weidman Group	X			X			
Nitesh Patel	Hyundai Power Transformers	X			X			
Alexander Winter	HighVolt	X			X			
Ion Radu	Hitachi Energy	X			X			
Sheldon Kennedy	Niagara Transformer	X			X			
Mark Shem-Tov	VRT Transformer	X			X			
John Lackey	PowerNex Associates	X			X			
Pierre Riffon	Pierre Riffon Consultant	X			X			
Les Reckseidler		X			X			
Alain Bolliger	HV Technologies	X			X			
Suresh Babanna	Prolec-GE Waukesha	X			X			
Hemchandra Shertukde	Hartford University	X			X			
Sanjay Patel	Smit	X			X			
Jeffrey Britton	Doble	X			X			
WeiJun Li	Braintree Electric Light	X			X			
Steven Brzoznowski	BPA	X			X			
David Wallach	Duke Energy	X			X			
John Herron		X			X			
Vladimir Khalin	KV Consulting	X			X			
Mark Lachman	Prolec Energy	X			X			
Mario Locarno	Doble	X			X			
Joseph Melanson	Consultant	X			X			
Kris Neild	Megger	X			X			
Axel Kramer	Reinhausen	X			X			
Stephen Jordan	TVA	X			X			
Harry Pepe	Penix Technologies	X			X			
Roger Hayes	GE Renewable Energy	X			X			
Craig DeRouen		X			X			
T. Spitzer		X			X			
Neil Kranich		X			X			
Michael Franchek		X			X			
Polo Rodriguez	Consultant	X			X			
Arup Chakraborty	Delta Star	X			X			
Zan Kiparizoski	Howard Industries	X			X			
Phillip Hopkinson	Hvolt Inc	X			X			
Kris Zibert	Allgeier Martin	X			X			
Wally Bender		X			X			
Marnie Roussell	Entergy	X			X			
Shawn Gossett	Ameren	X			X			
Poorvi Patel		X			X			
Peter Kleiner	U. S. Army	X			X			
Mike Waldrop		X			X			
James McIver	Siemens Energy	X			X			
Rodrigo Ronchi	WEG	X			X			
Donald Platts	Consultant	X			X			
Shibao Zhang		X			X			
Larry Christodoulou		X			X			
Scott Dennis	Hitachi Energy	X			X			I accept but with comments on the proposed table 4 as it has "transformers" misspelled as highlighted in yellow below.
Larry Dix	Quality Switch	X			X			Comment – do we really want to have the option for PD testing a class I transformer below 5 kV? If that has been discussed I may have missed that but it does seem to open up a door that might bring unintended consequences.

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George Partyka, Jr.	PTI Transformers	X			X			I do have one comment and that is to add “by the purchaser” after all instances of “specifically requested”. In my opinion, this is to just be consistent with the wording found in the standard.

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Eric Davis	Burns & McDonnell	X			X			Table 4 Accept as noted - does not match Table 3.
Steve Snyder		X			X			It will also be necessary to slightly change the text in Clause 5.10 (C57.12.00) where it describes the contents of Table 4.
Jason R. Varnell		X			X			There is a typo in Table 4 as it reads "Class I power transformes" instead of "transformers".
Scott Dennis	Hitachi Power Grids	X			X			I accept but with comments on the proposed table 4 as it has "transformers" misspelled as highlighted in yellow below
George Jr.	PTI Transformer	X			X			I do have one comment and that is to add "by the purchaser" after all instances of "specifically requested". In my opinion, this is to just be consistent with the wording found in the standard
Bruce Forsyth	Bruce Forsyth & Assoc.	X				X		Regarding the proposed changes to C57.12.90-2021, my vote is <b>REJECT</b> because the first sentence of 10.8.1 as written implies the requirement for partial discharge testing to be specifically requested applies to <u>both</u> Class I and Class II transformers, and that is not the intent of the proposed changes. I am willing to change my vote to <b>ACCEPT</b> if the first sentence of 10.8.1 is reworded. If the sentence is changed to "Each Class II transformer and, when partial discharge is specifically requested, each Class I transformer shall receive..." I am willing to change my vote to <b>ACCEPT</b> . Note that I support the spirit of the change and only want to eliminate any ambiguity regarding the "specifically requested" requirement.
Kyle D Stechschulte	AEP	X				X		The proposed language suggests that Class II transformers now require PD tests to be <i>specifically requested</i> . My suggested changes: 10.8 Induced-voltage test for <b>Class I power transformers when partial discharge testing is specifically requested and all Class II power transformers</b> 10.8.1 Each <b>Class I power transformer when partial discharge testing is specifically requested and all Class II power transformers</b> shall....
Raj Ahuja		X				X		Reject - OR Accept with following changes: The acceptance levels should be the same as that of Class II power transformers. a. 250 pC acceptance level during 1 hour test b. 50 pC increase during 1 hour test. -
Bertrand Poulin	Hitachi Energy	X				X		I strongly believe that mixing Class I and class II transformers in clause 10.8 is going the wrong way. I also strongly believe that specifying a one hour test for class I transformers is also going the wrong way. If the only option is to specify the one hour test or not to specify any pd test, many people will not specify this one hour test knowing that this makes no sense. It is simply not possible to test a large volume of transformers for one hour (actually slightly more) each.  A pd test should be a quality test, not a design test and therefore, should be considered a routine test. Class I transformers deserve their own test for PD, and it should be a shorter test so that it can be done as routine.
Alexander Kraetge		X				X		My rejection is based on: 500 pC acceptance level during 1 hour test AND 150 pC increase during 1 hour test.  Both values are too high for an effective quality assessment. If we already question the 250pC for Class II transformers as being quite high, accepting 500pC as still OK for smaller transformers does not make sense to me, even though I understand your motivation as explained. I propose to take the values as for Class II transformers.
Shamaun Hakan	WEG		X		X			Table is not following 1.81 and 1.52 rules for modified (red colored) items.

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Eric Schleismann	Southern Company							The section 10.8 title is not clear. The wording implies that partial discharge testing of class II power transformers is only required when specifically requested. For clarity, I recommend the following: "Induced-voltage test with partial discharge measurement for Class II power transformers. Induced-voltage test for Class I power transformers, when partial discharge testing is specifically requested."
			X		X			Section 10.8.1 is not clear. Again the wording implies that partial discharge testing of class II power transformers is only required when specifically requested. For clarity, I recommend the following: "Each Class II power transformer shall receive an induced-voltage test with the required test levels induced in the high-voltage winding. Additionally, Class I power transformers shall receive an induced-voltage test with the required test levels induced in the high-voltage winding when partial discharge testing is specifically requested."
								Section 10.8.5.2 should not differentiate between Class II and Class I transformers. Class I power transformers should also have to meet the same 250pC test limit as Class II transformers. My company specifies 250pC as a limit for Class I transformers, and our purchased transformers easily meet the limit.
Ajith Varghese	Prolec-energy		X		X			Table 4 have many typo error and Voltage Table doesn't agree with 1.8 X and 1.54X NSV
Mark Perkins								For changes to C57.12.90 I accept with a small editorial change. Since a three phase transformer has three terminals the word Terminal should be terminals
			X		X			For changes to C57.12.00 I don't think it is often feasible to measure PD below 500 pC on terminals below 34.5 kV so I would make a note saying it is not recommended to have an acceptance criteria on terminals below 34.5kV. With this change I would accept the proposal
Chris Baumgartner	We Energies		X		X			Reason for rejection: The values in Columns 6 and 7 are different in Table 4 for Class I and Class II. These should be the same, or Footnote b should be revised to state the correct multipliers for Class I tests.  Other comments (not reason for rejection): 1. Correct typos in footnotes of Table 4 – c, "normal"; e, "comm on" "mayuse" "neujtral" and "l-voltage"; f, "do n ot" 2. I suggest revising Table 3 to clarify that it applies to Class I when partial discharge testing is not specifically requested; Title would be "...and Class I power transformers when partial discharge testing is not specifically requested, voltage in kV" and heading for Class I in table would be "Class I power transformers without partial discharge testing"
Kenneth Skinger	Scituate Consulting			X	X			
Charles Sweetser	Omicron Entergy			X	X			
Anthony Franchitti	PECO Energy		X			X		I think the 1-hr and the 1-hr increase criteria should be the same as Class II criterial.
George Frimp	Hitachi Energy							My vote is reject, only because the numbers for the phase-to-ground enhanced and one hour test voltage levels do not correspond to what is actually calculated using the notes b and c. Below are the numbers I calculate for columns 6 and 7 for the Class I transformers :
								(kV rms) Col 1 (Ph-Grd) Col 6 (Ph-Grd) Col 7
								1.2 1.2 1.1
								2.5 2.6 2.3
								5.0 5.2 4.6
								8.7 9 8
								15.0 16 14
								25.0 26 23
								34.5 36 32
								46 48 42
								69 72 63
								There are two typos in Note c as noted below:
								Column 6 and Column 7 provide phase-to-ground test levels that would normally be applicable to wye windings. When the test voltage level is to be measured phase-to-phase (as is normally the case with delta windings), the levels in Column 6 and Column 7 must be multiplied by 1.732 to obtain the required phase-to-phase induced-voltage test level.

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Daniel Blaydon	Baltimore G&E		X			X		<p>Modifications to Table 4: I suggest that an additional column for the one-hour level be added to Table 3 with a footnote that this column only be used when PD testing is specified. Expanding Table 4 with duplicate information is not necessary.</p> <p>Requirements for Class I PD testing: PD limits for Class I transformers should not be different than Class II transformers. The limits for Class II transformers were reduced because it was recognized that they were much higher than what has been generally accepted by both end users and manufacturers for many years and to align with IEC standards. There is no apparent technical basis for waiting to reduce PD limits for Class I transformers based on testing data (as is suggested) as some end users are already specifying Class II PD testing for Class I transformers without issue. This will ultimately create more confusion in the standard since the difference in PD limits essentially creates a different test.</p>
Santosz			X			X		<p>I am okay with the general idea of this proposal and glad to see that some test levels are added to C57.12.0 since they aren't there now. However, I do not approve this proposal. My comments follow:</p> <ul style="list-style-type: none"> <li>• I suggest the phrase "when PD testing is specifically requested" be changed. To me this opens up questions such as 'requested by whom and when and how'. It should be more formal such as: "when PD testing has been agreed between purchaser and manufacturer". This is the verbiage used throughout the standards</li> <li>• Since PD testing is an OTHER test for Class I as defined in Table 17 of C57.12.00, it is only to be done when agreed. I suggest something be added to Table 17 that describes the intent of this change since it seems kind of special.</li> <li>• In C57.12.00, Table 3 is for Class I and Table 4 is for Class II. This new proposal distorts this by replicating much information in Table 4 that is already in Table 3. I would rather see Table 3 revised to include the test levels and leave Table 4 unchanged.</li> <li>• In C57.12.90, subclause 10.7 is for Class I and 10.8 is for Class II. This new proposal suggest changes mostly to 10.8. I suggest it should be the other way around; make major changes to 10.7 and not 10.8. It could be that 10.7 refers to 10.8 if PD testing has been agreed to.</li> <li>• I am surprised that the acceptance criteria is set at the old level of 500/150 pC and not the new level of 250/50 pC</li> </ul>
Shakim	WEG		X		X			Proposed Changes to C57.12.00-2021, Table 4 : REJECT. Table is not following 1.81 and 1.52 rules for modified (red colored) items
Stephen Antosz			X			X		<p>I don't personally get involved with many Class I power transformers, but when I do I like to see the Class II PD testing done on them. So I am okay with the general idea of this proposal and glad to see that some test levels are added to C57.12.0 since they aren't there now. However, I do not approve this proposal. My comments follow:</p> <ul style="list-style-type: none"> <li>· I suggest the phrase "when PD testing is specifically requested" be changed. To me this opens up questions such as 'requested by whom and when and how'. It should be more formal such as: "when PD testing has been agreed between purchaser and manufacturer". This is the verbiage used throughout the standards.</li> <li>· Since PD testing is an OTHER test for Class I as defined in Table 17 of C57.12.00, it is only to be done when agreed. I suggest something be added to Table 17 that describes the intent of this change since it seems kind of special.</li> <li>· In C57.12.00, Table 3 is for Class I and Table 4 is for Class II. This new proposal distorts this by replicating much information in Table 4 that is already in Table 3. I would rather see Table 3 revised to include the test levels and leave Table 4 unchanged.</li> <li>· In C57.12.90, subclause 10.7 is for Class I and 10.8 is for Class II. This new proposal suggest changes mostly to 10.8. I suggest it should be the other way around; make major changes to 10.7 and not 10.8. It could be that 10.7 refers to 10.8 if PD testing has been agreed to.</li> <li>· I am surprised that the acceptance criteria is set at the old level of 500/150 pC and not the new level of 250/50 pC.</li> </ul>

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Durant Stacy	Hitachi Energy			X			X	
Scott Digby	Duke Energy			X			X	
Kyle nHeiden	Eaton			X			X	
Bruce Webb	Knoxville Utility Board			X			X	
Mickel Saad	Hitachi Energy			X			X	
Jos Veens	Smit Nymegan			X			X	
Markus Scheissl	SGB-Smit			X			X	
Samuel Brodeur	Hitachi Energy			X			X	
Peter Sheridan	SGB-USA			X			X	
Darren Brown	Howard Industries			X			X	
Eric Weatherbee	Pcore Electric Company			x			x	
Jarrod Prince	Ermco-ECI			X			X	Should 10.7 have a General Section or another Section added to clearly state when the Induced-voltage test should be performed based on the requirement of a PD test or not and therefore not change the Title of this Section.
								This same comment would apply to 10.8 as well but to do so in the General Section already established or in another Section to be added.

Total Respondants

87		62	11	14	65	10	12
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