Update on Recent Work of IEC TC34

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International Standards Development - Background

IEC, ISO and CIE are international standards development groups

- IEC – International Electrotechnical Commission
  - IEC covers both safety and performance. Has mandate to include energy efficiency and involve regulators
  - IEC TC34 have 3 CFL and 66 LED related changes to existing standards or new standards in development.
- CIE - International Commission on Illumination - has agreement with IEC and ISO to develop test method standards to advance science of light

International Standards Development - Background

- ISO - International Standards Organisation
  - New ISO Committee Tc274 “Lighting and Energy”

    - to focus on lighting energy efficiency in buildings and work with the CIE on test methods
- Many organisations and countries such as IES, UL, IEA, China, Taiwan, Australia, etc draw upon standards from these 3 organisations in developing national requirements or provide international guidance.
- TC34 is the IEC technical committee that develops safety and performance standards for **lighting products**

Update on CFL Standards

- Compact Fluorescent Lamp (Integrated control gear) CFLi are covered by:

- IEC 60968 “Safety”, has a positive voted Committee Draft for Vote (CDV) and approval to proceed to a Final Draft International Standard (FDIS). Publication due early 2015.
- IEC 60969 “Performance”, has a positive voted CDV and approval to proceed to FDIS. Publication due mid 2015
- 34A/1754/NP is to provide performance tiers to compliment the above. (presently out for vote)

Update on CFL Standards

- IEC 60969 “Performance”,
- The CFLi expert panel reviewed all National Committee comments on the CDV (Jan 2014). These have been circulated to IEC TC34 PRESCO members (March).
- The FDIS manuscript is near complete. PRESCO members to do last check before publication of FDIS with 2 month vote period.

  Note. Recent IEC rule changes at FDIS mean:
  - Positive vote - no comment accepted (editorial or technical)
  - Negative vote - only allowed with technical comment

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Update on CFL Standards – CFL Performance

- *New Work Proposal (PNW)*

  34A/1754/NP: Self-ballasted compact fluorescent lamps for general lighting services -Performance limits
- This Technical Specification has a number of performance levels that can be applied to self-ballasted compact fluorescent lamps intended for general lighting services.
- It includes an outline of tiers of performance that could be used by countries seeking guidance on CFL performance requirements at the national level.
- This proposal has now been released for vote by TC34 and closes 23 May 2014.

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Update on CFL Standards – CFL Performance

- When previously circulated as a Draft for Comment late in 2012 slightly more National Committees submitted positive comments than submitted negative comments.
- However there is still some opposition to the proposed Technical Specification.
- The availability of performance limits and tiers as an IEC specification on CFL performance is something that many lites.asia members have requested, and have been working to encourage IEC TC34 to provide such guidance for CFL performance.

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Update on CFL Standards – CFL Performance

- At the 6th lites.asia meeting in Delhi in September 2012, the meeting resolved to convey support for the proposal for an IEC Technical Specification on CFL performance tiers to the IEC, noting that:
  - lites.asia countries value the availability of IEC international standards and other documentation as a resource that is often used by them to develop national standards in safety, testing and performance;
  - that the proposed Technical Specification would be a valuable tool in informing and assisting countries to promote quality energy efficient lighting.

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Update on CFL Standards – CFL Performance

- In order to ensure that this new work proposal is supported, countries that are voting (P) members of TC34A are encouraged to review the PNW and, if in agreement with the proposal, to contact their National Committee to request a favourable vote to be submitted by 23 May 2014.
- Countries with Observer status (O) may also submit comments through their National Committee.
- A briefing has been sent out by the lites.asia secretariat with relevant web links – please let us know if you would like to receive it again

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Update on CFL Standards – CFL Performance

In order for the PNW to be successful and the Technical Specification proceed, the following is required:

- a simple majority of P members must vote in favour of the proposal in order for it to be adopted;
- *when submitting their vote on an NP, a statement justifying their decision must be provided.*

  In the absence of such a statement, their (positive or negative) vote will be disregarded.

Update on CFL Standards – CFL Performance

- at least 5 P-members must also have nominated or confirmed the name of an expert to take part in the drafting of the technical specification and approved the new work item proposal; and,
  - At the vote stage, the National Committee needs to indicate “they will have an expert participate”.
  - After the vote closes and within 30 days (assuming the vote is positive) the National Committee is required to nominate the person that will be involved.
  - Involvement can be either as direct attendance at meetings or as a corresponding member.

Update on CFL Standards – CFL Performance

Voting closes on 23 May 2014

- all votes, member nomination, justification and any comments must be registered and submitted via the IEC web link by your National Committee in order to count.
- Provided the vote on the PNW is successful, it is intended that work will commence at the June/July 2014 panel meetings to be held in Berlin.

- Based on previous feedback, it is by no means certain that the vote on 34A/1754/NP will be positive and work will proceed.

Update on CFL Standards – CFL Performance

- The details of the proposed Technical Specification currently included as a draft with the PNW would be subject to further revision and discussion in the drafting panel
- A Technical Specification provides guidance only and its use by any country is optional. It is intended to be drawn upon by countries that rely on IEC standards for the development of their national approach to appliance energy efficiency.

Update on CFL Standards – CFL Performance

- While some countries may not have a need for this work, other countries with different circumstances rely on the work of the IEC and in particular TC34 to inform their domestic standards and, in some cases, regulation.
- Not all countries and regions necessarily have the capacity to conduct detailed, independent analysis of performance levels for CFLs.

Update on CFL Standards – CFL Performance

Some concerns appear to relate to a view that performance requirements are outside the scope of IEC standards and should be regulated and enforced through national legislation and market surveillance only.

- While some countries may choose to reference one of the proposed TS performance tiers as regulation, this would be similar to the use of many other IEC standards –relating to both safety and performance – that are referenced by regulation in a range of countries around the world.

Update on CFL Standards – CFL Performance

- The IEC TC 2: Rotating Machinery has already included performance tiers in their performance standards for electric motors (IEC 60034-30-1), so this approach appears consistent with current IEC practice.
- The minimum performance levels also provide a way for countries to avoid contributing to the proliferation of different minimum performance levels.

Update on CFL Standards – CFL Performance

The proposed TS is also consistent with the IEC Market Strategy Board's White Paper 'Coping with the Energy Challenge The IEC's role from 2010 to 2030' (www.iec.ch/smartenergy/pdf/white_paper_lres.pdf):

- *'The IEC was historically safety and compatibility oriented. We now have to take the lead in new areas where integration of different approaches is needed, such as energy efficiency, productivity and the environment.'*
- Recommendation 8.2.4 asks '...*the IEC to consider developing closer contacts with regulatory and political authorities in order to promote electrical-energy-efficient solutions*.'

Update on CFL Standards – CFL Performance

There are also some concerns that the proposal might prevents product innovation or product differentiation on price and quality in the marketplace.

- The performance tiers provide options for minimum performance levels and high performance levels.
- They do not propose maximum performance levels so would not prevent innovation any more than the many and varied MEPS and HEPS already in place for CFLs around the globe

Update on CFL Standards – CFL Performance

- It has been suggested that the TS should only contain one tier of minimum performance levels.
  - The current draft has several tiers in recognition that different countries are also at different stages in the phase-out of inefficient lighting and the promotion of efficient lighting.
  - A level suitable for say the EU may not be appropriate as a minimum level for some other countries – in terms of consumer affordability and local manufacturing capacity.
  - A tiered approach also allows the timetabling of transition to higher performance requirements in the future.
  - In any case, this current vote is in relation to a New Work Proposal only, and the details of the draft TS would be subject to further drafting by a TC34 panel prior to a vote on the final document.

IEC TC34 restructure

- LEDs are a disruptive technology.
- The IEC Tc34 committee has for a long time been able to operate as “silos” where lamps, control gear and luminaires have been considered separately.
- LEDs combine these all of these into one.
- The old structure is under review, to include, not just LEDs but systems, controls for lighting, such as building management systems, the internet, etc.

IEC TC34 Standards – development or update

- IEC 62861 LED **Component Reliability** (pre-proving components to reduce test times from 6000 to 2000 hours
- IEC 62776 **Retrofit Lamps (LED tubes**) - Safety
  - LED lamp cap GX16t-5 LED retrofit tube lamps – Safety
- IEC 62612 **Self-ballasted LED lamps** for general lighting services with supply voltages > 50 V – Performance
- IEC 62717 ed1:2011 **LED modules** (lamps) for general lighting – Performance requirements
- IEC 62772-2-1 **LED modules** (luminaires) for general lighting – Performance requirements

IEC TC34 Standards

Others items of interest:

- **Emergency Lighting** – updates to consider LEDs
- **OLED - Safety and performance**
- **“Intelligent Lighting Systems”** new work to consider aspects of a systems approach to lighting equipment.

Thank You

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