IEA/PECTA activities Discussion

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What we learned from SSL

- Solid State Lighting (SSL) provide high-quality, energy-efficient lighting that surpasses traditional technologies at a lower life-cycle cost.
- https://www.iea-4e.org/ssl/
- Lower energy consumption and environmental savings.
- However, policy change was needed for consumers to switch over.

SSL in the news today

The Lighting Paradox: Cheaper, Efficient LEDs Save Energy, and People Use More

https://www.dn.se/sverige/ny-forskning-visar-led-lampan-kan-vara-en-klimatfalla/

Refers to this article from 2015:
https://insideclimatenews.org/news/21082015/lighting-paradox-cheaper-efficient-led-save-energy-use-rises/

Switching to WBG Power Electronics

- Promote WBG-based power electronics
- https://www.iea-4e.org/pecta/
- Energy savings not always as large (x2 vs x2 - x10 for SSL)
- Switchover cost can be smaller (x1 vs x10 for SSL)
  SiC MOSFET same price as Si IGBT for same ratings
- Other environmental or life cycle savings not as obvious
  (other applications rather than use of natural resources)

Positive signs for WBG Power Electronics

- Multiple manufacturers to second source components
- Evaluation kits and reference/demonstration designs
- Webinars on circuit design and gate drivers for WBG
- Discussion about Reliability

https://www.electronicdesign.com/electronic-design/whitepaper/21154826/this-crucial-wbg-power-transistor-reliability-test-is-often-missing?

What’s next?

- How to speed up WBG-technologies potential?
- Opportunities/barriers?
- Need for policies?