Quality Assurance for Off-Grid Lighting
Program Decisions Regarding the Lighting Global
Minimum Quality Standards and Performance Targets

Stakeholder Outreach Webinar
November 5th 2013 3 PM GMT
Presenting Today

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Lighting Global Quality Assurance Team
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Agenda

• **Background** on Lighting Global QA
• Overview of **stakeholder process** (June - Oct. 2013)
• Summary of **comments** and **program decisions** related to the Standards and Targets
• **Next Steps:** How to report performance metrics?
Lighting Global Quality Assurance Program

- Joint initiative of **IFC and World Bank**; supports Lighting Africa and Lighting Asia
- **Testing and verification program** for LED-based off-grid lighting products (including pico-PV systems)
- QA framework recently institutionalized through the **International Electrotechnical Commission (IEC)** (TS 62257-9-5, Ed. 2.0)
Stakeholder Process

Stakeholder process was used to receive and address feedback from members throughout the value chain

• Original memo describing proposed updates, program history, and motivation for changes was released on June 7: this memo is still available on the Lighting Global stakeholder webpage

• Proposed updates and process discussed at GOGLA meeting in Germany in June

• Previous webinar held on July 10 to describe process and answer questions (22 participants)

• Online form for stakeholder feedback was open between June 10 and August 23
Stakeholder Feedback

• We received responses from 13 different and diverse stakeholder organizations

• We grouped your feedback into 42 distinct comments
Thank You!

Your constructive feedback offered support and direction for the program updates. We received:

- **Broad support** for the proposed changes to the Standards
- **Useful comments** and suggestions to further improve the Standards
- **Many concerns** regarding the Targets, which resulted in major changes to this framework
Where we are now:

Program decisions and responses to stakeholder comments are presented in a memo posted on the stakeholder website on October 7th, 2013:

www.lightingglobal.org/activities/qa/stakeholder-engagement

Revisions go into effect January 1, 2014. Existing products maintain status until test results expire (2 years from receipt of results).
# Accepted Changes to Lighting Global Minimum Quality Standards

<table>
<thead>
<tr>
<th>Aspect</th>
<th>Accepted Change</th>
</tr>
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<tbody>
<tr>
<td>Lumen Maintenance</td>
<td>Increase requirement from L70 @ 2000 hrs to <strong>L85 @ 2000 hrs</strong></td>
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<td>Battery Durability</td>
<td>Batteries must pass <em>storage test</em> that simulates deep discharge in supply chain</td>
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<td>Hazardous Materials (battery only)</td>
<td>Ban <strong>batteries</strong> with cadmium or mercury</td>
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<td>Ingress Protection</td>
<td>Water ingress requirements extended to <strong>PV module junction box</strong> (closes loophole)</td>
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### Highlighted Comments Regarding the Minimum Quality Standards

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<tr>
<td>Lumen Maintenance</td>
<td>Conduct tests at <strong>higher temperatures</strong></td>
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<tr>
<td>Battery Durability</td>
<td>Also conduct battery <strong>cycling</strong> tests</td>
</tr>
<tr>
<td>Hazardous Materials (battery only)</td>
<td>1) Adopt <strong>RoHS and REACH</strong> guidelines</td>
</tr>
<tr>
<td></td>
<td>2) Ban lead-acid batteries</td>
</tr>
<tr>
<td>PV Ingress Protection</td>
<td>Need to determine appropriate <strong>method</strong></td>
</tr>
<tr>
<td>Warranty</td>
<td>1) <strong>Clarify warranty terms</strong> 2) Not all warranties are equal or enforceable</td>
</tr>
<tr>
<td><strong>Standby Loss</strong></td>
<td>Create <strong>new Standard</strong> for standby loss</td>
</tr>
<tr>
<td><strong>Mobile Charging Capability</strong></td>
<td>Develop a method for <strong>assessing and reporting</strong> auxiliary power capabilities</td>
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Comments on Hazardous Materials Ban

Comments:
• Adopt RoHS and REACH
• Ban lead-acid batteries

Response:
• We have concerns about the cost implications of requiring RoHS or REACH and are doing research to learn more
• Lead-acid are widely used, the most cost effective for certain product designs and recyclable in some markets
Comments on Warranty Requirement

**Comments:** We received comments ranging from “you should eliminate the requirement” to “you should require a 2-year no-questions-asked warranty.”

**Response:** We clarified the terms of the warranty and the reporting requirements:

- 1 year from time of purchase
- Cover entire product, including battery
- At a minimum, cover manufacturing defects and early component failure
- Full warranty terms available to customer prior to purchase that detail how to access
Open floor for questions on Accepted Changes to Standards

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Major Update:
Elimination of Public Performance Targets and Addition of Performance Reporting

Summary of updates:

• Public Performance Targets essentially eliminated
  • No longer part of QA framework descriptions
  • Not displayed on the SSS web page or SSS

• Replaced internally with *eligibility criteria* for participation in consumer awareness campaigns for Lighting Africa and Lighting Asia programs

• Introduced new **Standard**: performance reporting requirement for light output and daily run time.
Details: Consumer Awareness Eligibility Criteria

- **Brightness:** 25 lumens | 50 lux over 0.1 m²
  Criteria same as proposed update

- **Run Time:** 4 hours solar run time | 8 hours central charging
  Criteria duration same as before, though now all products with PV panels must meet the solar run time criteria
Rationale

Why Eliminate Public-Facing Performance Targets?
• **Eliminate confusion** about role of Standards and Targets
• Served initial purpose, but now market has matured
• **Encourage diversity of products** by eliminating what had become an artificial threshold.

Why Require Performance Reporting?
• Ensure buyers have **reliable information** available to compare product performance on an equal basis
• Research shows that **end-users care about light output and run time**
• These reported measures are already measured and will still be monitored for **“truth-in-advertising”**
Upcoming Stakeholder Process

Plan to pursue a 2-part process that engages both industry and end-users:

• End-users
  – Crucial information about how to best communicate information about these performance metrics to end-users gathered through focus groups and other field methods

• Industry and other stakeholders
  – Engaged in detailed stakeholder process
## Next Steps

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<td><strong>Now</strong></td>
<td>No more public Targets.</td>
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<tr>
<td><strong>Soon</strong></td>
<td>Kick off Performance Reporting Requirements stakeholder outreach process</td>
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<tr>
<td><strong>May ‘14</strong></td>
<td>(Planned) Announce new framework for reporting</td>
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<tr>
<td><strong>Aug ‘14</strong></td>
<td>(Planned) New framework for reporting in effect as part of the Minimum Standards.</td>
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(Some of) the challenges for setting reporting requirements:

- **What information to include?**
  - Light output and run time are obvious metrics; should other information be included as well?

- **Communication of information**
  - Literacy and numeracy diversity
    - Use graphics?
    - What concepts will end users understand?
      - e.g. most people don’t understand what a lumen is, but they can compare values to see which number is larger.
      - An alternative is to present info in terms of an equivalence that many people will know, e.g., the light output from a standard candle.

- **Degree of standardization of design**
  - Spectrum of options from branded “label” format to flexible format that gives manufacturers discretion about how to report the information (within limited guidelines)
  - Counterfeit label concerns are significant
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Will launch stakeholder process for reporting requirements soon; plan to require performance reporting in August 2014.
Thank you for participating
Our donor partners

• The Africa Renewable Energy and Access Grants Program (AFREA) • The Asia Sustainable and Alternative Energy Program (ASTAE) • The Energy Sector Management Assistance Program (ESMAP) • The Global Environment Facility (GEF) • The Good Energies Inc. • Italy • Luxembourg • The Netherlands • Norway • The Public-Private Infrastructure Advisory Facility (PPIAF) • The Renewable Energy and Energy Efficiency Partnership (REEEP) • The United States.