Energy Efficiency Testing – Data Center Storage

Certification Body – Lessons Learned
ENERGY STAR Process

Basic Process

Manufacturer

Applies for Test

Recognized Laboratory

*EPA

Applies for Certification

EPA Recognized CB

Upload Certified Product Information

Certified – Label Product

WMTL / SMTL Program

*see test option 1, 2 and 3 for alternative test locations

Signs Partner Agreement

EPA
Witnessed Manufacturer’s Testing Laboratory (WMTL) - A manufacturer’s laboratory being used to test specified products of which the manufacturer has production responsibility. The CB witnesses all tests done by a manufacturer’s laboratory which uses its own test equipment.

**Basic Steps:**

- Manufacturer applies to the CB to become a WMTL
- The CB evaluates suitability of laboratory to ISO/IEC 17025 cl. 5.2-5.8 prior to witnessing testing
- The CB will report recognized WMTL to EPA for registration purposes
- Upon successful evaluation of the WMTL all subsequent test shall be witnessed by the CB
ENERGY STAR Process

What does the CB review for certification?

- Test Laboratory EPA recognized (Third party, WMTL, SMTL or 1st Party)
- Test report/Test Data – Correct conclusions, results and test methods
- Measurement and Testing Instrument list with calibration dates
- Declaration about difference of construction – Family Models (as applicable)
- Photo documentation, catalog or picture of the product
- User manual / Instructions comply with ENERGY STAR specification and program requirements
- Valid ENERGY STAR Partner ID
- **ENERGY STAR® Certification submission form is complete and accurate**
- ENERGY STAR® Certification Body Agreement
<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENERGY STAR Manufacturing Partner</td>
<td>Manufacturing Partner s EPA issued Organization ID</td>
<td>Partner Contact Name For This Model</td>
<td>Type of Transaction</td>
<td>Reason for Transaction</td>
<td>Date of Transaction Type</td>
</tr>
<tr>
<td>Text: Min Length: 1; Max Length: 100</td>
<td>Integer;</td>
<td>Text: Min Length: 1; Max Length: 100</td>
<td>Enum Data; Initial Certification; Model ID</td>
<td>Date; Date;</td>
<td>ENERGY S Text; Min Length: 1; Max Length: 100</td>
</tr>
<tr>
<td>The ENERGY STAR Manufacturing Partner is the organization that has signed an ENERGY STAR Partnership Agreement and labels the model. This organization is typically the brand owner.</td>
<td>Provide the ENERGY STAR Manufacturing Partner contact responsible for this certified model.</td>
<td>Required</td>
<td>Required</td>
<td>Required</td>
<td>Required</td>
</tr>
<tr>
<td>Partner xyz</td>
<td>Joe Example</td>
<td>Modification</td>
<td>Modification: Changed Model Name/Number</td>
<td></td>
<td></td>
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</table>

**XML Submission Sheet**

<table>
<thead>
<tr>
<th>W</th>
<th>X</th>
<th>Y</th>
<th>Z</th>
<th>AA</th>
<th>AB</th>
<th>AC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date CB Notified Partner of Model Qualification Date</td>
<td>Certification Body Contact Name for This Model</td>
<td>Laboratory EPA issued Organization ID</td>
<td>Laboratory Contact for This Model</td>
<td>To What Major Markets is This Model Sold</td>
<td>Notes</td>
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<tr>
<td>Required</td>
<td>Required</td>
<td>Optional</td>
<td>Optional</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

**Example**

- Date CB Notified Partner of Model Qualification Date: 3/18/2014
- Certification Body Contact Name for This Model: Martin Olga
- Laboratory EPA issued Organization ID: 1120350
- Laboratory Contact for This Model: Uwe Meyer
- To What Major Markets is This Model Sold: Australia; New Zealand
- Notes: TESTING
ENERGY STAR Process

XML Submission Sheet

<table>
<thead>
<tr>
<th>Stream Num of PSUs in Largest Device Count Configuration</th>
<th>Stream Num Redundant PSUs Largest Device Count Config</th>
<th>Stream TDR File Name Largest Device Count Configuration</th>
<th>Stream Largest Dev Count Config Hot Band Wrkld Test (IOPS/w)</th>
<th>Stream Largest Dev Count Config Random Read Wrkld Test (IOPS/w)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Integer;</td>
<td>Integer;</td>
<td>Text; Min Length: 0; M Decimal; Dec Places: Dec; Dec</td>
<td>Opt.</td>
<td>Opt.</td>
</tr>
<tr>
<td>Indicate the total number of PSUs contained in the largest device count</td>
<td>Indicate the total number of redundant PSUs contained in the largest device count</td>
<td>Opt.</td>
<td>Opt.</td>
<td>Opt.</td>
</tr>
</tbody>
</table>

xyz Storage___streaming_4N_96 drives_04_10_2014.xlsx

The SNIA Emerald Test Data Report

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Product Description

Company
Address

Thank You!

…..Questions?

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