

## **Budget 2017: Government announces changes to the technologies supported by the ECA Scheme for Energy Saving Technologies**

On 22<sup>nd</sup> November the Government confirmed, in Budget 2017, that a number of changes to the ECA Scheme for energy saving technologies will come into effect in 2018, (anticipated in Spring/Summer 2018). These changes, detailed below, are based upon recommendations made to Government in November 2016.

### **Three new sub-technologies are proposed**

- **Evaporative Air Coolers to be added as a sub-technology in the Heating, Ventilation and Air Conditioning (HVAC) category** - Evaporative air coolers are used as an alternative to packaged chillers to provide conditioned, cooled air to commercial buildings, industrial processes and data centres. They have the potential to deliver significant carbon savings.
- **Saturated Steam to Electricity Conversion Equipment to be added as a sub-technology in the Waste Heat to Electricity Conversion Equipment category** - Recent technological developments have allowed the development of products that can generate electricity from lower quality steam that is not suitable for use in a conventional steam turbine generator. They have the potential to deliver significant carbon savings.
- **White LED Lighting Modules for Backlit Illuminated Signs to be added as a sub-technology in the Lighting category.** This lighting sub-technology will be a listed category - White LEDs offer significant energy savings for backlit illuminated signs, over other sources of lighting.

### **Two sub-technologies are proposed for removal**

- **Biomass Fired Warm Air Heaters (a sub-technology of Radiant and Warm Air Heaters)** - Organisations that use biomass equipment are generally using biomass boilers.
- **Localised Rapid Steam Generators (a sub-technology of Boiler Equipment)** - This is a small, declining market and ETL is not currently having a significant impact on this market.

### **Two sub-technologies will be merged**

- The previous categories for White LED Lighting Units and High Efficiency Lighting Units will be merged into one sub-technology called **Efficient White Lighting Units**. Thresholds will be set to focus the scheme on top performing products.

### **The qualifying criteria for a further eight sub-technologies will be revised**

1. Air Blast Coolers
2. Air Source Gas Engine Driven Split and Multi-split (including VRF) Heat Pumps
3. Automatic Monitoring & Targeting Systems
4. Burners with Controls
5. Evaporative Condensers
6. Hot Water Boilers
7. Waste Heat to Electricity Conversion Equipment
8. Uninterruptible Power Supplies

A summary is given below of the planned introductions and changes to the ETL criteria:

<p><b>Air Blast Coolers</b></p>	<ul style="list-style-type: none"> <li>• Introduce sub-categories for packaged air blast free coolers and air blast coolers, raise the EER threshold for air blast coolers and remove performance criteria for packaged air blast free coolers.</li> <li>• Update references to test standard BS EN 1048 and the EU Pressure Equipment Directive.</li> <li>• Amend criteria wording to refer to inlet temperature difference and variable speed fan(s).</li> <li>• Amend representative testing rules and allow wildcards in model numbers.</li> </ul>
<p><b>Air Source Gas Engine Driven Split &amp; Multi-Split (inc. VRF) Heat Pumps</b></p>	<ul style="list-style-type: none"> <li>• Amend the criteria to specify the new BS EN series of test standards for gas engine driven heat pumps: BS EN 16905:2017</li> <li>• Change performance parameters to seasonal energy efficiency performance thresholds in order to align heating and cooling performance with the new Ecodesign requirements under Commission Regulation (EU) 2016/2281 for air heating products.</li> <li>• Define seasonal energy efficiency performance thresholds.</li> <li>• Introduce representative testing for this sub-technology.</li> <li>• Remove non-VRF products from ETL gas engine driven heat pumps.</li> </ul>
<p><b>Automatic Monitoring &amp; Targeting Systems</b></p>	<ul style="list-style-type: none"> <li>• Increase the type of meters and sensors that fall within the criteria's scope to include oil, compressed air and steam flow meters and temperature sensors.</li> <li>• Define functionality criteria for eligibility requirements and measurement standards. Change the name of the category to <b>Automatic Monitoring &amp; Targeting Sub-metering Systems</b>.</li> <li>• Amend the name of the overarching technology category from AMT to aM&amp;T.</li> </ul>
<p><b>Burners with Controls</b></p>	<ul style="list-style-type: none"> <li>• Extend the scope of the product category to explicitly include heat recovery (i.e. recuperative and regenerative) burners and pulse-fired burners.</li> <li>• Establish the corresponding performance thresholds and measurement standards for the expansion of scope.</li> <li>• Clarify the eligibility and test requirements for burners designed for industrial applications.</li> </ul>
<p><b>Efficient White Lighting Units</b></p>	<ul style="list-style-type: none"> <li>• Introduce a robust increase to the required efficacy threshold of over 25% to reflect the continuing improvements in efficiency.</li> <li>• Housekeeping changes to further simplify the criteria, align testing requirements, and update references to standards.</li> </ul>
<p><b>Evaporative Air Coolers</b></p>	<ul style="list-style-type: none"> <li>• Specific functional criteria will be developed for direct evaporative air cooler products.</li> <li>• Specific performance criteria will be developed for indirect evaporative air cooler products, which include an energy performance threshold to focus support on top performing products.</li> </ul>

<b>Evaporative Condensers</b>	<ul style="list-style-type: none"> <li>Amend criteria to require eligible products to incorporate axial fans.</li> </ul>
<b>Hot Water Boilers</b>	<ul style="list-style-type: none"> <li>Amend the performance measurement for products <math>\leq 70\text{kW}</math> to Seasonal Space Heating Energy Efficiency (SSHEE) and validate proposed SSHEE performance thresholds.</li> <li>Align thermal efficiency thresholds for products <math>&gt;70\text{kW}</math> with Ecodesign, switching net CV to gross CV.</li> <li>Define performance thresholds for Category 1 High Temperature Hot Waters Boilers.</li> <li>Develop guidance for eligibility of boilers <math>&gt;400\text{kW}</math> rated output sold with non-integrated burners.</li> </ul>
<b>Waste Heat to Electricity Conversion Equipment</b>	<ul style="list-style-type: none"> <li>Extend the power capacity and the maximum design temperature range of equipment covered by the criteria</li> <li>Rename the category as a new sub-technology: <b>Organic Rankine Cycle Heat Recovery Equipment</b> and retain the title Waste Heat to Electricity Conversion Equipment as the technology group name.</li> </ul>
<b>Saturated Steam to Electricity Conversion Equipment</b>	<ul style="list-style-type: none"> <li>The proposed scope covers equipment which uses wet or saturated steam to generate electricity, meets performance thresholds for net electrical efficiency and overall efficiency; and has a 3 phase power output of less than 500 kWe at standard conditions.</li> <li>Establish associated performance thresholds and associated test and measurement standards.</li> </ul>
<b>Uninterruptible Power Supplies</b>	<ul style="list-style-type: none"> <li>Increase efficiency thresholds to refocus coverage on top quartile products.</li> <li>Require static UPS to incorporate a high efficiency operating mode and include advanced controls to switch quickly between modes.</li> <li>Require modular products to incorporate advanced controls to operate the modules in such a way as to improve efficiency.</li> <li>Make housekeeping changes to improve the alignment of requirements between static and rotary products.</li> </ul>
<b>White LED Lighting Modules for Backlit Illuminated Signs</b>	<ul style="list-style-type: none"> <li>Criteria will be developed which address the specific requirements of LED products used in illuminated signs. The criteria will feature the eligibility and performance criteria, the test and measurement standards and the technology description and definitions.</li> <li>Products will be assessed and listed on the Energy Technology Product List (ETPL).</li> </ul>

### **Minor housekeeping changes**

In line with usual practice, there will also be minor (i.e. housekeeping) changes made to some ETL categories, including Variable Speed Drives and Steam Boilers. Any ETL listed suppliers affected by these changes will be informed directly.

### **Timescales**

For the above mentioned categories which require a change to the ETL criteria, feedback on the proposed changes will be sought from stakeholders between December 2017 and February 2018. All of the stakeholders involved in the previous research programme are in the process of being contacted regarding these changes. If there are any technology areas in which you were not involved, but would like to comment, please contact ICF at [etl@icf.com](mailto:etl@icf.com) by 20 December 2017 and ICF will include you in the consultation.

For any general enquiries about the ETL scheme, the Annual Update process and products on the ETL, please contact [ECAQuestions@carbontrust.com](mailto:ECAQuestions@carbontrust.com).

The final criteria will be submitted to Government in March 2018 and all of the changes are expected to come into force between Spring/Summer 2018.