



BOSCH

Robert Bosch LLC
Telephone +1(202)393-0924
Fax +1(248)876-1439
Meredith.Tunick@us.bosch.com
www.Bosch.us

December 16, 2016

Abigail Daken
U.S. Environmental Protection Agency
ENERGY STAR HVAC Program
1200 Pennsylvania Avenue, NW
Washington, D.C. 20460

RE: ENERGY STAR Final Draft Connected Thermostats Specification V1.0

Dear Ms. Daken:

Bosch Thermotechnology (Bosch) is pleased to offer the following comments concerning the ENERGY STAR's Final Draft Specification for Connected Thermostats V1.0.

Bosch has been a leading global supplier of technology and services in the areas of Automotive, Industrial Technology, Consumer Goods and Building Technology for over 130 years. When designing our products, we pay close attention to combining efficient use of natural resources, system flexibility and user friendliness. All of our products are designed with energy efficiency in mind and are intended to enhance quality of life, while operating in an environmentally-friendly manner.

Increasingly, many of the products we are bringing to market are "connected" and are intended to support the growing Internet of Things (IoT).

Open Platform: Bosch strongly supports the adoption of open platform Connected Thermostat devices. The era of connectivity provides new opportunities and drives activities that support the next-generation of products and services. To enable a diverse range of connected applications, and to standardize different platforms and technologies, an open platform is essential. We commend EPA for taking this approach.

Connected Thermostat Manufacturers Have Varying Levels of Market Penetration: While the ENERGY STAR Program's objectives include the promotion and increase use of energy-saving technologies, the new data reporting requirements outlined by the CT specification may have the potential



to favor those CT manufacturers with greater market penetration. Because some manufacturers have more installed products across a more diverse set of climates, geographic areas, etc, the quantity of available and relevant data concerning CT performance would certainly be greater than those manufacturers with a smaller number of installed products.

December 16, 2016
Page 2 of 3

We strongly encourage EPA to approach this issue creatively and in such a way that promotes its energy efficiency objectives, but does not adversely affect opportunities for smaller CT manufacturers to participate in the program. As with all programs within ENERGY STAR, the specification should provide a level-playing field for all manufacturers and take into account that in some cases, the diversity of data available for reporting may be limited due to a variety of business factors.

Data Collection and Privacy Issues: Not all CT manufacturers treat data collection and data privacy in the same manner. For example, Bosch has strict corporate guidelines that govern privacy and the collection of personal data. These requirements restrict data collection and in many cases only allow the collection and retention of personal information as necessary per relevant law. Compared to most connected thermostat manufacturers, Bosch's internal position and approach to data privacy and collection may be stricter than typical U.S. HVAC manufacturers.

Safeguarding consumer privacy when processing personal data is something Bosch takes very seriously, and this concern is built into our business processes from the ground up. We treat all personal data as confidential and data protection and information security is protected through a set of stringent corporate requirements.

We fully agree that the approach that ENERGY STAR is taking is a positive one, however, there may be significant hurdles for CT manufacturers while moving to this new data collection and reporting structure. This may delay our participation in this product category in the near term since we may need to undergo a significant exercise to seek internal corporate approvals and alignment to ensure compliance with the ENERGY STAR program.

We would also like to further understand the implications of situations where consumers don't provide permission for data collection. How will EPA balance the need for a diverse data sample against the consumers' decisions to provide (or not provide) permission for data collection? What is the mechanism and/or process for EPA staff to address issues such as these, and



how will they potentially affect a CT manufacturer's participation in the program?

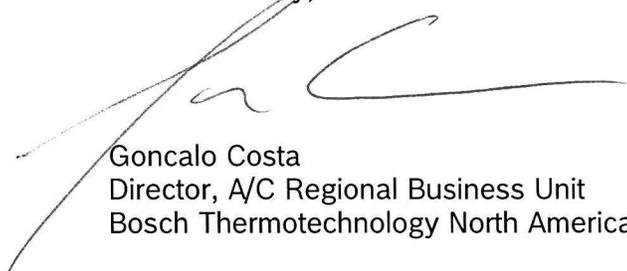
December 16, 2016
Page 3 of 3

Measuring of Run Time: We understand the approach behind choosing run time as a way of measuring efficiency as it may be the best way to universally compare energy savings without relying on the utility energy use data. However, other potential methods should be explored in future revisions which are more accurately able to monitor energy consumption.

Summary: We believe that there are significant energy efficiency gains to be realized in the connected thermostat space. We commend the ENERGY STAR program staff for their efforts to establish a standard methodology to calculate savings from connected thermostats. However, we would like to ensure that there is a level playing field for all manufacturers to participate equally in the program, realizing that the main objectives of these efforts are to help reduce energy consumption through the ENERGY STAR Connected Thermostat program.

Thank you very much for the consideration of our comments. Should you have any questions, please do not hesitate to contact me at 949-294-2652 or goncalo.costa1@us.bosch.com, or Meredith Tunick, Manager of Federal Government Affairs, at 202-603-6979 or Meredith.tunick@us.bosch.com.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Goncalo Costa', written over a horizontal line.

Goncalo Costa
Director, A/C Regional Business Unit
Bosch Thermotechnology North America