14 December 2017

VIA ELECTRONIC MAIL

Ms. Ann Bailey
Branch Chief, Energy Star Products
US Environmental Protection Agency
Office of Air and Radiation
William Jefferson Clinton Building
1200 Pennsylvania Avenue, NW
Washington, DC 20460

Re: Stakeholder Input on ENERGY STAR Program

Dear Ms. Bailey:

Juniper Networks is submitting these comments in response to the EPA's November 20, 2017 letter seeking stakeholder input on the ENERGY STAR Program. These comments pertain specifically to the Large Network Equipment (LNE) program, on which Juniper Networks worked closely with the EPA and US Department of Energy to develop. Juniper supports the concept of the voluntary LNE program and believes that the program's low level of adoption indicates a need to remove requirements that do not advance energy efficiency but do limit product design options.

By way of background, Juniper Networks delivers high-performance network infrastructure products and services spanning routing, switching, security applications, and firewalls. Our customers include telecommunications service providers; over-the-top content providers; commercial enterprises; and Federal, state, and local government departments and agencies. Juniper has long supported energy efficiency as a sound and responsible business practice, not only in terms of the operation of our products but also for the operation of our corporation. This is why Juniper participates in 80 PLUS, has been a City of Sunnyvale Certified Green Business, and continually considers new options for reducing energy usage.

Ever since the EPA and DOE announced their intention to establish an ENERGY STAR program for LNE, Juniper has been a partner with them in determining how the program should operate. We believed from the beginning that a voluntary program could drive the development and acquisition of energy-efficient

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networking products. As part of the process, we encouraged the EPA and DOE to base LNE specifications on peer-reviewed and established metrics and test methodologies.

Since the Federal government implemented the LNE program a few years ago, only one equipment manufacturer has obtained ENERGY STAR certification, and even then only for a portion of its product portfolio. We believe this is an indication that the government should revise the program to attract more partners.

We first recommend that, to draw in additional participants, the government should revise the specification to remove requirements that do not pertain to energy consumption and efficiency. For instance, in Product Specification Version 1.0, Data Element 5.1.1 requires manufacturers to measure the air temperature at the inlet of the device. The temperature at the air inlet does not affect power efficiency, such that this requirement essentially forces manufacturers to design their products in a specific manner that limits design and efficiency options. The government should modify the specification so that manufacturers can measure temperature at any location of a device as long as they disclose the location. This would fit within the principles of the voluntary program and could lead to broader industry adoption of the program.

Juniper further recommends that, in line with other equipment efficiency standards, the specification should not mandate the testing topology. Test Conduct 5.1A(12) requires that the Unit Under Test (UUT) be connected to the test equipment using (1) full mesh topology if the UUT does not have clear designations between its uplink and downlink ports or (2) partial mesh if the UUT does have such clear designations. Other efficiency standards for network equipment, including ATIS and TEER, permit the UUT to be connected in serial. This is because serial connection not only has no discernible impact on the efficiency of the UUT but also is less costly than partial or full mesh (which require additional equipment for testing). This change to the specification could significantly increase industry participation in the program.

Thank you for your consideration of these views. Should have any questions regarding this submission, please feel free to contact me at bkoley@juniper.net or (408) 745-2000.

Sincerely,

DocuSigned by:
Bikash Koley
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Bikash Koley
Executive Vice President and Chief Technology Officer

cc: Mr. David M. Nemtzow, Acting Director, Building Technologies Office, Office of Energy Efficiency and Renewable Energy, US Department of Energy