### UNITED STATES PATENT AND TRADEMARK OFFICE

# BEFORE THE PATENT TRIAL AND APPEAL BOARD

## ECOBEE TECHNOLOGIES ULC

Petitioner

v.

ECOFACTOR, INC.

Patent Owner

Patent No. 8,596,550

## **DECLARATION OF DAVID M. AUSLANDER**

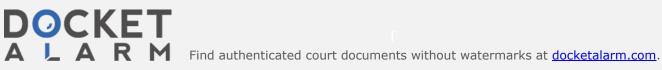


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### I. ENGAGEMENT AND COMPENSATION

1. My name is David M. Auslander. I have been retained by counsel for ecobee Technologies ULC, ecobee Ltd., and Generac Holdings Inc. (collectively, "ecobee") for the purpose of providing my opinion with respect to the unpatentability of U.S. Patent No. 8,596,550 ("the '550 patent"). I am being compensated for my time in preparing this declaration at my standard hourly rate, and my compensation is not dependent upon my opinions or the outcome of the proceedings. My curriculum vitae is attached as Ex. 1003.

### II. QUALIFICATIONS

- 2. I received my Bachelors in Mechanical Engineering from The Cooper Union in 1961. From the Massachusetts Institute of Technology, I received a Master of Science (S.M.) in 1964 and a Doctor of Science (ScD) in 1966. I have over 50 years of experience in the study, research, teaching, and development in control system design and analysis, including energy management systems, real time software methodology, motion control, and dynamic system modeling and simulation.
- 3. My research areas focus on control system design and analysis, including energy management systems like those discussed in the '550 patent. This area also includes issues of real time software design and dynamic system simulation, which are key areas for designing successful products that need to adapt



to changing environments. For example, I co-authored the "Real-Time Software for Implementation of Feedback Control," chapter in The Control Handbook, published by CRC Press and IEEE Press in 1996. I also co-authored a textbook entitled Control Software for Mechanical Systems: Object Oriented Design in a Real-Time World, published by Prentice-Hall in 2002. I also authored a chapter regarding "Digital Controllers," in the Encyclopedia of Physical Science and Technology (Third Edition), published by Academic Press in 2003, and co-authored a chapter entitled "Network Fundamentals," in the Handbook of Networked and Embedded Control Systems, published in 2005.

- 4. Some relevant research papers for which I was a co-author are: "Multi-Sensor Single-Actuator Control of HVAC Systems" at the International Conference for Enhanced Building Operations in Richardson, TX (2002), "A Tale of Two Houses: the Human Dimension of Demand Response Enabling Technology from a Case Study of an Adaptive Wireless Thermostat" and "Demand Response-Enabled Residential Thermostat Controls" for the American Council for an Energy Efficient Economy (ACEEE, 2008), and "Developing Affordable Smart Thermostats" for Home Energy (2008).
- 5. I have taught classes in the areas of real time software and feedback control systems. I developed a measurement and instrumentation course and several courses in the areas of mechatronics.



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