

## 2020 webinars to support NYSERDA's Renewable Heat NY program

Due to the COVID -19 pandemic NYSERDA has decided to cancel the full day training "Hydronics for High Efficiency Biomass Boiler System," originally scheduled for April and tentatively rescheduled for October. To sustain the training effort, the following four webinars will be presented over the remainder of 2020. These webinars are free, and will be presented by John Siegenthaler, P.E. This schedule will be posted on NYSERDA's Renewable Heat NY website soon, along with a link for registration.

### **August 20 / 1:00-2:00 PM**

#### **Topic: Options for domestic water heating in biomass boiler systems**

**Description:** Most systems using pellet boilers, or cordwood gasification boilers, are designed for space heating. However, many of the buildings in which these boilers are used also have a requirement for domestic hot water. This webinar explores several design concepts and hardware options for integrating domestic water heating as an ancillary load. Specific topics include: DHW load estimation, internal and external heat exchangers, flow switches, preheating and auxiliary heating, on-demand versus storage based systems, and anti-scald protection.

### **September 17 / 1:00-2:00 PM**

#### **Topic: Control concepts for hydronic systems using renewable energy heat sources (part 1)**

**Description:** The controls used in hydronic heating systems supplied by renewable energy heat sources, such as biomass boiler, heat pumps, and solar thermal collectors have proven to be an area in which installers have some difficulty. This webinar will emphasize "universal" control concepts used in these systems, and shows how they are implemented with off-the-shelf hardware. Specific topics include: Basic switch and relay logic, setpoint temperature control, staging control, differential temperature control, and sensor mounting.

### **October 29 / 1:00-2:00 PM**

#### **Topic: Control concepts for hydronic systems using renewable energy heat sources (part 2)**

**Description:** This webinar will be a continuation of the September 17th discussion. It will discuss Outdoor reset control, mixing control, designing control systems using ladder diagrams, and present examples of complete control systems.

### **November 12 / 1:00-2:00 PM**

#### **Topic: Case study - Pellet boiler system at the NYSDEC boat maintenance facility at Lake George**

**Description**The NYSDEC boat service facility at Lake George uses a pellet boiler as the primary heat source for a floor heating system. This webinar exams the details used in this system, including fuel supply, boiler, thermal storage, and the distribution system. It will also discuss some of the monitored performance for the system, and some of the initial challenges met in fine tuning system operation.