

Blooming Nursery, Inc.: the 'Easiest Sustainable Project on their Docket' – Lighting Retrofits and Controls

By Whitney Rideout, Oregon Association of Nurseries (www.oan.org)

Go to Blooming Nursery, Inc. in Cornelius, Oregon and you'll find yourself immersed in a culture thriving on progressive and sustainable practices. You'll find everything from LiveRoof® modular green roof system and solar thermal panels to restored riparian areas and container recycling programs; very alluring and cutting edge stuff. But in this case-study we're going to focus on lighting retrofits. Why? Simple. This series of studies is intended to help nurseries get started on sustainable practices in a challenging economy. Lighting retrofits provide a very simple and profitable project with a short payback period. In other words, this is: 'Sustainability on Training Wheels' and it can start contributing savings to boost your bottom-line sooner than you might think. Moreover, Blooming Nursery has done a brilliant job with their lighting retrofits, so if you're looking for a way to get started on a sustainability effort - here is your blueprint on a silver (and green) platter.



Blooming Nursery, Inc. (Blooming) is a wholesale nursery that provides more than 1,800 perennials, flowering shrubs, herbs, ground covers and ornamental grasses. They offer finished containers marketed under the Blooming Advantage name as well as plugs, potted liners and bare root divisions. They cultivate most of their plants in a state-of-the-art 40,000 square foot propagation greenhouse, which can then be moved into heated greenhouses totaling 60,000 sq ft, or to 150,000 sq ft of cool greenhouses and cold frames. They also maintain over 45 acres of growing fields to support their bare root offerings.



Blooming Nursery, Inc. in Cornelius, Oregon

Michael Wisshack, General Manager for Blooming, was kind enough to showcase all the sustainability projects they have underway, including energy efficiency items. When Blooming decided to increase their energy efficiency, they began by replacing inefficient boilers with high efficiency condensing boilers and installing heat retention curtains in propagation areas. Lighting seemed a natural next step, and they dug into the project with an intelligence

and thoroughness that made short work of it and actually wound up getting most of it paid for by government incentives and grants; more on that in a moment.

[Wisshack] "Lighting was actually the simplest of the actions we implemented in that timeframe. Energy Trust of Oregon (ETO) performed an onsite-audit for free, and wrote up a detailed lighting analysis - it was very impressive and enlightening to see the kind of money we were leaving on the table due to our legacy lighting systems." The ETO analysis described Blooming's energy use, suggested retrofits, and included a full ROI analysis which detailed estimated payback of the retrofits, including the amount of work that could be funded through ETO incentives and Business Energy Tax Credits. (BETC)

[Wisshack] "79% of the project was paid for by available incentives, which of course was wonderful as this took the ROI payback timeframe down to a year."

Recommendations by ETO included:

- Replacing existing T12 lights with T8 lights: T12 lamps are the very common 1 ½" diameter fluorescent tube lamps. T8 lamps are 1" diameter and also fluorescent tube, but use less electricity and produce more light than T12 lamps. Blooming replaced 40 T12 fixtures.
- Replacing Metal Halide lights with T8 lights. Metal halide lamps are common in high-bay applications such as warehouses or barns. Blooming replaced 13 metal halide lamps with 6-bulb T8 fixtures, cutting electricity use in half in those areas.
- Installing lighting controls: installation of occupancy sensors to ensure lights are turned off. Occupancy sensors were installed on individual fixtures. This allows some lights in a room to be on while others can remain off if that area is not occupied. Occupancy sensors can increase electric savings by 25% or more.

[Wisshack] "ETO made this project very easy because they did the analysis and even provided a list of contractors to make the retrofits." "Scheduling the contractors to change the fixtures was the most difficult part of this project that we had to manage, but it wasn't really burdensome as the contractors were very flexible and did most of the work during off times to help alleviate the stress and inconvenience on staff and better facilitate our production demand."

[Wisshack] "What can I say - it was just a great experience." "No training was needed, our lighting is better, and our electricity bills are lower. We now save almost \$2,200 per year in electricity and offset 11 tons of CO2.

So, it's good business, and it also feels good to know that we're fundamentally better stewards of the resources we use to do our jobs and serve our customers. The project was simple and the payback (after incentives) of one year makes it something every nursery operation should investigate."



Blooming retrofitted lighting in their barn, offices, shop and lunch room.