Curtis Lumber:
Energy efficient lighting for retailers

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National ENERGY STAR
Lighting Partner Meeting
San Diego, California
Projects

- Lighting Display Showroom
- Lighting Lab
- Main Facility Lighting Project
How these projects came about?

- The general lighting in our facility was our first consideration.
- Ballast failures
  - Curtis had over 60 fixtures out, replacing ballasts become a priority.
- Fire potential
  - Our old ballasts were so hot that they were melting out insulation.
- Re-lamping of facility
  - We received several proposals to redo our lighting, it took over a year to settle on one contractor.
- Displaying our products well and reaching a growing market was obvious
Lighting Display Showroom
How this came about?

- **Rebuilding of the display**
  - We had a low cost product that was poorly displayed and could not be sold with our custom kitchens or baths.

- **Reduce electric consumption**
  - From the start we designed the display to use less than 10 percent of the energy of any current lighting showroom and this is how we will pay for it.

- **Create a different type of showroom**
  - We needed to create a showroom that complimented our other high-end showrooms and attracted consumer interest.
What kind of support did we receive?

- LRC
- NYSERDA
- American Energy Care (AEC)
- J.H. Bennett
- Eames Construction
- L & C Electric
- Suburban
- Velux
- Allied
- Our Folks
How can other people copy what we did?

- Have a need
  - We needed to repair or redo our current lighting display.

- Recognize an opportunity
  - Redoing our lighting display and improving performance will be cost effective.

- Be flexible in the solution you require
  - Keep an open mind and listen to the experts.

- Stay focused
  - Keep the company's best interest at heart.
How can other people copy what we did?

- **Detail**
  - The devil is truly in the detail, these projects are more intensive than you realize.

- **Ask questions**
  - Listen and ask questions concerning cost and longevity, what will it cost you in the end? What are the benefits? Will it work? How long will it work for?

- **Seek support**
  - When you get going there is support from many sources and our contractors were key.

- **Be flexible during execution process**
  - Challenges will arise and so will opportunities, keep an open mind as to the benefits and the costs involved.
How can other people copy what we did?

- Keep looking for opportunity
  - Keep looking for ways to reduce cost and improve the outcome.

- Get marching orders and move out when you lock a major aspect of the project
  - When everyone agrees lock the project and move as quickly as you can to completion.

- Everybody has something to contribute
  - Listen to what people are saying and implement the good ideas.

- Build a network and stay connected
  - You are not alone and there is a lot of support for within and without.
Lighting Lab
How this came about?

- Collaborative effort
  - Lighting Research Center
    - World class academic facility right in our neighborhood
  - Curtis Lumber
    - A growing company seeking to reduce energy consumption, improve lighting and provide world class products and service to our customers
  - NYSERDA
    - Great agency to work with providing insight and funding for a wide variety of projects
How this came about?

- Contractor involvement essential from the beginning
  - Pick professionals and build a great team
- Educate: using service and products show what can be done, the LRC funded by NYSERDA was key
  - Builders/Contractors
  - Remodelers
  - Consumers
- Demonstrate: Lead by example
  - Great Aesthetic Appeal
  - Effectiveness of efficient lighting design
  - Multi-uses of efficient lighting
What kind of support did we receive?

- Lighting Research Center
  - Design
    - From the aesthetics to the functionality they stood by us.
  - Technology
    - The LRC is at the cutting edge.
What kind of support did Curtis Lumber provide?

- **Funding**
  - We put our hard earned money on the line.

- **Design**
  - Through a collaboration of effort we developed winners.

- **Contractor Support**
  - Gifted and talented professionals are essential.

- **Marketing**
  - Letting the public and especially customers know.

- **Project Leadership**
  - In the end you have to drive each process to completion.
What kind of support did we receive?

- **NYSERDA**
  - Funding
    - Money for reducing return on investment makes costly projects acceptable.
  - Marketing
    - Energy savings can come about by many methods and telling others through marketing assistance, thus reaching a wider audience is essential to success.
How can other people copy what we did?

- Have a need
  - These projects are very expensive and you must have a need to change what you are doing.

- Develop a beautiful, logical and cost effective design
  - If it does not look good or does not work you are wasting time and money.

- Develop a network and stay connected
  - This is a very dynamic process and change as well as roadblocks must be addressed.
Main Facility Lighting Project

A $1.5 Million project with a payback of about 6 years through tax incentives, grants and energy savings.
Projects

- Skylights
  - Direct sunlight within our entire facility improves lumen levels and through CRI appearance of all objects, this represents well over 75,000 watts of natural light.

- PV System
  - Collecting 50,000 watts and distributing it where needed during daylight hours.

- Fluorescent Lighting
  - Making up for lack of natural lighting, dimmable in all retail areas and controlled by occupancy sensors everywhere.

- Computer controlled lighting
  - Computers make adjustment of lighting levels and duration of illumination a snap.
How this came about?

- People saw an opportunity
  - We saw a chance to fix a problem, reduce operating cost and vastly improve our professional appearance.
- Practice what we preach
  - Since we now sell lighting we had to become the area experts and apply what we learned to our own operation.
- Drastically reduce energy consumption in facilities
  - Saving money is a good thing.
What kind of support did we receive?

- Velux
- NYSERDA
- LRC
- American Energy Care (AEC)
- Eames Construction
- JH Bennett
- L & C Electric
How can other people copy what we did?

- Have a need
  - Something must drive you.
- Develop a logical design
  - The design must work, be attractive and above all be cost effective.
- Develop a network and stay connected
  - These are tough projects and you will need all sorts of help.
Future Projects

- AC/DC Fluorescent System
  - We are about to begin installation.

- Photovoltaic Power Generation
  - We are mounting the hardware on the building as we speak.

- Co-Generation
  - This may or may not be a cost effective solution but we are looking.
Future Projects

I can not keep spending the companies money. We need to show a return on what we are doing. Using creative financing thanks to NYSERDA we have lower monthly bills including debt repayment than our previous power bill.