

# Xavier S. Walter

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Certified BPI Building Analyst and Envelope Specialist

Team Captain of NJs most successful cooperative of Energy Efficiency Experts

Energy Efficiency Trainer and Educator

Political Action



# THE ENERGY TEAM

The “Whole Building Approach” to  
Sustainability and Energy Efficiency



Sustainable

# Energy Star Contractors

Participating with the NJ Office of Clean Energy







## GOAL:

To bring sustainable utility savings and comfort to properties in New Jersey through Education and Implementation of Energy Efficiency Upgrades.

- LED Lighting
- Solar Electric
- Solar Thermal
- Sealing and Insulating
- Changing Behaviors

5,000sqft

# Our Building



Showroom

Training  
Center

Warehouse



With  
Room  
To  
Grow



# 1751 Route 206 Southampton NJ

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- We have a plan
  - No Gas/Electric bill by Jan 2013
  - Sustainability Policy
  - Improved Fleet Vehicles
- 100% Renewable Electricity – Glacial Energy
- LED Lighting
- Solar Hot Water System
  - Saves \$60-\$100 per month



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One of our auditors even has a car converted to veggie oil.

# LED Lighting

## LED Lighting throughout

- Display Lighting 2,000sqft showroom – 100watts total
- High Bay – 100watts Versus 450watts
- Tube Lights – 26bulbs 12hrs a day/360
- 15watt LED vs. 36watt Fluorescent
  - LED = \$303yr vs.
  - Fluorescent = \$727.83yr

Saves Money, Lasts Longer, Burns Cooler



# Why LED?

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- Lasts 60,000hrs
- Lower Maintenance cost
- Better light quality
- No Mercury!
- Less Replacement
- Over HALF the cost to run



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# Scan to email/fax

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- New Energy Star Copy Machine
- Scan to all team members email
- Scan to desktop icon
- Send to any email address/fax
- Duplex printing
- \$100mos for in vs. \$300+ in old printers.

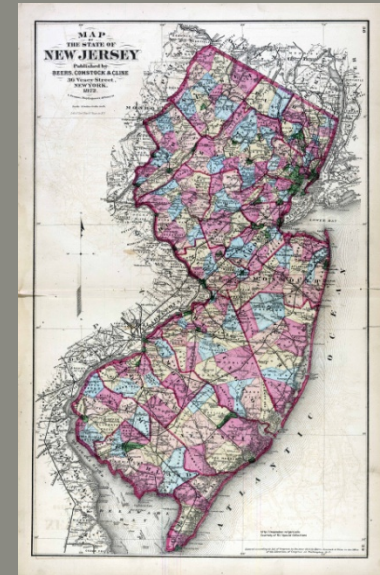


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# Buying Practices

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- Products Manufactured in the US and NJ when at all possible.
- Shipping farther costs more, and burns fuel.
- Shop in your neighborhood
  - Keeps money flowing locally





HOME PERFORMANCE WITH  
**ENERGY STAR**

*Fact Sheet*

# Air Sealing

- “Air Infiltration can account for as much as 30% of a [buildings] heating and cooling bills”  
- US Dept of Energy
- “As much as 25% of a [buildings] heating and cooling dollars escape through unseen gaps and cracks.”  
- NJ Office of Clean Energy



# Where are the leaks?

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- The Energy Team had a 2ft x 40ft breach in the building envelope. Now we are comfortable and saving heating/cooling dollars.
- Drop Ceilings – Doesn't keep heat in
- Garage Bay Doors – Use timers, and heater shutoff switches
- More..... You just have to look!



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HOME PERFORMANCE WITH  
**ENERGY STAR**

## Fact Sheet

# Insulation

- **High-performance insulation**, *good air sealing procedures and proper installation make insulation perform at optimum levels.*
- **Efficiency of the insulation** *is measured in R-value—the higher the R-value, the greater the insulating effect.*
- **Greater insulation levels** *in walls, floors, or attics result in better energy performance and lower electric bills.*
- **Insulation acts as a sound buffer**, *so you can enjoy a quieter home.*

**Cellulose insulation** is an excellent insulator made from recycled newsprint treated with a fire retardant. It provides great coverage, filling in gaps often left between insulation batts and ceiling and wall joists.



What is between you and the outside?

How someone feels isn't just the temperature on the thermostat.

# Solar Thermal Systems

- A heat collector that captures UV rays, and acts as a heat exchanger for hot water.

Circulator pump keeps the existing water heater from having to turn on.

Easy and Versatile.

- Space Heating
- Dishwasher
- Hotel/motel
- Remote water heating





# This is our unit



Produces 200deg+  
water

Works on  
Thermodynamics

Will accommodate  
high demand

Installed since 2010

No Problems

Soon To Heat the  
Training Room

# Recycle

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- Save bulk recyclables, get \$\$\$
- Waste Management
  - Trash and Single Stream

Energy Team Goal: Incorporate community recycling streams by end of 2012.

- Cardboard
- Computers
- Appliances



ReStore Open  
by January  
2012

# What the Team DOESN'T do.

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- Paper cups – We all reuse mugs
- Wash Dishes
- Trade Show Papers – Laminate
- Leave Lights On
- Over Condition our spaces
- Waste Kcups, Use them Twice for a big glass.
- Print reams of paper
- Use water bottles - Refill



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# *Why do we choose sustainability?*

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- Practice what we preach
  - Test and Torment new products
  - Reduce Operating Expenses
  - Invest in the future
  - Grow the Community
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- Wish List – No Utility Bills, Better Vehicles Mileage,

# How to pay for it?

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- Priority Based on ROI
  - Savings pay for the cost – 5yrs or Less
  - [www.dsire.org](http://www.dsire.org) – National Rebates/Incentives
- [www.sbdcnj.com](http://www.sbdcnj.com) – Small Business Help
- **Lease/Loan** – Payment less than Savings, Positive Cash Flow
- [www.njcleanenergy.com](http://www.njcleanenergy.com) - NJOCE
  - Smart Start, Direct Install, and more.



# *What should you do?*

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- Get an Energy Assessment
- Identify Problems, and Solutions
- Make a plan
- Pick a Captain
- Set retrofit goals
- Examine behaviors
- Teach Employees
- Start at Home



Thank You for your time.

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[www.yourenergyteam.com](http://www.yourenergyteam.com)

800-672-2117

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