

# Energy Stewardship & GreenFaith Energy Shield



Stacey Kennealy, Certification  
and Shield Director

# GreenFaith Inspires, Educates



  
**GreenFaithU**  
Education that connects faith & the environment

# And Mobilizes



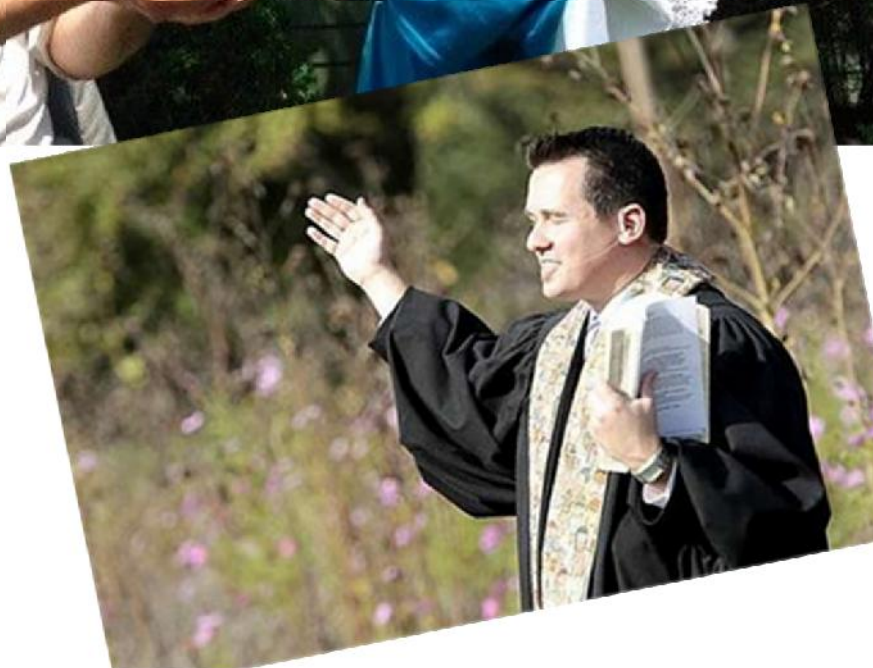
**DIVEST &**

**REINVEST**

**NOW!**

Powered  
by GreenFaith

# People of Diverse Religious Backgrounds



# For Environmental Leadership



**ONE  
STOP  
SHOP**

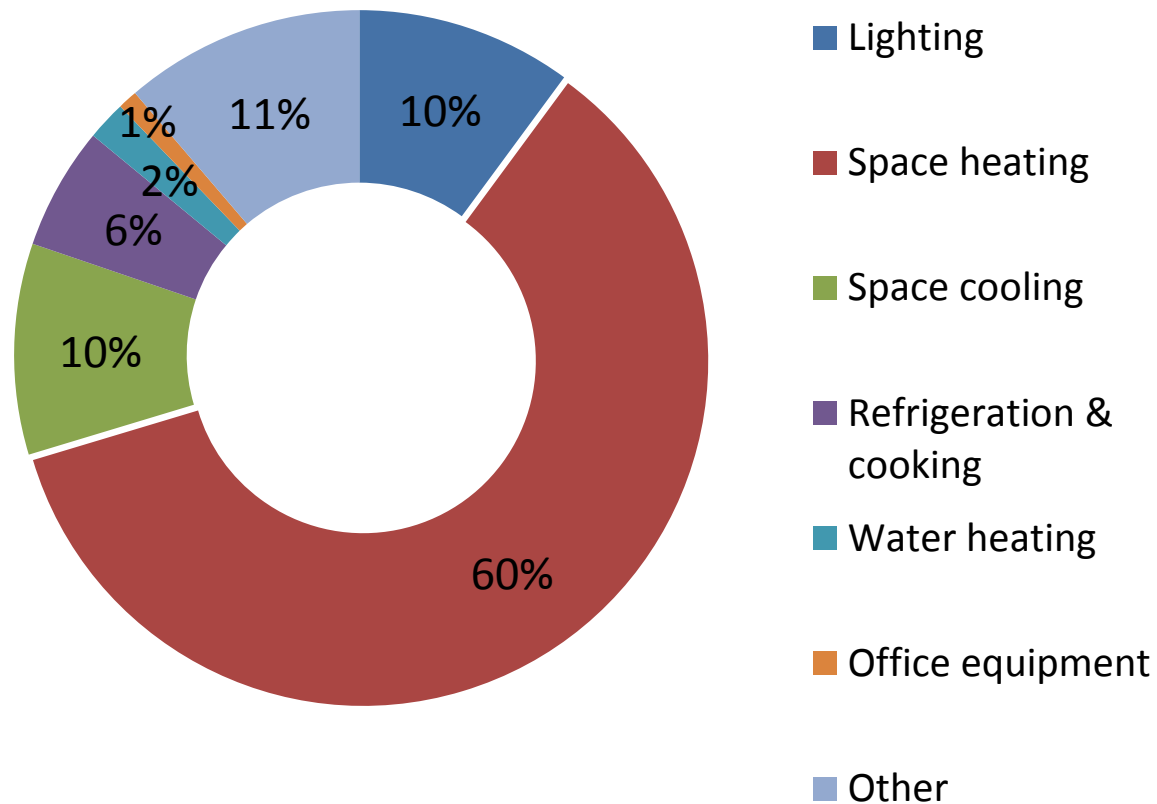


# Agenda Today

- Energy use in a house of worship
- People fixes
- Technology fixes
- Success Story
- Questions

# Energy Use in a House of Worship

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*Source: Department of Energy,  
Buildings Data Book, 2003*

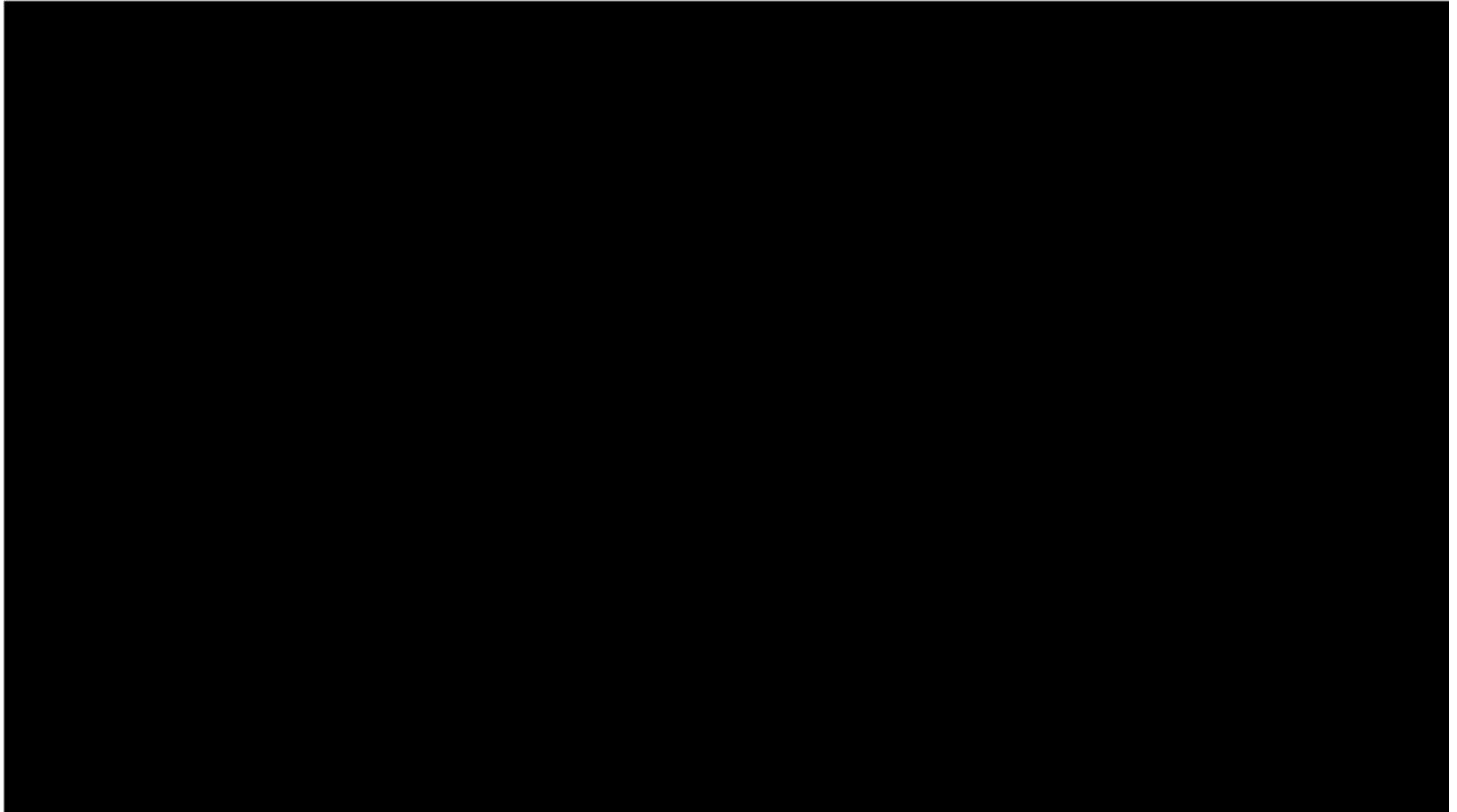


# Energy Conservation – 2 Ingredients



# **Creating a culture of energy conservation. People + Technology**

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# Human Fixes

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“One of the most important observations from psychological research is that many decisions are made by automatic, unconscious processes on the basis of information that our conscious, rational brains are hardly aware of.”

Dr. Christie Manning at Macalester College



# People Action #1 - Commit

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**Prioritize. Make visible. Put people on the task.**

- Designate an Energy Steward & Team
- **Declare intention publicly** - cut energy usage how much and by when? Create accountability.
- **Tip:** Pass a Governing Board Resolution
- **Cost:** \$0
- **Payback:** Ongoing



## Resolution on Energy Conservation

*This resolution was adopted by Congregation Adath Shalom in Morris Plains, NJ in 2011*

WHEREAS, the Adath Shalom Board of Directors recognizes that Judaism teaches us that we have a moral responsibility to preserve our environment, and

WHEREAS, the Adath Shalom Board of Directors recognizes that we have a fiduciary duty to operate and maintain our facilities in a fiscally responsible manner,

NOW THEREFORE,

BE IT RESOLVED, that Adath Shalom is committed to incorporating energy conservation into the operation and maintenance of the synagogue;

BE IT FURTHER RESOLVED, that Adath Shalom will promote and encourage energy conservation and awareness in the Adath Shalom community and beyond; and

BE IT FURTHER RESOLVED, that Adath Shalom will emphasize through our religious observance and in other ways the Jewish teachings and traditions to preserve and sustain the environment and promote actions that demonstrate this commitment.

# People Action #2 -Benchmark

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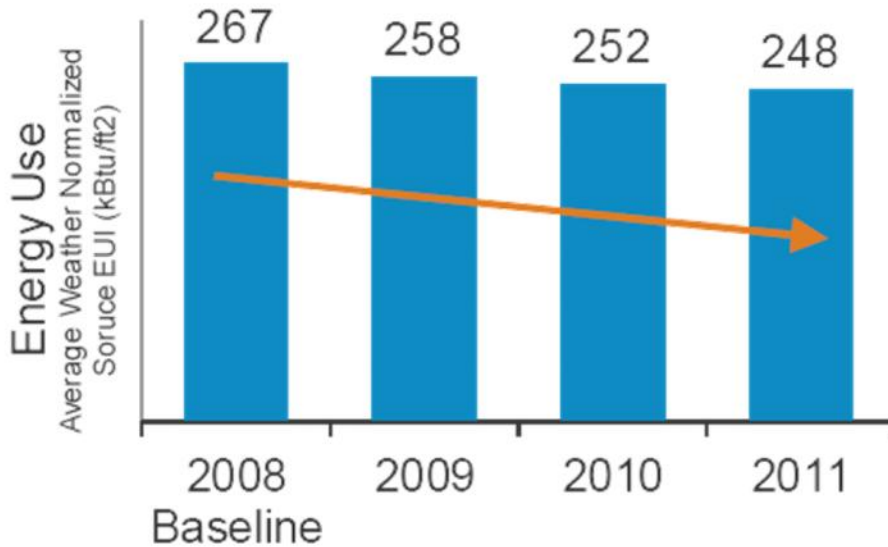
## Develop a Baseline & Ongoing Records

- Chart your energy use for the past 2 years
- Portfolio Manager
- **Tip:** appoint one leader to coordinate
- **Cost:** 2-3 hours setup, 2 hours/year
- **Payback:** Immediate, both with motivation and education opportunities.

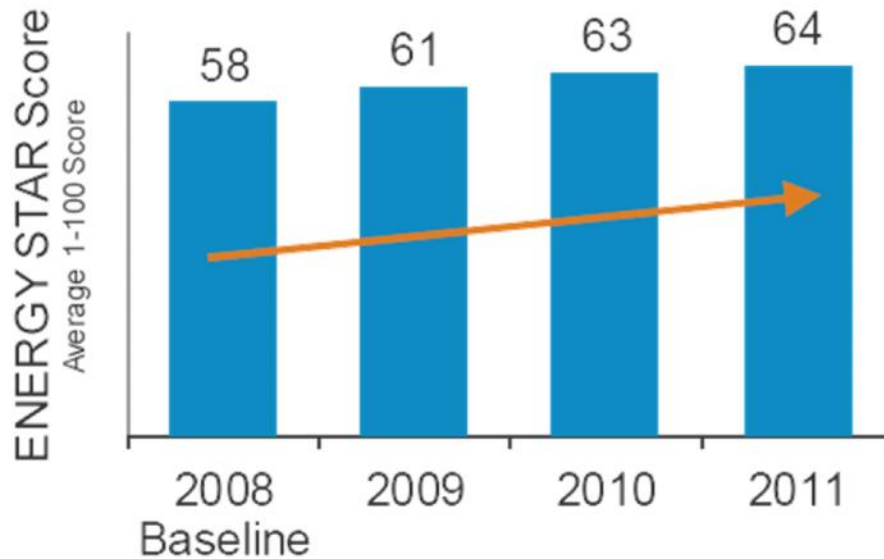


30,000 buildings

## Energy Savings in Portfolio Manager



7%  
Savings



6 point  
increase

# St. Stephen's Episcopal Church

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20,000 square feet

Cost reduction per sq. ft. (19 months): **12.34 %**

## Improved ENERGY STAR score (as determined through Portfolio Manager)

- National median: 50
- Baseline 2/29/12: 75
- Change 9/30/13: **82**

## Metric Ton of Greenhouse Gas Emissions

- National median: 73.3
- Baseline 2/29/12: 56.4
- Change 9/30/13: 47.4

“One concrete statement like ‘we saved 12% on energy costs’ is far more meaningful than a long list of projects. It makes people pay attention – and motivates them to take action at home.”

Margaret Lopic



# People Action #3 – Engage & Promote

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Enter and Win: A Contest for TBR Members

Over the past 12 months T'Green Olam has implemented energy-saving initiatives throughout our building. Guess how much money these initiatives have saved our community and win a prize.

# Technology Fixes

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# Tech Action #1 – Control Temperature

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## Install Programmable Thermostats & Increase Setbacks

- 7 day programmable, multiple settings
- 45 degrees/90 degrees possible in infrequently used spaces
- **Tip:** Program quarterly
- **Cost:** \$70 per thermostat
- **Payback:** 6 months or less – often quicker; save thousands

**"If a room is used 10 hours/week, make it comfortable; you can save energy for the other 158 hours of the week"**



# T – stat Mathematics

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$$7 \neq 5 + 2 \neq 5 + 1 + 1$$

# Tech Action #2: Use space efficiently



"I think they need to add another service."

Zone	Spaces within the Zone	Location of Thermostat
A	1,2,3, School & Preschool Directors Offices	Outside 1 &2
B	4,5,6	Outside 5
C	8, 9, Youth Director's Office	Inside 8 (Nr Door)
D	Library, 11, 12	Library
E	Small Chapel ONLY	Small Chapel

**SETBACK TIMES**

Room	ZONE A			ZONE B			ZONE C		ZONE D			ZONE E
	1	2	3	4	5	6	8	9	Library	11	12	Small Chapel
Monday*	3:00-6:30PM											12:30 - 6:30
Monday	10:00PM			3:00PM			3:00PM		3:00PM			10:00 PM
Tuesday	8:15PM			8:15PM			8:15PM		6:00PM			12:30PM
Wednesday	3:00PM			3:00PM			3:00PM		3:00PM			12:30PM
Thursday	9:00PM			7:00PM			7:00PM		9:00PM			9:00PM
Friday	(Sandy) 8:00PM			3:00PM			3:00PM		12:00PM			12:30PM
Saturday	Unoccupied			Unoccupied			Unoccupied		In use 8:00 - 10:00AM			Unoccupied
Sunday	12:30PM			12:30PM			12:30PM		12:30PM			12:30PM

\*Mid-day Setback

ALL TSTATS TO SETBACK TO 55°F FROM 11PM TO 6:30AM  
 PROGRAM INTERVAL TO END AT 11:00PM SO OVERRIDES SET BACK AT NIGHT

Events that do not occur weekly (i.e. Youth Group, Meetings, etc) will need thermostats adjusted as needed. This should be set up by maintenance staff when tables and or coffee are set up.

# Tech Action #3 - Use Energy-Efficient Equipment

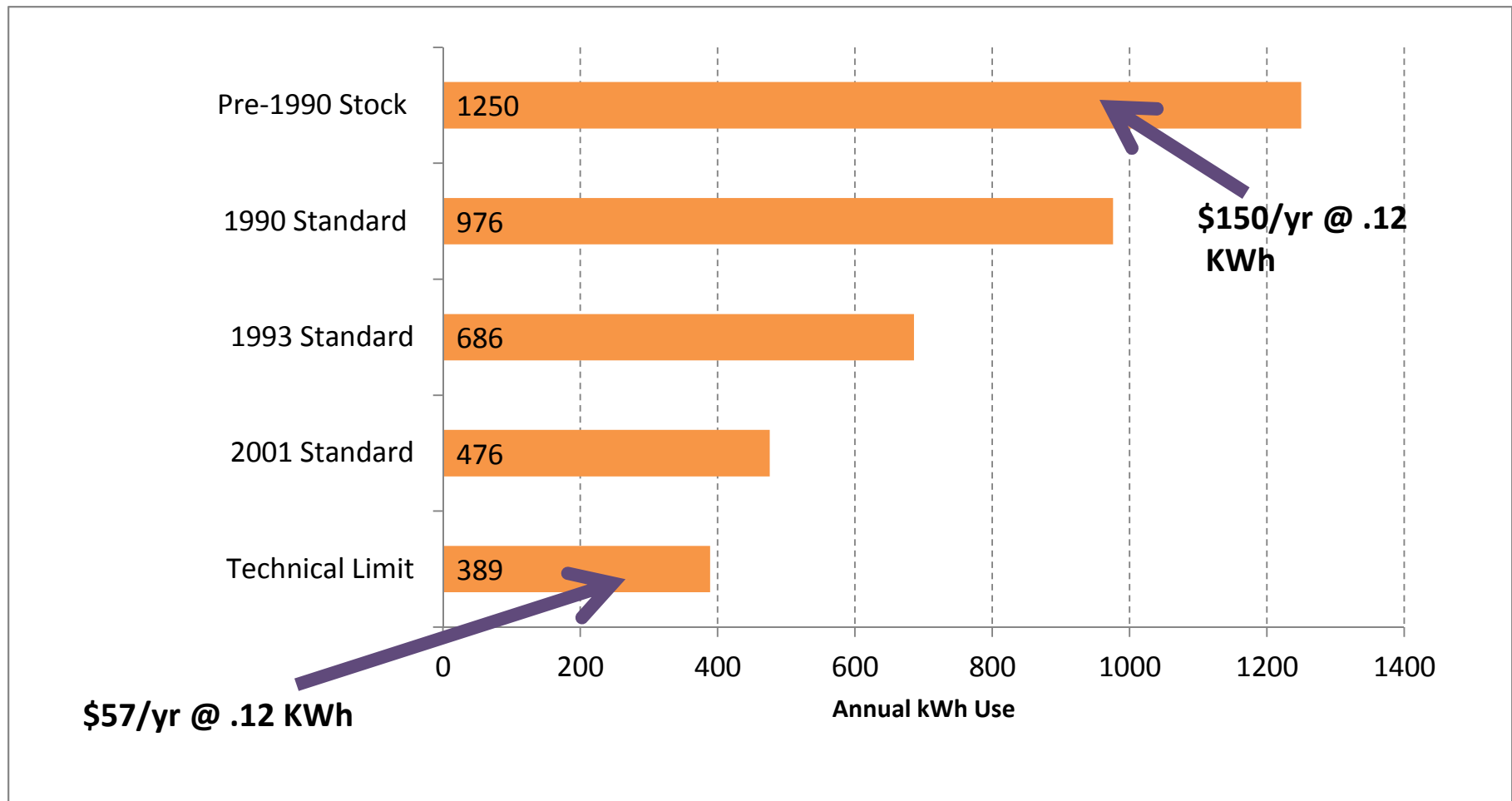
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- Look for Energy Star rating
- **Cost:** Small differential
- **Payback:** Differs depending on equipment.
- **Tip:** Rebates often available:



[http://www.energystar.gov/index.cfm?fuseaction=rebate.rebate\\_locator](http://www.energystar.gov/index.cfm?fuseaction=rebate.rebate_locator)

# Refrigerators



Source: Residential Energy by Chris Dorsi and John Krigger  
Note: comparison is for residential size units



# Tech Action #4 – Turn it down or off

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- **Myth:** It's better to leave lights and equipment on because it takes extra energy to start them
- **Tips:** Standby mode, power strip, vacation mode on water heaters
- **Cost:** \$0
- **Payback:** Can be substantial if lighting is routinely left on, or with large water heaters



# Tech Action #5 – CFLs & LEDs

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- CFLs use  $\frac{1}{4}$  of the energy of an incandescent, LED  $\frac{1}{10}^{\text{th}}$
- **Tip:** Dispose of CFLs properly; get lighting expertise for LED
- **Cost:** \$2-3 per CFL; varies for LED
- **Payback:** 9 months on average if 20+ hours/week
  - 2 years for LED (but last 20-40 years!)



# Tech Action #6 – T-8's

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- No need to replace fixture, just ballasts
- 32 watt or 28/25 high efficiency
- **Tip:** Rebates available – [www.energystar.com](http://www.energystar.com); some companies offer financing
- **Cost:** approx. \$40 per 2 bulb fixture.
- **Payback:** Aim for rooms 15 hours/ week or more. Payback period of 1-3 years.



# Tech Action #7 – Exit Signs

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- Two 15-watt incandescent vs. 2 watt LED
- **Tip:** Use inserts instead of replacing sign
- **Cost:** \$21-\$25 per insert. \$60 for new fixture.
- **Payback:** 1 year, on average



# Tech Action #8 – Weatherstrip & Insulate

- Look for dust, feel for drafts
- **Tip:** Have a volunteer day to carry out
- **Cost:** depends on amount of weather-stripping
- **Payback:** 5 years on average

**Add up all leaks and  
you've got an open  
window!**



# Success Story: Temple Beth Rishon

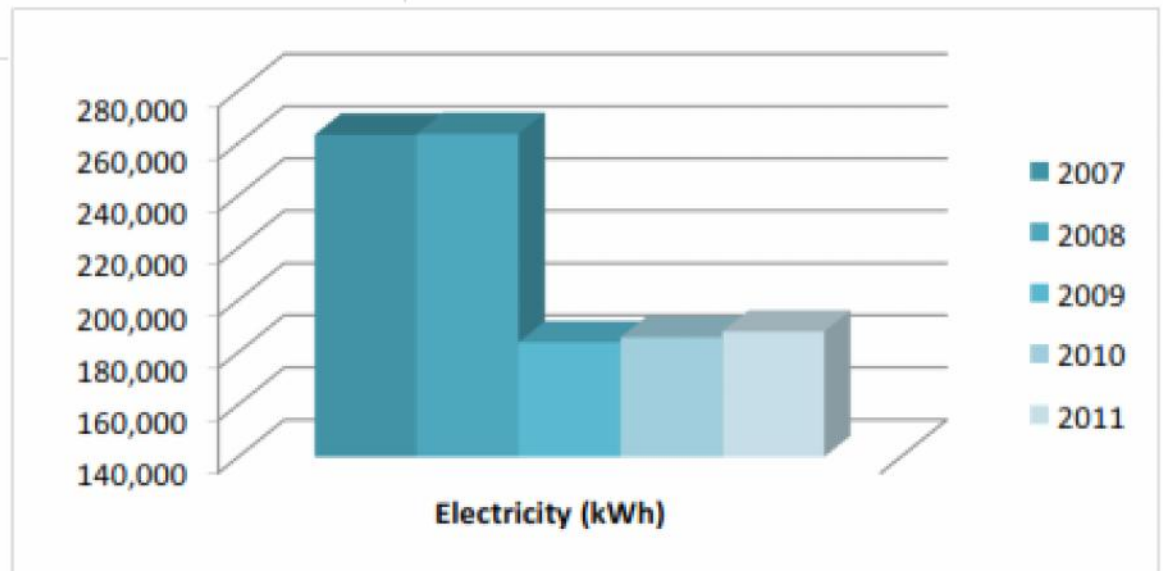
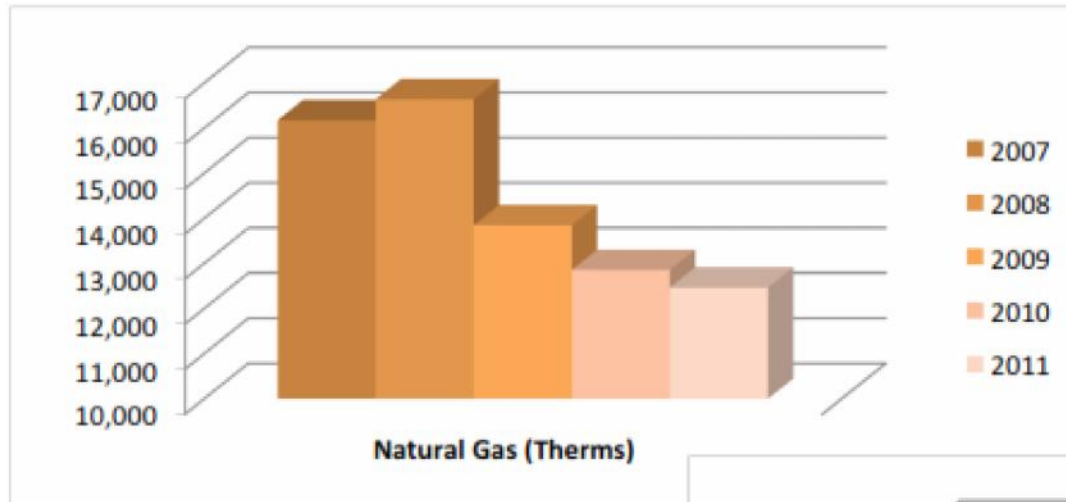
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- 500 families
- Wyckoff, NJ
- Multi-use: Preschool, Hebrew School, Synagogue
- **Their Story:** Small steps pay big

# What Do You Think They Did?

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# Small Actions Can Lead to Big Results.





## **Big Results.**

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**\$50,000 savings  
in 3 years.**

- ✓ **Reduced Electricity Usage by 30%**
- ✓ **Reduced Natural Gas Usage by 19%**
- ✓ **Avoided 128 tons of CO2 emissions**
- ✓ **Equal to planting 319 trees,  
or taking 11.2 cars off the road for an entire year!**

# Temple Beth Rishon Isn't the Only One...

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<http://reformjudaismmag.org/Articles/index.cfm?id=3204>

OR

Go to [www.greenfaith.org](http://www.greenfaith.org)

Click on 'GreenFaith in the Media', then 'Press Clips'  
Article on 'Smart Strategies for Facilities Savings'

# What is the Energy Shield?



**Meaningful**  
**manageable**  
**measurable**

Environmental Merit Badge for Faith Communities

# Energy Weekend

- Pray
  - Prayers, texts, spoken teaching in worship
- Learn
  - Religious education for adults, teens, children
- Act
  - Action plan for the house of worship, school or institution
  - Basic action steps
  - Household Commitment Form
- (Optional) Advocacy
- Publicize



# What's in the Action Plan?

## People Steps

- Publicize your commitment
- Build an energy team
- Designate an energy steward
- Pass a governing board resolution
- Gather bills, benchmark w/Portfolio Manager

## Technology Steps

- Temperature regulation
- Lighting
- Appliances
- Facility usage
- Weather stripping



All steps are zero or low cost!

# GreenFaith Resources

- Worship resources
- Lesson plans for adults, teens, children
- 12 Steps for Energy conservation
- Household commitment form
- Portfolio Manager Benchmarking support
- Sample advocacy and publicity materials
- Telephone and email support

To learn more: [www.greenfaith.org](http://www.greenfaith.org)

