

# HOW GOING GREEN IN YOUR CHURCH CAN PUT YOUR FINANCES IN THE BLACK

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Woodland Baptist Church

San Antonio, Texas

# INTRODUCTION

How I became involved in Creation Care



# WHAT COULD I DO FOR ELEANOR?





SOMEONE  
DO SOMETHING  
ABOUT CLIMATE  
CHANGE!

WHAT ARE YOU  
LOOKING AT?

SOMEONE



# OIKONOMOS

How we started Creation  
Care at Woodland

A group of hands clasped together in a circle, symbolizing teamwork and collaboration. The image is in a dark blue, monochromatic style with a slight vignette effect.

**BUILDING THE TEAM TO  
DO SOMETHING**

**N** FILM

# DAVID ATTENBOROUGH

A LIFE ON OUR PLANET



# OUR STRATEGY

## 1. Minimize the Politics

*“We are so locked into our political identities that there is virtually no candidate, no information, no condition that can force us to change our minds.”* Ezra Klein



# OUR STRATEGY

## Avoid creating controversy

- Oil industry knows the truth
- 75 years of carbon emissions
- Picking a fight in Texas gets us nowhere





Actor/Comedian

"The US leads the world  
in people who think  
**climate science** is fake,  
but **pro wrestling** is real."

*- John Fugelsang*

**SO THEN, HOW DO WE BEGIN A  
CONVERSATION ABOUT CLIMATE CHANGE?**

# “GLOBAL WARMING’S SIX AMERICAS”

RESEARCHERS TONY LEISROWITZ AND ED MAILBACH

1. **Alarmed** – has grown from 18% in 2008 to 26% in 2020
2. **Concerned** (Accept science but feel the threat is more distant) - 33% in 2008 to 28%
3. **Cautious** (unconvinced that the threat is urgent) – steady 20%
4. **Disengaged** (people who know little and could care less) – 12% in 2008 to 7% in 2020
5. **Doubtful** (those who don’t think it is a serious risk) –11%
6. **Dismissive** (Angrily reject the idea of climate change and most susceptible to misinformation and conspiracy theories) – 7%

**KATHARINE HAYHOE**  
**CLIMATE SCIENTIST, TEXAS TECH**  
**PASTOR'S SPOUSE,**  
**MISSIONARY KID**

- Know your audience
- 93 percent of the US population is open to conversation
- Dismissives 7 percent are a waste of time



***IF YOU ARE EXPLAINING,  
YOU ARE LOSING.***



**START A CONVERSATION IN YOUR CHURCH BY  
TALKING ABOUT SAVING MONEY.**

- Becoming good stewards of our environment can help your church's budget

**HOW WOODLAND'S EXPERIENCE WITH  
ENVIRONMENTAL STEWARDSHIP HAS  
BROUGHT THE CHURCH FISCAL SUCCESS**





## OIKONOMOS SOUGHT IMMEDIATE SUCCESS

- Provide recycle receptacles in worship center to collect worship bulletin.
- Put recycle receptacles all over the campus.
- Make it easy to recycle



# OIKONOMOS SOUGHT IMMEDIATE SUCCESS



Go to virtual meetings; digital notes and handouts

Asked for church leadership to consider using less paper products.

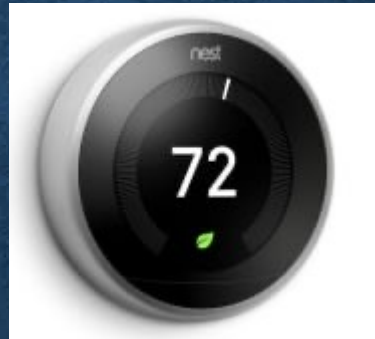


Signs over every light switch asking folks to turn off the lights when they left the room.

# ENERGY AUDITS GUIDE THE PROCESS

Evaluates the efficiency of the building structure

- Insulation
- HVAC
- Lighting
- Caulking and weatherstripping
- Smart thermostats
- Roofs



# ENERGY AUDIT: STOP THE LEAKS

1. Contact your energy provider for audits
2. Download the free ENERGY STAR® Action Workbook for Congregations; this is a step-by-step instruction for conducting your audit
  - [https://www.energystar.gov/buildings/tools-and-resources/energy\\_star\\_action\\_workbook\\_congregations](https://www.energystar.gov/buildings/tools-and-resources/energy_star_action_workbook_congregations)



# WOODLAND ENERGY AUDIT

**We focused on:**

- Lighting
- Insulation
- Weatherstripping
- HVAC equipment including smart thermostats



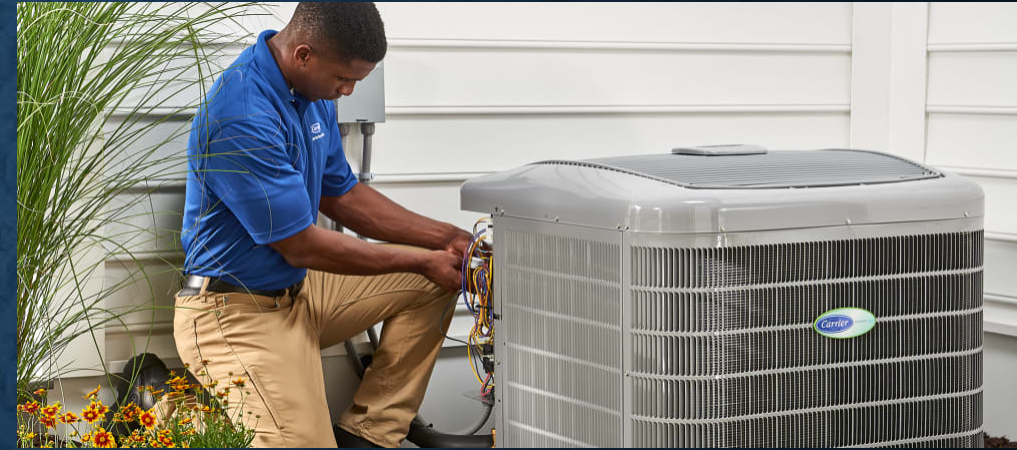
# WOODLAND ENERGY AUDIT

- Kitchen equipment
- Computers, water coolers,
- Entrance/Exit door air leaks
- Use Zoom committee meetings:
  - saves time, reduces costs for members, saves natural resources, better member participation



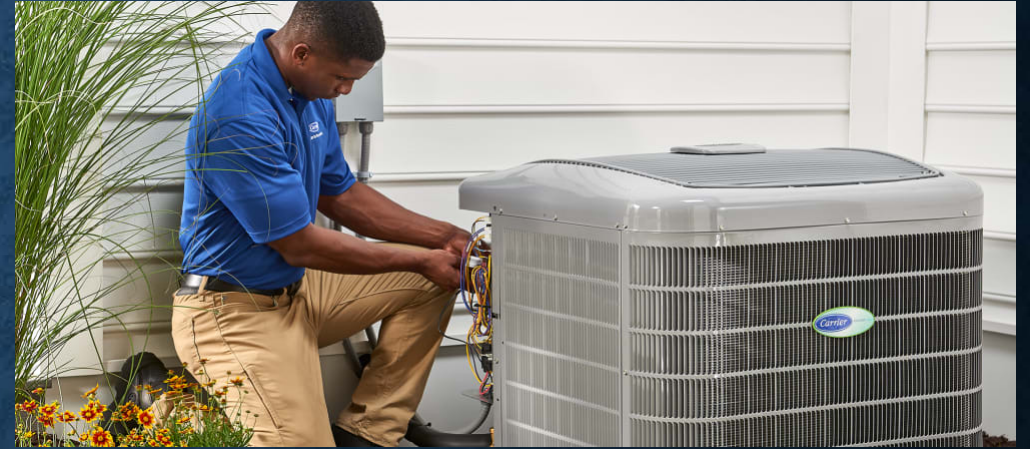
# WOODLAND ENERGY AUDIT SUMMARY

- By adding
  - weatherstripping,
  - changing incandescent lights to LED as they burn out
  - upgrading or tuning up HVAC equipment
  - Savings = \$10,976 per year in utility costs
- We are making these replacements/improvements in increments, as budget allows



# WOODLAND ENERGY AUDIT

- Plus, the utility company agreed to refund us \$10,216 in rebates when these changes are complete
- Check to see what your utility company might offer
- Most utilities will not offer rebates until the state or community requires
- However, the cost savings are real





## Opportunity Summary

Opportunity	Annual Energy Savings (kWh)	Demand Savings (kW)	Annual Cost Savings	Utility Rebate
1 Lighting Efficiency	15.06	49,831	\$5,481	\$7,155
2 Entrance & Exit Door Air Infiltration	1.69	2,520	\$277	\$413
3 HVAC Unit Replacements	4.53	8,904	\$979	\$2,032
4 Participate in High-Performance A/C Tune-Up Program	36.4	34,580	\$3,458	No Cost
5 Energy Star - Cool Roof Coating	2.08	7,108	\$781	\$618
<b>Total</b>	<b>59.76</b>	<b>102,943</b>	<b>\$10,976</b>	<b>\$10,218</b>

# WOODLAND ENERGY AUDIT

- Woodland's actions earned the church the first silver award given to a church by the city of San Antonio.
- A Banner and news stories created a lot of attention, bringing 5 young couples with families to our church in less than a year.
- An energy audit is not controversial, and it allows you to start talking about eco-stewardship



# WOODLAND SOLAR PANELS

Woodland's goal was to offset 75% of our usage

Solar makes financial sense

- Almost 1/2 our costs are recouped from rebates offered through the local utility company and the Inflation Reduction Act.
  - Utility rebates are paid when the system goes active
  - Inflation Reduction Act reimbursements come in the next tax year

# **RISING ENERGY COSTS**

- Based our projections on 3% per year utility rate increases
- Actual annual increase from May 2021 – April 2022 was 18%
- 2023 YTD rate increases are 3.8 percent

# TARGET FINANCIAL GOALS

- 75 percent energy usage- allows for snow, rain days, cloudy days, nights, etc.
- Annual utilities average \$28,000
- Solar offset is \$21,000 per year
- Woodland self-funded the project without incurring loans
- Low interest loans are available

# PROJECT SUMMARY W/ REBATES

- Total cost is \$305,000
- Rebates -171,000
- Payback in 6 years

Payment Options	Cash Purchase
IRR - Term	16.4%
LCOE PV Generation	\$0.028 /kWh
Net Present Value	\$281,183
Payback Period	5.9 Years
Total Payments	\$305,498
Total Incentives	\$171,649
Net Payments	\$133,848
Electric Bill Savings - Term	\$880,860
Upfront Payment	\$305,498

**Combined Solar PV Rating**  
Power Rating: 132,825 W-DC  
Power Rating: 132,825 W-DC-CEC

# WOODLAND SOLAR PROJECT COMPLETED IN JUNE 16, 2023

**14 months to complete**

- Coming off Covid
- Prices were higher
- Contractors were busy



# TIMELINE

- Allow one year:
  - Allow 2 months to determine your scope of work and contractor selection
  - Allow 2 months for bidding process—if you are more than a year from starting the project, your estimates will be higher
  - Allow 1 month to select your contractor and sign the contract
  - Allow 3 months for utility company approvals (if needed) and construction permits
  - Allow 4 months to secure and install equipment



# SOLAR INVESTMENT TOO MUCH?

- Pastor Jorge Zayasbazan worked with CPS utility company to:
  - Install *free* solar panels on the church and
  - Secure a 15 percent discount per year off utility bills for the church



*Baptist Temple Church*

901 East Drexel Ave.

San Antonio, Texas 78210

# CHURCH SETS UP SOLAR FARM AS REVENUE SOURCE

- First Baptist Church, Mount Olive, NC reimagined how to make the best use of church facilities
- Video on their website details how out-of-the box thinking can save the environment and benefit the church:  
<https://fbcmountolive.org/>
- They leased their land to an energy company to install solar farms



# CHURCH SETS UP SOLAR FARM AS REVENUE SOURCE

- ROI is 400 percent more than they were getting for farm leases
- FBC has made solar a mission and ministry to the community as well as a reliable revenue source



# WHERE WE ARE HEADED

- Low-cost water retention system
- Campus beautification with indigenous plants
- Composting
- Engaging young people

# BENEFITS

- Raised community awareness and our position in the community
- Added 6 young adult families
- Cut extraneous budget costs to allow for more income for ministry
- Educating our congregation on eco-stewardship without making anyone angry
- Doing our part to make God's world a better place for our grandchildren and future generations

# OIKONOMOS IS READY TO HELP

- Solar panels
- Charging stations
- Energy audits
- Recycling
- Gardening
- Sustainability

**PRACTICE RESURRECTION!!!**