

# Leaping to Net Zero

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UMC Net Zero Team – Executing Specific Actions

5-30-2023

## God calls us to be stewards of the earth

God blessed them, and God said to them,  
“Be fruitful and multiply, and fill the earth  
and subdue it; and have dominion over the  
fish of the sea and over the birds of the air  
and over every living thing that moves  
upon the earth” [**Gen 1:26–28**]

# What is Net Zero?

- Cutting greenhouse gas (CO<sub>2</sub>) emissions such that a balance between the amount of GHG produced and removed from the atmosphere is achieved
- What causes greenhouse gas emissions in a church?
  - Use of electricity produced from fossil fuels
  - Excess use of electricity by inefficient heating, cooling and lighting systems
  - Boilers, furnaces and other appliances that use natural gas

# Why do we want to reduce carbon footprint?

- The Next generations are very concerned about the environment
  - Increase future church membership
  - Present the church as promoting sustainable practices
  - Include sustainability in the church mission statement
- Exemplify good stewardship to the community and the congregation
- Saving money

We are leaders and visionaries in sustainability

# Support from the Bishop of the Northern Illinois Conference

- Bishop Dan Scherwin
- “As a church, we are called to take care of creation. The United Methodist Church and now our own Net Zero Team, offer us countless ways to practice stewardship that increases care of the planet. The NIC Net Zero team will open conversations and help put new ways of stewarding the earth into action. This is the start of building and sharing long-term creation care efforts in our churches.”

# Net Zero Team of UMC

- UMC Northern Illinois Bishop has created a Net Zero team of volunteers from churches to help with reaching this goal
- Churches will have access to resources and support
- Website: [www.econetnic.org](http://www.econetnic.org)
- Facebook: Net Zero Team Facebook group called Eco-Sustainability Network

# Technologies that reduce carbon emissions

- Electricity generated by
  - Solar and wind
- HVAC (heating and cooling) systems
  - Heat pumps
- Energy efficiency appliances
- LED lighting

# Why is this a good time to do it?

- Financial Incentives are currently available from federal, state and local governments
  - These are in the form of grants, tax credits and rebates
  - This varies by church and location
- Methodist Church has pledged to achieve net-zero greenhouse gas emissions by 2050.
  - Council of Bishops have stated: "need to join the movement to address creation care and climate change as an existential crisis the Church can not ignore"



# Incremental process

- Recommend an incremental process to achieve objective
- First step is to have gas or electric provider perform an energy audit to determine where the church is using energy
- Sign up for community solar – e.g. Nexamp <https://solar.nexamp.com>
  - Implemented at no cost with savings of 20% on electric energy useage
- Next implement energy efficiency low hanging fruit
  - Lighting changes which save on electric bills
  - Windows/Insulation/Doors
- Have a solar company perform an estimate of putting solar on your roof
- Faith in place is offering 10K grant to churches that install solar
- Come up with a plan to implement the remainder

# Resources

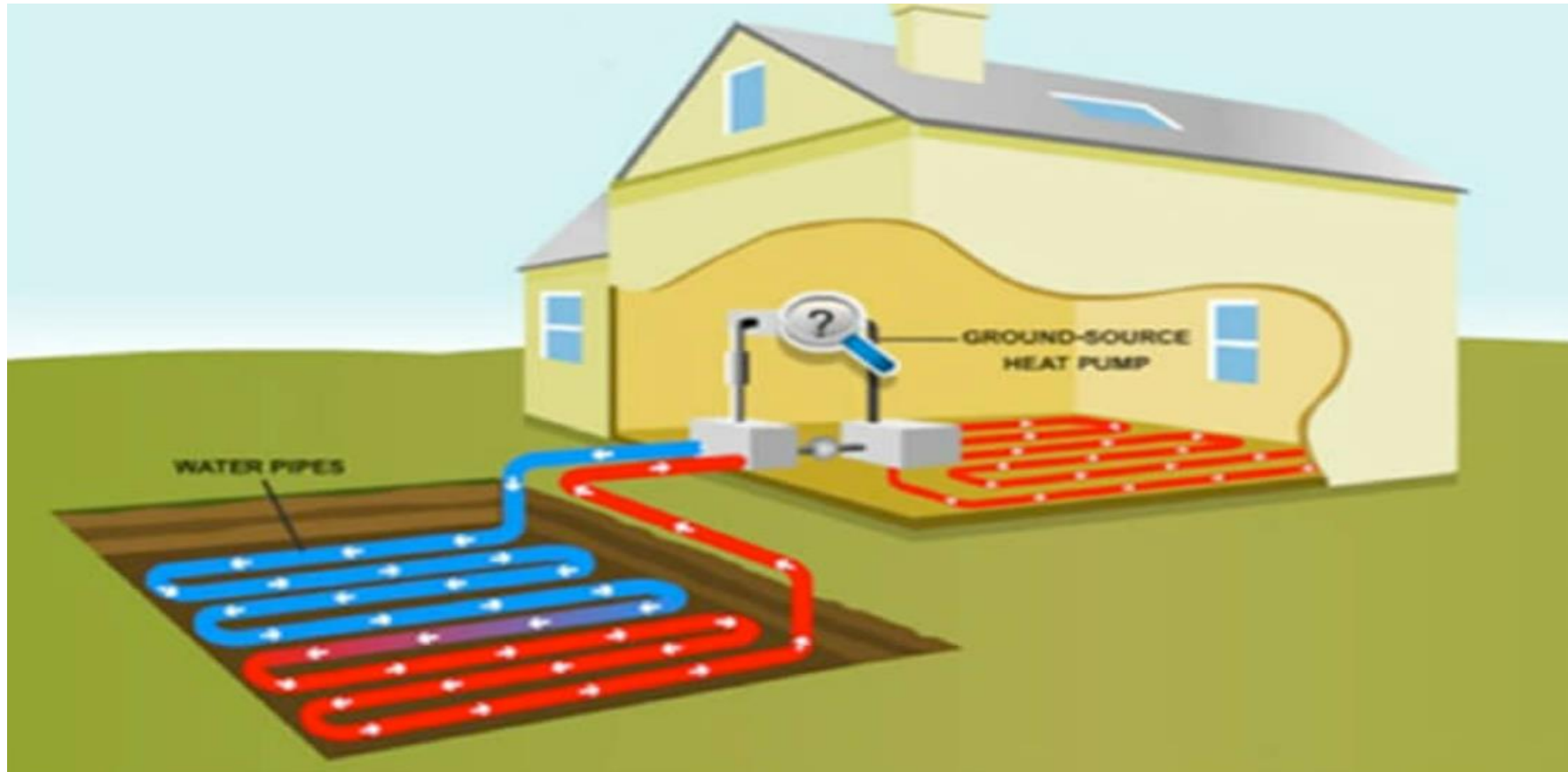
- Wind Free Solar - <https://www.windfree.us/>
- Nexamp Community solar – <https://solar.nexamp.com>
- Project Green Environmental Solutions (LED lighting) - <https://projectgreenenvironmentalsolutions.com/#/>
- Faith in place free energy audit - <https://www.faithinplace.org/>

# Case study – Euclid UMC, Oak Park, IL

- Implemented **99 solar** array panels in 2014 on Church roof
  - Saving of \$466/month on \$35,688 investment (had Federal tax and grant help)
  - Saving of \$146,366 over next 25 years
- Implemented **geo-thermal** in 2011 for heating and cooling (see next slide)
  - Saves \$8,500 / year in heating and cooling operational costs
  - Saves \$11,500 / year in cost of gas to run the boiler
- Implemented **LED lighting** throughout the building.
  - Cost \$9,982 to implement.
  - Lowered annual electricity cost by \$4,775
  - Payback time on investment is 3.447 years.
- Implemented **Community Solar in 2021**
  - No cost to the church to sign up for this program
  - Saving of 20% on electric energy use.
  - All the energy the church uses is offset by solar energy we put into the system from a solar farm owned and operated by the vendor

**We consider our Church as Net Zero.**

# What is Geo-thermal?



geothermal heat pumps are up to 600 percent more efficient than fossil-fuel powered boilers

# What is community solar?

- Subscription-based model allowing homes and businesses that cannot host solar panels on their buildings to support solar energy production from nearby solar arrays
- Save up to 20 percent of energy costs
- Offered in Commonwealth Edison territory
- Euclid receives about 50,200 kWh annually from the solar farm in Rockford, IL and is guaranteed a 20 percent discount compared to ComEd's rates
- Generates green jobs for the local economy

# Euclid cost savings on energy

Euclid Ave UMC Energy Expenditures by year					
	2009	2013	2015	2020	2022
Electricity	\$13,000	\$10,000	\$5,300	\$2,300	0
Gas	\$7,000	\$1,500	\$1,500	\$1,500	\$1,500
Total	\$20,000	\$11,500	\$6,800	\$3,800	\$1,500

↑  
Geothermal

↑  
Solar

↑  
Community  
Solar

<https://www.eesi.org/articles/view/geothermal-energy-and-efficiency-upgrades-give-new-life-to-an-old-illinois-church>







# Mission support - Euclid community groups are offered free space in our building

- OEFF (One Earth Film Festival)
- ROYAL (Back to School, Kick off)
- AA and Marijuana Anon.
- Community Fridge
- Suburban Unity Alliance, community organization.
- Free electric vehicle charges
- Mothers of Children with Disabilities
- Muslim Holiday Celebrations and Friday Prayers
- Light Giver spirituality groups
- Open use of the indoor Labyrinth
- Fund raisers for legal assistance
- Neutral Meeting space for workers trying to organize unions
- Trans support and community building group
- Tai Chi and Yoga for Senior Citizens
- Music Library and Performance space for the Community Renewal Chorus
- Covid Vaccine station
- Emergency site for local Jr. Highs and Senior Living Residence
- For years *offered shelter to the homeless one night a week*
- *Free weddings* to the GLBTQ+ community (to make up for the sin of heterosexism perpetuated by the UMC)

Due to our low energy costs, we can offer free space to the community in support of our mission