

NET ZERO @ NEIGHBORHOOD PLAN REPORT

At last year's annual meeting, the congregation of Neighborhood Church (NUUC) unanimously resolved to become a Net Zero Congregation, and to develop a Net Zero plan with timeline and budget. Below is that plan report, as developed by the Net Zero @ Neighborhood Committee (NZ@NC).

The Case for Achieving Net Zero

The congregation of Neighborhood UU Church resolved to become a Net Zero Congregation because:

- We respect the interdependent web of all existence, of which we are a part
- We are committed to service toward a compassionate, sustainable, and peaceful world
- We must help ensure our children, and their children have a healthy, habitable world to live in
- We recognize that climate change affects disadvantaged communities first and hardest, and is a social justice issue that calls for our immediate action

Net Zero Vision & Approach

Neighborhood Church will have achieved its Net Zero aspirations when it has:

1. Eliminated or off-set all carbon emissions generated from the use of the Church campus by:
 - Reducing on-site energy use by ~40%, and eliminating the use of natural gas
 - Producing ~50% of the electricity used on-site (est. 35 kW of Solar PV)
 - Purchasing carbon-free electricity from PWP and/or a local Community solar facility
 - Off-setting remaining CO2 emissions by purchasing carbon offsets
2. Eliminated or off-set the collective personal carbon emissions from NUUC congregants, by encouraging and facilitating congregants to:
 - Understand and track their carbon emissions
 - Take significant steps to reduce their emissions and utilize carbon-free energy
 - Off-set their remaining emissions with carbon offsets

Net Zero Timeline & Budget

The NZ@NC conducted a campus-wide survey this year to identify emissions reduction opportunities, and utilized subject matter experts and local contractors to estimate the feasibility & cost of the identified net zero projects. Below is a summarized cost schedule for those projects. Some projects will be scheduled to coincide with routine maintenance or end-of-life replacement of existing equipment, while other projects will be scheduled based on the availability of funds. Funding for this effort will come from multiple sources, including:

- NUUC Budget: annual budget line item to provide a continuous source of funds for on-going expenses (like carbon offsets) or smaller projects (like lighting replacement)
- Spalding Fund: supported by an annual offering, can be used for non-routine Net Zero projects
- External grants and rebates: for installing specific capital projects, like new HVAC systems
- NUUC fund raising events: targeted at specific capital projects, like installing solar panels

Net Zero Budgeted Expense	2018/2019	2019/2020	2020-2025	2026-2035	2035+
Energy Efficiency Projects*	\$2,400	\$3,800	\$8,800	\$8,600	\$3,100
GHG Offsets	\$1,600	\$1,200	\$1,200	\$1,400	\$1,900
Budgeted Sub-total (\$/yr):	\$4,000	\$5,000	\$10,000	\$10,000	\$5,000
Net Zero Capital Expense	2018/2019	2019/2020	2020-2025	2026-2035	2035+
Hot Water Heater upgrades	\$0	\$2,000	\$2,000	\$2,000	\$0
HVAC system upgrades	\$0	\$0	\$80,000	\$112,000	\$0
Solar installation	\$0	\$0	\$114,000	\$75,000	\$0
Capital Projects Sub-total (\$)**:	\$0	\$2,000	\$196,000	\$189,000	\$0
Net Zero Projected Savings	2018/2019	2019/2020	2020-2025	2026-2035	2035+
Energy & GHG Reductions (est.)	2%	4%	25%	40%	40%
Energy Cost Savings (\$/yr)	\$300	\$700	\$6,800	\$11,300	\$11,300
Onsite energy production (kW)	0 kW	0 kW	20 kW	35 kW	35 kW
Onsite energy production (% of use)	0%	0%	26%	56%	56%

Congregant Engagement

To conduct the ongoing education of our congregation and encourage action on all steps that would create a Net Zero congregation, the NZ@NC provided the following during the 2017-2018 church year:

- Awakening the Dreamer Symposium: The NZ@NC partnered with the Pachamama Alliance to host three 4-hour workshops, reaching 60 NUUC members in a transformative reflection on our interconnectedness with the planet and its peoples. A customized version of this symposium was conducted with the Sr. High youth as well.
- Game Changer Intensives: The NZ@NC and Adult RE Program partnered with the Pachamama Alliance to host a 10-week study group, studying the intersection of climate change and justice.
- The NZ@NC partnered with Rev. Gundlach to conduct the Earth Day worship service, and hosted informational presentations on climate-related issues throughout the church year.
- NZ@NC consulted regularly with the Board of Trustees and staff on all stages in the development of this plan.
- Engaged in shared spiritual practice during Earth Day worship service, completing a survey to estimate the congregation's carbon footprint. To be repeated annually.

NUUC's Carbon Footprint

The NZ@NC utilized NUUC utility bills, and emissions factors from climate scientist Peter Kalmus' book, *Being The Change – Live Well and Spark a Climate Revolution* to estimate the GHG emissions for the NUUC campus and its congregants, as summarized below:

NUUC Campus - 2017	
Source of GHG Emissions	Annual GHG Emissions
Electricity	138.5
Natural Gas	25.9
Water	1.7
Staff Air Travel	29.8
Congregant Travel to Church	51.4
Campus CO₂e (MT/yr)	247.3

Figures taken from NUUC Annual Carbon Report

NUUC Congregants - Estimate	
Source of GHG Emissions	Annual GHG Emissions
Food Consumption	10.5
Goods & Services	9.0
Home Energy	8.0
Transportation	13.0
Total per Pledge Unit	40.5
# of Pledge Units	313
Congregation CO₂e (MT/yr)	12,677

Estimates taken from: UC Berkeley CoolClimate Network

How This Plan Was Developed

The Net Zero @ Neighborhood Committee, created by the NUUC Green Council, spent the majority of the 2017-2018 church year developing the above plan, utilizing the following approach to guide their efforts:

- Develop a vision statement for Net Zero @ Neighborhood, clarifying what it means for Neighborhood to be a Net Zero Congregation
- Calculate the current NUUC campus carbon foot-print (GHG emissions)
- Calculate an estimate of the congregation's current carbon footprint
- Survey the NUUC campus for opportunities to reduce GHG emissions from the use and maintenance of the campus
- Conduct a feasibility & cost study for installing on-site solar
- Develop a cost schedule for emissions reduction and on-site solar projects
- Develop a strategy for financing & governance of Net Zero projects
- Develop a NUUC campus GHG reporting tool for on-going emissions tracking and reporting
- Develop and initiate a congregant Net Zero educational & engagement process
- Produce & deliver a Net Zero Report to the congregation by the end of the 2017-2018 church year

For further information about the Net Zero Plan, contact frank.colcord@gmail.com