

Why become Carbon Neutral?

The accelerating dangers and degradations facing our planet’s climate, ecosystems, resources, and vulnerable populations are *caused by specific actions and choices* embedded in our “way of life” in the advanced nations.

In particular, the earth and much of humanity face the dire consequences of climate change caused mainly by atmospheric carbon from *the burning of fossil fuels*. Although the scope and severity of this situation seems incomprehensible, and we often feel powerless to confront it, there are specific actions and choices available to us.

Our Mount Auburn congregation is pursuing a plan to achieve “*net-zero carbon*” in our *building operations* through high-efficiency upgrades to lighting, heating and cooling, windows and other systems, combined with solar electricity-generation.

We believe this to be *a prophetic stance on this – the greatest threat humanity has ever faced*. Yet at the same time it will realize savings to our medium- and long-term operating costs.

Our Steps toward a Carbon Neutral Facility:

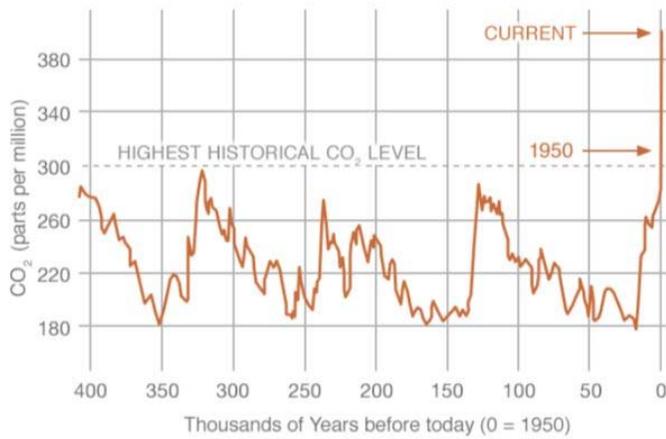
Our situation at Mt. Auburn Presbyterian is probably typical – we have several buildings of various ages, mainly built before the days of environmentally-conscious design or construction practices. Yet our research and conversations with experts have proved encouraging! Here is a summary of our planned improvements, from baseline 2017 facilities:

Remaining LED lighting retrofit	\$ 18,000
Replace old, leaking windows	\$ 62,000
High Efficiency zoned heat pumps	\$280,000 (eliminating gas boilers)
Solar panels, 80% of elect. usage	<u>\$131,000</u>
TOTAL COST	\$491,000

Why This Costs Nothing:

Looking out over two decades, this net-zero carbon plan can be achieved without net costs:

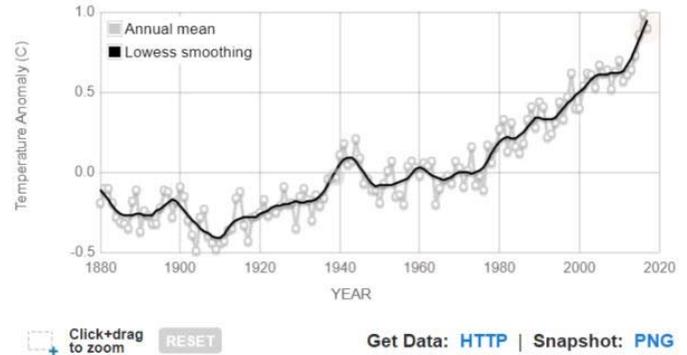
20-years gas & electric without retrofits	\$750,000 (minimum; current usage rates)
20-years electricity costs with retrofits	\$175,000
Allowance for carbon-offset purchases	<u>\$ 25,000</u>
TOTAL SAVED	\$550,000



Current Co2 levels on 400,000 year timeline (NASA)

GLOBAL LAND-OCEAN TEMPERATURE INDEX

Data source: NASA's Goddard Institute for Space Studies (GISS).
Credit: NASA/GISS



Global Average Temperatures since 1880 (NASA)

Carbon and Climate: Sources & Resources

[A Safe Operating Space for Humanity](#). *Nature* 461, 472-475 (24 September 2009); doi:10.1038/461472a; Published online 23 September 2009.

Hansen, James, et al. [Target Atmospheric CO2: Where Should Humanity Aim?](#) Submitted April 7, 2008. NASA climate scientist James Hansen's paper about the 350ppm target. Be sure to also explore Dr. Hansen's ["Climate Science, Awareness, and Solutions"](#) program at Columbia University's Earth Institute.

[The IPCC 5th Assessment Report](#). The latest report by the Nobel-prize winning United Nations Intergovernmental Panel on Climate Change, supported by the world's leading climatologists.

Baer, Paul, Tom Athanasiou and Sivan Kartha. ["The Right to Develop in a Climate Constrained World: The Greenhouse Development Rights Framework."](#) An important policy framework for how to mitigate climate change while ensuring an equitable path to development for the Global South.

Bill McKibben, "Global Warming's Terrifying New Math" (In *Rolling Stone*, August 2, 2012)

<http://www.rollingstone.com/politics/news/global-warmings-terrifying-new-math-20120719>

And the update (in the *New Republic*) a few years later: <https://newrepublic.com/article/136987/recalculating-climate-math>

Citizens' Climate Lobby, an organization for citizen engagement: "Governments will respond to the will of the people provided we tell them what we want. And what we want is a livable world." Patriotic. Non-Partisan. Constructive. Optimistic. Market-Based Solutions. Get involved at <https://citizensclimatelobby.org/>