

Cool Congregations Challenge 2024 Entry Planner

How did you learn about the Challenge? Email from programs@interfaithpowerandlight.org

Do you have permission to enter your congregation in the Cool Congregations Challenge? * Yes

Full name of congregation: Boise Unitarian Universalist Fellowship

Street Address 6200 N Garrett St

City Boise

State / Province / Region Idaho

Postal / Zip Code 83714

Country U.S.A.

Average number of members within the congregation * 289

Setting * Urban

Is your congregation predominantly (50% or more) BIPOC? (BIPOC includes Asian, Black or African American, Hispanic or Latinx, American Indian or Alaska Native, Native Hawaiian or Other Pacific Islander) No

...

Religion * Unitarian Universalist

Contact Person Name * (First, Last) Jim Bigelow

Contact Person's Email * jimbigelow51@gmail.com

Contact's Phone Number * 541-231-3881

Approx Planning Date

11/22/22 – first carbon neutral BUUF meeting with Jim Bigelow, Scott Smith, Tom von Alten, and John Warren

Project planning completion date

2025 – Spring 2024, Capital campaign for funding of HVAC replacement. 2025: replace 4 GHG emitting HVAC to meet 2030 goal. Replace remainder of units as funding is available.

Title

Planning for Carbon Neutral Church

Baseline Carbon Footprint

32.26 MT/yr of CO₂e – based on 2019 data.

Estimated Emissions Reduction

25.26 MT/yr of CO₂e – based on switching to [Idaho Power's Clean Energy Program](#) and replacing all 8 GHG emitting HVAC units with all-electric HVAC units.

Estimate project's cost savings. (round numbers only)

2019 used 434,500 cu ft of natural gas and 23,280 KWh of electricity.

methodology Calculate previous year's gas consumption in kWh, divide by SCOP (rough estimate could be 3) and multiply with electricity kWh cost.

estimate \$0.10 KWH

Idaho Natural Gas Residential Price is at a current level of 14.47, =

Natural gas—7.42 cubic feet/kWh

1. $434,500 / 7.42 = 58,559 \text{ kWh}$
2. $58,559 / 3 = 19,519 \text{ kWh for heat pumps}$
3. $19,519 \text{ kWh} \times \$0.10 = \$1,951 \text{ estimated cost of heat pumps}$

2019 natural gas bill: -1,809.61

result: $\$1,951 - \$1,810 = \$141 \text{ more per year (7\% increase)}$

Summarize the findings and recommendations of the plan. (250 words) 233 used

Our plan is to balance the carbon sequestration of our landscaping against the greenhouse gas (GHG) emissions of our building and to be carbon neutral by 2050. We'll do this by using 100% electricity from non-GHG emitting sources and by finding and electrifying GHG emitting sources. We will also share our work with other congregations so they too can become carbon neutral.

We measured the carbon footprint on the building and grounds using Interfaith Power & Light's Cool Congregations Carbon Footprint Calculator using 2019 as our reference point. Our 2019 carbon footprint was estimated at 32.26 MT/yr of CO₂e, with a social cost of our emissions of \$6,129.40/yr (using the 2023 DOE Social Cost of Carbon (SCC) of \$190)/MT). 74% of our footprint comes from our natural gas burning HVAC system (23.8 mt/yr). Our electricity footprint was 2.5 MT/yr (8% of the total footprint)

because 74% of Idaho Power electricity comes from renewable sources. Our outdoor landscaping captures 8.57 MT/yr.

Our recommendations are to reduce the carbon footprint by 82% to 7 MT/yr, yielding a SCC of \$1,330.00/yr, by:

1. Using Idaho Power's Clean Energy Program to get 100% clean electricity.
2. Replacing the current HVAC with an all-electric system.

This reduction will be a major step to achieving carbon neutrality and will be followed by work to increase our energy efficiency, refine, and reduce our remaining footprint and increase our carbon capture.

Tell us about your planning team and any collaborators, such as your state IPL, US Green Building Council, or other such partners (max 250 words) 249 used

We are founding members of the Idaho Chapter of Interfaith Power and Light and partners with the Boise Chapter of the Citizens' Climate Lobby. Using their help, we've worked for many years to educate our congregation and the community with seminars and classes such as *Acting to Save Our Planet* and *Cooking for Meatless Mondays*. We've also reduced our building's energy consumption with activities such as switching all our lights to use LED bulbs, including our exit signs.

In November of 2022 we started working to become carbon neutral by 2050 and to inspire others to do the same. We talked with a wide range of people and groups within the congregation to learn about the building and grounds and to get their support. We worked with our Minister, office staff, board of directors, our building's architect, an in-house HVAC expert, and many of those who continue to volunteer their time to maintain our outdoor and indoor sanctuaries. With information from the UUA's [Green Sanctuary 2030](#), [Cool Congregations](#), [Boise's Climate Action Roadmap](#) and [Idaho's chapter of Interfaith Power and Light](#) we develop a plan for reducing the carbon footprint of our building and grounds.

We found that the emissions of our HVAC system make up a large part of our footprint. We commissioned an engineering firm to evaluate and suggest possible HVAC systems to reduce our carbon emissions. We made the choice of an all-electric replacement system with the help of an electrical contractor, Idaho Power, and HVAC vendors.

How will your plan become a reality? * Maximum of 250 words. 249 used

We are realizing our plan by engaging the minister, staff, board of directors, and the congregation in the decision to become carbon neutral. We introduced the plan to the congregation with the presentation, [Imagining a Carbon Neutral World](#), a special appeal connected with our annual action. Our congregation showed their support by donating \$15,200.

After calculating our carbon footprint, we developed a plan to reduce the footprint by 82% and shared it with our Board of Directors.

The Board immediately authorized the switch to 100% green power at an increased cost of \$0.01/kWh for an 8% reduction in GHG emissions. They also commissioned an engineering firm to analyze our situation and suggest alternatives. They also brought together a team with our in-house HVAC expert and the building's architect to evaluate the alternatives. This reduction plan was presented to the congregation at a meeting of all voting members and received unanimous support.

The Board's evaluation team chose an electric furnace/heat pump HVAC system and all the necessary accompanying work. The estimated cost is on the order of \$450,000 with an estimated 7% increase in our energy bill.

Other improvements/upgrades to our building are planned along with this HVAC replacement. The Board chose a capital campaign to raise the funds needed for all the projects and presented both the projects and the campaign to the congregation in a town hall.

The campaign will start early in 2024 with a 2025 goal to start replacing HVAC units as funds are available.

Have you shared your plan with anyone outside of your green team or planning committee? If so, tell us about it. * Maximum of 250 words. 248 words used

From the project's inception, we have said that our moral and spiritual values call us to become carbon neutral for the benefit of our children, their families and all those that come after us.

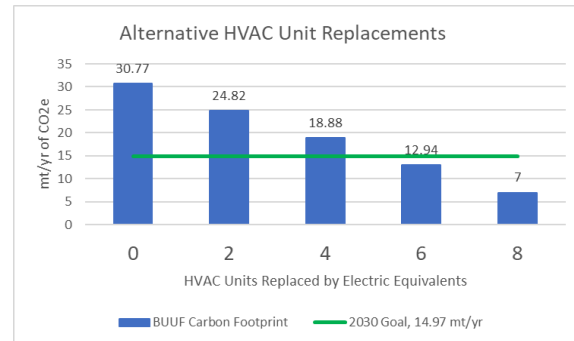
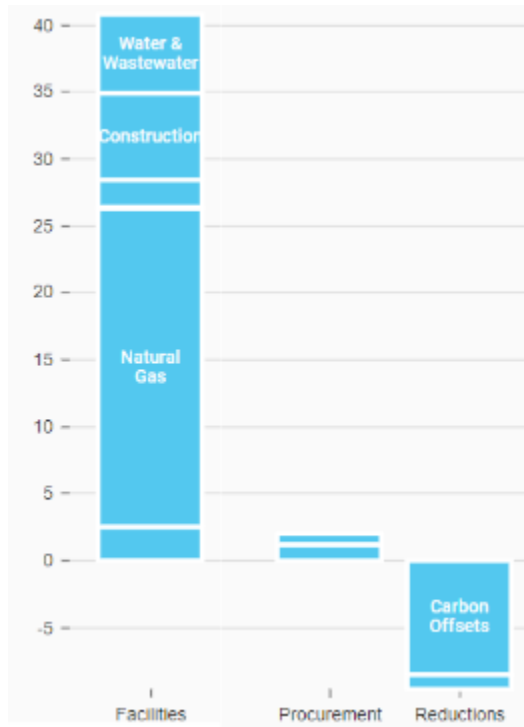
We started by getting the support of our Minister and Board of Directors. From there we gained the support of the congregation through the fund-raising campaign, *Imagining a Carbon Neutral World*.

As we learned more about our emissions and possible solutions to decrease them, we have shared these learnings and our vision at congregational gatherings. We were also very clear that it's not enough for our congregation alone to be carbon neutral; everybody must be carbon neutral. So, we are sharing our work at every opportunity.

Our church is one of the initial members of the Idaho Chapter of Interfaith Power and Light. We have shared our vision and progress at their monthly meetings, at a community sustainability fair, at the 2023 Interfaith Climate Festival during Earth Week and at small group meetings with other congregation's green teams.

Our goals are in line with Boise City's Climate Action Team as well as the Unitarian Universalist Association's Green Sanctuary 2030. We have shared our plan with the Boise City Climate Action Team since we are certain that grass roots efforts such as ours are crucial for Boise to become carbon neutral. We are using the UUA Green Sanctuary 2030 program and working toward accreditation with the idea of sharing our work with other UU congregations.

Attach up to three photos of your project. Acceptable formats include .jpg, .png, .gif, xls, xlsx, .pdf, .doc, .docx



Add your web address if desired

<https://boiseuu.org/justice/climate-action-team/>