**Brunswick Uniting Church - 3-Year Update Report to the Congregation on progress with our Climate Action Plan**

**Appendix 1.

Report to Brunswick Uniting Church Council Carbon/Energy Audit Task Group, December 2021**

1. **Have you published an *Olive Branch* or Web article
for any of your Committee or Group activities this month? No**
2. **Recommendations to Church Council (if any)**
3. **That Church Council thank Peter Allan for his pro-bono work to support our Climate Crisis Action Plan, and for his offer to provide further support. *– approved, done.***
4. **That Church Council request the Property Committee to attend to the following actions by the end of April 2022:**
5. Install timers (or just signs?) on both instantaneous boiling water units
6. Advise hall users (via signs + booking instructions) to switch the hall heaters on/off individually as needed, whenever turning on/off the master heater switch (and provide a broomstick or other suitable tool to enable this to be done safely and conveniently)

*Regarding timers or signs, Council requests that Property Committee, in consultation with the Booking Officer, decide which is the best option and install them.*

1. Install motion sensors in the toilets *– approved, done.*
2. Replace the OW gas heater with a RCAC *– approved, done.*
3. **That Church Council request the Property Committee to seek quotes and estimates of pay-back periods for** rewiring and adding solar panels to:
4. the youth hall
5. the Student Houses
6. the manse

***Approved. Also requested Property Committee to research the cost/benefit of insulating the Student Houses***

1. **That Church Council request the Property Committee to attend in the next 1-3 years to the following actions:**
2. Replace the OW fridge
3. Replace the hall hot water heater with a heat pump and plumb it to OW with recirculation
4. Finding LED replacements for the OW walkway lights

In each case, Church Council delegates to Property Committee the authority to decide whether to wait until the item needs urgent replacing, or to replace it early on the grounds that there would be a net gain to the environment. In doing so they should consult with the Treasurer regarding any budgets available for priority Climate Actions and Planned Maintenance as well as the conventional policy on capital expenditures from Maintenance Reserves.

*Approved*

1. **That Church Council request the Treasurer, in consultation with the Task Group and Climate Action Group, to review (and if appropriate, change) our Electricity and Gas Retailer and to communicate with Powershop and the public regarding our dissatisfaction and any change… *– approved, done.***
2. **Rationale for any recommendations (if any)**
3. **See the attached report from Peter Allan, Sustainable Resource Use).**
4. **See the attached report from Peter Allan, Sustainable Resource Use). The Task Group considers that these actions are the “low hanging fruit”, i.e. fairly readily done at low cost and with a meaningful impact.**
5. **See the attached report from Peter Allan, Sustainable Resource Use). The Task Group considers that each of these has significant potential for impact, both to our emissions and in terms of our message to the community around us, but further information is needed.**
6. **See the attached report from Peter Allan, Sustainable Resource Use). The Task Group considers that each of these is worth doing, but other considerations such as cost, the embodied energy in the current system, impact and/or availability make them lower priorities.**
7. **Powershop has been an excellent “green” provider of electricity and gas but has now been bought out by Shell. For more information see Environment Victoria’s informative statement:** <https://bit.ly/3o5TR7V>

**4. Progress towards Goals**

**This task group was formed to implement recommendation 2a of BUC’s Climate Crisis Action Plan: “Audit BUC's current energy use and carbon footprint, and develop recommendations for action, by December 2020”. After many delays, directly and indirectly related to the lockdowns, we’re finally there in December 2021 – hooray!**

1. **What else does Church Council need to know about? e.g. Opportunities, Issues/Risks/Challenges, etc.**

We take this opportunity to also share with Church Council an updated chart of BUC’s overall progress on its Climate Action Plan. We note there has been a significant change from red (not commenced) and yellow (commenced) to yellow and green (completed or well underway) – plenty to celebrate! Please accept our apologies if we have missed any updates.

**Prepared by (name of author): Shawn Whelan and James Clough, for the Task Group**

**Appendix 2.**

**COMMENTS for 2023 update of Climate Action Plan**
**1. BUC will continue to develop our theological and our personal and collective discipleship as the people of God living in a time of climate crisis.**

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| **Plan steps** | **Current response** |
| **1a. Develop BUC's theological understanding of environmental & climate crisis, appropriate Christian responses** |  |
| Establish a working group to draw together key principles from theology, missiology, ecclesiology etc. | No progress on this |
| Establish study group(s) | A successful Eco-theology Conversations group was established in the second half of 2021. We are still investigating how to recommence this. |
| Specific focus on climate crisis in worship, for example:* Season of Creation services (each September)
 | Season of Creation has been the focus of worship for the past 3 years. |
| * develop a specific Climate Crisis liturgy?

Incorporate justice, stewardship, eco-theology and Indigenous perspectives. | A specific Climate Crisis liturgy has not yet been developed. |
| Consult with Wurundjeri WoiWurrung Cultural Heritage Aboriginal Corporation regarding any feedback on this Plan.*Start off with Moreland Aboriginal Climate knowledge* | BUC is engaging with the traditional custodians of our region through the First Nations Solidarity Group of the Church Council |
| Learn from other churches (UCA, Pope’s Encyclical, etc) | Materials such as the Spiritual Exercises from the Laudato Si Action Platform have been used. |
| Study Dark Emu, The Film 2040, other books/films | No action with this |
| Connect with, learn from, Pacific Islanders | No action with this |
| **1b. Incorporate “environment” into SMP and YUCY** |  |
| At least once a semester, provide a climate-focussed activity for Youth Group | No intentional activity here. The Christmas pageant of 2021 had a Climate Change focus. |
| *eg. Tree planting, School Strike, Clean-Up Australia Day, TEAR Justice conference* | Some members of SMP took part in School Strike |
| "Caring for God's creation" woven into SMP programmesparticularly around the season of creation in September | No intentional activity here. |
| **1c. Develop pastoral and discipleship practices that help each of us live as Christians in a time of climate crisis** |  |
| Continue and build on existing actions such as Annual Blessing of the Bikes | Now a regular event (in September?) |
| Food Co-op | Food Co-op continuing |
| Olive Arts and Olive Pesto climate themes | The theme of one exhibition was caring for creation |
| Develop space/practice for reflecting together as climate activists (in our different ways) | No action by CAG |
| Weekly vigils | Not a weekly event. Some vigils were held in the lead-up to COP 27 |
| Climate Grief | No action with this |
| **1d. Create a set of publicly accessible materials (web based and other) about climate theology** | No action here |
| Low priority for now, given accessibilty of materials on web. |  |
| *- tag Ian's sermons with "Climate" and post on page* | Has happened, but search facility does not seem to pick it up. |

**2. The plan will include specific targets for BUC to become carbon positive. We will encourage and empower households to do the same.**

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| **2a. Audit BUC’s current energy use and carbon footprint, and develop recommendations for action, by December 2020** |  |
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| Engage an auditor by July 2020 (note we can draw on several |
| BUC contacts as well as internet research) |
|  |
| Receive report by September 2020, including "baseline" carbon seek footprint for BUC site/operations as at 1 January 2020 and recommendations,recommendations for types of action we could take to improve then and develop recommendations for action (distinguishing BUC and member households) by December 2020 |

 | Peter Allan was engaged and prepared an audit with a suggested action strategy. An action plan was developed and was approved by Church Council in December 2021. Baseline emissions were not calculated |
| **2b. Make BUC operations “net carbon neutral” by 30 September 2020** |  |
| Use solar panels to reduce electricity usage | A number have been installed. Further evaluation to take place. |
| Source and purchase 100% Green Power for BUC site by 31 May | Green Power initially purchased from Powershop by changed to Diamond Energy after the former became Shell |
| Source and purchase Carbon Offsets for BUC site's electricity use by 30 June 2020 |  |
| Source and purchase "Green Gas" (offset), or purchase direct carbon offsets for gas usage, by 30 June 2020 | Carried out |
| Purchase carbon offsets for any additional emissions identified in the audit of BUC site by 30 September. |  |
| Work with Student House, Ian/Beth, and tenants to ensure (as far as possible) that all BUC properties are net carbon neutral by 30 September 2020  | Still on-going |
| **2c. Reduce BUC's actual carbon emissions as far as reasonably practicable by end 2025** |  |
| Implement any clear, cost-neutral, quick-to-complete recommendations by 30 December 2020 | On-going action by Property Committee |
| Develop list of other potential actions, with estimates of cost (upfront and net-over-time costs) and time required, by March 2021 | On-going action by Property Committee |
| Set priorities and target dates for these actions, and/or target energy (carbon) reductions for 2021-25, by June 2021Examples could include:Replace gas heating in hall with electrical heating (powered by GreenPower)Progressively replace all major appliances with most energy efficient versions (as they fall due for replacement, or by accelerated timeline)See Property Committee’s draft "gold standard" Project Plan A for other such steps, including hiring a project manager to complete all actions in 12 monthsBetter insulate our buildings - save heating energyExamples could also include carbon-sink actions such as: On-site compostingCarbon-sink Gardening – change plantings, increase area?Investigate & implement other strategies to reabsorb carbon | **Update from James Clough 25/04/23**The Olive Way gas heater failed, and we replaced it with an efficient electric heat pump. We've just about cleaned up the wall where the gas heater used to be.Same for 1&3/278 — Student House and the rental unit, those walls still to be reinstated properly.Those two Student House units also got hot water heat pumps, 3. because it died and 1. preemptively.New boiling-water unit in the Olive Way turns itself off. (Once users are educated properly.)After searching for years, found LED replacements for one of the church downlight pendants, though they've gone off the market again before we bought enough for all the pendants.More actions coming on the hall heaters, toilet exhaust fans and solar panels. So far only the Youth Hall is disconnected from gas; more to come eventually but not in any immediate plans. |
| **2d. 50% of BUC households have (re)committed to act on Change by December 2020 at home** |  |
| Develop a voluntary “pledge” document for households to consider, e.g. | A voluntary pledge was introduced during Season of Creation in 2020.This was repeated in 2021 and displayed graphically. Over 140 commitments were made by BUC members around Food and Consumption. Of these, over 80 to Energy Use, over 30 to travel, over 30 to advocacy, about 20 to financial divestment. Needs to be re-visited |
| household carbon audit (formal or informal) | Simple audit form provided. Referred also to ABC TV Program |
| tech changes (appliances, energy provider, etc)behavioural changes (reduce usage)could also include advocacy actions as well as consumer behaviour (see 3 and 4) |  |
| Engage kids in promoting the Pledge | Some children were involved in 2021 |
| Share information to support household actions *(documents, expo, training etc.)*  | Simple audit form provided. Referred also to ABC TV Prog |
| Report and celebrate progress, by next AGM | Not reported at 2021 or 2022 AGM |

**3. BUC, both collectively and as individual members, will engage with the wider church, as well as other faith communities, groups, and people in our local community**

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| **3a. Strengthen public witness/messaging** |  |
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| Maintain existing public witness/messaging, including |
| participation in large public rallies etc |
| artwork and signs in the window facing Sydney Rd |
|  banners and/or signboards facing Sydney Rd |
| Include “Climate Action” text on the Earth button on BUC website |
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| Extend website with relevant resources and information, e.g. |
|  *include relevant sermons & posts on Climate Action page* |
| *develop a "Climate Matters" blog* |
| *include updates on progress against this Plan* |
| Develop additional actions (for immediate implementation or recommend to CC for approval), e.g. |

Project messages on North Wall of the Rooming House next door | **Summary of actions under “Strengthen public witness”**Members participated in Strike for Climate 2022, Climate Change service at St Paul’s in the lead-up to COP 27 in October 2022 Banners have been put up on the church building and fence.The Tower Window has been used a number of times to promote climate action.An extensive display of material about our climate action policies and actions can be found on the BUC Website, which (along with our newsletter) has a dedicated section for climate action news and materials. |
| **3b. Connect with people (UCs?) in coal-dependent areas – two-way dialogue to understand their communities, their concerns, find ways to engage theologically and practically around climate transition** |  |
| Identify relevant connections that we already have, e.g.Ian’s connections?Individual members' connectionsMake initial contact to identify opportunities and discuss timing -late 2020 or early 2021 due to Covid-19, bushfiresDevelop connections and dialogue - 2021, if appropriate, e.g.* Develop "pitch" and supporting materials
* Train ourselves for missional dialogue
* Approach initial group of neighbouring businesses
* Evaluate pilot and develop further plan
 | No action to date |
| **3c. Formally engage with ARRCC** |  |
|  | Formally joined in 2021 and still maintained.; our main active connection has been through two members who are both actively involved at BUC but also now at another congregation (as they move between local and out-of-Melbourne residences). |
| **3d. Connect with relevant community groups and organisations in Moreland** |  |
| Participate in eventsBuild coalitions to amplify our/their voice | Links have been established with Zero Carbon Merribek |
| Engage with Moreland Council to encourage and support their good steps e.g. fewer cars in Moreland. Establish relationships with local reps so they know us & where we stand. | Links have been developed with the Federal member for Wills. Peter Khalil spoke at a forum after worship in December 2021 |
| **3e. Reach out to local businesspeople, get to know them & what they’re then 2 (2021+) doing for climate action, encourage & assist further steps** |  |
| Develop "pitch" and supporting materials | No action here |
| Train ourselves for missional dialogue | No action here |
| Approach initial group of neighbouring businesses Evaluate pilot and develop further plan | No action here |

**4. BUC, both collectively and as individual members, will urge all levels of government, as well as business, to declare a climate crisis and commit to restoring a safe climate.**

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| **4a. Campaign solidly on one priority issue/campaign for 2020** |  |
| Identify a relevant campaign, considering realistic prospects, coalitions available to work with, etc.Become fully informed on that issue | In 2020-21 we worked with Friends of the Earth on their campaign around Victoria’s renewable energy target.In 2022 a campaign was developed to raise awareness of the UN Climate Meeting COP 27This involved working with other local churches and holding 3 vigils and attending a service at St Paul’s Cathedral |
| Actively engage BUC people in the campaign – see above.Review, identify lessons, plan for extended or different campaigning in 2021 | On going planning has not continued |
| **4b. Big business – focus on one or two major companies to engage, persuade, boycott etc** |  |
| Identify relevant target (Origen?) Develop a sequential strategy Write to company as BUCMobilise households who use that company to also write Connect with Market Forces – information and strategy | Through Move Beyond Coal – there has been a focus on NAB at its financing of Whitehaven Coal in 2022/2023 by a number of members of the congregation. |
| **4c. Support individual action for political & economic change** |  |
| Identify/create and distribute good resources for individual action – by end 2020(see also #1 above) | A key strategy has been to encourage engagement in activities which are planned and promoted by ARRCC |
| Develop a group, register or other mechanism for tracking and sharing the involvement and successes of individual members in political and economic action – by end 2020 |  |

**Appendix 3
Comparison of Carbon Emissions: 2019 and 2022

Methodology**Electricity and gas bills for 2018 through to 2023 indicate the energy usage at BUC. These have now been documented for the 6 years if anyone would like this information.

I decided to then compare 2019 with 2022 as the former was prior to Covid and the latter was getting “back to normal”. I wanted to see if any reduction in emissions had occurred. I used the Assembly’s “congregation calculator” to work out the carbon emissions from both electricity and gas. This calculator (set up by Rev Dr Ji Zhang, a Uniting Church minister and also an environmental engineer – see Assembly website under “Toward Zero”) gave reasonably close results to a long-hand version which I previously developed.

The results were as follows

 Total Gas - tonnes Total Feed-in Electric - tonnes **TOTAL** tonnes
Date Gas (MJ) CO2-e/year Elect (kWh) Elect (kWh) CO2-e/year CO2-e/year
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2019 145,588 7.50 31,835 816 25.12 32.63

2022 80,459 4.15 24,065 1,137 18.57 22.72

 **Observations**From this initial comparison it can be seen that:

1. Annual emissions for BUC are roughly in the same ballpark as say 2 or 3 typical houses.
(this shows that if we could influence individual members to take personal action it might have a much greater impact on reducing global greenhouse gas emissions).
2. Emissions from our use of electricity are roughly 4 times those for gas.
3. Emissions for both gas and electricity have fallen. Interventions such as replacing the gas space heater in the Olive Way may have reduced gas emissions. Interventions such as timers and sensors may have reduced our electricity consumption.
However, activity levels at the church (for example people renting the hall) may not have returned to pre-Covid levels, and this could be the major factor in the reduced consumption. More data will be needed to establish definite trends.

 **Comment**It could be argued that because we purchase 100 percent Green Power our emissions from electricity are zero. Generally, those in the industry would say that you have to be particularly careful when claiming this as some distributors are very good at “Green washing”. In some circumstances not all the power is genuinely off set with renewable energy when people purchase “Green Power”. It could also be argued that Diamond Energy is very environmentally focussed and can be relied upon to not use “Green washing” as a tactic. I personally feel that for now we can continue to report electricity emissions as above – this still gives the incentive to reduce consumption and therefore costs.

It is also interesting to note that during a part of the year when activity at the site is reduced (December to February) the off-peak usage of power is very similar to a part of the year when activity is greater (March to May). This could indicate that it is the appliances that are running continuously which are contributing most to our electricity usage. These appliances would include the four refrigerators, the two-door freezer, fans for under floor ventilation, two small hot water services (Youth Hall and Olive Way) and two hot water boiling units (although these now have timers).

The fact that gas emissions are much smaller than electricity emissions indicates that we would not reduce our overall emissions by very much by spending a large amount of money to get out of gas.
Gas emissions are smaller simply because our main appliances – the worship centre heater and hall heaters – are used for such short times each week and for only a few months each years.

Information from our electricity bills also indicates the amount of electricity BUC generated each year from its solar panels. Most recently, we generated 6193 kWh and of this we used 5138 kWh and exported 1055 kWh. This indicates that BUC saved about 20 percent on its electrical bills by using its own solar panels, and some credits were also obtained from a modest feed-in amount. Some analysis would need to be done to determine whether say doubling our solar panels would be cost effective, especially as Victoria has a target to have 100 percent renewable electricity by 2035.

 **Future Action**The main question is “where to focus limited resources for the best result?”
Whilst I (Richard Arnold) am not completely familiar with all the appliances on the property, my answer would probably to be the following:

1. Try to reduce electrical consumption from the continuously running appliances by replacing inefficient appliances with higher efficiency appliances.

It might also be helpful to check whether we need all four refrigerators.

Also check if the small water heaters have timers since maintaining water temperature when the appliances are hardly ever used can be energy consuming. Small “on demand” electric water heaters may also be a solution.
2. Look for opportunities to replace any gas appliances (which emit Scope 1 emissions) since emissions from these appliances will not be reduced by government action to change what is supplied. Some further investigation might be needed to prioritise which BUC gas appliances have the highest annual emissions since some of them (the heaters) are only used for limited periods each year.

There may also be incentive programs to get out of gas as this an objective of the Victorian government. It would be worth keeping an eye out for these.