

Journal of the Association for Climate Health

Winter/Spring 2021

Letter from the Managing Director

The view out my window – and probably yours too – has been featuring many characteristics of climate change – unseasonable warmth in the winter followed by outsized blasts of snow and wind. Long-established winds are shifting, and the result is more volatility in what we feel every day. While we usually think of climate change as warming around the world, it also means higher variability, more uncertainty, more uncomfortable or even catastrophic weather. This may add to what we can get out of solar and wind projects, but it also threatens food crops, public health and the viability of millions of species, including our own.

All the more reason to keep doing this work.

We do have cause for optimism – the new administration in Washington is restoring science to its customary role as trustworthy advisor in government. Yet that restoration does not mean we can breathe easy yet. What it does mean is we are no longer swimming against quite a strong riptide; the riptide continues however and we need to keep swimming and not give up.

This newsletter is full of ideas on how we can each do our part – individually and as a society. We hope you will keep reading and put much of this into action.



Read about our projects from the past few months

We have been active with projects in several areas:

- Published a White Paper on the Regional Greenhouse Gas Initiative (RGGI) and testified at the Pennsylvania state hearings on the benefits of PA joining RGGI
- Began promoting geothermal as a low-impact alternative for heating and cooling
 - Helped form geothermal interest group *Geodelphia* along with Sierra Club and others
 - Presented findings to advisors of Philadelphia’s City Council and the city’s Office of Sustainability on geothermal and a greener future for city-owned gas utility
- Created presentation for the general public on climate change and actions
 - Began offering public education on climate change to community groups and houses of worship
- Benefitted from the work of several great volunteers, especially helping research outreach on our special projects

Climate Change:
What is it?
What can we do
about it?

A presentation for people and communities

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- Consulted with Advisory Board member Rajat Kapur of &Marketing on improving the visibility and searchability of our a4ch.org website and began retrofitting website to match his recommendations.
- Ongoing work encouraging renewable energy sources in local cities and towns
- Ongoing work on reducing greenhouse gases from surgical procedures and healthcare
 - Contacted the biggest 100 cities' sustainability officers regarding health care sustainability issues
 - Continuing to contact individual large hospitals and surgical centers regarding easy health care sustainability measures

How you can help

- If you belong to a house of worship or community group which might be interested in (free) adult programming on climate change, put them in contact with us
- Let us know which of our resources, articles, strategies have been useful, interesting, helpful, and what you've been forwarding to others
- Make use of our climate-friendly strategies and solutions at home and at work
- Tell others about a4ch, our work, our website and resources – share with friends, family, teachers and others in the community
- Connect us with any officials or teachers who might benefit from our resources
- Donate to help pay for our website and other expenses



Enjoy some of our most popular Idea Forum posts below:

Agriculture:

British potato chip firm recycles carbon from brewing beer

Traditionally, breweries produce a lot of excess carbon which gets vented outside and becomes a greenhouse gas. Potato farmers also have a high carbon footprint, partly based on their fertilizer requirements since making fertilizer results in high CO₂ emissions. British crisps manufacturer Walkers is cutting CO₂ emissions by 70% as it puts these two together and eliminates the waste. They capture carbon from breweries, run it through an anaerobic digester to pull out the methane and use it to create power for the brewery. The leftover potato mash gets mixed with more waste CO₂ from the



brewery and becomes enriched fertilizer for the potato fields. The result - they reduce their carbon footprint, both by creating renewable energy and by reducing carbon emitted in making fertilizer for potatoes grown for the chips. A double win for the atmosphere!

Climate Justice:



Navaho Nation looks to solar for a just transition away from coal

Two decades of nonprofit action has finally shut down the Navaho coal mines and coal-fueled generating stations which long threatened air and water quality in the area. But how to replace the jobs and income which they used to provide for the tribe? Poverty and long distances have kept a quarter of Navaho homes from having access to electricity, but they do have space, sun and millions of dollars of now abandoned assets, including pipelines, electrical lines and silos. Plus a population interested in being trained for solar installation and other renewable projects. How can these be put to use? Solar and other renewables may provide an answer.

Climate Research:

Finding funding for new climate tech gets easier

New technologies can die of starvation when funding dries up. Government financing can be hard to find, and foundations rarely grant funds for long shots, or for climate change in general. Tax laws frown on charities funding ventures which become commercial, but Prime Coalition, a nonprofit running \$90 million of venture capital for a coalition of 165 charitable organizations, found a remedy in program-related investments (PRIs), tax-speak for funds invested in projects which might eventually turn a profit. This will allow a green light for new green technology.



Climate Strategy:

| Country | Score | Region | Inco |
|------------|-------|--------------------------|--------------|
| Iceland | 6.5 | Europe, Central Asia | High |
| Denmark | 6.4 | Europe, Central Asia | High |
| Norway | 6.2 | Europe, Central Asia | High |
| France | 6 | Europe, Central Asia | High |
| Ireland | 6 | Europe, Central Asia | High |
| Finland | 5.9 | Europe, Central Asia | High |
| Costa Rica | 5.8 | Latin America, Caribbean | Upper income |

US ranks 40th in progress towards sustainability, trailing Canada, India, Uruguay, Morocco, Poland and Mexico The Green Future Index, a new measure developed by *MIT Technology Review*, ranks 76 leading countries in their commitment and progress toward a low-carbon future. Under a Biden administration, the US has the opportunity to rise substantially and take a stronger leadership role. Can we do it? Probably, yes, but we need to pull a lot of forces together first. Should we do it? Yes. Will we do

it? This depends on each of us (those who see the need) pitching in and doing our part, whether it is through daily buying choices, voting for pro-climate leadership, donating to environmental causes or educating each other on the need to do the right thing.

Creating Behavior Change:

Twenty three Utah cities and counties opt for 100% renewables by 2030 Local governments adopting climate goals can often be found in college towns and liberal areas, but it is more newsworthy when it happens in red-state Utah. Starting with three cities passing renewables resolutions in 2016 and 17, the movement took on momentum when legislation in 2019 allowed Rocky Mountain Power to create a bulk power purchasing program for cities choosing renewables. The legislation required residents and businesses to be enrolled automatically unless they specifically asked to opt out. This gives a big boost to renewables as many people never read their utility bills. Early estimates indicated a risk of higher costs, but recent declines in the cost of solar and wind are likely to make participants' bills lower than for those who choose to stick with fossil fuel power.



Individuals:



Eat more plants, cut back on food waste – Top 10 ways to eat for a better climate Even as millions starve, a billion tons of food are discarded annually. And food raised for human consumption is often done in ways that harm the climate, the soil and the waterways. What can each of us do? Plenty! Here are some key ideas:

- 1. Eat more plants** Raising animals to eat creates 15% of global greenhouse emissions, consumes water and other scarce resources. Increase your plant-based foods and help rebalance the environment.
- 2. Eat more variety** Currently $\frac{3}{4}$ of the world's food supply comes from only 12 plant and five animal species, while most of the rest comes from next most popular 100 species. This reliance on a tiny percentage of the Earth's biodiversity puts us at risk on many levels. So be bold and adventurous – at least occasionally – with your food choices.
- 3. Use your voice** Vote early and often for sustainable food and agriculture. Let your representatives know you care – that's the only way they'll care too.
- 4. Find out about your fish** Overfishing is a threat to fish populations, ocean environments and climate health. Deliberate mislabeling of fish is used to disguise the sale of endangered species – so much so that about 20% of the fish sold in the US last year was labelled wrong. If you buy only from reputable sources – and eat less popular species – you help preserve ocean fish to feed your kids and their kids tomorrow.
- 5. Cut the waste** Much of the world's food is grown, harvested, transported to markets and ends up in the trash. If food waste was a country, it would be the third biggest contributor to greenhouse gases after China and the US. Buy what you need, freeze what you aren't eating or use it to feed friends and family; buy the ugly produce that would otherwise get thrown away.
- 6. Grow some of your own food** It's gratifying, even if it's just a few tomatoes or herbs, and it has a smaller carbon footprint than food grown and shipped from thousands of miles away.
- 7. Look for sustainable products** Look out for labels showing your food is sustainably produced (see above for more). Food and containers sold by a small but growing number of companies are produced with a smaller climate footprint than their competitors – look for them and support their pioneering efforts.

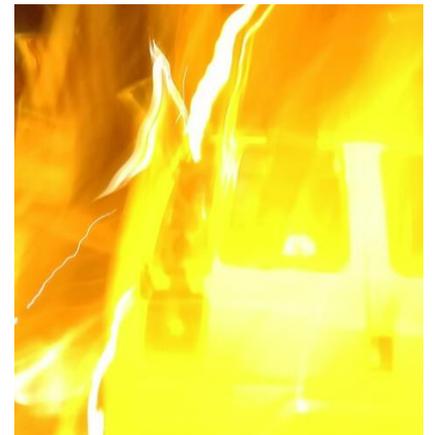
8. Get Giki – an app you can download, to find ethical and sustainability information on over a quarter of a million foods. Get **Seafood Watch** app to check the sustainability of your fish. Want to find local vegan restaurants? Try the **Happy Cow** app.

9. Pass on plastic Plastic packaging is a growing environmental threat and less than 10% of it gets recycled. Even cities with a once-robust recycling program are increasingly forced to burn or park plastic in landfills instead of doing the responsible thing. Bring reusable bags to the store and avoid products with unnecessary plastic packaging. Ask retailers to stop using plastic. Support local ordinances which propose to ban single use plastics.

10. Eat what's in season – and there's always some food in season. If you're not eating seasonal produce, your food may travel across the world to reach you. That means more greenhouse gases for transportation alone – but you don't have to, or you don't have to as often.

Industry:

Waste heat to power gets boost from new tax credits Excess heat from industrial processes is often vented to the atmosphere – and yet some can easily be converted to electricity. Oak Ridge National Labs found almost 100 such sites – especially at refineries, chemical plants and steel mills where industrial heat may be 475°F or higher – and another 3000 facilities in the US alone which could be retrofitted to recycle that waste energy into an additional 8.8 MW of usable power. Except that often it isn't profitable to do so – but might be with the new tax credit embedded in the omnibus bill funding the US government through September 2021.



Making use of waste heat can reduce industry's climate footprint in several ways – first, by not venting it into the atmosphere, second by reducing the need for other sources of power which create greenhouse gases, third, by providing power used at their own sites, thus reducing the power lost due to inefficiencies across the transmission lines.

Even in your own home you can make better use of waste heat. When you boil pasta or potatoes, do you throw the water out after cooking? On a hot day when you're using fans or air conditioning, let it go down the drain so it doesn't keep warming the house. But on a cold day, leave the cooking water to cool, releasing the heat into the house to make your home comfy. Do you run a clothes dryer in the middle of a hot day, or time it for when the air is cooler?

Aim for early morning or late at night – this will reduce your climate footprint **and** the load on your a/c. Or make good use of the warm day and let towels and linens dry on a drying rack, the shower rod or outdoors on a balcony or clothesline. Each little bit can make a difference!



Investors:

Investor pressure for sustainability has an impact on global supply chains The sustainability movement is stronger in Europe and Canada and Australia (50-60%) compared to only 25% in the US. Still, the movement is strong and growing. Corporate reporting requirements are becoming more responsive to investors asking for this information. Many major companies, responding to pressure for more sustainability, are leaning on

companies who supply them with components to become more sustainable. The result – more renewable energy is being purchased by corporations around the world, and more sustainable manufacturing practices are being adopted.

Legal:

City of Baltimore sues oil companies for rising seas and climate threat

Flooding, heatwaves killing vulnerable citizens, sinkholes under streets and crumbling retaining walls – these are some of the effects of global warming which are overwhelming the city's finances. Baltimore is not the first city or state to sue the fossil fuel industry for continuing to promote oil and gas even though they were aware of the threat of global warming. Lawsuits arise partly out of indignation that some of the major oil giants actively created disinformation campaigns and lobbied against climate legislation for decades. Right now, the US Supreme Court is considering whether Baltimore's case should be heard in state or federal courts. Baltimore hopes they will choose the state courts because environmental liability cases traditionally lose in federal courts. Yet even if the city loses this narrow procedural point, the increasing amount of science behind climate issues and the growing disgust at the self-serving stream of propaganda from the oil industry might be enough to turn the tide and begin winning in federal courts.



Science and Technology:

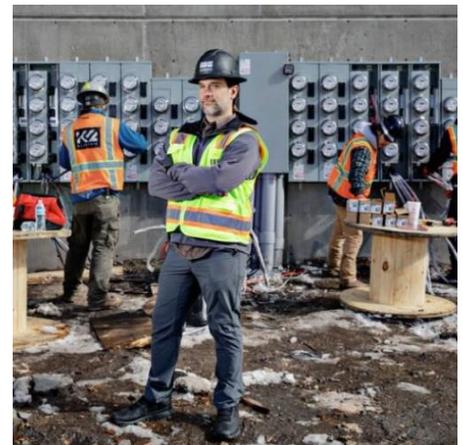


Net zero jet fuel now available at only twice the cost Still that's an improvement from "not available at all". Air travel has an enormous climate footprint, creating 2-3% of global greenhouse gases, so any improvement there would be welcome. New start-up Infinium uses renewable energy, breaks water down into green hydrogen and feeds it into a reactor which makes synthetic fuel for planes, ships and trucking. This could substitute for more standard fuels with no need to retrofit the vehicles. Fuel at twice the cost would raise transportation costs, but as more companies adopt greener synfuels, costs would decline based on economies of scale and further technological advances.

Perhaps even more promising, scientists at Oxford University recently discovered a cheaper way to make aviation fuel out of atmospheric carbon. The group working on it predict they will be ready to make commercially available carbon-neutral jet fuel in less than 3 years.

State and local:

Gas utilities lean on state legislatures to protect their business as communities encourage switching to cleaner electric heat and appliances Yes, natural gas is cleaner than coal or oil when used to create electricity. But natural gas is still a fossil fuel, so burning it creates greenhouse gases – more than renewables like solar, wind or geothermal energy. Worse, natural gas is mostly made of methane, and a good deal of it leaks into the atmosphere. Just to put this in perspective, methane is a greenhouse gas 80x more harmful than carbon dioxide, so methane leaks are important to fix or avoid. All this makes climate-aware communities want people to switch to renewable electricity instead of natural gas.



Not surprisingly, most natural gas utilities see this as a threat to their business. A few are experimenting with geothermal projects to supply heating and cooling – including Everclear in

Massachusetts and Con Edison in New York. Yet most are ignoring the problem, hoping it will go away. Several are twisting state legislators' arms to stop communities from banning new gas infrastructure and hookups – a popular step to get to net zero emissions. Why is this important? Virtually every study on sustainability suggests phasing out natural gas. Yet these utilities, established to serve the public purpose, are impeding that public purpose in many states. Adding insult to injury, the money for lobbying comes from the ratepayers themselves.



Utility Companies:

More renewables coming to the power grid – so we'll need more transmission lines, more storage and more finance As electric cars become popular, and as climate-conscious people increasingly move to low-carbon strategies, utilities will increasingly need to add green power to the grid. This means more transmission lines – both short and long distance – will be needed. Also more storage capacity, especially where intermittent solar and wind generation is added. More dollars will be needed to

finance these long-term capital projects. And each of these issues encounter some knotty problems along the way – how to locate in a NIMBY world, among others. Just saying.

Reminder:

If you have enjoyed this newsletter, please do at least one of the following:

- Share your climate success stories, interesting articles and other climate-positive ideas with us and with others
- Make use of our climate-friendly strategies and solutions at home and work
- Tell others about a4ch.org, our work, our website and resources
- Connect us with any state, local or federal officials, school or hospital administrators who might benefit from our resources
- Donate what you can – even a small amount – to help pay for our website and other expenses

Stay healthy and get your COVID shots!