

## Journal of the Association for Climate Health

December 2021

### Letter from the Managing Director

2021 was a year of good news as well as grim. The grim is right up front and obvious: wildfires, wild weather, drought, flooding and plague - many signs that grim times loom ahead – and yet there are also signs of hope that we might still forge a path into a sustainable future. Some things that keep me hopeful:

- The US **rejoined the Paris Climate Accords**. Although this is no guarantee of better policy or implementation, it is a statement of vision and intent. Those are important too.
- The US and China – the two biggest contributors to global warming – committed to cooperate on reducing emissions, and a slew of other countries also agreed to substantial cutbacks by the end of the decade. Again, no guarantees, but at least a statement to lead us forward. Additionally, the US and the EU have agreed to **reduce methane emissions** – methane being 80x more heat-trapping than CO<sub>2</sub>, yet this gas has been overlooked during previous global climate negotiations.
- To begin forcing governments and industry to actually **do what they promise**, Dutch and German courts have held Royal Dutch Shell and the German government respectively to reduce their carbon footprints. On the other side of the planet, Australia’s federal court ruled that Australia’s Environment Minister had a duty of care to protect youth from climate harm. These precedents should help embolden the legal community worldwide to take action and push people to walk the walk, and not just talk the talk.
- **Renewable energy now makes up over 30% of the energy supplied worldwide**. Even the Kentucky Coal Museum has solar panels on its roof to provide the power they need.
- “Green” steel was delivered to a commercial customer for the first time by a Swedish company (Hybrit) made without coal. Steel has a huge carbon footprint and making it more sustainable opens up a vast slew of industry which can now begin looking to reduce their emissions.
- Divestment movements are beginning to succeed in many major universities and pension funds. What does this mean? Substantial stockholders are dumping shares of companies which are major contributors to global warming. This does not directly slow the warming of our planet – those companies continue to do whatever they do, and other investors swoop in to buy the dumped shares, often at good prices – but it again signals a vision of a better world. Students and activists in days past – for example the anti-apartheid movement to promote racial justice in South Africa – help spearhead a

vast shift in public opinion which help eventually change things for the better. So, divestiture is a signal of changing public opinion and may be helpful indirectly.

- **Local communities are beginning to fight back – and win!** – battles:
  - A historically black neighborhood in Memphis stopped an oil pipeline from being routed under their homes
  - The LA Board of Supervisors voted unanimously to stop all new oil and gas drilling projects in the county
  - The Delaware River Basin Commission put a stop to new fracking permits along the river dividing New Jersey and Pennsylvania
- Two major oil companies are on notice for more accountability regarding their climate footprint:
  - Exxon had to seat three new activists on their board of directors, voted in by disgruntled shareholders
  - Chevron was forced by shareholders to implement tougher emission targets
- Hundreds of research projects for renewable energy, battery storage, sustainable agriculture and carbon capture projects are now being developed for commercial use around the world. Some are funded by governments, some by nonprofits and some by venture capital – all of which is a good sign.

Yes, we have a loooooong way to go. And the time is getting tight to turn this ship Titanic off its heading toward the iceberg, if you permit a metaphor from the world of ice instead of the warmer world of climate change. But with all these efforts and their cumulative effects, there is a good chance we can save the world for future generations and sustain most of the world's species for years to come.

#### **Read about our projects from the past few months**

- The 4-County renewable energy Power Purchase Agreement which we helped instigate in 2020 is now being managed by the professional staff of the Delaware Valley Regional Planning Group.
- We have been working on pushing the City of Philadelphia-owned gas utility (PGW) to adopt geothermal energy as a renewable alternative to gas heating and cooling systems. This work includes testifying at city-sponsored hearings and advocacy. With our partner Sierra Club we are raising funds to measure methane leaks from PGW's network of aging gas pipes which provide a significant portion of the metropolitan greenhouse gas emissions. If you are interested in further detail, check out our Geodelphia web page and link to donate to support this work:  
<https://geodelphia.org/>
- As always, we continue to provide information and links to articles offering climate positive solutions.

- We have been working on three forms of outreach, aided by volunteer efforts. Our youngest volunteer has established a new presence on Instagram, and you can check it out [here](#). Another volunteer has been building databases – one for outreach to the medical community on unsustainable medical practices, another for outreach to local community groups on climate change and how individuals can reduce their climate footprint. We offer a virtual presentation on this subject which can be offered anywhere, so feel free to contact us if you'd like to set something up for your community, neighborhood, church, synagogue or parent group.

Enjoy some of our most popular *Idea Forum* posts below:

**Agriculture:**

**Appalachian greenhouse represents the future of farming – greener than ever** Normally we don't see a lot of advances originating in Appalachia, but the biggest greenhouse in the US today is there, and they have been getting 30x greater yields on crops while using only 10% of the water than with conventional farming. Because farmers have long cut down forests and diverted water from wildlife and other users, any method that seriously cuts back on those inputs can reduce global warming while allowing additional food production for a world whose population continues to expand. Using sensors on each plant along with robotics and artificial intelligence has made these savings possible at the AppHarvest greenhouse in Morehead, Kentucky, though the resulting power use is substantial. Still, pairing these methods with renewably sourced electricity would be an excellent way forward.



**Climate Justice:**

**Unions and climate advocates learn to work together**

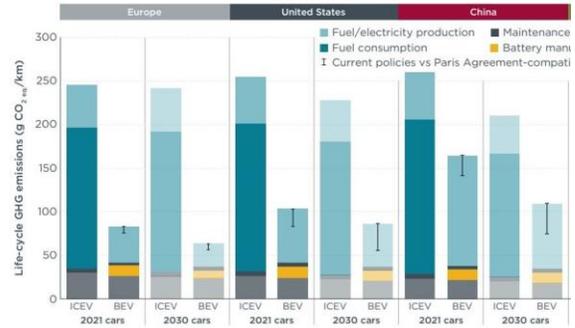
Climate advocates are eager to see the costs of renewables and climate-positive technology come down. Why? Because the cheaper these projects get, the more likely people are to take them on. Cheaper has often meant using nonunion labor for manufacturing, transporting and installing. No wonder unions have been uneasy about climate change issues! Now climate advocates in Connecticut, Illinois, New York and Texas have begun to recognize the value of working with unions. Teamwork can create greater support for climate health projects, which means legislation may get passed, government agencies may approve or fund climate-positive projects, and the economy can offer good clean-tech

jobs for workers in their communities. Labor is a key constituency for meeting climate goals so this level of cooperation should be encouraged.

**Climate Research:**

**It’s ok to buy electric cars, a new study determines – the old claims they are worse than gas-powered cars were wrong**

Critics sometimes argue that, although EVs use no fossil fuels, they can create more climate harm than internal combustion engines when you take into account the emissions from manufacturing electric car batteries, plus emissions from any EVs charged up with coal-based electricity. A new study by the International Council on Clean Transportation in Berlin puts that claim to rest. Looking at the cradle-to-grave atmospheric impact in the US, China, India and Europe, today’s EVs have substantially lower greenhouse gas emissions than gas-powered vehicles. Small reductions in gas-powered cars’ climate impact can be made by going hybrid or using biofuels but those changes are minor. In order to reach Paris Climate goals, the Council calls for a complete phase-out of gas vehicles in favor of full electric.



**Climate Strategy:**

**Global methane pledge tackles small but mighty component of climate threat**

President Biden’s recent speech on the Global Methane Pledge proposed reining in a long-overlooked but insidious component of global warming. Previous global climate policies have focused on reining back carbon dioxide emissions. Methane, in contrast, is a smaller fraction of greenhouse gas but

each molecule of methane has about 80x more heat-trapping capability than a molecule of CO<sub>2</sub>. Ignoring methane is a luxury we can no longer afford. Methane leaks out from oil and gas wells, refineries and pipelines. Even more under-the-radar are leaks from natural gas utilities which have networks of leaky pipelines. Methane is the major component of natural gas, yet the utilities market it under the more user-friendly name “natural gas”. The industry presents natural gas as a clean fossil fuel, and this is true at the combustion end but not if you include significant leaks from wellhead all the way to the end-user. Once it arrives in a home or business, it’s indoor air pollution is lower than oil or coal, though greater than electricity. Yet this ignores the large fraction of gas which never arrives at the site for use, because of flares and leaks all the way along the line. Thus methane gas has been masquerading

for over a century as an innocent, healthful source of heat and power. With the world waking up to its dangers, we hope this gap in regulations will be filled – at the EPA but also worldwide.

### Creating Behavior Change:

#### The first-ever Earthshot Prize – like the Nobel Prize for climate work – given to 5 winners worldwide

Prince William of England and his wife, Duchess Kate, announced the winners of the first Earthshot Prizes recently. Named after US President John Kennedy’s Moonshot project which landed people on the moon for the first time, and organized somewhat like the Nobel Prizes, Earthshot includes awards in five categories each year: to protect and restore nature; clean air; build a waste-free world; revive our oceans; and fix the climate. The first year’s winners include two governments (Costa Rica and Milan, Italy) and three private companies for work that focuses on restoring coral reefs, reducing food waste and hunger, and converting agricultural waste into green energy. 750 organizations were competing for 5 prizes. Each winner received £1 million (British pounds), worth \$1,375,000 in US currency. We applaud this new prize which can bring excitement, publicity and financial incentives to move us away from our current path towards painful extinction.



### Individuals:

**Please stop flushing virgin forests down the drain!** A little-known secret – most toilet paper in the US is made from logging in the largest intact forest on the planet. Three major manufacturers - Proctor & Gamble, Kimberly Clark, and Georgia-Pacific – sell most of the toilet paper, napkins and paper towels sold in stores, and they go from forest to factory to store to your home to your face or bottom and then into the sewer or the trash. Yet there are now alternatives made by smaller, greener brands from recycled paper and bamboo. Read more about this, along with a new report from the Natural Resources Defense Council rating 95 brands of toilet paper from *FastCompany*’s Elizabeth Segran at [https://www.fastcompany.com/90677480/toilet-paper-really-is-terrible-for-the-planet-heres-what-you-can-do-about-it?partner=rss&utm\\_campaign=rss+fastcompany&utm\\_content=rss&utm\\_medium=feed&utm\\_source=rss](https://www.fastcompany.com/90677480/toilet-paper-really-is-terrible-for-the-planet-heres-what-you-can-do-about-it?partner=rss&utm_campaign=rss+fastcompany&utm_content=rss&utm_medium=feed&utm_source=rss)

## Industry:

**The race for green concrete is heating up** Concrete, like steel, creates a huge climate footprint – about 6% of the world’s greenhouse gas comes from making concrete. Concrete’s dirty profile is now attracting serious attention by concerned environmental thinkers including Bill Gates, financiers and venture capital companies. The result is that over \$100 million has been invested in green cement startups over the past year. Cement insiders (yes, there is such a thing!) suggest the industry has cut emissions by 20% over the past two decades with more attention to waste cutting and so forth, but it’s continuing impact indicates there is still a long way to go. What approaches are being tried by these new startups? Primarily various ways of pulling atmospheric CO<sub>2</sub> into the concrete to harden it and lock the carbon down. In Europe, where companies are required to pay for licenses on their carbon emissions, adoption may be faster because builders can save money with carbon capture cement.



## Investors:

**One of the reasons the climate is at risk is that society has never placed value on the environment – but some companies are beginning to change that.** Recent reports estimate that Nature is worth \$125 trillion, and that half the world’s GDP relies on nature. This underlines the tremendous value Nature has, though it is often treated as lacking value, and people and enterprises steal from it or degrade it with impunity. When one person takes freely from the environment (whether by mining, grazing their cows in a public park or dumping their waste into a stream or up into the sky), that action creates a loss for us all. The Financial Stability Board, reporting to Finance Ministers and Governors of central banks around the world, is beginning to address this by creating standards for measuring and reporting change. Sportswear company Puma has been pioneering the idea of Environmental Profit and Loss statements for a decade now. Dow Chemical now includes Nature in its measurement of progress towards sustainability goals.

## Legal:

**Can the law give waterways the right to sue developers who would kill them?** Voters in Orange County, Florida (near Orlando) passed a law giving streams and rivers certain rights, allowing people to represent those rivers' rights in court, and strengthening people's rights to clean water. Environmentalists are taking a developer and the state to court over a housing development which would destroy 63 acres of wetlands and 33 acres of streams. Over 9 million acres of wetlands have been destroyed in Florida since it became a state, which seriously harms animal life and water quality while also increasing flooding. India recently gave legal standing to the Ganges River plus other rivers, lakes, glaciers and forests; Ecuador provides nature with legal rights, and so do Bolivia, Colombia, Bangladesh and Uganda. Perhaps it is time to give the upper atmosphere some legal standing also – then police the infractions.



## Science and Technology:

**Rebuilding coral reefs, one Lego at a time** In Singapore, scientists have been experimenting with using Legos to rebuild coral reefs, which have been suffering around the world due to land development, seaport activity, oil spills and climate change. Lego blocks turn out to be useful (as well as colorful) for anchoring coral and giant sea clams. Legos are stable and last a

long time, which is important as coral reefs grow slowly over decades and centuries. Interesting, but how does this help the climate? Rebuilding marine ecosystems are another way to capture carbon which otherwise escapes and becomes a greenhouse gas.

## State and Local:

**Bike paths become more sustainable** Solar bike paths? Why not? And why not use them as test cases for whether concrete can serve a second purpose – not only creating durable paths for transportation, but also collecting sun energy and converting it to electricity. Governments in the Netherlands have been experimenting with embedding solar cells in concrete blocks and using them for bike paths and eventually roads as well.





### **Utility Companies:**

#### **Eminent domain may be the pathway for green grid expansion**

Yes, there is a long history of environmentalists fighting the government's use of eminent domain to get the right to build oil or gas pipelines across people's properties. But the same reluctance of landowners to allow those intrusions

may be needed to build up the transmission lines to bring more renewable electricity to the increasingly electrified grid, as people switch from natural gas heat to electric, from gas-powered cars to electric, and from brown energy to green. The legal tactic of eminent domain allows governments to take the right of using private property as long as it is for a public purpose. Governments offer compensation for this use, but frequently end up in court as many landowners prefer not to have their land crisscrossed by others, or try to extract larger payments for this use. The process is usually not pretty, but frequently necessary in order to complete a large, often inter-state project such as a major transmission line carrying wind or solar power from Texas or Kansas to Chicago or the East Coast. New legislation may be needed in Congress to simplify the process.

### **How you can help**

If you have enjoyed this newsletter, we invite you to do one or more 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 – its tax deductible – to help pay for our website and other expenses

**Our fervent wish: May 2022 be a year of good health and joy for you, your loved ones and the planet!**