

# THE VILLAGE GREEN

Number thirty, May 2, 2021

**Do you want to know what local environmental ecological and climate events (on-line and in person) have been scheduled for Grey, Bruce and environs?**

**They're listed and described at Grey Bruce Climate Action's event listing:**

<https://greybruceclimateaction.ca/events>,

**where you can also add your own organization's upcoming events.**

## **GLOBAL SUMMIT: LEADERS MAKE MORE PROMISES**

At a global leaders' virtual summit convened on Earth Day by President Biden as signal of U.S. re-engagement in climate action, Prime Minister Trudeau pledged to reduce emissions of greenhouse gases by 40% to 45% below 2005 levels by the end of this decade. This is between 4% and 9% higher than the 36% the Canadian government says it can achieve under existing measures, which is already above the 30% target committed to under the Paris Agreement. Trudeau's office said provinces were consulted over the winter on these new aspirations, but environment ministers in Alberta, Saskatchewan and Ontario said they were not consulted. However, British Columbia, Nova Scotia and Prince Edward Island welcomed the new targets. Meeting Canada's new targets is made much more difficult without provincial commitments, since so many of the drivers of greenhouse gas emissions lie within provincial rather than federal jurisdiction.

The U.K., the European Union, Japan and the U.S. also announced more ambitious targets at the summit. Biden announced the U.S. will aim at emission reduction of 52% over its 2005 emission levels.

While China's Xi Jinping didn't announce new targets, his speech made a commitment to phase down coal-fired energy generation. Said Xi Jinping, "*We will strictly control the coal-fired power generation projects*" and "*We will strictly limit the increase in coal consumption over the 14th five-year plan period and phase it down in the 15th five-year plan period.*" Analyst say that to align policy with its long-term carbon neutrality goal, China must immediately stop building new coal-fired power plants and shut 364 gigawatts of coal capacity by 2030 – down from an estimated 1,095GW currently.

The U.S. emits nearly 15% of the world's CO<sub>2</sub> from fuel sources, according to the International Energy Agency's 2018 statistics – more than any other country except China, which emits nearly twice as much.

Less noticed at the summit was the launch of a <sup>us</sup>\$ one billion financial tool to help translate promises into effective initiatives for forests. The tool, developed by a new public-private coalition called Lowering Emissions by Accelerating Forest Finance (LEAF), aims to end tropical deforestation by 2030. Unlike the UN's Reduction of Emissions from Deforestation and Forest Degradation (REDD+) mechanism, this fund starts with money in the bank – it is already underwritten by several large multinationals and a few developed countries. LEAF will fund its recipients for targets achieved by the applicant (you have to contain or reverse deforestation now and get the money next), a stronger incentive for countries to implement initiatives and show results as fast as possible.

# THE VILLAGE GREEN

Number thirty, May 2, 2021

## GREY HIGHLANDERS ARGUE FOR BEAVER VALLEY PRESERVATION

At four municipally-sponsored on-line visioning sessions on the future of the Beaver Valley Corridor held on April 28, a number of residents of Grey Highlands voiced their concerns about a proposal to create a municipal-private sector partnership to develop lands in the ecologically rich but vulnerable valley.

The proposed partnership first set off alarm bells in the minds of conservationists when Grey Highlands announced the partnership, couching development of the lands entirely in terms of private sector profit opportunity, with no mention of any role civic or environmental groups might play in shaping the future of the properties. In October 2020 Grey Highlands Council announced it intended to "maximize the development potential" of the former Talisman Resort, and in March 2021 a Joint Agreement was signed by the municipality and the owners of the former Talisman packaging two properties currently owned by the municipality with the former Talisman-owned lands to jointly market the properties to developers, to "maximize profits."

In response a core group of residents was formed to bring together conservation, education, service organizations and other stakeholders to negotiate to purchase the properties. Says core group member Joyce Hall:

*"Many citizens are already expressing concern that development will destroy the already fragmented wildlife corridor, increase pressure on the water supply and watershed, and undermine the fragile beauty of this unique valley... Grey Highlands has the opportunity here to pursue the maximum public good for precious public land, especially given all we now know about the links between COVID, the destruction of our environment and the value of nature to our health."*

In advance of the visioning sessions the core group circulated a petition addressed to the Grey Highlands Municipal Council that said, in part:

*"Whereas the Beaver Valley lands once known as Talisman Mountain Resort are contiguous with a UNESCO World Biosphere Reserve, and are a much beloved and high profile public asset; and whereas many well-established stakeholder groups exist and have a productive role to play in the future of these properties; we ask that Council delay any sale of the 3 parcels in order to give the citizens leading this effort 3 months to bring together nature conservation, education, service organizations and other stakeholders to develop an appropriate and realistic plan for the properties. We need time."*

The Municipality's response to this petition may be an indicator of whether Grey Highlands sees its civic sector as an integral partner in development, equal to the private sector – or merely an afterthought. The petition can be signed at <https://www.surveymonkey.com/r/DJP9KJT>.

## FEDERAL TORIES PUBLISH CLIMATE PLAN

Despite dissension within the federal Conservative Party's ranks about whether human-induced climate change even exists, the Tories issues a climate plan in mid-April. Titled **Secure the Environment: The Conservative Plan to Combat Climate Change**, the plan contains a feature that looks very much like a carbon tax – a climate-saving tool the Conservatives have decried ever since it was introduced by the federal government.

# THE VILLAGE GREEN

Number thirty, May 2, 2021

This is how the Tory plan describes its version of the tax:

*“Canadians will pay into their Personal Low Carbon Savings Account each time they buy hydrocarbon-based fuel. They will be able to apply the money in their account towards things that help them live a greener life. That could mean buying a transit pass or a bicycle, or saving up and putting the money towards a new efficient furnace, energy efficient windows or even an electric vehicle.”*

The plan reiterates the tax-is-bad mantra so beloved of many conservatives (ignoring the fact that taxes are a way for a government to fund climate protection):

*“Carbon pricing should not result in Canadians sending billions of dollars of new tax revenue to the government – revenue which it will be increasingly tempted to spend.”*

The plan also takes a whack at China – a sop, perhaps, to those Canadians who argue that what Canada can do is a drop in the bucket compared to big polluting countries (ignoring for moment the fact that on a per capita basis we are a dirty country):

*“We will stand up for Canada in the world by insisting that major polluters like China clean up their act. We won’t hurt Canada’s growth while the worst climate offenders do nothing. We will study the imposition of a carbon border tariff which would reflect the amount of carbon emissions attributed to goods imported into Canada. Producers in countries with emissions reductions mechanisms that are compatible with our own will be exempt. We will urge our American trade partners to adopt this approach as well.”*

The Plan is at <https://cpcassets.conservative.ca/wp-content/uploads/2021/04/15104504/24068610becf2561.pdf> .

## **REPORT: STRATIFICATION WILL KILL OUR LAKES**

The study *Phenological shifts in lake stratification under climate change*, published in *Nature Communications* on April 19, suggests that climate change in the northern hemisphere will cause lake stratification to increase by an average of 21 days per year, with potentially catastrophic effects on the lakes.

As temperatures rise in the spring, warm air heats the top layer of water, which separates out from the cooler layers of water beneath. This is the process of “stratification”. The stratified layers don’t mix easily. The greater the temperature difference between the layers, the less mixing. Lakes generally stratify when hot weather maintains the temperature gradient between warm surface water and colder, deeper water.

Stratification can create a barrier that makes it harder for dissolved gases and particles to move between the layers of water, preventing the oxygen from surface water from sinking deeper into the lake and leading to “deoxygenation” in the depths. But it is these cooler depths to which fish and other aquatic life migrate in mid-summer to escape the warmer water above them. Increasingly, then, they will be seeking refuge in water where they can’t breathe.

The study notes that a shift to earlier stratification in spring can also encourage communities of phytoplankton – a type of algae – to grow sooner, and can put them out of sync with the species that rely on them for food – a process called “trophic mismatch”.

Winds blowing rapidly across lakes tend to mix the water column, thus acting against the stratifying effect of increasing air temperature, but wind speed is expected to decrease as the planet warms.

# THE VILLAGE GREEN

Number thirty, May 2, 2021

The authors highlight the vulnerability of North America's Great Lakes, which house "irreplaceable biodiversity" and represent some of the world's largest freshwater ecosystems. These lakes have been stratifying 3.5 days earlier every decade since 1980.

The study is at <https://www.nature.com/articles/s41467-021-22657-4>.

## LAKE SIMCOE IS A GREAT LAKE TOO

A recent report **Lake Simcoe Under Pressure In 2021: Key Stressors And Solutions**, published by the Rescue Lake Simcoe Coalition and the Simcoe County Greenbelt Coalition, posits some successes in preserving this often overlooked Great Lake, while describing the immense threats the lake still faces. The report, at <https://rescuelakesimcoe.org/wp-content/uploads/2021/03/Under-Pressure-Report-2021.pdf>, summarizes the problem this way:

*"More than \$80 million dollars from the province of Ontario and the federal government have been spent on Lake Simcoe's rehabilitation since 2008. Those critical investments have helped naturalize some shorelines, restore some wetlands, and reduce phosphorus loads from agriculture, sewage treatment plants, and urban sources. But the minor improvements achieved are overshadowed by two critical threats: climate change and the impacts of development. Thanks to a changing climate, the Lake Simcoe watershed has seen an increase in major storm events which leads to infrastructure failure and more pollutants, including phosphorus, entering the lake. 100-year storms now happen every 10 years."*

The report proposes six protective actions:

1. Limit growth in the watershed to sustainable levels, to protect the lake's health
2. Stop the Minister's Zoning Order (MZO) that allows the "Orbit" development for up to 150,000 people in farm fields in Innisfil, around a proposed GO train station
3. Stop the Bradford Bypass over the Keswick/Holland Marsh at the lake's south end that would destroy the very wetlands the Lake Simcoe Protection Plan is meant to safeguard
4. Stop the Upper York Sewage System from discharging into Lake Simcoe
5. Keep the Lake Simcoe Protection Plan strong (the Plan is slated for review this year)
6. Expand the Greenbelt into Simcoe County to support Lake Simcoe's health and the preservation of farming in the area.

## BLUE MOUNTAINS HUGS TREES, OLD AND NEW

The Town of The Blue Mountains has launched a public survey to gain feedback from residents regarding updates to the current Municipal Tree Preservation By-Law 2010-68. The purpose of the survey is to gain feedback regarding the town's role in tree protection and preservation in the community. The survey can be accessed by visiting the project webpage: <https://yourview.thebluemountains.ca/municipal-tree-by-law-update>.

In addition to his municipal initiative, the Blue Mountains Tree Trust, an environmental charity that preserves heritage trees in the Town of the Blue Mountains, announced in March that it plans to establish a local nursery that offers plant saplings grown from highly successful local native trees. Said Betty Muise, the Tree Trust's program coordinator:

*"We have these 100-plus-year-old trees in our community that are spectacular. We should be closing the loop. So, the Tree Trust nursery project will focus on cultivating locally adapted native tree seedlings because these types of native plants have evolved to be successful and most adapted to local conditions."*

# THE VILLAGE GREEN

Number thirty, May 2, 2021

The Blue Mountains Tree Trust is affiliated with similar initiatives in Centre Wellington, Meaford, Stratford-Perth and the Toronto Island Community.

## **CLEAN AIR ALLIANCE: MAKE PICKERING NUKE PLANT SAFE**

The Ontario Clean Air Alliance has asked Rumina Velshi, President of the Canadian Nuclear Safety Commission, to impose an interim moratorium on the operation of the Pickering Nuclear Generating Station (PNGS) until Ontario Power Generation (OPG) has demonstrated that the risk to public safety from its continued operation is acceptable. Said the Alliance in its March 30 letter to Velshi:

*“According to Dr. Frank Greening, a former OPG research scientist, OPG has failed to demonstrate that the PNGS’s pressure tubes are still fit for service. In addition, Dr. Greening has pointed out that the failure of OPG to obtain reliable deuterium pickup data for Pickering Unit 6 means that OPG has failed to meet the requirements of CSA Standard N285.4 for this Unit which should therefore be immediately shut down. According to Dr. Sunil Nijhawan, a nuclear engineer and consultant who once worked for OPG and specializes in accident and safety assessments, in a worst-case scenario, a ruptured pressure tube could lead to a series of ‘cascading failures not unlike what happened at Fukushima...’ An interim moratorium on the operation of the PNGS need not lead to an increase in gas-fired generation. At the present, much of Pickering’s nuclear generation is surplus to Ontario’s needs and is exported to the U.S. Pickering’s generation that is currently consumed in Ontario can be replaced by purchasing safer and lower-cost Quebec water power.”*

## **CANADA: WORST OF THE G7 IN MEETING CLIMATE TARGETS: U.K. DOES BEST**

According to a recent article in the National Observer’s newsletter *Zero Carbon*, Canada fares worst among G7 members in terms of reducing greenhouse gas pollution. Our level of emissions in 2020 is 21% higher than in 1990. Of G7 members the U.K. has done best according to figures cited in a Carbon Brief analysis found at <https://www.carbonbrief.org/analysis-uk-is-now-halfway-to-meeting-its-net-zero-emissions-target>. The U.K.’s level of emissions in 2020 was 51% below 1990 levels. While there may be inaccuracies in the U.K.’s data for 2020, it’s clear Britons are doing well compared to us. Carbon Brief says U.K. levels have dropped for three main reasons:

- Electricity supplies that no longer rely on coal (accounting for about 40% of the reduction)
- Cleaner industry (40% of the reduction), including manufacturing and waste industry emissions controls on landfill methane, halocarbons and nitrous oxide (25%), as well as more efficient industrial processes and a structural shift away from carbon-intensive manufacturing (15% of the reduction)
- A smaller and cleaner fossil fuel supply industry, with lower methane emissions from coal mines and leaky gas distribution pipes (10% of the reduction).

Much slower progress had been made on the gas used to heat buildings, and almost no progress had been made in transport-related emissions in the U.K. And according to research by Paul Brockway of the University of Leeds and others, some of the reduction in U.K. energy consumption, and therefore emissions, stems from "outsourcing" industrial production to China and other countries.

Carbon Zero attributes much of the U.K.’s success to two factors:

*“One is support across political lines. You might have noticed a lot of the success on that chart came under Conservative governments. Years of campaigns pulling from within and*

# THE VILLAGE GREEN

Number thirty, May 2, 2021

*pushing from outside made the Conservatives into willing advocates for climate action. Boris Johnson once derided wind turbines as 'not being able to pull the skin off a rice pudding.' These days he pledges to 'build back greener,'" investing in a 'green industrial revolution' with enough offshore wind to power every home in the U.K.*

*Another crucial thing the U.K. got right was its process for creating climate policies. The U.K. set the world standard: independent experts design policies years in advance that will meet five-year carbon budgets. Right now, they're setting out the laws and regulations needed for 2033-37. Parliament passes the needed laws years ahead of time. Other countries like France have since adopted the model. But Canada chose a more hodgepodge approach including weaker stakeholder committees that don't have their own independent budgets or teams for research and analysis."*

The Carbon Zero article is at <https://www.nationalobserver.com/newsletters/zero-carbon/2021/04/01/whats-working-race-against-climate-change>.

## 350.ORG CALLS FOR GREEN - NDP CLIMATE EMERGENCY ALLIANCE

The climate advocacy organization 350.org has launched an on-line petition calling on Canada's NDP and Green Parties to form a climate emergency alliance to elect as many climate champions as possible, then use their combined power to pass bold legislation in the House of Commons. Says the petition's text:

*"Green Party Leader Annamie Paul and NDP leader Jagmeet Singh, I call on you to set aside your partisan differences and form a Climate Emergency Alliance between the Green Party and NDP ahead of the next federal election. In this Alliance, both of your parties would come together under the promise to do everything in your power to tackle the climate emergency at the pace and scale that science and justice demand. You would pledge to work together during the election to elect as many climate champions as possible, and afterwards in Parliament to pass ambitious climate legislation in line with a made-in-Canada Green New Deal. We can't afford to wait for Justin Trudeau to start governing like we're in a climate emergency. Nor can we wait several decades for the NDP or Green parties to build enough power to form government. Under our broken voting system, a Climate Emergency Alliance is the best possible option for our climate and our communities. Will you form a Climate Emergency Alliance as we head into the next federal election?"*

Further background on the proposed alliance, and a link to sign the petition, are at [https://climatealliance.ca/homepage/?utm\\_medium=email&utm\\_source=actionkit#case](https://climatealliance.ca/homepage/?utm_medium=email&utm_source=actionkit#case).

## CANADIAN GREEN FARMERS: INVEST IN US

In its recently released report entitled *A Down Payment for a Resilient and Low-GHG Farm Future*, the Canadian organization Farmers for Climate Solutions makes a case for the federal government to allocate c\$300 million in its 2021 budget to help farmers play an even greater part in dealing with climate degradation. The report proposes allocations to six programs:

1. c\$115 million to **Doing More with Less Nitrogen** (agronomists and farmers working together to improve nitrogen management through a cost-share program)
2. c\$115 million to **Increasing Adoption of Cover Cropping** (supporting farmers to plant cover crops through a per-acre payment program)
3. c\$25 million to **Normalizing Rotational Grazing** (Supporting ranchers to implement rotational grazing through a cost-share program for planning and infrastructure)

# THE VILLAGE GREEN

Number thirty, May 2, 2021

4. c\$30 million to **Protecting Wetlands and Trees on Farms** (reinforcing farmers as stewards of the land through a pilot program to conserve existing forests and wetlands)
5. c\$10 million to **Powering Farms with Clean Energy** (transitioning on-farm energy beyond diesel through pilot programs)
6. c\$5 million to **Celebrating Climate Champions** (shining a light on farmers who implement climate-friendly practices through an awards program and awareness campaigns).

The report is at

[https://static1.squarespace.com/static/5dc5869672cac01e07a8d14d/t/603cf540ca355d0ac5009619/1614607684484/FCS\\_BudgetRecommendation2021.pdf](https://static1.squarespace.com/static/5dc5869672cac01e07a8d14d/t/603cf540ca355d0ac5009619/1614607684484/FCS_BudgetRecommendation2021.pdf)

## U.S. CONSERVATIVES CREATE “MARKET ENVIRONMENTALISM” ACADEMY

A couple of years ago some young conservatives in the US revolted against the common wisdom of many conservatives that climate change didn't exist, or wasn't related to human activity. They formed an organization, the American Conservation Coalition, to acknowledge the importance of anthropogenic climate change, and to espouse market-driven low-regulation approaches to the crisis, all under the broader conservation umbrella (perhaps because conservation is more palatable to conservatives than climate action).

The Conservation Coalition has now created a Market Environmentalism Academy to provide training, described on the Academy's web site as:

*“an educational platform that hosts courses on a variety of environmental topics, from a pro-market perspective. As the first-ever educational hub of its kind, the Academy will equip participants with the knowledge and skills necessary to fight for solutions that uplift our environment, economy, and people.”*

Its programming for 2021 includes four levels of courses, from Basic (“Gearing Up”) to Advanced (“Summit”), covering these topics:

Introduction to Market Environmentalism	How to be an Effective Environmental Leader
The Philosophical Roots of Environmentalism	The Role of Hunters & Anglers in Conservation
Free Market Environmentalism	Why Climate Science Should be Non-Partisan
Why the Green New Deal is Bad for America	My Journey from Climate Denialism to Reality
Climate Change as a National Security Threat	Debunking Common Environmental Myths
Introduction to Eco-Modernism	Why Innovation is Good for the Planet
Conscious Capitalism for the Planet	Nuclear Energy and Small Modular Reactors
Carbon Capture and Storage	Biotechnology
Renewable Energy and Battery Storage	History of America's Conservation Movement
The U.S. National Park Service	A Faith-Based Approach to the Environment

Socialism is Bad for the Planet.

The Academy's website is at <https://www.marketacademy.eco/>.

## STUDY: GREEN INVESTMENTS PAY BETTER

The International Energy Agency, a policy think tank funded by the world's energy ministers, has produced a study in partnership with the Centre for Climate Finance & Investment (CCFI) at London's Imperial College Business School, compared the five- and 10-year investment

# THE VILLAGE GREEN

Number thirty, May 2, 2021

performance of 545 oil, natural-gas and coal producers in 55 countries against a portfolio of 208 renewable-energy and equipment companies from 34 countries. The study, entitled *Clean Energy Investing: Global Comparison of Investment Returns*, indicates that in advanced economies, renewable power delivered a 10-year total return of 727%, compared to just 31.6% for fossil fuel companies. In riskier emerging markets and developing countries, the renewable companies still delivered, posting a 10-year return of 136%, versus 113.8% for fossil fuel firms. The report breaks new ground in demonstrating clean energy's performance in developing markets, where clean energy faces greater uncertainty and higher costs of capital. Because our futures depend in part on decisions made in China, the report also studied the performance of Chinese companies alone. The news is good: over 10 years, China's portfolio of 105 fossil fuel companies offered investors a 41.1% return, while its 74 renewable-power companies delivered a 243% return.

Says CCFI executive director Charles Donovan:

*"There's nothing new about the positive performance of renewable energy stocks. It's been the same story for more than a decade, yet total investment is still lagging. National regulators, particularly in the United States, must get to work on the reforms needed to level the playing field for clean-energy investors."*

## **FACTOR CLIMATE VULNERABILITY INTO DEBT RELIEF: IMF**

Kristalina Georgieva, the head of the International Monetary Fund (IMF) has urged rich nations to reconsider the criteria for developing countries to access international finance, saying vulnerability to climate shocks should be taken into account. At the opening press conference of the IMF's spring meeting, Georgieva said income level was the primary consideration when disbursing international finance, *"but there are other sources of vulnerabilities, for example high vulnerability to climate shocks. And therefore the international community should look into other factors of vulnerability as we think of appropriate ways to support developing countries."*

Her comments came after G20 finance ministers agreed to extend a debt repayment holiday for 73 low income countries beyond June to December 2021, but they declined to expand the initiative to middle-income countries such as small island states in the Caribbean that face ballooning debt levels as the costs of Covid-19 and climate impacts mount and as tourism revenues plummet. Said the Alliance of Small Island States (AOSIS), the extension of the debt repayment pause *"only goes some way to solving the huge debt issues Covid-19 and climate change have served up to island nations"*.

*"More than half of the world's small island states don't even qualify for this debt relief, due to outdated and illogical criteria,"* said Aubrey Webson, Ambassador of Antigua and Barbuda and AOSIS chair.

An assessment by the World Bank and the IMF has described the combination of debt, climate change and environmental degradation as *"a systemic risk to the global economy... that exacerbates climate and nature vulnerabilities"*.

## **MALDIVES: ARTIFICIAL ISLAND TO SURVIVE SEA RISE**

An artificial island in the Maldives, a country made up of many islands, could be a destination for people trying to escape rising waters on lower-lying islands.



# THE VILLAGE GREEN

Number thirty, May 2, 2021

With more than 80% of its 1,190 coral islands standing less than 1 metre above sea level, the Maldives has the lowest terrain of any country in the world, making the Indian Ocean nation particularly vulnerable to sea level rise.

With global sea level rising 3 to 4 millimetres per year – a rate that will rise in coming decades – the Maldives' future is grim. One study concluded that low-lying islands could become uninhabitable by 2050 as wave-driven flooding becomes more common and freshwater becomes limited. The Intergovernmental Panel on Climate Change anticipates sea level could rise by about half a metre by 2100 even if greenhouse gas emissions are sharply reduced or rise up to one metre if greenhouse gas emissions continue to increase strongly.

The Maldives government has explored purchasing land on higher ground in Sri Lanka and India as an insurance policy against sea level rise, but it is also enhancing the resilience of its islands, particularly Hulhumalé, an artificial island northeast of the capital, Malé.

Construction of the island began in 1997. It now covers four square kilometres, the Maldives' fourth largest island. Hulhumalé is home to more than 50,000 people, with 200,000 more expected to move there. Built by pumping sand from the seafloor onto a submerged coral platform, the island rises about 2 metres above sea level, twice as high as Malé, making it a refuge for Maldivians who will be driven off lower-lying islands due to rising seas. It could also be an option for evacuations during future typhoons and storm surges.

## **U.S. INFRASTRUCTURE PLAN: GREEN BUT TOO SMALL?**

On March 31 President Biden unveiled his us\$2 trillion infrastructure proposal, called the American Jobs Plan. True to campaign promises, tackling climate change is at its core, with us\$1 trillion over eight years to help cut greenhouse gas emissions.

Some climate activists say it's not enough. On March 30 a coalition of U.S. labor and environmental groups called for us\$4 trillion in climate investments, and the Congressional Progressive Caucus has proposed spending us\$1 trillion per year for ten years. Others such as Josh Freed, head of the climate and energy program at center-left think tank Third Way, say the plan's scale is appropriate and will spur private sector investment. Said Varshini Prakash, founder of the Sunrise Movement *"The priorities and approach are right – this contains the frameworks of the Green New Deal – but as of now this plan could only be considered a beginning of that truly transformative vision."*

In terms of us\$621 billion for transportation infrastructure, Biden's proposal would fund states and the private sector to build 500,000 electric vehicle chargers and invest us\$85 billion in repairing buses, light rail, and other transit lines, as well as funding traditional road and highway maintenance. This plan would replace 50,000 diesel transit vehicles, make at least 20% of school buses electric, and electrify the federal government's vehicle fleet.

In terms of the power sector, the plan would establish a Clean Electricity Standard and require utilities to increase their share of clean electricity (Biden's goal is 100% carbon-free electricity by 2035). It allocates us\$100 billion to modernize the electrical grid through a new Grid Deployment Authority to manage rights-of-way along roads and railways and to spur new high-voltage transmission lines. The plan would support expanded tax credits and production tax credits to create green-energy jobs.

Usually only us\$8 billion in the federal research budget goes toward energy, but to promote new clean energy technologies and make existing technologies more efficient, Biden's plan allocates

# THE VILLAGE GREEN

Number thirty, May 2, 2021

us\$35 billion to research for climate technology breakthroughs and us\$15 billion to pilot projects in critical areas from energy storage to hydrogen.

The plan also provides for:

- us\$45 billion to eliminate lead pipes
- us\$56 billion in loans and grants to states, territories, and tribes to modernize water systems
- us\$100 billion for 100% high-speed broadband coverage, with the goals of broadband coverage, price transparency with broadband providers and support for broadband networks affiliated with local governments, nonprofits, and co-operatives, including expansion in tribal communities
- us\$16 billion to plug abandoned gas and oil wells and restore abandoned uranium, coal, and hard-rock mines
- us\$213 billion for housing to produce, preserve, and retrofit two million affordable and sustainable living places, including us\$40 billion to improve public housing infrastructure. Biden also calls for the elimination of local and state exclusionary zoning laws and asks the U.S. Congress to pass the Neighborhood Homes Investment Act to produce 500,000 new or rehabilitated homes.
- us\$100 billion to upgrade and build new public schools
- us\$25 billion to increase the number of child-care facilities and upgrade existing ones. Biden also proposes an expanded tax credit to encourage employers to build workplace child-care facilities.
- us\$400 billion to expand access to affordable community care or home care for the elderly or people disabilities and to expand access to long-term care through Medicaid
- us\$30 billion to prepare for future pandemics.

The White House claims the American Jobs Plan would be paid for within 15 years if passed in tandem with Biden's planned changes to the corporate tax code. Biden has invited Republican members of Congress to help shape the plan but Democrats are prepared to pass the bill without their support if necessary.

## EXTINCTION REBELLION (U.K.) TACKLES MONEY SOURCES

The U. K. Branch of Extinction Rebellion (XR) has intensified a campaign under the name of Money Rebellion, targeting financial systems and institutions for the role they play in funding carbon-spewing and environmentally destructive economic activities, targeting in particular HSBC and Barclays banks as well as Her Majesty's Revenue and Customs.

Says the Money Rebellion website at <https://extinctionrebellion.uk/act-now/resources/money-rebellion/>:

*"Nonviolent Direct Action: Banks, the stock market, and other unelected financial institutions make huge decisions for us and for the planet, with little to no accountability. We need new rulemakers that allow life on Earth to thrive. We'll disrupt key economic institutions with a wide range of non-violent tactics."*

Money Rebellion launched its 2021 action campaign with an on-line rally on April 11, although some local groups had already begun demonstrations that disrupt bank branches.

XR said more direct action protests are planned as part of a campaign that will also involve debt, tax and mortgage strikes. One group of activists have taken out loans totaling £4,000 from

# THE VILLAGE GREEN

Number thirty, May 2, 2021

Barclays that they are refusing to repay and have instead donated the money to the human rights group Survival International.

Later this month XR plans to launch a tax strike during which campaigners will withhold about 3.5% from their business or income taxes (the percentage that XR says the U.K. government spends on harming the planet). This amount will be withheld for a year, and if by that time the U.K.'s government hasn't met the group's demands – including telling the truth about the climate emergency and cancelling “destructive projects” – the money will be donated to Wilderlands, a project to support nature in the U.K.

## **NEW PROMISE ACT WOULD HELP COMMUNITIES TRANSITION FROM COAL ECONOMY**

The New Promise Act, sponsored by U.S. congressman Tom O'Halleran, an Arizona Democrat, is a step forward in recognizing the need for a federal commitment to economic revitalization in communities hard-hit by the decline of the coal economy. It may offer insights that Canada can use when we finally admit that we can't allow our fossil fuel regions and communities to continue to dirty us all, simply so they won't have to change.

The bill, inspired by the closing of Arizona's obsolete Navajo Generating Station establishes a framework and funding for economic development assistance; fiscal relief to local governments facing a major loss to their tax base; and transition assistance, including direct wage relief, to workers and their families. The framework is modeled on other economic transition programs such as the Department of Defense's Base Realignment and Closure program.

The bill would fund local governments to cover lost revenues for up to seven years, giving them time to create and implement a community economic development plan that would include an assessment of opportunities for infrastructure, reclamation of shuttered coal plants and related coal ash sites, boosting of renewable energy and other local industries, as well as coordination with local education institutions and unions for retraining and apprenticeship opportunities.

The New Promise Act also creates a 10-year program to cover lost wages and benefits for workers in transition, including health and pension benefits. It would support both large-scale economic development and small business assistance. The revenue replacement would help communities that can show actual revenue losses and cushion the impact of losses as other economic development initiatives are implemented.

The bill would require states to bring together labor, business and broad community stakeholders. Although the bill focuses on coal plant closures, the framework could be expanded to encompass coal mining communities.

The effect of such initiatives will be national, and ultimately, global. If it succeeds, communities in Arizona, Kentucky, West Virginia, Illinois, Ohio, Montana, Wyoming, Colorado, Pennsylvania, New Mexico and Texas will benefit.

## **FUKUSHIMA WATER**

Japan intends to release more than one million tonnes of radioactive water from the destroyed Fukushima nuclear plant into the Pacific Ocean. The decision, long-expected but delayed for years due to safety concerns and protests, came at a meeting of cabinet ministers who endorsed the ocean release as the best option.

# THE VILLAGE GREEN

Number thirty, May 2, 2021

The government insists most of the radioactive isotopes have been removed using a complex filtration process but one isotope, tritium, cannot be removed. The company that runs the power plant has promised to dilute the water within regulatory limits before pumping it into the ocean.

Civic and political groups in Japan are not satisfied. Residents in Fukushima remain concerned and fishing groups believe consumers will refuse to buy produce from the region.

China calls Japan's plan extremely irresponsible and says the move will *"seriously damage international public health and safety, and the vital interests of people in neighboring countries"*. China says Japan should not initiate the discharge until it has consulted and reached agreement with all stakeholder countries and the International Atomic Energy Agency.

## DEFORESTATION FOOTPRINTS

Many developed countries are causing deforestation in poorer nations through international trade, new research shows. Agriculture and forestry are responsible for 80% of global deforestation. This is driven by demand for goods such as coffee, chocolate, cattle, soy, palm oil and timber that are often then traded and consumed in countries around the world. The new study, published in Nature Ecology and Evolution, calculates the "deforestation footprints" of individual countries, comparing their domestic deforestation to what they "import" from abroad through their consumption of foreign-made products. The U.K., Germany, France, Italy and Japan "imported" more than 90% of their national deforestation footprints from abroad between 2001 and 2015. Between 46% and 57% was from tropical forests.

The study also shows a strong U.S. influence in Canada because the U.S. is the primary export destination for Canada's forest products.

## GIZMO CORNER: JUICE FROM A KEG?

A new portable 1 kW wind turbine, about the size of a beer barrel, may hold promise, particularly for windy areas like Grey and Bruce and for urban and residential use. The turbine, called a Powerpod, was designed by Halcium, a Utah firm that calls its creation the "safest, most powerful wind turbine in the world". Halcium claims Powerpods are cheaper than solar panels and more efficient in places that get fewer than 300 days of sun a year. Halcium says the turbine accelerates the wind entering it. The pod takes air and funnels it into a smaller exit than in a normal turbine, which speeds it up before it hits the internal blade. Wind can enter from multiple directions at once.

Powerpod can sit on a roof, fence, campervan, sailboat, or any secure surface. Consumers can use a Powerpod by itself, hooking it up to a power system the same way as solar panels, with the same equipment. Or, if you already have a solar system, it can connect seamlessly and provide an additional, diversified source of power. The blade is contained entirely within the pod's shell, making it safe around children, pets and wildlife.

Halcium has created a map showing the estimated average daily power generated from a 1kW Powerpod, vs a 1kW solar system in different cities around the world. Its statistics for Toronto suggest a 24 hour average energy production of 9.9 kwh from a 1kW Powerpod, compared to 2.2 kwh from a a 1kW solar system in Toronto. Only the outputs from Capetown and London, U.K., exceed Toronto's 24 hour average Powerpod output according to Halcium's calculations for 16 cities around the world. Powerpod production is in its early stages, but Halcium says it has financial backers for its innovation. Its website describing the Powerpod is at <https://www.halcium.com/>.

# THE VILLAGE GREEN

Number thirty, May 2, 2021

## IN MY HUMBLE OPINION: MYSTICS AND CLIMATE

An April 15 CBC climate newsletter article titled *The ongoing search for the perfect climate change metaphor* draws our attention, yet again, to the need to find compelling ways to embed climate action in our own minds, souls and behaviors. It's at [https://subscriptions.cbc.ca/newsletter\\_static/messages/whatonearth/2021-04-15/](https://subscriptions.cbc.ca/newsletter_static/messages/whatonearth/2021-04-15/).

The article makes the astute observation that more information about climate change is precious but it is not, by itself, enough to make most people change their ways or demand that our institutions change their ways too.

The article praises the power of metaphors to help us sustain climate action. It describes the metaphor of a "war" on behalf of nature as one such metaphor, and it points to the drawbacks of the war metaphor, citing the decades-long and spectacularly unsuccessful American "war on drugs" as an example of the limitation of the metaphor.

The article also describes the power of love for our planet as a compelling adjunct to facts about our planet – love as an emotion just as valid as fear and anger as a motivator. It quotes Kai Chan, a professor in sustainability at the University of British Columbia, who agrees that the public and scientists could learn a lot about love:

*"We as scientists need to be much more in touch with our emotions and also our values. It's helping us to recognize that we all do, surely, in one way or another, love this planet that we call home – and then asking us whether our actions are consistent with that emotion."*

While the CBC article is thought-provoking, its title is deceptive because it implies a search for the "perfect" climate change metaphor. If by "perfect" we mean an utterly compelling metaphor that works for everyone, the search will fail. More likely we need a truckload of metaphors, figures of speech, rhetorical tricks and dog and pony shows to motivate us to save our world, as well as ways to target each technique to the audience that finds it compelling.

And that leads me to the mystical.

At first blush, the dire stark facts of climate degradation suggest that mystical approaches to it are mere frivolity in the face of those facts.

But there are some of us – perhaps many of us – who are moved by the benign power of the inexplicable and paradoxical. I call that mysticism.

Some of us (I'm one of them) have no mystical insights ourselves but we are deeply influenced by the insights of others. I'm profoundly moved, for instance, by the works of Julian of Norwich, a late medieval English anchoress whose writings describe a series of visitations (she called them "shewings") made to her by a figure she identified as Christ. In one of these shewings, Christ puts all of creation in the palm of her hand, and it is no bigger than a hazelnut:

**"He showed me a little thing the size of a hazelnut, in the palm of my hand,  
and it was as round as a ball.**

**I looked at it with my mind's eye and I thought, 'What can this be?'  
And the answer came, 'It is all that is made'.**

**I marvelled that it could last,  
for I thought it might have crumbled to nothing, it was so small.**

**And the answer came into my mind, 'It lasts and ever shall because God loves it'.  
And all things have being, through the love of God."**

# THE VILLAGE GREEN

Number thirty, May 2, 2021

Julian of Norwich's "shewing" went through my mind a while ago when I was reading a reckoning of the amount of trash collected by Owen Sound Waste Watcher volunteers.

On one level it occurred to me that these folks were a few volunteers among many who aren't volunteers, in only one city, who collect a few bits of trash out of tons of it. No big deal. Nothing that changes the world.

But then I let Dame Julian into my head. It was as if she were saying, ***"See that volunteer picking up one bit of trash? She's as small as a hazelnut in your hand. Now see everyone everywhere who is doing something small to serve a great purpose, and hold them all in your hand and your eye. And thank the one Owen Sound trash-picker for being part of the all, for being the all."***

Since then, I've been practicing. When I read about or witness a small act of earth-caring I try to let it become all acts of earth-caring, small as a hazelnut, big as everything. I'm not good at it yet, but when I do it well, it leaves no space on the palm of my hand for cynicism or hopelessness. It will not crumble to nothing, nor will I.

Respectfully submitted to the polis,  
John Butler

## SHE SAID / HE SAID

**"Something to think about: The Earth is 4.6 billion years old. Let's scale that to 46 years. We have been here for four hours. Our industrial revolution began one minute ago. In that time, we have destroyed more than 50% of the world's forests. This isn't sustainable."**

posted by Odette Bartnicki on the Climate Action Team (CAT) Grey-Bruce Facebook page, April 1

**"Canada is experiencing the whiplash of having our neighbour and largest trading partner go from zero to a hundred on climate action in the space of weeks with U.S. President Biden signing numerous executive orders on climate change as soon as he took office. Suddenly our net-zero pledge, so touted just months ago, looks pedestrian rather than aggressive. We're lagging again. That's partly because Canada is stuck on solving the wrong problem. Climate change is not a simple problem of technology and innovation, to be addressed by switching out the hardware of our energy system. Solving climate change requires something deeper – transforming our society and moving the economy beyond our dependence on fossil energy."**

Laura Tozer, professor, Physical and Environmental Sciences, University of Toronto.

**"Some circles maintain that current economics and technology will solve all environmental problems, and argue, in popular and non-technical terms, that the problems of global hunger and poverty will be resolved simply by market growth... They may not affirm such theories with words, but nonetheless support them with their deeds by showing no interest in more balanced levels of production, a better distribution of wealth, concern for the environment and the rights of future generations. Their behavior shows that for them, maximizing profits is enough."**

Pope Francis, (from the Papal encyclical Laudato Si')

# THE VILLAGE GREEN

Number thirty, May 2, 2021

**“Owing in part to climate change, there was a record hurricane season last year, with the last two storms, Eta and Iota, striking Central America... Northern Triangle countries – Honduras, Guatemala, and El Salvador – have been afflicted by climate-induced drought for a decade, leaving 3.5 million people facing food insecurity, but the floods from those two storms produced even more savage damage. Twelve hundred schools were damaged or destroyed; forty per cent of corn crops and sixty-five per cent of the bean harvest were lost. As a percentage of G. D. P., the damage is greater than that done by the worst storms ever to hit the United States, yet the people of these countries did comparatively little to cause the climate crisis – whereas the four per cent of us who live in this country [the U.S.] have produced more greenhouse gases than the population of almost any other nation. So there’s really no way to pretend that migrants arriving at our southern border have no claim on America. Honduras could have built the biggest, most beautiful wall on its northern border, and our CO<sub>2</sub> would still have sailed right across it.”**

Bill McKibben in *The New Yorker Climate Crisis newsletter*, March 31 edition

**“This curious world which we inhabit is more wonderful than it is convenient; more beautiful than it is useful; it is more to be admired and enjoyed than used.”**

Henry David Thoreau, graduation address at Harvard College, 1837

**“The way that Christianity has been interpreted from medieval Europe to the age of colonization to the efforts in the 1950s in America to wed it to capitalism through moves like putting ‘In God We Trust’ on the money . . . to the contemporary expressions of the Prosperity Gospel, mainstream religion has contributed to the objectification and exploitation of nature.”**

Karenna Gore, director of the Center for Earth Ethics, Union Theological Seminary

**“Enabling massive shifts in humankind’s relationship with the natural world to achieve sustainability and true environmental protection requires us to change how we think and how we live on the Earth. Such a shift requires us to broaden our own rights as people and the rights of nature. We must come together to do this, yet we remain divided by nationality, geography, class, ethnicity, and, of course, by faith. As nature knows no political, social, racial, demographic, or religious boundaries, perhaps it can serve to unite us, rather than divide us – bridging our differences where so few other aspects of our lives can. Then we can exercise our collective Earth citizenship.”**

Mari Margil, Executive Director, Center for Democratic and Environmental Rights

**“State and local officials have dismantled clean water and environmental protections, allowing Big Ag to dump more waste – including fertilizer and manure that feed toxic algae blooms – in our waterways! In Florida, the consequences are terrible. At least 432 Florida manatees have already been killed in 2021, well over double the state’s five-year average.”**

Wenonah Hauter, Executive Director, Food & Water Watch, April 5, 2021

**“The atmosphere is laden with tiny plastic fragments. Researchers modelled the air above the western U.S. and found it contains almost 1,000 tonnes of microplastic. Most – 84% – comes from roads, much of it from car tyres that constantly produce microplastics as they wear down. And 11% blows in from the ocean, which has so much plastic in it that most continents receive more from the marine environment than they put in.”**

*Nature Briefing*, April 14, 2021

# THE VILLAGE GREEN

Number thirty, May 2, 2021

all my friends  
viewing the moon –  
an ugly bunch

**Matsuo Bashō (1644-1694)**

## HOME AND LOVE

Because I like to sit at home  
And hear the robins call and sing,  
Or breathe the sweet the breezes bring  
I've grown to pity those who roam  
And have no spot however prest  
Where he can whisper, "Here I rest."

author unknown,  
Printed in the *Flesherton Advance*,  
April 6, 1922

For information about *The Village Green*, or to subscribe to it (free), please  
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