NMPPA FALL CONFERENCE

SUSTAINABILITY AND PROCUREMENT

Applying lessons learned from the World Climate Summit

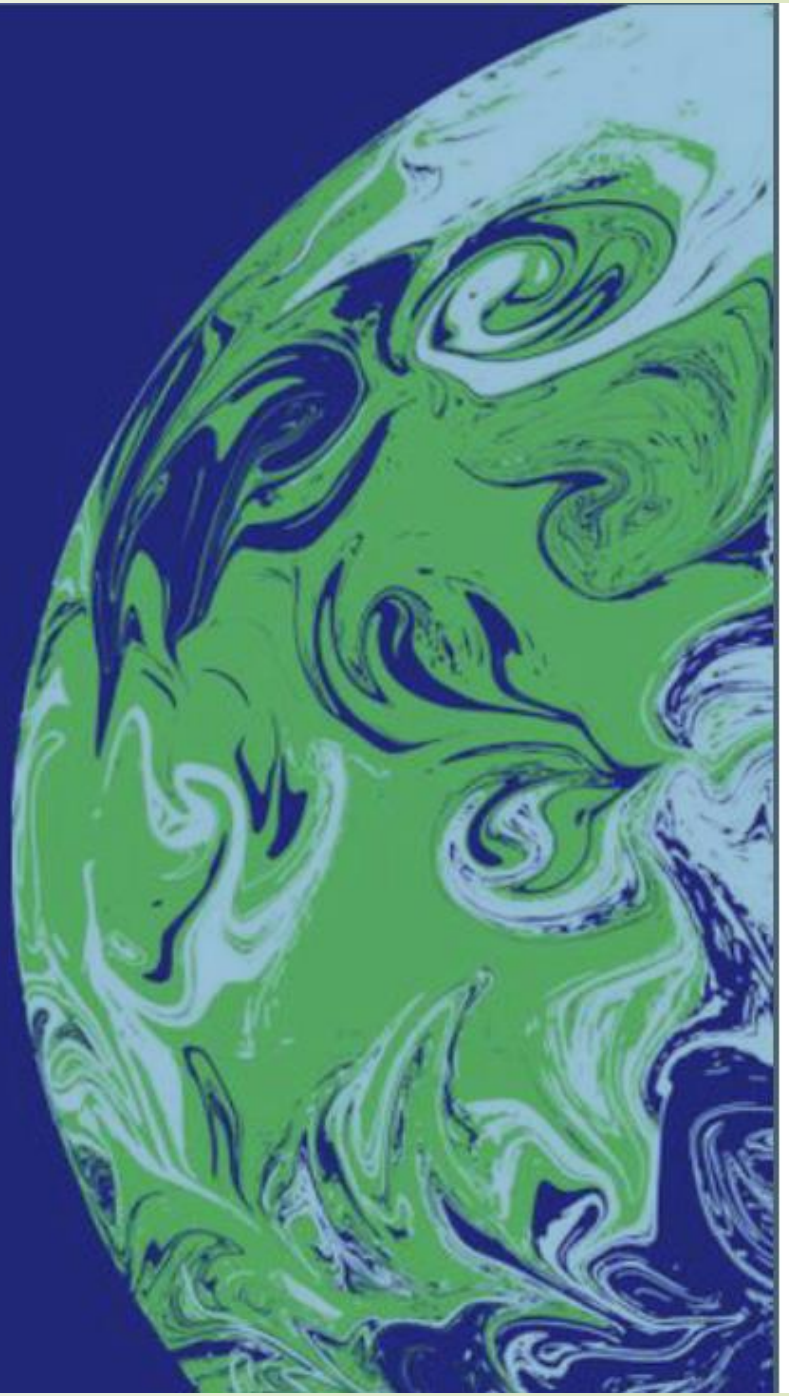
MARK R. HAYDEN

01-12 NOV 2021

GLASGOW

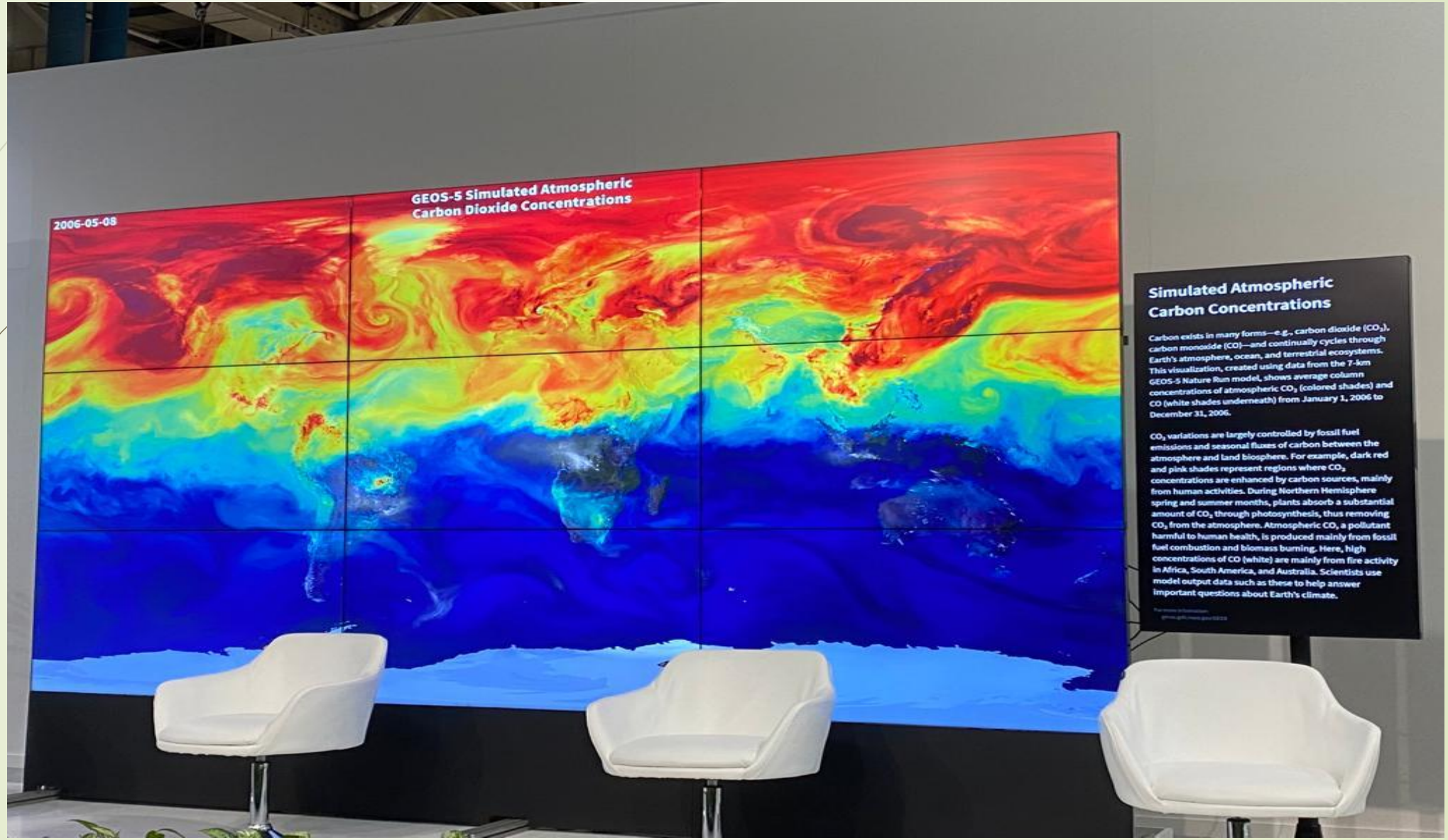
COP26

IN PARTNERSHIP WITH ITALY



Partnering with the Coalition for Sustainable Communities New Mexico

NASA CO2 World Map



Rare Kentucky December 2021 Tornado Outbreak

News about Kentucky Tornado

bing.com/news

Thousands still left without water, power after Kentucky tornado kills 74: What we know

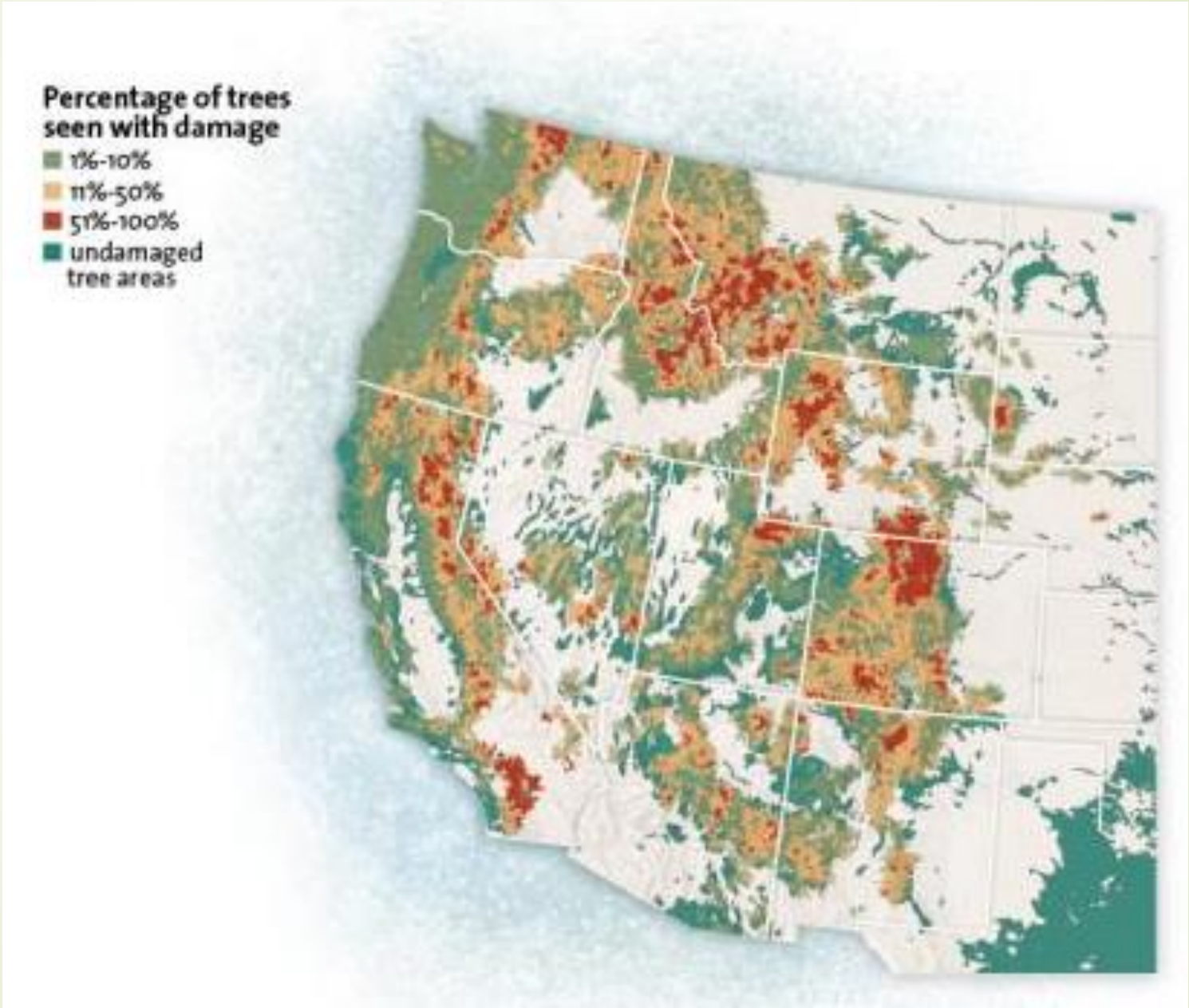
At least 88 people were killed across five states after a series of deadly tornadoes ripped ...

USA TODAY on MSN.com · 37m

GLACIER MELT (Muir Glacier 1941 & 2004)

Thwaites Glacier "Doomsday Glacier"- widest glacier on the planet and the size of Florida, sits on top of bedrock at the western edge of Antarctica. The ice dam holding it in place is cracking. If it empties into the ocean, a regional chain reaction will drag other nearby glaciers with it, which would mean several feet of sea-level rise.

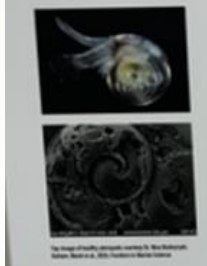
Drought, Tree Stress, Bark Beetles, Lightning Strikes



Ocean Acidification

The Arctic and Southern Oceans have absorbed the lion's share of excess CO_2 in the Earth's atmosphere, mostly because colder and fresher waters more easily take up carbon. By some estimates, these polar waters have absorbed up to 60% of the carbon taken up by the world's oceans thus far. This makes them an important carbon sink, limiting global warming, despite sharp increases in human carbon emissions.

This "ecosystem service" however has come at a high cost: increasing rates of acidification of polar waters, because when dissolved into seawater, CO_2 forms carbonic acid. Acidification levels today are higher than at any point in the past three million years.

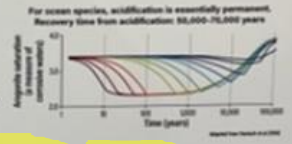


In addition to acidification, the polar and many near-polar ocean ecosystems face additional threats due to global warming: marine heatwaves and generally warming waters, which also sometimes decreases oxygen levels; freshening of these waters, from increasing amounts of meltwater pouring off the Greenland and Antarctic ice sheets, which also can affect ocean currents and mixing between surface and deeper waters; invasion by more southerly species; and especially in the Arctic, loss of multi-year sea ice.

Together, these threats are stressing polar and near-polar ecosystems already today, with impacts such as marine die-off events and apparent difficulty in some regions for animals to build shells.

Both polar oceans already appear to be nearing a critical ocean acidification chemical threshold. There is high likelihood that these changes are a harbinger of much worse to come; until, and unless, CO_2 levels begin to fall sharply.

There is currently no practical way for humans to reverse ocean acidification, and these more acidic conditions will persist for tens of thousands of years. This is because processes that buffer the acidity from the ocean occur very slowly, over nearly geologic time scales. CO_2 "only" lasts for 800–1000 years in the atmosphere, but ocean processes are much slower.



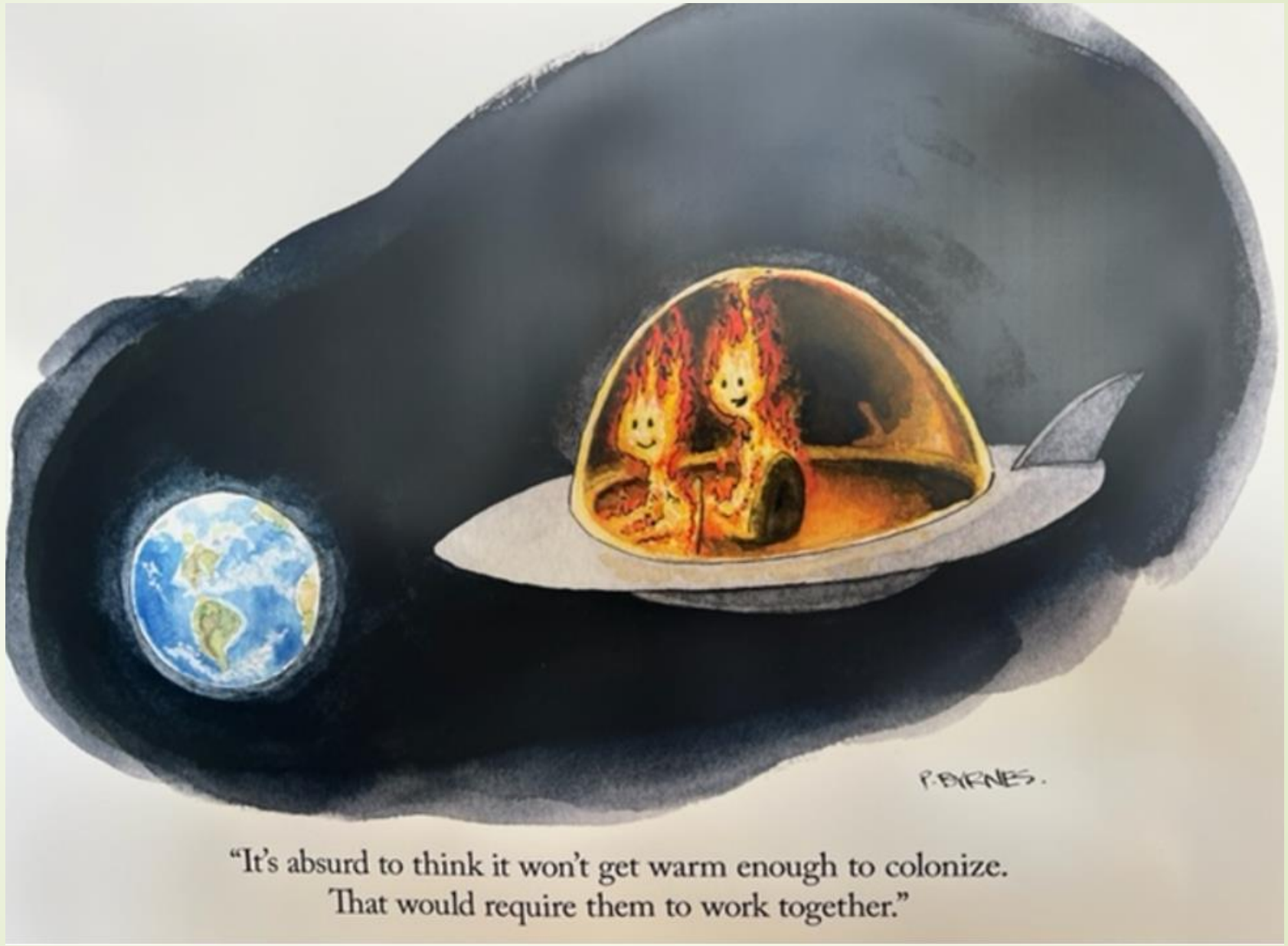
The hard reality is that it will take some 50- 70,000 years to bring acidification and its impacts back to pre-industrial levels, following the weathering of rocks on land into the ocean, making this one of the most permanent impacts of climate change in our polar regions. This very long lifetime of acidification in the oceans is also one reason why mitigation efforts focused on "solar-radiation management," as opposed to decreasing atmospheric CO_2 represent a special threat to the health of the world's oceans, especially those at the poles.

For more information, see the 2021 State of the Cryosphere Report at: www.iccinet.org/statecryo21

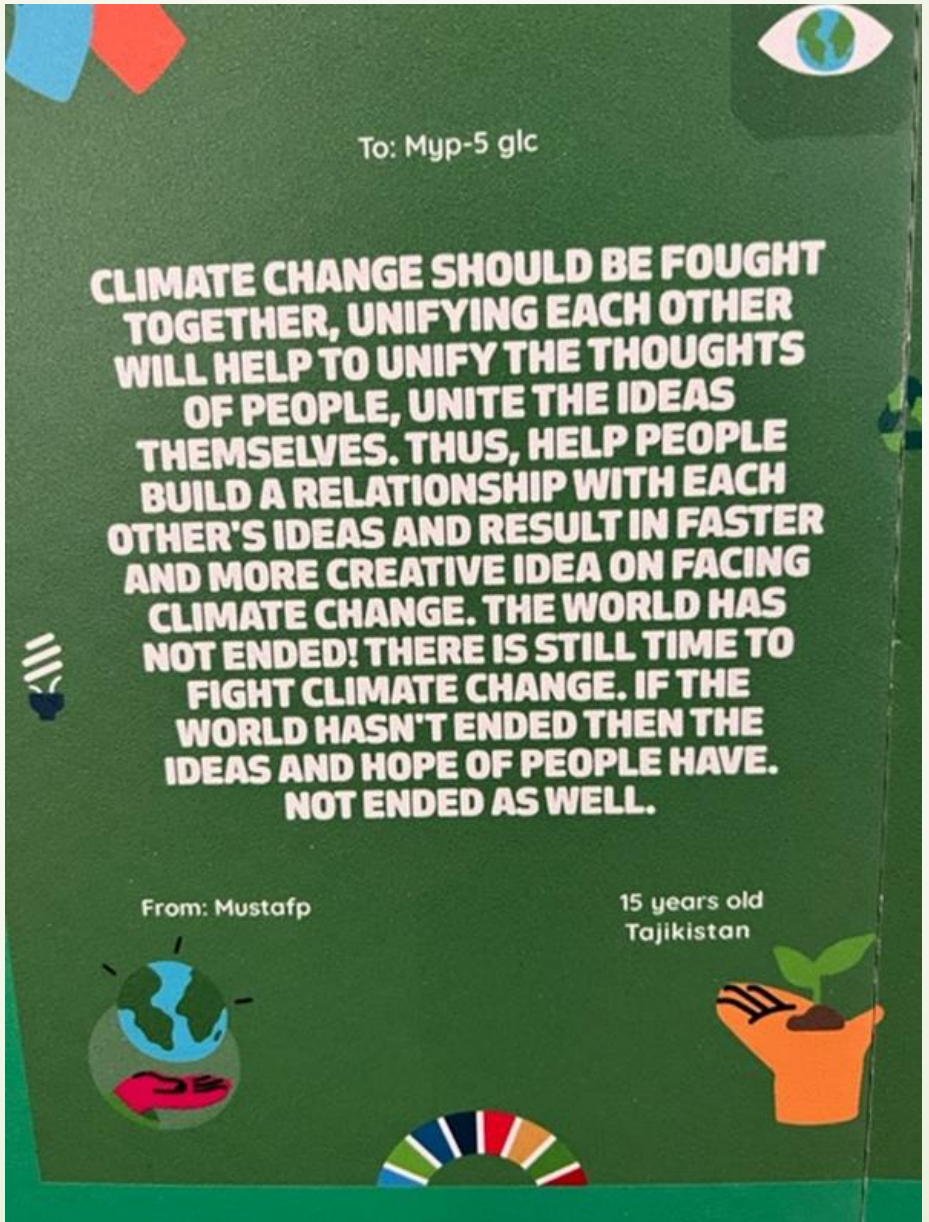
See previous panel for Literature

Scientific Reviewers

Will We Cooperate Together?



Message from a 15 year old



2021 World Climate Change 26TH Conference Of Parties

(COP27 planned in November 2022)

WHAT'S GOING ON? / *WHAT'S NOT GOING ON?*

- Reaffirmed Paris Accord for 1.5 C
- Phase down of coal and fossil fuel subsidies
- Forest Funding $20 billion & harvest ban in 10 years
- Ask doubling of finances for adaptation by 2025
- Development of a Global carbon trading system

But…

- Pledges result in 2.4 C rise (not 1.5 C by 2100 even if implemented)
- Funding for developing nations is more talk than delivery
- Coal, Oil, Gas is kept going through "the energy transition"
- Enforcement mechanisms lacking


WE NEED TO TALK ABOUT
THE ELEPHANT IN THE AIRPORT.
CLIMATE CHANGE.
To find out how we're helping tackle the greatest challenge of our time visit heathrow.com/climate
Heathrow
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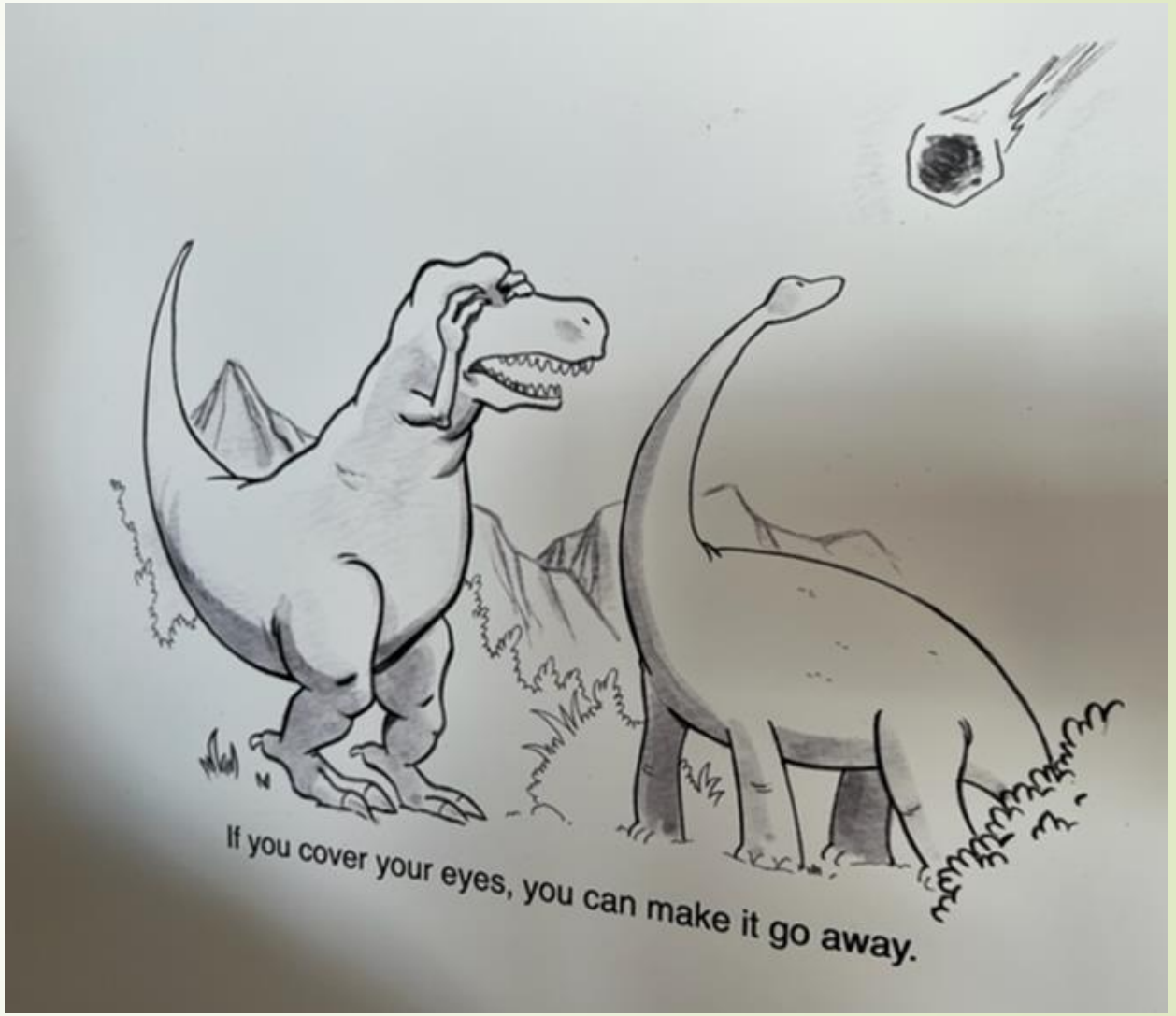
Ignoring the problem is not the solution



Signs of Hope throughout Glasgow

Friendly but Passionate Protestors

Children's post-Paris Accord Report Card: "D"

Windmill Farms Everywhere in Scotland

Lessons from the Peat Bogs

Village Inn of Carstairs Scotland

COP26 Observations

Urgency (2040 timeline)

Cooperation (universities, labs, govts, private sector)

Optimism & Innovation (e.g., Battery Technology)

Finance Sector Buy-In (BlackRock retirement fund)

No Stranded funding of Carbon-based tech projects

First steps include: protecting forests, preserving peat bogs, converting transportation & energy sectors

Focus on wind, solar and alternative fuels (hydrogen)

1. What are the commitments?

2. What are the goals?

3. What is the plan for action?

4. How has New Mexico promoted reduction of greenhouse gases?

5. What can states do individually and collectively (through NASPO)?

United States Goal:

Achieve zero emissions by 2040
Maintain 1.5 C rise

New Mexico Goals:

1. Reduce methane emissions by 50% by 2025
2. Reduce methane emissions by 80% by 2030
3. Promote sustainable communities
4. Implement low carbon fuel standards
5. Ensure just transition in shifting from fossil fuels
6. Create a statewide assessment
7. Conserve 30% of land and waters by 2030
8. Large scale restoration of forests and indigenous ecosystems

Governor Lujan Grisham on the World Stage

NEW MEXICO AND COP 26

New Mexico is a member of the United States Climate Alliance and was one of several state governors attending.

New Mexico Actions

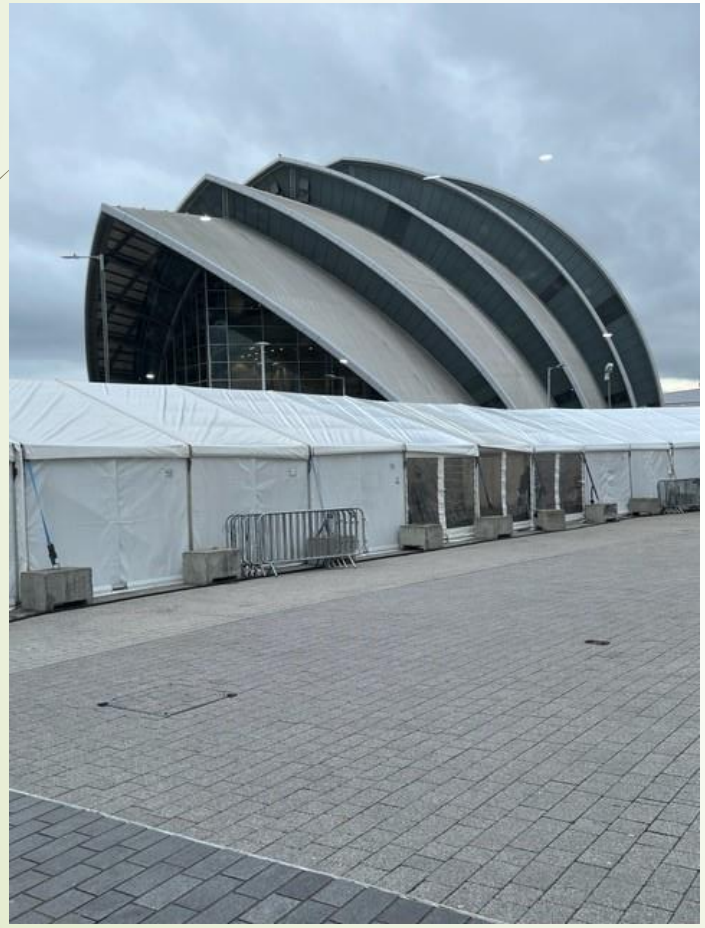
1. NM joined the United States Climate Alliance (along with governors from Hawaii, Illinois, Oregon and Washington)

2. NM coordinated with the Environmental Defense Fund, White House National Climate Advisor Gina McCarthy, Special Presidential Envoy for Climate John Kerry, and Leaders from the UK.

3. NM Cabinet Secretaries attended including Energy, Minerals and Natural Resources Sarah Cottrell Propst; Environment Secretary James Kenny; and Economic Development Secretary Alicia J. Keyes.

4. The US is in the process of adopting NM's oil and gas regulations for the national standard.

Scientists agree we need to stay under 1.5 C through 2035



ELEMENTS OF THE PLAN

Energy transformation

- End combustion engines by 2040 (CA by 2035)
- Switch to Hydrogen fuel and away from methane/oil/coal fossil fuels
- Transmission piping network (retrofit natural gas and oil for H2)
- Windmill electric generation installation & maintenance
- Solar panels and installation
- Wind & Solar – electric transmission lines

Transportation

- Charging stations nationwide
- Electric busses
- Electric trains
- Electric cars
- Electric trucks

Energy conservation

- Transformers
- Window reflecting film
- Energy assessments
- LED lighting
- Smart buildings (shut offs based on real time occupancy)

Preservation

- Forests
- Peat Bogs
- Other carbon sequestering methods

AGREEMENTS

- **Deforestation:** 130 countries agreed to cease /reverse harvestation by 2030 for 90% of world's
- Forests with funding pledges.
- **Methane:** 100 countries agreed 30% reduction by 2030
- **Coal: Powering Past Coal Alliance:** 25 countries agreed to phase out coal power and cease public financing by end of 2021 including New Mexico.
- **Zero Emission Vehicles by 2035 to 2040**:
- 38 countries and major manufacturers agreed to end the combustion engine.
- **US / China Agreement on Climate Cooperation**
- **Net Zero Pledges:** 450 banks, insurers, pension funds managing $130 trillion committed to Net Zero by 2050.

COMMITMENTS

- *Over 100 countries representing 70% of the global economy have now joined the Carbon Pledge* Today, the United States, the European Union, and partners formally launched the Global Methane Pledge, an initiative to reduce global methane emissions to keep the goal of limiting warming to 1.5 degrees Celsius within reach.

- At COP26 General Motors & Ford agreed to **Glasgow Accord on Zero Emissions Vehicles** calling for automakers to only sell zero-emissions vehicles by 2040.

- The strong global support for the Pledge illustrates growing momentum to swiftly reduce methane emissions---widely regarded as the single most effective strategy to reduce global warming. Countries joining the Global Methane Pledge commit to a collective goal of reducing global methane emissions by at least 30 percent from 2020 levels by 2030 and moving towards using best available inventory methodologies to quantify methane emissions, with a particular focus on high emission sources. The countries who have joined the Pledge represent all regions of the world and include representatives from developed and developing nations.

COMMITMENTS

Investors: COP26 turns up the heat on sustainability

Stakeholders responsible for assets worth over US$130 trillion joined the Glasgow Financial Alliance for net zero at COP26. Members and their portfolio companies must set science-based near-term and 2050 decarbonization targets, both for the near term and for 2050. They must also release supporting plans and report progress annually. Another development was the formation of an International Sustainability Standards Board. This is aimed at developing globally consistent climate disclosure standards for corporates, to help investors compare their sustainability performance and related risks. More consistent disclosure will aid deeper scrutiny, which is likely to add to pressure on oil and gas companies.

Cooperation is Key !

COMMITMENTS

Hydrogen: new pledges

The announcement of the 'H2-Zero' initiative was a major step for hydrogen at COP26. Twenty-eight companies from sectors including refining, fertilizers, and mining pledged to support the supply and demand of low-carbon hydrogen. That's a step in the right direction, but only represents about 4% of the current overall hydrogen project pipeline. To achieve a 1.5 °C scenario, supply-side pledges will need to grow 20-fold. At the same time, demand-side pledges would need to increase from 1.6 million tones per year to 500 million tones.

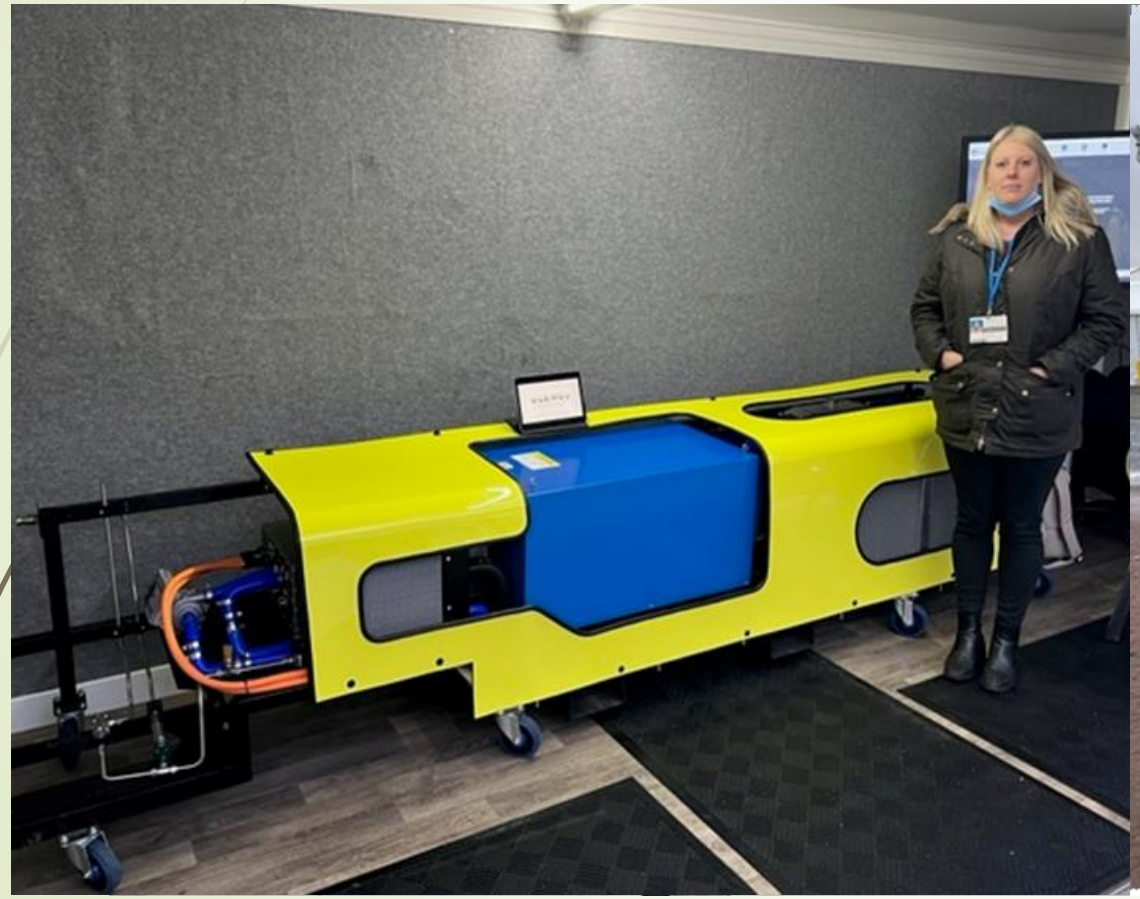
HYDROGEN BUSES AND TRUCKS

HYDROGEN UTILITY VEHICLES & ATVs

HYDROGEN PLANES

ALL ELECTRIC PLANES

HYDROGEN CELL EMERGENCY VEHICLES



COMMITMENTS

Carbon capture and storage: set for rapid growth

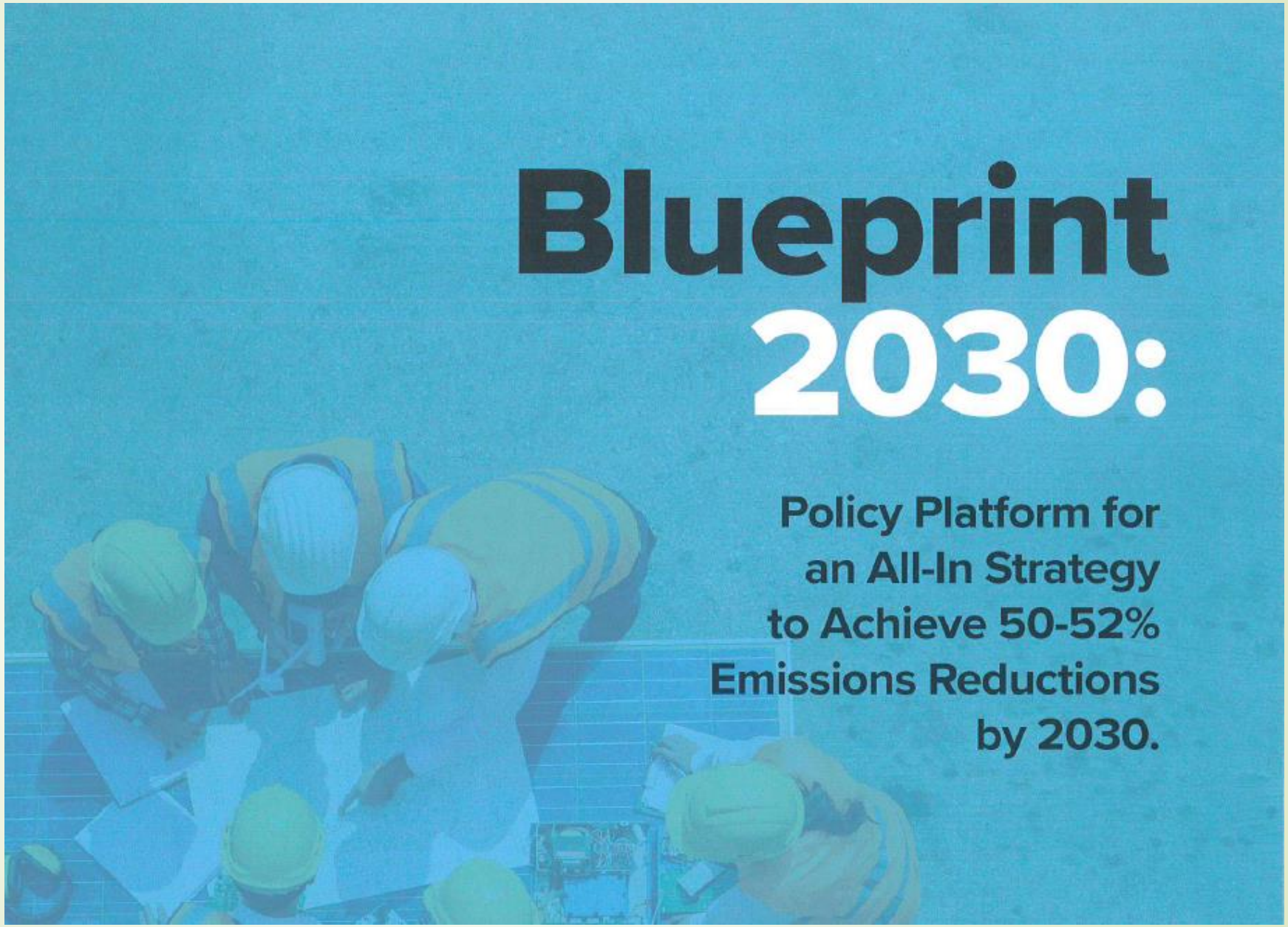
Three key outcomes from Glasgow impact carbon capture and storage, if indirectly. Firstly, countries' higher net zero ambitions will rely on both offsets from nature-based programes and mechanical carbon removal; that will include both CCS and direct air capture (DAC). Secondly, the call to phase down coal should drive carbon abatement in the coal value chain. And thirdly, approval of Article 6 should be a spur for all forms of offsets. To achieve net zero by 2050, we still forecast up to 8 billion tones of total CCS and DAC. As of November 2021, the pipeline is at 500 million tones and growing rapidly.

Modern Mill Published a Thought Leadership Paper Identifying Solutions That Address COP26's Pledge To End Deforestation By 2030 The article entitled "Nine Steps To Zero" discusses how wood alternatives can help meet COP26's zero deforestation target and advises the A/E/C industry to evaluate all wood alternatives before purchasing.

END OF GASOLINE? ELECTRIC JAGUAR

BAMBOO BICYCLE AND AIRPORT SIGNS

nt from my iPhone


Blueprint
2030:
Policy Platform for
an All-In Strategy
to Achieve 50-52%
Emissions Reductions
by 2030.

All-In Strategy Breakthrough Policies

THE POWER SECTOR

- Mandate/incentivize 100% clean electricity by 2035 and 80% or more by 2030 (federal and state)
- Procure 100% clean electricity on a 24/7/365 basis as soon as possible (all)
- Invest in RD&D to ensure a reliable, resilient energy supply that is largely renewable (federal, business)
- Train and inspire the clean-energy workforce while supporting community transition (all, especially civil society)

THE TRANSPORTATION SECTOR

- Mandate/incentivize phase-out of internal combustion engines for light-duty vehicles by 2035 and medium- and heavy-duty vehicles by 2045 (federal and state)
- Produce and procure ZEVs, targeting 100% of light-duty vehicle sales by 2035 and at least 30% of heavy-duty vehicle sales by 2030 (all)
- Invest in mass transit and one million new EV charging plugs that are broadly available to all communities (all, led by federal)

THE BUILDING SECTOR

- Mandate/incentivize energy-efficient, all-electric appliances and zero-emissions new buildings by 2030 (federal, state, city)
- Raise awareness of public health and climate dangers of gas (all, especially civil society)

THE INDUSTRIAL SECTOR

- Mandate best practices and prohibit venting and flaring at oil and gas sites, reducing fugitive methane leakage by at least 60% by 2030 (federal, state, cities in oil-producing regions)
- Incentivize carbon capture, utilization and storage (CCUS), innovation, and low-carbon solutions in hard-to-abate sectors (federal and state)
- Implement "buy clean" requirements for emissions-intensive goods and infrastructure (e.g., cement and steel) (all)
- Raise awareness about green products and construction practices (all, especially civil society)
- Mandate stringent refrigerant management protocols and use of low-GWP alternatives wherever viable, driving down HFC emissions by 40% or more by 2030 (federal, state)

THE NATURAL AND WORKING LANDS SECTOR

- Incentivize nature-based solutions, targeting an 18% increase (additional 140 MT) in annual carbon sequestration from present levels (federal, state)
- Incentivize and invest in waste-to-energy and sustainable agriculture

Priority high ambition policies that can lead to **50–52% emissions reductions by 2030**

An All-In strategy to reach economy-wide 50–52% emissions reductions by 2030 will require concerted, robust action across all major emissions sectors of the economy, driven by leadership at all levels of society. This means strong investment and mandates from the federal government to enable decarbonization in all regions of the country and set a high floor for ambition. It also means additional leadership from state and city governments to set the pace of transition in key sectors and lock in stringent standards and emissions reductions. Finally, an All-In strategy requires business and civil society leaders to bolster this transition by establishing reliable markets for clean energy and pushing on political leaders to enact policy that will deliver lasting change and keep their

The Power Sector with an All-In Strategy

"ALL IN" BREAKTHROUGH ACTIONS:

- **Mandate/incentivize 100% clean electricity by 2035 and 80% or more by 2030 (federal and state)**
- **Procure 100% clean electricity on a 24/7/365 basis as soon as possible (all)**
- **Invest in RD&D to ensure a reliable, resilient energy supply that is largely renewable (federal, business)**
- **Train and inspire the clean-energy workforce while supporting community transition (all, especially civil society)**

NATIONAL ACTIONS

- Mandate/incentivize 100% clean electricity by 2035 and 80% or more by 2030, including a phaseout of coal
- Incentivize rapid clean energy deployment through a 30% investment tax credit and 2.5 cents/KWh production tax credit through 2030
- Invest in a reliable, resilient electric grid, including RD&D for energy storage and 10GW additional interregional transmission capacity
- Increase 45Q to $85/ton through 2030 and mandate/incentivize 90% carbon capture for all new baseload plants burning natural gas starting in 2025

STATE ACTIONS

- Lock in CES of 80% or more by 2030, with renewable resources making up at least 60%
- Incentivize nuclear fleet retention through zero emissions certificates and other policies that support reliable, zero-carbon generation
- Expand wholesale markets and coal
- Mandate/incentivize utility energy storage to adequately value grid services and other benefits

CITY ACTIONS

- Procure 100% clean electricity for municipal operations, using municipal rooftops where possible
- Partner with utilities and regulators to procure 100% clean electricity for all city-wide customers

BUSINESS ACTIONS

- *Utilities:* invest in and plan for transition to 100% clean power, including supporting the phaseout of coal
- *Large corporate buyers:* procure clean electricity on a 24/7/365 basis
- *Utilities:* partner with national labs and RTOs to implement utility-scale storage demonstration projects

CIVIL SOCIETY ACTIONS

- Inspire and train the clean-energy workforce
- Procure clean electricity on a 24/7/365 basis

Priority high ambition policies that can lead to **50–52% emissions reductions by 2030**

An All-In strategy to reach economy-wide 50–52% emissions reductions by 2030 will deliver a transformed power sector. Emissions from electricity generation will need to decline by more than 80% from 2005 levels—contributing to more than half of needed economy-wide reductions. This means that an all-hands-on-deck approach is more important than ever to lock in the transition to a clean-energy economy. The national government can lead on many of these changes by setting a strong national CES that allows states to continue playing a pivotal role as innovator and implementer. Cities, businesses, and civil society reinforce the transition by partnering on aggressive procurement targets, investing in storage, and enhancing the call to action

The Transportation Sector with an All-In Strategy

"ALL IN" BREAKTHROUGH ACTIONS:

- **Mandate/incentivize phase-out of internal combustion engines for light-duty vehicles by 2035 and medium- and heavy-duty vehicles by 2045 (federal and state)**
- **Produce and procure ZEVs, targeting 100% of light-duty vehicle sales by 2035 and at least 30% of heavy-duty vehicle sales by 2030 (all)**
- **Invest in mass transit and one million new EV charging plugs that are broadly available to all communities (all, led by federal)**

NATIONAL POLICIES

- Mandate strong vehicle emissions standards for light-, medium-, and heavy-duty vehicles
- Incentivize ZEVs through tax credits for light-, medium-, and heavy-duty ZEVs
- Invest in EV infrastructure, including one million new EV charging plugs
- Partner with states to deploy EV charging infrastructure along major travel corridors
- Accelerate the phase-out of internal combustion engines (ICE) through vehicle scrappage programs
- Invest in mass transit, including $80 billion for passenger and freight rail and 100% electrification of school bus fleets

STATE POLICIES

- Lock in stringent vehicle emissions standards for light-, medium-, and heavy-duty vehicles
- Mandate ICE vehicle phase-downs and ZEV sales targets for all on-road vehicle types
- Incentivize and procure ZEVs and charging infrastructure for public and private fleets

CITY POLICIES

- Procure 100% zero-emission vehicles and set targets for private fleets
- Incentivize ZEV deployment through low- and zero-emission zones and expedited permitting for charging infrastructure
- Update urban planning and zoning to incentivize per-capita vehicle miles traveled (VMT) reductions of 1% annually

BUSINESS ACTIONS

- *Major auto manufacturers:* Transition to all-electric light-duty sales by 2035
- *Utilities:* Invest in ZEV infrastructure and set rate structures that support efficient EV charging
- *Large heavy-duty fleet owners:* Pilot new models and transition toward 100% ZEV procurement

CIVIL SOCIETY ACTIONS

- Educate and promote adoption of ZEVs and reduced use of personal vehicles
- Procure 100% zero-emission vehicles for institutional fleets

Priority high ambition policies that can lead to **50–52% emissions reductions by 2030**

An All-In strategy to reach economy-wide 50–52% emissions reductions by 2030 requires a rapid transformation of the transportation sector. Emissions in the sector will need to decline by nearly 40% from 2005 levels, contributing to just over 20% of the needed economy-wide reductions (the second-largest sector reductions). A coordinated effort across all of society will accelerate and enable widespread electric vehicle production and sales. Through incentives, investments, and—importantly—reinstating strong vehicle emissions standards, the federal government can enable the broad changes required. States can further lock in emissions standards and sales targets, cities can lead by example (e.g., through investing in municipal fleet electrification), while cities, businesses, and civil society further bolster this effort by creating and educating a

The Building Sector with an All-In Strategy

"ALL IN" BREAKTHROUGH ACTIONS:

- **Mandate/incentivize energy-efficient, all-electric appliances and zero-emissions new buildings by 2030 (federal, state, city)**
- **Invest in building electrification and efficiency upgrades, with a priority for low- and middle-income housing (federal, state, city)**
- **Raise awareness of public health and climate dangers of gas (all, especially civil society)**

NATIONAL POLICIES

- Incentivize rapid efficiency upgrades by doubling the existing homes tax credit incentive rate and increasing the commercial buildings tax deduction to $3 per square foot through 2030
- Adopt a performance-based standard for all federal buildings, increasing the renovation rate to 3% per year with deep retrofits of 40% energy savings
- Invest in funding programs (e.g., Weatherization Assistance Program, Weatherization Readiness Program) to accelerate retrofits, with a priority for low- and middle-income homes
- Update appliance efficiency standards and expand tax credits to incentivize the transition to zero-emissions buildings
- Expand EPA EnergyStar, DOE Better Plants, and other model programs

STATE POLICIES

- Mandate/incentivize building efficiency and electrification through performance-based, zero-emissions building standards and fuel-neutral Energy Efficiency Resource Standards targeting 2% annual energy savings

CITY POLICIES

- Adopt stretch codes and building performance standards targeting 11% or more savings over base standards and 100% electrification
- Drive accelerated electrification by phasing out gas connections for new building construction
- Mandate electrification and heating demand flexibility in local building codes
- Lead by example through public benchmarking, rooftop solar, and deep efficiency retrofits for city-owned buildings

BUSINESS ACTIONS

- *Companies and large real-estate holders:* Invest in energy efficiency and participate in benchmarking and transparency programs
- *Companies and large real-estate holders:* Partner with cities, utilities, and DOE to drive investment in electrification and grid interactivity in commercial and institutional buildings

CIVIL SOCIETY ACTIONS

- Invest in facility efficiency and

Priority high ambition policies that can lead to **50–52% emissions reductions by 2030**

An All-In strategy to reach economy-wide 50–52% emissions reductions by 2030 requires a rapid transition to zero-emissions buildings, with direct residential and commercial building sector emissions declining by 26% from 2005 levels. All levels of governance and society must come together to drive this transition, supported by federal government investments and programming that include tax credits and model programs. State and local policies can further enhance ambition to accelerate electrification and energy savings. Businesses, utilities, and civil society can partner to ensure access to affordable electricity—especially for our most vulnerable communities—and build heightened awareness and demand for beneficial electrification.

NM STATE PURCHASING SUSTAINABLE INITIATIVES

- WORK FROM HOME

  In the last week of March 2020, General Services Department pivoted to allow all Divisions including State Purchasing Division (SPD) to work from home saving thousands of commuting trips to the office.

- VIDEO CONFERENCE BID OPENINGS & VENDOR MEETINGS

  State Purchasing's bid openings and vendor procurement meetings are now conducted by video only saving thousands of commuting trips to our Santa Fe office.

- PAPERLESS FILES

  Successfully moved from paper submission of bids and proposals to 100% electronic through SPD's webpage.

- E-SIGNATURE LAUNCH

  SPD/GSD was the first agency to implement DocuSign for electronic signatures, greatly reducing the handoff time to process paper contracts for execution. Once the process was perfected, electronic signatures were rolled out to all executive branch state agencies.

NM STATE PURCHASING SUSTAINABLE INITIATIVES

- SUSTAINABLE PROCUREMENTS

  SPD rolled out its first sustainable procurements in 2020. Based on reports from Grainger and Staples over the last year, the state purchases about 10% of its supplies in sustainable categories such as janitorial supplies not including energy star electronics.

- CRB MIGRATION

  Since the Contracts Review Bureau (CRB) moved from the Department of Finance and Administration to the General Services Department, CRB is now accepts all contracts electronically, cutting the processing time to 3 days or less while eliminating the printing of contracts now that the electronic version is our official copy. CRB was a 100% manual process handling over 1500 contracts annually, taking on average about 20 days to process each contract.

- SOLAR INSTALLATIONS

  In 2021 the largest solar carport installation of its kind in NM has began producing 1.6 megawatts of electricity to the Runnels, Simms and Montoya state buildings buildings in Santa Fe. The $6.9 million South Capitol Green Energy Project and supplies 40 percent of annual power needs, saving the state a projected $219,000 a year in costs.

FACILITIES MANAGEMENT INITIATIVES

State Buildings Green Energy Project

In August 2019, the State of New Mexico's Facilities Management Division of the General Services Department began a $32 million project to improve the energy efficiency of more than 30 executive buildings in Santa Fe. The project is anticipated to cut energy bills in half, saving the state at least $1.1 million per year. The project will also have a lasting impact on the community, state, and world in terms of the global greenhouse gas emissions reduced by these efforts.

Solar:

Of the 19 sites determined to need solar PVs, 16 are complete with the remaining 3 large solar car ports

Building Envelope:

Of the 26 site determined to need Building Envelope, 23 are complete with the remaining 3 sites being completed by year end.

HVAC & Controls:

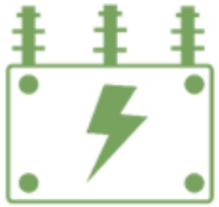
Of the 26 site determined to benefit from higher energy efficient equipment and building automation systems (BAS), 22 are complete with the remaining 4 sites

Domestic Water:

Of the 26 site identified whereby the installation of water savings devices, 25 of those sites are complete with one (1) remaining site to be completed before year end.

Lighting:

Of the 30 site determined to benefit from higher efficient lighting systems, 25 are complete with the remaining 5 sites being completed by year end.



Transformers:

Of the 22 sites determined to benefit from high efficient transformers, all 22 sites are complete.

Window Film:

Of the 26 site determined to need Window Film, all 26 sites are complete.

SOUTH CAPITOL PARKING LOT NOW SOLAR

NM STATE PURCHASING FUTURE PROJECTS

- Creation of "green teams" in both state and local government entities to teach procurement personnel learn how to purchase sustainable goods.
- Outreach to organizations such as the New Mexico Public Purchasing Association, APS, and the City of Albuquerque to educate the sustainable products offering on SPD's statewide price agreements used by all executive branch and local public entities.
- Coordination with National Association of State Procurement Officials and the Sustainable Purchasing Leadership Counsel to share innovation and lessons learned in sustainable initiatives.
- Continued collaboration with universities to establish "Best Practices" for sustainable procurement in NM. SPD recently worked with ASU's master's class on this project through Shirley-Ann Augustin-Behravesh, PhD, Senior Sustainability Scientist, Global Institute of Sustainability and Innovation Lecturer, Arizona State University School of Sustainability, College of Global Futures.

ELECTRIC VEHICLES

The transportation sector is the No. 2 producer of greenhouse gas emissions in New Mexico. The General Services Department received a $750,000 appropriation in the FY21 legislative session to augment electric vehicles in the state's motor pool to provide transportation for state agencies. In 2021 GSD added its first all-electric vehicles to the Motor Pool and purchased 35 full electric vehicles and 40 hybrids including 8 pickup trucks. GSD is completing installation of 30 charging stations on state campuses in Santa Fe to serve government and privately owned electric vehicles.

GSD has made substantial progress on its State Buildings Green Energy Project, a $32 million energy-efficiency and solar power initiative for 30 government buildings in Santa Fe. Solar power has been installed on 16 buildings, and construction is underway on three large solar carports. The State Buildings Green Energy Project will save taxpayers at least $1.1 million a year in electric utility costs. The project also will reduce state government's annual carbon footprint by the equivalent of removing 1,200 gas-powered passenger cars from the roads.

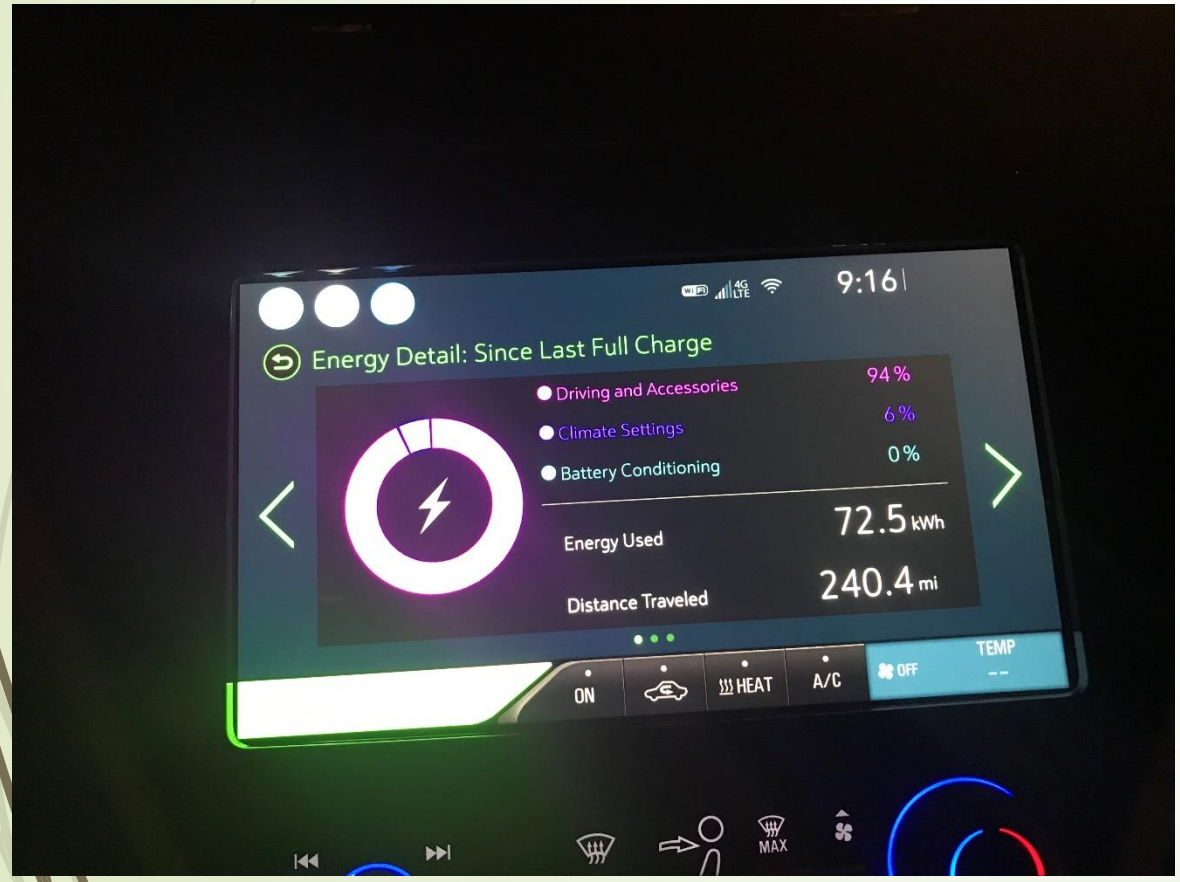
My Socorro Saga Begins – 6 hours to charge

Made it to Albuquerque – 24 hours to charge

Brilliant Idea – Let's use the DC Fast charger!

Every car dealer kicked me out at closing time

240 Miles on a 220 Range Chevy Bolt All Electric vs. a 450 mile range on my Toyota Prius Hybrid



Overview of the Bipartisan Infrastructure Law Clean School Bus Program

Under **Title XI: Clean School Buses and Ferries**, the Bipartisan Infrastructure Law (BIL) provides **$5 billion** over five years (FY22-26) for the replacement of existing school buses with clean school buses and zero-emission school buses.

These new clean school bus replacements will produce either zero or low tailpipe emissions compared to their older diesel predecessors.

School bus upgrades funded under this program will result in cleaner air on the bus, in bus loading areas, and in the communities in which they operate.

The first funding opportunity under this program is the 2022 Clean School Bus Rebates.

CLEAN BUS PROGRAM

Eligible Applicants

State and local governmental entities responsible for:

1) providing bus service to 1 or more public school systems; or
2) the purchase of school buses

Nonprofit School Transportation Associations

Indian Tribes, Tribal Organizations, or tribally controlled schools

Eligible Contractors

CLEAN BUS PROGRAM

School Bus Replacement Funding

The maximum rebate amount per bus is dependent on:

- Bus Fuel Type
- Bus Size
- Whether the school district served by the buses meets one or more prioritization criteria

Maximum Bus Funding Amount per Replacement School Bus

School District Prioritization Status	Replacement Bus Fuel Type and Size					
	ZE – Class 7+	ZE – Class 3-6	CNG – Class 7+	CNG – Class 3-6	Propane – Class 7+	Propane – Class 3-6
Buses serving school districts that meet one or more prioritization criteria	$375,000	$285,000	$45,000	$30,000	$30,000	$25,000
Buses serving other eligible school districts	$250,000	$190,000	$30,000	$20,000	$20,000	$15,000

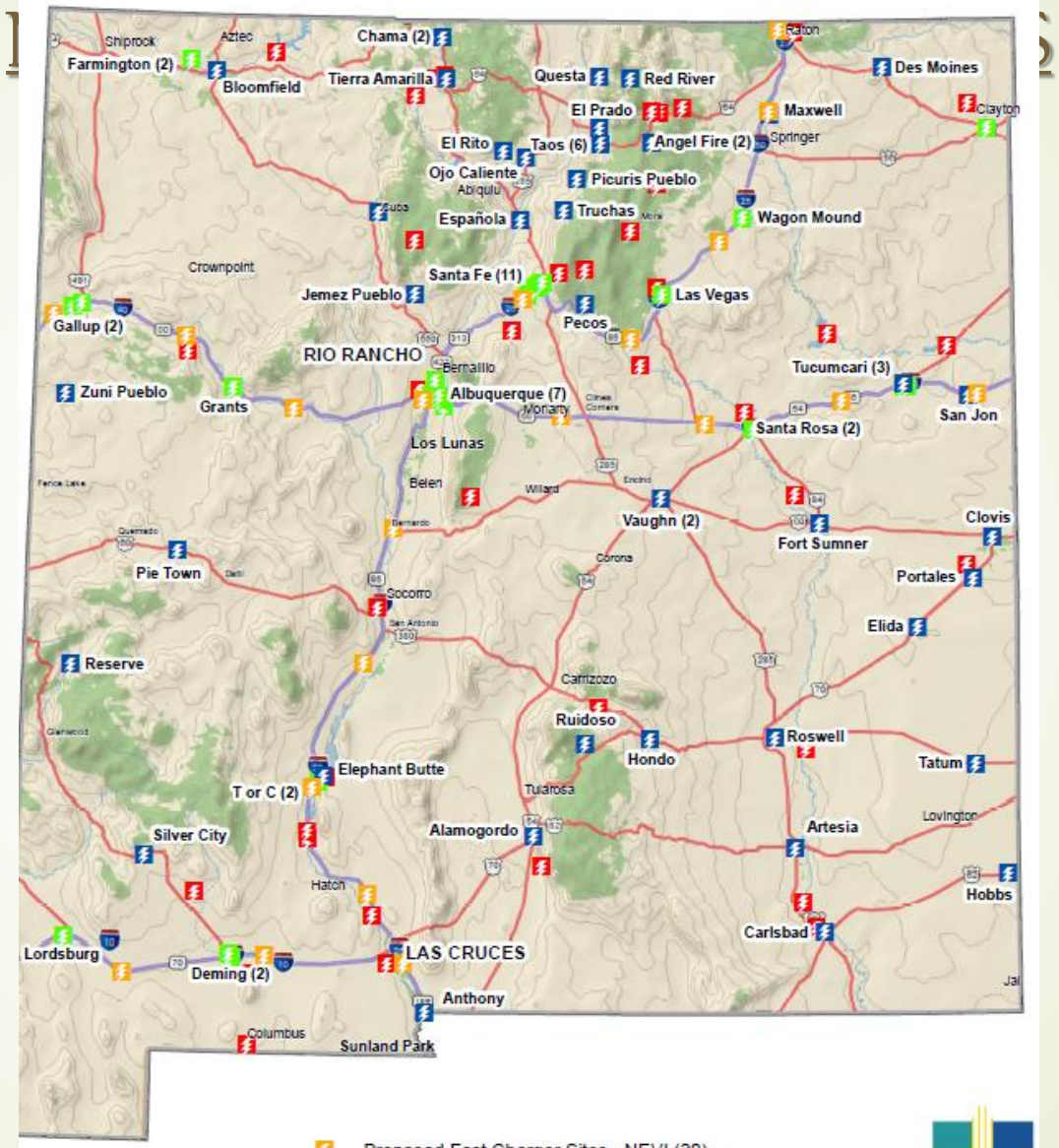
EV CHARGING STATIONS IN NM ARE KEY

Public Service Co. of New Mexico, New Mexico's largest electric provider, proposal to state regulators for incentivizing the buildout of infrastructure that would be needed to bolster the use of electric vehicles. PNM's filing is the result of more than a year of research and community outreach, detailing a series of customer rebate proposals for installing charging infrastructure and charging during off-peak times.

This is the first plan under a 2019 law requiring public utilities to submit plans to the Public Regulation Commission by 2021 for how they will expand the infrastructure for electric transportation, taking into account how the plans will increase access to the use of electric vehicles by underserved communities and whether any reductions in pollution can be expected. Utilities can recover reasonable costs related to implementation of the plans through increases in customer rates.

PNM estimates its program will cost close to $8.5 million over two years. If approved, PNM's full rollout could happen as early as 2022.
PNM currently owns and operates four free charging stations — two in Santa Fe, one at a visitor center in Silver City and another at an Albuquerque shopping mall.

Proposed and Current Fast Charger Sites (ARPA, NEVI, EMNRD, DC Fast Chargers)



- Proposed Fast Charger Sites - NEVI (20)
- Proposed Fast Charger Sites - ARPA (47)
- Current DC Fast Chargers (31)
- Proposed Fast Charger Sites - EMNRD (39)

NMDOT

NEW MEXICO GRANT FUNDS

New Mexico is one of the first states to submit a comprehensive EV Charging station plan to the Federal Government for funding.

NM has several funding sources for the purchase and installation of Electric Vehicle (EV)charging stations throughout the state. Most funding will be made available through NMDOT.

NMDOT is planning the EV charging station locations to comply with the National Electric Vehicle Infrastructure (NEVI) program.

Broadband expansion is key to making EV Charging stations operable. Participation by local governments will be a key part of this state-wide roll out.

NEW MEXICO GRANT FUNDS

Feb 10 Guidance

Plan Vision and Goals

The Plan should describe how it supports a convenient, affordable, reliable, and equitable statewide and national EV network. The Plan should describe how the State intends to use the funds distributed under the NEVI Formula Program to carry out the Program in each fiscal year in which funds are made available. The Plans should be updated on an annual basis to reflect the State funding Plans for that fiscal year. Each State should provide 5-year goals for the duration of the program that include at least one outcome-oriented goal with a quantitative target. This section of the Plan should also identify the overall vision and goals specific to the geography, demographics, and network of the State as consistent with the NEVI Formula Program.

Joint Office Template

Plan Vision and Goals

<Insert the State's vision to strategically deploy electric vehicle charging infrastructure and to establish an interconnected network to facilitate data collection and support the development of convenient, accessible, reliable, and equitable EV charging. Provide an enumerated list of goals that supports the establishment of an interconnected network that will facilitate: 1) data collection; 2) equitable access; and 3) network reliability. Plan vision and goals should provide an outlook for the 5-year program and beyond with at least one outcome-oriented goal with a quantified target.>

YOUR LOCAL OPPORTUNITY TO PARTICIPATE

To facilitate simplicity in obtaining grant funds along with ease of purchasing the EV stations and their installations, State Purchasing is coordinating with NMDOT to package this function in a statewide price agreement.

Only chargers meeting the NEVI and NMDOT specifications and requirements will be available on the price agreement that can be used by all local government bodies.

The state is also encouraging partnering with New Mexico businesses who might benefit from offering services at charging locations.

NMDOT PROCUREMENT FOR EV CHARGING STATIONS

Some of the parameters DOT may incorporate in their specifications and requirements:

- User common experience (location app, charging configuration, payment)
- Centralized use data collection and integration on a standard platform (e.g., ChargePoint open compatible)
- Charging station data security compliance
- Warranty and maintenance
- Construction with solar panels as needed
- Construction site direct delivery of devices
- Modular format flexibility for upgrades and repairs
- Carbon credit retention

NMDOT PROCUREMENT FOR EV CHARGING STATIONS

This protocol will allow the state to:

- Narrow selection of EV charging stations to only those compliant with state and federal requirements and avoiding local variants
- Specifications for EV charging stations are a condition to accepting DOT's grant funding
- Best value charging station pricing is obtained for all state agencies and local governments
- Provide local entities with an easy method to expedite grant funds
- Removes local charging station choice decisions and pricing mark ups by the contractor
- Allows easy purchase of charging stations from a statewide pricing agreement

NMDOT PROCUREMENT FOR EV CHARGING STATIONS

Several approaches may be implemented:

- EV chargers only
- EV chargers installed
- EV chargers with solar installed
- EV chargers funded in part with public-private partnership
- Awards will likely be in regions outlined by DOT with one or more vendors per region on a statewide pricing agreement
- Contractors may bid on some or all state regions
- Suppliers agree to deliver charging stations directly to the construction sites

EV CHARGING STATIONS & BROADBAND

One major barrier to New Mexico's EV charging station roll out throughout the state is the **lack of broadband for charging operation in many rural locations.**

NMDOT is coordinating closely with the NM Office of Broadband Access and Expansion.

Suggestions to solve the broadband problem is to partner with local governments to bring fiber to a mesh network on government buildings that can be used to send signals to the EV charging stations.

EV CHARGING STATIONS & BROADBAND

Is your local government interested in participating?

If you need grant writing expertise, both DFA and NM Municipal League have resources to help.

This is a coordinated effort, perhaps one of the most complex of its kind, to partnership with NMDOT, the Federal Government, General Services Department's State Purchasing Division, the central NM Broadband Office, the Power Companies, Suppliers, and local governments.

EV CHARGING STATIONS

In 2019, signaling New Mexico's commitment to electric vehicles, Governor Michelle Lujan Grisham joined seven governors from other Western states (Arizona, Colorado, Idaho, Montana, Nevada, Utah and Wyoming) in signing a memorandum of understanding to develop electric vehicle charging infrastructure along major highways in the region. The agreement includes Arizona, Colorado, Idaho, Montana, Nevada, Utah and Wyoming, signaling New Mexico's commitment to electric vehicles.

In Santa Fe, the General Services Department installed 30 new charging stations for use by both government and private vehicles. The General Services Department oversaw the $1.5 million project.

EV CHARGING STATIONS

The December 13, 2019 Electric Vehicle Accord reaffirms an interstate partnership to develop electric vehicle charging infrastructure along major highways in the Intermountain West. Voluntary minimum standards for charging stations was agreed by the REV West MOU updating an October 2017 agreement with the goal to ensure drivers can seamlessly drive an electric vehicle across the Signatory States' major transportation corridors. "Buyers need to know that if they invest in electric vehicles, they'll be able to drive where they need to go, recharging as needed while enabling public and private sector investment in electric vehicle (EV) charging stations and grow EV adoption in the region.

The voluntary minimum standards for Direct-Current Fast Charging (DCFC) stations include standards for administration, interoperability, operations and management. These standards are the result of collaboration between all the signatory states, with input from the private sector. The voluntary minimum standards are meant to guide the public and private sectors in developing their EV charging stations, ensure a consistent and easy experience for EV owners.

NORTH CENTRAL REGION TRANSIT DISTRICT ZERO EMISSION BUS PROJECT

NCRTD's proposal to remove two low-floor, diesel-fueled buses and three high-floor, gasoline-fueled buses (2011-2015 model years) from service plans to deploy five zero-emission battery electric buses in their place. Combined, the 5 replaced buses operate for approximately137,760 miles for an annual fuel consumption of 5,010 gallons of diesel and 8,870 gallons of gasoline respectively.

Deploying battery electric buses in place of fossil fuel vehicles will reduce energy consumption and harmful emissions, including greenhouse gases and particulates. The battery electric buses that NCRTD is proposing to put into service consume less energy per mile than buses that use other common propulsion technologies, such as gasoline, diesel, and natural gas engines. Even when considering well-to-wheel energy requirements, battery electric buses are a more efficient transit solution than these other vehicle technologies.

NORTH CENTRAL REGION TRANSIT DISTRICT ZERO EMISSION BUS PROJECT

Operating battery electric buses instead of comparable 2021 fossil fuel buses reduces the amount of energy that NCRTD uses each year by 1.8 terajoules – the energy equivalent to 31 years' worth of annual gasoline consumption for the average American car driver.

Deploying the zero-emission buses in place of the existing vehicles reduces NCRTD's annual greenhouse gas emissions by approximately 77 tons and prevents the release of 5.7 lbs. particulate matter under 10 micrometers annually; 5.3 lbs. of which is fine particulate matter known to have a considerable health impact on the local community. This reduction in emissions for greenhouse gases and particulates results in an estimated social cost savings of $4,000 annually.

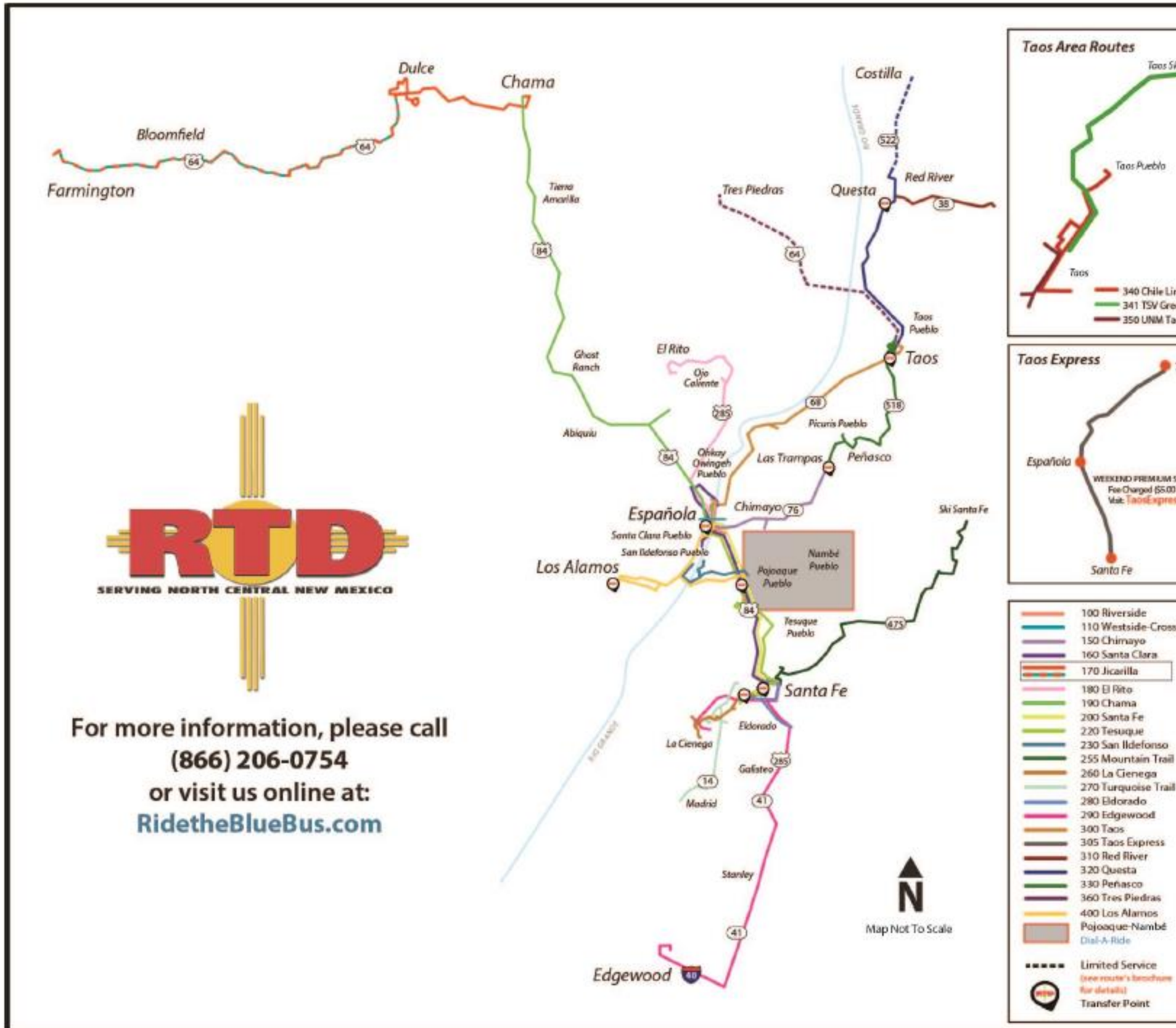
North Central Regional Transit District Zero Emissio Bus(ZEB) Project

- 6 - 35 ft Electric Buses (at least 3 maybe hydroge fuel cell electric)
- 4 - Electric Cutaways
- Targeted routes for deployment of ZEB's is in Espanola (Riverside Route) and Taos (Red, Green and Taos to Santa Fe)
- Depot Charging (electric and hydrogen fueling facilities)
- Weather, altitude and topography and weather conditions and load factors impact where we pla ZEB's or hydrogen fuel cell electric vehicles or a
- 3 - On-route Bus Chargers for Electric Vehicles
- Staff Training
- Project Cost: ~$ 10 Million (80% federally funded and 20% local funds)
- Time Frame:
  - FY 2021 Design/Procurement
  - FY 2022 Construction of on route charger

CRTD Transit ystem Map & formation

33 routes serving an area that encompasses 10,079 square miles of North Central New Mexico with an estimated population of 289,027 residents.

Annually travel 1.42 million miles per year (an average of 56,800 miles per route/year) equivalent of 509 roundtrips from New York to California



NEW MEXICO LEGISLATION

On March 3, 2020 Governor Michelle Lujan Grisham signed a group of bills to expand New Mexico's capacity for solar energy and help modernize the state's electric grid, advancing her administration's work in the reduction of greenhouse gas emissions, economic diversification and renewable energy sector expansion.

- Senate Bill 29 relaunches an expired 10 percent tax credit toward the purchase of a solar system for NM residents and business owners with a $6,000 cap per taxpayer per year. When the previous credit expired, solar jobs fell 25 percent across New Mexico.

NEW MEXICO LEGISLATION

- House Bill 50, sponsored expands infrastructure for renewable energy by making transmission line projects eligible for Industrial Revenue Bonds available to cities and municipalities, laying the groundwork to transmit power across the state.

- House Bill 233 The Energy Grid Modernization Roadmap directs the Energy, Minerals and Natural Resources Department to develop a strategic plan for energy grid modernization and to establish a competitive grant program to support implementation of eligible grid modernization projects.

NEW MEXICO CLIMATE SUMMIT

New Mexico's first-ever New Mexico Climate Summit was held at the State Capitol on October 25-26, 2021.

- The two-day event gathered nationwide experts and leaders from across the state to develop bold new policies that address the climate crisis and include a just energy transition for all of New Mexico's diverse communities.
- The summit is in partnership with organizations including Somos Un Pueblo Unido, Rio Grande Chapter of the Sierra Club, Natural Resources Defense Council, OLÉ, Center for Civic Policy, Western Resource Advocates, Environmental Defense Fund, Conservation Voters New Mexico, NM Wild, Power4NewMexico, the Angelica Foundation, and the Energy Foundation.

NEW MEXICO CLIMATE SUMMIT

Speakers included Maite Arce of the Hispanic Access Foundation, Andrew Baumann of Global Strategy Group, Governor Michelle Lujan Grisham, professors from the University of New Mexico and Georgetown University, Native and Tribal leaders, and House Speaker Egolf.

In-depth breakout discussions took place around key issues including federal funding opportunities, ensuring an equitable transition, the future of New Mexico energy, economic diversification, air, land, and water conservation efforts, and next steps in our fight against the climate crisis.

NM STATE PURCHASING PARTNERSHIPS

In 2020 State Purchasing partnered with Arizona State University's **Shirley-Ann Augustin-Behravesh, PhD Senior Sustainability Scientist, Global Institute of Sustainability and Innovation Lecturer, School of Sustainability, College of Global Futures**, to engage her entire graduate class to research sustainability best practices across the country.

The end product was a sustainable procurement report for NM to roll out a plan for our state to implement its first sustainability procurement program.

Highlights include: Top-Level Management Buy-In Benchmarks, Clear Environmental Procurement Policies, Defining Responsibility Roles; Create Employee Training Programs; Tailored training sessions designed to fit with key business policies and practices, Producing guidelines and making training available to all employees to contributes to a successful state sustainability outcome.

STATE PURCHASING PARTNERSHIPS

Arizona State University's report also detailed next steps to create:

- Green Teams.

  Foster a strong sustainability culture and lead behavior by the dissemination of information about green products, services, practices and tool sharing in an on-demand environment. Creating teams encourages new creation of new behavioral norms and institute organizational change.

- *Award Programs*.

  Positive practices and results can be recognized organized around a variety of targets within each government entity and rewarded with monetary prizes, training opportunities, or certificates, to encourage exemplary participation.

- *Professional Networks*

  Assistance with adopting appropriate sustainability certifications, labels, and standards while addressing common barriers to implementation. Both NASPO and NMPPA may be of help in the creation and roll out of this type of environment.

OTHER STATES & TRIBES

Jicarilla Pueblo

- 100% renewable energy pueblo with 700 acres of solar.
- This area of NM is the lowest cost to build.
- Targeted to become the largest solar electric producer in the US with another 1000 acres planned.
- Energy transition project results in revenue and jobs for the tribe.

Obsticles:

- Electric power storage is challenging.
- Sufficient transmission lines are not yet built.
- A large percentage of tribes do not have water in their homes, filtration.
- EV charging next focus.
- Training in energy sector anticipated to increase wages in prior coal areas by 40% and reaches the lower economic areas.
- Oil/Gas families are often lower educated immigrants who are in a boom/bust industry where 16 hour days and estrangement from the family is common in between layoffs.

POST - COP 26

The Conference of Parties or the UN Climate Change Conference (the official name for climate COPs) has happened every year since 1995. The two-week summits are an important space for stakeholders to discuss the climate crisis on a global level. At the 2015 COP in Paris, 190 countries in the world officially ratified the "Paris Agreement". The UN General Assembly is the platform from which global leaders will make compelling arguments to limit and tackle the climate crisis.

President Joe Biden and US Special Presidential Envoy for Climate, John Kerry spoke at the event.

A major focus was an ongoing shift in how we produce and consume energy. Five years into this process, the verdict is sobering: we are not transitioning fast enough to meet the goals of the Paris Agreement. It is as important to understand where we are heading and **why the planet will warm by 2.3 degrees C if we do not succeed with further increasing the pace of transition.**

CONTACT STATE PURCHASING

Google “New Mexico State Purchasing” for their website.

For Procurement help call State Purchasing’s Customer Service Liaison:

Francine Wagner 505-827-0472

Everyone can Help!

Each of your Purchasing Decisions Add Up to Make a Difference