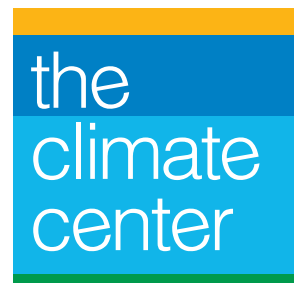




No More Business as Usual: Climate-Safe CA & the Path to Net-negative Emissions by 2030

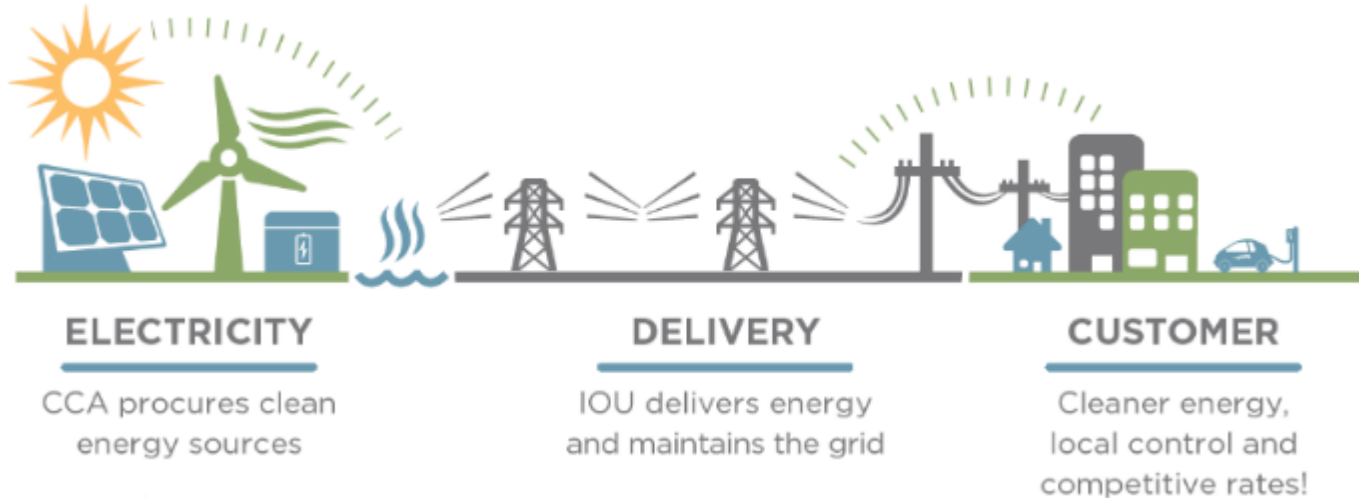


Environmental Forum of Marin, FORUM 2020 Lecture, Sept. 15, 2020

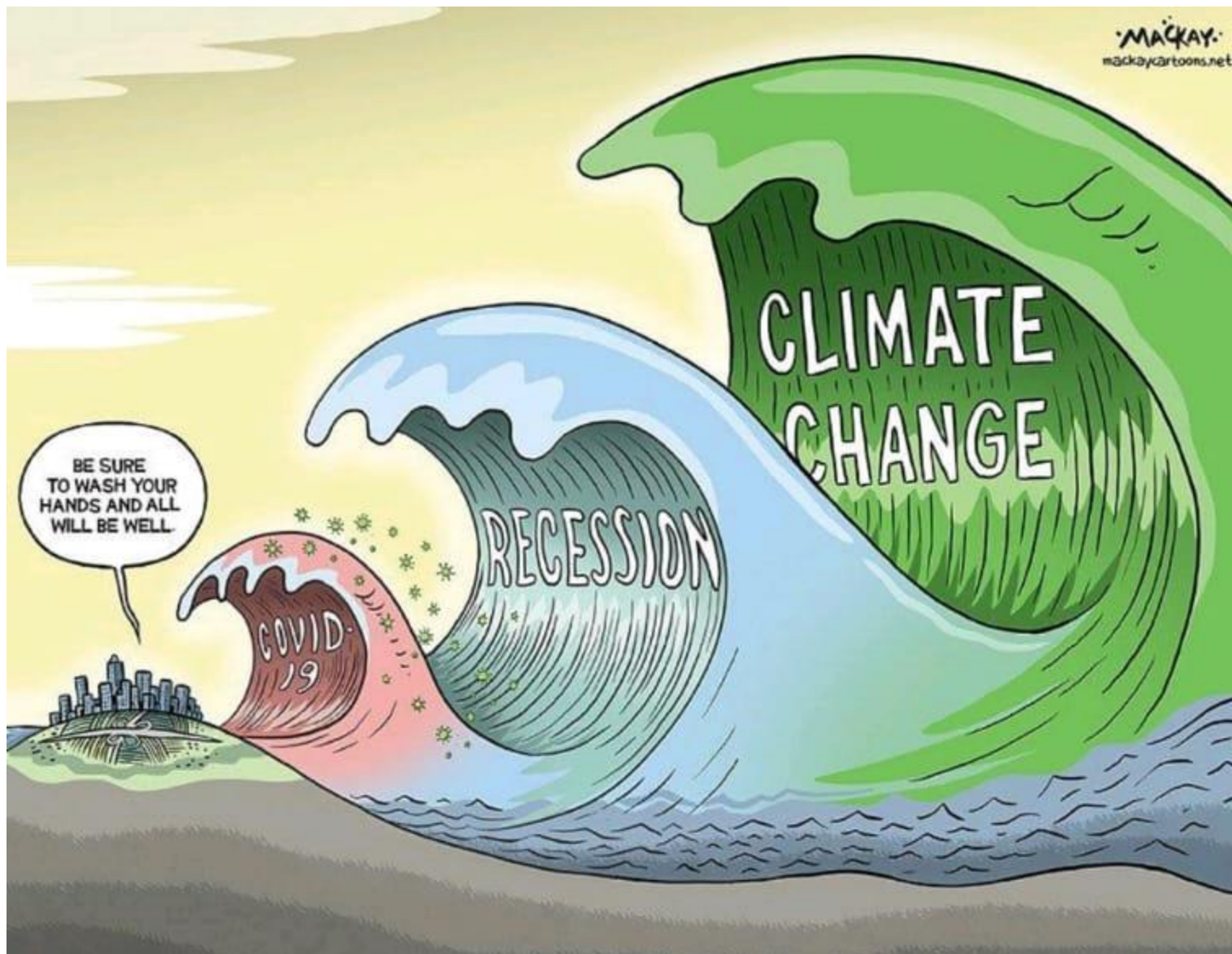
Ellie Cohen and The Climate Center Staff

www.theclimatecenter.org ellie@theclimatecenter.org

Mission: Speed and scale greenhouse gas reductions



**Key role in growing Community Choice Energy:
21 CCAs serving 11 million Californians- ¼ of
state- with 88% clean energy today!**



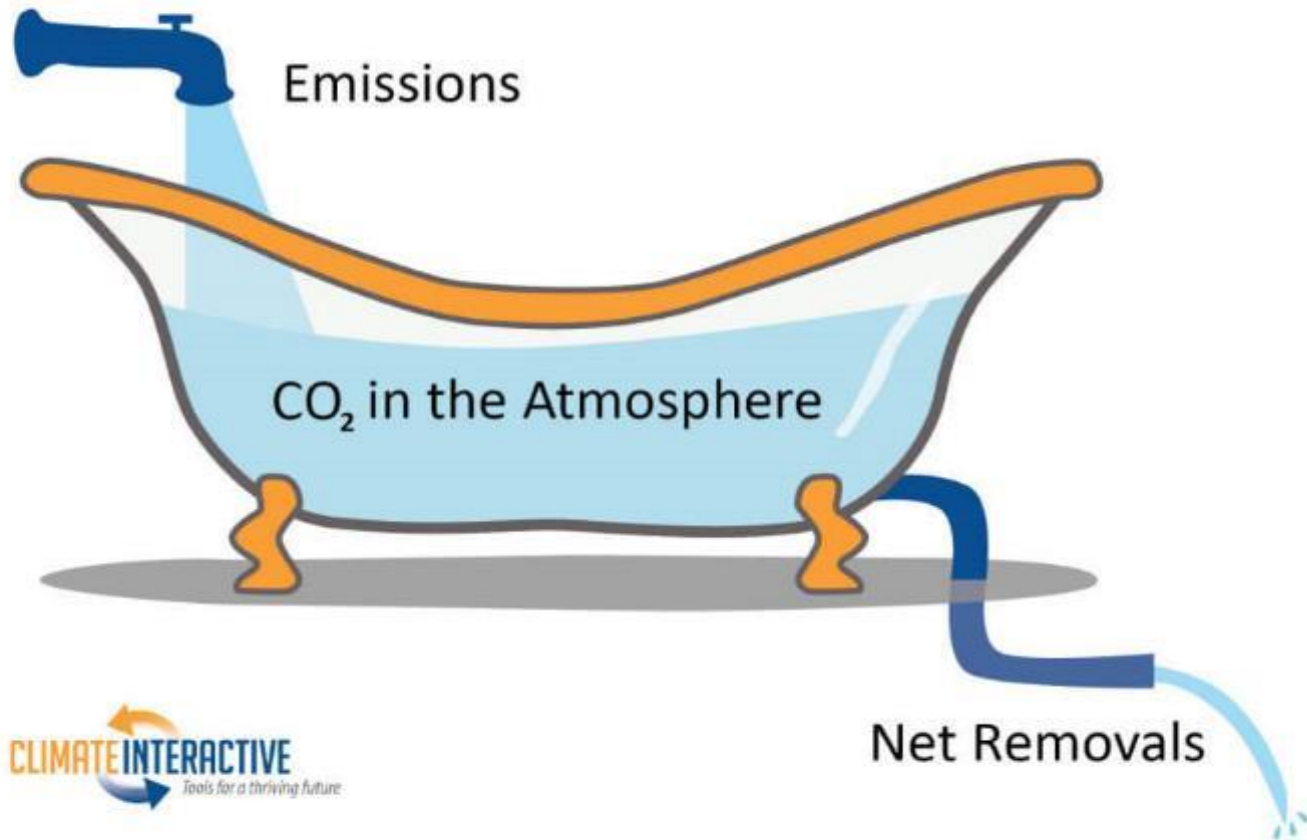
COVID19 and Climate Change

Lessons & Opportunities

- Heed science and experts
- Advance preparation saves lives
- Tipping points happen quickly, abruptly
- Healthy ecosystems sustain life and make us more resilient
- We are only as resilient as the most vulnerable
- Shared responsibility: “We” not “me”
- Individuals make a difference and we need coordinated government action
- We can act quickly, invest trillions and change behavior with political will



5.5% projected drop in emissions due to pandemic; need >double annually & start drawdown from atmosphere

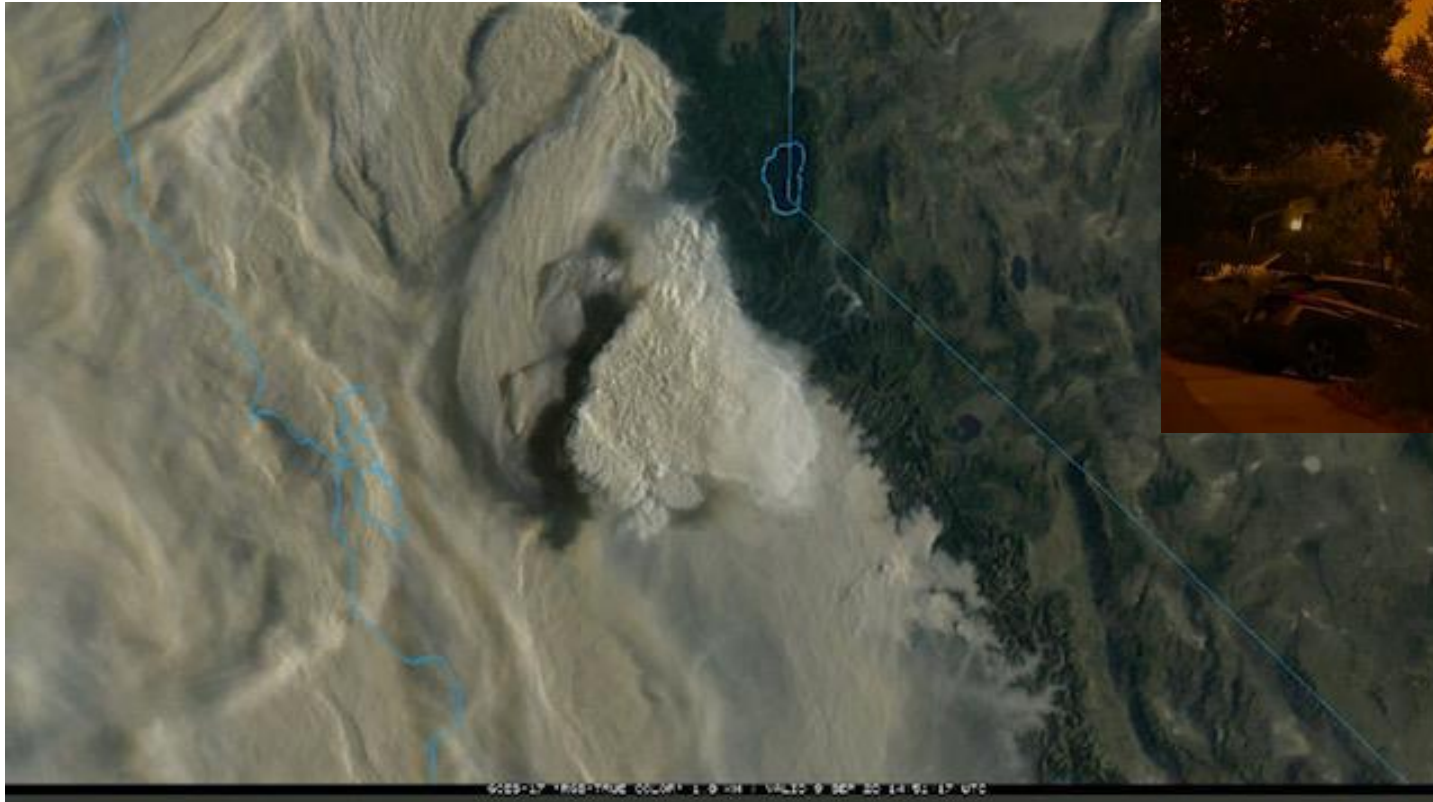


Overall framing by Dr. John Sterman, MIT Sloan

<https://grist.org/climate/the-world-is-on-lockdown-so-where-are-all-the-carbon-emissions-coming-from/>

<https://www.climateinteractive.org/tools/climate-bathtub-simulation/>
<https://www.carbonbrief.org/analysis-coronavirus-set-to-cause-largest-ever-annual-fall-in-co2-emissions>

Our house is on fire, the “hellscape is here,” and Californians are afraid...



Sept 9, 2020 GOES WEST Satellite image of Northern California; Orange skies over Bay Area

<https://www.latimes.com/opinion/story/2020-09-09/wildfires-record-temperatures-hellscape-climate-change-greenland-rising-seas>

Sunday

Los Angeles Times

\$3.66 DESIGNATED AREAS HIGHER © 2020 WST ++ SUNDAY, SEPTEMBER 13, 2020 latimes.com

California's climate apocalypse

Fires, heat, air pollution: The calamity is no longer in the future — it's here, now

Oregon residents standing ground

BY RICHARD READ,
MOLLY HENNESSY-FISKE
AND MELISSA ETEHAD

MOLALLA, Ore. —
Christine VanOeveren grab-



BY SUSANNE RUST
AND TONY BARBOZA

In 2001, a team of international scientists projected that during the next 100 years, the planet's inhabitants would witness higher maximum temperatures, more hot days and heat waves, an increase in the risk of forest fires and "substantially degraded air quality" in large metropolitan areas as a result of climate change.

In just the past nearly two decades after the third United Nations Intergovernmental Panel on Climate Change report was issued, heat records were

Current global climate goals are inadequate

UN IPCC 1.5C Report- Oct 2018

- Emissions must decline by 45% by 2030 to meet 1.5C (2.7°F) limit
- Up to 1000 Gt CO₂e must be removed from atmosphere over the decades ahead
- Achieve net-zero emissions by 2050



UN operates by consensus so goals are conservative and not enough.

We must do more sooner per new science...

<https://www.ipcc.ch/sr15/>
<https://www.ipcc.ch/sr15/chapter/summary-for-policy-makers/>

Abrupt ecosystem collapse likely this decade starting in tropical oceans

Deep emissions cuts this decade could save thousands of species



Jan 2016 common murre carcasses near Whittier, AK, David B. Irons

Trisos et al. *Nature*, April 2020 High % of species exposed to harmful climate conditions at same time - potentially lead to sudden die-offs of biodiversity

Jacox et al. **Thermal displacement by marine heatwaves**. *Nature*, August 2020; 584 (7819): 82 DOI: [10.1038/s41586-020-2534-z](https://doi.org/10.1038/s41586-020-2534-z)

West Antarctic ice shelves unHINGING— portends 10 ft of sea level rise



Enormous curved crevasses near the Pine Island Glacier shear margin. (Brooke Medley/NASA)

<https://www.washingtonpost.com/climate-environment/2020/09/14/glaciers-breaking-antarctica-pine-island-thwaites/>

Abrupt permafrost thaw doubles previous est.CO2/methane emissions

Not in any climate models
including IPCC 1.5C
report... “How realistic are
our projections” without
permafrost feedbacks?
“We can definitely stave off
the worst consequences if
we act in the next decade”

-Merritt Turetsky, PhD

>1/3 of global methane increase due to fracking

More than half of increase from US fossil fuel production

Methane 86x stronger than CO₂ as warming compound over 10-20 year lifespan

“Reducing methane now can provide an instant way to slow global warming”

-R. Howarth, Cornell University



<https://www.nytimes.com/2020/07/14/climate/methane-emissions-record.html>

Saunois et al, Earth Syst. Sci. Data, 12, 1561–1623, July 2020 <https://doi.org/10.5194/essd-12-1561-2020>

Jackson et al, Eniro Research Letters, July 2020 <https://iopscience.iop.org/article/10.1088/1748-9326/ab9ed2>

Höglund-Isaksson et al. *Enviro Research Communications*, 2020; 2 (2): 025004 DOI: [10.1088/2515-7620/ab7457](https://doi.org/10.1088/2515-7620/ab7457)

Hmeil et al Nature Vol 578 Feb 2020 <https://www.nature.com/articles/s41586-020-1991-8>

Howarth. *Biogeosciences*, 2019 DOI: [10.5194/bg-16-3033-2019](https://doi.org/10.5194/bg-16-3033-2019)

<https://therealnews.com/stories/methane-emissions-fossil-fuels-vastly-underestimated>

Western US now in global warming-induced severe megadrought

- 2000 to 2018 was 2nd driest in 1200 years
- Threatens dustbowl & ag economy by as early as 2027 in California
- 2015 drought cost ~\$2.7 billion and 20k lost ag jobs in California



<https://www.washingtonpost.com/weather/2020/04/16/southwest-megadrought-climate-change/>
[Williams et al. Science Apr 17 2020](#)
<https://www.scientificamerican.com/article/drought-takes-2-7-billion-toll-on-california-agriculture/>



Fall fire weather days have doubled since 1980 in California

but can reverse trend with major GHG reductions

Goss et al Environmental Research Letters Mar 2020

<https://www.latimes.com/california/story/2020-03-19/the-west-is-in-an-expanding-20-year-drought-that-a-march-miracle-will-do-little-to-change>

Australian pyrocumulus fire clouds that create dry lighting, igniting more fires

100+ years of fire suppression: Need controlled burns, mechanical thinning, TEK (Traditional Ecological Knowledge) applied at scale



<https://www.cnn.com/2020/09/05/us/california-mammoth-pool-reservoir-camp-fire/index.html><https://insideclimatenews.org/news/11092020/western-wildfires-big-blowup-forest-policy>

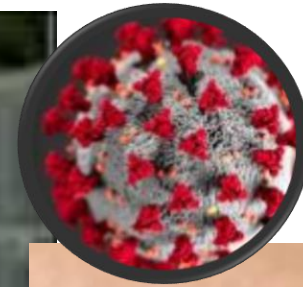
Land use changes and more pollution – increases impacts, reduces resilience



<https://www.npr.org/2020/09/11/897692090/how-big-oil-misled-the-public-into-believing-plastic-would-be-recycled>

These are polyacrylic fibers- microplastics in soil. *Credit: Anderson Abel de Souza Machado*

Increasing health impacts especially to most vulnerable communities; extreme heat most deadly



<http://www.who.int/globalchange/en/>

Leleiveld et al., Cardiovascular, March 2020

Hoffman et al. Climate Jan 2020

Bekkar et al JAMA June 2020

<https://www.nytimes.com/2020/06/18/climate/climate-change-pregnancy-study.html>

5.5 million Californians live within one mile of oil or gas wells: *environmental racism*

- California is 7th largest oil producing and 3rd largest refining state in the country
- Western States Petroleum Association, most powerful corporate lobby in CA, spent \$8.8 million on lobbying in 2019 alone
- 81,500 active and idle oil and gas wells, pumps, refineries and pipes produce high rates of asthma, respiratory diseases and cancer



Inglewood Oil Field © Gary Kavanagh 2017

Farmworkers on the frontline of climate change

#wefeedyou



United Farm Workers
@UFWupdates

<https://twitter.com/UFWupdates/status/1304419702110912513/photo/1>

<https://www.nytimes.com/2020/08/25/climate/california-farm-workers-climate-change.html>

the
climate
center

RAISING THE ALARM

Evidence that tipping points are under way has mounted in the past decade. Domino effects have also been proposed.



A. Amazon rainforest
Frequent droughts

B. Arctic sea ice
Reduction in area

C. Atlantic circulation
In slowdown since 1950s

D. Boreal forest
Fires and pests changing

F. Coral reefs
Large-scale die-offs

G. Greenland ice sheet
Ice loss accelerating

H. Permafrost
Thawing

I. West Antarctic ice sheet
Ice loss accelerating

J. Wilkes Basin, East Antarctica
Ice loss accelerating

9 of 15 global tipping points underway now... domino effect to uninhabitable 'hothouse' climate if we don't act soon...

Lenton, Rockstrom, Gaffney, Rahmstorf, Richardson, Steffen, Schyellnhuber.
Nature, Nov 27 2019
<https://www.nature.com/articles/d41586-019-03595-0>

<https://www.sciencedaily.com/releases/2019/11/191127161418.htm>

“We have **underestimated the risks** of unleashing irreversible changes, where the planet **self-amplifies global warming**. This is what we [are starting to see] already at 1°C global warming. Scientifically, this provides strong evidence for **declaring a state of planetary emergency, to unleash world action** that accelerates the path towards a world that can continue evolving on a stable planet.”

“We don't want to push the 'on' buttons of runaway global warming. The next decade is our window...with consequences for all future generations.”

- Johan Rockström, Director, Potsdam Institute for Climate Impacts Research, 2019



<https://www.sciencedaily.com/releases/2019/11/191127161418.htm>

<https://sverigesradio.se/avsnitt/1425542>
<https://medium.com/@rchrthy/johan-rockstr%C3%B6m-10-point-agenda-for-saving-the-world-unofficial-transcript-431261f885c6>

The science is clear—after assessing 5 million climate pathways:

“We must aggressively pursue carbon neutral energy by 2030 & hope for ‘some luck’ for a tolerable climate.”



Climate inaction is bankrupting our economy

- ~\$80 billion in insured and uninsured losses in California in 2019 alone due to wildfires
- Climate change threatens U.S. financial markets including insurance and mortgage markets, pension funds, and other financial institutions
- One year delay in adopting the (conservative IPCC) 1.5C pathway globally costs >\$5 trillion (in 2020)
- Damages from delayed GHG reductions in the US now cost ~\$600 billion per year (in 2020)



<https://www.accuweather.com/en/weather-news/california-wildfires-will-cost-tens-of-billions-accuweather-estimates/612548>

<https://www.nytimes.com/2020/09/08/climate/climate-change-financial-markets.html>

<https://medium.com/@ben.m.sanderson/a-last-chance-to-meet-climate-targets-37a2b7a02ff9>

Sanderson, B.M., O'Neill, B.C. Assessing the costs of historical inaction on climate change. *Sci Rep* 10, 9173 (2020). <https://doi.org/10.1038/s41598-020-66275-4>

Carbon neutrality or net zero CO₂e emissions- is it enough?

Balance
carbon emissions
with carbon
removal

(transition to a "post-carbon
economy").

NO!

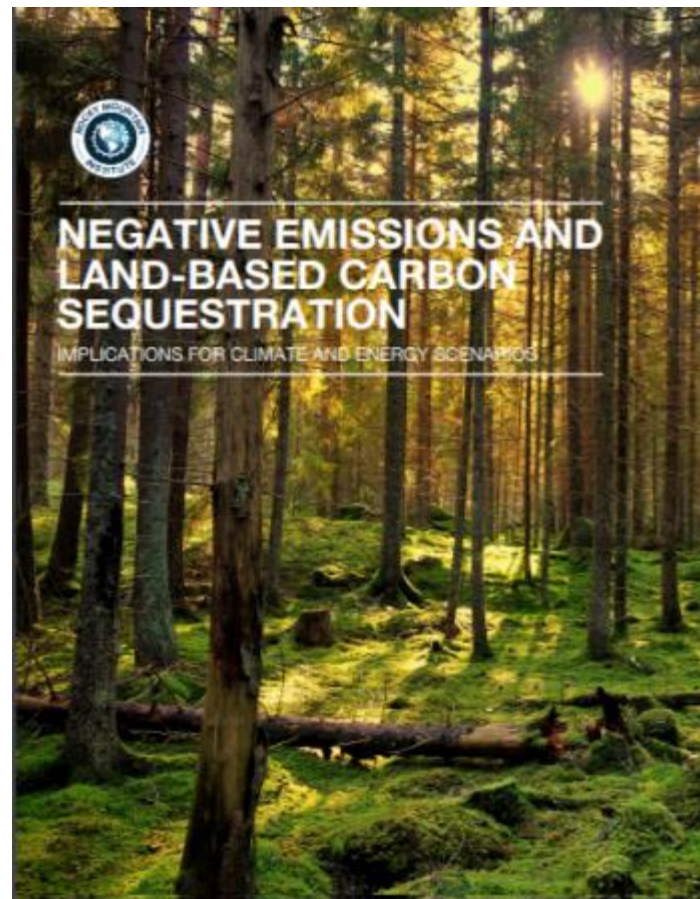


GOAL: Net “negative” emissions

Bring atmospheric
CO₂ back down (e.g.
to 350ppm)

--reverse some (not
all) of the impacts

(“overshoot” pathway- the faster we do this, the more
impacts we can avoid.)



https://www.rmi.org/wp-content/uploads/2018/11/RMI_Negative_Emissions_Scenarios_Report_2018.pdf

**The climate reality
is outpacing
outdated science
and policy.**

**Leaders are now
stepping up.**

New Proposed National Climate Targets.... California is behind!

All include some versions of just transition and closing the climate gap

BIDEN-SANDERS UNITY TASK FORCE

- **Eliminate carbon pollution from power plants by 2035**
- Net-zero new buildings by 2030
- Get agriculture to net-zero

HOUSE SELECT COMMITTEE ON CLIMATE CRISIS

- Net-zero emissions by 2050
- Net-zero emissions in power sector by 2040
- **100% ZEVs-cars and light trucks-by 2035**

SENATE SELECT COMMITTEE ON CLIMATE CRISIS

- Net-zero emissions globally by 2050
- **Invest 2% annually of GDP w/ 40% to low income communities**
Note: 2% of CA 2019 GSP \$3.2 trillion = \$64 billion

DNC CLIMATE COMMITTEE

- Near-zero emissions by 2040
- **100% clean renewable energy by 2030 in electricity generation, buildings, and transportation**
- 100% zero-carbon new bldgs by 2025
- \$10-\$16 trillion in fed expenditures over next decade

<https://www.democrats.senate.gov/climate-report> August 25, 2020

<https://joebiden.com/wp-content/uploads/2020/07/UNITY-TASK-FORCE-RECOMMENDATIONS.pdf> July 8, 2020

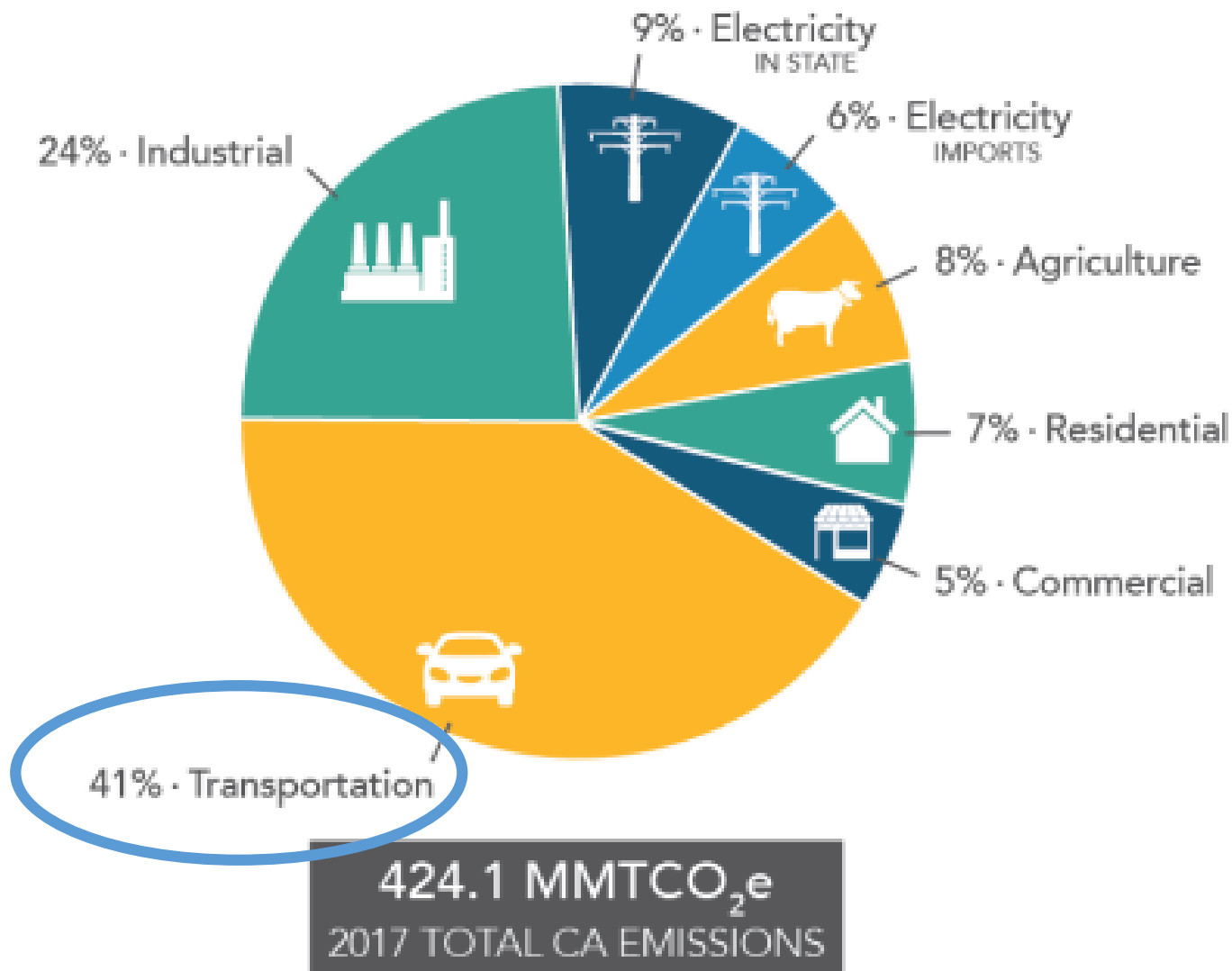
<https://climatecrisis.house.gov/> June 30, 2020

<https://www.dnccclimate.org/the-platform> June 4, 2020

Governor Newsom: We are in a climate emergency, must fast-track goals



California Measured Emissions 2017



SUVs: 2nd biggest cause of emissions rise (2010-2018)

SUV sales doubled over past decade; SUV drivers rank 7th in world for CO₂ emissions, more than UK & Netherlands combined



Photo: Jonathan Turley

<https://www.iea.org/newsroom/news/2019/october/growing-preference-for-suvs-challenges-emissions-reductions-in-passenger-car-mark.html>

CA isn't counting all of our emissions

Consumption-based, out-of-boundary emissions from embedded goods & services

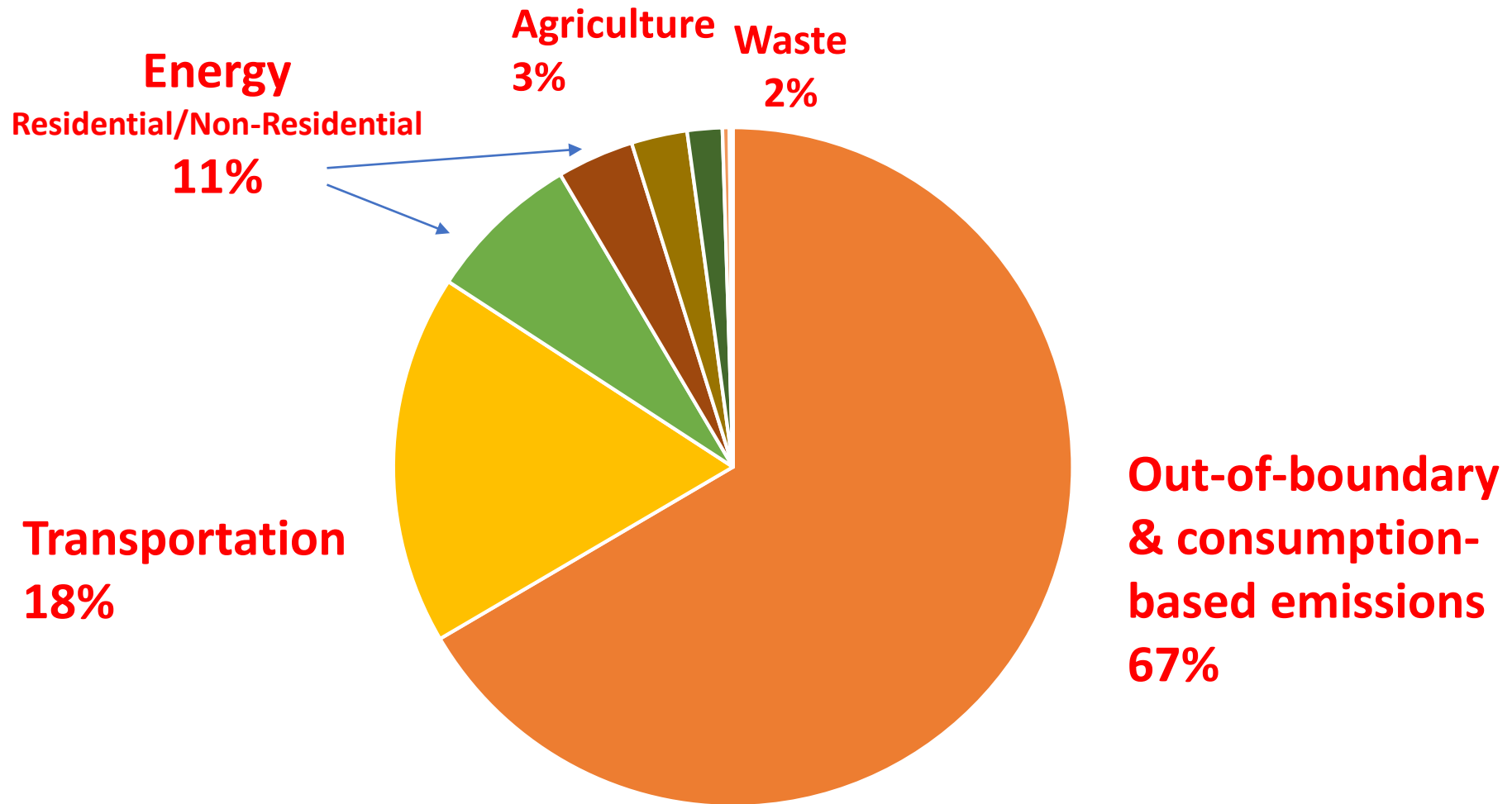
- Product & food manufacturing & disposal (waste) outside boundary
- Air travel & other transportation outside boundary
- Emissions from production of natural gas and fuels; foreign fuels refined in California



Photo: Ellie Cohen

<https://www.baaqmd.gov/about-air-quality/research-and-data/emission-inventory/consumption-based-ghg-emissions-inventory>

Example: Marin measured emissions estimated to be 1/3 of all emissions in 2017



~4,324,920 MT CO₂e

California must lead for the country and the world to secure a climate-safe future



Need more aggressive policies and accelerated timelines in CA now!



Climate-Safe California Campaign for Rapid Decarbonization

www.theclimatecenter.org

GOAL: By 2025, CA will have enacted the bold policies required by science to dramatically reduce emissions, start drawdown and secure resilient communities by 2030, inspiring global action

CLIMATE-SAFE CALIFORNIA

Accelerate existing state goals
to achieve by 2030:

- 80% below 1990 GHG levels (*Schwarzenegger 2005 EO by 2050*)
- Net-negative emissions (*sequestration greater than emissions, CA becomes net carbon sink*) (*Brown 2018 EO by 2045*)

**One Next Step? Governor Newsom 2020 Executive Order
that accelerates these timelines to 2030**



Two guiding principles for all Climate-Safe CA policies:

1- Ensure a just transition for workers

- Support workers dependent on fossil fuel enterprises
- Continue creating jobs for building, construction and other trades as we solve climate change together



2- Prioritize climate justice

- Climate-safe policies must ensure that lower-income communities are no longer disproportionately harmed by fossil fuel development, production, and use
- Policies must prioritize lower income & communities of color --> *climate justice is racial justice*
- Policies must ensure *everyone* is able to participate in the clean energy economy

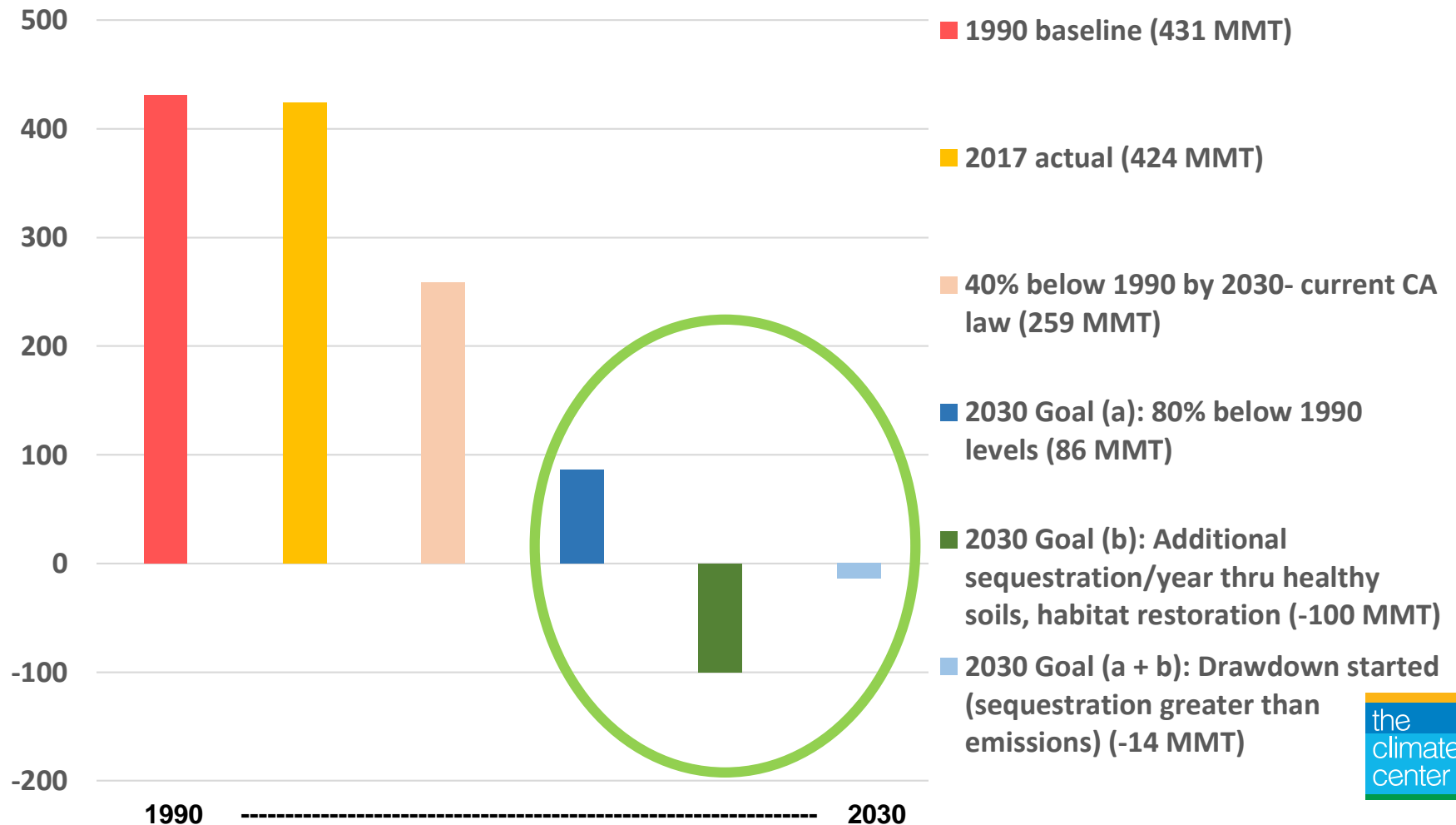


Photo: Stand.LA, by KPCC AirTalk

California's measured GHG emissions: where we are & where we need to go by 2030

www.climatesafeca.org

Million Metric Tons (MMT) CO₂e Per Year



KEY POLICIES REQUIRED BY SCIENCE TO REACH NET-NEGATIVE EMISSIONS BY 2030

- Accelerate the phase-out of fossil fuel development, production and use
- Increase sequestration
- Invest in community resilience
- Fund climate action

www.climatesafeca.org

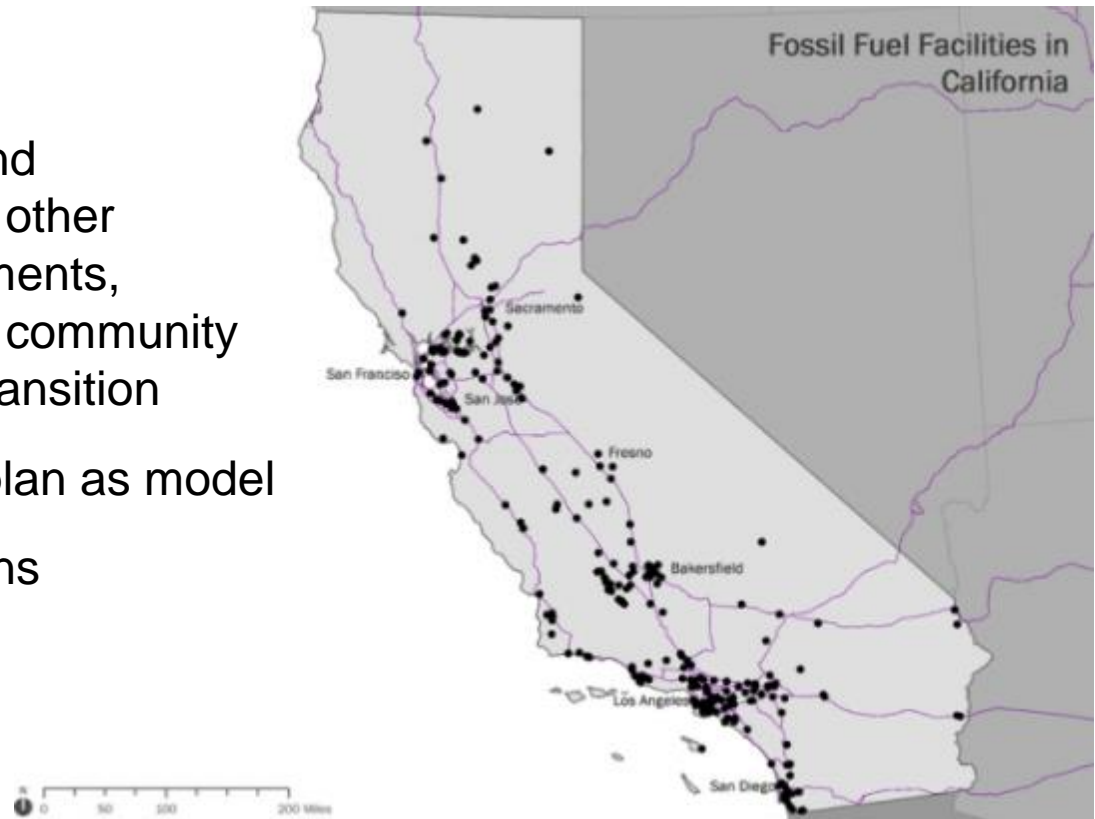
1- Accelerate phase out of fossil fuel development, production and use

- Immediately **halt new oil & gas drilling** and infrastructure development; **start plugging abandoned wells**, and, **establish health and safety zones** from active wells
- Ensure significantly greater **GHG-free transportation and mobility**
- **Secure 100% GHG-free, decentralized electricity & energy storage by 2030**
- Electrify almost everything with **massive GHG-reduction in new and older buildings**



Launch Just Transition planning now to rapidly phase out fossil fuel production in CA & achieve 80% below 1990 GHGs by 2030

- Work with Building and Construction Trades, other unions, local governments, business, NGOs and community leaders to plan just transition
- Use Diablo Canyon plan as model
- Need win-win solutions



Rapidly Transition to Sustainable Mobility

- Begin phase out of fossil fuel powered vehicles--cars, trucks, buses, ships-- by no later than 2025; Permit no new ICE vehicle registrations by no later than 2030
- Flip priorities: invest 80%+ of Caltrans \$ in non-GHG sustainable modes of transportation, not freeways, by 2025
- Invest in affordable housing near jobs
- Invest in clean mass transit
- Accelerate telecommuting for workforce, students, business and government



Zero Emissions Vehicles & charging stations have grown-- but need much more!

- ZEVs = 2.5% (655k) of CA cars (26m total)
- 33.4% increase from 2018 to 2019
- Must more than double current CA goal to 10+ million ZEVs by 2030...
- Dramatically increase charging infrastructure (eg, thru public/private partnerships)
- And get many more people out of cars!



Photo: Ellie Cohen

Florian Knobloch et al. '[Net emission reductions from electric cars and heat pumps in 59 world regions over time](https://doi.org/10.1038/s41893-020-0488-7).' *Nature Sustainability* (2020). DOI: 10.1038/s41893-020-0488-7
<https://www.latimes.com/business/story/2019-12-01/electric-vehicle-sales-in-california-on-the-rise-but-is-it-enough-to-reach-the-5-million-goal-by-2030>
<https://www.dmv.ca.gov/portal/wcm/connect/5aa16cd3-39a5-402f-9453-0d353706cc9a/official.pdf?MOD=AJPERES>
<https://centerforjobs.org/ca/zev-reports/states-progress-on-5-million-zero-emission-vehicle-by-2030-q3-2019-results-2>

Major increase in building electrification and efficiency

- Buildings = ~25% of CA's GHG emissions
- 20+ California cities have enacted **methane** gas bans for new buildings
- Enact zero-emission building codes by 2025



Electric Induction Stove-Shutterstock

<https://www.curbed.com/platform/amp/2020/2/4/21112234/home-power-range-stove-electrification-natural-gas>

Embodied Carbon in Construction Calculator-
<https://www.buildingtransparency.org/en/>

<https://www.forbes.com/sites/pikeresearch/2020/02/06/new-solutions-emerge-for-embodied-carbon-in-buildings/#4e65204e5c88>



<http://www.buildingdecarb.org/>

Ban Gas-Powered Lawn Equipment



1 hr lawn mower use

driving 300 miles
from LA to Vegas



1 hr leaf blower use

driving 1100 miles
from LA to Denver

<https://ww2.arb.ca.gov/our-work/programs/small-off-road-engines-sore>

2- Increase Sequestration

- Sequester addl. 100+ MMT CO₂e annually in healthy soils, forests and vegetation annually by 2030-- starting no later than 2022
 - Carbon farming and gardening
 - Climate-smart habitat restoration and management on land/coast
 - Enhance protected habitats



Carbon Farming, Marin



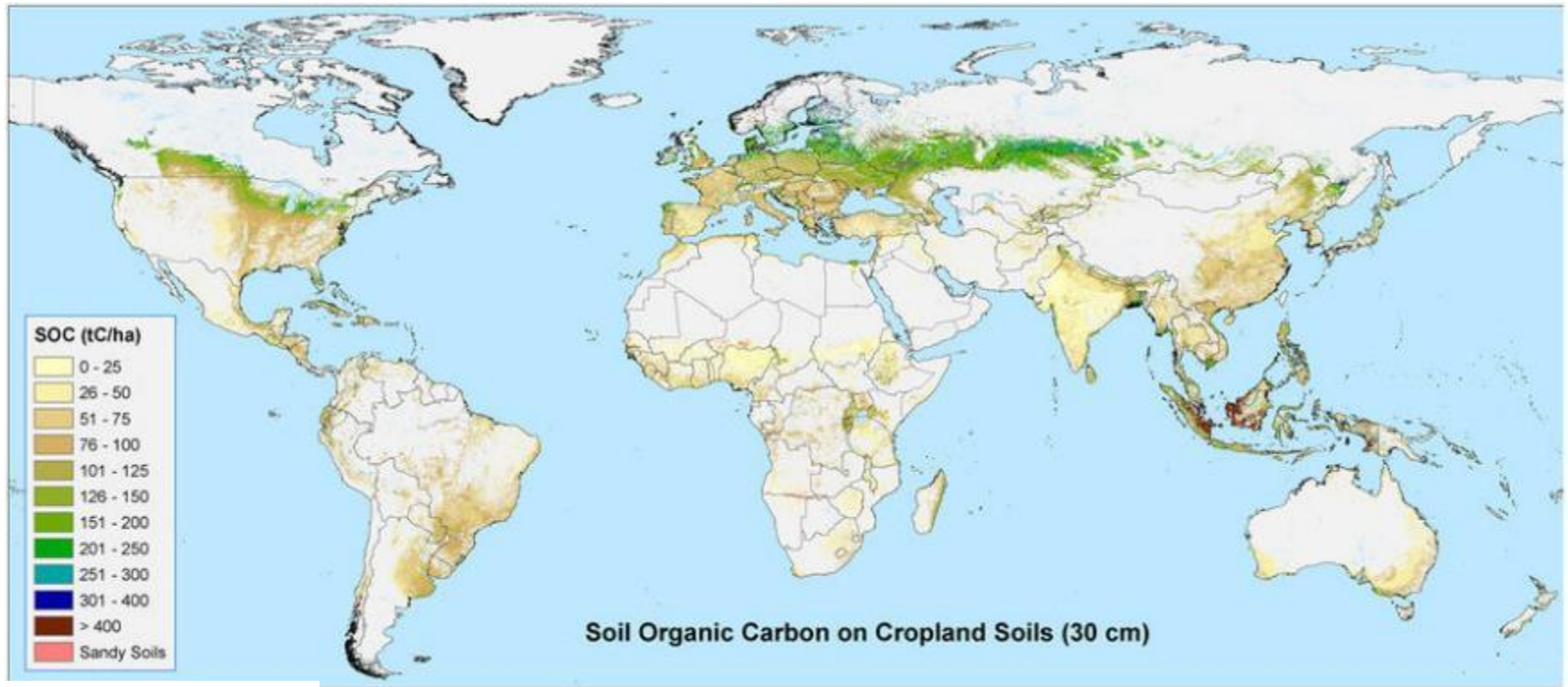
Kelp forests



Point Blue STRAW project

<https://www.marincarbonproject.org/carbon-farming>
<https://www.carboncycle.org/carbon-farming/>
<https://www.pointblue.org/our-work/restoration/>

Croplands could sequester ~1/5 of current annual emissions globally; healthy ag soils 5+ Gt/yr



Vermeulen et al. [A Global Agenda for Action on Soil Carbon](#). Nature Sustainability, Jan 2019

Bronson, Griscom, et al. [Natural Climate Solutions](#). PNAS October 2017 doi: 10.1073/pnas.1710465114

Zomer et al (TNC). [Global Sequestration Potential of Increased Organic Carbon in Cropland Soils](#). Scientific Reports, 2017.

Carbon farming on working land potential sequestration at scale Example: 15+m acres = at least 61 MMT/year CO₂e, increasing annually

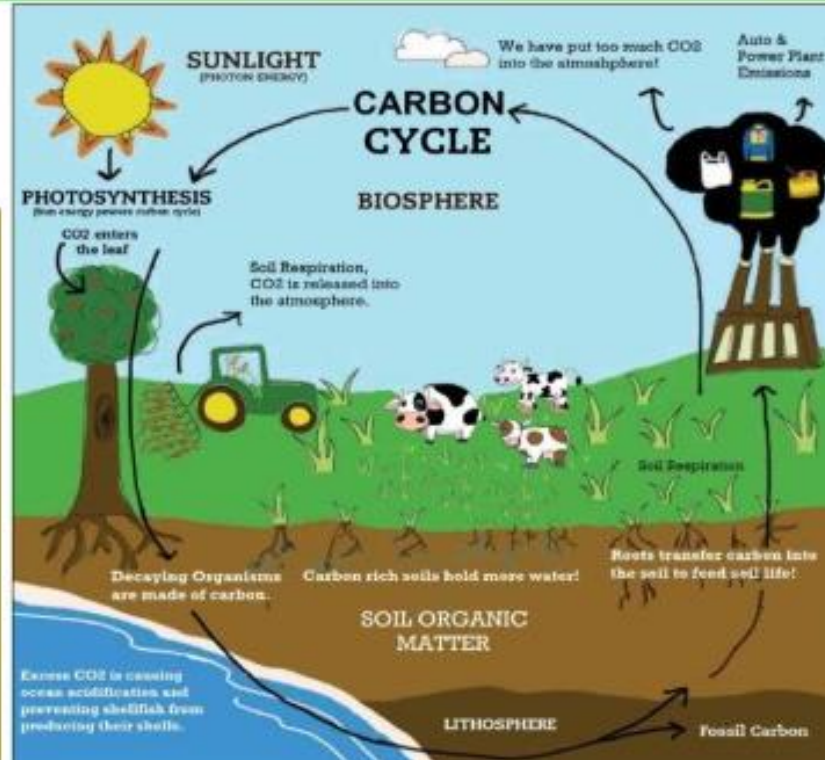
CARBON FARM PLANNING in Marin

Assistance is available for farmers and ranchers!
Plan for carbon sequestration and climate adaptation conservation practices with Marin RCD!

Potential List of Conservation Practice(s)* in a Carbon Farm Plan:

- Compost Application • Anaerobic Digester
- Silvopasture/ Shrub & Tree Establishment
 - Windbreak/ Shelterbelt/ Hedgerow
 - Riparian and Wetland Restoration
 - Filter Strips • Grassed Waterways
 - Forage & Biomass Planting
 - Rangeland Management
- Prescribed Grazing and Range Planting
 - Nutrient Management
- Residue & Tillage Management, No-Till
 - Cover Crops

*NRCS Standard Conservation Practices



MARIN CARBON PROJECT

Carbon Cycle Institute



Marin est cost of roughly \$500/acre-- \$10.5 billion for 21M acres over 10 years with multiple co-benefits for resilience, water, biodiversity and more

Riparian restoration potential at scale

Major potential for CO₂e sequestration and other benefits



See Point Blue: <https://www.pointblue.org/our-work/restoration/>. Photo: Point Blue's STRAW program; Lewis, D.J., et al. 2015. Creek carbon: Mitigating GHGs through riparian restoration. UC Coop Ext, Marin County. Novato, CA. 26 pgs. http://ucanr.edu/sites/Grown_in_Marin/files/224684.pdf;

Climate Friday Virtual Town Hall- Soil as a climate solution

the climate center

Climate Friday Virtual Town Hall- Soil as a climate solution?

Carbon

Watch later Share

Torri Estrada

The Key to Agricultural Productivity and Resilience

MORE VIDEOS

©CarbonCycleInstitute

12:38 / 59:44

YouTube

Torri Estrada, Executive Director of Carbon Cycle Institute
Wendy Millet, Ranch Director of TomKat Ranch

<https://theclimatecenter.org/08-21-2020-climate-friday-virtual-town-hall/>
Library of webinars: www.theclimatecenter.org/webinars

3- Invest in Community Resilience

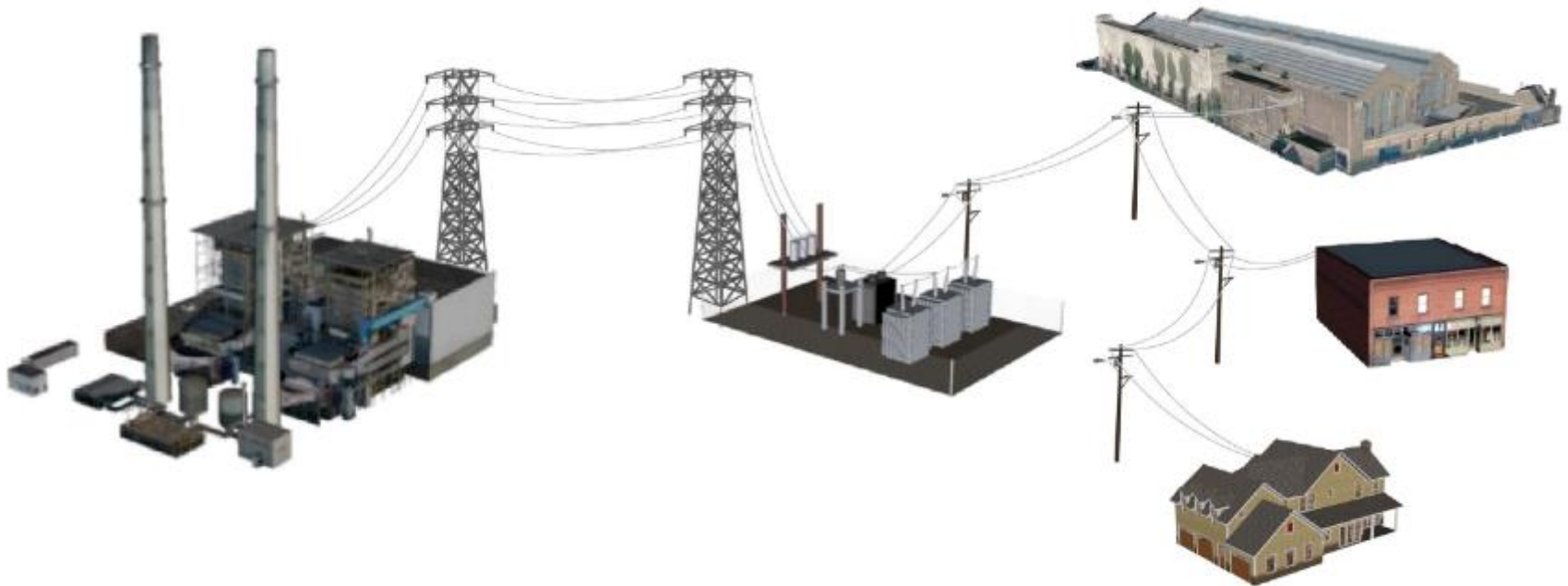
- Fund implementation of resilience plans in all California counties and cities by 2025 (SB379)
- Implement *clean* energy community microgrids with battery storage including EV's, starting with critical facilities in lower income communities by 2021



<https://microgridknowledge.com/tribal-microgrid/>

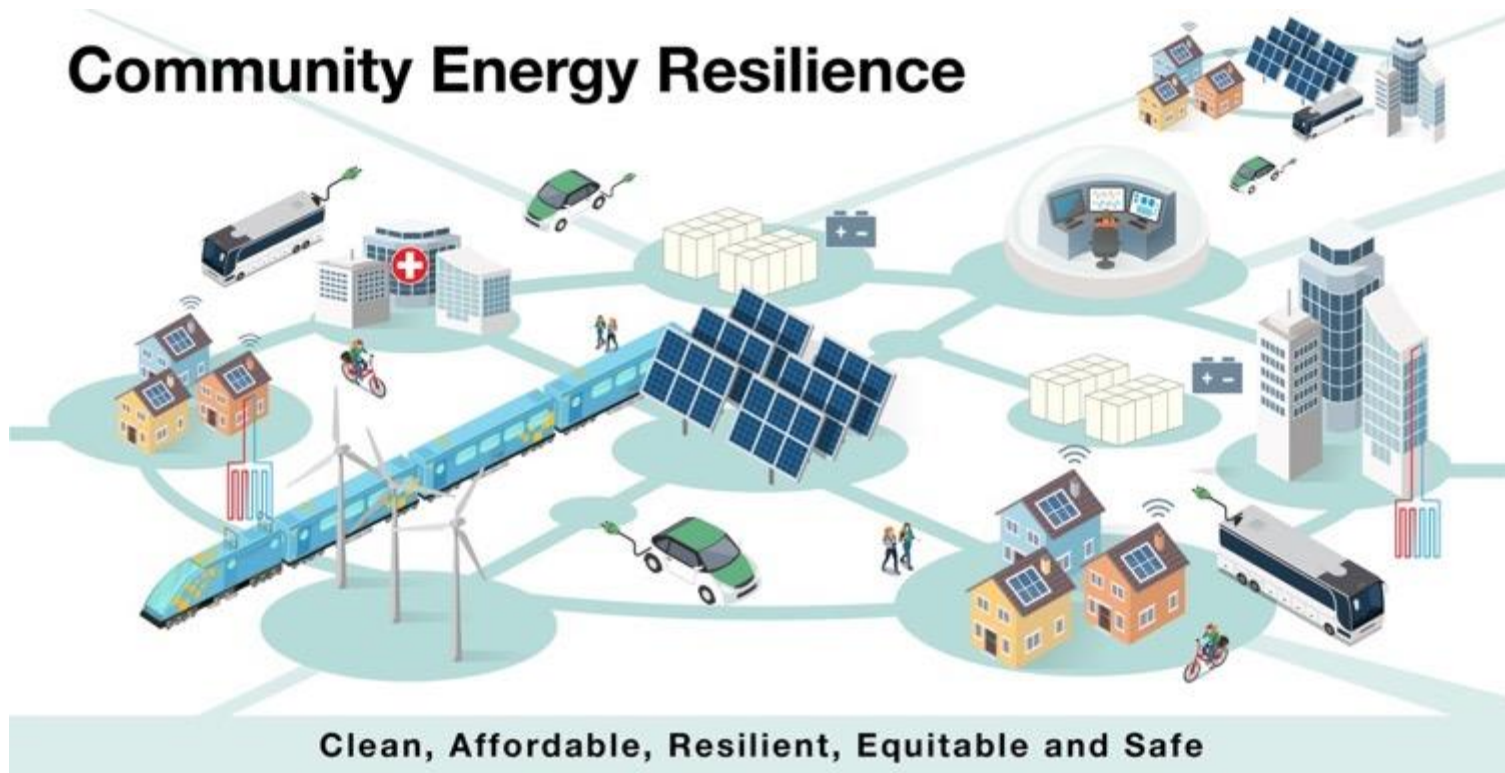
Instead of perpetuating a 100-year old grid architecture...

..a transmission network prone to failure and likely to start wildfires..



Let's create a decentralized and integrated power grid

Community Energy Resilience



**1000s of local electricity systems,
linked over the “macro grid”**

Change CPUC Rules

- Fast-track current rulemaking to accelerate opening of microgrid market
- Revise regulations so thousands of small-scale clean energy providers can participate, while creating new local jobs
- Prioritize clean energy resilience for lower income communities



California's climate and electricity crises require clean energy community microgrids

<https://www.sacbee.com/opinion/california-forum/article245311865.html>

4- Fund climate action

Institute **progressive funding strategies to produce additional ~\$12-20+ billion/year** specifically for climate action such as:

- **Regulatory changes that open markets** *so private investments pay for much of what's needed*
- **Frequent Flyer Fee** e.g., \$2.4 billion *from \$10 per passenger x 240 million (CA in 2018)*
- Fossil Fuel Severance Tax
- Enhance Cap & Trade
- Green climate bonds
- Close tax loopholes and make tax code upgrades
- Progressive carbon taxes



We have the solutions and technologies today!



Investing in GHG reduction creates jobs and builds the economy

- **\$2.2 billion from CA's Cap-and-Trade Program supported direct employment of 36,106 job years from 2013-2016**
- 54% of the jobs were in building trades
- 11% in architecture and engineering, 10% in transportation



J.R. DeShazo et al. **Employment Benefits from California Climate Investments and Co-Investments.** UCLA Luskin Center for Innovation. Aug, 2018. <https://innovation.luskin.ucla.edu/publication/employment-benefits-from-california-climate-investments-and-co-investments/>

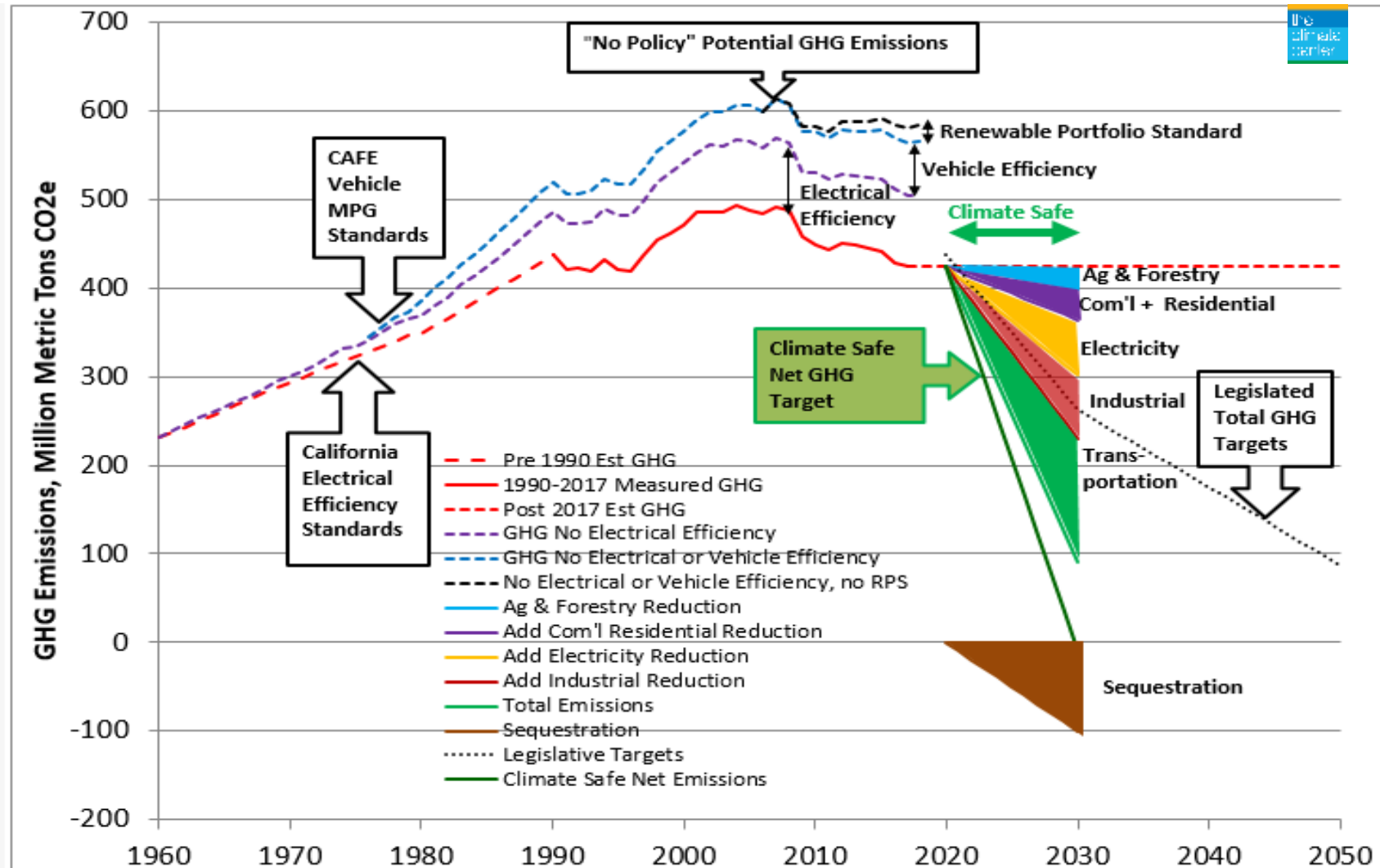
Recent studies about beneficial economic impact of climate investments

- \$80 billion invested in California will generate ~725,000 jobs
- **Clean energy generates more than 2x the jobs as in fossil fuels**
- Current California emissions reduction goals yield an estimated \$21 billion in economic and other benefits



Climate-Safe California 80% below 1990 levels and net-negative emissions by 2030

<https://theclimatecenter.org/potential-pathways-to-a-climate-safe-california/>



Over 550 endorsements of Climate-Safe California including:

- **ELECTEDS and APPOINTED**

- Congressmen Jared Huffman, Mike Thompson
- State Senators Henry Stern, Mike McGuire
- CA State Assoc of Counties,* Chair, James Gore
- Mayor Protem, City of Oxnard,* Carmen Ramirez
- Angelina Galiteva, CAISO Board member*

- **ACADEMICS and ECONOMISTS**

- Dan Kammen, PhD, UC Berkeley*
- Hunter Lovins
- Steve Weissman, PhD, UC Berkeley*

- **BUSINESS**

- Joint Venture Silicon Valley
- Terry Tamminen, Seventh Generation Advisors*
- Ygrene Energy

- **NGOs**

- Alliance of Nurses for Healthy Environments
- Center for Sustainable Energy
- Local Government Commission
- Mi Familia Vota

- **FAITH**

- Roman Catholic Diocese of Fresno



Building broad support for climate action

- Labor
- Environmental Justice
- Health Care
- Agriculture
- Real Estate
- Insurance
- Energy
- Environment
- Local Government
- Transportation
- Information Technology
- Recreation... and more



Climate-Safe California Phase I

- Secure endorsements
- Establish new statewide Climate-Safe CA alliance with workers, healthcare, environment/ justice, businesses, local govt. & other partners – *build bridges across silos*
- Build power in Sacramento and secure early policy wins eg, Community Energy Resilience
- Engage experts to develop science-based pathways & policies to net-negative emissions by 2030
- Publish white papers, opinion columns with opinion leaders & other influencers
- Building regional partnerships
- **Raise \$25 million-- \$2 million by spring 2021**

Congressman Jared Huffman

Member of House Select Committee
on the Climate Crisis



“I applaud Climate-Safe California for recognizing that solving our climate crisis requires setting the bar high enough to actually meet the challenge. I endorse this effort to keep California on that course, leading our country and the world toward climate solutions.”

<https://theclimatecenter.org/endorsementlist/>

Mayor Pro Tem Carmen Ramírez

City of Oxnard, public interest attorney



“[Climate-Safe California] is urgent and desperately needed. Also urgent is a just transition and safety net for those working in the fossil fuel industry. We must not leave people behind as seen in the coal industry.”

<https://theclimaticenter.org/endorsementlist/>

Carl Mears, PhD

UN IPCC Climate Scientist,
Remote Sensing Systems



“The Climate Center’s suite of decarbonization policies are all required to stay below 2°C (3.6°F) warming & avoid dangerous climate chaos. We need aggressive, equitable policies in place now so society can transition to a fossil-fuel-free economy as quickly & safely as possible.”

<https://theclimatecenter.org/endorsementlist/>

Terry Tamminen

former CAL EPA Secretary under Governor Schwarzenegger



“I strongly endorse the goal of Climate-Safe California to achieve net-negative emissions by 2030; 2050 is too late. The campaign’s focus on science, urgency, and policy is exactly what’s needed – and California must lead the way.”

<https://theclimatecenter.org/endorsementlist/>

State Senator Henry Stern

*speaking at The Climate Center's Virtual Community
Energy Resilience Summit, August 5, 2020*



“This campaign for a Climate-Safe California is not only crucial but it is scalable. The goal for a 2030 near term net-negative emissions target is not just something we should be striving for in California, but should be pushing the next administration [*in Washington*] to embrace as well.”

<https://theclimatecenter.org/endorsementlist/>

ENDORSE CLIMATE-SAFE CALIFORNIA

www.climatesafeca.org



Climate-Safe California
Rapid Decarbonization Campaign
Endorsement Platform

- A public pledge of support for California to accelerate aggressive climate policy
- Inspiring states and countries to greater action for a climate-safe Earth

**This is the Governor's “Winston Churchill” moment;
ask him to accelerate climate action timelines now**



Never in human history will so much be owed by so many to so few

(inspired by Winston Churchill)

Other actions you can take:



- **VOTE and volunteer**
- **Divest and invest** for a climate-safe future gofossilfree.org & fossilfreefunds.org
- Support **Community Energy Resilience bills** come January
- Support **setbacks for oil/gas infrastructure** away from schools, homes
- Tell your legislators to support a clean, green and just **Climate Recovery Bond, regulatory changes and fees** for jobs and a climate-safe future
- Ask your **City Council** to develop, implement & *fund* a Community Energy Resilience Plan & Climate Action Plan



Other actions you can take:



- [Purchase/lease solar](#), wind or 100% green power
- Ditch the SUV and make your next car an EV, plan to use it as back-up power source, or ditch your car! www.resilientneighborhoods.org
- Use mass transit, shared transit, e-bikes and other micro-mobility
- Reduce airplane travel and enjoy staycations
- Work from home and support telecommuting policies
- Make energy efficiency/electrical improvements to your home, including wiring for EV charging bayrenresidential.org/get-rebates
- Switch to electric lawn equipment, electric/induction stoves, electric appliances & hot water heaters, and heat pumps
- Insulate home, install insulating windows & doors
- Eat locally grown, organic food; avoid industrially grown meats entirely
- Support climate-friendly natural and working lands, waters management
- Engage young people in education, habitat restoration & policy action
- Use less, waste less: refuse, reduce, reuse, take action!
- **SUPPORT THE CLIMATE CENTER!** www.theclimatecenter.org

We can– and are– making a difference!



**Be bold, take risks and innovate for
a healthy, equitable future**

WE HAVE CHOICES



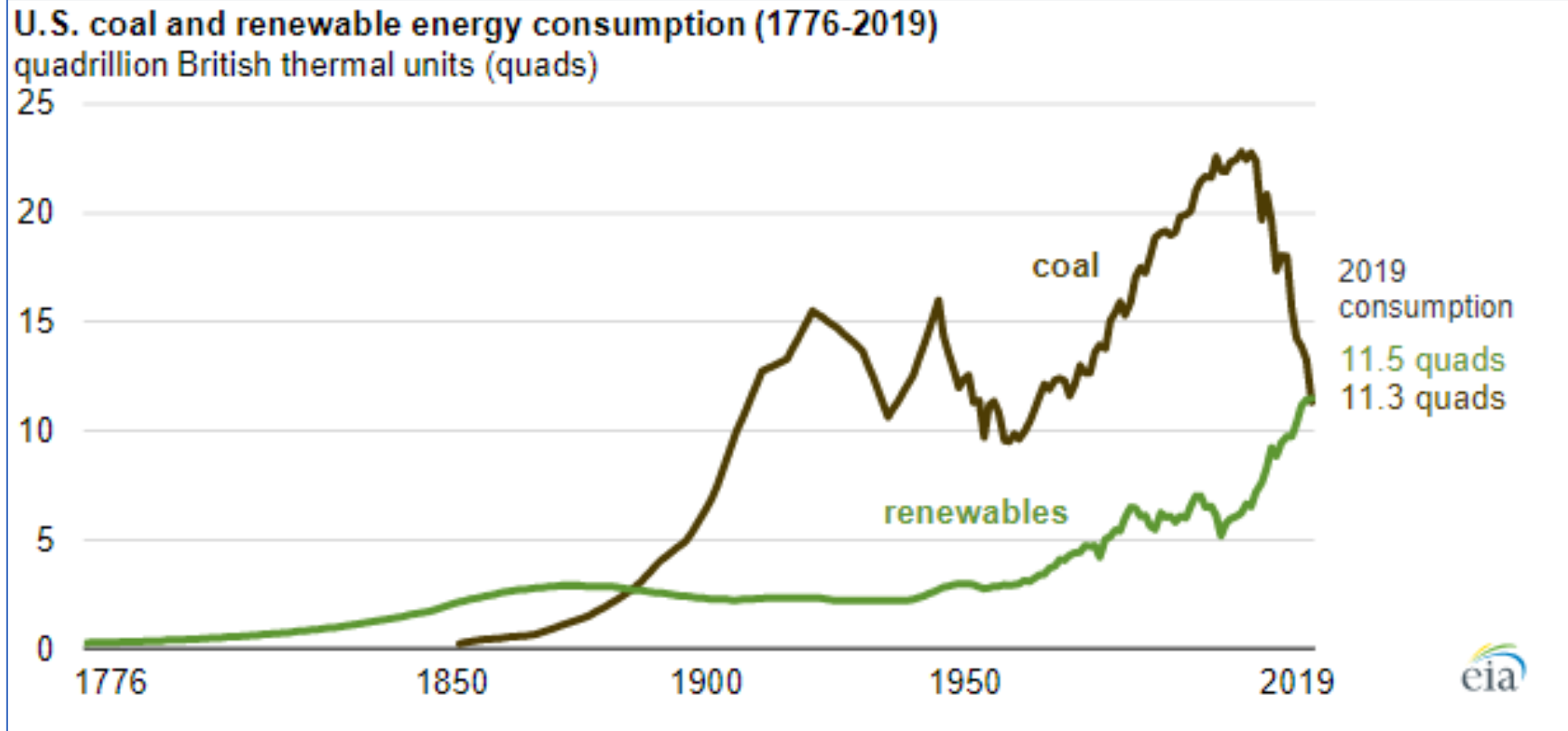


One person can make a difference!



Together we make an even bigger difference!!

U.S. RENEWABLES PRODUCE MORE ELECTRICITY THAN COAL for first time in 130 YEARS in 2019 SOLAR GROWS 32% & WIND 20%



U.S. Energy Information Administration

[U.S. renewable energy consumption surpasses coal for the first time in over 130 years](https://pvbuzz.com/renewables-produce-more-electricity-than-coal/) May 28 2020

<https://pvbuzz.com/renewables-produce-more-electricity-than-coal/> Apr 27 2020

https://www.eia.gov/electricity/monthly/epm_table_grapher.php?t=epmt_es1a

CA first state to reach net negative emissions

Kickstarts nation & world into speed & scale climate action

February 2030



Drawdown & resilience increasing despite record-breaking drought thanks to climate-friendly natural & working lands management

August 2035



The New York Times

Wednesday, November 6, 2040

Global Climate Union
Authorizes \$420 Trillion in
Healthy Planet Accords;
On Track to 350 PPM and a
Safe Climate

Sunrise party wins presidency

Ecosystems, Economy & Communities Healthy & Resilient,
Soils and Vegetation Sequestering Carbon at Scale; Wildlife
Populations Recovering



Thank you!

ellie@theclimatecenter.org
www.theclimatecenter.org

