



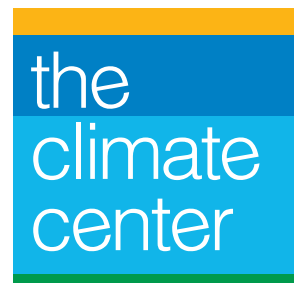
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# The Path to Climate-Safe California: Net-negative emissions by 2030

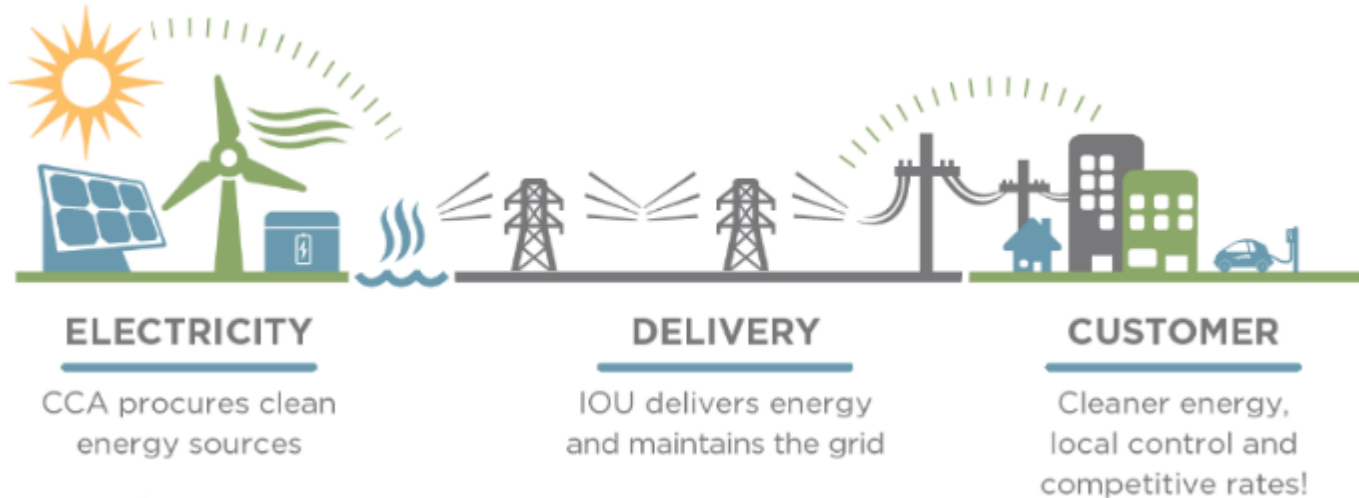
Sustainability Summit-- GGNRA, GGNPC, The Presidio Trust

Ellie Cohen, April 29, 2020

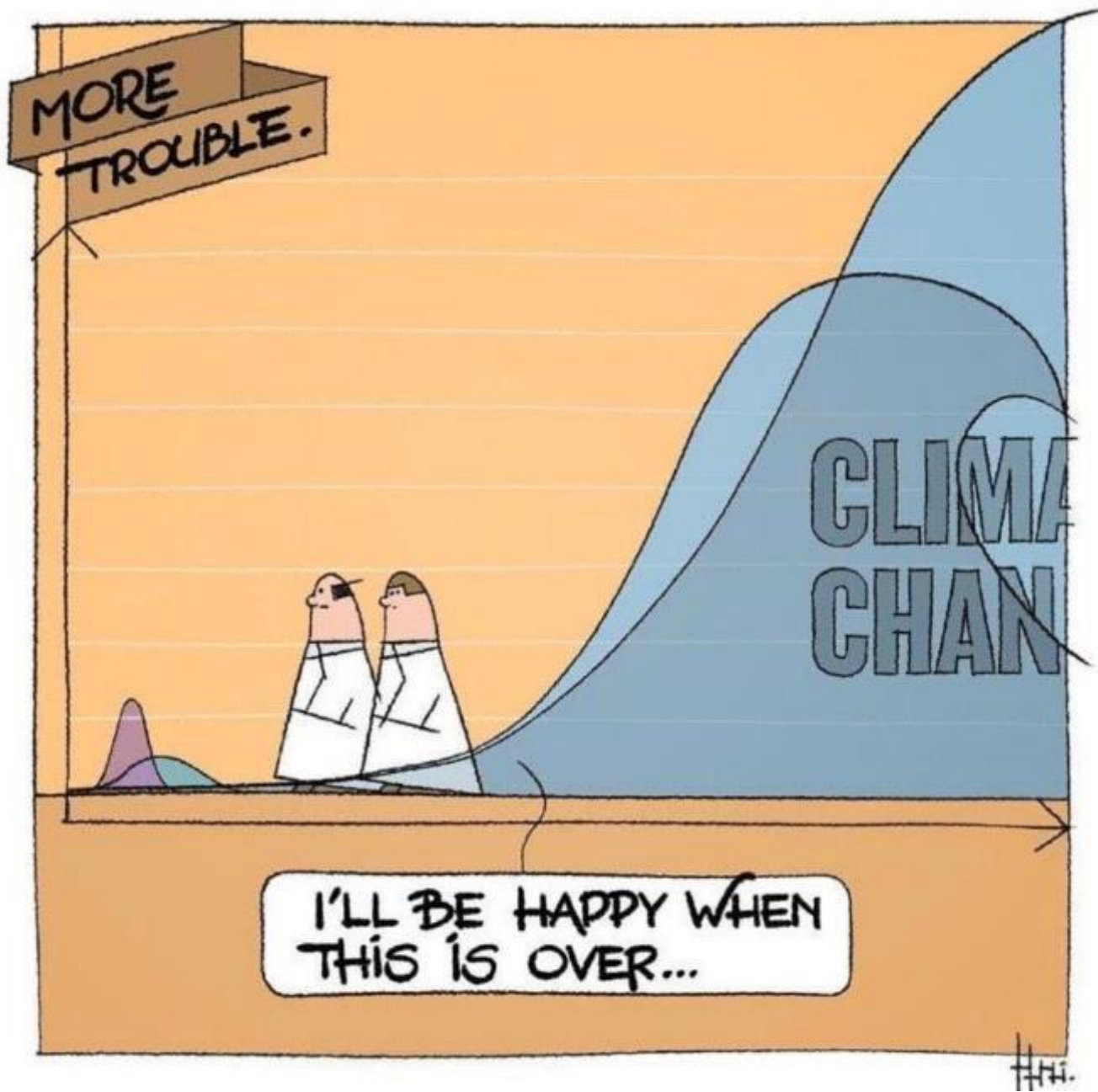
[www.theclimatecenter.org](http://www.theclimatecenter.org)



# Mission: Speed and scale greenhouse gas reductions

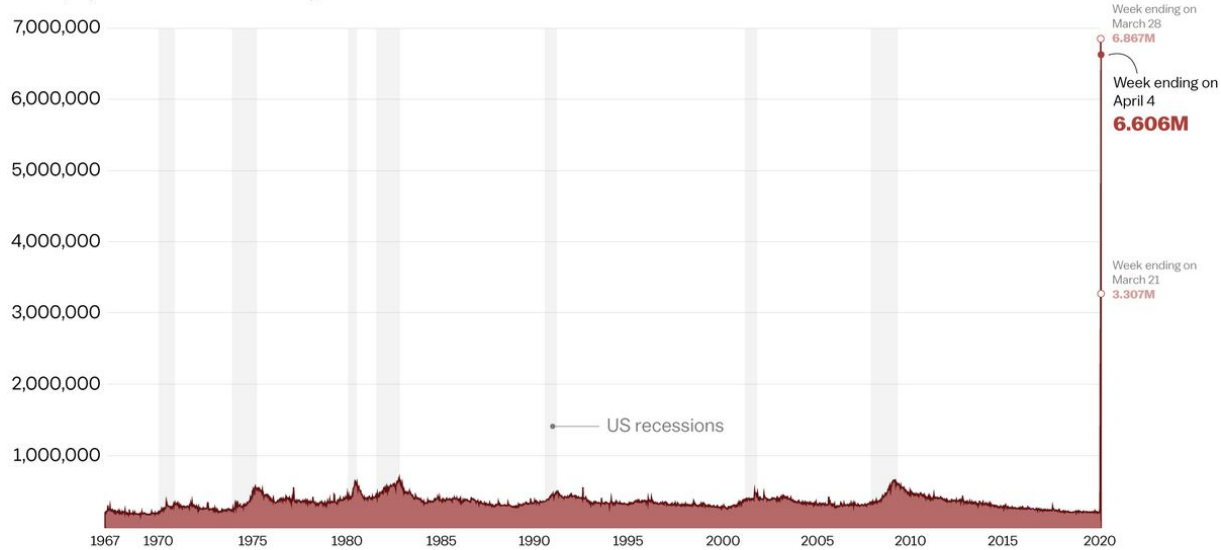


**Key role in growing Community Choice Energy:  
20 CCAs serving 11 million Californians- ¼ of  
state- with 88% clean energy today!**



## An unprecedented rise in unemployment

Unemployment insurance claims by week

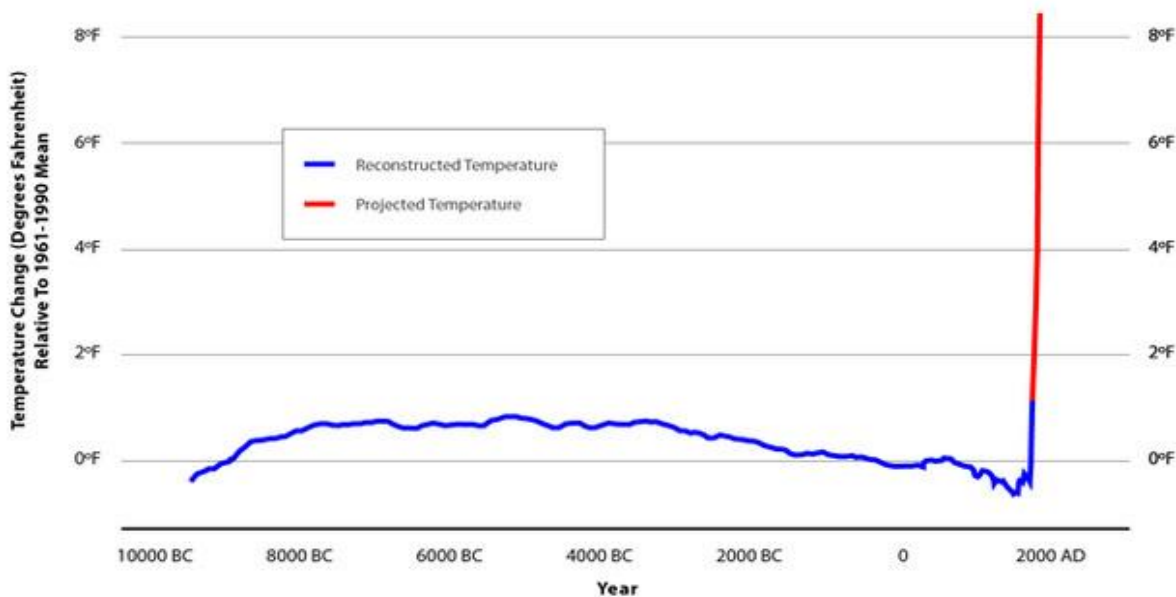


Source: US Department of Labor

Vox

# COVID-19 and Climate Change

## Carbon Pollution Set To End Era Of Stable Climate



Source: Science & ClimateProgress.org

# COVID19 and Climate Change

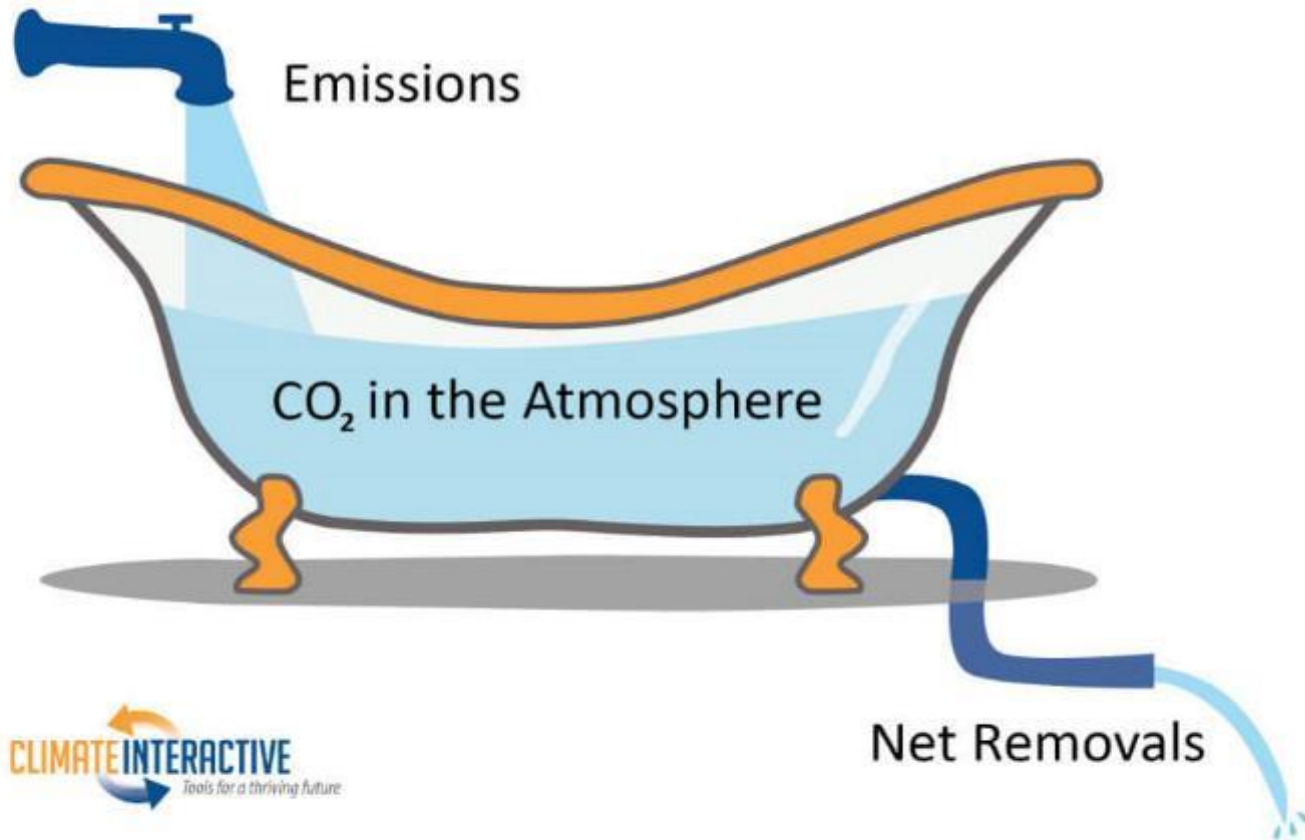
- Heed science and experts
- Advance preparation saves lives
- Tipping points happen quickly, abruptly
- We are only as resilient as the most vulnerable
- Healthy ecosystems sustain life and make us more resilient
- Shared responsibility: “We” not “me”
- Individuals make a difference and we need coordinated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

# Empty freeways, blue skies $\neq$ climate change mitigation

*Just hit 417 ppm CO<sub>2</sub>e first time in human history*



**5.5% projected drop in emissions due to pandemic; we need  $>7.6\%$  every year until 2030 to stay below 1.5C warming per IPCC**



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>

# UN IPCC 1.5C Report- Oct 2018

**Operates by consensus => most conservative**  
**New science => we must do more sooner**

- Emissions must decline by 45% by 2030 to meet 1.5C (2.7°F) limit
- Achieve net-zero emissions by 2050
- Up to 1000 Gt CO<sub>2</sub>e must be removed from atmosphere over the decades ahead



# Abrupt ecosystem collapse- could start this decade in tropical oceans

Deep emissions cuts this decade could save thousands of species



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

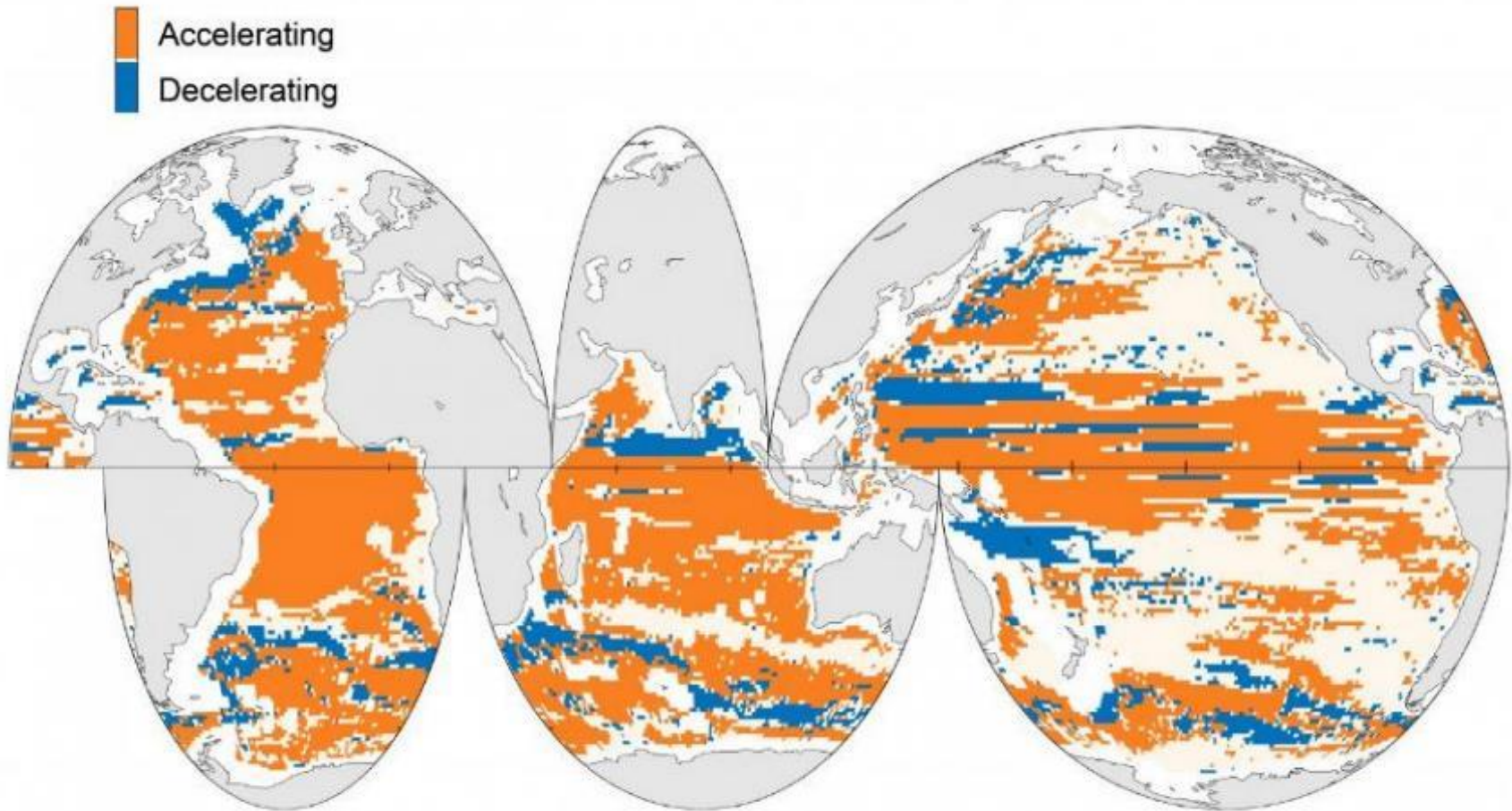
Trisos et al. *Nature*, April 2020

High % of species will be exposed to harmful climate conditions at about the same time - potentially lead to sudden die-offs of biodiversity

# 3/4 of world's oceans speeding up

**Wasn't expected until 2100; Earth more sensitive to climate change?**

Faster winds=> faster currents => ↑ wildlife impacts & weather extremes



# 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*

# Methane from fossil fuels ~40% more than thought

## ~33% of global methane increase due to fracking

Methane 83x stronger global warming compound than CO<sub>2</sub>  
over its 10-20 year lifespan

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

*-R. Howarth*



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)

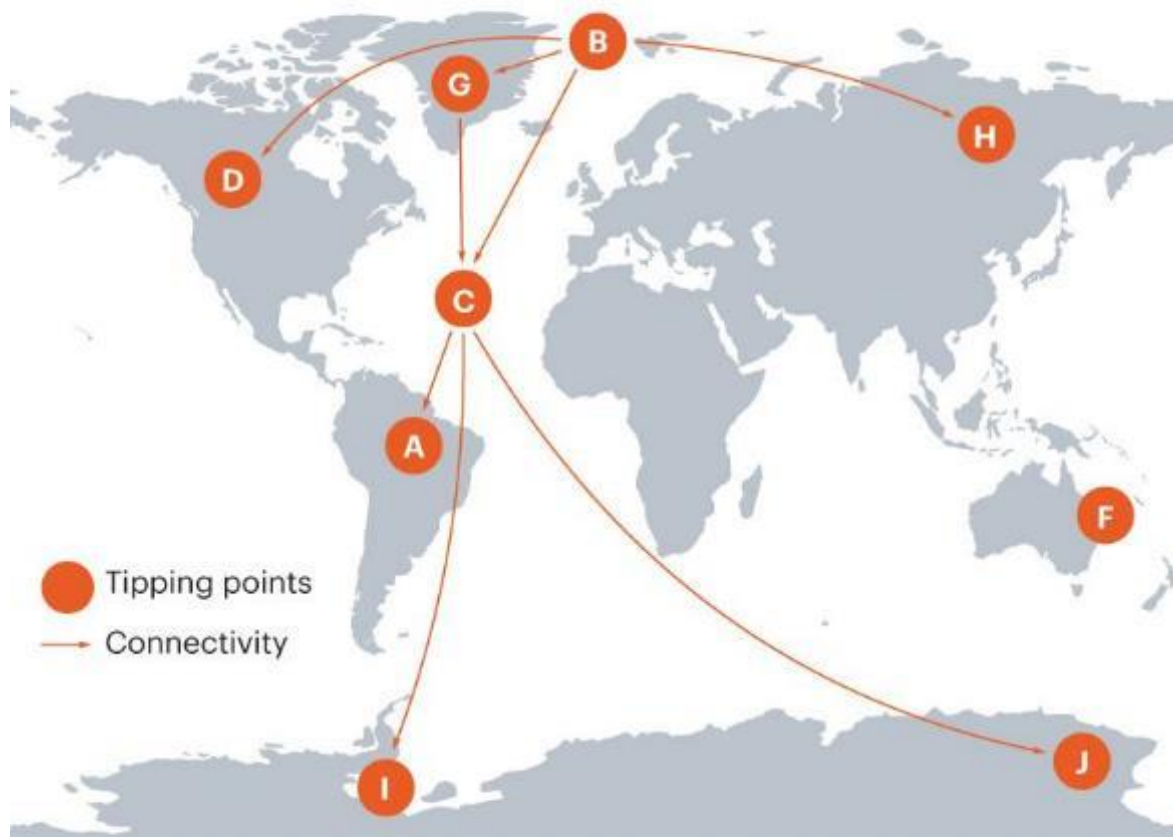
Hmeil et al *Nature* Vol 578 Feb 2020 <https://www.nature.com/articles/s41586-020-1991-8>

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>

# 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, Schellnhuber. *Nature*, Nov 27 2019  
<https://www.nature.com/articles/d41586-019-03595-0>

**“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, December, 2019



<https://sverigesradio.se/avsnitt/1425542>  
<https://medium.com/@rchrthy/johan-rockstr%C3%B6ms-10-point-agenda-for-saving-the-world-unofficial-transcript-431261f885c6>

*After assessing 5 million climate pathways:*  
**“We must aggressively pursue carbon neutral energy by 2030 & hope for ‘some luck’ for a tolerable climate future”**



Lamontagne et al. [Robust abatement pathways to tolerable climate futures require immediate global action](https://www.sciencedaily.com/releases/2019/03/190311125353.htm). *Nature Climate Change*, March 2019  
<https://www.sciencedaily.com/releases/2019/03/190311125353.htm>

# 11,000 scientists' warn: climate emergency

...To secure a sustainable future...decision-makers and all of humanity [must] promptly respond to [the] climate emergency and act to sustain life on planet Earth, our only home.”



Smoke from fires burning in California from satellite photos, Oct. 2017

-Ripple et. al. [World Scientists' Warning of a Climate Emergency](#),  
*Bioscience*, November 2019

# Western US now in global warming-induced megadrought

2000 to 2018 was 2<sup>nd</sup> driest in 1200 years



<https://www.motherjones.com/environment/2014/02/california-drought-matters-more-just-california/>

<https://www.washingtonpost.com/weather/2020/04/16/southwest-megadrought-climate-change/>  
Williams et al. *Science* Apr 17 2020

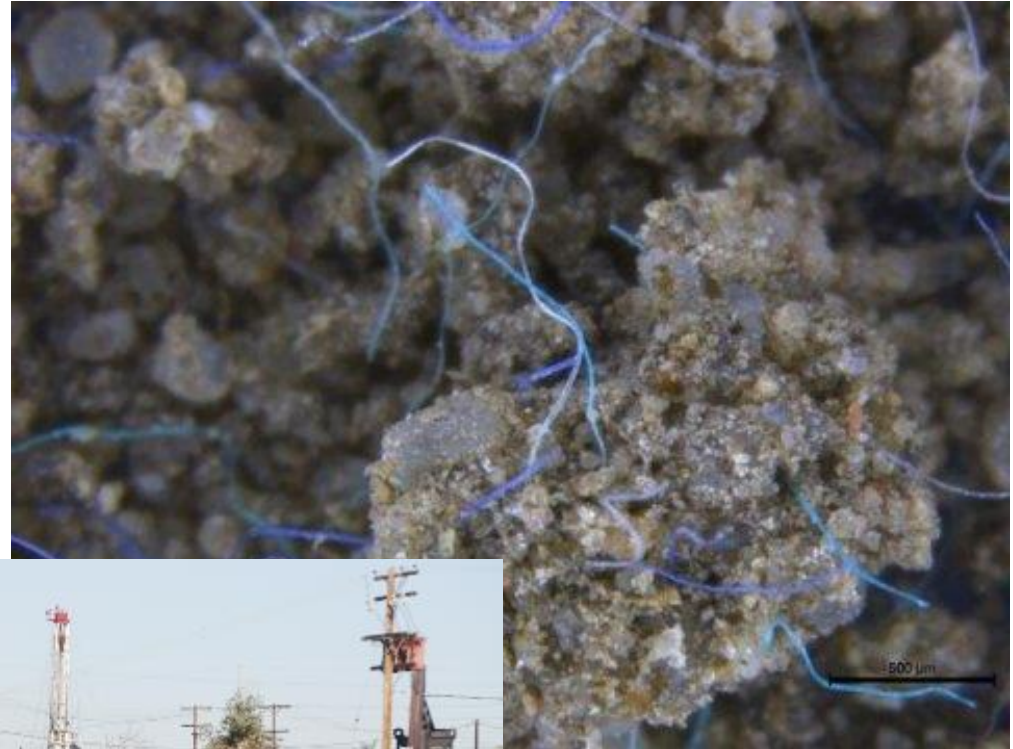
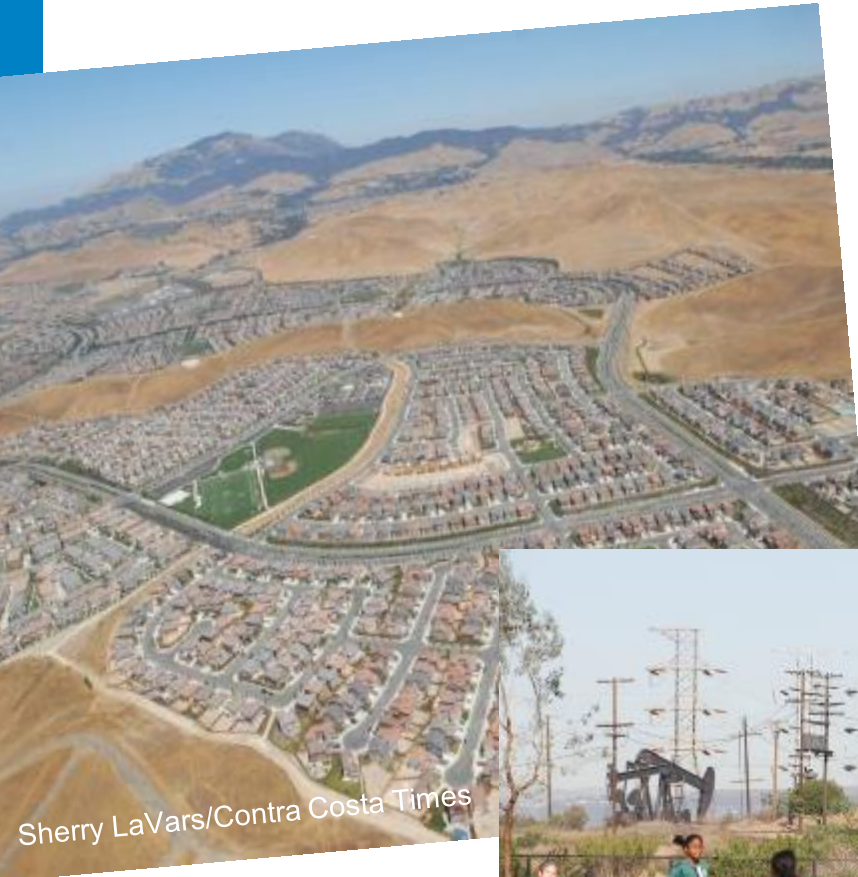


# Fall fire weather days have doubled since 1980 in California

Goss et al Environmental Research Letters Mar 2020

*Australian pyrocumulus fire clouds that created dry lightning, igniting more fires*

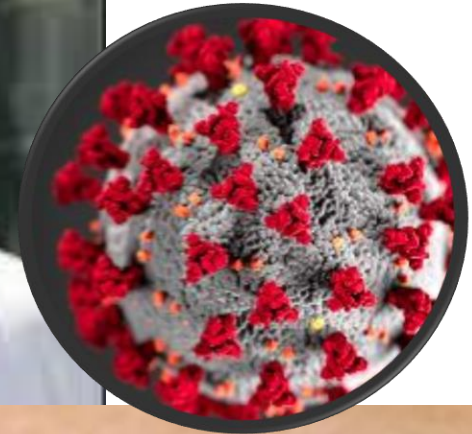
# Land use changes and more pollution – increase impacts, reduce resilience



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

<https://www.stand.la/health-and-safety.html>

**↑ Health Impacts:** e.g., polluted air shortens lives;  
extreme heat kills more than other extremes with  
redlined neighborhoods hotter by 5°F-12°F



# Are net-zero CO<sub>2</sub>e emissions enough?

Balance  
carbon emissions  
with carbon  
removal  
(sequestration)

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

**NO!**

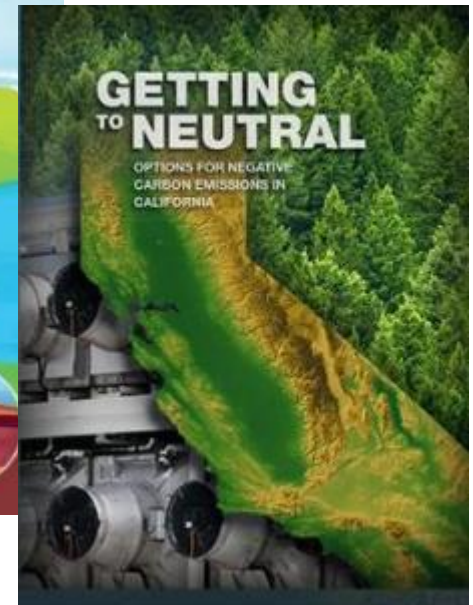
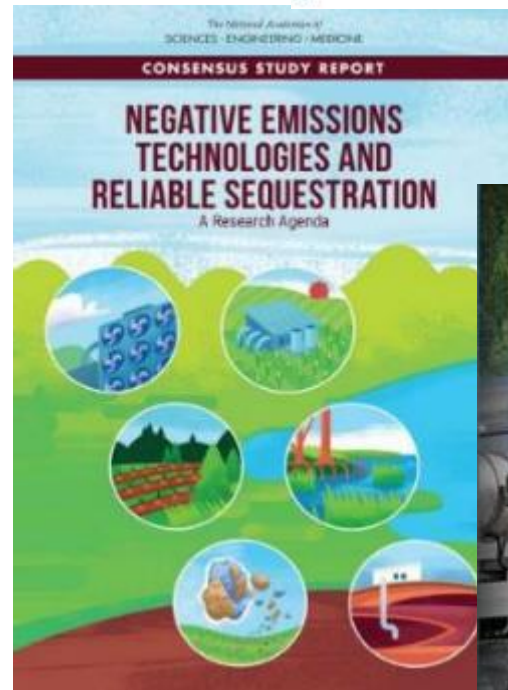
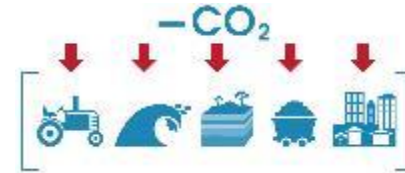


# GOAL: DRAWDOWN

## Net-negative emissions by 2030

- More sequestration than emissions to become a net carbon sink
- Massive emissions reduction and increasing sequestration
- Reverse some (not all) of the impacts

(e.g. CO<sub>2</sub> at least below 350 ppm); “overshoot” pathway- the faster we do this, the more impacts we can avoid.)



<https://www.llnl.gov/news/new-lab-report-outlines-ways-california-could-reach-goal-becoming-carbon-neutral-2045> January 2020

[https://www.rmi.org/wp-content/uploads/2018/11/RMI\\_Negative\\_Emissions\\_Scenarios\\_Report\\_2018.pdf](https://www.rmi.org/wp-content/uploads/2018/11/RMI_Negative_Emissions_Scenarios_Report_2018.pdf)

<https://www.nap.edu/catalog/25259/negative-emissions-technologies-and-reliable-sequestration-a-research-agenda>

# Global Climate Action Leaders

**Finland:** Carbon neutrality by 2035 w/o carbon offsets

**Uruguay:** Net carbon sink (net-negative emissions) by 2030— major investments in wind, increased forest cover

**Norway:** Banning new Internal Combustion Engine (ICE) car sales in 2025

**Denmark:** Reduce GHGs to 70% below 1990 by 2030

**Copenhagen:** Carbon neutral by 2025 with econ growth

**Rhode Island:** 100% renewable energy by 2030

**Santa Monica:**

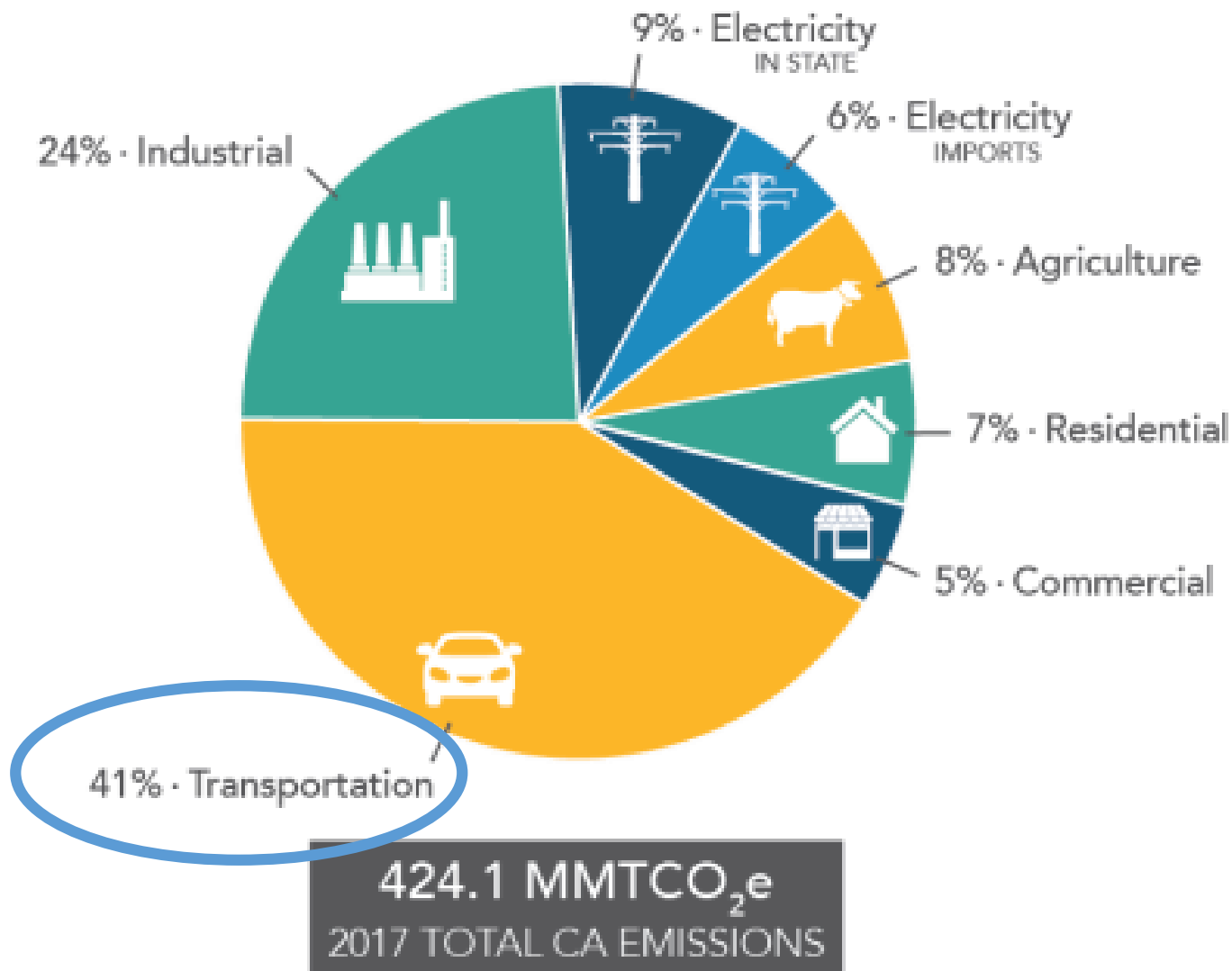
- 80% below 1990 carbon emissions by 2030
- Converting 50% ICE vehicle trips to walking or bikes/scooters/skateboard by 2030
- Water self-sufficiency by 2023; Zero waste by 2030

# State of California- some key climate policies

- ❖ Executive Order S-3-05 (2005): Reduce GHG emissions to **80% below 1990 levels by 2050**
- ❖ SB 32 (2016): Reduce GHG emissions to **40% below 1990 levels by 2030**
- ❖ SB 100 (2018): Achieve **60% renewable energy by 2030** and **100% by 2045**
- ❖ Executive Order B-55-18 (2018): Achieve **carbon neutrality by 2045** and **maintain net-negative emissions after**

**Is this enough per the science and climate reality?**

# 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

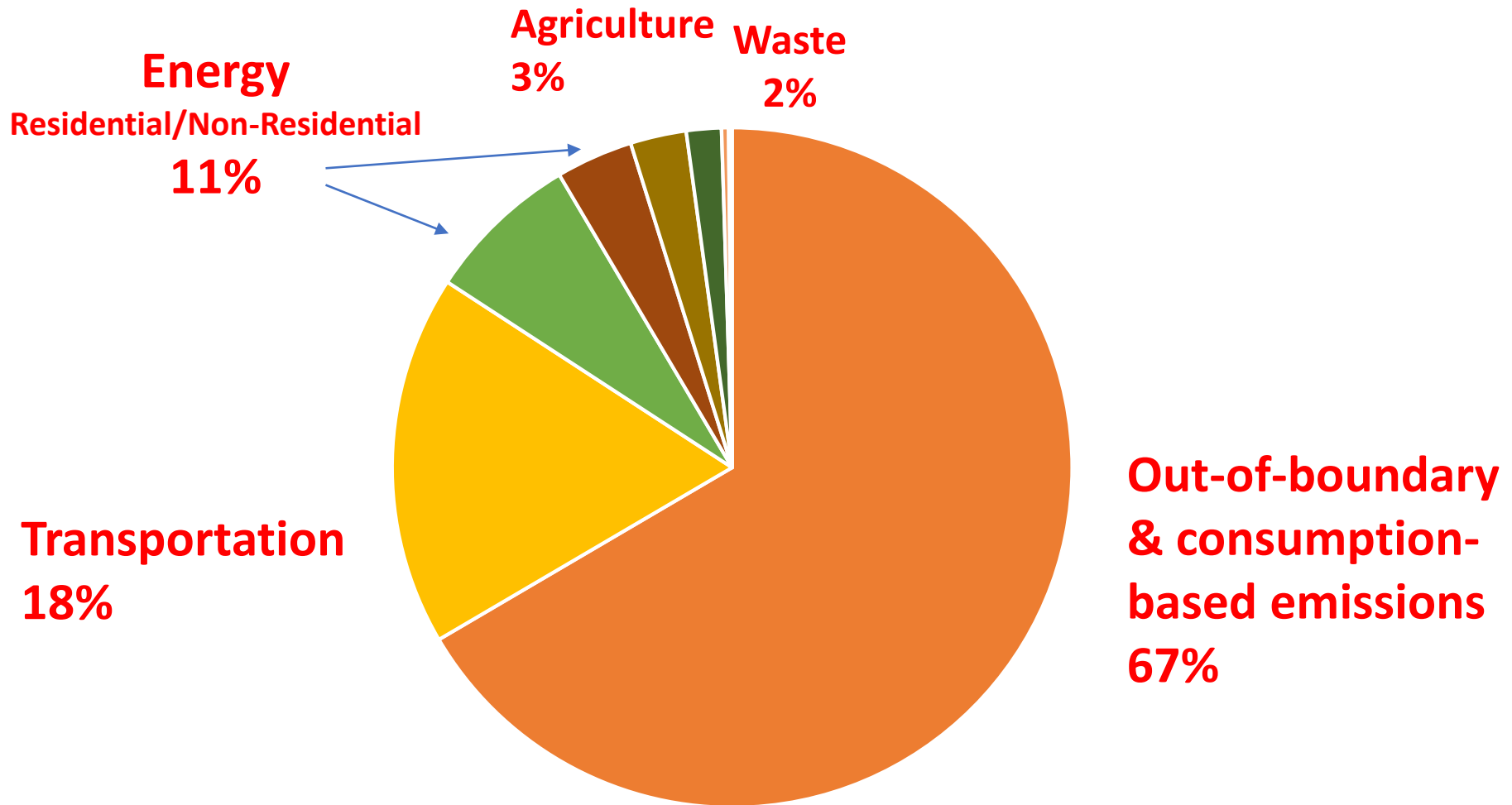
- Product & food manufacturing & disposal (waste) outside boundary
- Air travel & other transportation outside boundary
- Emissions from production of natural gas and fuels; foreign fuels refined in California



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 CO<sub>2</sub>e**

# Need more aggressive policies and accelerated timelines now!



## Climate-Safe California Campaign for Rapid Decarbonization

[www.theclimatecenter.org](http://www.theclimatecenter.org)

**VISION:** By 2025, CA will have enacted the bold policies required by science to dramatically reduce emissions, become a net carbon sink and secure resilient communities by 2030, inspiring global action

# Climate-Safe California: GOAL

[climatesafeca.org](https://climatesafeca.org)

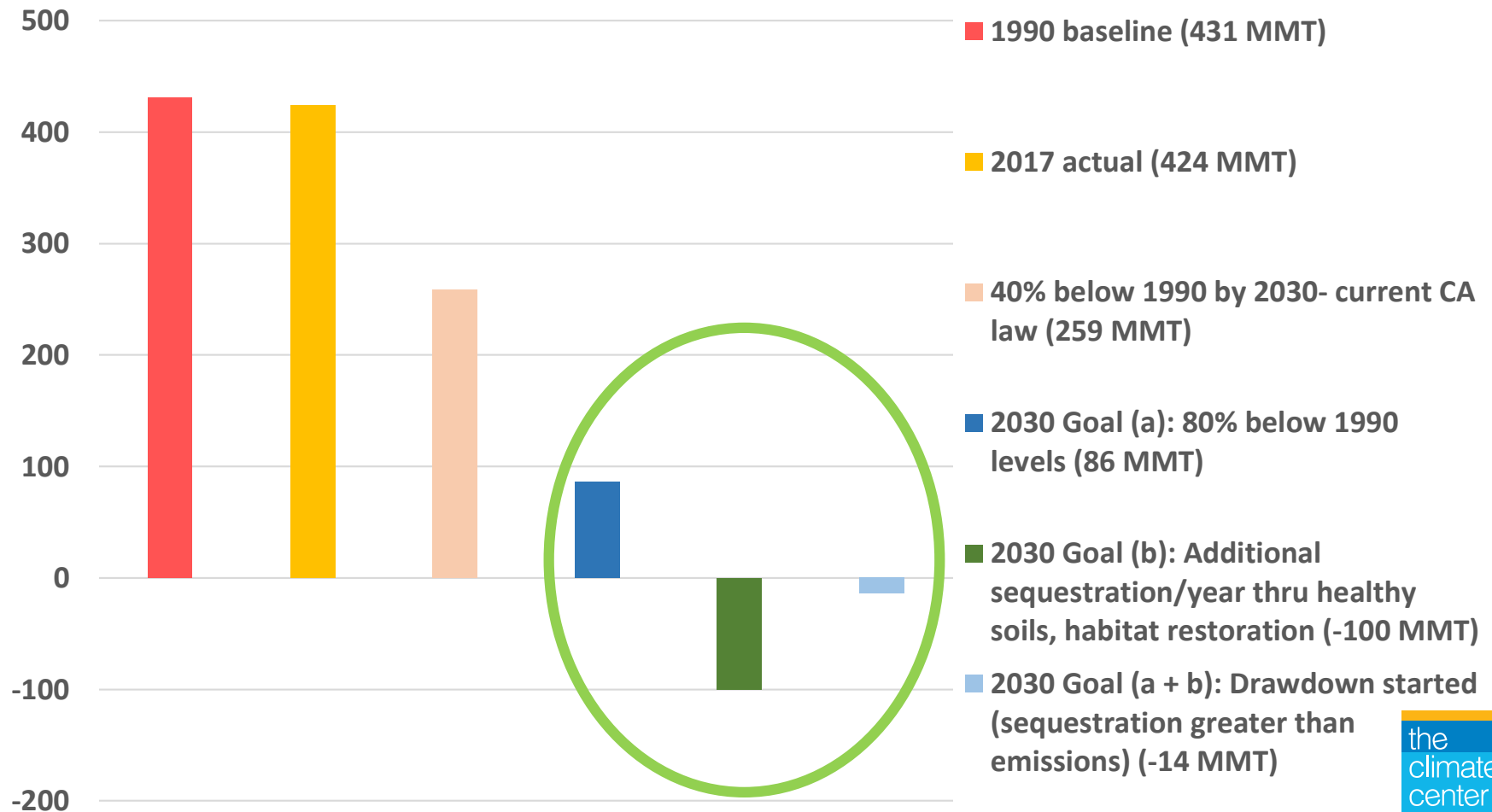
Accelerate existing state policy timelines to  
achieve **80% below 1990 GHG levels and  
net-negative emissions by 2030**  
*(sequestration greater than emissions)*



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

Endorse here: [www.climatesafeca.org](http://www.climatesafeca.org)

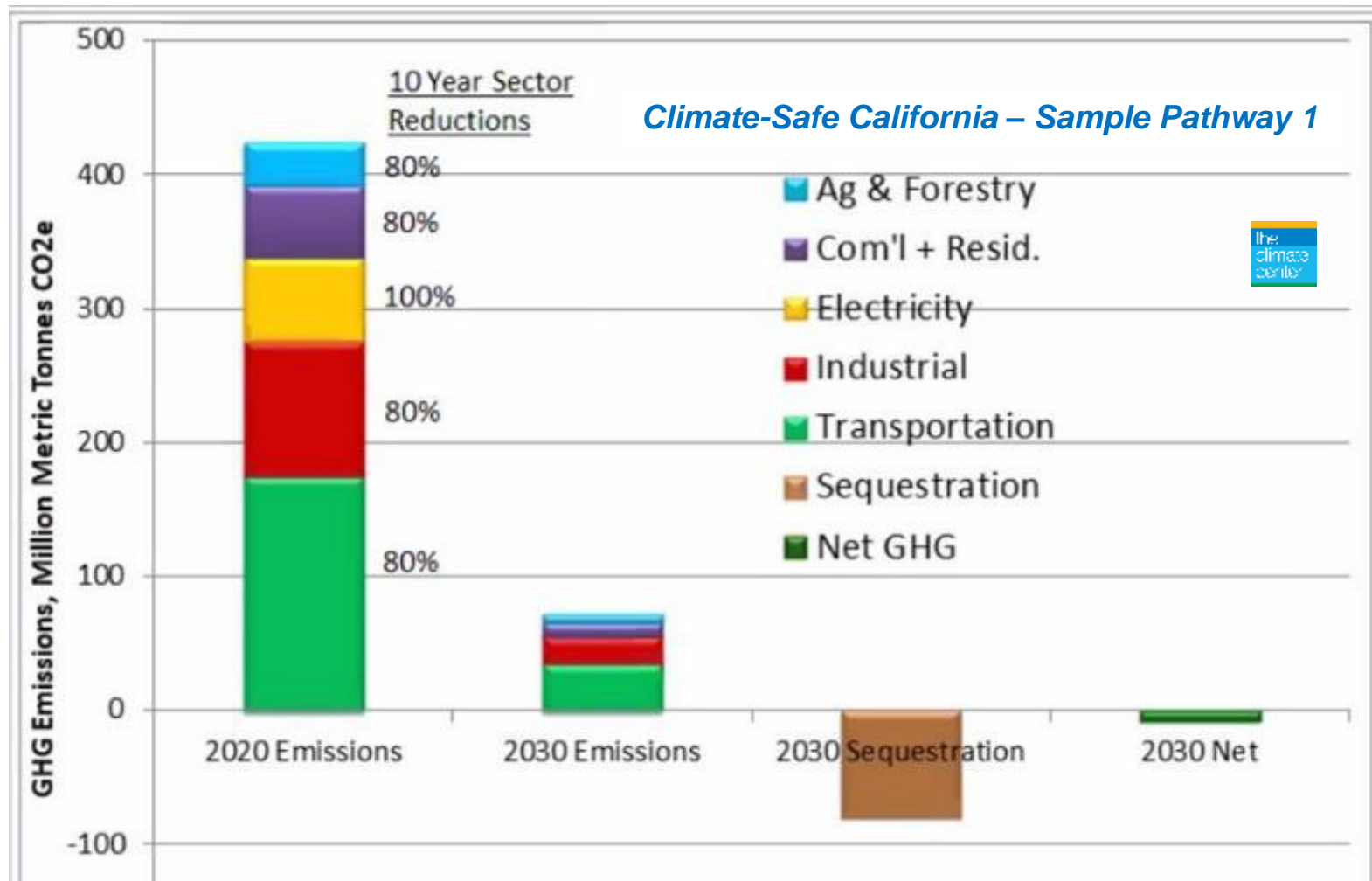
## Million Metric Tons (MMT) CO<sub>2</sub>e Per Year



# CLIMATE-SAFE CALIFORNIA

Accelerate existing state timelines to achieve  
80% below 1990 levels and net-negative emissions by 2030

Endorse here: [www.climatesafeca.org](http://www.climatesafeca.org)



# Ensure a just transition for workers and prioritize lower income communities

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



<https://www.iddri.org/en/publications-and-events/blog-post/investing-just-transition>

# ENACT THE POLICIES REQUIRED BY SCIENCE:

Endorse here: [www.climatesafeca.org](http://www.climatesafeca.org)

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

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

- Immediately halt new oil & gas drilling and infrastructure development
- 100% GHG-free, decentralized electricity & energy storage by 2030
- Electrify almost everything!



# Rapidly Transition to Sustainable Mobility

- Begin phasing out fossil fuel powered vehicles--cars, trucks, buses, ships- by 2025
- 80%+ of Caltrans \$ to sustainable modes of transportation, not freeways, by 2025
- Invest in affordable housing near jobs, transition to telecommuting when possible



# Zero Emissions Vehicles & charging stations growing-- but need much more!

- ZEVs = 2.5% (655k) of CA cars (26m)
- 33.4% increase from 2018 to 2019
- Must >double current CA goal to ~10+ million ZEVs by 2030
- Get more people out of cars!



Florian Knobloch et al. *'Net emission reductions from electric cars and heat pumps in 59 world regions over time.'* 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>

# 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 CO<sub>2</sub>e annually in healthy soils, forests and vegetation annually by 2030--starting no later than 2022
  - Carbon farming and gardening
  - Climate-smart habitat restoration on land/coast
  - Enhance protected habitats



Carbon Farming, Marin



Kelp forests

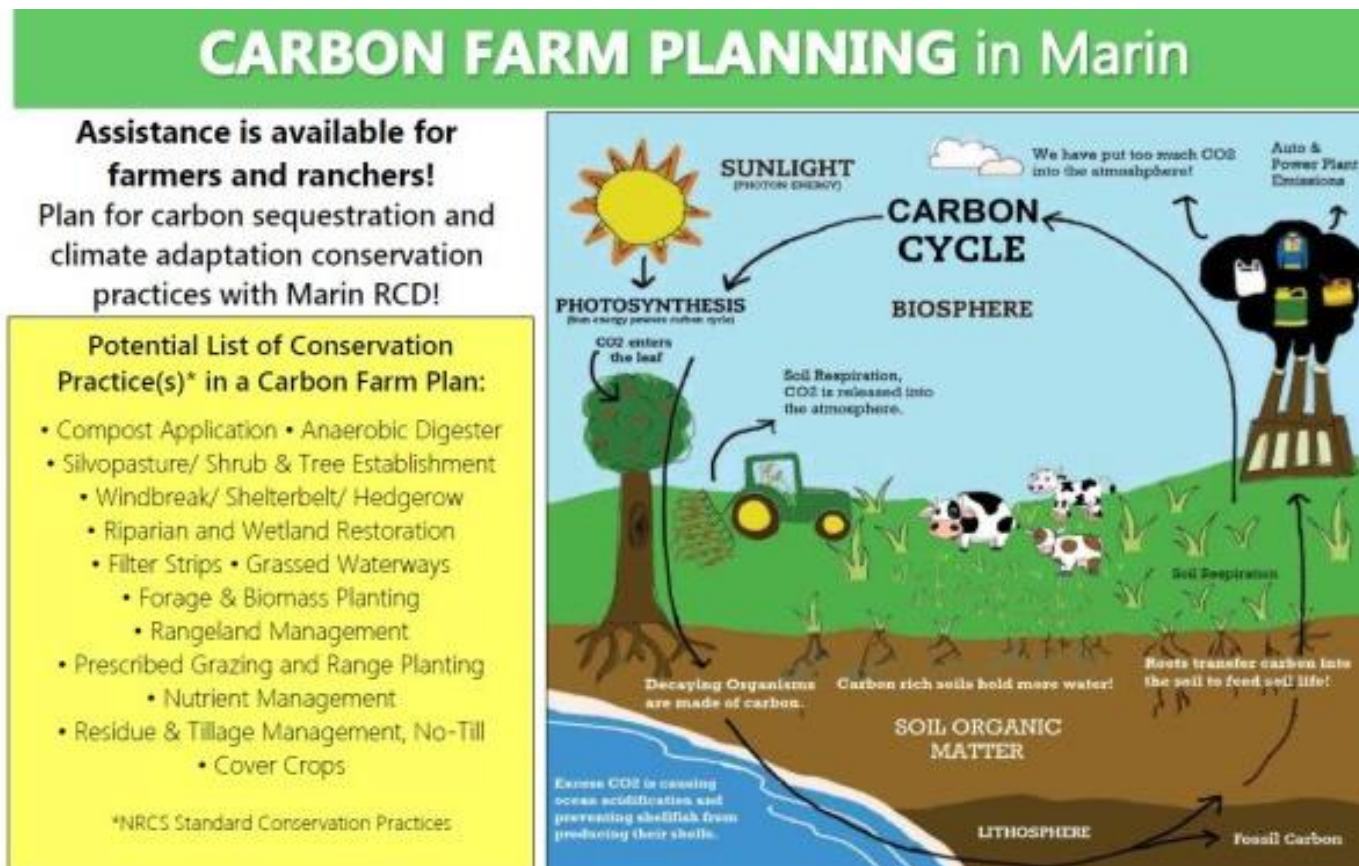


Point Blue STRAW project

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

# Carbon farming potential sequestration at scale

## Example: 21m acres = at least 20 MMT/year CO<sub>2</sub>e/20 years



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 CO<sub>2</sub>e 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](http://ucanr.edu/sites/Grown_in_Marin/files/224684.pdf);

# 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 EV storage, starting with critical facilities in lower income communities by 2021



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

# PG&E planned new methane gas back-up generators

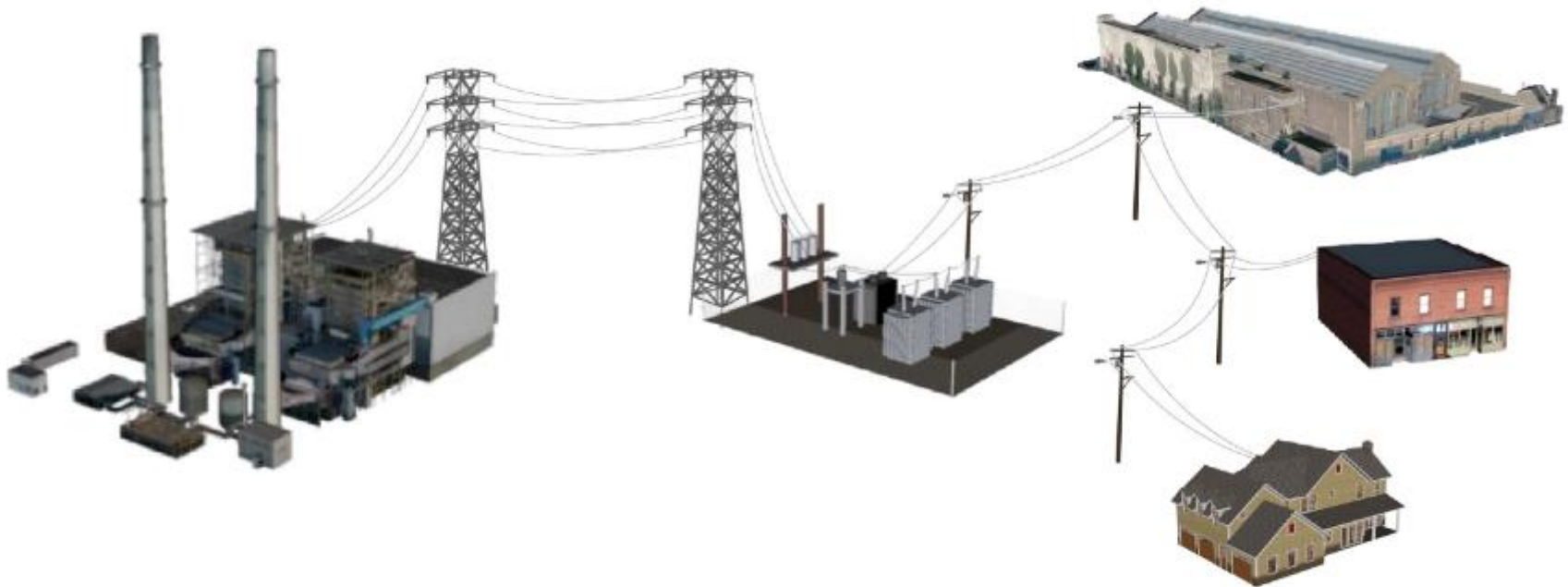
PG&E Substations for DGEMS Phase

Substation	Peak Load	Land Info (Sq ft.)		Latitude	Longitude
		Potential Land/Site Identified	Outside Substation Fence		
SAN RAFAEL	69.9	Y	62,000	37.9706527	-122.5272077
HIGHWAY	50.0	Y	85,000	38.16608965	-122.2535906
MOLINO	33.8	N		38.42533288	-122.8322634
ALTO	31.8	Y	96,500	37.89839799	-122.5249516
LAS GALLINAS A	33.4	N		38.02238116	-122.5381475
FORT BRAGG A	13.8	Y	15,000	39.43477268	-123.7994643
IGNACIO	30.5	Y	1,260,000	38.07665096	-122.5404603
WILLITS	15.2	Y	46,772	39.40556241	-123.3270646
CARQUINEZ	11.9	Y	63,600	38.09103762	-122.2483861
GREENBRAE	23.5	Y	50,000	37.93799601	-122.5143516
WINDSOR	22.3	Y	130,000	38.565927	-122.832315
KONOCTI	14.5	Y	61,570	38.93235913	-122.741004
BRUNSWICK	60.3	Y	71,330	39.23103074	-121.0349999
UKIAH	17.5	Y	73,181	39.14314429	-123.1918136
CLEAR LAKE	14.1	N		39.00783962	-122.8939866
TYLER	15.3	Y		40.13838296	-122.20884
CLOVERDALE	16.5	Y		38.79725991	-123.0103812
HIGHLANDS	24.7	Y	30,000	38.93702324	-122.6089758
MIDDLETOWN	15.5	Y	36,189	38.75277959	-122.6087491
BIG RIVER	4.0	N		39.31138519	-123.7865885



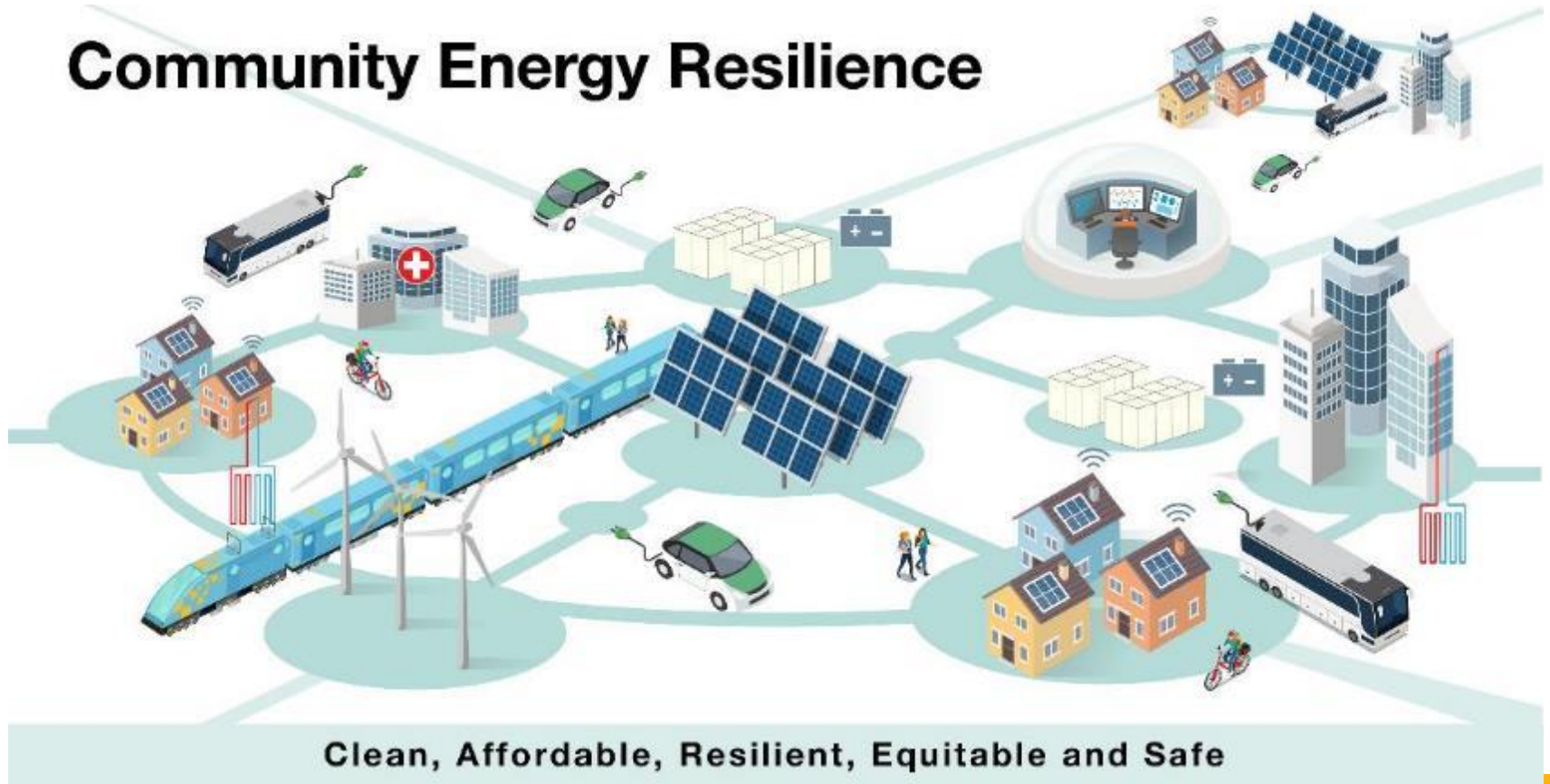
# Instead of perpetuating a 100-year old grid architecture...

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



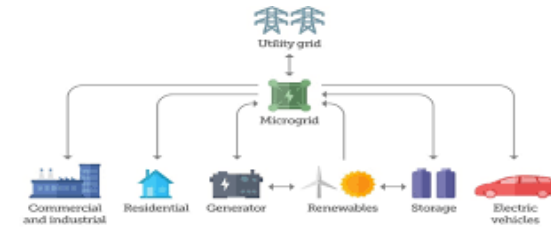
...let's build a new integrated, decentralized  
grid...

## Community Energy Resilience

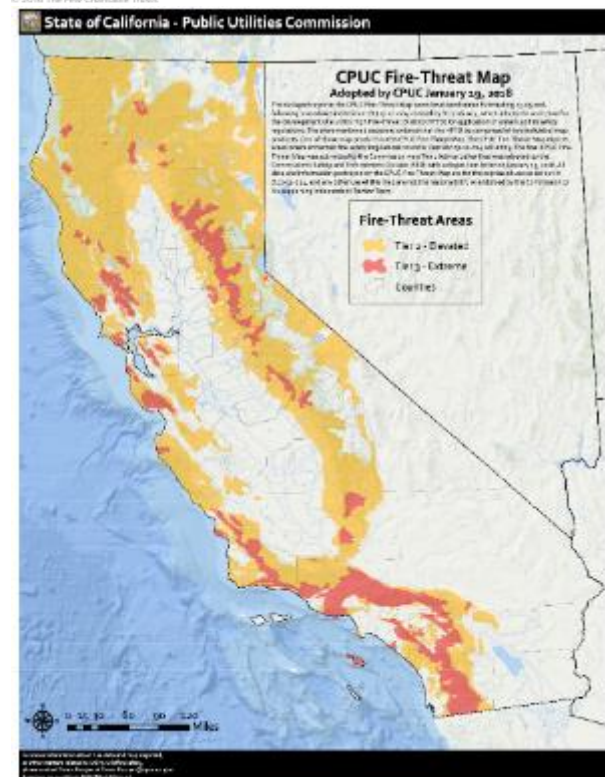


# ...starting with critical facilities serving lower income communities and homes for medically dependent

49 major state government buildings  
92 refrigerated food warehouses  
147 digital TV transmitters  
225 local emergency operational centers  
273 AM towers  
535 urgent care facilities  
570 hospitals  
728 colleges and universities  
1,013 law enforcement facilities  
1,751 passenger transportation terminals  
1,193 cell towers  
3,182 nursing homes  
3,139 emergency medical service facilities  
3,209 fire stations & equipment depots  
10,465 public schools  
12,388 child care centers



Source: US CHS  
© 2016 The Pew Charitable Trusts



# Community Energy Resilience Planning - SB 1314 (Dodd)



- A new state program to fund and support all California local governments to plan and implement local energy resilience projects, engaging local communities in the process
- Keeps California's 35,000 critical facilities up and running through microgrid technology
- Prioritizes lower income and high fire threat communities

## For 2020:

- Amend into an existing bill like SB 1215 (Stern)
- Allocation through budget trailer bill based on existing statute



## 4- Fund Climate Action

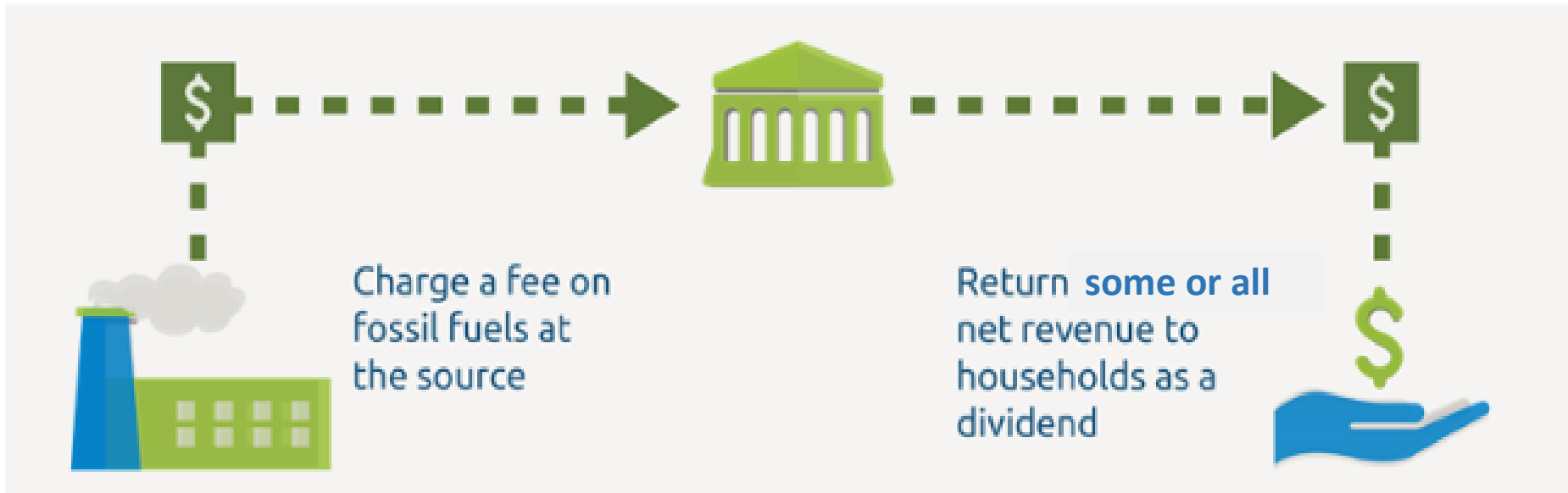
New progressive financing mechanisms to produce additional \$20+ billion/year specifically for climate action

- Frequent flyer fee e.g., \$2.4 billion from \$10 per passenger x 240 million (in CA in 2018)
- Green bonds
- Progressive carbon taxes (e.g., fee and dividend)



# Carbon Fee & Dividend: Charge for Pollution, Return Funds to Economy

## A carbon fee & dividend policy



From Citizens Climate Lobby/Jerry Hinkle  
HR 763 Energy Innovation and Carbon Dividend Act  
Read more here: [https://en.wikipedia.org/wiki/Carbon\\_fee\\_and\\_dividend](https://en.wikipedia.org/wiki/Carbon_fee_and_dividend)

# Climate-Safe California

Clean, Healthy, Equitable, Resilient and Affordable



# CLIMATE-SAFE CALIFORNIA PLATFORM

Endorse here: [www.climatesafeca.org](http://www.climatesafeca.org)

## WE CALL UPON CALIFORNIA TO ENACT THE FOLLOWING:

- 1. By 2022, commit to accelerating existing policies to achieve 80% below 1990 levels and net-negative emissions to 2030**
- 2. Close the “climate gap” for lower income communities**
- 3. Commit to a secure transition for workers**
- 4. Enact the policies required by science:**
  - Accelerate the phase-out of fossil fuel development, production and use**
  - Increase sequestration**
  - Invest in community resilience**
  - Fund climate action**

# Climate-Safe California Phase I

- Secure platform endorsements
- Secure initial partners for new statewide Climate-Safe CA Partnership with workers, healthcare, environment/justice, businesses, local govt. & other partners – *build bridges across silos*
- Engage experts to develop science-based pathways & policies to net-negative emissions by 2030
- Draft white papers, opinion columns
- ID & mobilize opinion leaders & other influencers
- Identify initial target communities
- Launch a strategic communications effort
- Secure early policy wins: Community Energy Resilience
- **Raise \$25 million-- \$2 million by summer 2020**

# Endorsements

[www.theclimatecenter.org/endorsementlist](http://www.theclimatecenter.org/endorsementlist)

**“Climate-Safe California is the bold pathway that leads toward shared prosperity on a healthy planet – exactly what California and the world need now.”**

L. Hunter Lovins  
President of Natural Capitalism Solutions  
Rocky Mountain Institute Co-Founder and author



**“Climate change is here. It is now. The Climate Center offers the best roadmap to get us where we need to be in the next few years. We need a carbon descent plan, and we need it now. Climate Safe California is just such a plan.”**

Ed Begley Jr.  
Actor and environmentalist



**“The Climate Center’s platform is a win-win for people and the planet. It will rapidly jumpstart an economy in peril while beginning the process to reverse the climate crisis.”**

Efren Carrillo  
Board President, The Climate Center,  
former Supervisor, County of Sonoma



# **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!!

# ENDORSE THE CLIMATE-SAFE CALIFORNIA PLATFORM



**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

[www.theclimatecenter.org/endorsement](http://www.theclimatecenter.org/endorsement)

## Other actions you can take:

- Get involved in local government & speak out to your elected officials- *demand green, clean, equitable stimulus funds—“just recovery”\**
- Support AB345- setbacks for oil/gas infrastructure away from schools, homes...
- Divest and invest for a climate-safe future [gofossilfree.org](https://gofossilfree.org) & [fossilfreefunds.org](https://fossilfreefunds.org)
- Make energy efficiency/electrical improvements to your home, including wiring for EV charging [bayrenresidential.org/get-rebates](https://bayrenresidential.org/get-rebates)
- Ditch the SUV and make your next car an EV, plan to use it as back-up power source
- Ask your City Council to develop, implement *and fund* a Community Energy Resilience Plan and Climate Action Plan



\*<https://www.sacbee.com/opinion/california-forum/article242059966.html>

## Other actions you can take:

- Reduce airplane travel and enjoy staycations
- [Purchase/lease solar](#), wind or 100% green power
- Use mass transit, shared transit, e-bikes and other micro-mobility
- Insulate home, install insulating windows & doors
- Eat locally grown, organic food; avoid industrially grown meats entirely
- Switch to electric lawn equipment, appliances & hot water heaters, and heat pumps
- 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](http://www.theclimatecenter.org)



# U.S. RENEWABLES PRODUCE MORE ELECTRICITY THAN COAL DURING FIRST TWO MONTHS OF 2020 AS SOLAR GROWS 32% AND WIND 20%



U.S. Energy Information Administration

<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](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

April 2030



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

August 2035



# GGNRA Green Team, GGPC, Presidio Trust Awarded Presidential Medal of Freedom for Climate Leadership



# 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!

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www.theclimatecenter.org

