

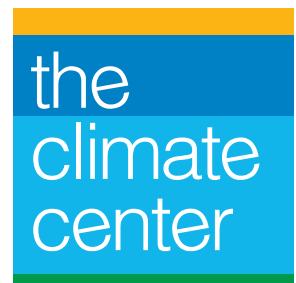


Climate-Safe California: The Path Net-Negative Emissions by 2030

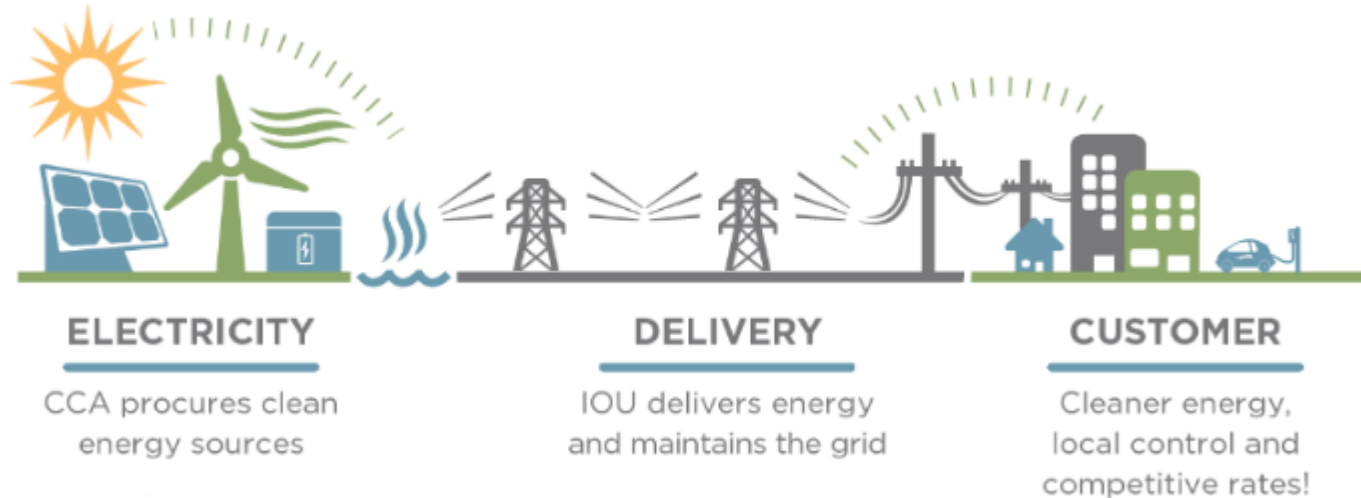
December 30, 2020

Ellie Cohen and Team, The Climate Center

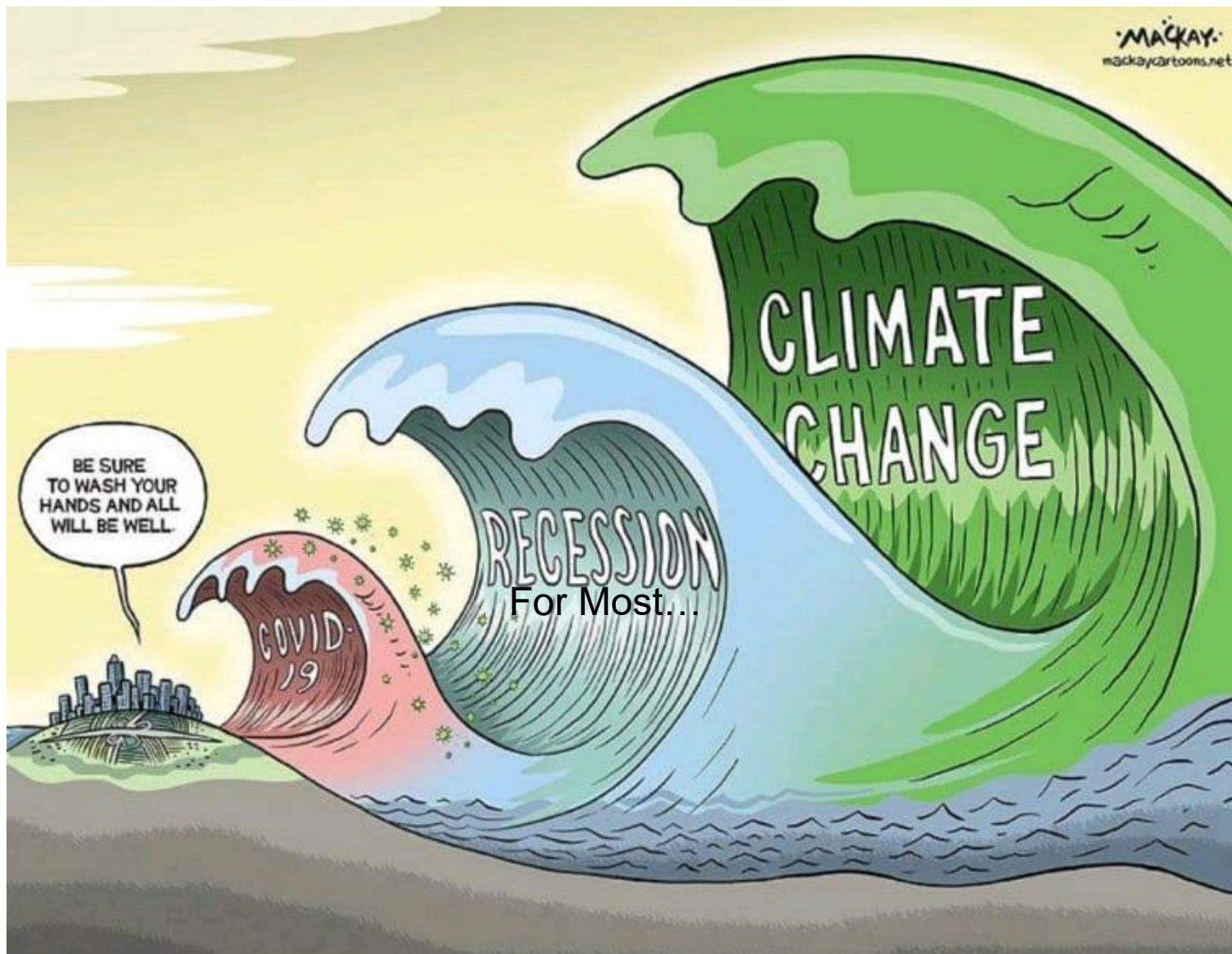
www.theclimatecenter.org ellie@theclimatecenter.org



Mission: Speed and scale greenhouse gas reductions



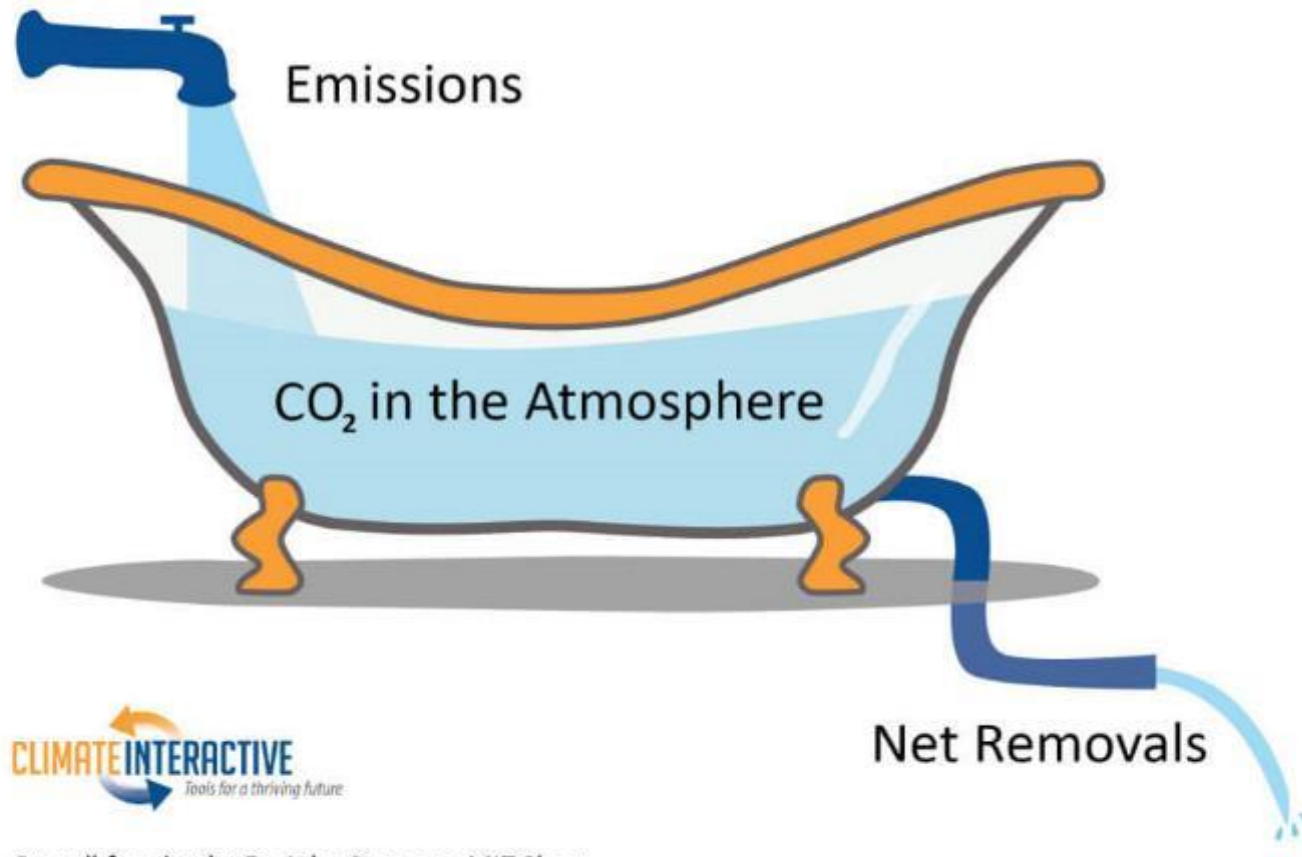
**Key role in growing Community Choice Energy:
21 CCAs serving 11 million Californians- ¼ of
state- with 88% clean energy today!**



COVID19 and Climate Change: opportunity amidst devastation?

- Heed science and experts
- Advance preparation saves lives
- Tipping points happen abruptly
 - *Both positive & negative*
- Healthy ecosystems sustain life and make us more resilient
- Shared responsibility- “We” and “Me”
 - *Individuals make a difference*
- Coordinated government action speeds up solutions
- We can act quickly, invest trillions and change behavior with political will

7% drop in 2020 emissions due to COVID; but
CO₂ in atmosphere same as 2019
due to reduced land sink e.g., massive wildfires
Must double GHG cuts annually each year



Overall framing by Dr. John Sterman, MIT Sloan

4C Carbon Outlook: Dec 2020 https://4c-carbon.eu/sites/default/files/2020-12/4C%20Carbon%20Outlook_final.pdf
Lenzen et al PLOS ONE July 2020 15 (7): e0235654 DOI: [10.1371/journal.pone.0235654](https://doi.org/10.1371/journal.pone.0235654)
<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/>

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



Sept 9, 2020 GOES WEST Satellite image of Northern California pyrocumulus cloud; 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/>

Threshold for dangerous climate change (>1.5C) likely to be crossed between 2027 and 2042 globally

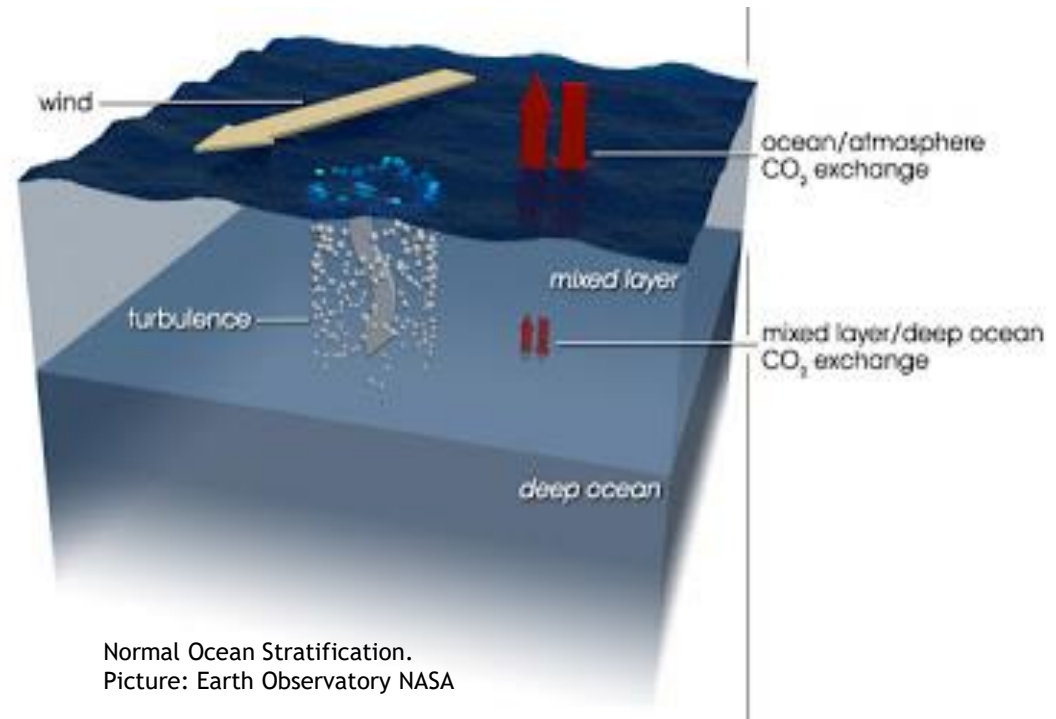


Raphaël Hébert, Shaun Lovejoy, Bruno Tremblay. **An observation-based scaling model for climate sensitivity estimates and global projections to 2100.** *Climate Dynamics*, 2020;
DOI: [10.1007/s00382-020-05521-x](https://doi.org/10.1007/s00382-020-05521-x)
<https://www.sciencedaily.com/releases/2020/12/201221160425.htm>

Top layer of ocean heating up & thickening=> more drought, intense storms, & fisheries impacts, and less CO₂ absorption

“The impacts of climate change are proving to be worse than we predicted... driving more vicious cycle of warming.”

-co-author Michael Mann, PhD



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 IPCC 1.5C report
models... “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

Nitze et al. **The catastrophic thermokarst lake drainage events of 2018 in northwestern Alaska: fast-forward into the future.** *The Cryosphere* (12): 4279 DOI: [10.5194/tc-14-4279-2020](https://doi.org/10.5194/tc-14-4279-2020) “Conditions were similar to those our climate models predict will be normal by the end of this century, way, we caught a glimpse of the future.” <https://www.sciencedaily.com/releases/2020/12/201201124056.htm>
Turetsky et al. *Nature Geoscience* | VOL 13 | February 2020

>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

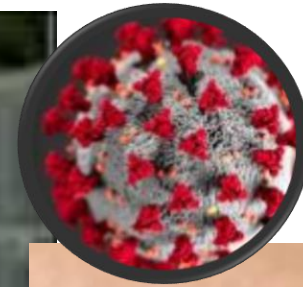
but can reverse trend with major GHG reductions

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

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>

Climate inaction/delay is bankrupting our economy

- **Fed Reserve:** banks must consider climate risks
- **Threatens** insurance & mortgage markets, pension funds, and other financial institutions
- **\$150 Billion in damages from 2018 CA wildfires**; \$80 Billion in 2019
- **\$80 billion invested in California will generate ~725,000 jobs**
- Investments in **clean energy** generate more than **2x the jobs as in fossil fuels**



<https://www.federalreserve.gov/publications/files/financial-stability-report-20201109.pdf>

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

Wang, D et al. **Economic footprint of California wildfires in 2018**. *Nature Sustainability*, 2020 DOI: [10.1038/s41893-020-00646-7](https://doi.org/10.1038/s41893-020-00646-7)

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

Political Economy Research Institute https://www.peri.umass.edu/images/CA-EconRecProgram-6-12-20_Final.pdf

World Resources Institute <https://www.wri.org/blog/2020/07/economic-benefits-climate-action-us>

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 off **unleashing irreversible changes ...We are seeing strong evidence already for **declaring a state of planetary emergency**...**

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%B6ms-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.”

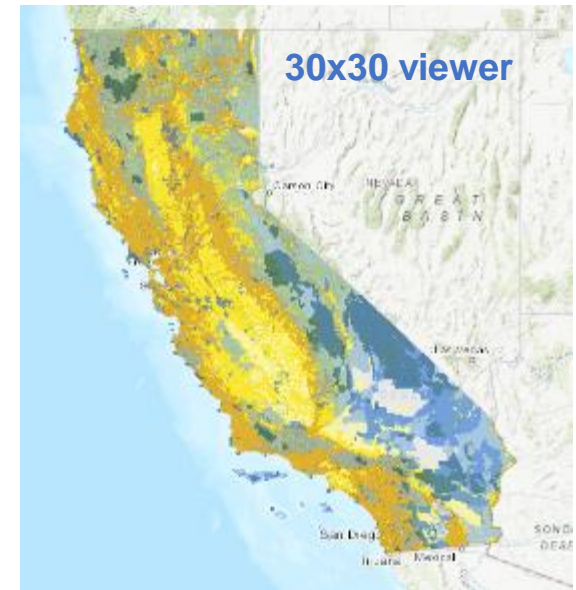


**The climate reality
is outpacing
outdated science
and policy.**

**Leaders are now
stepping up.**

Governor Newsom on Sept. 11, 2020: “We are in a climate emergency... Our goals are inadequate...We must fast-track goals”

New Exec Orders: 100% ZEV new car sales by 2035 & protect
30% of land and waters by 2030.... **But....**



<https://defenders.maps.arcgis.com/apps/webappviewer/index.html?id=8fa934ebbee54431bdc53d0873ab14>

<https://www.gov.ca.gov/2020/09/23/governor-newsom-announces-california-will-phase-out-gasoline-powered-cars-drastically-reduce-demand-for-fossil-fuel-in-californias-fight-against-climate-change/> Sept. 23 2020

<https://calmatters.org/environment/2020/09/california-governor-climate-emergency/> Sept. 11 2020

California is behind: New International & Proposed National Climate Targets....

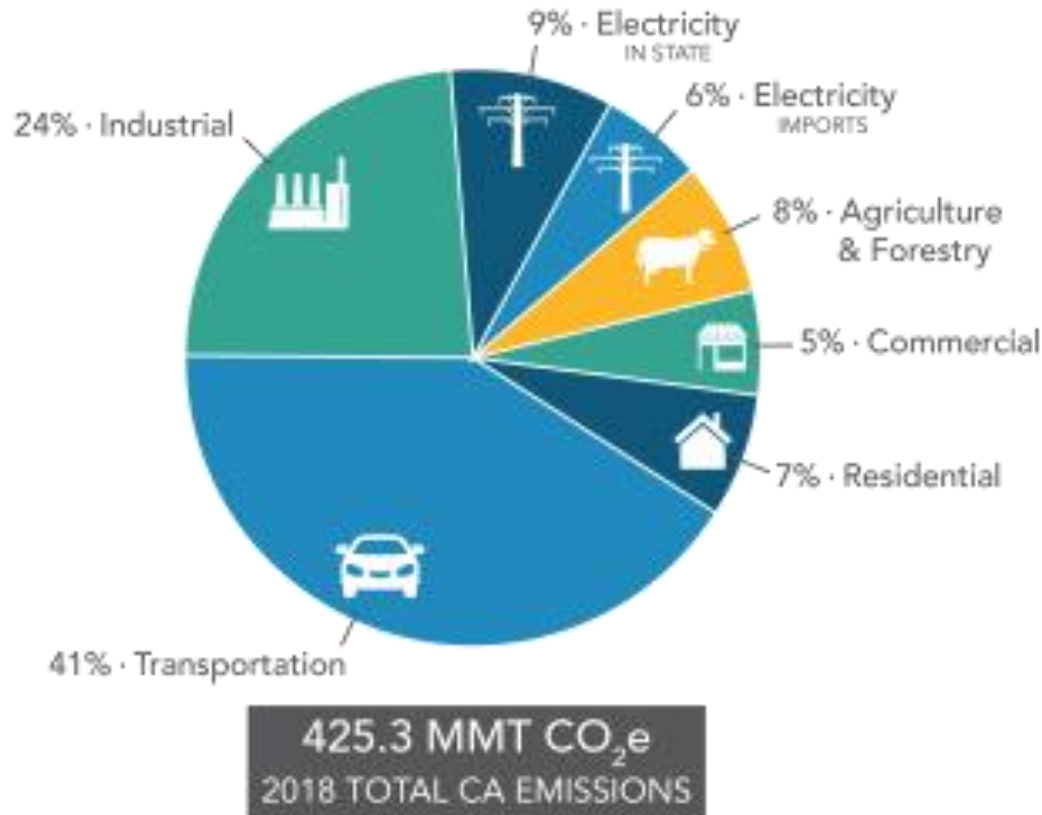
- ✓ **UK:** cut **GHGs 68% by 2030** from 1990 levels & **100% ZEV sales by 2030**
- ✓ **EUROPEAN UNION:** cut **GHGs by at least 55% by 2030** ... from 1990 levels to reach net zero emissions by 2050
- ✓ **LANCET 2020 HEALTH & CLIMATE:** called on **lawmakers to stop rise of GHGs in next five years; cut GHGs 7.6% per year until 2030** [would equal 55% below 1990 levels by 2030 in California]
- ✓ **BIDEN-SANDERS UNITY TASK FORCE**
 - **Eliminate carbon pollution from power plants by 2035**
 - Net-zero new buildings by 2030
 - Get agriculture to net-zero
- ✓ **SENATE SELECT COMMITTEE ON CLIMATE CRISIS**
 - **Invest 2% annually of GDP w/ 40% to low income communities** **Note: 2% of CA 2019 GSP \$3.2 trillion = \$64 billion**

<https://www.theguardian.com/environment/2020/dec/03/uk-vows-outdo-other-major-economies-emissions-cuts-by-2030> Dec 3, 2020 &
<https://www.cbsnews.com/news/uk-ban-new-gasoline-diesel-cars-vehicles-by-2030-boris-johnson-green-industrial-revolution/> Nov 18 2020
<https://www.axios.com/eu-carbon-emissions-target-cut-2030-climate-063fa943-1af8-471f-a798-590bba10c7c4.html> Dec 11, 2020
[https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(20\)32290-X/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(20)32290-X/fulltext) December 2, 2020
<https://joebiden.com/wp-content/uploads/2020/07/UNITY-TASK-FORCE-RECOMMENDATIONS.pdf> July 8, 2020
<https://www.democrats.senate.gov/climate-report> August 25, 2020

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



California Measured Emissions 2018 and Current Policies



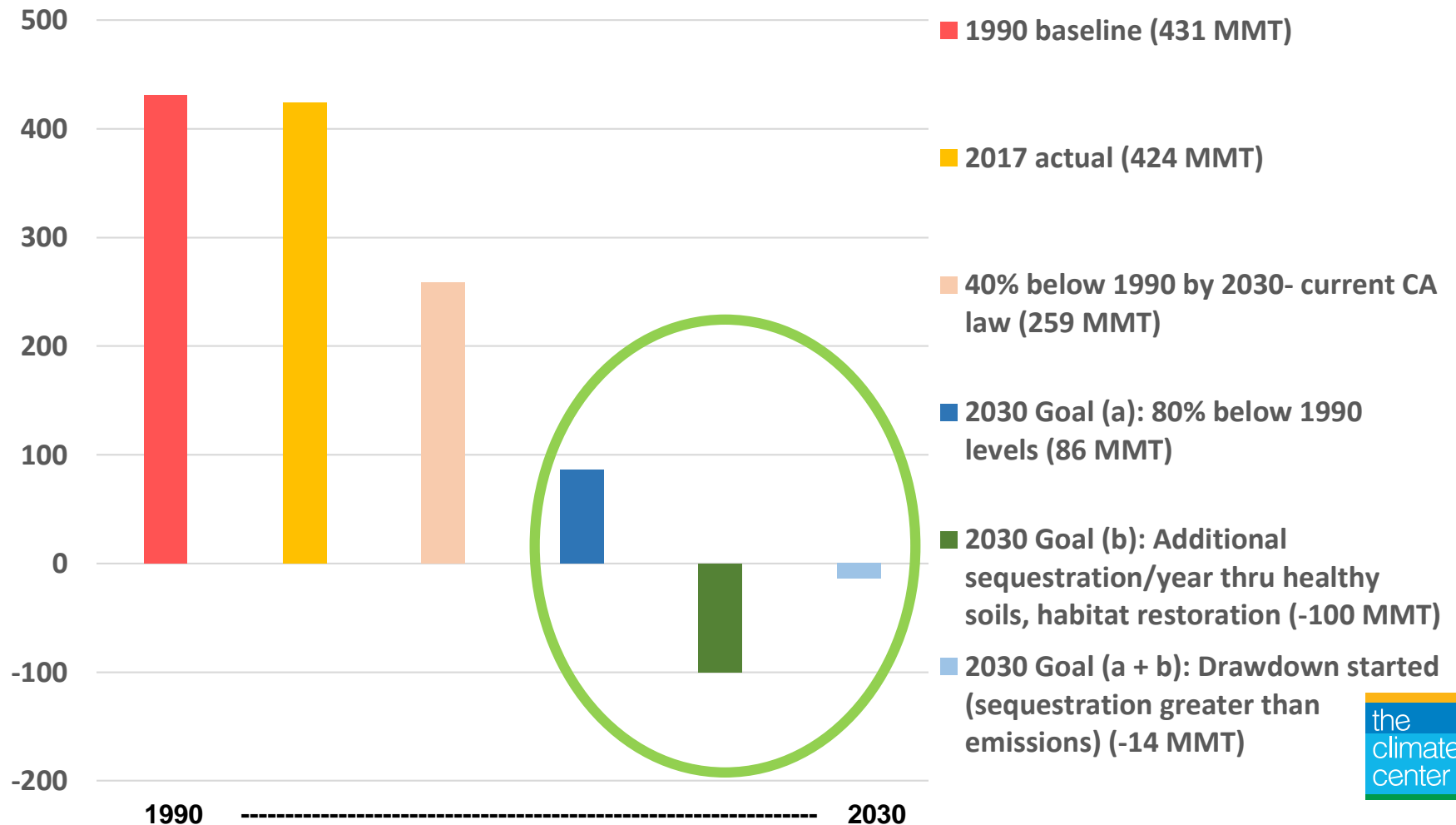
CURRENT CA POLICIES ARE NOT ENOUGH:

- 40% below 1990 GHG levels by 2030
- 60% GHG-free electricity by 2030
- 100% ZEV new car sales by 2035

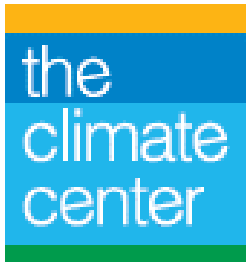
California's measured GHG emissions: where we are & where we need to go by 2030

www.climatesafeca.org

Million Metric Tons (MMT) CO₂e Per Year



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](#))



Guiding principles for Climate-Safe CA targets, policies and programs

- 1- Based on the **latest science**
- 2- Ensure a **just transition** for fossil fuel workers
- 3- Prioritize **climate justice**: ensure lower-income & BIPOC communities are no longer disproportionately harmed by fossil fuels and have equitable access to climate-friendly solutions



Photo: Stand.LA. by KPCC AirTalk

TYPES OF POLICIES REQUIRED BY SCIENCE TO REACH NET-NEGATIVE EMISSIONS BY 2030

1. Accelerate the phase-out of fossil fuel development, production and use
2. Scale-up nature-based sequestration to 100 MMT/year by 2030 on natural & working lands
3. Invest in community resilience, including clean energy microgrids & storage
4. Fund climate action with \$12-20 billion/year and leverage private sector money

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

- Immediately **halt new oil & gas drilling** and infrastructure development
- **Start plugging abandoned wells**
- **Establish 1 mile health and safety buffer zones around active wells**
- **Secure 100% GHG-free, decentralized electricity & energy storage by 2030**



Rapidly Transition to Sustainable Mobility

- **Begin phase out of fossil fuel powered vehicles--cars, trucks, buses, ships immediately**
- **No new gas powered vehicle registrations by no later than 2030**
- **Flip priorities: invest 80%+ of Caltrans \$ in non-GHG sustainable modes of transportation by 2025**
- **Invest in affordable housing near jobs**
- **Invest in clean mass transit**
- **Establish universal WIFI**
- **Accelerate telecommuting** for for workforce, students, business, and government



Increase ZEV charging infrastructure

- ZEVs = 2.5% (655k) of CA cars (26m total)
- Need 2-3x more **current CA goal to 15+ million ZEVs by 2030...**
- Fully fund the CA Electric Vehicle Infrastructure Project ([CALeVIP](#)) to \$200M
- And 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>
<https://centerforjobs.org/ca/zev-reports/states-progress-on-5-million-zero-emission-vehicle-by-2030-q3-2019-results-2>

Electrify buildings and increase efficiency; phase out methane gas

- Buildings = ~25% of CA's GHG emissions
- 20+ California cities have enacted **methane** gas bans for new buildings
- **Enact 100% electric requirement for all new buildings in 2022 building code update**



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/>

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/>

Carbon farming on working land potential sequestration at scale

20+ m acres = ~100 MMT/year CO₂e by 2030

CARBON FARM PLANNING in Marin

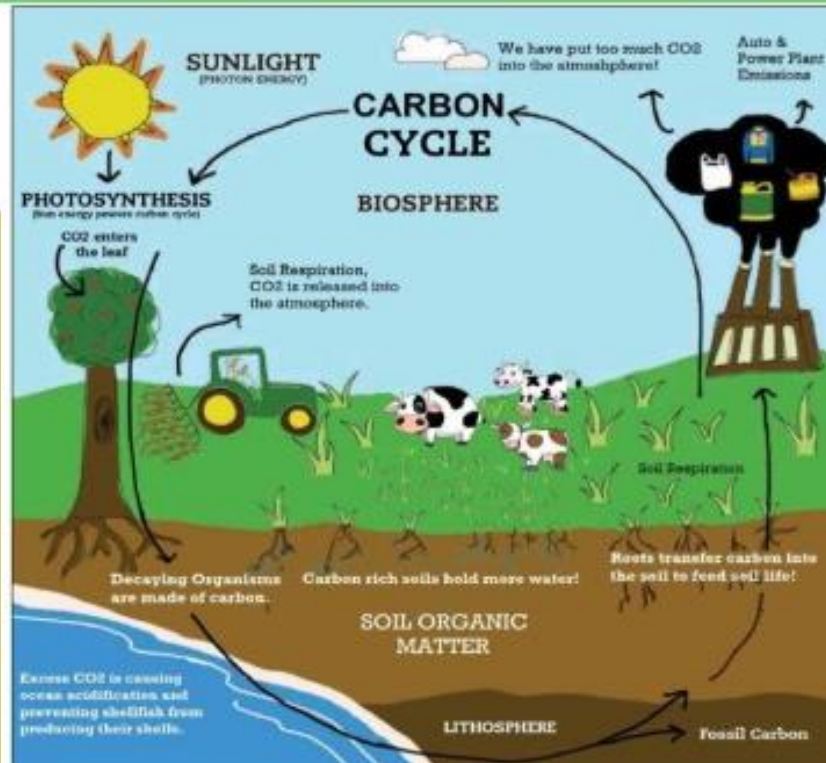
Assistance is available for farmers and ranchers!

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



Carbon Cycle Institute

MARIN CARBON PROJECT



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 for water, food security, biodiversity and resilience



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;

Draft Sequestration Bill

Climate Restoration & Food Security Act

- To implement **nature-based carbon sequestration at speed and scale** on California's natural and working lands
- Creates a **technical assistance program** to help landowners take advantage of state and federal funding programs
- Establishes a **Climate Restoration Corps**
- Possibly linked to equitable funding mechanism (e.g., per passenger and goods per parcel or weight fee)



Photo: Point Blue's STRAW program <https://www.pointblue.org/our-work/restoration/>.

3- Invest in Community Resilience

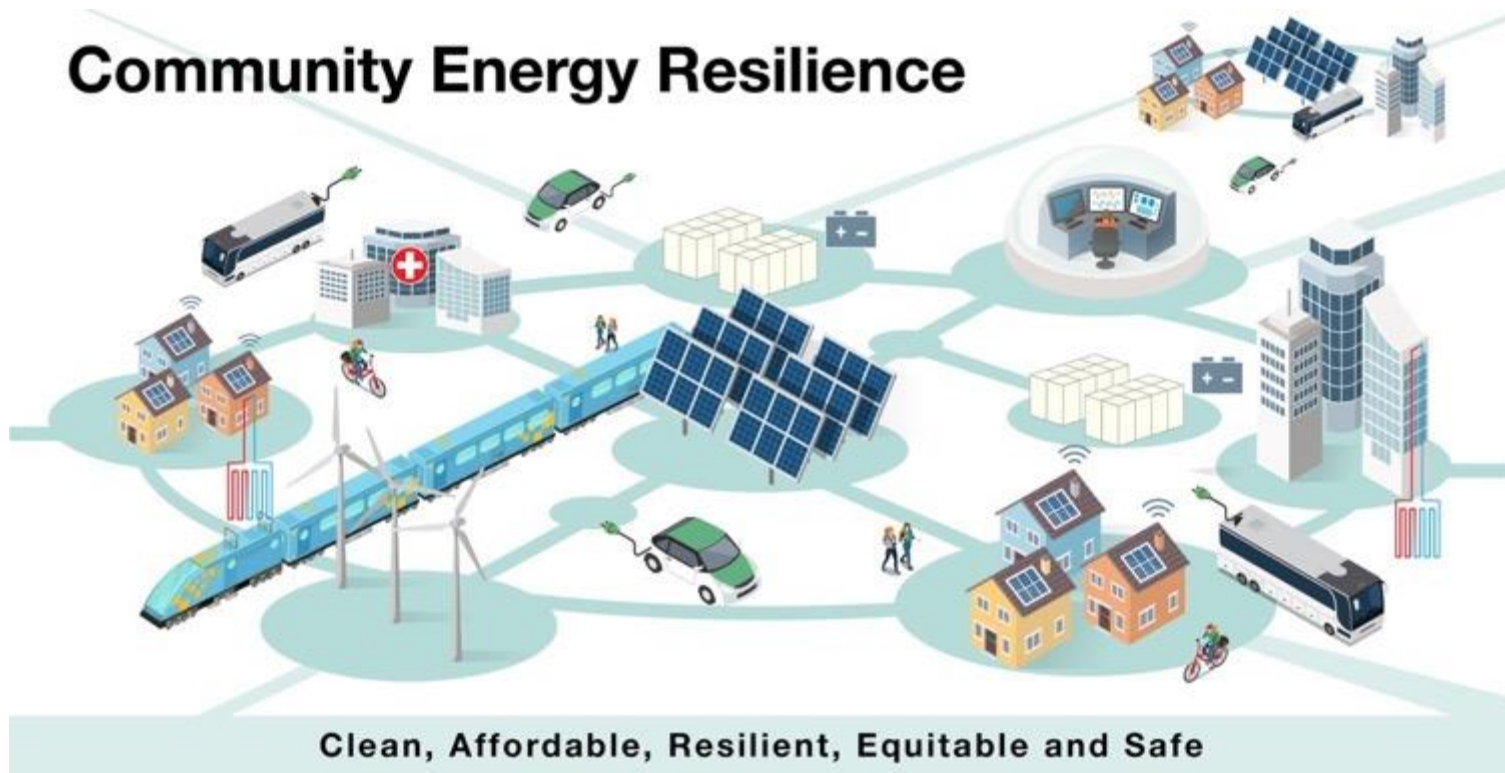
- **Fund implementation of resilience plans** in all California counties and cities by 2025 (SB379)
- **Implement *clean* energy community microgrids with storage** including EV's, starting with critical facilities in lower income communities by 2021



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

Let's create a decentralized and integrated power grid

Community Energy Resilience



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

Scale up mobile power storage

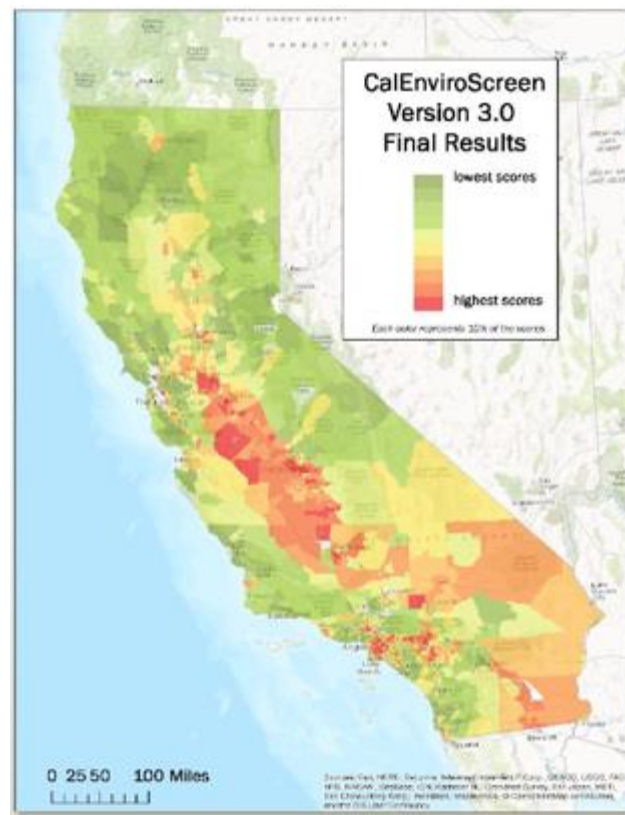
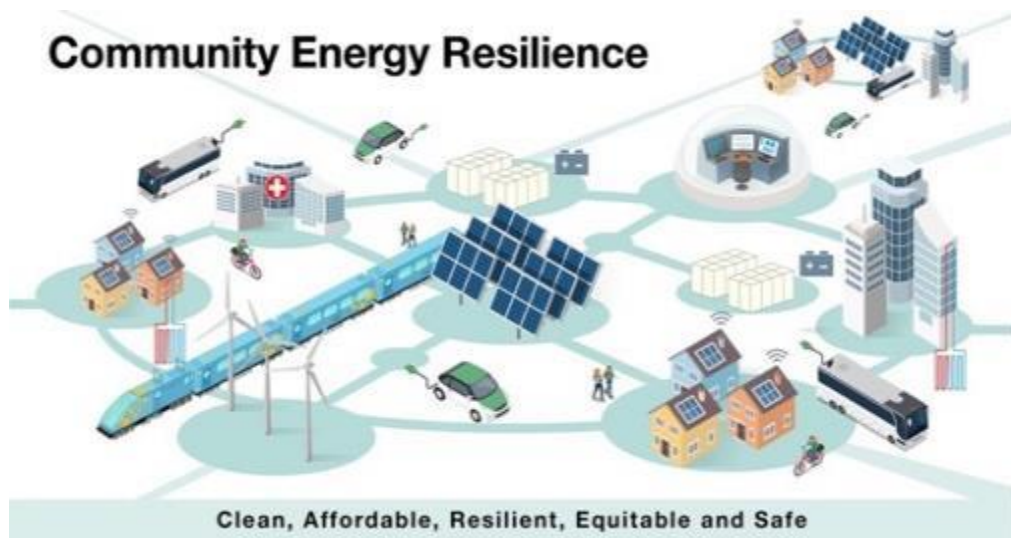
CA's school bus fleet = 24,200

If all-electric, could store $\sim\frac{1}{4}$ of peak electricity usage & help clean the air



150 kW battery packs per bus; 24,200 times 150 kW = 3600 MW, i.e. about $\frac{1}{4}$ of the evening duck curve ramp

CA Microgrid Policy Must Prioritize Clean Energy Resilience for Communities That Suffer Most from Air Pollution and Power Outages



Changes from CPUC & CEC

- Fast-track current rulemaking to accelerate opening of microgrid market
- Revise regulations so thousands of small-scale clean energy providers can sell to others, while creating new local jobs
- Enhance community energy resilience using “mobile storage” – EVs!
- Prioritize clean energy resilience/access to incentive programs for lower income communities



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

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

Two 2021 Bills to Prioritize Microgrid Development in Disadvantaged Communities

1) PLAN

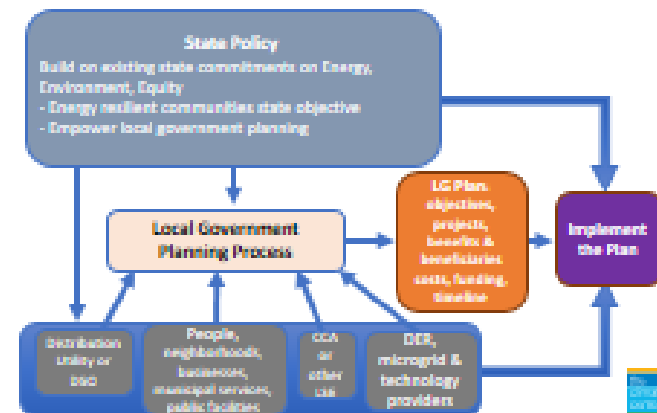
Community Energy Resilience Act (SB99, Dodd): Creates a new CEC statewide program for local governments in disadvantaged communities to plan local energy systems for decarbonization, resilience, equity

2) FUND

Energy Resilience and Equity Act (EREA): Provides market signal to fund microgrid development in disadvantaged communities:

- With market signals, the private sector will respond

Community Energy Resilience Act (CERA): Communities PLAN



Utility Reform Bill

Provide Open-Access for distributed, local clean energy providers, microgrids & systems

- Create a distribution system platform & market framework to promote growth of local clean energy systems
- Support local governments, tribes, CCAs, clean energy providers, community-based organizations to plan & implement clean, resilient local energy systems
- Provide data & technical support for local initiatives for decarbonization, resilience & equity, driven by local priorities
- Link utility financial incentives to performance of distribution services & community collaboration
- Ensure reliable, safe, affordable, & equitable electric distribution service

4- Fund climate action

Institute **equitable 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*
- **Per Passenger/Parcel Fee** e.g., \$2.4 billion/yr *from \$10 per passenger x 240 million (CA in 2018)*
- **Ballot measures** e.g., \$30 Billion 2022 climate ballot measure for transportation & other sectors over 10 years
- **Progressive Carbon Fees**
- **Green climate bonds**
- Close tax loopholes & upgrade code

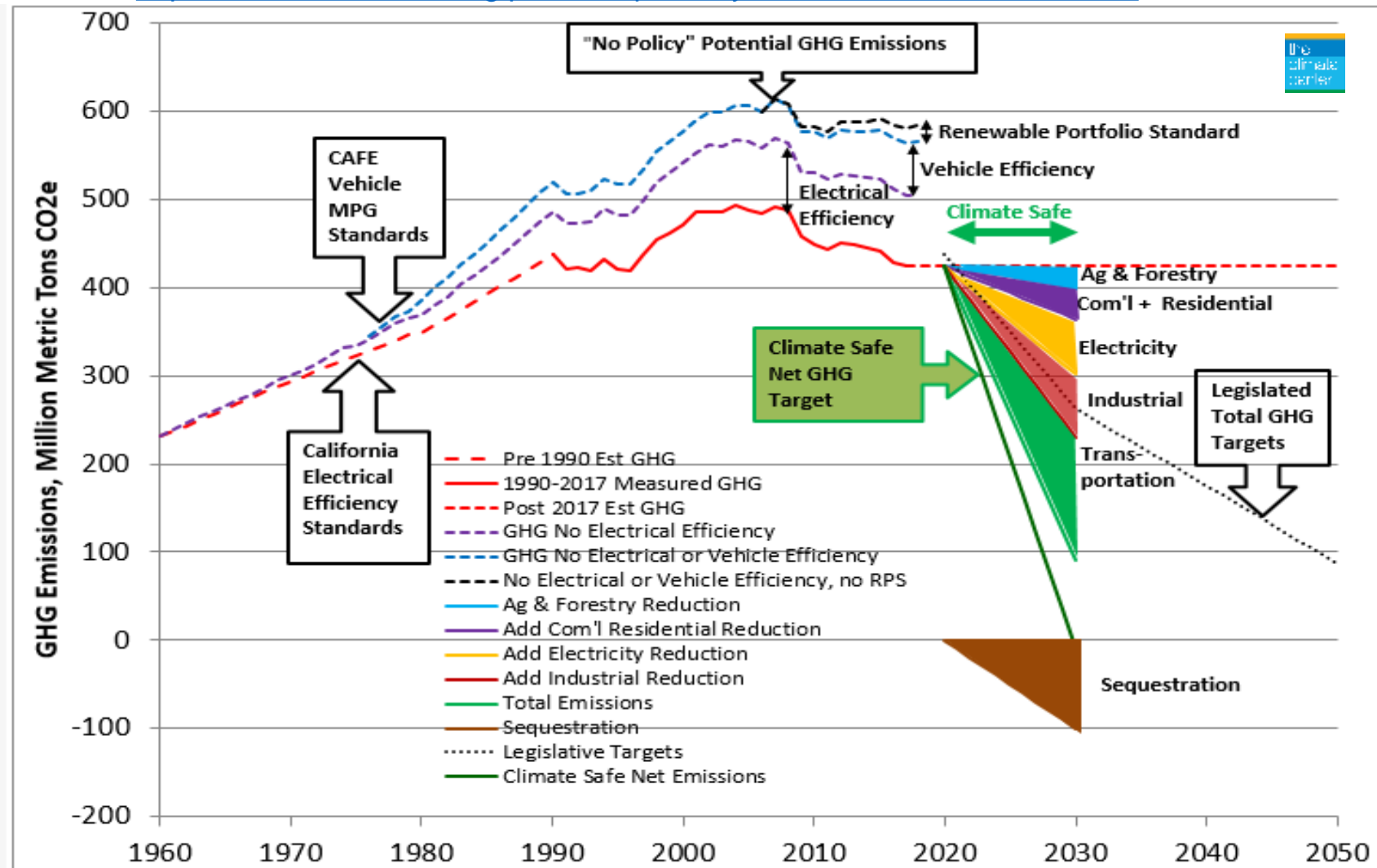


The suite of solutions and technologies exists today for California to enact now



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

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



Must build cross-sector support for speed and scale climate action

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



770 endorsements of Climate-Safe California including:

- **ELECTEDS and APPOINTED**

- Congressmen Jared Huffman, Mike Thompson
- State Senators Scott Wiener, Henry Stern, Mike McGuire
- CA State Assoc of Counties,* Chair, James Gore
- County Supervisors Holly Mitchell, Carmen Ramirez
- Angelina Galiteva, CAISO Board member*

- **SCIENTISTS and ECONOMISTS**

- Carl Mears, PhD, UN IPCC
- Dan Kammen, PhD, UC Berkeley*
- Hunter Lovins
- Ben SanTERS, PhD, LLNL*
- Steve Weissman, PhD, UC Berkeley*

- **BUSINESS**

- Hobo Wines
- Terry Tamminen, Seventh Generation Advisors*
- Ygrene Energy

- **NGOs**

- Alliance of Nurses for Healthy Environments
- Carbon Cycle Institute
- Center for Sustainable Energy
- Central CA Environmental Justice Network
- Joint Venture Silicon Valley
- Local Government Commission
- Mi Familia Vota

- **FAITH**

- Roman Catholic Diocese of Fresno
- Catholic Charities, Stockton



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/>

Supervisor Carmen Ramírez

Ventura County Board of Supervisors, former Mayor of Oxnard



“[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://theclimatecenter.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/>

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/>

Supervisor Holly J. Mitchell

L.A. County Board of Supervisors, former State Senator



“The science supports the fact that California’s climate crisis is real with dangerous and accelerating impacts on our vulnerable populations. Climate-Safe California offers a powerful solution that will hopefully catalyze similar efforts in other states, the nation and the world.”

<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/>

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

Our house is on fire. Ask at every level of government: are we doing enough?



California must lead: we need more from the Governor and the legislature!



- Declare a State of Climate Emergency
- Appoint a cabinet level State Climate “Czar”
- Issue Executive Orders/Pass legislation to:
 - Achieve net-negative emissions with the start of drawdown and resilience for all California’s communities by no later than 2030
 - Require all state climate policies to align with most current science, address just transition, and prioritize climate justice
- Prioritize securing public funding & leverage private funding for equitable climate action at speed and scale

Exxon no longer in Dow; Peak oil already happened

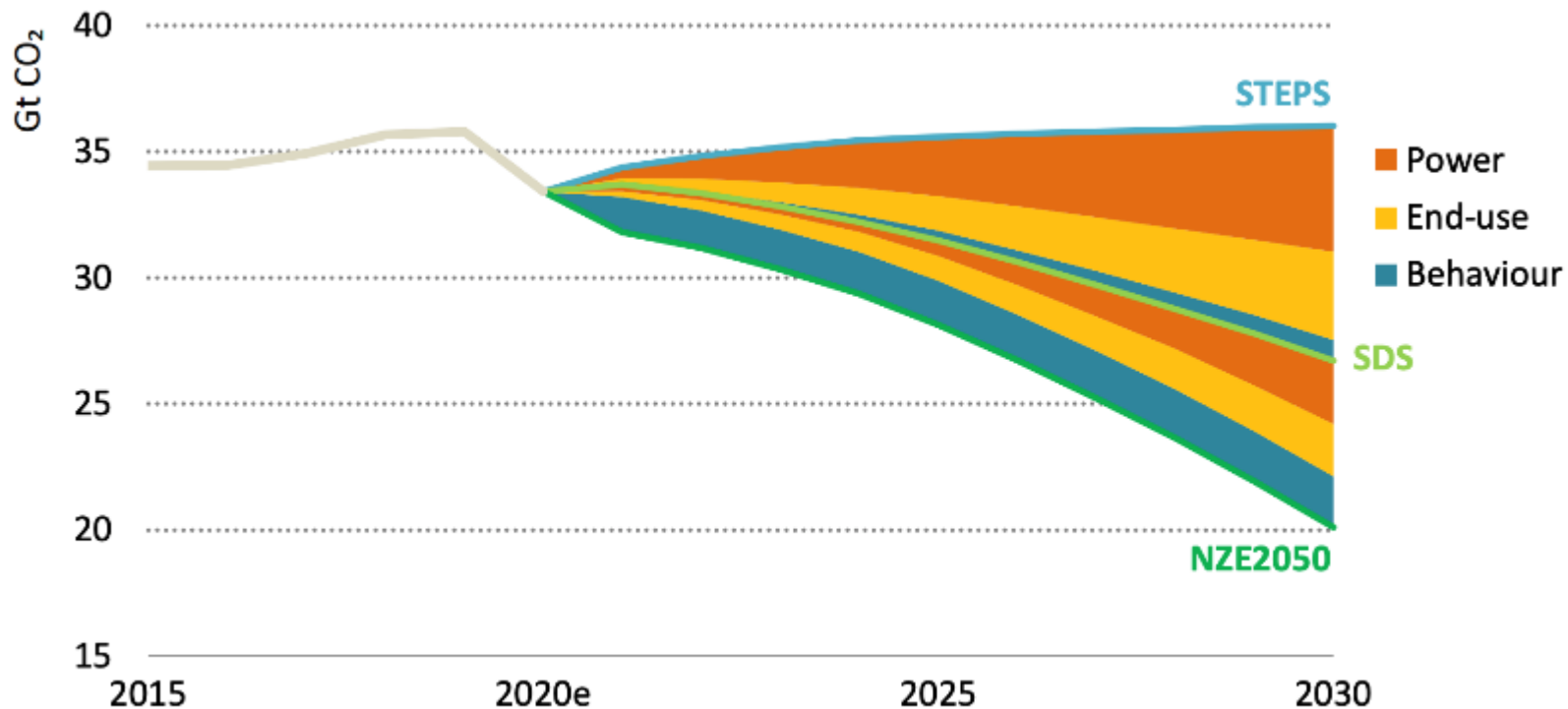
Exxon under pressure



<https://www.marketwatch.com/story/heres-what-exxons-removal-from-the-dow-says-about-the-energy-sector-2020-08-25> <https://www.cnbc.com/2020/08/25/exxon-mobil-replaced-by-a-software-stock-after-92-years-in-the-dow-is-a-sign-of-the-times.html>
<https://energypost.eu/bp-outlook-2020-peak-oil-has-already-happened/>

SOLAR NOW CHEAPEST ELECTRICITY GLOBALLY

CO₂ emissions from coal-fired power stations projected to decline by 75% between 2019 and 2030



<https://www.carbonbrief.org/solar-is-now-cheapest-electricity-in-history-confirms-iea> Oct 13 2020

[U.S. renewable energy consumption surpasses coal for the first time in over 130 years](https://www.eia.gov/electricity/monthly/epm_table_grapher.php?t=epmt_es1a) 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 equitable climate action

December 2030



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

March 2035





Thank you!

ellie@theclimatecenter.org
www.theclimatecenter.org

