



THE GREEN NEW DEAL

What Makes It Necessary, What It Is, and How We Can Get It

Prepared by Carl Davidson
For Global Studies 2019

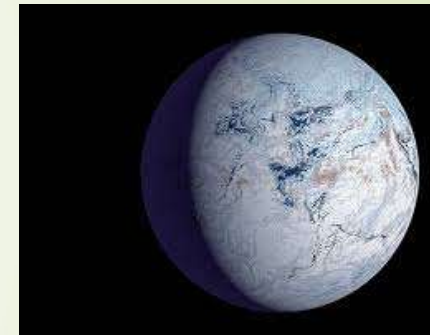
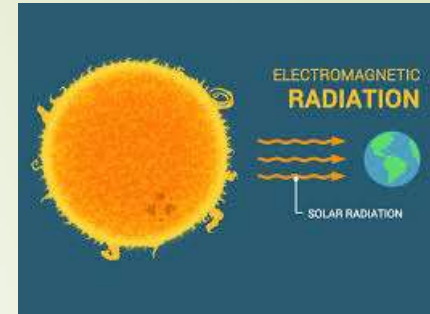
Let's start with science and facts...

*Our world is getting much warmer,
our climate is changing...Why?*



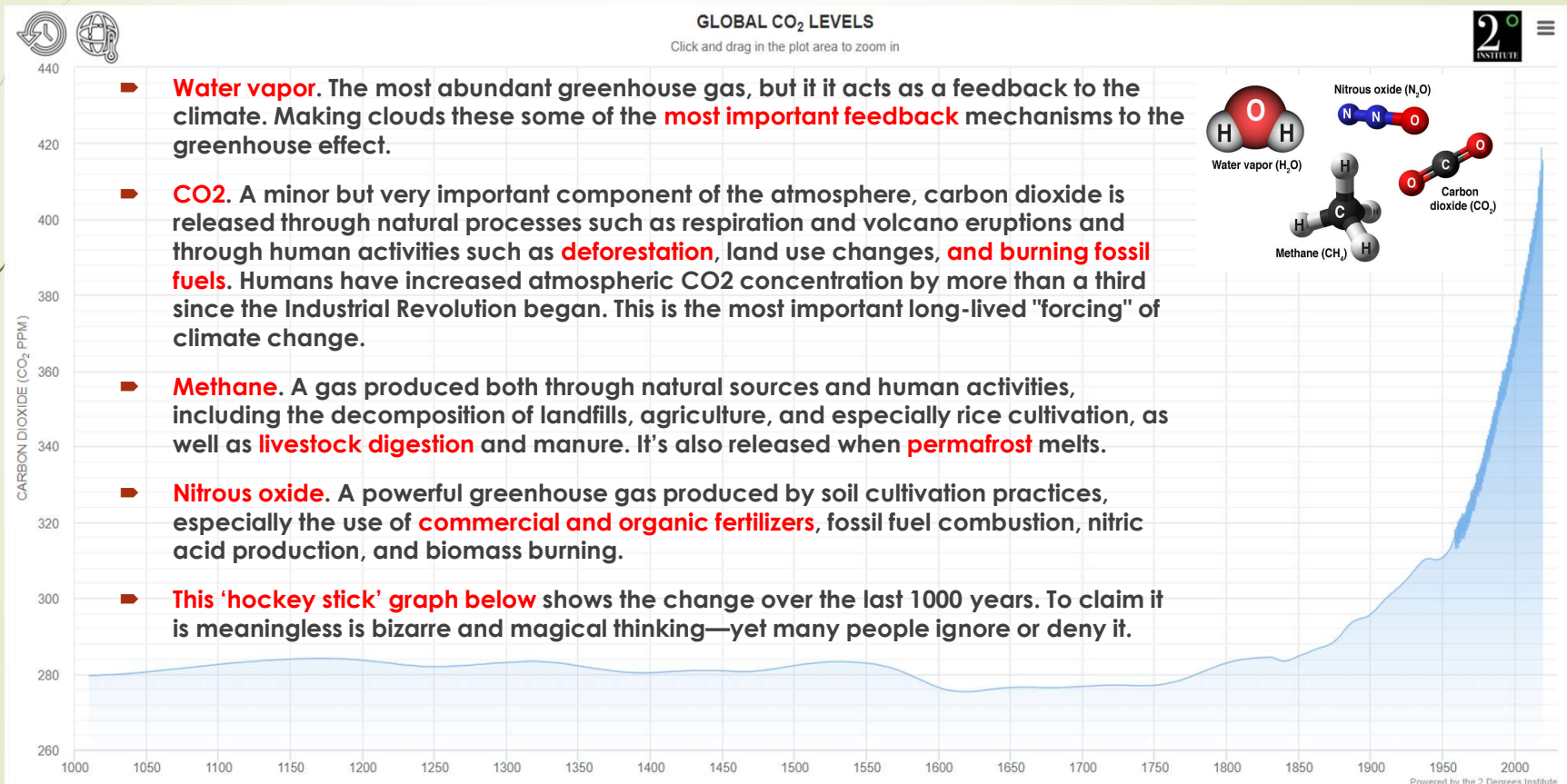
Our now outmoded
image of the world

- The Sun **radiates a steady amount of energy** to the Earth's surface. It varies only by rotation (night and day), by the tilt of our axis (opposite seasons north and south) and our elliptical orbit (annual seasonal variation).
- The Earth radiates a lesser amount of energy back to space and the Sun, and absorbs some as heat that warms the surface. If that was all there was to it, our planet would be a ice-covered sphere.
- **But it's not an iceball. Why?** Because the atmosphere of certain gases functions as a blanket, reflecting back additional heat to allow for melted water as oceans and for water vapor as clouds. These vary and make what we call weather and climate.
- What happens if the gases change? The climate can rapidly change, and much else besides.
- The 'Big Blue Marble' photo of the Earth, circa 1970, altered our social consciousness of our species for all time going forward. **We saw ourselves as an 'ecosystem' vividly for the first time.**



The 'Green House Gases'

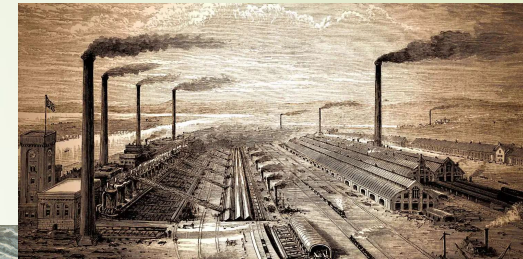
We need them in a '**Goldilocks Zone**'—too little and we freeze; too much and we're in trouble



What Major Change Started in 1800?

The **Industrial Revolution**, steam engines for transportation, clearing forests and grasslands

- Steam power started with wood and charcoal, but soon **burned coal and oil**.
- Steam power started in pumping water from mines, but soon delivered power for **all machines** in factories
- Steam was first used on small river boats, then to local trains. These spread to major ocean liners, warships, transcontinental trains, and farm tractors and other farm tools.
- It all added up to taking fossil carbon from the ground, burning it, and pumping CO₂ and other greenhouse gases **into the air**.
- The gases form the '**reflective blanket**' in the air, and temperatures steadily start to rise, as in the previous graph.

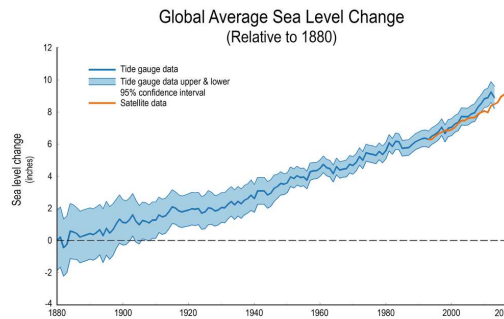


alamy stock photo

What Happens When the Air Warms?

Freaky stuff Not too hard to figure out. Ice melts. Sea levels rise. But oceans currents and wind patterns are also altered. **In some places, snow stops, while in others, it snows for the first time.** It's why we use the term **CLIMATE CHANGE** and not just global warming.

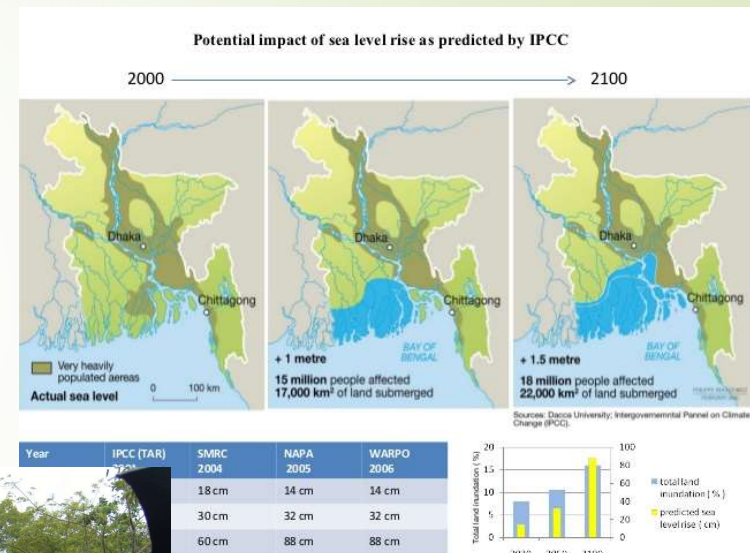
- Chart of global **sea level rise**, with red line indicating start of satellite measurement.
- Miami faces regular street flooding.
- Alaska **glacier retreats** four miles from 2009 to 2015.
- But these are **freaky** and **NOT MINOR** inconveniences. They are a **warning**.



So Climate Change Also Means New and More Disasters

When people's livelihood requires stable supplies of fresh water and water levels, any change can bring **suffering and mass migrations**

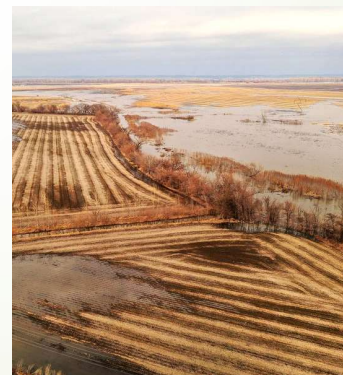
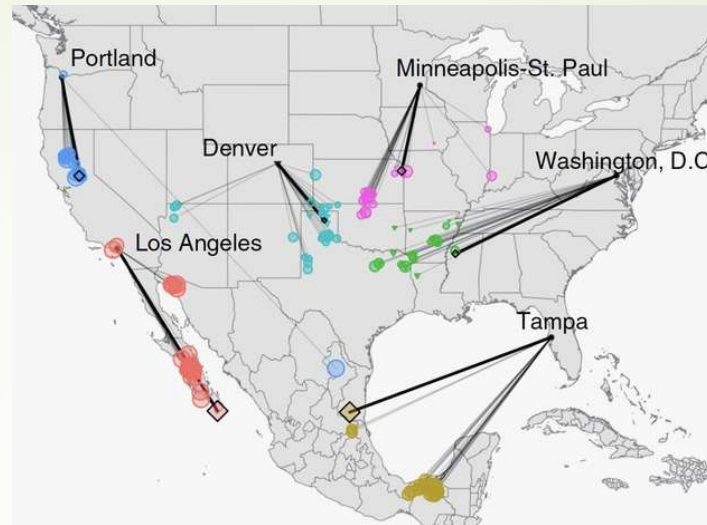
- Salt water destroying land for crops
- Huge areas of Bangladesh going underwater.
- One family's home and gardens gone.
- Mass migrations already underway.



And change is not just for remote and far way places...

It has an impact everywhere, one way or another, with **the danger of famine**, conflict over movements across borders, and war

- Top map shows 50 year projection of **change in temperature and dryness** for several major US cities.
- Far right is Manhattan after a projected 5 ft sea level rise.
- Lower left in Florida after a projected 5 ft sea level rise.
- Lower middle is **current** flooding and crop destruction in the Midwest in places where it is **not common**.



Can this be stopped, deflected or reversed?

Hopefully, but it starts with **leaving carbon in the ground**, while tapping into energy from the Sun and Moon, direct or indirect.

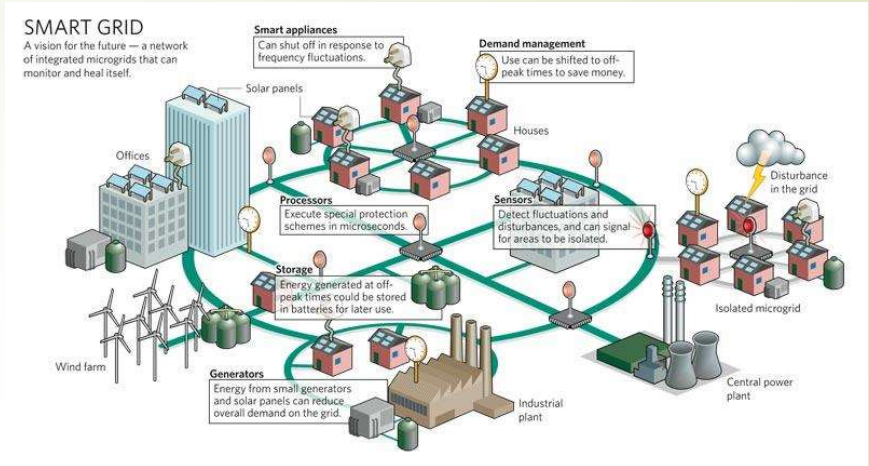
- Humanity will need **electrical power in increasing amounts**, but there is no necessity to get it from burning various forms of carbon or uranium.
- In addition to direct radiation, the Sun, along with the tug of the Moon's gravity, supplies energy as **winds, waves and falling water**—a biosphere in constant motion as an **inexhaustible source** of constant energy.
- An additional source in some areas is **geothermal**, heat from the Earth's interior.
- These are the component machines of the **Green New Deal**, and the technology keeps getting better and more diverse.



First, Can We Learn to 'Think Big?'

Major global problems require solutions at all levels, and require our breaking loose from the **'we can't afford it' fallacy**

- Our current outdated US energy grid **loses 6% of its electrical power** constantly. That's the equivalent of the output of 200 coal-fired plants.
- Our current grid only sends energy one way. We need a **'Smart Grid'** with **feedback of power flow** fluctuations fed into the Internet to a meter in each home or workplace. This allows us to adjust our use to the optimal time slots.
- 'Smart Grids' must be **globally connected**—the Sun is always shining, the tides are rising and falling, the rivers are always flowing and the wind is always blowing **somewhere**.
- The **Green New Deal** means replacing the old grids with a new Global 'Smart Grid.' This creates many jobs at once —unskilled, skilled and highly skilled.
- Bucky Fuller's 'dymaxion map' (right) shows Earth's land surrounded by water. His point was that **making a single 'Smart Grid' was easier than you might think**.



What About Major Industry?

In the Green New Deal, **waste approaches zero**, because high design approaches infinity

- In green industrial design, **'waste' is an alien concept**, since any materials left over are cycled back into raw materials. Above, plastic waste becomes **new street pavement**. Middle, scrap wood pieces become **new furniture**
- Likewise when products wear out, they are **returned for reproduction**.
- Cast-off materials from earlier, anti-green production are gathered and recycled in various ways. Below, **'scrap' steel is fashioned to new turbines**. Half or more of today's steel and aluminum in the U.S. comes from scrap, not mines.
- Using **'waste' is nearly always cheaper** than unused raw materials, since less energy is required, say, to make steel from scrap than from iron ore, coke and limestone



What about agriculture? Isn't it 'green'?

No, just the opposite. Current practices of 'factory farms' **are destroying the soil** and degrading animal, grain and vegetable products

- Agribusiness 'factory farms' **leach nutrients from the soil and cause rich topsoil to 'run off,'** then requiring chemical fertilizers.
- **Permaculture** methods can restore the soil with the rotation of natural plants and flowers, with less use of energy for equipment.
- The most **sustainable farms are family-sized or slightly larger**, interconnected with similar farms in larger coops. They produce better crops and livestock at lower overall costs. But the **Green New Deal** is needed to help farmers make the transition.
- The result? Better production, richer soil **and less use of fuels and chemicals** producing greenhouse gases



What Can Make Housing 'Green'?

Low cost in social settings **via high design recycling and rehabilitation**



- Use of environment-friendly building materials
- Passive solar design and energy efficiency
- Water & waste conservation
- Waste reduction, recycling and reuse
- Improve indoor air quality
- Old homes still structurally sound can be rehabbed.
- Top right, 'Tiny Houses' in a 'backyard commons' in LA
- Center, back alley commons and gardens
- Left, 'Tiny House' homes for low-income rent or purchase.
- **Thousands of jobs** for home rebuilders of all skill levels



Green Transportation is Mass and Public

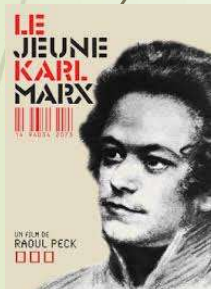
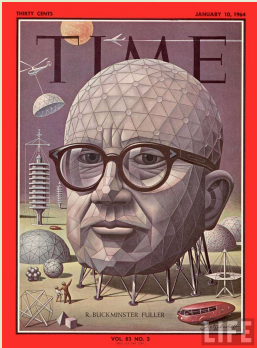
But not always. It can be combined with heavy freight and light delivery, and individual cars and cycles

- Eurostar **high-speed rail** (top right) is powered by the grid between European major cities, with less cost and emissions 90% lower than flying. Airports are more polluting than train stations.
- Pittsburgh **light rail** (center right), powered from the grid, for transport within city and suburbs.
- Electric **rental cars and bikes** available at rail and bus stations.
- **Water transport** is far more energy-efficient than trucks on highways. Chicago water taxi (top left) has \$5 rides to key tourists areas (or all day passes). Middle left, long chain of barges carries coal, ore, sand and grain through locks at dam sites at much less cost and pollution.
- All this make for **millions of manufacturing jobs**.

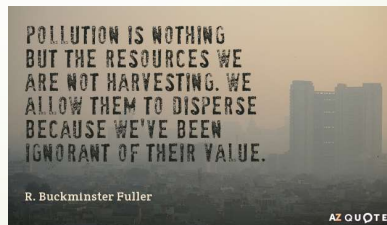


Innovation Is a Key to the Green New Deal

Buckminster Fuller (left) taught us two things about Universe: **1. Matter/Energy was always conserved**, even if one changed into the other, i.e., $E=MC^2$. **2. Know-how always grew**, and the more it was used, the more it grew and the better it got.



- Question: **What is the difference between the two bicycles?** The cost to the user, in terms of hours of labor currency is about the same, and they both get you from point A to B.
- Answer 1: The second contains 50% less in mass, but with more features, a better and safer ride, i.e., **a far lighter eco-footprint**.
- Answer 2: The key **difference is information as high design**, an attribute applicable to everything we need, making better with less.
- The more we innovate, the more there is to innovate.** To curb growth in hardware and waste, the knowledge sector must expand toward infinity.
- Karl Marx had the same ideas, but set them aside as projects for the future, but noting how capitalism contained the features that would create its own gravediggers.**



The Green New Deal Is Also About Our Health

Pollutants in the air, the water, and in the ground where our crops are grown **also end up in our bodies**



Barry Commoner featured in *Time* when discussion of 'ecology' was just starting.

- Barry Commoner's **4 Laws**:
- 1. Everything is connected to everything else.
- 2. Everything goes somewhere.
- 3. There is no free lunch
- 4. Nature knows best.
- Commoner also argued that the best way to deal with poisons was **not to make them** in the first place.
- Clockwise: Water in Flint, air in Beijing, coal slurry in W VA streams, pesticide poisons on vegetable crops.
- The Green New Deal, in it's call for full employment in green jobs, also calls for **Medicare for All**.





Summing Up: The Core 7-Point Platform

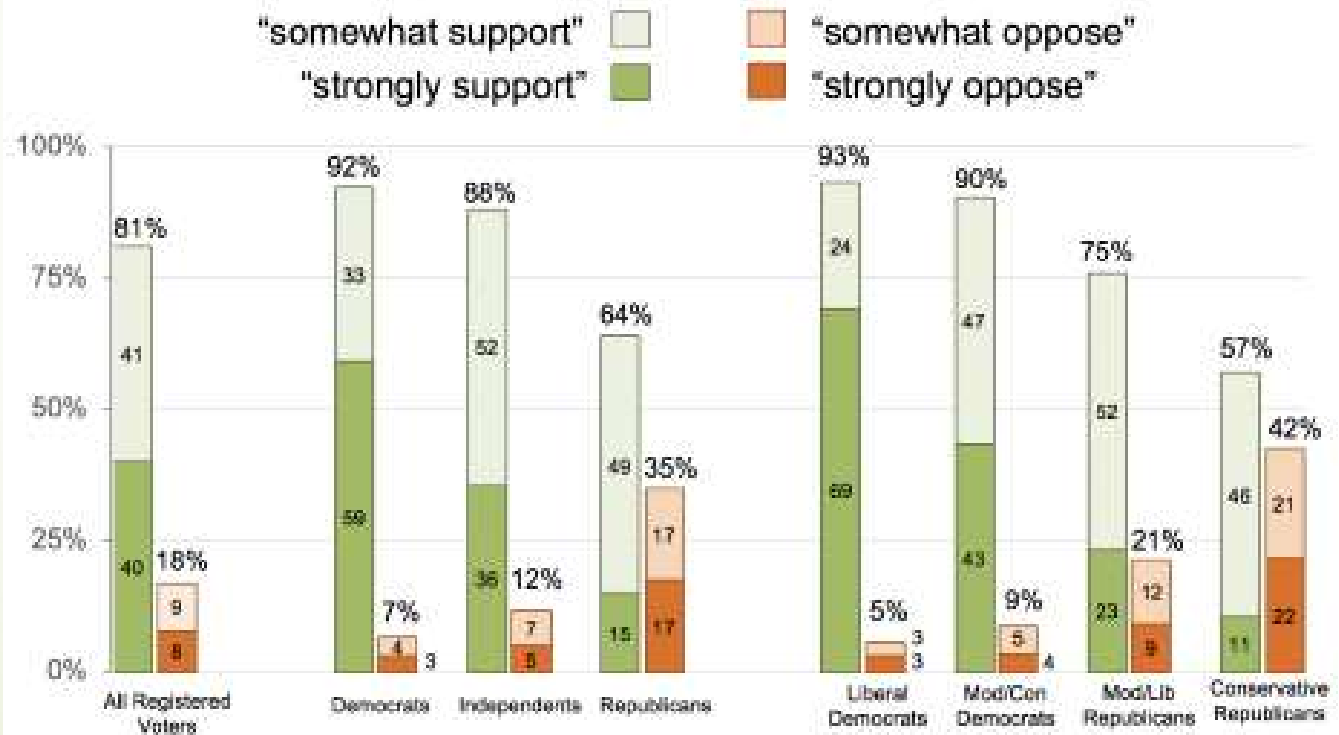
The green energy and industrial revolution can go on, but here are the key elements

- **Transition away from burning carbon** and uranium to energies from the Sun and Moon. This will slow down, and hopefully stop and reduce CO2 levels. Build the new hardware required. Plant trees.
- **Distribute all energies worldwide** by building the new transnational **Smart Grid**. This will conserve power and make it accessible to all.
- **Redesign and rebuild industries for zero waste**. Longer-lasting, higher quality stuff made with less energy.
- Transition from agribusiness factory **farms to organic, sustainable family-sized farms**. Make crops more regional to allow for getting many foods locally.
- **Redesign new housing and retrofit existing stock** for lower energy, better materials, and thriving communities.
- **Increased innovation** and high design for all products and services.
- **Curb the production of poisons toward zero**, and remove pollutants from human consumption.

What About **Political Will**?: First, We Are Still a 'Militant Minority'

- The 2nd column gives us a **majority** only among Democratic voters
- The last two columns shows **the GOP are our adversaries**, but not without weak spots.
- **To Oversimplify:** Elect Dems, defeat the GOP, but this is not enough. **We have to become a strong, overall majority.**

Support for the Green New Deal among Registered Voters



Start with Your State Government

The chart shows current attitudes among state legislators on matters related solar energy. **The battle is uphill.**

We rarely win at the top what **we haven't already won at the lower levels** and the base.

A number of new victories have been **won by GND left candidates**. This must grow.

States also draw CD lines that can or cannot be **used to gerrymander** Congress. This matters a lot.

2019 State Solar Power Rankings Report

How to read the report:

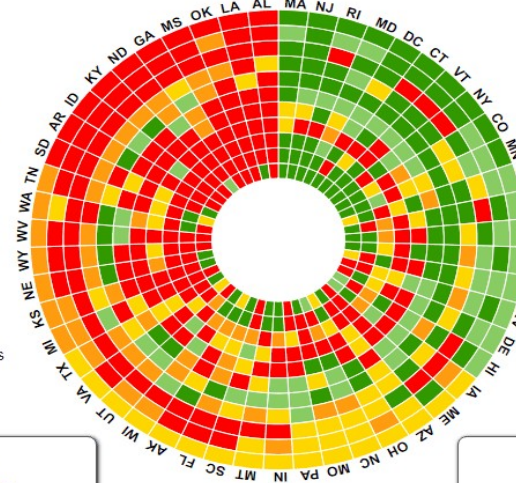
This chart ranks the 50 states and the District of Columbia, from best (green) to worst (red), based on their solar-friendliness. For example, Massachusetts receives the best score, while Alabama receives the worst.

The outermost ring (closest to each state label) shows the overall grades awarded the states. The inner rings represent factors contributing to the grades.

Instructions: Roll over or tap on any segment of the chart to populate the boxes below with the state's grades and 2019 solar outlook.

Factors:

- 1) Overall Grade
- 2) Renewable Portfolio Standard (RPS)
- 3) Solar Carve Out
- 4) Electricity Price
- 5) Net Metering
- 6) Interconnection
- 7) Solar Rebates
- 8) State Solar Tax Credits
- 9) Performance Payments
- 10) Sales Tax Exemption
- 11) Property Tax Exemption



Massachusetts 2018 SOLAR REPORT CARD

Overall Grade: **A**

Policy	Incentives
B RPS Law	C Solar Rebates
A Solar Carve Out	C State Solar Tax Credits
A Electricity Price	A Performance Payments
A Net Metering	A Sales Tax Exemption
A Interconnection	A Property Tax Exemption

Avg. Payback: **6 Years** IRR: **21.9%**

Grading Scale



Toggle Colorblind Mode

Massachusetts

1st place

Trend: **▲ 1**

[Massachusetts](#) re-takes the #1 spot this year with its truly awesome solar carve-out and new SMART Solar Program that will provide incentives for the next generation of solar projects in the state. Good work this year, Massachusetts lawmakers. You earned it.

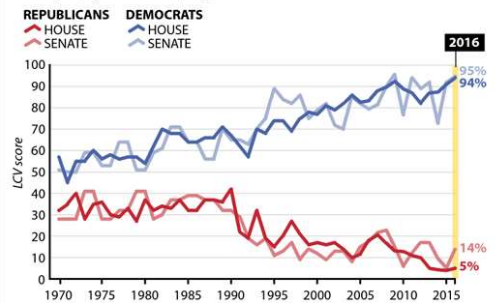
GND Bloc in Congress in March 2019

- We're only a counter-hegemonic bloc now. **The relation of forces must shift and the opposition must be split.** That requires organized voters who show up.

The Great Divide

With an average 85 percent voting gap between Republicans and Democrats in 2016, Congress has never been so polarized over environmental issues.

LEAGUE OF CONSERVATION VOTERS' ENVIRONMENTAL VOTING SCORES
U.S. Congress, by chamber and party, 1970-2016



SOURCE: League of Conservation Voters

PAUL HORN / InsideClimate News

House Sponsor
Alexandria
Ocasio-Cortez
NY-14



U.S. CONGRESS
RESOLUTIONS
FOR



THE
GREEN
NEW DEAL

FOR A JUST,
PROSPEROUS, &
SUSTAINABLE ECONOMY



Senate Sponsor
Ed Markey
Massachusetts

Updated 03/26/19

Source: congress.gov



SunriseMovement.org | JusticeDemocrats.com



91 HOUSE CO-SPONSORS H.RES.109

AZ-03 Raúl Grijalva
CA-02 Jared Huffman
CA-03 John Garamendi
CA-05 Mike Thompson
CA-06 Doris Matsui
CA-11 Mark DeSaulnier
CA-13 Barbara Lee
CA-14 Jackie Speier
CA-15 Eric Swalwell
CA-17 Ro Khanna
CA-18 Anna G. Eshoo
CA-19 Zoe Lofgren
CA-20 Jimmy Panetta
CA-24 Salud Carbajal
CA-27 Judy Chu
CA-28 Adam Schiff
CA-30 Brad Sherman
CA-32 Grace F. Napolitano
CA-33 Ted Lieu
CA-34 Jimmy Gomez
CA-37 Karen Bass
CA-38 Linda Sanchez
CA-41 Mark Takano
CA-43 Maxine Waters
CA-44 Nanette D. Barragán
CA-47 Alan Lowenthal
CA-49 Mike Levin
CA-51 Juan Vargas
CO-02 Joe Neguse
CT-01 John Larson
CT-02 Joe Courtney
CT-03 Rosa DeLauro
CT-05 Jahana Hayes
DC-AL E. Holmes Norton*
FL-20 Alcee L. Hastings
FL-26 D. Mucarsel-Powell
IL-04 Jesús "Chuy" García
IL-05 Mike Quigley
IL-07 Danny K. Davis
IL-09 Jan Schakowsky
ME-01 Chellie Pingree
MD-02 Dutch Ruppersberger
MD-03 John Sarbanes
MD-07 Elijah E. Cummings
MD-08 Jamie Raskin
MA-02 Jim McGovern
MA-03 Lori Trahan
MA-04 Joe Kennedy, III
MA-05 Katherine Clark
MA-06 Seth Moulton
MA-07 Ayanna Pressley
MA-08 Stephen Lynch
MA-09 Bill Keating

MI-09 Andy Levin
MI-13 Rashida Tlaib
MN-04 Betty McCollum
MO-01 Wm. Lacy Clay
NJ-09 Bill Pascrell, Jr.
NJ-12 B. Watson Coleman
NM-01 Deb Haaland
NY-03 Tom Suozzi
NY-05 Gregory W. Meeks
NY-06 Grace Meng
NY-07 Nydia M. Velázquez
NY-09 Yvette D. Clarke
NY-10 Jerrold Nadler
NY-12 Carolyn Maloney
NY-13 Adriano Espaillat
NY-15 José E. Serrano
NY-16 Eliot Engel
NY-17 Nita Lowey
NY-18 Sean P. Maloney
NY-26 Brian Higgins
NC-04 David E. Price
NC-12 Alma S. Adams
MP-AL Gregorio Sablan*
OR-01 Suzanne Bonamici
OR-03 Earl Blumenauer
OR-04 Peter DeFazio
PA-02 Brendan Boyle
RI-01 David Cicilline
TN-09 Steve Cohen
TX-16 Veronica Escobar
TX-20 Joaquin Castro
TX-35 Lloyd Doggett
VT-AL Peter Welch
VA-03 Bobby Scott
VA-11 Gerald E. Connolly
WA-07 Pramila Jayapal
WA-09 Adam Smith
WI-02 Mark Pocan

12 SENATE CO-SPONSORS S.RES.59

CA Kamala Harris
CT Richard Blumenthal
CT Chris Murphy
HI Mazie Hirono
MA Elizabeth Warren
MD Chris Van Hollen
MN Amy Klobuchar
NJ Cory Booker
NY Kirsten Gillibrand
OR Ron Wyden
OR Jeff Merkley
VT Bernie Sanders**

* Non-voting Member

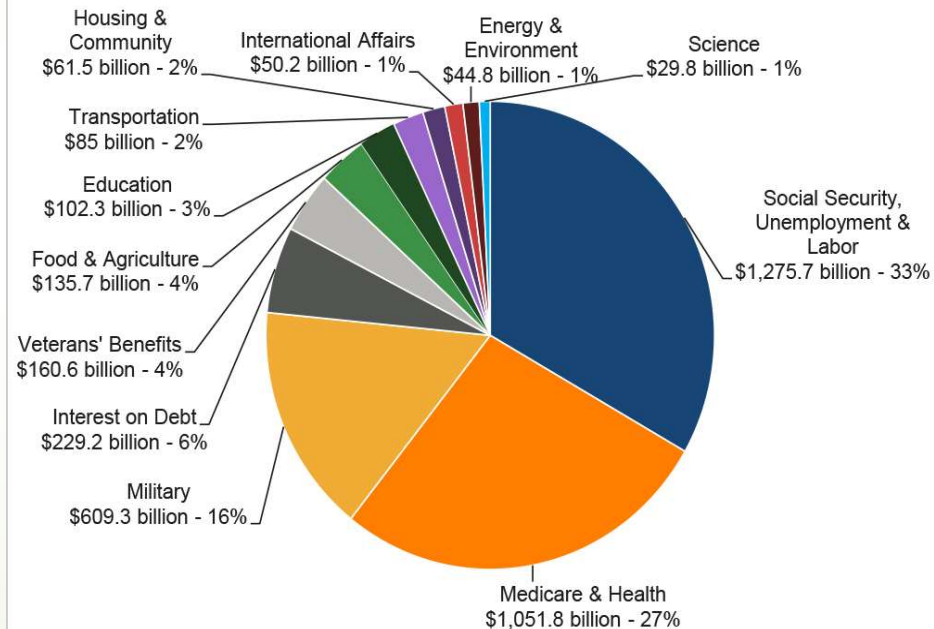
** Independent, caucuses with Dems

We Can't Afford it! Who Will Pay for It?

This is the first question always thrown at GND supporters. The claim is \$50 to \$100 Trillion over 10 years. The answer is — 'Yes, we can!'

- The GND investment in economic growth will have a **"multiplier effect"** for decades. An injection of new income into the economy leads to more spending, which creates more income, and so on. If the millions of new GND employed spend 80% of their earnings and save 20%, every \$1 million dollars invested by the GND will generate \$5 million of extra income.
- GND will also use funds already allocated to housing, transport, and energy. **They would be re-designed and repurposed.** As well, full employment does away with much of welfare and jobless insurance.
- A GND is the best solution for a cyclical economy. A new efficient energy and transportation **infrastructure will boost purchasing power from below**, as opposed to interest rate cuts that hurt retirees, curb local government spending, **only enriching the banks.** With the creation of state level public banks, any debt service going to private banks could also be reduced.
- Given a **sovereign currency**, we can **spend as much money as needed**, and **recover the investment as it generates new taxable wealth**, directly and indirectly. GND outlays are investments that return far more value over time. They actually add to government and private revenue in the lower run.
- **One important change:** Military industrial policy would be phased way down for a **green industrial policy.** The military is a major source of pollutants. At the same time, some Pentagon sectors understand the security dangers of the climate crisis, and the need for changes reducing both waste and carbon-burning.

Total Federal Spending 2015: \$3.8 Trillion



The Last Word: We Can't Afford **Not** to Fund and Implement It.

- Crop failures
- Unseasonal wildfires
- Extremely rare flooding and storm patterns
- Melting of the North Pole and change in ocean currents.
- Mass migrations from areas no longer able to support human life.
- All this and more is already taking place, and getting worse.
- **What will it cost?**

