

*Top Resource:*

**Federation for a  
Manufacturing  
Renaissance**

<https://fed4mr.org/>

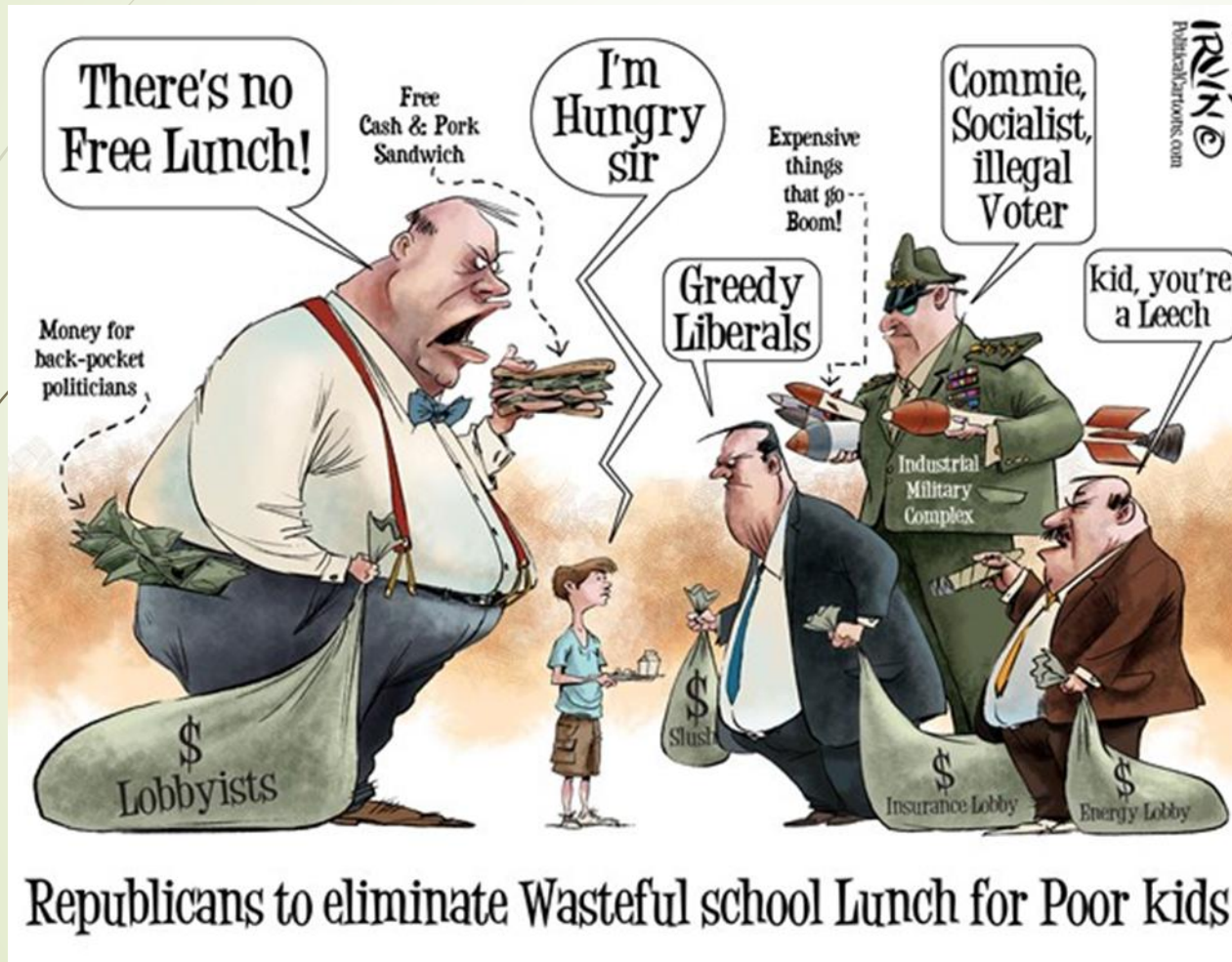


# Clean Energy & Green Industrial policy

*What It Is, Why It Is Necessary and How We Can Get It*

Prepared by Carl Davidson  
For SEP 4<sup>th</sup> Monday, 2023

# In the USA, our upper crust claims we must reject 'industrial policy' as a tool of socialists.

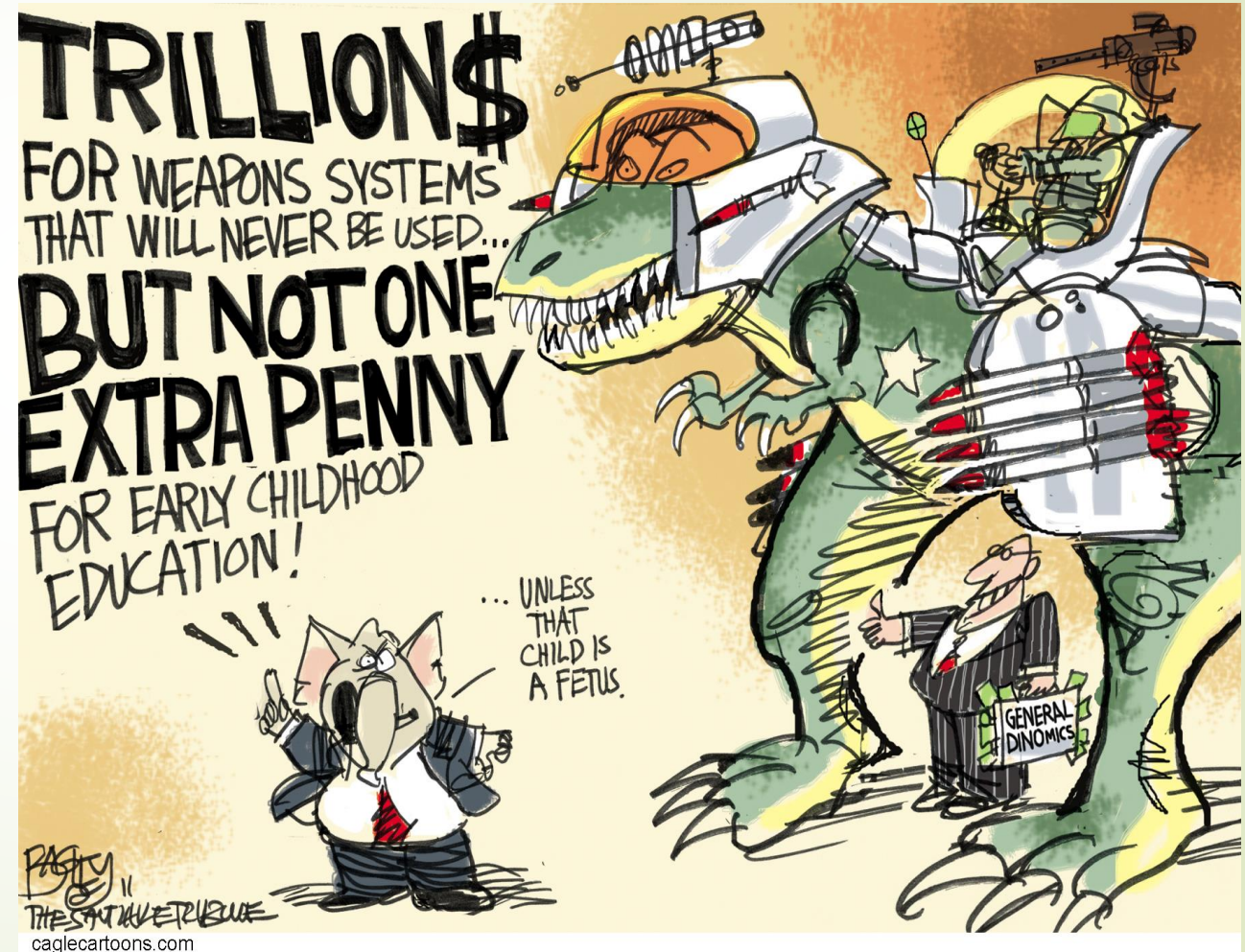


- **It's simply not true.** From the time of George Washington and Alexander Hamilton, we have always had an industrial policy.
- What we don't like to admit is our industrial policies and the ensuing growth was based on high tariffs, defending slavery, building up our military, and wars of conquest.
- In short, we have a **racialized military-industrial policy**



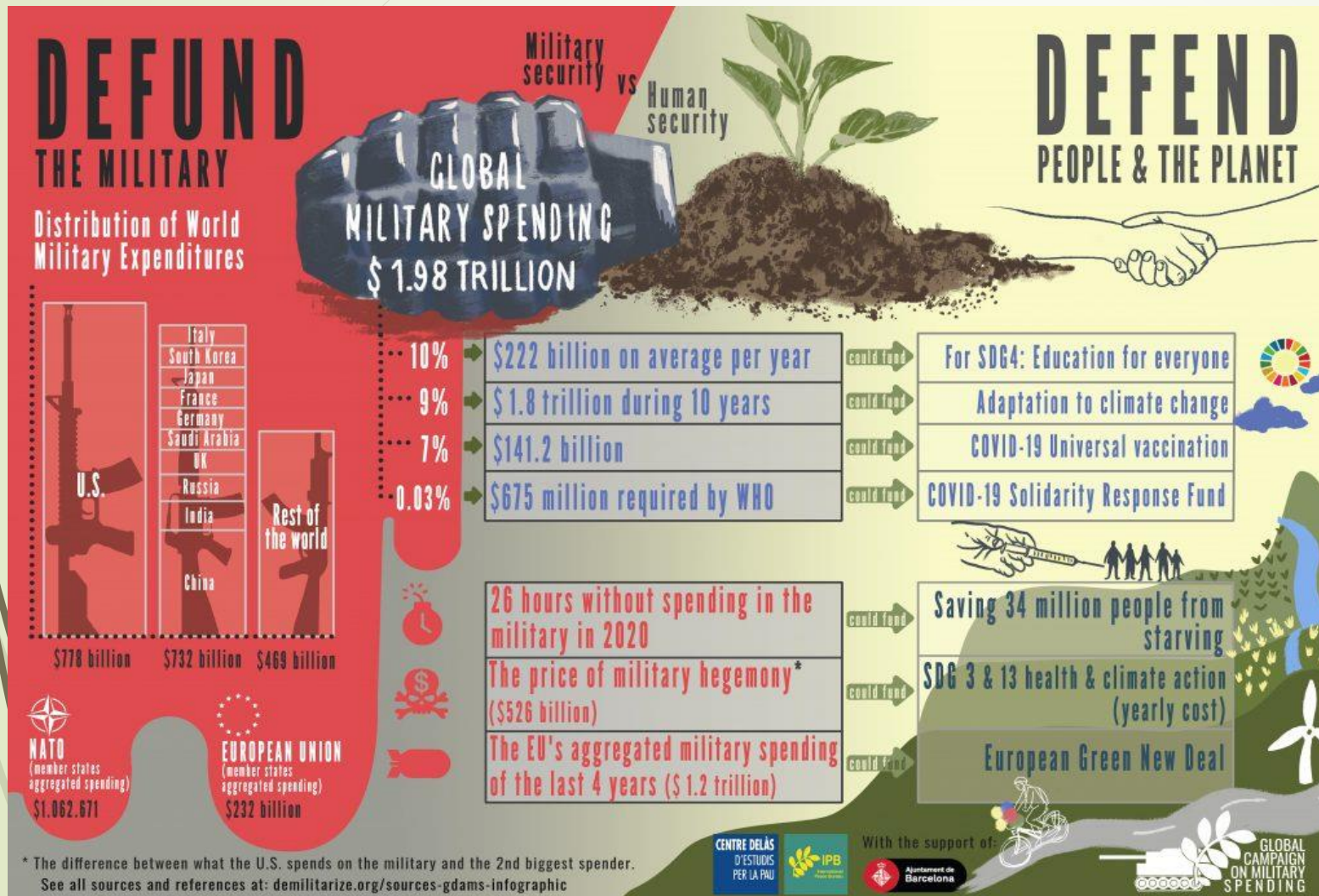
# If you want the best weapons in the world, we're your guys. But human welfare? Not us.

- ▶ **How many U.S. workers rely on military money for their paychecks?** Depending on what you count, it's between **4 and 8 percent**. And no surprise: it's unduly **white, male and older**
- ▶ The **shrinking of manufacturing** over 40 years, however, has caused problems. Now **the DoD wants to shape the workforce to its liking even more.**
- ▶ **But weapons production is not a big multiplier.** Money spent on clean energy generators and mass transit is **much better at creating spinoff jobs.**





# Getting to Good Policy: We Have A Tough Fight



- All economies are **three-sided**. They require buyers, sellers and a cop.
- The rightwing likes for you to think there are only two, buyers and sellers. **They like to hide the cop.**
- Liberals like you to think the cop is **Officer Friendly and a social worker** at home and the Peace Corps (with a few good guy troops) abroad.
- But to make this deep transformative shift, we will need **a lot of allies, including most liberals and many business owners** along with labor, civil rights and social justice allies.



# It's Not Just Militarism. Burning carbon for most processes is harmful and deadly in the end. Can it be stopped or reversed?

Hopefully! That's why a **green** industrial policy aims at **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 to be **manufactured** as part of the **Green New Deal**, and they keep getting better and more diverse. But here's the rub: **Our current manufacturing base is lacking in capacity.**



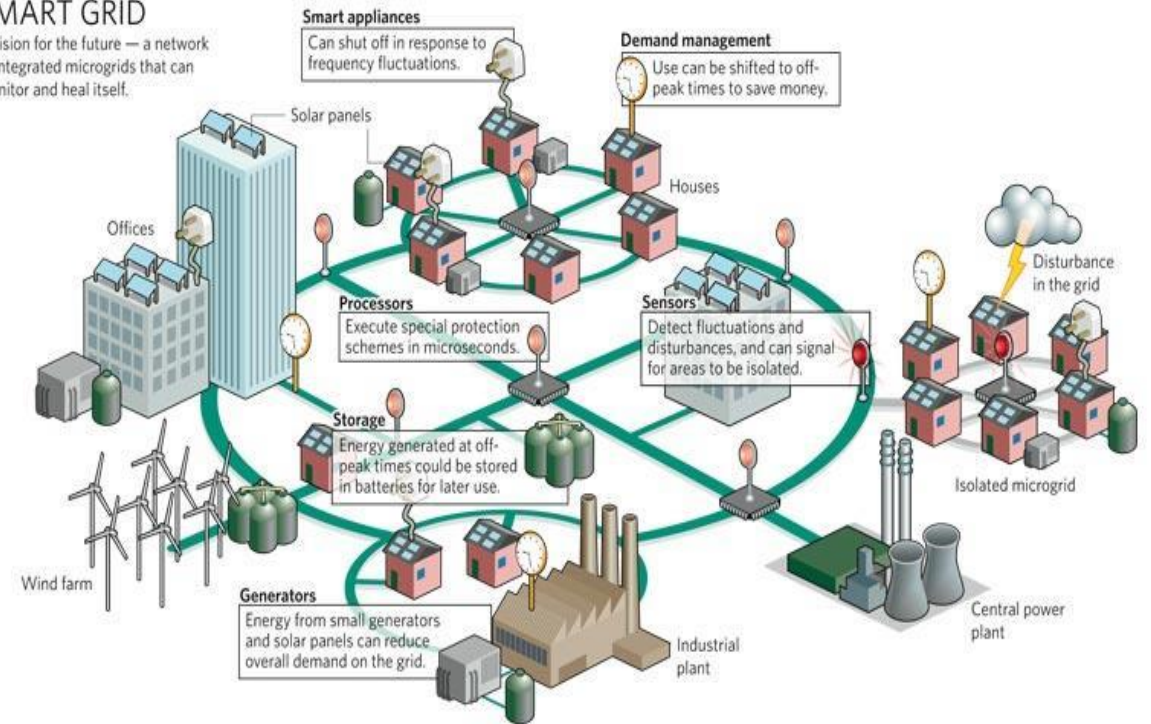
# First, We Need an Industrial Policy Requiring Us to 'Think Big'

Major global problems require **strategic solutions** and **deep structural reform** at all levels--and 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.
- '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.
- **Smart Grids** must be globally connected—the Sun is always shining and the wind is always blowing somewhere.
- 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.
- 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**.

## SMART GRID

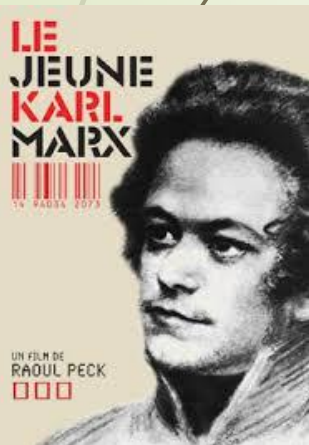
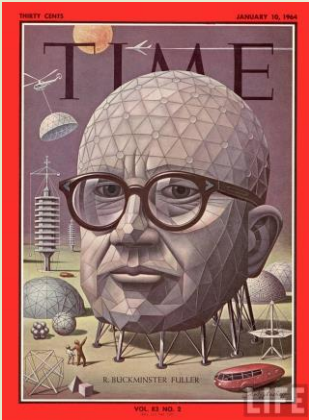
A vision for the future — a network of integrated microgrids that can monitor and heal itself.





# Innovation Is a Key to High Road Manufacturing

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.
- Worth Noting: **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.



POLLUTION IS NOTHING  
BUT THE RESOURCES WE  
ARE NOT HARVESTING. WE  
ALLOW THEM TO DISPERSE  
BECAUSE WE'VE BEEN  
IGNORANT OF THEIR VALUE.

R. Buckminster Fuller

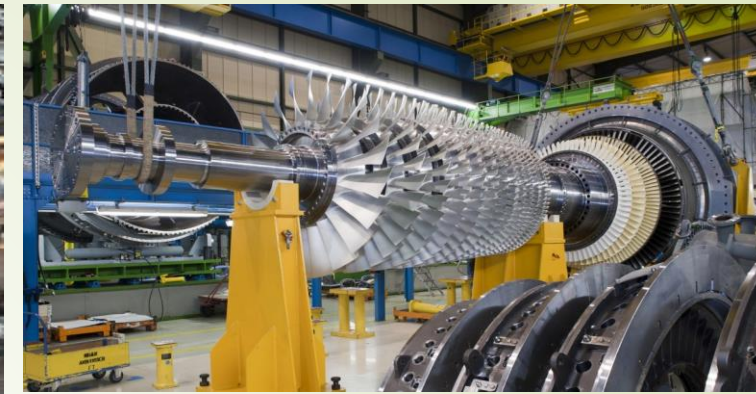
AZ QUOTES



# How Does Green Manufacturing Work in Major Industry?

In **high road manufacturing** of the Green New Deal, **waste can approach zero**, because, as Fuller noted, **high design can approach infinity**.

- In green industrial design, **'waste' is an alien concept**, since any materials left over are cycled back into raw materials. Above, 'scrap' steel is fashioned to **new turbines**. In the middle, plastic waste becomes **new street pavement**. Below, 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. **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





# Green Transportation is Mass and Public.

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

- Eurostar **high-speed rail** (top right) is powered by the grid between 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 tourists areas (or all day passes). Middle left, chain of barges carries coal, ore, and grain through locks at dam sites at much less cost and pollution.
- All this make for **millions of manufacturing jobs**. It will also make many of those jobs accessible to those without private transport.





# What Can Make Housing 'Green'?

Low-cost structures in socially critical 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 House' and backyard commons in LA
- Center, back alley commons and gardens
- Upper Left, 'Tiny House' homes for low-income rent or purchase.
- **Thousands of jobs** for home rebuilders of all skill levels





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

**No, just the opposite.** Current practices of 'factory farms' **are destroying the soil** and degrading animal, grain and vegetable products. **See loss of topsoil in lower right.**

- 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,** interconnect with similar farms. 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 and **harming farm workers.**





# The Green New Deal Is Also About Our Health

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



- Barry Commoner's **4 Laws**:
- Everything is connected to everything else.
- Everything goes somewhere.
- There is no free lunch
- 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 and reducing pollutants in poor and minority neighborhoods.**

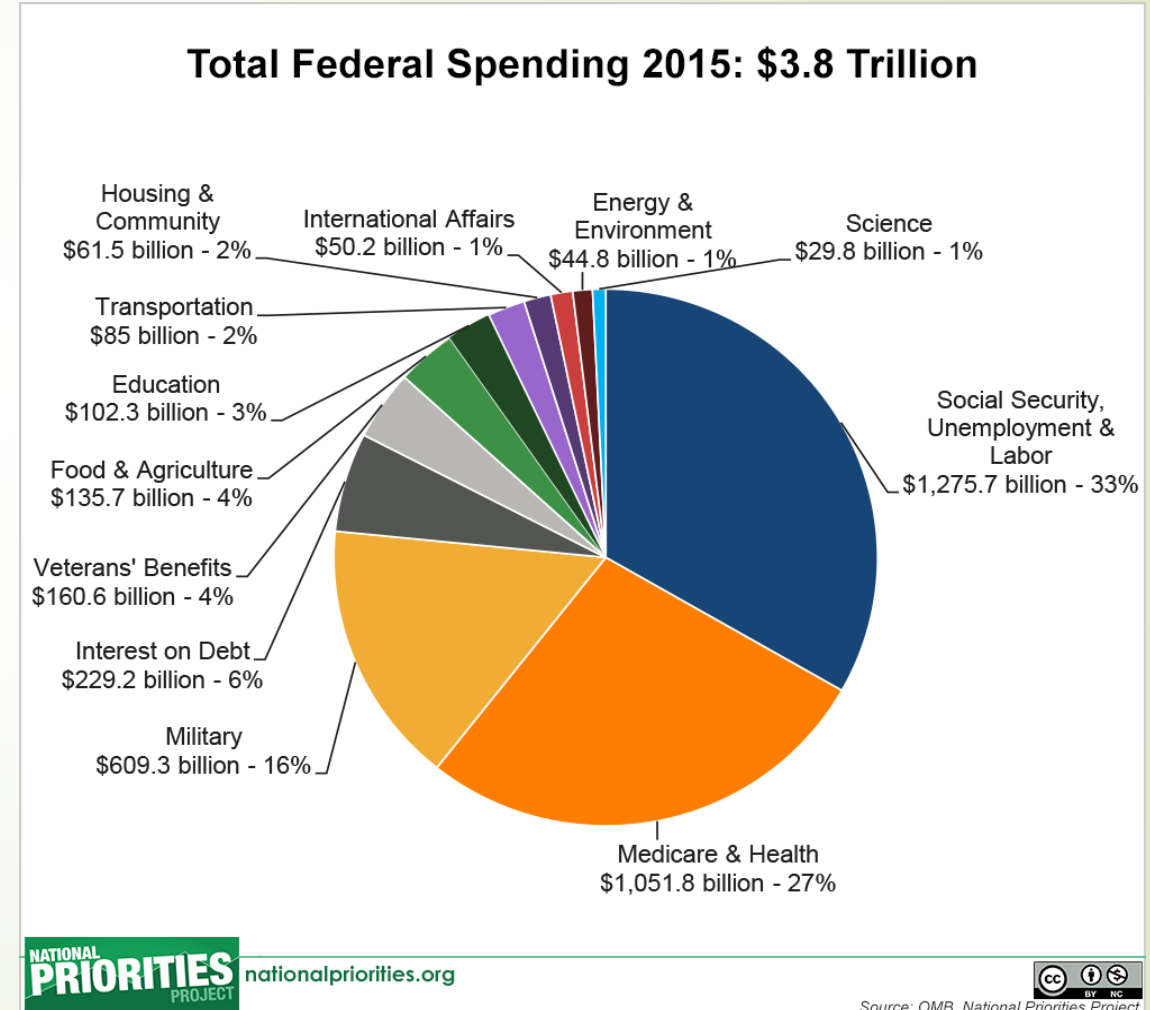




# We Can't Afford it! Who Will Pay for It?

This is the first question always thrown at GND supporters. The claim is \$50 to \$100 Trillion over 10 years. The answer is both simple—'**Yes, we can!**'—and more complicated. 'We will have to make some major changes.. But they are all to the good!'

- **Some funds already spent would go down.** For example, full employment does away with much of welfare and jobless insurance.
- Funds are already allocated to housing, transport, and energy. They would be **re-designed and repurposed.**
- **The big change:** Military industrial policy would be phased way down for **a green industrial policy.** The GND must be **anti-militarist.**
- Debt service could be reduced with **public banks and a FT tax** on Wall St.
- Most important, Our adversaries argue GND outlays are **handouts to people of color**, largely lower-ranked workers. Actually, they are investments that **return far more value over time.** They actually add to government and private revenue in the longer run.
- Given a sovereign currency and wealth fund, **we can lend ourselves as much money as needed**, assuming it largely generates new wealth, directly or indirectly.







# Summing Up: The Core 7-Point Platform

*Clean energy and green industrial revolution discussions can go on, but here are the key elements*

- **Transition away from militarism and 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.
- Increased **innovation and high design** for all products and services.
- **Redesign and rebuild industries for zero waste**. Longer-lasting stuff with less energy. Apply it to mass transit. Hire inclusively where the need is greatest.
- **Redesign new housing and retrofit existing stock** for lower energy, better materials, and thriving communities. **Start where the needs are greatest**, and build upward and outward.
- Transition from agribusiness factory **farms to organic, sustainable family-sized farms**. Make crops more regional to allow for getting many foods locally. Care for farm workers.
- **Curb the production of poisons toward zero**, and remove pollutants from human consumption

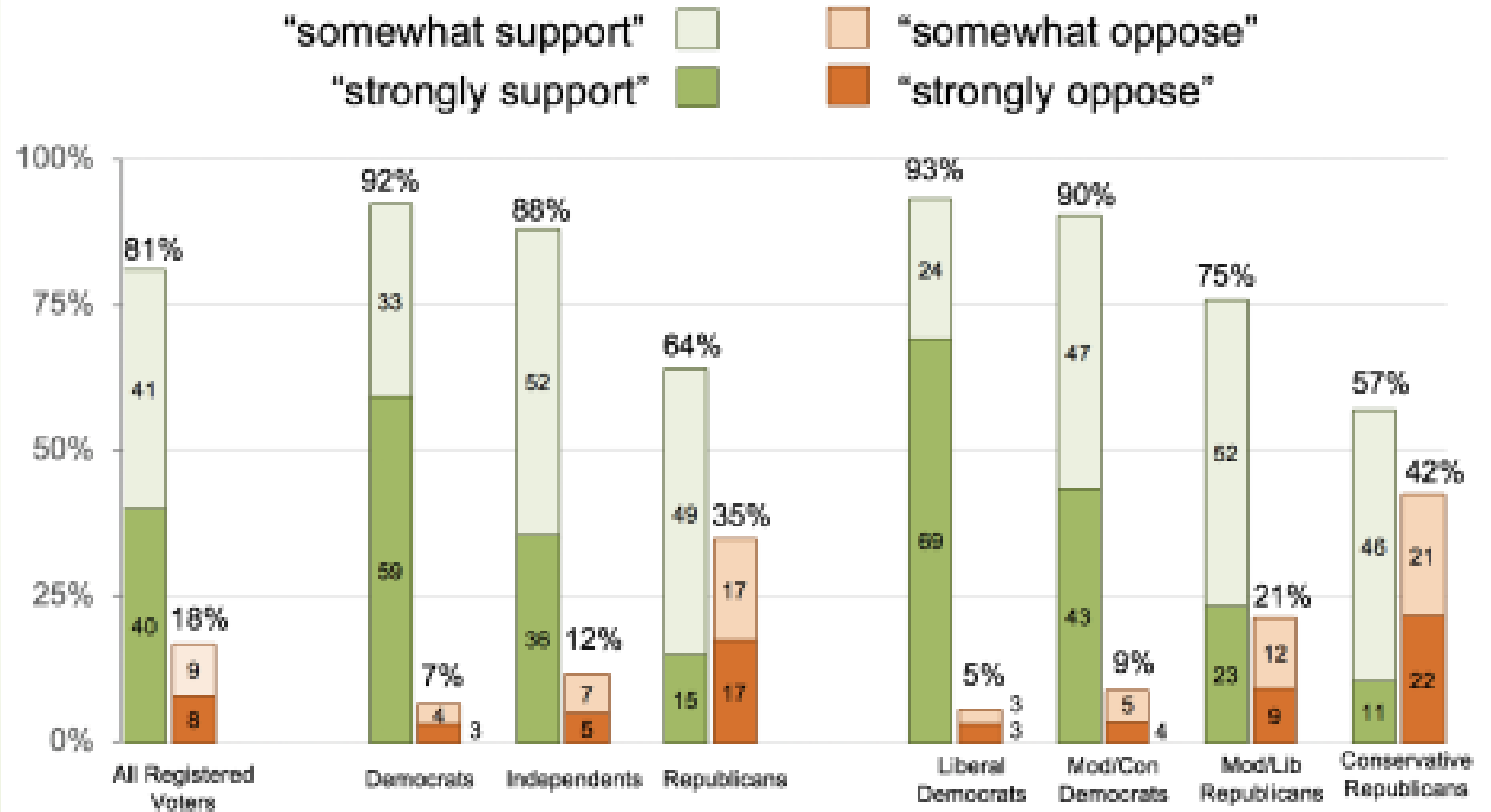


# What About Political Will?: We Need an Electoral Arm.

*We Are Still a 'Militant Minority' Needing To Connect with a Progressive Majority*

- The 2<sup>nd</sup> column gives us a **majority** only among Democratic voters
- The last two columns shows **the GOP are our adversaries**, but not without weak spots.
- **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.

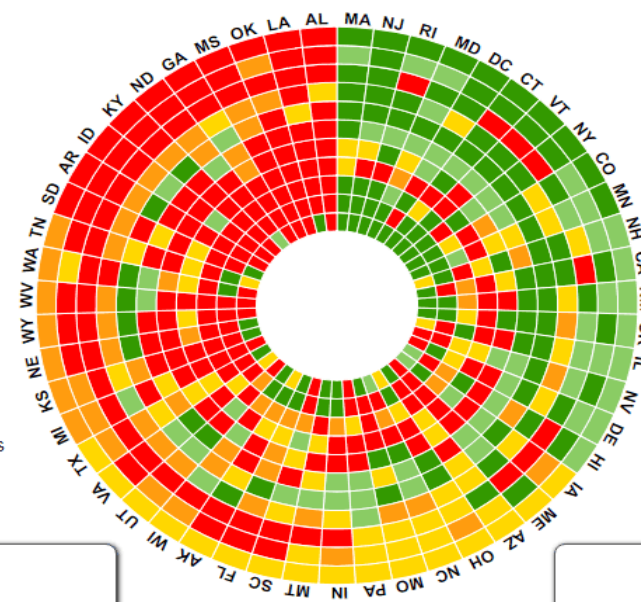
## 2019 State Solar Power Rankings Report

### 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>B</b> RPS Law	<b>C</b> Solar Rebates
<b>A</b> Solar Carve Out	<b>C</b> State Solar Tax Credits
<b>A</b> Electricity Price	<b>A</b> Performance Payments
<b>A</b> Net Metering	<b>A</b> Sales Tax Exemption
<b>A</b> Interconnection	<b>A</b> 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

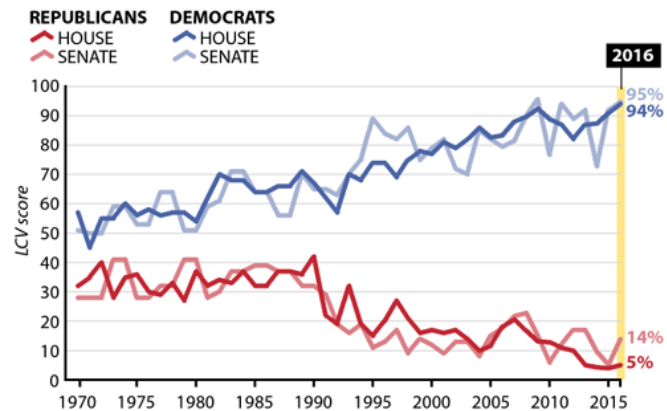
➤ This is 2019. We're still only a counter-hegemonic bloc but we're growing. **The relation of forces must shift and the opposition must be split.** That requires organized voters who show up.

## 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



# The Last Word: We Can't Afford **Not** to Fund and Implement A Green Industrial Policy..

Federation for a  
Manufacturing  
Renaissance

<https://fed4mr.org/>

- 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?

