

ENVIRONMENTAL JUSTICE



SCIENCE **AND** FAITH

God, The Creator



**“And God saw every thing that he
had made, and, behold, it was
very good...”**

Genesis 1:31 (KJV)

Its The LAW! (In Fact, Its the First Law)

**Energy is
neither
created nor
destroyed, it
just changes
form.**





Radio Waves



Microwaves

Terahertz Radiation



Infrared Light (IR)



Visible Light



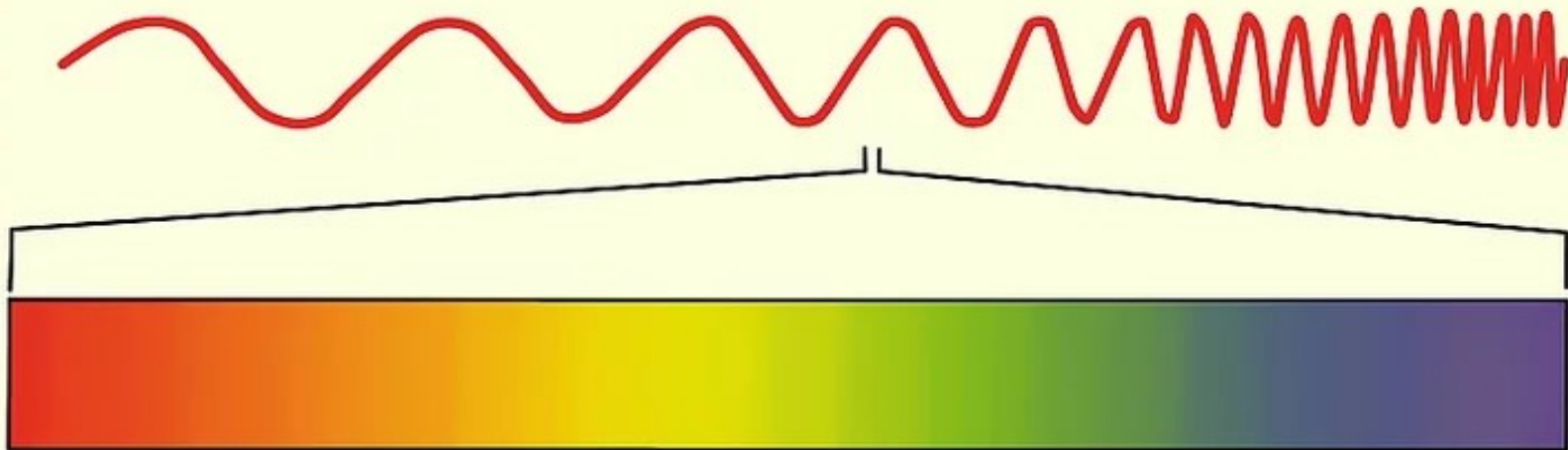
Ultraviolet Rays (UV)



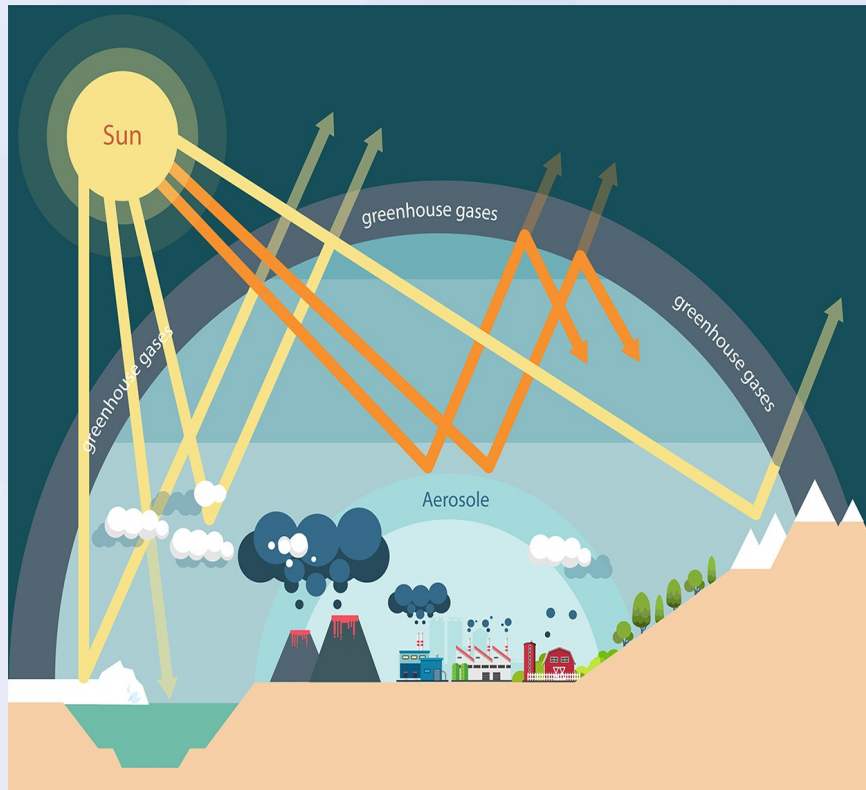
X-Rays



Gamma Rays



The Greenhouse Effect



The Greenhouse Gases

Methane
(CH₄)

Nitrous
Oxide
(N₂O)

Carbon
Dioxide
(CO₂)

Ozone
(O₃)

Chlorofluoro-
carbon
(CFC)

Carbon
Monoxide
(CO)

Sulphur
Dioxide
(SO₂)

The Four Laws of Ecology

- **Everything is connected to everything else.**
- **Everything must go somewhere.**
- **Nature knows best.**
- **There is no such thing as a free lunch**

Barry Commoner, 1917 - 2012

Photo (c) Elena Elisseeva/Shutterstock Images
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So, What's This Got To Do With Cows?



The Hidden Cost of Hamburger

**Table Talk 1: Where did you see examples of
Commoner's Four Laws of the Ecology demonstrated in
the video?**

The Four Laws of Ecology

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Rollback of Federal GHG Regulations



<https://www.nytimes.com/2019/08/29/climate/climate-rule-trump-reversing.html>

Paris Agreement

- ▶ Paris Agreement at United Nations Framework Convention on Climate Change
- ▶ Goal - to keep global average temperature increase well below 2 degrees Celsius above pre-industrial levels
- ▶ Original US Commitment:
 - ▶ Achieve economy-wide target of reducing GHG emissions by 26-28% below 2005 baseline levels by 2025
 - ▶ Make best efforts to achieve 28% reduction
- ▶ June 1, 2017 Announcement of US Withdrawal
 - ▶ President Trump states, *"will undermine (the U.S.) economy," and "puts (the U.S.) at a permanent disadvantage"*
 - ▶ Earliest possible effective withdrawal date is four years after agreement came into effect in the US (11/4/2020)
- ▶ Resulted in formation of the US Climate Alliance

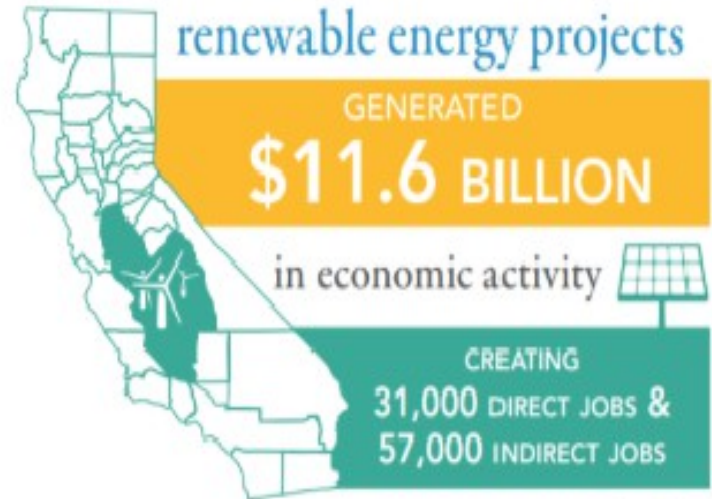
US Climate Alliance

- ▶ Bipartisan coalition of 25 governors
- ▶ Current Members
 - ▶ CA, CO, CT, DE, HI, IL, ME, MD, MA, MI, MN, MT, NV, NJ, NM, NY, NC, OR, PA, PR, RI, VT, VA, WA, WI
 - ▶ <https://www.usclimatealliance.org/>
- ▶ Members commit to:
 - ▶ Implement policies that advance the goals of Paris Agreement (i.e., reduce GHG by at least 26-28% below 2005 by 2025)
 - ▶ Track and report progress to the global community in appropriate settings including when world convenes to take stock of the Paris Agreement, and
 - ▶ Accelerate new and existing policies to reduce carbon pollution and promote clean energy deployment at the state and federal level





Progress in California

- ▶ California Cap and Trade in place since 2012
- ▶ As of 2020, has reduced CA GHG inventory to 1990 levels
- ▶ New target to reduce emissions to 40% below 1990 levels

FROM 2002-2015 SAN JOAQUIN VALLEY
renewable energy projects



CALIFORNIA'S CLIMATE POLICY PORTFOLIO

- | | |
|---|---|
|  Double building efficiency |  Cleaner freight and goods movement |
|  50% renewable power |  Slash potent "super-pollutants" from dairies, landfills and refrigerants |
|  More clean, renewable fuels |  Cap emissions from transportation, industry, natural gas, and electricity |
|  Cleaner zero or near-zero emission cars, trucks, and buses |  Invest in communities to reduce emissions |
|  Walkable/Bikeable communities with transit | |

Northeastern/Mid-Atlantic States - Regional Greenhouse Gas Initiative (RGGI)

Regional Greenhouse Gas Initiative

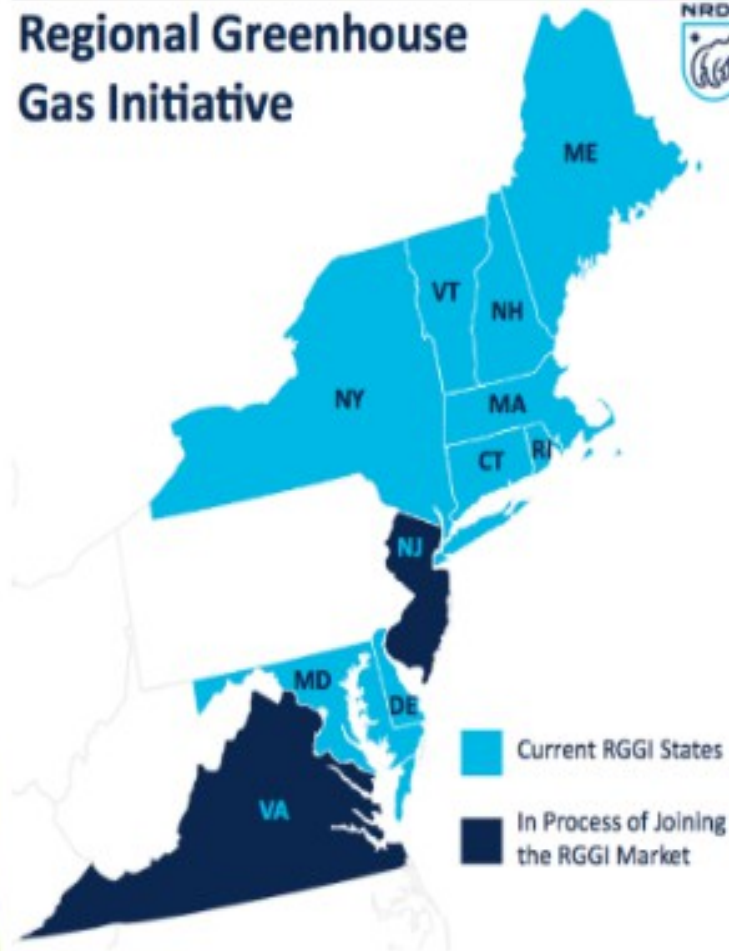
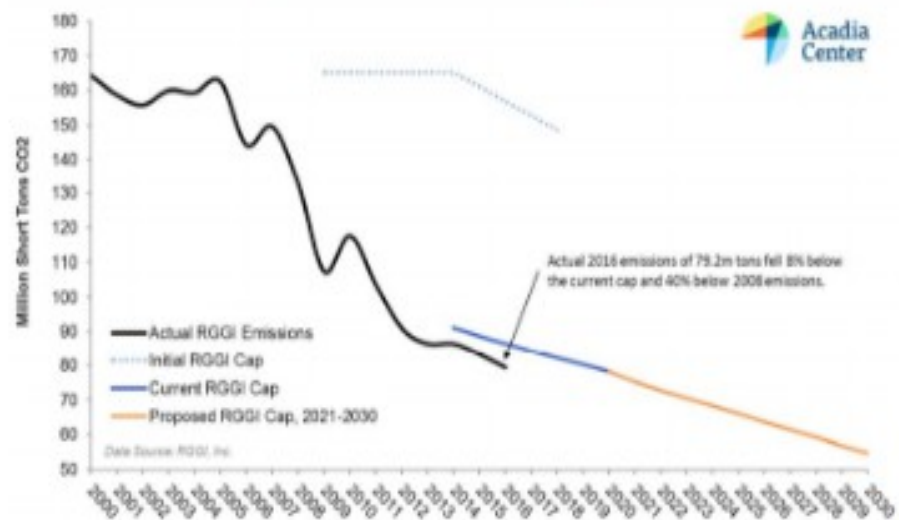


Figure 1: RGGI Caps and Actual Emissions



“The buildup of greenhouse gases we experience today occurred in the absence of human understanding; our ancestors were innocent of the damage they were doing. That can tempt us to believe that global warming is something that is happening *to* us - that we are victims of a fate that was determined by actions that precede us. If we change the preposition, and consider that global warming is happening *for* us - an atmospheric transformation that inspires us to change and reimagine everything we make and do - we begin to live in a different world. We take 100% responsibility and stop blaming others. We see global warming not as an inevitability, but an invitation to build, innovate, and effect change, a pathway that awakens creativity, compassion, and genius. *This is not a liberal agenda, nor is it a conservative one. This is the human agenda.*”

- Paul Hawken, Former Executive Director of Project Drawdown

Project Drawdown TED Talk

Table Talk 2. Care for the Creation. What practices can you develop that will make your food choices less impactful on the Creation?



And of his fullness
have all we received,
and grace for grace.

John 1:16

