



Universal Electrification

**WHAT CAN EACH ONE OF US DO TO
HELP ARREST CLIMATE CHANGE?**

**RAPIDLY END THE USE OF
OIL AND GAS!**





We Are the End Users

Our climate is warming because of human activity. The burning of fossil fuels to energize our lives is a key contributor to this urgently serious problem.

We can help reduce warming by ending our own use of these fuel sources. In California, natural gas for heating homes and hot water and fueling cars, is the most commonly used fossil fuel.



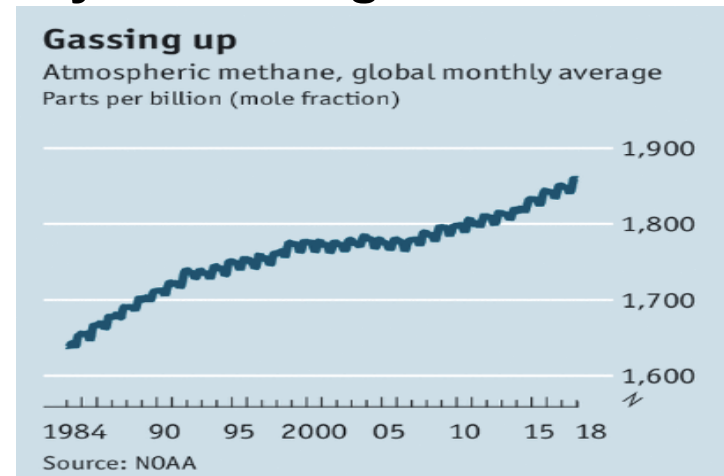


The Problem With Natural Gas

Natural gas produces only half as much CO₂ per unit of energy as coal. But natural gas is mostly methane and methane leaks are 85 times more effective at trapping heat than CO₂ (global warming potential or GWP).

Methane concentration has been steadily increasing in the atmosphere

- From agricultural practices
- Decay of organic waste
- Loss from melting of permafrost
- Leaking from oil and gas wells and pipelines.



We need to reduce methane emissions as soon as we can.





Methane Leakage from Fossil Fuel is Production is a Nation-wide Problem

Where the natural gas industry is leaking methane

Methane leaks occur at every step and stage from production to distribution. These estimates are from 2016.

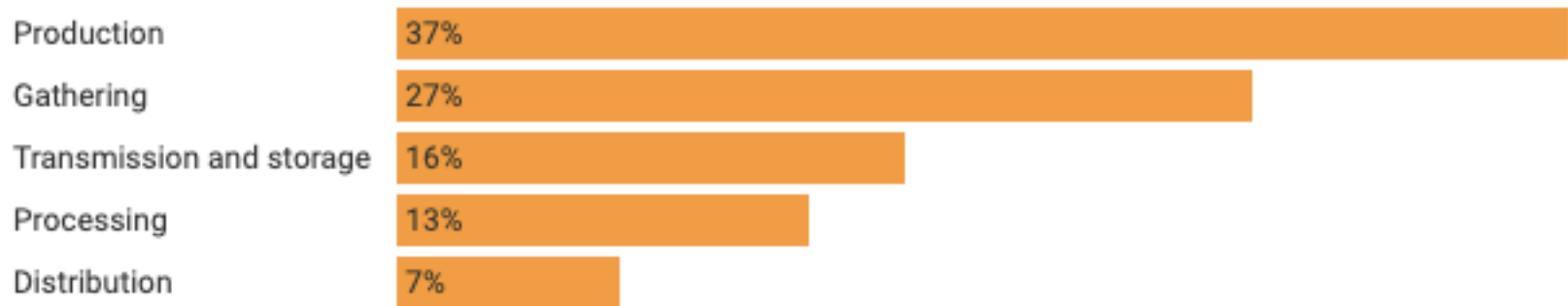


Chart: The Conversation, CC-BY-ND • Source: [Environmental Protection Agency](#) • [Get the data](#)

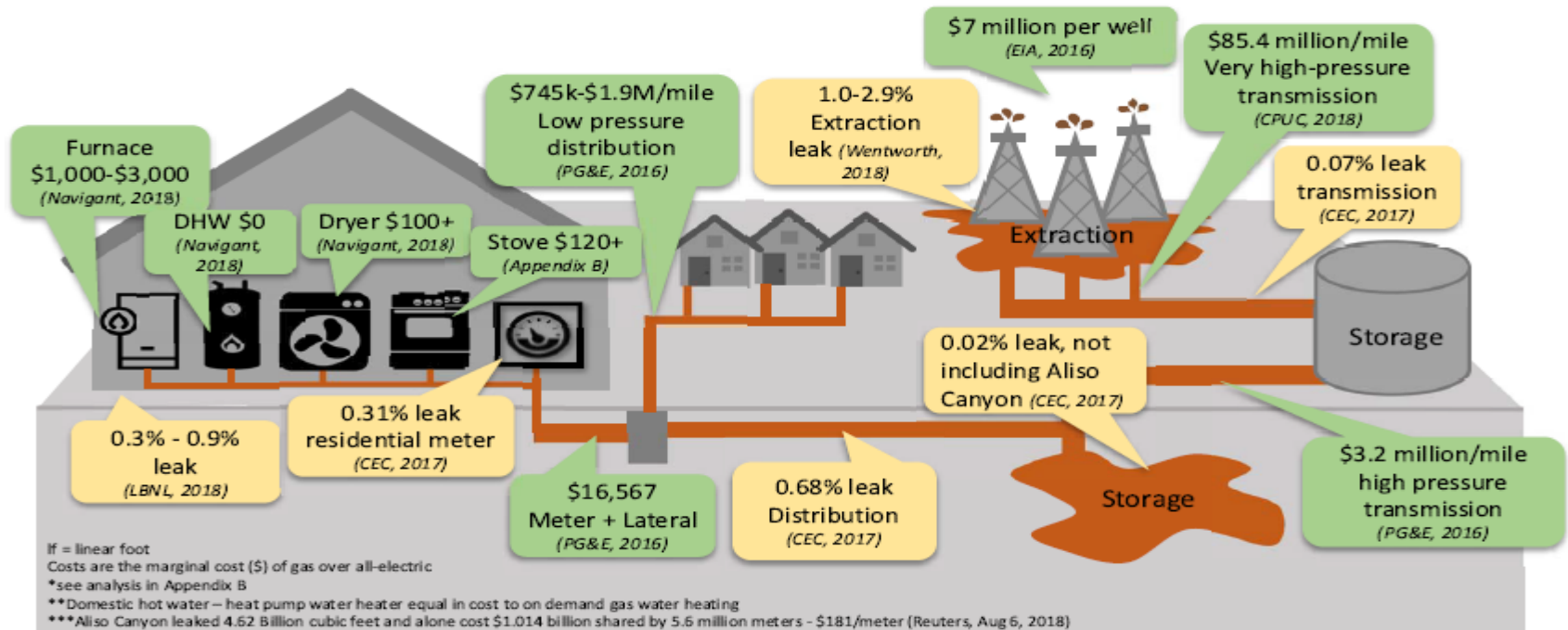
The best solution is to stop using fossil fuels and transition to clean energy.





Gas Leaks in Production and Transmission and Adds Cost to Construction

California's Natural Gas Leaks at 2.4%-4.3% and Adds ~\$40,000/House in Construction Costs





As Individual Fossil Fuel Users, What Can We Do?

Electrify everything we use with clean, 100% renewable electric energy.

California's electricity portfolio is currently between one third and one half renewable. Some carriers give you the ability to opt-up to 100% renewable, usually solar.

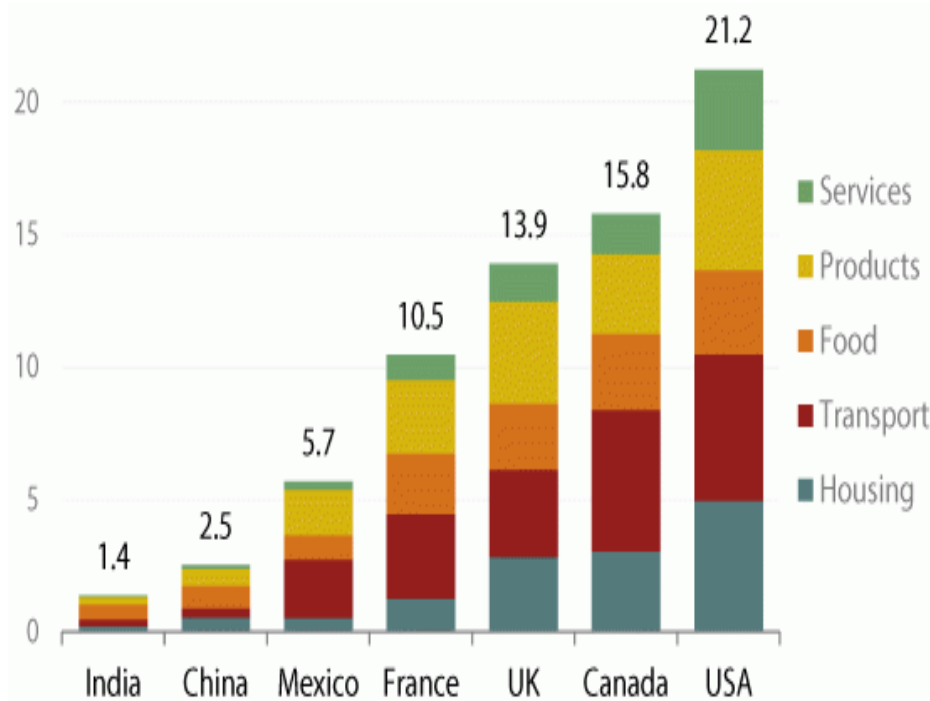
By switching to 100% renewable, you can immediately make a difference in your GHG production.

Making the transition to all renewable electric driving and homes allows us all to join the fight to reduce the warming of our planet.





What We Can Do, Action 1:



Personal Carbon Footprints: t CO₂e/capita (2004)

If you drive – switch to electric, charged at home, then move forward to further electrify your home.





What We Can Do, Action 2:

Electrify your house (and all buildings) with clean, 100% renewable energy.

Use heat pumps

By extracting heat from the outside air, heat pumps only need about 1/3 as much electricity as resistance electric appliances.

Electric heat pump heating and air conditioning

Electric heat pump hot water heaters

Electric heat pump clothes dryers.

Electric or induction cooking

Electric fireplaces





Partnering

Partner with your city



FEB
07

East Bay Electrification Expo:
Fight Climate Change in a
Clean Energy Home!

by Ecology Center

Berkeley phases out
gas infrastructure in
new buildings as of
January 2020.





Join With Other Organizations



**SIERRA
CLUB**



**BUILDING
DECARBONIZATION
COALITION**



LWVC Climate Change Task Force



Education

Climate Change is NOW

Earth's climate is now changing faster than at any point in the history of modern civilization, primarily as a result of human activities. A 2018 UN report warned that we have 12 years to limit world catastrophes.

We must act now to prevent truly catastrophic consequences. But what can we do? Inside are significant actions to take now.

Join Our Climate Team

The League of Women Voters has climate change as a key priority.

Join our local League's Climate Change Team. We meet the third Tuesday of every month at 7:30. Go to lwvbae.org, or call 510-843-8824.

Come and make a difference!



Fight Climate Change at Home

But How?



WHAT CAN YOU DO TO FIGHT GLOBAL WARMING?

ELECTRIFY EVERYTHING! STOP USING FOSSIL FUELS!

Make a transition to all-electric homes and vehicles. Energize your life with renewable power produced by solar and wind.

California's increasingly clean electric grid gives us a powerful tool to reduce the green house gases we individually produce.

TRANSFORM YOUR TRANSPORTATION:

Join the movement to zero carbon cars or other gas-free transport.

TRANSFORM YOUR HOME:

- Convert your hot water heater to an electric heat pump.
- Convert your space heating to electric heat pump and get free air conditioning.
- Convert your clothes dryer to a heat pump
- Replace your gas stove with electric.
- Replace your gas fireplace with electric.

HERE IS A PRIORITIZED ROADMAP FOR MAKING THE TRANSITION AWAY FROM NATURAL GAS:

1. CHOOSE 100% RENEWABLE ELECTRICITY.

Opt up to 100% renewable electric power through your local provider or use your own rooftop solar.

2. BUY A PLUG-IN ELECTRIC CAR.

If you need to own a car, this is the single biggest reduction you can make on your carbon footprint.

3. MAKE A HOME ELECTRIFICATION PLAN.

Be ready when your heater or hot water heater fails. Identify installers and appliances ahead of time.

4. SAVE DURING YOUR TRANSITION.

The less carbon produced the better. Habits that save energy are extremely important!

A CITIZEN'S GUIDE TO REDUCING ENERGY WASTE

tinyurl.com/CitizensGuide1

The League of Women Voters Sponsors The ENVIRONMENTAL CONCERNS SPEAKER SERIES:

tinyurl.com/environspeakers
Come and hear these important talks.

SAVE MONEY AND BECOME AN INFORMED ENERGY CONSUMER:

1. CALCULATE YOUR CARBON EMISSIONS TO UNDERSTAND REDUCTIONS.

tinyurl.com/calculateyourcarbon

2. CALCULATE SOLAR PANEL COSTS AND REBATES:

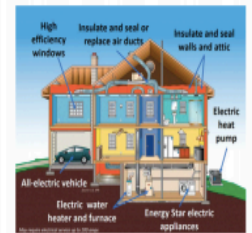
As you use more electric power, solar is a valuable option and it can make your home energy independent!

tinyurl.com/calculateyourcarbon

3. RESEARCH ELECTRIC VEHICLES + REBATES HERE:

tinyurl.com/electriccars1
tinyurl.com/SierraClubEV
tinyurl.com/ZappyRide

As California makes this transition, more rebates will become available. Watch the PG&E Marketplace for information.





Benefits of Electrification

Electrification is the future. By electrifying our homes and cars, we invest in our future, not our past.

Electrifying your home will clean its' air. Indoor air can be very dirty, with NOX emissions produced almost equivalent to the smog from all of the light duty vehicles in California. Invest in your health!

Electrification can save you money after your transition.

