COFFEE

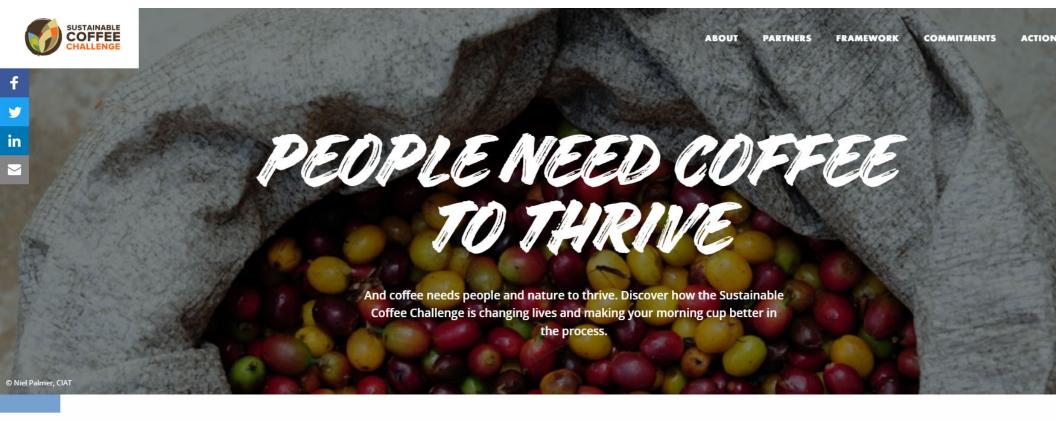




Steve Stelzer AIA, LEED® AP

Program Director,
Public Works & Engineering, Code Enforcement
Green Building Resource Center

4//14/20



The coffee we drink depends on the health, prosperity and well-being of 25 million coffee producers, 10 million hectares of coffee farms, and the continued ability of nature to sustain them.

The Sustainable Coffee Challenge is a collaborative effort of companies, governments, NGOs, research institutions and others to transition the coffee sector to be fully sustainable. Challenge partners are urgently working together to increase transparency, align around a common vision for sustainability and collaborate to accelerate progress toward those goals.

Conceived by Conservation International and Starbucks and launched during the 2015 Paris climate meetings with 18 founding partners dedicated to coffee sustainability, the Challenge aims to stimulate greater demand for sustainable coffee. The movement has since grown to more than 100 international partners.

Are we reaching a TIPPING 2000 POINT?

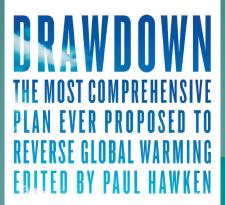
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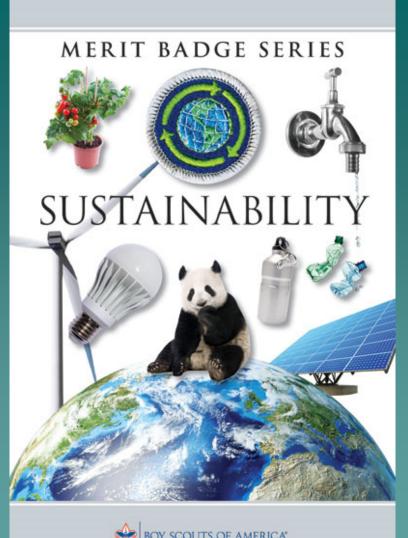


The TIPPING POINT How Little Things Can Make a Big Difference MALCOLM GLADWELL "A fascinating book that makes you see the world in a different way," - FORTUNE

2017





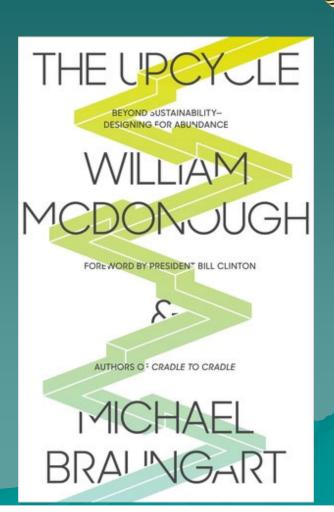




I think so...

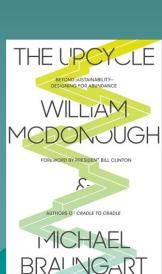


Of all the things humans might do with carbon, just about the worst is burning it - exactly what people have been doing for the past century.



52% of the anthropogenic carbon dioxide generated since 1850 resides in our air (while roughly the other half is absorbed in our oceans, causing acidification).

Is this a problem?



→ SHARE







Lawyer for Melania Trump Threatens Defamation Suits Against News Outlets



How Donald Trump Blew Up the 'Gaffe'



Risky Baking: It's Hard to Make a Perfect Bagel Without Lye



BY DEGREES America's First Offshore Wind Farm May Power Up a...

Sunday Review

DATA POINTS

Think It's Hot Now? Just Wait

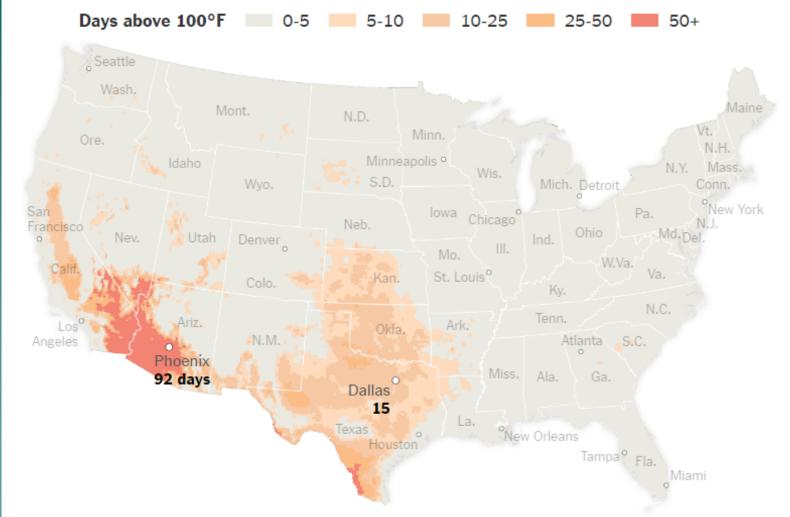
By HEIDI CULLEN AUG. 20, 2016

July wasn't just hot — it was the hottest month ever recorded, according to NASA. And this year is likely to be the hottest year on record.

Fourteen of the 15 hottest years have occurred since 2000, as heat waves have become more frequent, more intense and longer lasting. A <u>study</u> in the journal Nature Climate Change last year found that three of every four daily heat extremes can be tied to global warming.

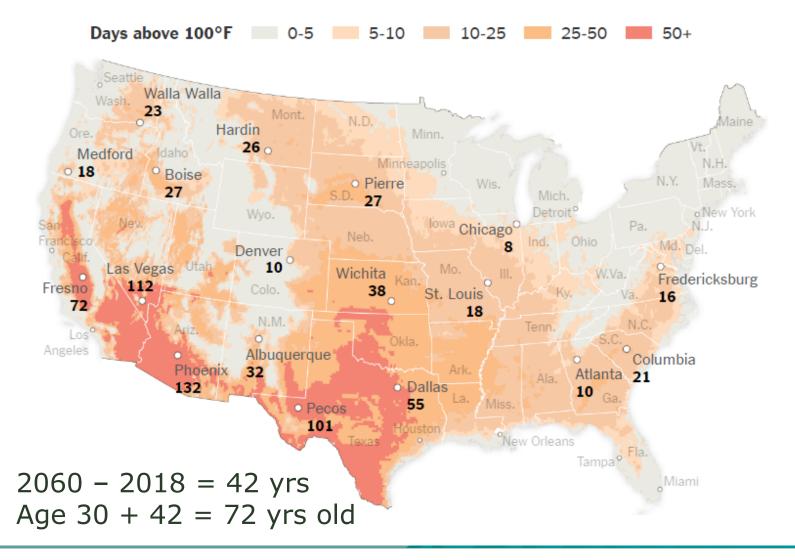
This map provides a glimpse of our future if nothing is done to slow climate change. By the end of the century, the number of 100-degree days will skyrocket, making working or playing outdoors unbearable, and sometimes deadly. The effects on our health, air quality, food and water supplies will

1991-2010 average





By 2060





ENERGY MANAGER TODAY

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Do You Have an Insulation Strategy?

August 4, 2016 By Carl Weinschenk



Image: Chicagosprayfoam, http://www.stevebeckerphotography.com, http://www.ChicagolandSprayFoam.com

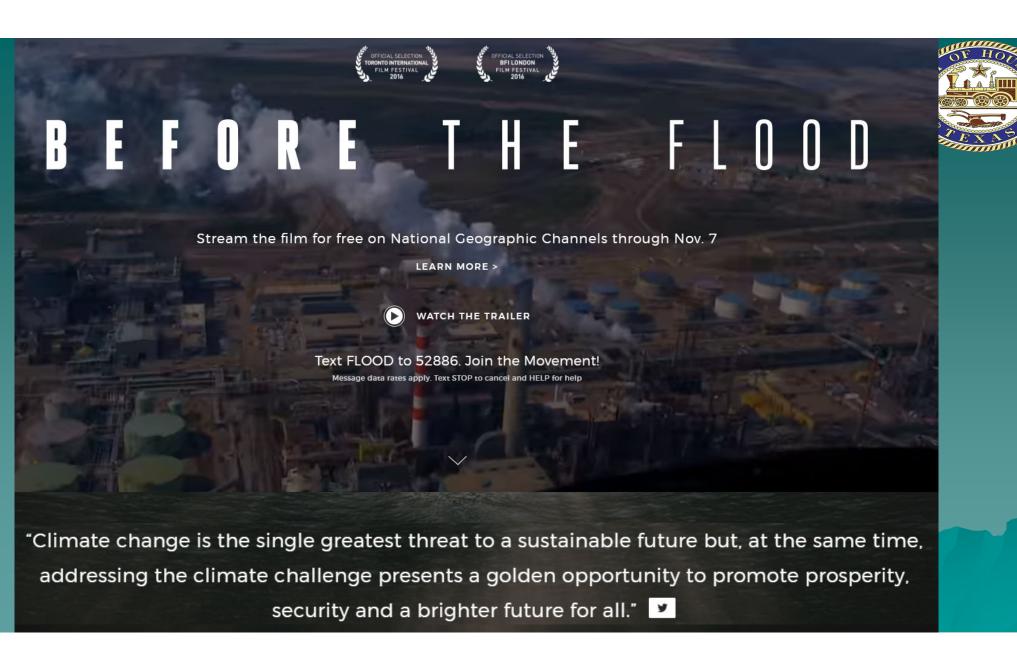
Considering its importance, insulation doesn't seem to get as much attention as it deserves.

This appears to be changing, at least to some extent. Recently, there have been changes to insulation requirements in the both the country's biggest state and biggest city -California and New York City. There also is a new standard released by the Green Seal.

Since insulation goes into just about every structure, it is almost needless to say that it is a big business. And it is growing. The Freedonia Group earlier this week published a study that predicts that global demand for insulation will rise 3.7 percent annually to reach 26 billion square meters of R-1 measure of insulation's thermal efficiency — in 2020.

In New York City, there will be changes to the Energy Conservation Code that take effect on October







WORLD . ENVIRONMENT

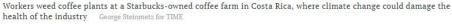
Your Morning Cup of Coffee Is in Danger. Can the Industry Adapt in Time?











By JUSTIN WORLAND/ALAJUELA, COSTA RICA June 21, 2018

Howard Schultz wants to know if I drink coffee. The Starbucks boss is sitting on a balcony overlooking the company's leafy farm in the Costa Rican province of Alajuela, where I'm told the coffee-harvested and roasted on-site-is a must-



You May Like

by Outbrain ID

Why the NAD+ Pill Could Change How We Age





http://time.co m/5318245/c offeeindustryclimatechange/





coffee+climate change

About 208,000 results

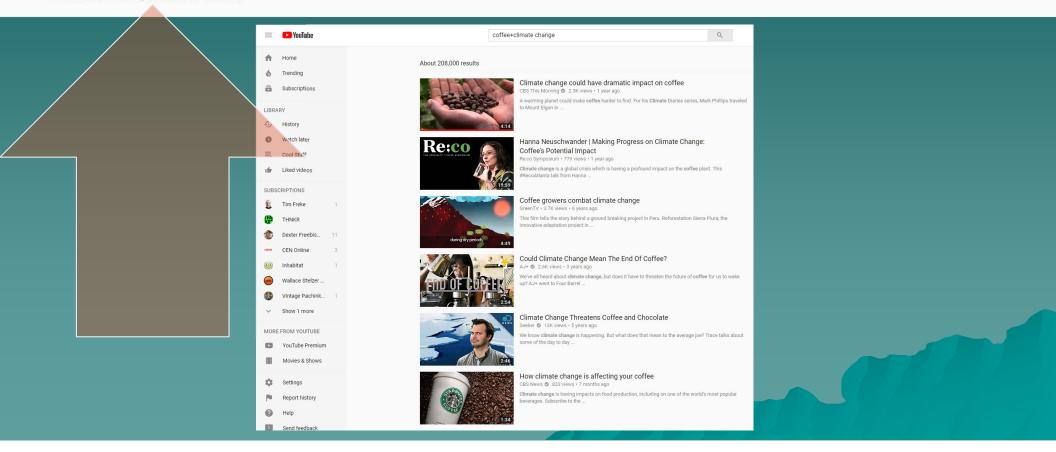
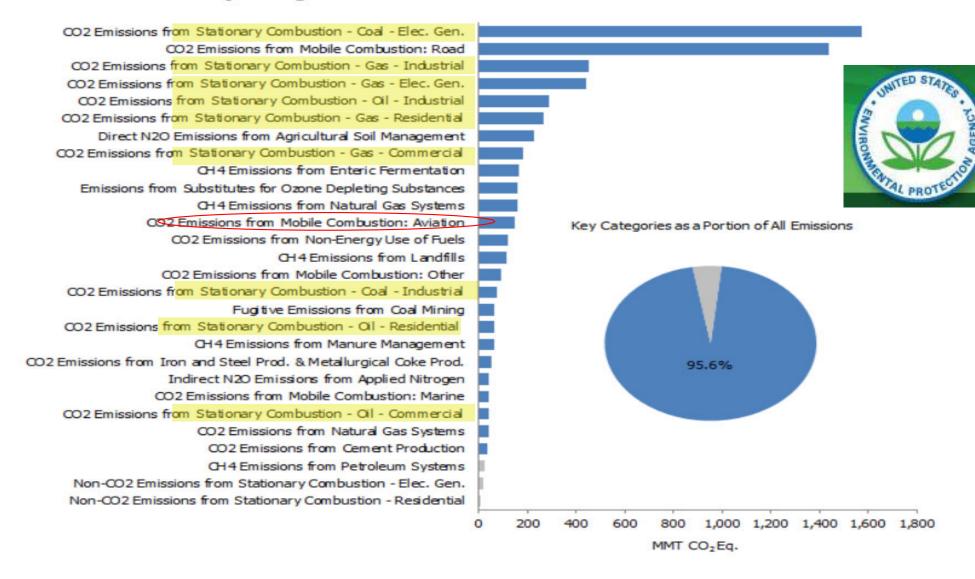


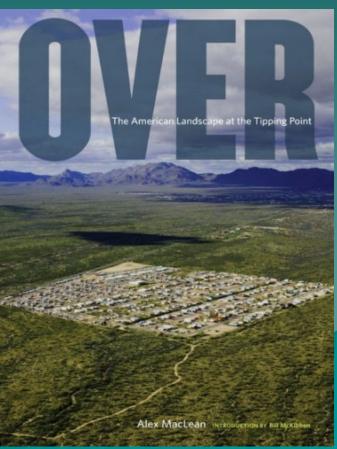
Figure ES-16: 2013 Key Categories



Power is Problematic







"W.A. Parish is a coal-fired facility whose four generators produce nearly 19 million megawatt-hours per year. Encircling the plant's stockpile of coal is a mile-long train that brings in low-sulfur coal from Wyoming. Each day, the plant consumes 36,000 tons of coal, which amounts to three mile-long trainloads."



So What?

...burning coal constitutes the largest human-generated contribution to atmospheric carbon dioxide and is a major source of methane..... "between 1975 & 2001, the annual releases of toxic metals from coal plants nearly doubled.... [which] account for over 40% of all air toxins reported to the EPA."



3 trainloads of coal a day

America's 50 Dirtiest Power Plants





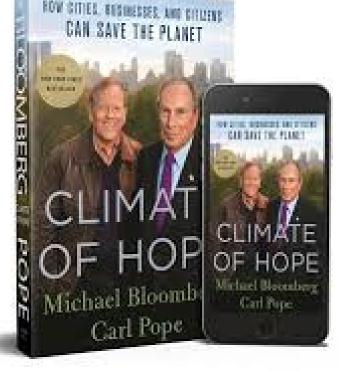












Neil Carman, Clean Air Director

Neil is involved in a broad range of Texas air quality issues including: reviewing emissions and technical data on industrial sources of air pollution and particularly their impacts on communities of color and low-income neighborhoods; commenting on one-hour ozone nonattainment programs; implementation of the new EPA eight-hour ozone standard; EPA's Title V federal air operating permit program; educational outreach to Sierra Club members on local air quality; evaluating air toxics monitoring around industrial sources; working with citizens to train them how to take air samples near industrial sources; and more.

NRG WA Parish:

(Coal = 28% of group)

Calpine Cedar Bayou:

Calpine Deer Park:

NRG TH Wharton:

Calpine Baytown:

Calpine Pasadena:

NRG Greens Bayou:

NRG Cedar Bayou4:

NRG Petra Nova:

2697 MW coal

956 MW gas

1495 MW gas

1103 MW gas

1025 MW gas

810 MW gas

763 MW gas

354 MW gas

249 MW gas

22 MW carbon capture

(like that makes up for WA Parish....)



Parish emitted nearly 18X as much SO2 pollution as ExxonMobil's Baytown oil refinery, one of the largest in the nation. Parish emitted over 8X as much SO2 pollution as all 9 refineries combined in the Houston area.

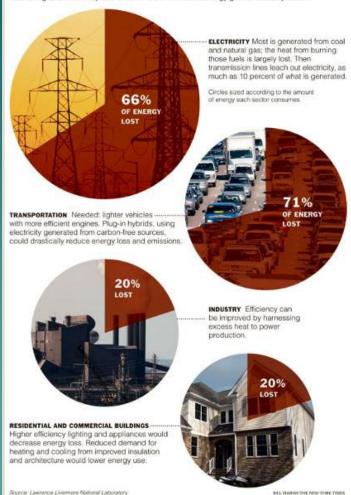
WA Parish coal-fired power plant = 42,719 tons SO2 emissions - #1 in Houston among 501 plants

Eco Services sulfuric acid plant = 3,838 tons SO2 - #2 in Houston

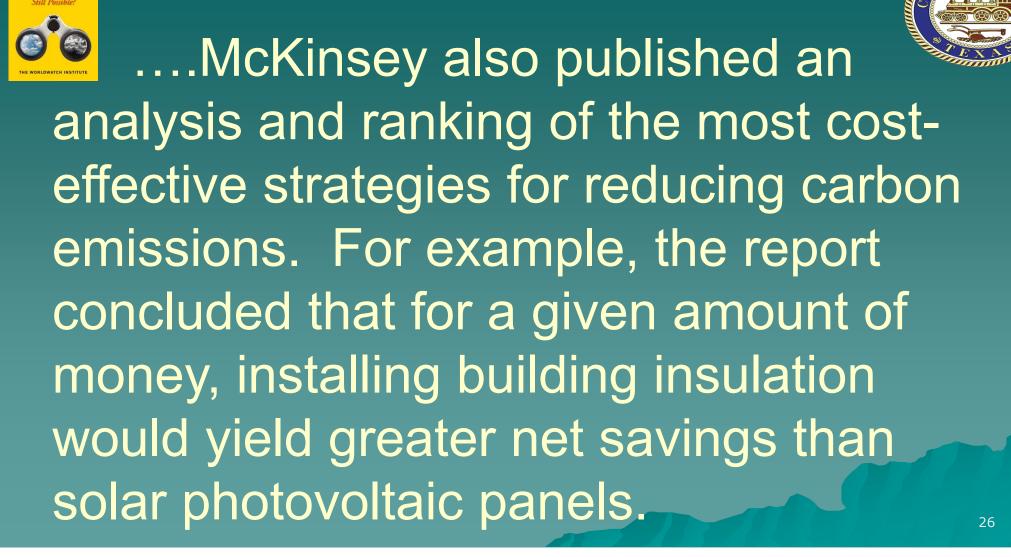
Wasted Energy

About 56 percent of all energy in the U.S. economy is wasted. Some energy is always lost when fuels are burned and heat escapes, Inefficient technology and design are also culprits.

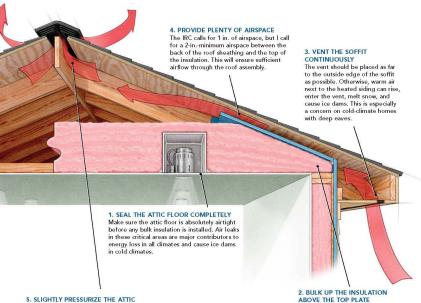
Efficiency's role in cutting emissions is a matter of debate. Most scientists agree that both cleaner fuels and greater efficiency are needed. Here is how much energy goes unused, by sector.



Let's not forget 66% of fuel energy is lost getting the electricity to your outlet....



Energy Audits



Building codes suggest balancing the intake and exhaust ventilation. The code, however, is wrong, and I'm working hard to get it changed. More ventilation at the eaves than at the ridge will slightly pressurize the attic. A depressurized attic can suck conditioned air out of the living space, and losing that conditioned air wastes money.

For best results, provide between 50% and 75% of the ventilation space at the eaves; a 60/40 split is a good sweet spot. The code specifies 1 sq. ft. of net free-vent area (NFVA) for every 300 sq. ft. of attic space. (Keep in mind that different vent products have different NFVA ratings.) Here's how to do the math for a 1200-sq.-ft. attic.

Calculate how much NFVA you need.

- 1200 sq. ft. ÷ 300 sq. ft.
- = 4 sq. ft. of NFVA

Convert that

- 4 sq. ft. of NFVA
- x 144 (in. per sq. ft.)
- = 576 sq. in. of NFVA

Divide it up between the 60% of 576 sq. in. =

345.6 sq. in. (soffit vents)

40% of 576 sq. in. = 230.4 sq. in. (ridge vents) Make sure the amount of insulation (typically fiberglass or cellulose) above the top plate is equal to or greater than the R-value of the wall assembly, never less.

Apply it to the particular soffit and ridge vents that you are using.

Soffit vents

- 345.6 sq. in. ÷ 9 (NFVA-per-ft. rating of vent)
- = 38.4 lin. ft. of intake, or
- = 19.2 ft. of intake per side of roof

Ridge vents

230.4 sq. in. ÷ 9

= 25.6 lin. ft. of exhaust



Do you have enough attic insulation? Are your ducts connected to the unit and **NOT leaking?**

www.finehomebuilding.com

One of Our Displays





140 degree attic70 degree inside

R-38 (12") insulation Eave vent Ridge vent

Energy Audits – Great Display





Asked of EVERY group I tour through the GBRC: When you go up into your attic, can you see your 6" ceiling joists? Then you don't have enough insulation.....

Energy Audits – Great Display





Half do, half don't.

IDEA: Bring back 'Home Ec' in schools

Energy Audits – Great Display





The Point:
Using less
power plant
energy is a real
solution....

Energy Audits

CITY OF HOUSTON BUILD WORKS & ENGINEEDING CODE ENGODOEMENT





DIY Home Energy Audit

You can easily conduct a preliminary home energy audit yourself. On a simple walk through use this checklist to identify any problem areas that you home may have. Making energy efficient changes/ upgrades can significantly lower energy consumption and your monthly bill. At the end of the audit, there is a list of simple steps that you can do to save even more energy. However, this is not the same as an audit done by a professional energy auditor (see page 3). Check off the items once you have finished a task, and then you are one step closer to saving money on energy cost! Make notes and keep for future reference.

Add up all Your Energy Bills for the Past Year

How many kilowatt hour (kWh) did you consume? _____ How many for the highest month? ____ This will be useful benchmarking, and give a better framework of solar panel power generation.

Check for Air Leaks

The potential energy savings from reducing drafts in a home may range from 5 to 30% per year, and the home is generally much more comfortable afterward.

Air Flow: Check to see if air can flow through the places below. Hold a feather or lightweight piece of string in front of the areas below, if it moves - even slightly - there is airflow. Also, look for cobwebs - spiders put their webs where there is air movement.

☐ Electrical Outlets	☐ Fireplace Dampers - are they closed when not in use
☐ Switch Plates	☐ Wall - or window - Mounted Air Conditioners
☐ Window Frames	☐ Attic Hatches
■ Baseboards	☐ Kitchen Cabinets
☐ Weather Stripping Around Doors	☐ Medicine Cabinets
☐ Duct Disconnects in the Attic	☐ Exterior Walls

☐ Caulking and Weather Stripping: Check to see that it is applied properly, leaving no gaps or cracks, and are in good condition.

\square On the outside of your house: 1	Inspect all areas	where two different	: building materials	meet,
looking for cracks and/or gaps, inc	cluding:			

☐ All exterior corne

- ☐ Where siding and chimneys meet
- ☐ Areas where the foundation and the bottom of exterior brick or siding meet
- ☐ Check for holes or cracks: In and around your walls, ceilings, windows, doors, light and plumbing fixtures, switches, and electrical outlets, pipes and wires, foundation seals, and mail slots that can leak air into or out of your home.

☐ Seal return air chases

Anywhere you felt/saw air, cracks, or gaps, use caulking or weather stripping to fill and seal them. If airflow was felt/seen behind electrical outlets and light switch plates, purchase electrical and switch plate insulation pads to place behind the plate.



Download the DIY Home Energy Audit

THE BLOG

The World Is In Trouble: What Are YOU Doing About It?

① 08/16/2016 06:17 pm ET | Updated 5 days ago







Petra Kuenkel

Author and leading strategic advisor to pioneering international multistakeholder initiatives

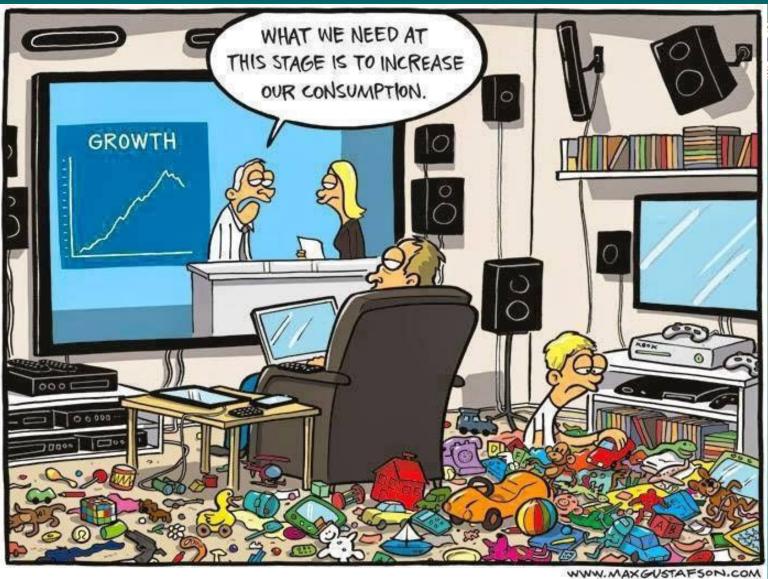
Together, for better or worse

Mahatma Gandhi — 'Be the change that you wish to see in the world.'

As human beings we do not always co-create in the most sustainable or successful way. At times we act in constructive, life-enhancing, and responsible ways. And at other times we are destructive, to ourselves, to others and to our environments.

At the same time, the future should not be something we afraid of. There is evidence that humankind can learn from the past. But a sustainable future does not just happen. We create it together. Every year. Every month. Every day. Every













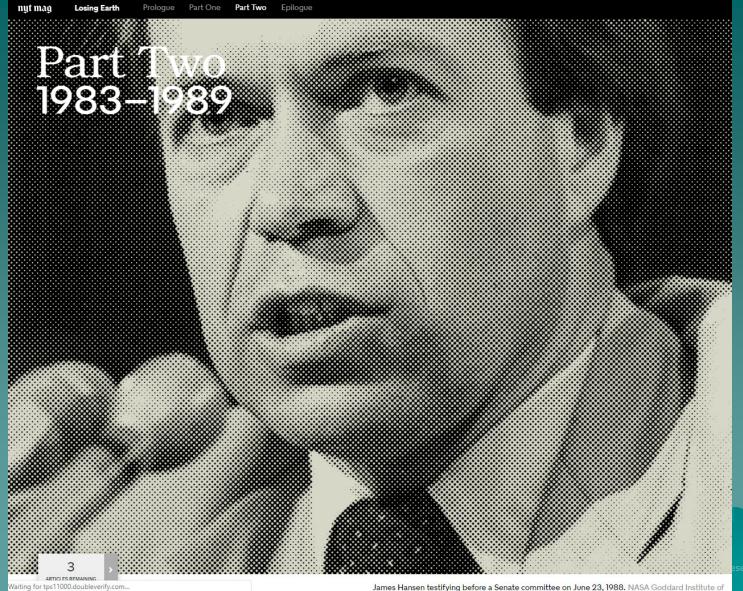
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Losing Earth: The Decade We Almost Stopped Climate Change

By Nathaniel Rich
Photographs and Videos by George Steinmetz
AUG. 1, 2018





The United States government knew. Roger Revelle began serving as a Kennedy administration adviser in 1961, five years after establishing the Mauna Loa carbon-dioxide program, and every president since has debated the merits of acting on climate policy. Carter had the Charney report, Reagan had "Changing Climate" and Bush had the censored testimony of James Hansen and his own public vow to solve the problem. Congress has been holding hearings for 40 years; the intelligence community has been tracking the crisis even longer.

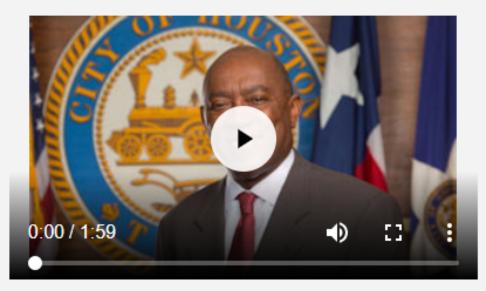
Everybody knew. In 1958, on prime-time television, "The Bell Science Hour" — one of the most popular educational film series in American history — aired "The Unchained Goddess," a film about meteorological wonders, produced by Frank Capra, a dozen years removed from "It's a Wonderful Life," warning that "man may be unwittingly changing the world's climate" through the release of carbon dioxide. "A few degrees' rise in the Earth's temperature would melt the polar ice caps," says the film's kindly host, the bespectacled Dr. Research. "An inland sea would fill a good portion of the Mississippi Valley. Tourists in glass-bottomed boats would be viewing the drowned towers of Miami through 150 feet of tropical water." Capra's film was shown in science classes for decades.

Everyone knew — and we all still know. We know that the transformations of our planet, which will come gradually and suddenly, will reconfigure the political world order. We know that if we don't act to reduce emissions, we risk the collapse of civilization. We also know that, without a gargantuan intervention, whatever happens will be worse for our children, worse yet for their children and even worse still for their children's children, whose lives, our actions have demonstrated, mean nothing to us.



CLIMATE ACTION AND ADAPTATION PLAN

Click on Mayor's Climate Change Video Below



WHAT IS A CLIMATE ACTION AND ADAPTATION PLAN?

A Climate Action and Adaptation Plan provides evidenced-based measures to reduce greenhouse gas emissions and preventative measures to address the negative outcomes of climate change. The plan will demonstrate how the City will adapt and improve its resilience to climate hazards that impact the city today as well as risks that may increase in the coming years.



City Hall is Not Silent



SOCIAL & POLICY ISSUES APRIL 22, 2016

Americans' Identification as "Environmentalists" Down to 42%

BY JEFFREY M. JONES

AMERICANS WHO IDENTIFY AS ENVIRONMENTALISTS

2016

78% 42%

GALLUP POLL

Environmentalists?



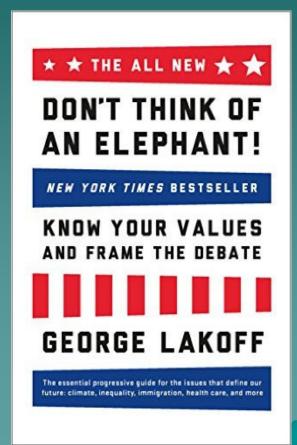
"A landmark contribution to humanity's understanding of itself."

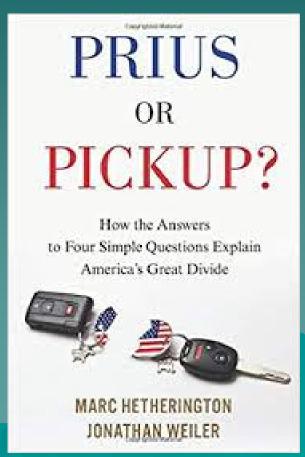
—The New York Times Book Review

THE RIGHTEOUS MIND

WHY GOOD
PEOPLE ARE DIVIDED
BY POLITICS AND
RELIGION

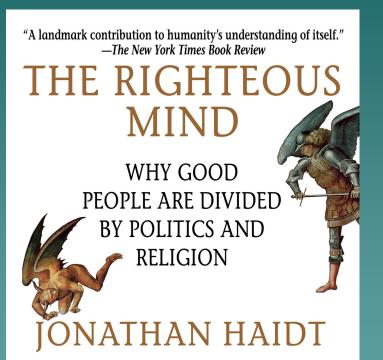
ONATHAN HAIDT

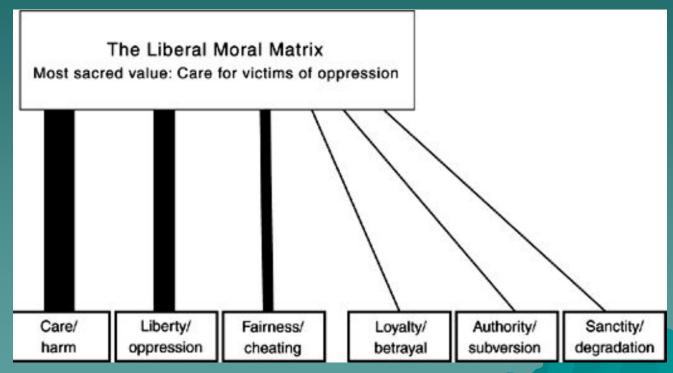




Categories of Liberals









Categories of Libertarians



"A landmark contribution to humanity's understanding of itself."

THE RIGHTEOUS MIND

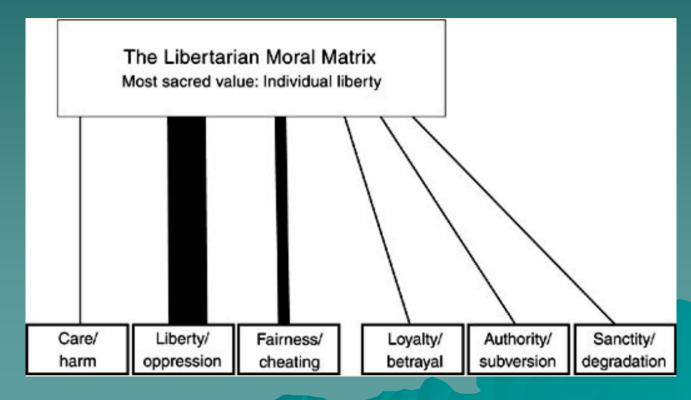
WHY GOOD

PEOPLE ARE DIVIDED

BY POLITICS AND

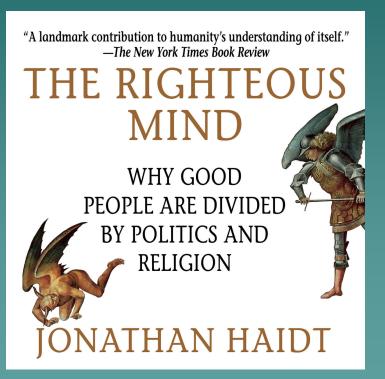
RELIGION

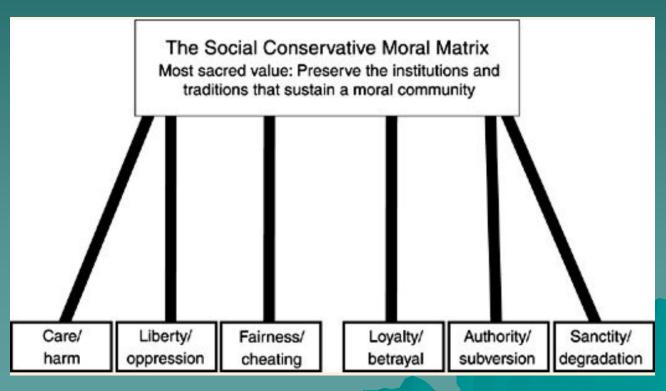
TONATHAN HAIDT



Categories of Conservatives

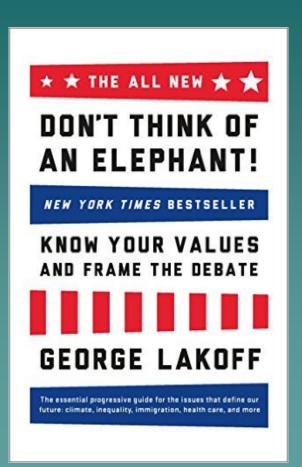






Categories of Progressives





Socioeconomic
Identity politics
Environmentalists
Civil Liberties
Spiritual
Antiauthoritarians

Worldview

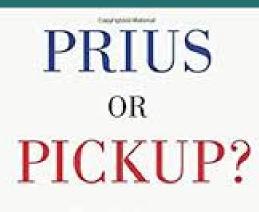


26% mostly Fixed 26% Mixed

19% mostly Fluid 13% purely Fluid

42%

32%

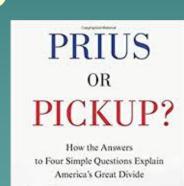


How the Answers to Four Simple Questions Explain America's Great Divide



JONATHAN WEILER

"Coffee is more polarizing than most products, apparently. In 2012 a consumer research firm called Buyology conducted a survey to assess brand loyalty among four thousand Americans.





Starbucks is among the companies that Republicans and Democrats feel most differently about. Democrats love it; Republicans don't. Republicans do like coffee, but when they go out for it, their brand of choice is Dunkin' Donuts, not Starbucks.

The difference between these two alternatives couldn't be starker. At Starbucks, the drink sizes are Italian words, not English ones. The array of coffee concoctions that one can choose from takes up multiple boards above the barista's preparation station.

There is, by contrast, no "barista" at Dunkin' Donuts. Until recently, there weren't an awful lot of choices at Dunkin', either. Small, medium, or large. Cream, sugar, or both."

to Four Simple Questions Explain



A Brewing Storm:

The climate change risks to coffee

August 2016

Contents

Key Points	1
Introduction	2
How is climate change affecting the world's coffee regions?	4
How is climate change affecting coffee pests and diseases?	5
How is climate change likely to affect where coffee is grown?	6
What are the risks to producers, workers, and their communities?	8
What capacity do coffee farmers have to adapt?	10
What are the risks to biodiversity and carbon stores in coffee landscapes?	11
Learn, choose, demand – what coffee drinkers can do	12

Creating change takes leadership. We need people to lead: individuals, communities, investors and business leaders. We need people from all walks of like to step forward and join us as leaders of change.

DONATE www.climateinstitute.org.au/donate

The author, Corey Watts, would like to the thank the following for their advice and response to disafts: Molly Harriss Olson, Stephen Nankervis, Arry Botta and Mirjam Groten at Fairtrade Australia New Zealand, Alvin Stone and colleagues at the ARC Centre of Excellence for Climate System Science, University of New South Wales; John Connor, Kristina Stefanova and Luke Menzies at The Climate Institute. Responsibility for any outstanding issues lies with the author.





Fairtrade Australia & New Zealand commissioned this report by the Climate Institute to better understand the extent to which climate change is impacting coffee production globally. It is hoped that insights gained from this report will lead to greater engagement, from the coffee industry and consumers, with key initiatives that aim to protect this valuable commodity, and the millions of livelihoods it supports around the world, for future generations.

ISBN 978-1-921611-35-3



For most coffee farmers, communities, and companies the consequences of unrestrained global warming are hard to imagine. Governments and companies that aim to avoid the economic, social and environmental costs of dangerous global warming, are recognising we need products, business models and economies with at least zero net greenhouse gas emissions.

Many companies and governments have begun to recognise the dangers of global warming—not least because of pressure from consumers and citizens—but their actions do not yet match the scale and urgency of the task.

However, the future for coffee and the world is not yet set. Several coffee companies have responded to customer demands for climate action, and many nations are making substantial efforts. Fairtrade, for example, has moved to ensure the production and supply chains for its Fairtrade Climate Neutral Coffee don't add more heat-trapping greenhouse gases and that steps are taken to build safer, more resilient, more sustainable workplaces. Positive changes are brewing from above and below.

For coffee drinkers, the first step is to learn about the challenges faced by coffee producers and communities, and about what Fairtrade and others are doing to make a difference. Next, most consumers can now choose brands that are carbon neutral, guarantee a fair return to smallholder farmers and their communities, and help them build their capacity to adapt to climate change. Finally, people can demand action from all companies and their governments to ensure all products, business models and economies are carbon neutral or better.

WITH EACH CUP THEY DRINK, COFFEE LOVERS HAVE THE POWER TO HELP SMALLHOLDER FARMERS AND OTHERS WEATHER WHAT LIES AHEAD.





⇔ Where To
∮



Eco Tech

Home & Garden

How & Buy

Well-Being ✓

Inspire

Business

How I Cured My Caffeine Addiction (and you can, too!)

☐ Lisa Beres ☐ January 8, 2019





Of course – Abstinence. That will certainly impress people.





HOME

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THE TEAM

COFFEE RESEARCH & EDUCATION

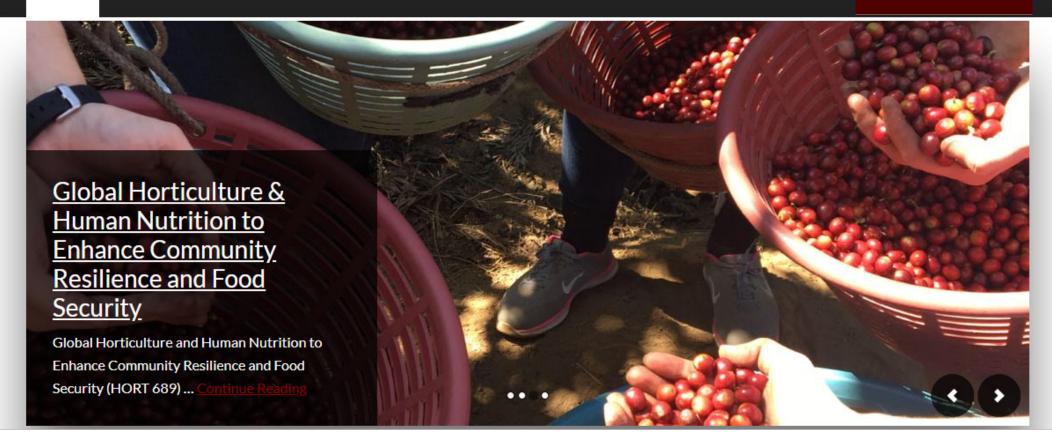
RESEARCH

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BLOG



The world's most popular coffee species are going extinct. And scientists say we are to blame

By Lauren Kent, CNN

Updated 2:07 PM ET, Wed January 16, 2019

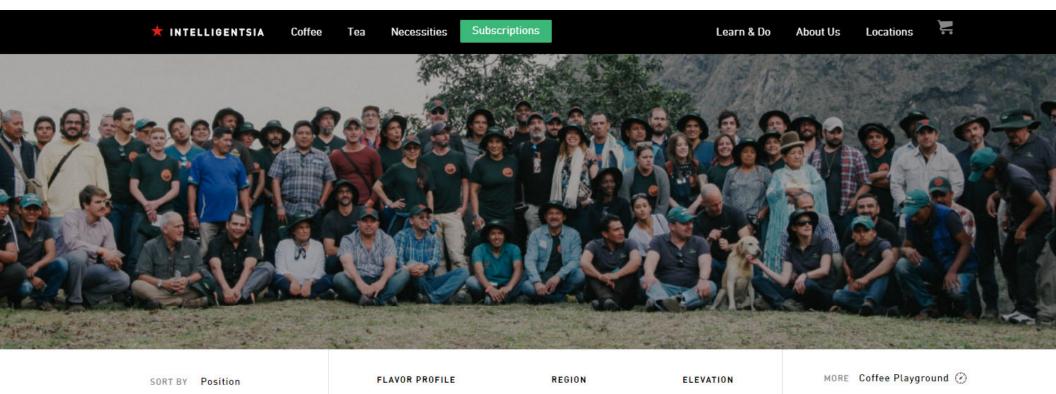


More from CNN

Virgin reveals adults-only cruise ship

Time is running out and Theresa May's Plan B for Brexit is Plan...

Photos: Coffee's health history



Intelligentsia is the first to adopt Direct Trade practices in the industry. We understand that what happens on the farm directly affects the quality of our coffees, which is why we've spent the last 15 years and counting cultivating relationships with growers who share our exact standards in quality. We don't just buy exceptional coffee from award-



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Pine Mountain Java-Log Recycled Coffee Grounds Firelogs, 4 Hour Burn Time, 4 Logs (4152501471) Long Burning Firelog for Campfire, Fireplace, Fire Pit, Indoor & **Outdoor Use**

Pine Mountain

★★☆☆☆ 151 reviews

Price: \$24.99 **/prime**

Usually ships within 1 to 2 months.

Get it as soon as Wednesday, Feb. 13 - Monday, March 4 if you choose Standard Shipping at checkout.

Ships from and sold by Amazon.com exclusively for Prime members. Gift-wrap available.

Package Quantity: 1

Exclusively for Prime members

This item is reserved for Prime members.

Amazon Prime cannot be purchased from our app currently.

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11 used & new from \$24.99







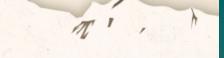


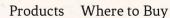












Our Promise

Pine Mountain®
Your Mountain Retreat Begins

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ALL PRODUCTS > SPECIALTY FIRELOGS

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Pine Mountain® Java-Log® 4-Hour Firelogs

Inspired by nature, with a commitment to sustainability, Pine Mountain Java-Log is the only firelog made from recycled coffee grounds. Named TIME[®] invention of the year in 2003, the Java-Log firelog burns bright, for a brilliant, aromatic fire the whole family can enjoy.

- Burns cleaner than ordinary cordwood: emits up to 78% less carbon monoxide and up to 66% less creosote than cordwood fires*
- 12 million pounds of coffee grounds recycled each year
- Burns up to 4 hours

How to Make a Coffee Fire Log











In this instructable, I'll show you the basic recipe for making a Coffee Fire Log. The recipe could still use some tweaking, but it's a good start and a fun and easy project.









RECIPES *

TECHNIQUES

FEATURES ▼

OUR EDITORS

DRINKS / COFFEE

What Is Coffee's Carbon Footprint?

MEISTER • PROFILE / TWITTER / FACEBOOK / CONTACT













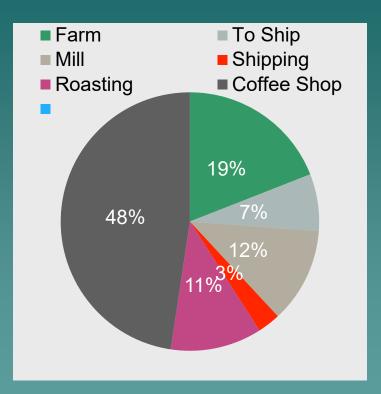
PRINTER-FRIENDLY VERSION





Coffee Shop Coffee: 10.5 lbs CO2/ lb of Coffee





Home Coffee: 5.5 lbs CO2/ lb of Coffee



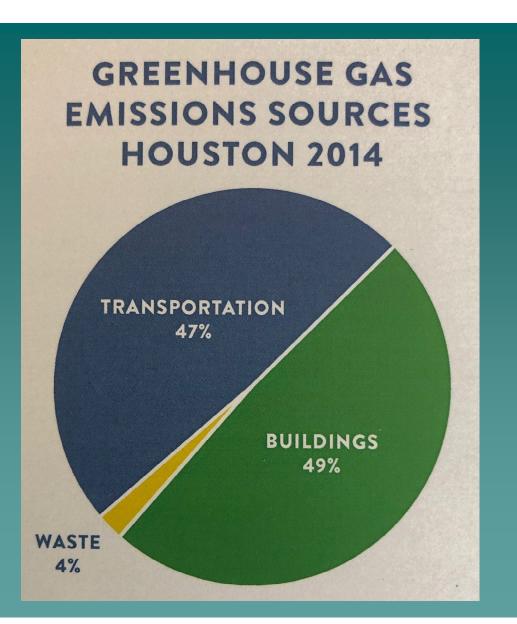
Gasoline
20 lbs CO2/ gal
1.25 lbs CO2/ cup

0.263 lbs CO2/ cup*

0.137 lbs CO2/ cup*

* 40 cups/lb







Buildings matter



Now, what can you do at work? Can you influence government? Can you and 25 friends email? We're close to the Tipping Point.

Choose:

THE RESERVE THE PARTY OF THE PA

- ☐ Lead
- ☐ Follow
- Get out of the way (third for a reason)

Questions?





Green Building Resource Center



ABOUT US GREEN BUILDING NEWS **EVENTS** INCENTIVES RESOURCES

. . . .

Search.

EVENTS

PACE: Liftoff in Houston 02/28/2018 - 6:00 pm to 8:00 pm

GBRC Rain Barrel & Compost Bin Truckload Sale 05/12/2018 - 10:00 AM - NOON

CITY OF HOUSTON LINKS

- + Public Works Home
- + City of Houston Home
- + Houston Permitting Center
- + ReBuild Houston
- + Pay My Waterbill

Welcome



The City of Houston's Green Building Resource Center, a project of the Department of Public Works and reen Engineering, offers economical, sustainable building BUILDING solutions for the public.

Over 50 educational displays, a library of information, and samples of recycled materials provide strategies for green building and in-home energy conservation. Visit the showroom to learn about the impact of recycling, green building materials, solar panel installation, low-impact development techniques for stormwater runoff, energy-efficient windows and lighting strategies, heating and cooling technologies, and water conservation methods.

The Green Building Resource Center is located on the first floor of the Houston Permitting Center, which was constructed to green building standards to reach LEED PERMITTING for New Construction to the Gold level. The building embodies innovative ideas for energy conservation,



featuring a raised floor system that provides future flexibility, water efficient plumbing fixtures, energy efficient light fixtures and AC equipment, recycled content acoustical insulation, and recycled artwork. In addition, the HPC boasts the following features:

- . A vegetated roof, watered with harvested rainwater and condensate from the air-
- . A bioswale alternative to a traditional storm sewer, demonstrating permeable pavement, vegetated biorention, and turf-covered biofiltration
- . A rooftop array of 387 solar panels

BOOK A GBRC SPEAKER



GREEN INITIATIVES

