# California Methane Leak Goes From Bad To Worse!!!!

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California Methane Leak Goes From Bad To Worse!!!!

## Already affecting THE ENTIRE PLANET

## ATTORNEY GENERAL files Lawsuit

## Scientists say it is officially "awful"

#### Getty Images for Variety

California Attorney General Kamala Harris speaks onstage at the 2014 Variety Power of Women presented by Lifetime at Beverly Wilshire Four Seasons on October 10, 2014 in Los Angeles.

California's attorney general announced a lawsuit Tuesday against Southern California Gas Company that alleges violations of state law in connection with a months-long gas leak in the San Fernando Valley.

Thousands of people living near the Aliso Canyon facility in Porter Ranch have temporarily relocated, two local schools have closed and thousands of students have been relocated for the rest of the school year.

#### Gas Leak Tech Introduced

Attorney Generia Kamala Harris' lawsuit claims the utility violated California health and safety laws to quickly control the leak and report the release to authorities. The lawsuit also cites an environmental threat due to the release of methane.

"The impact of this unprecedented gas leak is devastating to families in our state, our environment, and our efforts to combat global warming," Harris said in a statement. Southern California Gas Company must be held accountable," said Harris in a statement. "This gas leak has caused significant damage to the Porter Ranch community as well as our statewide efforts to reduce greenhouse gas emissions and slow the impacts of climate change. My office will continue to lead this cross-jurisdictional enforcement action to ensure justice and relief for Californians and our environment."

### Business Affected by Porter Ranch Gas Leak Getting Relief

A nonprofit organization is making \$5 million in loans and other financial assistance available to businesses affected by the ongoing natural gas leak near Porter Ranch. Annette Arreola reports for the NBC4 News at Noon on Wednesday, Jan. 20, 2016. (Published Wednesday, Jan. 20, 2016) The lawsuit seeks relief in the form of injunction, civil penalties, and restitution.

SoCalGas issued a statement saying company is "working hard to both stop the leak and adress our neighbors' concerns. Beyond that, we do not comment on pending litigation and will respond to the lawsuit through the judicial process."

# GRAPHIC: Porter Ranch Gas Leak Relief Well Operation

The city and county of Los Angeles have already filed suit against SoCalGas over the leak, which was discovered Oct. 23. Late last month, Southern California air regulators approved a sweeping abatement order aimed at minimizing the release of natural gas.

Also Tuesday, Rep. Brad Sherman, who has a home in Porter Ranch close to the site of the Southern California Gas Co. gas leak, announced that he plans to introduce legislation designed to prevent more leaks in the future. Sherman noted in a statement that the Department of Transportation Materials Safety Administration has established federal safety regulations for natural gas transportation.

### Residents Fear They'll Have to Pay for Gas Leak

Hundreds of angry Porter Ranch homeowners had one lingering question -- why has this leak been allowed to happen? Robert Kovacik reports for the NBC4 News at 11 p.m. on Thursday, Jan. 21, 2016. (Published Thursday, Jan. 21, 2016)

Porter Ranch Gas Leak FAQ

# The Horror of the Invisible Disaster

# Just how big is the natural gas leak in California?

Science Friday

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Writer Elizabeth Shockman (follow)

# natural-gas.jpg

Crews from Southern California Gas Company and outside experts work on a relief well at the Aliso Canyon gas field above the Porter Ranch section of northwest Los Angeles, California. Credit: Dean Musgrove/Reuters

It's been more than two months since inspectors uncovered a colossal natural gas leak in California's Aliso Canyon, and it will take at least another month, possibly two, to plug it up, according to Southern California Gas Company's latest estimates.

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"On a scale of of actual emissions, of the size of the leak, this is dwarfing anything that's happened like that before in this area or really almost in any other area in this country," says Stanford University environmental scientist Rob Jackson, "This is very unique and very unusual."

The invisible methane plume, captured on infrared camera by the Environmental Defense Fund, has driven thousands of nearby residents out of their homes, shut down two schools, and cancelled out a chunk of the state's greenhouse gas reduction efforts.

The Aliso Canyon storage field is one of about 420 underground storage places for natural gas. Jackson says most gas storage fields are old oil and gas fields, more similar in structure to enormous subterranean honeycombs than to actual hollowed-out caverns.

"You can think of these underground storage fields as a balloon underground," Jackson says, "They just keep pumping gas into it and it gets to a very, very high pressure. And if the knot on that balloon comes untied, then the gas jets out and it takes a long time for that air to finish. It just keeps jetting out and that's what's happening at Aliso Canyon."

So far the Southern California gas company has tried using mud and brines to counterbalance the pressure of the leaking gas, but their efforts so far have failed. Now the gas is bubbling down and out around the cement sheath.

"At this point, it's an uncontrolled release ... that's just belching natural gas - about 2.5 million pounds of methane every day," Jackson says.

Some have called this the worst environmental disaster since the B.P. oil spill. Jackson says it's unprecedented.

"This leak is bigger than the methane that's emitted by all industrial activities in California, including the entire oil and gas industry. It's huge," Jackson says.

In terms of global methane emissions, though, Jackson says this leak is not that big of a concern.

"You're not going to see a massive spike in the atmosphere because of this leak. It's huge, but it's not that huge," Jackson says.

The leak is also not likely to cause too much bad interaction with the ozone in Los Angeles.

"The ozone in Los Angeles is catalyzed by hydrocarbons, rather than nitrogen oxides, but it's not typically catalyzed by light hydrocarbons such as methane and ethane. And it's also winter. And it's rainy. So that would only likely be an issue if this went into the summer — and even then it might not be the biggest issue," Jackson says.

The really big concern? There may perhaps be other traces of toxic gases in the leak that could cause devastating health effects to people in the area.

"The thing that people are most concerned about are the trace gases," Jackson says. "What else is in that air at low concentrations that could cause health effects long term?"

This article is based on an interview that aired on PRI's Science Friday.

#### In Science, Tech & Environment (follow) and Environment (follow) .

Tagged: North America United States California environment Climate Cha Scientists say that the California Methane Event Will Affect the Entire World.

• The Methane Leak Will Drift To Ends Of The Planet and Will Affect All Life On The Earth

• It has already reached the Arctic Circle and started shifting the weather

Cover-up has had bigger effect than most realize

Accelerating Towards an Arctic Blue Ocean Event

# Posted by xraymike79 i

#### Tags

"For the last 8,000 years we've had [relatively] amazing stability with constant weather temperatures and sea level. This stability has allowed the development of agriculture, civilization, industrialization, and a population of 7 billion and rising. This apparent stability is entirely a fluke. It is by amazing good luck that we are here today looking back on the past."- John Nissen (12-4-2014), Arctic Methane Emergency Group On the 4th, 5th, and 6th of December of the year 2014, the Arctic Methane Emergency Group (AMEG) held press briefings at the COP-20 United Nations Climate Change Conference that is taking place in Lima, Peru. For those unfamiliar with AMEG, here is a summary about them from their website that illustrates their proven track record of predictions:

AMEG is a group of determined scientists, engineers, communicators and others, dedicated firstly to establishing what really is happening to our planet (especially in the Arctic) using best scientific evidence, secondly to finding effective and affordable means to deal with the situation, and thirdly communicating these matters to authority and the general public. AMEG aims to position itself in the centre ground – neither overstating nor understating the dangers of

AMEG aims to position itself in the centre ground – neither overstating nor understating the dangers of climate change. We are only alarmist in the sense that we are drawing attention to the more unpleasant realities of rapid Arctic warming and climate change, which have been downplayed or ignored by IPCC, unwittingly backed up by the media. We are determinedly optimistic as regards promoting an intervention strategy against all the odds, believing that mankind must have the collective intelligence to sort out the mess that mankind has got itself into.

AMEG gave evidence to the UK's Environment Audit Committee in their inquiry on protecting the Arctic. Much of our evidence was dismissed by government advisers, but all our evidence has been borne out by subsequent observations and events, including: the rapid rise in temperature of Arctic ocean and atmosphere; the dramatic decline of sea ice to a record minimum in September 2012 (following the exponential downward trend we had warned the committee about); the exponential increase in release of the potent greenhouse gas, methane, from the Arctic Ocean seabed; the exponential increase in melting of the Greenland lce Sheet and consequent sea level rise; and the continuing disruption of the jet stream patterns we expected from Arctic warming, with resulting climate change in the form of weather extremes (despite a continuing hiatus in global warming), causing widespread crop failures and increase in the food price index above the crisis level, thus promoting civil conflict in a number of Asian and African countries where food prices have recently escalated, including most notably Syria.

Recent independent research, by scientists in AMEG and elsewhere, puts beyond reasonable doubt our assertion that the Arctic is locked in a vicious cycle of warming and melting, with the sea ice well past its tipping point. The current albedo forcing from snow and sea ice retreat is now estimated at around 0.4 to 0.5 Watts per square meter, averaged globally, amounting to 200 to 250 terawatts heating in the Arctic – more than mankind's total energy consumption. This albedo forcing is liable to double within a few years as the snow and sea ice further retreat. AMEG believes that the vicious cycle of warming and melting can only be broken by rapid intervention to cool the Arctic.

Although AMEG's research has concentrated on the Arctic and its effect on climate change, our study of IPCC's own evidence suggests just how serious are the long-term prospects of climate change due to both CO2 and methane – far more serious than claimed by IPCC itself. The carbon budget for CO2 – the allowable amount of CO2 to avoid dangerous climate change – has already been used up, if onetakes into account the effect of methane and other greenhouse gases. If one also takes into account the

climate forcing through albedo loss in the Arctic, then it is clear that the world is heading for extremely dangerous global warming by mid-century, even without Arctic methane. The only way to head off such a disaster is by reducing the level of greenhouse gases in the atmosphere well below their current levels, using a combination of aggressive reduction in both CO2 and methane emissions but also by removal of CO2 from the atmosphere.

#### SUMMARY OF AMEG PRESS BRIEFINGS:

 The tipping point for the collapse of Arctic glaciers has been breached and a runaway meltdown of the North Pole ice cap is currently unfolding. Arctic ice is decaying exponentially. (For a better visualization, picture an area of ice the size of the state of Maine being lost every year since 1979.) Highly reflective snow and ice is being replaced by dark sea water which is much more [absorbent] of solar energy causing the Arctic to warm much, much faster than the rest of the planet. This is destabilizing the atmospheric air circulation and ocean circulation. It is reducing the temperature gradient or difference between the equator and the pole which slows down the jet stream making it wavier with higher ridges and troughs. The jet stream has also become prone to stagnating in the same region. Very warm, humid southerly air can go to much higher latitudes than before, and cold arctic air can go to much southerly latitudes than before. This in itself is representing an enormous positive and go to historical relations and the positive for humans) which is carrying more and more heat up into the Arctic and more and more coldness from the Arctic further south. What this will do is fracture the jet streams, leading us to a very different world, a less predictable climatic world where weather extremes such as torrential rains and extended droughts and floods come to dominate the weather system. The frequency, severity, and duration of these events all increase. These events also occur in regions where we did not have this before. For example, we get 80cm(32 inches) of snow in the Atacama Desert which is the driest region of the planet - an unprecedented event. We get torrential rains where we had desert before. We get desert where we had moderate temperatures before. This is already happening now with just 0.85 °C of warming that the world has experienced since the start of the industrial revolution. This situation is very dependent on the conditions in the Arctic. As the Arctic continues to exponentially decline in snow and sea ice cover, these extremes will undoubtedly have to increase. The physics of the system says so. Because we now live in a warmer planet, there is more evaporation of the oceans leading to more water vapor in the atmosphere which fuels stronger storms. (The atmosphere can hold 7% moisture for every 1°C increase in average temp. Since we have increased the average temp by ~0.8°C from pre-industrial times, we have 6% more water vapor in the atmosphere). Because we have changed the chemistry of the atmosphere, we have changed the planet's weather and climate. • Once we reach a point of no Arctic sea ice, perhaps as early as September 2015, this will create a "blue ocean event" in which all the heat from the sun will be able to penetrate Arctic waters, vastly accelerating the rate at which the Arctic is warming. Consequently, massive disruption of atmospheric circulation and ocean currents will ensue, thus locking the Arctic into an ice-free state. Global sea levels will rapidly rise and climate chaos will ramp up.

• The East Siberian Arctic Shelf, containing hundreds to thousands of times more heat trapping gases than what are presently in the atmosphere, is in the process of releasing a catastrophic amount of

#### greenhouse gases.

 Climate models do not take into account fractures, imperfections in the sea floor, regions of unfrozen subsea methane and other weak points in methane deposits. The models simply treat these areas as uniform slabs that will act in a predictable and symmetrical manner.

Historical ice core and sediment records show numerous instances of the Earth having undergone abrupt climate change of 5-6°C or greater within a very short time period, one or two decades.
The initial heat-trapping strength of methane(CH4) is up to several hundred times more powerful than CO2 during the first couple decades of its release into the atmosphere before degrading into CO2.
Collapse of Civilization is assured at a 4°C rise in global temperature.

Scientists consider a global warming of 6°C to be a threat to the survival of humanity, and anything beyond an increase of 2°C to be intolerable (as recorded at the Asia-Europe Summit by Khor, September 2006). – Link

 Even conservative IPCC projections of BAU predict a 4°C rise in global temperature by the end of the century and this estimate does not include the methane release from the Arctic seabed, permafrost and tundra. No where in its reports does the IPCC state that a 4°C would be catastrophic to civilization and life on Earth.

• Simply attempting to "adapt" to anthropogenic climate change is not a realistic option.

• The meme of money and profit holds sway over all of society.

• The operating system of global civilization, i.e. neoclassical economics, is fatally flawed and it will kill us.

 The consequences of predicted drought from global warming will make food production impossible in most of the world ...

The Biggest Environmental Disaster In the History Of The West Coast Could Be Turned Into The Greenest Energy Solution By Dean Lester

These headlines are shocking millions of people across the nation: California Declares State Of Emergency Over L.A. Methane Leak (link) California Declares State Of Emergency Over L.A. Methane Leak ... of the most devastating environmental disasters in the history of California," Los ... from his community about pressing the

governor to declare an emergency.

Erin Brockovich: California Methane Gas Leak is Worst U.S. ... (link) In the nation's biggest environmental disaster since the BP oil spill, ... for one- quarter of all California's methane emissions in just one month. .

State of Emergency Declared for Aliso Canyon, California, Because ...(link) An Environmental Disaster Unfolding in CA ... California Gov. Jerry Brown declared a state of emergency Wednesday for a methane leak that ...

Americas - California governor declares methane gas leak ...(link) California Governor Jerry Brown declared a natural gas leak in a ... Screengrab, Environmental Defense Fund | Infrared footage ... a disaster." said Kelly Huston, deputy director of the governor's Office of Emergency Services.

California governor declares emergency over Porter ... - CNN.com ... (link) California governor declares emergency over Porter Ranch gas leak ... Southern California Gas Company's actions to stop the leak, track methane ... prior commitment to mitigate the environmental impact of the actual amount .

After At Least 2,300 Home Evacuations, Big Methane Leak Causes ......(link) The area has been suffering from the effects of a methane gas leak at the ... The Environmental Defense Fund, which released a shocking infrared ... Others, though, criticized the governor for failing to address California's systemic ... was a disaster waiting to happen, but officials mostly ignored those risks.".

Massive volumes of Methane gas are leaking into the air from the Porter Ranch disaster. Additionally, it is not California's only methane leak. It sounds like a sci-fi disaster film but it is a real event and it is happening now. Innovative technology companies have solutions at hand, which can turn the disaster into an upside.

Methane is a chemical. Methane (/ ' m ɛ θe ɪ n / or / ' mi : θe ɪ n /) is a chemical compound with the chemical formula CH 4 (one atom of carbon and four atoms of hydrogen). It is the simplest alkane and the main component of natural gas. The relative abundance of methane on Earth makes it an attractive fuel, though capturing and storing it poses challenges due to its gaseous state found at standard conditions for temperature and pressure.

In its natural state, methane is found both below ground and under the sea floor, where it often finds its way to the surface and the atmosphere where it is known as atmospheric methane.[5] The Earth's atmospheric methane concentration has increased by about 150% since 1750, and it accounts for 20% of the total radiative forcing from all of the long-lived and globally mixed greenhouse gases (these gases don't include water vapor which is by far the largest component of the greenhouse effect).[6] Methane breaks down in the atmosphere and creates CH · 3 with water vapor.