

PRM-50-117  
84 FR 36036

10

# PUBLIC SUBMISSION

<b>As of:</b> 8/16/19 11:13 AM <b>Received:</b> August 15, 2019 <b>Status:</b> Pending_Post <b>Tracking No.</b> 1k3-9bmq-i4lb <b>Comments Due:</b> October 09, 2019 <b>Submission Type:</b> Web
--

**Docket:** NRC-2019-0063

Criteria to Return Retired Nuclear Power Reactors to Operations

**Comment On:** NRC-2019-0063-0003

Criteria to Return Retired Nuclear Power Reactors to Operations

**Document:** NRC-2019-0063-DRAFT-0012

Comment on FR Doc # 2019-15934

---

## Submitter Information

**Name:** George Erickson

**Address:**

4678 Cedar Island Dr.

Eveleth, MN, 55734

**Email:** tundracub@mediacombb.net

---

## General Comment

Because of Climate Change, we must increase the production of electricity with highly efficient, CO2-FREE, 24/7, CO2-free, resource-conserving nuclear power, the safest way to generate electricity, by restoring idled plants to production and building more. Please see the attachments that prove my point. All of them and more are included in Unintended Consequences: the Lie That Killed Millions and Accelerated Climate Change, the PDF of which is attached. For paper copies see Amazon.com. George Erickson 218-744-2003

---

## Attachments

2 resources

1 safety 1a

3 Capacity factors

4a Subsidy chart

4 EmissionsPerSource (002)

7a Solar German results

5 coal v nuke ad

4b cost of electricity in \$\$ per kwh

8a Solar toxic waste

11 Windmill and fracking waste 2

10 Wind Germany - light blue area supplied by burning carbon

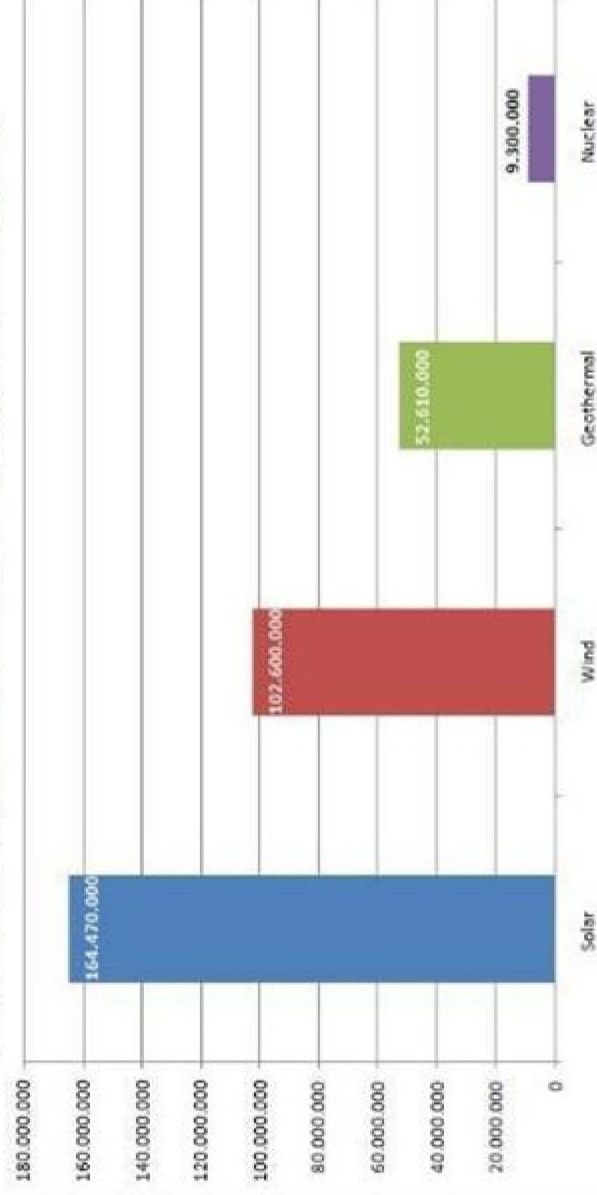
Hansen on nuclear

CO2 air -seawater pH

ocean acid graph

methane leak image

**Total tonnage required to build 10.000 TWh generation capacity**



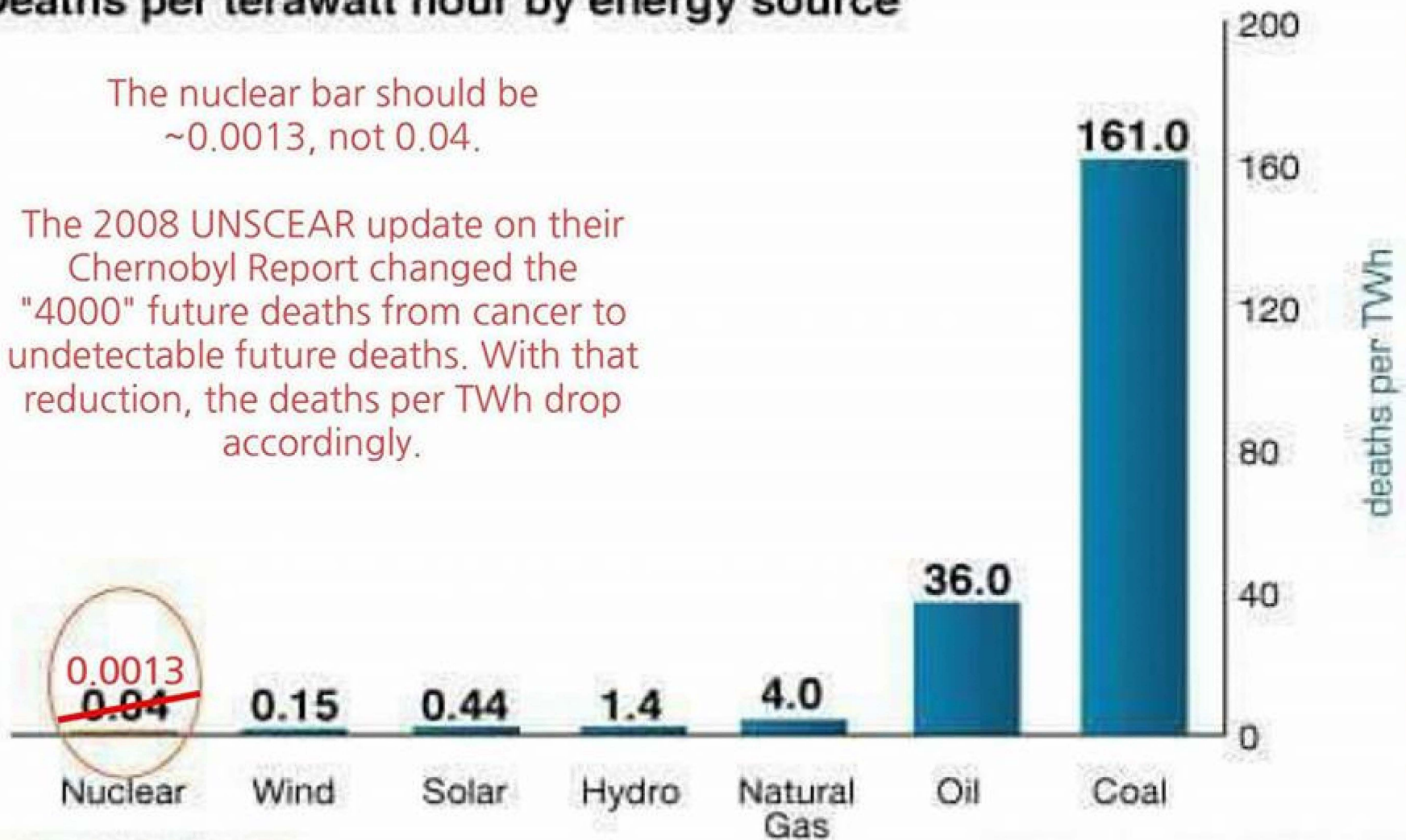
Source : Quadrennial technology review / Chapter 10 : Concepts in integrated analysis | September 2015 | [www.energy.gov](http://www.energy.gov)

# Nuclear: The Safest Energy Source of All

## Deaths per terawatt hour by energy source

The nuclear bar should be  
~0.0013, not 0.04.

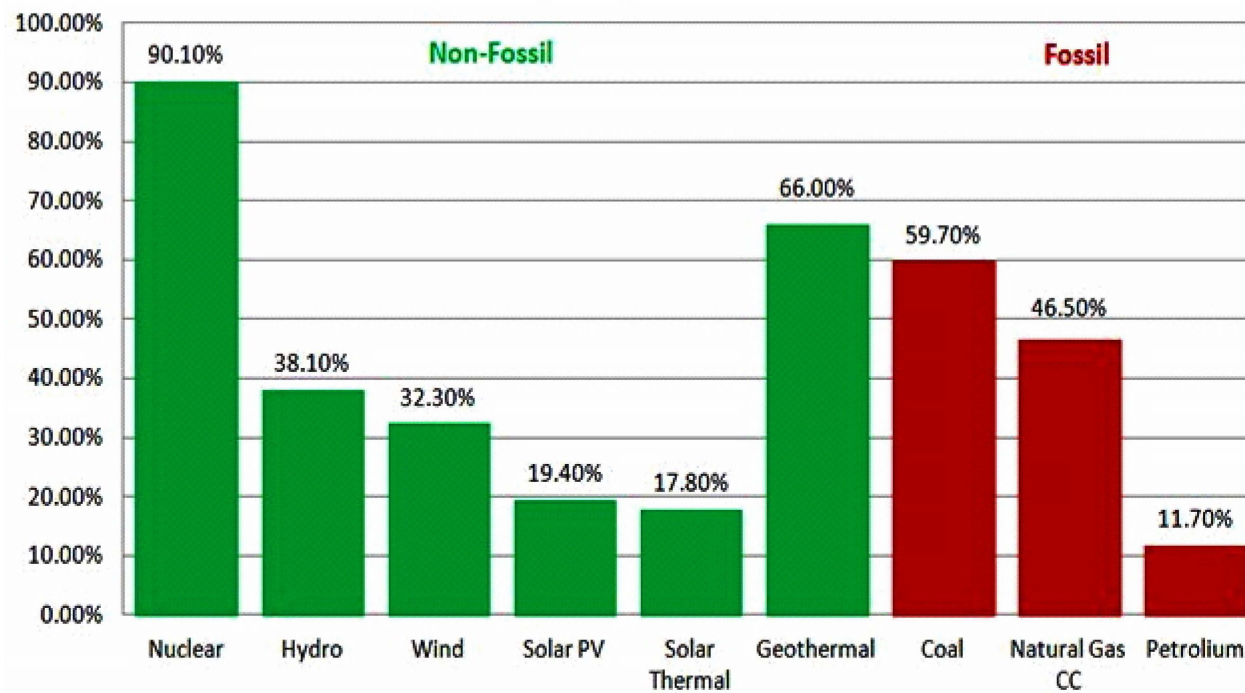
The 2008 UNSCEAR update on their  
Chernobyl Report changed the  
"4000" future deaths from cancer to  
undetectable future deaths. With that  
reduction, the deaths per TWh drop  
accordingly.

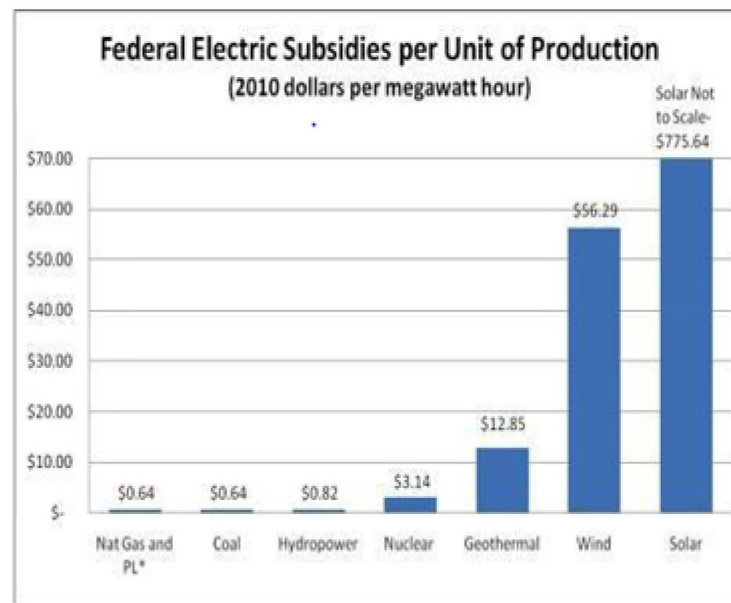


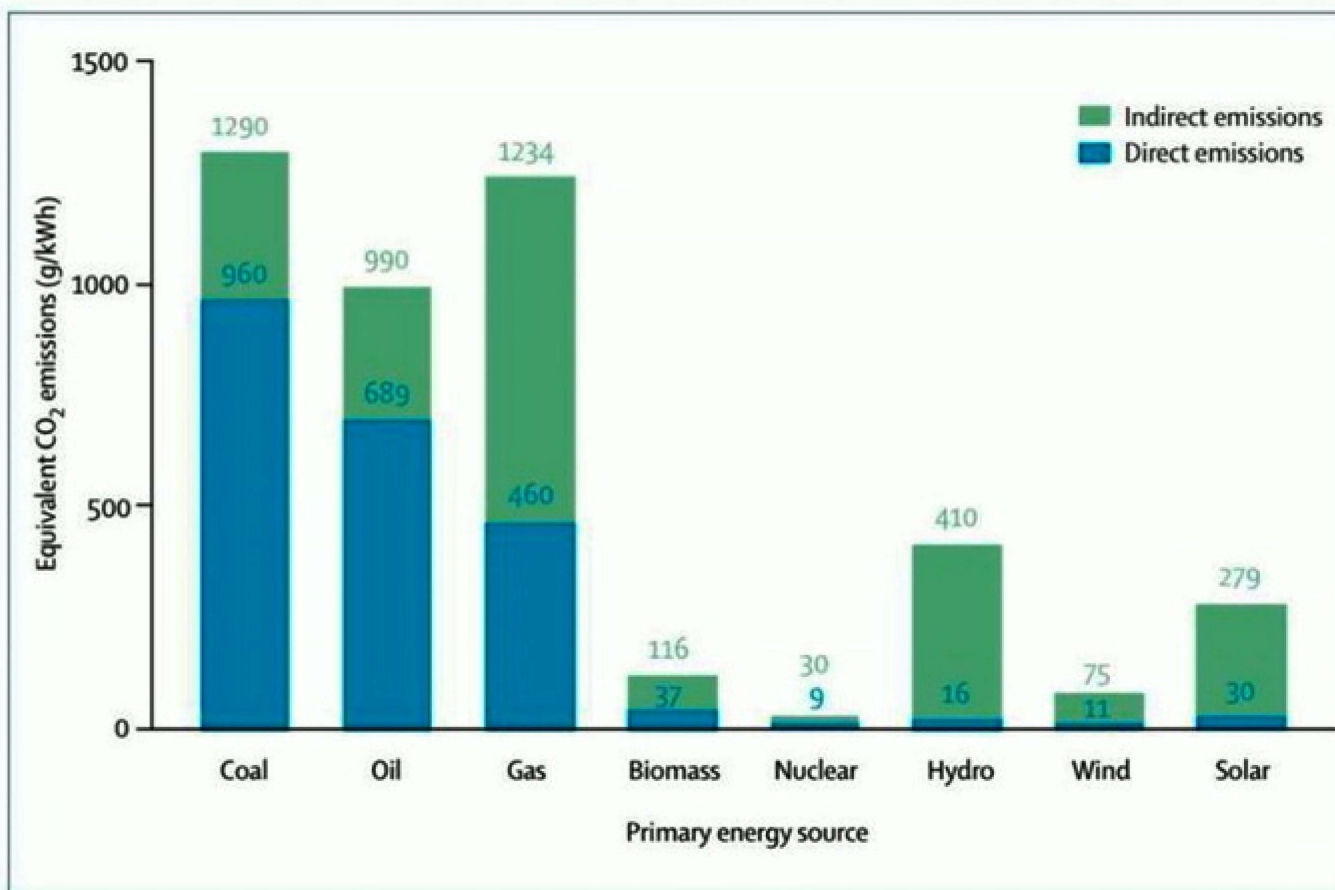


## 2013 Capacity Factors by Energy Source

(Source: U.S. Energy Information Administration)



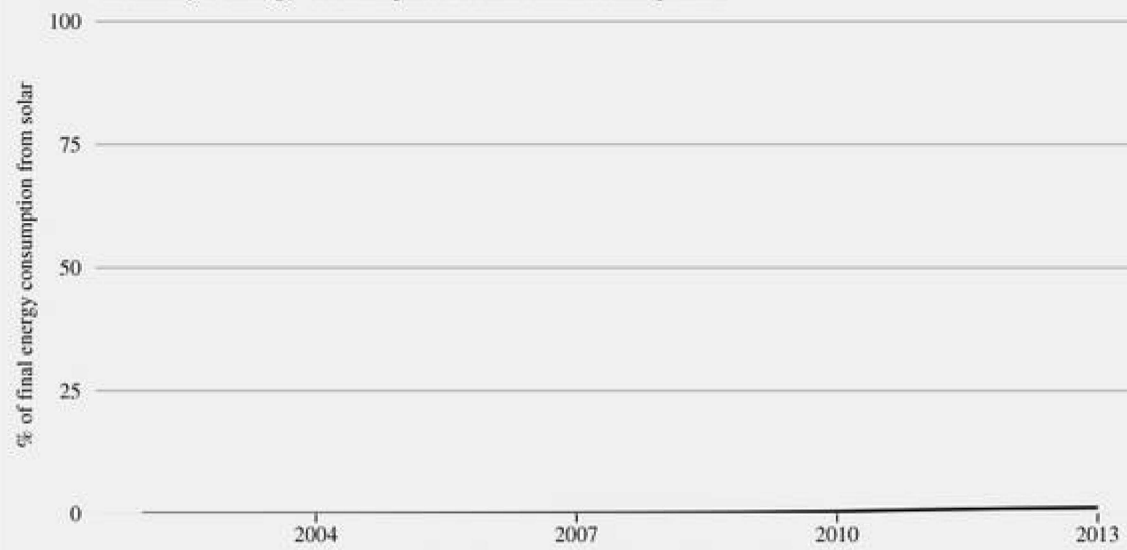




**Full energy chain CO<sub>2</sub> equivalent emissions by primary energy source.**

Markandya, A., & Wilkinson, P. (2007). Electricity generation and health. *Lancet*, 370(9591), 979-990.  
doi:10.1016/S0140-6736(07)61253-7

**Ignore the headlines. Here is a graph showing how much of Germany's energy consumption comes from solar panels**



Data: Eurostat

Figure: @CountCarbon

# Protecting Mining Jobs and Communities



## A message from Australia's coal miners

Climate change is real and we need a Government that will tackle it.  
Doing nothing is no longer an option.

Voters have a choice at the election:

### Labor

- ☒ Support \$1.5 billion investment in Clean Coal Technology
- ☒ No nuclear power station

### Coalition

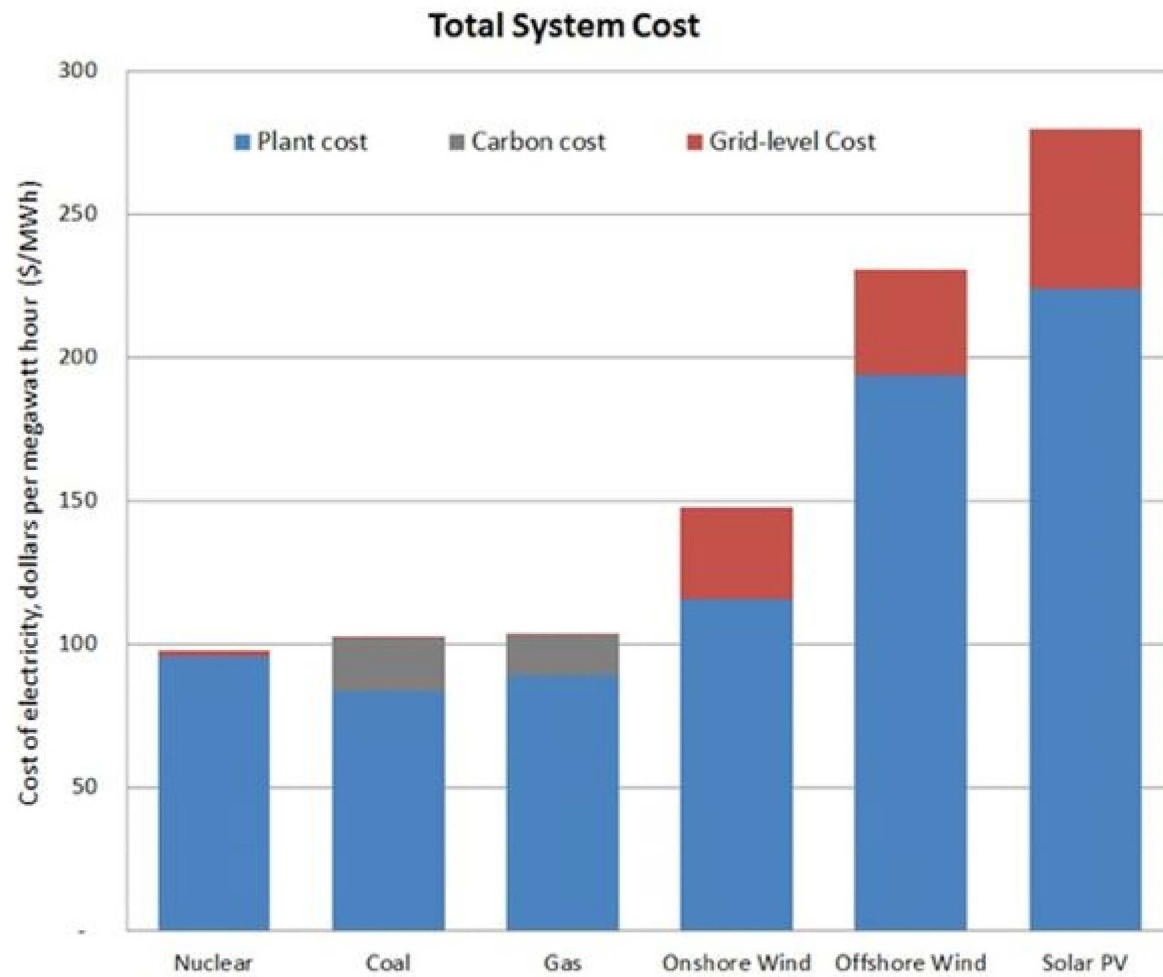
- Continue to neglect Clean Coal Technology
- Develop nuclear power stations that would replace the coal industry.

## Nuclear Power Will Kill the Coal Industry

If you care about mining industry jobs and local communities don't support the Liberal and National parties' plans to introduce nuclear power stations.

Going nuclear is dangerous and will mean the end of our coal industry. Oppose a party







# THINGS CHINA MAKES

**21.8 GIGAWATTS**  
*Solar Cell Production  
Capacity*

That's  
**74%**  
*of global solar cell production  
capacity in 2011.*



**Solar cells:**  
Over four tons of silicon tetrachloride  
liquid waste per ton of raw polysilicon



By Lisa Mahapatra

INTERNATIONAL BUSINESS TIMES

h report titled "Not So Trivial Facts" by David Ciu



Tens of thousands of tons of toxic waste from producing 2,000 kilos of Neodymium for the direct-drive permanent-magnet generator of every single large wind turbine – dumped in Baotou, China



Six-mile wide lake of toxic waste at Baotou, China, used for dumping seven million tons a year of waste from rare earth metal processing plants, seen in the background. Jamie Choi, an expert on toxics for [Greenpeace China](#), says villagers living near the lake face horrendous health risks from the carcinogenic and radioactive waste. Over 4,400lb (2,000kg) of neodymium-based material (Nd2Fe14B) go into the direct-drive permanent-magnet generator of every single large wind turbine.



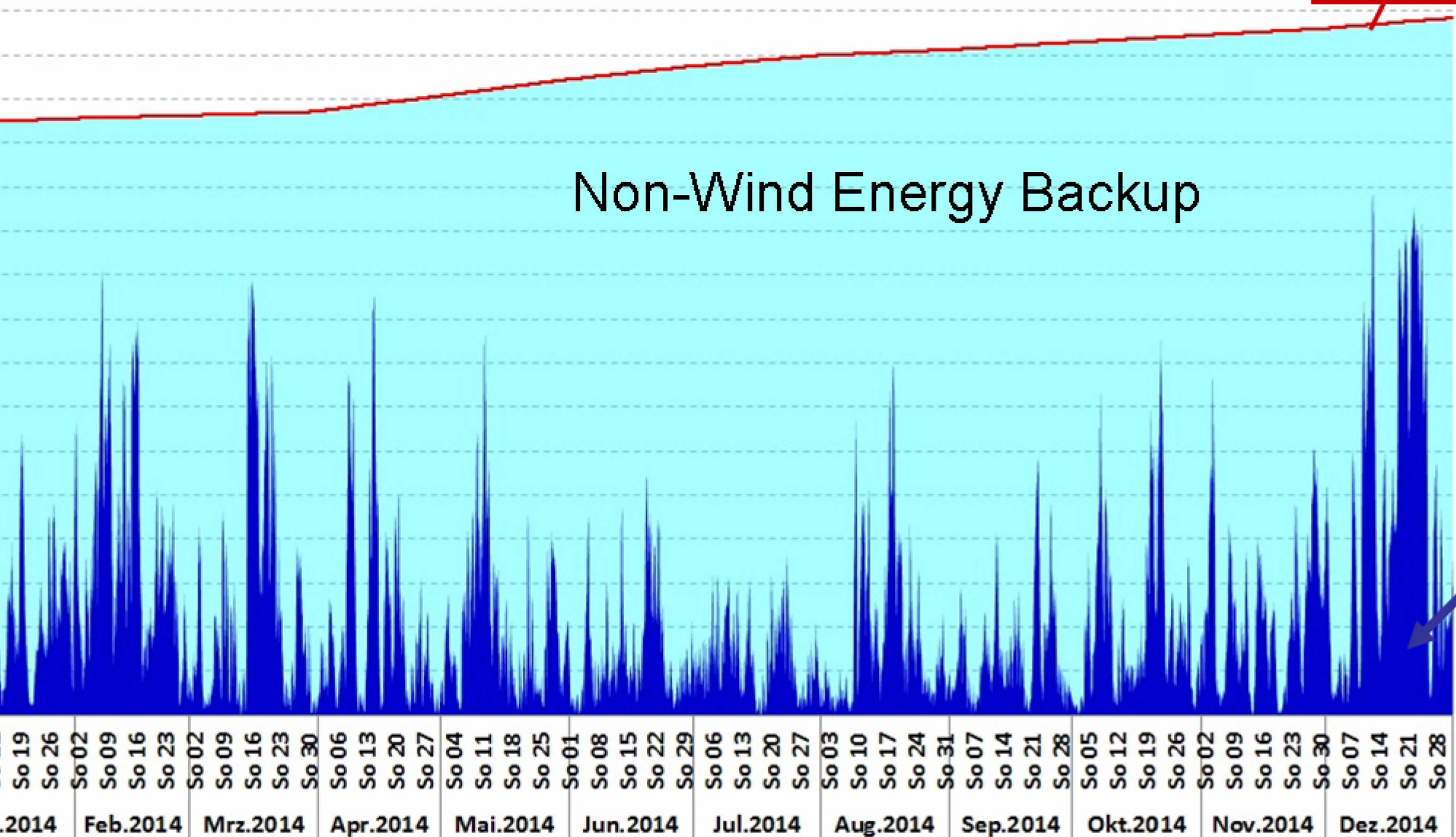
# German Wind Cost & Yield 2014

Instal  
Wind Ca  
(namep

■ Nennleistung Wind

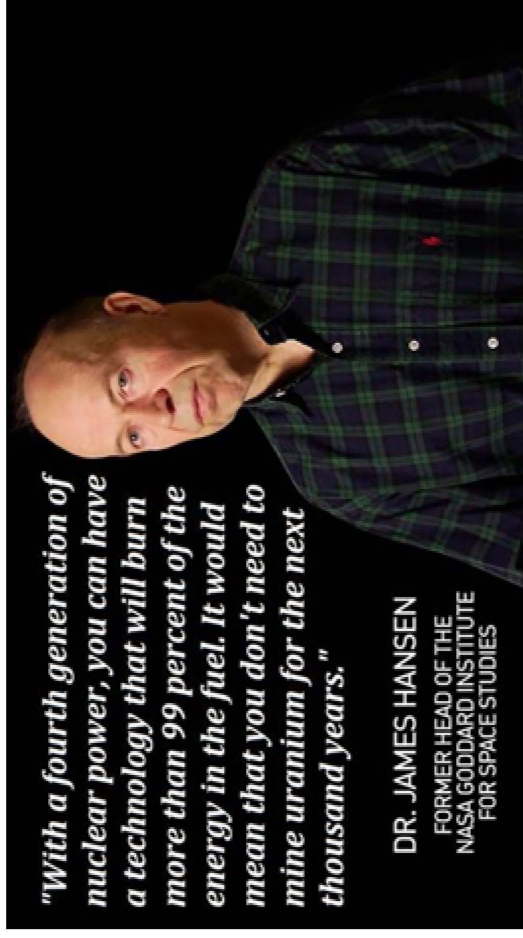
■ Windenergie Einspeisung Ist EEX

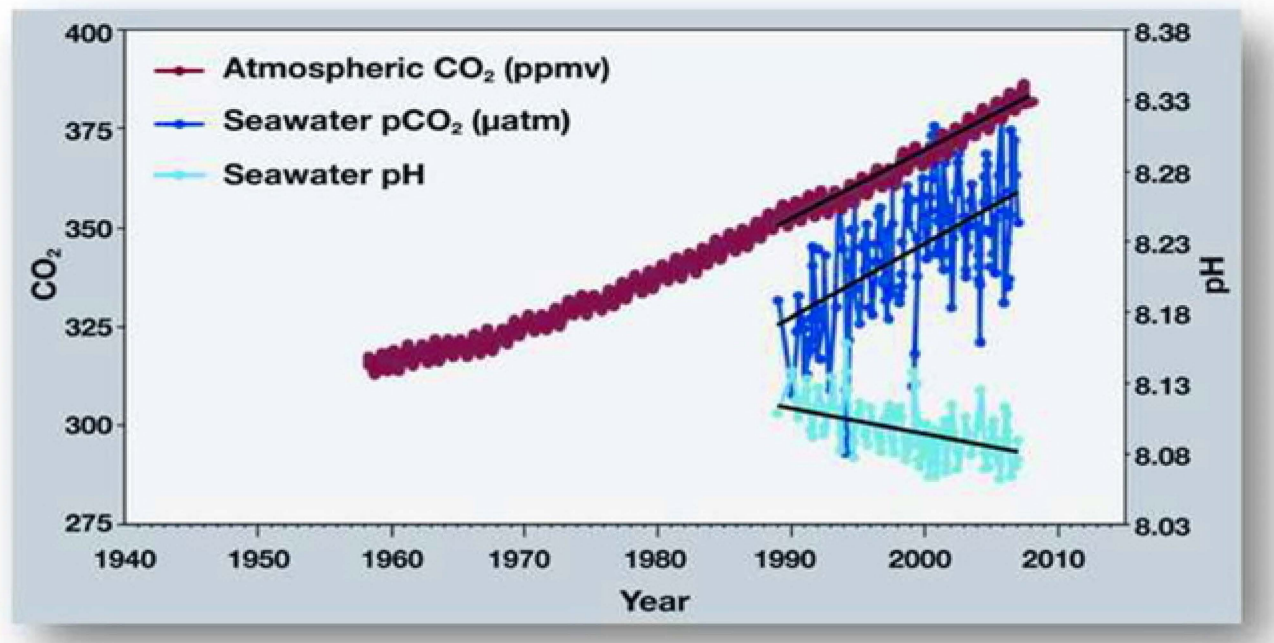
Non-Wind Energy Backup



*"With a fourth generation of nuclear power, you can have a technology that will burn more than 99 percent of the energy in the fuel. It would mean that you don't need to mine uranium for the next thousand years."*

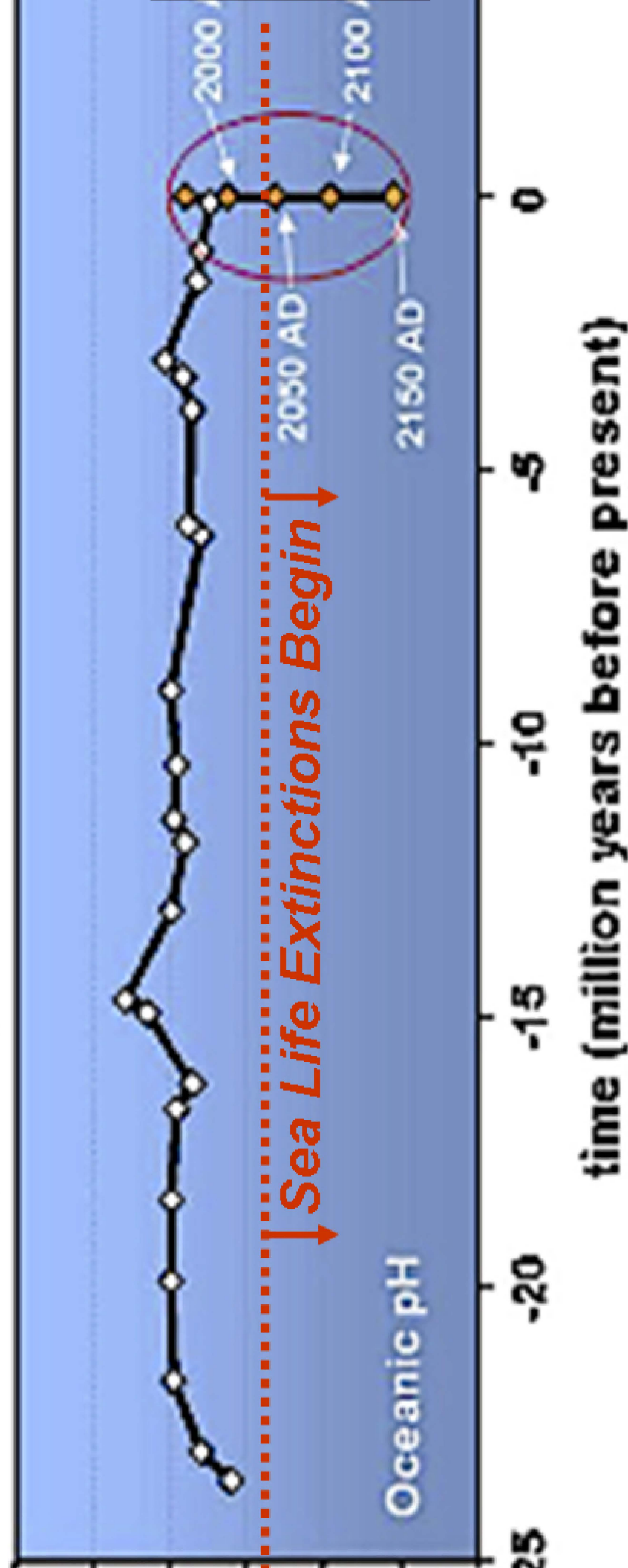
DR. JAMES HANSEN  
FORMER HEAD OF THE  
NASA GODDARD INSTITUTE  
FOR SPACE STUDIES





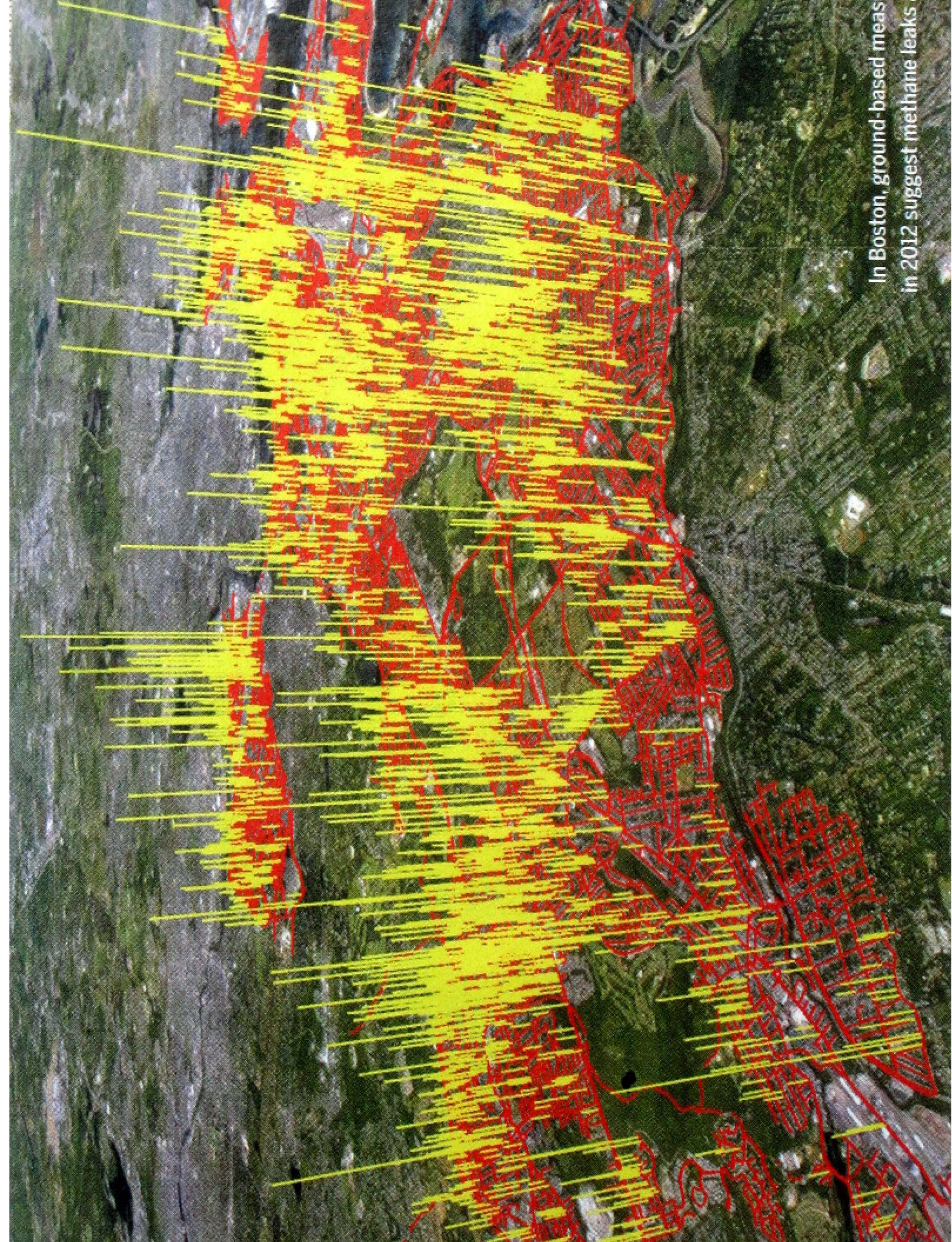
...s are Acidifying Fast .....

Changes in pH over the last 25 million years



...ening now, at a **rate** and to a **level** not experienced by **marine organisms**





In Boston, ground-based measurements in 2012 suggest methane leaks