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Green Watch

Fear Itself

The EPA's reliance on bad radiation science frightens Americans and increases vulnerability to terrorism

By Jon Basil Utley and Steven J. Allen

Summary: *U.S. government policy on radiation exposure is based on irrational fear and on discredited science called "LNT." The policy doesn't just deny Americans access to useful technology and raise the price of electricity. In an emergency, the policy could be more dangerous to people than the radiation itself. What's worse: The LNT concept goes beyond radiation exposure; it underlies other policies that cost billions and destroy jobs.*

Anti-nuke protesters warn us of the dangers of zombies and Godzilla—not to mention radiation-caused giant ants (in the movie *Them!*) and three-eyed fish (in *The Simpsons*).

Bad science leads to bad decisions. When the Environmental Protection Agency (EPA) relies on an absurd theory of how radiation affects human beings, it threatens Americans' access to life-saving medical technology and cheap electricity, it wastes tens of billions in storage and cleanup expenses, and it greatly increases the chance of ruinous overreaction to disasters and to security threats.

What kind of overreaction do we mean? Consider what happened in Japan. The 2011 earthquake and tsunami killed more than 18,000 people in Japan, including an estimated 1,607 people in the Fukishima prefecture. (Japan has 47 prefectures, akin to U.S. states.) Yet 1,656 died, mainly old and ill persons, during the panicked evacuation of the area around the Fukishima #1 power plant, according to *Japan Today*, a major Japanese newspaper. The evacuation was in response to following U.S. Environmental Protection Agency guidelines.

You read that right. More people were killed in the evacuation—which was ultimately shown to have been unnecessary—than were killed in the Fukishima prefecture by the earthquake, the resulting tsunami, and the resulting meltdown *combined*.

The number killed by radiation, fear of which was the basis for the evacuation? Zero.

Similarly, in Europe and the Soviet Union after the Chernobyl disaster, some 100,000 women reportedly had abortions out of fear that the radiation would cause thousands of cases of birth defects. The actual number of birth defects believed to have been caused by the radiation? Zero.

The name of the theory behind this hysteria is "linear no-threshold" or LNT. By the phony logic of LNT, any tiny amount of radiation will kill some number of people out of every million or billion people exposed.

And the theory is not just used with radiation. LNT is also how the government came up with many of its dubious risk guidelines for chemicals and minerals. Thousands of jobs are being sacrificed and billions of dollars are being spent by industry and municipalities in trying to comply with these limits.

The theory's harm has worsened as science has progressed to the point where we can actually measure in parts per billion, which adds to the fear that almost any product may be dangerous. By ultrastrict standards, human breath itself can give you cancer (and, by environmentalists' standards, it can cause "climate change").

Linear No-Threshold

The "linear no-threshold" idea, in essence, is this: If 100 aspirins would kill the average person, then that same person would be killed by 100 aspirins taken at the rate of one a day for 100 days. Or, if one day 100 people each took one aspirin, then one of those hundred people would die.

The LNT principle is simple—the effect of something is proportionate to the dose you receive of it. For radiation, the standard mea-

surement is the millirem, which is the equivalent of one-tenth of a chest X-ray. Cut the dose by a factor of ten, and according to LNT you reduce the harm by that amount. Double the dose, and you double the effect. This notion is easy to use as the basis for government policy precisely because it's simple.

Too simple. Almost nothing in nature is linear. Almost everything in nature follows the Goldilocks pattern, in which there is a "just right" amount of exposure to heat, sunlight, water, noise, stress (such as in exercise), and so on. "It's the dose that makes the poison," scientists say. Most things that are good for you in small amounts can hurt you if the amounts are too large, and many things that are poisons at large doses—fluoride, arsenic, mercury, etc.—are, in small doses, beneficial or even necessary for life.

With radiation, there's another factor to consider: the fact that humans and other lifeforms evolved on an earth on which every living thing is constantly bombarded with radiation in myriad forms. Logic dictates that radiation at very low levels must be harmless, or extremely close to harmless, or perhaps even beneficial. If not, we wouldn't be here.

It's not just logic, though, that says radiation in reality does not follow the LNT model. It's the scientific evidence.

No evidence

Environmentalist Stewart Brand, co-founder of the *Whole Earth Catalog*, wrote last year that, although he believed radiation exposure above 100 millisieverts (10,000 millirem) per year to be linear in causing cancer, he also found that below that level—

> no increased cancer incidence has been detected, either because it doesn't exist or because the numbers are so low that any signal gets lost in the epidemiological noise. . . .
>
> The LNT operates on the unprovable assumption that the cancer deaths exist, even if the increase is too small to detect, and that therefore "no level of radiation is safe" and every extra millisievert is a public health hazard.
>
> Some evidence against the "No-Threshold" hypothesis draws on studies of background radiation. In the U.S. we are all exposed to 6.2 millisieverts [620 millirem] a year on average, but if varies regionally. New England has lower background radiation, Colorado is much higher, yet cancer rates in New England are higher than in Colorado—an inverse effect. Some places in the world such as Ramsar, Iran, have a tenfold higher background radiation, but no higher cancer rates have been discovered there. These results suggest that there is indeed a Threshold below which radiation is not harmful.
>
> Furthermore, recent research at the cell level shows a number of mechanisms for repair of damaged DNA and for ejection of damaged cells up to significant radiation levels. This is not surprising given that life evolved amid high radiation and other threats to DNA. The DNA repair mechanisms that have existed in yeast for 800 million years are also present in humans.

LNT, Brand suggested, distracts us from the need for regulations to protect us from real threats. "The actual threat of low-dose radiation to humans is so low that the LNT hypothesis can neither be proven true nor proven false, yet it continues to dominate and misguide policies concerning radiation exposure, making them grotesquely conservative [i.e., risk-averse] and expensive. Once the LNT is explicitly discarded, we can move on to regulations that reflect only discernible, measurable medical effects . . . "

Chernobyl

A 2005 U.N. report on the 1986 Chernobyl disaster reported radiation harm was far less than predicted. According to the 600-page report, the accident caused fewer than 50 deaths, most of them among emergency workers who died in the first months after the incident. Early estimates of deaths were in the thousands. There was an increase in thyroid cancer in children—linked, in some accounts, to the Soviets' failure to warn the public against drinking milk from contaminated cows—but that disease is highly treatable and only nine children died from it. (A later report set the number at 15.) By the time of the 2005 report, 99 percent of the 4,000 children who developed the illness had already survived for almost 20 years.

And according to Dr. Zbigniev Jaworowski, former chairman of the U.N. Scientific Committee on the Effects of Radiation (UNSCEAR), even that low number of thyroid cancers may represent a "screening effect." That is to say, after the meltdown, more children were checked for thyroid cancer, and as a result, more cancers were found. This theory is supported by the fact that the cancers started to appear a year after the incident, and peaked seven years later. Rebecca Terrell in *The New American* noted that, if the cancers were caused by Chernobyl, they should have begun to appear after 5-10 years and the number of cases should have increased until 15-29 years after the incident.

The U.N. report on Chernobyl described the 20-mile exclusion zone around the reactor as abounding in animal life, full of wolves, elk, wild boars, eagles, and other creatures. The World Health Organization's summary stated, "No evidence or likelihood of decreased fertility among the affected population has been found, nor has there been any evidence of congenital malformations" (birth defects).

Women were reportedly having abortions as far away as Italy out of fear of radiation. In Greece, there were some 2,500 abortions more than usual, presumably because of radiation fears, even though the "excess" exposure at that distance was 100 millirem—one percent of the level at which increased cancer risk has been detected.

After the Three Mile Island incident in 1979, no one died. (A famous bumper-sticker of the time referred to a case in which Sen. Edward Kennedy, D-Mass., attempted to cover up his involvement in an auto accident in which a woman was killed: "More people have died in Ted Kennedy's car than at Three Mile Island.") Residents from the Three Mile Island area testified at a Senate hearing on the incident, and when they did, they were exposed to more radiation from the granite in the Senate office building than they had received because of the accident at the nuclear power plant.

As for the long-term effect of the 2011 meltdown in Japan, scientists from France's nuclear agency in February 2013 "spent three days in Fukishima City and made side-trips

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into the evacuation zone. When they got home, their dosimeters said they had absorbed less radiation than they would have had they spent those days in Paris," due to that city's normal background level of radiation, according to Will Boisvert in the *New York Observer*.

The origin of LNT

The father of LNT was Hermann Muller, a Nobel Prize-winning geneticist and a crusader for eugenics. His socialist views took him to the Soviet Union, where he worked for a time in the 1930s before being forced to leave. (He claimed later in a letter to Julian Huxley that his departure was necessitated when Soviet dictator Joseph Stalin read a translation of Muller's book on eugenics and prepared an attack on the book in the Soviet press. Muller, it appears, was too left-wing for Stalin.)

In the aftermath of World War II, Muller was one of a number of scientists who had worked on the Manhattan Project to create the atomic bomb, and felt guilt about it. In this view, the bomb was created to fight Nazi Germany, not to stymie the Soviet Union, which many of the scientists supported, or at least considered no worse than the U.S. They opposed nuclear weapons—especially the possession of nuclear weapons by the U.S. and its allies—and they came together in "peace" efforts such as the Pugwash Conferences on Science and World Affairs and the campaign, led by Linus Pauling, to ban testing of nuclear weapons.

Pauling, who won the Nobel Prize for chemistry and the Nobel Peace Prize, was either a willing agent of the Soviet Union or one of those naïve individuals whom the Soviets worked with and, behind their backs, called "useful idiots." Accused of receiving Communist help to organize 2,000 scientists to sign a petition against nuclear testing—the effort that won him the Peace Prize—he testified before Congress that he had done it at a total cost of $250. Experts on petition drives who have read Pauling's account of how he did it say that his story cannot be true. That means that he committed perjury.

Like Muller, Pauling was a eugenicist, according to *Harvard* magazine, which noted that, "in 1968, [he] urged compulsory screening for defective genes before marriage. He suggested some form of visible display—such as forehead tattoos—to prevent the mating of two carriers of a defective gene." And his statements on radiation were deceptive and/or unscientific. For example, he declared in 1957 that "I am convinced that there will be born in future generations *hundreds of thousands* of feeble-minded children, with serious physical defects *because of the tests that already have been made*." Somehow those cases of feeble-mindedness caused by nuclear testing escaped the notice of scientists who came later.

As for Muller, in his 1946 Nobel acceptance speech and in the committee meetings of the National Academy of Sciences, Muller argued there is no safe level of radiation exposure, a position that the NAS adopted and that become the seeming consensus of scientists. Edward J. Calabrese, a professor of toxicology at the University of Massachusetts School of Public Health and the author of more than a dozen books, claims that, based on his study of Muller's correspondence, as well as recently declassified files and other materials, he has concluded that Muller lied. (For details, see "Radiation's Big Lie: Did a Nobel laureate knowingly lie about the dangers of radiation in 1946?" on the website of the Institute of Electrical and Electronics Engineers.)

LNT was adopted by the United Nations, including UNSCEAR. "Its primary use," wrote James Conca in Forbes, "was as a Cold War bargaining chip to force the cessation of nuclear weapons testing." Some left-wing scientists, though, put science ahead of politics in analyzing LNT. George Kistiakowsky, who worked on the Manhattan Project, served as science advisor to President Eisenhower, and chaired the left-wing Council for a Livable World, wrote in a 1976 book about his exposure to the LNT idea in a 1960 report by the Federal Radiation Council:

> It is a rather appalling document which takes 140 pages to state the simple fact that since we know virtually nothing about the dangers of low-intensity radiation, we might as well agree that the average population dose from man-made radiation should be no greater than that which the population already receives from natural causes; and that any individual in that population shouldn't be exposed to more than three times that amount, the latter figure being, of course, totally arbitrary. . . .
>
> At issue was the reference to a linear relation between dose and effect, which I still believe is entirely unnecessary for the definition of the current radiation guidelines, since they are pulled out of thin air without any knowledge on which to base them.

"Sixty-three years of research on radiation effects have gone by, and Kistiakowsky's critique still holds," wrote environmentalist Stewart Brand. "The Linear No-Threshold (LNT) Radiation Dose Hypothesis, which surreally influences every regulation and public fear about nuclear power, is based on no knowledge whatever."

In the late 1950s, the International Commission on Radiological Protection adopted LNT as the basis for radiation protection standards. According to a 2013 *Canadian Nuclear Society Bulletin* article by Dr. Jerry Cuttler, an expert on nuclear sciences and engineering, this was done "because of strong political pressure by scientists and other influential people to create a social fear of low radiation from [atomic] bomb testing during the arms race and abhorrence of nuclear war."

In the 1950s and '60s, a belief in LNT fit perfectly with the spirit of the times. It was an era when people had little understanding of radiation, when their fears were exploited in and shaped by movies like *Godzilla* and *The Amazing Colossal Man*. When Marvel Comics came along in the 1960s, radiation was presented as something that could turn a person into The Incredible Hulk or The Thing or the X-Men's Cyclops, who couldn't stop shooting dangerous beams from his eyes. Radiation, we were led to believe, makes monsters.

Never mind that radiation is all around us, every day, and was all around us long before the invention of nuclear power or nuclear weapons or automobiles or writing or agriculture.

The harm done by "protection"

Doctors for Disaster Preparedness, in its newsletter *Civil Defense Perspectives* (*CDP*), warned that "the government is 'protecting' Americans with extremely costly measures against non-threats—while leaving them totally vulnerable to the really big threats." Similarly, the July 2000 *CDP* described "radiation denial," the refusal to acknowledge certain facts about radiation. Some examples:

> Low-dose irradiation has been experimentally shown to enhance growth, reproduction, immunity, radioresistance, mental acuity, and mean life span, and to decrease infections, sterility, heart disease, cancer deaths, and premature death. . . .
>
> The EPA and the radiation protection industry remain committed to the Linear No Threshold theory—it being necessary for their agenda or livelihood. LNT defenders rely on studies and methods that [T.D. Luckey, professor emeritus at the

> University of Missouri-Columbia School of Medicine] places in 19 categories such as the following: ignoring health benefits, lumping data to eliminate dose-response information, misrepresenting data, omitting data, using single-tailed statistics, using the median instead of the mean, blocking publication, extrapolating from cells to intact organisms, using old animals for growth studies, and leaving out the low-dose category. . . .
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> The LNT—which Prof. Gunnar Walinder of UNSCEAR called "the greatest scientific scandal of the 20th Century"—has caused the waste of trillions of dollars worldwide. The public has not only been deprived of the economic and health benefits of low-cost nuclear technology but of the measurable health benefits of enhanced exposure to irradiation at hormetic [i.e., helpful] levels. Current government policy kills real people by denying them the benefits of radiation—in the name of public health.

The reality of the effect is clear from studies of nuclear power workers (for whom, in one study, radiation seems to have reduced cancer deaths 52 percent), radium dial painters, uranium miners, airline pilots, and people who live in areas with high natural background rates of radiation in Colorado, Brazil, Iran, and southwestern France.

Initially, the old EPA limit may have been supposed to help ward off the threat of cancer. But these limits came into effect after World War II when scientists knew little about radiation's threat to human beings. Today, however, there is a vast body of evidence showing that low doses of radiation, up to 10 rem (10,000 millirem), build resistance to many diseases and prolong human life.

The UN changes its mind

After decades, even some bureaucrats are coming to understand the foolishness of LNT.

In December 2012, the United Nations Scientific Committee on the Effects of Atomic Radiation admitted the failure of the LNT model. An UNSCEAR report stated that uncertainties at low doses are such that UNSCEAR "does not recommend multiplying low doses by large numbers of individuals to estimate numbers of radiation-induced health effects within a population exposed to incremental doses at levels equivalent to or below natural background levels."

Forbes contributor James Conca responded to the report:

> Finally, the world may come to its senses and not waste time on the things that aren't hurting us and spend time on the things that are. And on the people that are in real need. . . . The advice on radiation in this report will clarify what can, and cannot, be said about low dose radiation health effects on individuals and large populations. Background doses going from 250 millirem to 350 millirem will not raise cancer rates or have any discernible effects on public health. Likewise, background doses going from 250 millirem to 100 millirem will not decrease cancer rates or affect any other public health issue.
>
> Note: Although most discussions are for acute doses (all at once) the same amount as a chronic dose (metered out over a longer time period like a year) is even less effecting. So 10 rem [10,000 millirem] per year, either as acute or chronic, has no observable effect, while 10 rem per month might.
>
> UNSCEAR also found no observable health effects from [2011]'s nuclear accident in Fukushima. *No effects.*

Conca noted that, based on the United Nations report, "The linear no-threshold dose hypothesis (LNT) does not apply to doses less than 10 rem [10,000 millirem], which is the region encompassing background levels around the world, and is the region of most importance to nuclear energy, most medical procedures and most areas affected by accidents like Fukushima."

New EPA standards

In March 2013, the EPA posted and solicited public comment on new guidelines that, if adopted, would dramatically change the standards in cases of radiation release such as dirty bombs and nuclear power accidents. When posted, the guidelines took effect on an interim basis.

Environmentalists promptly attacked the idea of changing the guidelines. The proposed revision of the EPA's Protective Action Guide (PAG) for radiological incidents, would, critics claimed, relax the rules too much. Public Employees for Environmental Responsibility (PEER) declared in a press release that the changes would mean more civilian fatalities: "In soil, the PAGs allow long-term public exposure to radiation in amounts as high as 2,000 millirems. This would, in effect, increase a longstanding 1 in 10,000 persons cancer rate to a rate of 1 in 23 persons exposed over a 30-year period." That calculation appears to be based on LNT.

Environmentalists may or may not be sincere when they issue such warning. Perhaps they fear that a realistic radiation threat analysis could weaken opposition to nuclear power, against which they have campaigned for decades. (*The China Syndrome*, a highly effective anti-nuclear power film from the production company of radical activist Jane Fonda, was released in 1979.)

While the EPA website now shows that health risks begin at 50,000 millirem rather than 15, the site still uses the old, lower numbers for its threat warnings. For example, EPA still uses the 15 millirem limits for residents in the vicinity of the Yucca Mountain waste storage site in Nevada. And EPA still uses the 15 millirem limit for Superfund cleanups, thus adding hundreds of millions, if not billions, of dollars to the costs of such work. 50,000 millirem is 3,333 times 15 millirem, of course, but even 50,000 is lower than the 100,000 millirem threshold commonly used for radiation sickness.

The dirty bomb scenario

After the 2011 Fukushima nuclear accident, Japan followed conventional guidelines and evacuated 160,000 persons from their homes, based on exposure levels of 2,000 millirem. Yet not a single person died and hardly any became ill, even among the emergency nuclear workers at the reactor.

Actual radiation sickness begins at exposure of 100,000 millirem, some 50 times the risk used to evacuate Japanese civilians. And even this risk can be minimized by staying indoors and closing windows. Later the Japanese government raised the limit for responders to 25,000 millirem from the initial 10,000 millirem, which was inhibiting emergency response.

This excessive caution all comes from old U.S. limits of 15 millirem, which was thought to be the threat level for humans. For perspective, consider that the average American is exposed to 360 millirem per year, while pilots and residents of high cities like Denver, receive 920 millirem. A *Scientific American* article explained how Japanese authorities ordered evacuation of anybody living within 20 kilometers of the stricken plant and told those within 30 kilometers to take shelter and stay indoors. It also reported that the U.S. Nuclear Regulatory Commission recommended that any American within 80 kilometers evacuate the area.

That's the kind of panicked response we might expect here in America if we were hit with a "dirty bomb," an explosive device designed to disperse radioactive material.

The Boston Marathon attack of 2013 had similarities to a hypothetical attack involving a dirty bomb, so it focused the attention of emergency planners and much of the public on the dirty bomb threat. The House Homeland Security Subcommittee held hearings that asked, What if the Boston bombing attack had been a radiological one? Those hearings did not discuss different radiation danger thresholds, and New York's Police Commissioner for Counter Terrorism described the threat as if the 15 millirem limit were correct.

Dirty bombs are far, far easier to construct than nuclear weapons, and a dirty bomb detonated in a heavily populated urban area would have devastating consequences. In the Marathon attack, outside the tragedy for those in the immediate vicinity of the bombs and their families, the effect on most Bostonians was relatively minor; they were inconvenienced by the shutting down of their city for a day. Imagine if it had been a dirty bomb and a quarter million people had been ordered to evacuate their homes and offices. In the ensuing panic, people would have been injured, even killed, and there would have been great economic damage immediately and in the long run.

Under the EPA's limits, a dirty bomb that contaminated a hundred-foot radius would require an emergency evacuation of half a city. Imagine the fallout (no pun intended) if, after such a harmful evacuation, people realized that it was unnecessary.

EPA regulations could mean shutting down whole cities

Realistic radiation health limits need to be properly understood by first responders and affected citizens. Otherwise, panic may do economic destruction far beyond the actual damage. Monumental traffic gridlock could paralyze whole cities. In truth, a dirty bomb might contaminate only a few city blocks, while current EPA limits could shut down square miles of central cities. After what happened in New Orleans following Hurricane Katrina, one can easily imagine soldiers going into people's homes and offices, demanding that they leave to comply with government "danger" levels, while, like New Orleans, criminals stick around to loot the abandoned areas.

The Federation of American Scientists Web site declares, "Areas as large as tens of square miles could be contaminated at levels that exceed recommended civilian exposure limits. Since there are often no effective ways to decontaminate buildings that have been exposed at these levels, demolition may be the only practical solution. If such an event were to take place in a city like New York, it would result in losses of potentially trillions of dollars."

In an article on a hypothetical nuclear bombing of Washington, D.C., the *National Journal* reported in 2005 regarding the EPA standard at the time: "Meeting the EPA standard for public safety—no more than 15 millirem of radiation exposure per year—would cost trillions of dollars for a midsized city, according to a study led by Pacific Northwest National Laboratory. But the cost drops by half or more when the acceptable threshold is raised to 100 or, better, 500 millirem, which is still just 10 percent of the 5 rem [5,000 millirem] level approved for nuclear reactor workers." The study referred to an actual nuclear bomb, but the point about the EPA threshold is the same.

OSHA rules mirror EPA limits

Add to this the unrealistic limitations for first responders, who might be terrified and run away or at best be handicapped by unnecessary, ponderous anti-radiation suits. Some first responders are subject to OSHA (Occupational Safety and Health Administration) rules that mirror the EPA limits, and any authority or property owner who ignored those limits might later be sued. All of which makes for a possibly unimaginable economic catastrophe from one small dirty bomb.

And in the case of an actual nuclear attack on an American city, the same principles apply. Even a Hiroshima-size attack on Washington on the ground (which would collapse every building within a half mile of the explosion) could be survived by those farther away from the blast zone, if they knew the rudimentary rules for seeking shelter, in particular from the fallout path during the first 24 hours (which falls mostly downwind, only 10-15 minutes after the explosion, allowing some time to seek shelter). As the *National Journal* noted, the radiation from nukes dissipates quickly. Ninety percent is gone after seven hours, 99 percent after 49 hours. Fallout spreads according to the wind patterns, but citizens can protect themselves for the few hours necessary by washing, disposing of outer clothing, and using a simple breathing mask to keep alpha particles out of the lungs.

It's horrible to contemplate such an event. But the September 11 attack was also horrible to contemplate, and we paid the price for not being prepared.

What really needs to be done is to explain to Americans how to protect themselves from radiation, specifically by sealing rooms and staying in place rather than panicking and trying to leave town. Most Americans are ignorant about radiation, and politicians want to "show that they care" by establishing the lowest limits. But the threat of dirty bombs is very real even today, and there is, unfortunately, a reasonable chance that terrorists might someday get their hands on a nuclear weapon. Those threats make it critical that the government and the media tell the truth, before the reaction to an attack causes needless panic, waste, and chaos.

Conclusion

The greatest threat from terrorism is that politicians and bureaucrats can use it as an excuse to increase their power, leading to unnecessary and counterproductive wars (and the taxes to pay for them), denial of civil liberties, and mountains of new regulations that are supposed to make us safe. Fanned by media-generated panic and ignorance, radiation exposure is always at the top of the list of most feared events and is, therefore, an area particularly prone to government overreaction.

The Linear No-Threshold model and the radiation standards that are rooted in LNT don't just hurt the country by inhibiting nuclear power and radiation-based medical technology. They make us much more vulnerable to terrorism by magnifying the destructive effects of potential attacks. That's yet another reason to dump LNT onto the ash heap of history.

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GreenNotes

In the August 2013 *Green Watch*, we reported on the case of former **U.S. Rep. Bob Inglis** (R-South Carolina), who became a crusader for Global Warming theory and subsequently lost his seat in **Congress** by an astounding 71-29 percent. Inglis is now the proud recipient of the **John F. Kennedy** Profile in Courage Award "for the courage he demonstrated when reversing his position on climate change after extensive briefings with scientists, and discussions with his children, about the impact of atmospheric warming on our future."

A sterling silver lantern made by **Tiffany's**, the award sometimes goes to **Republicans** who go against their party—former **President George H.W. Bush** for breaking his "no new taxes" pledge, **Sen. John McCain** for his anti-First Amendment legislation (the McCain-Feingold Act), and **Lowell Weicker**, a onetime Republican Senator who became so liberal that conservatives supported his Democratic opponent. The award is named for the book ***Profiles in Courage***, for which John F. Kennedy won the **Pulitzer Prize** although, historians say, he didn't actually write it.

Inglis isn't the only Republican lining up with the anti-science crowd. Environmental activist/***Washington Post*** reporter **Chris Mooney** recently praised "**Carlos Curbelo**, a just elected **Florida** Republican congressman [who] recently visited a **Miami**-area school, where kids reportedly gave him 200 thank you letters for his willingness to address climate change. Last month, Curbelo also flew on Air Force One with **President Obama** for his Earth Day trip to the **Everglades**."

Once again, **Iowa**'s first-in-the-nation caucus seems to have done its work in pushing presidential candidates to support "green" scams such as ethanol. When **Hillary Clinton** (D) was a U.S. Senator from **New York** in 2002, she opposed the ethanol mandate, which harms the environment and drives up the price of food and fuel. But, as noted in ***The Hill*** newspaper, "when she ran in the 2008 presidential election, Clinton was strongly supportive of the renewable [*sic*] standard, which is widely supported in Iowa, whose economy depends largely on the corn that makes most ethanol." She recently reiterated her backing for ethanol after a meeting with key Iowa Democrats, including the director of the I**owa Corn Growers Association**.

In contrast, another candidate, **Sen. Ted Cruz** (R-Texas), has come under fire from **America's Renewable Future**, an ad hoc group formed to pressure 2016 presidential candidates to endorse the mandate.

After Cruz pointed out correctly that science doesn't back up Global Warming theory, **Gov. Jerry Brown** (D-Calif.) unleashed a tirade, declaring that "that man betokens such a level of ignorance and a direct falsification of scientific data, it's shocking and I think that man has rendered himself absolutely unfit to be running for office." And when Cruz appeared as a guest on the talk show ***Late Night with Seth Meyers***, the comedian Meyers ridiculed the Senator's position, saying, "I think the world's on fire literally. Hottest year on record. But, you're not there, right?" The audience whooped in approval. Reporting the encounter, the left-wing website ***Salon*** celebrated that Cruz had been "mercilessly skewered."

Meyers was referring to the report by two Obama administration agencies, the **National Aeronautics and Space Administration** (NASA) and the **National Oceanographic and Atmospheric Association** (NOAA), that 2014 was "the hottest year on record." Both agencies subsequently admitted that, even by their own figures, it was probable that 2014 was actually cooler than earlier. Meanwhile, satellite measurements have shown no global warming since 1998.

Campaigning in **New Hampshire**, former **Gov. Jeb Bush** (R-Fla.) said the U.S. must "be cognizant of the fact that we have this climate change issue and we need to work with the rest of the world to negotiate a way to reduce carbon emissions." **NextGen Climate Action**, founded by billionaire Democrat **Tom Steyer**, praised Bush, saying he "demonstrated leadership today on the issue of climate change—distancing himself from the other Republican presidential hopefuls and demonstrating why climate change doesn't have to be a partisan issue."