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Alaska Department of Environmental Conservation
Division of Air Quality Comment Form
Name: John Brading
Address: 2204 Steese Hwy, Fairbanks, AK 99712

Comment: (1) On the proposed regulation^{to} require switching to Diesel #1. Yes switch to Diesel #1 because it will reduce P.M. 2.5 by reducing the sulfur dioxide (SO₂) almost 4 times more than Diesel #2. (2) Mix 20% biodiesel with 80% petroleum Diesel reduces carbon monoxide, sulfur dioxide, particulate matter, hydrocarbons, air toxics and carbon dioxide. (3) Install electrostatic precipitators in wood, oil, & coal Burners. (4) Spray Biodiesel on or #1 diesel on to coal reduces sulfur dioxide. (5) Push the clean air above the cold inversion down into the cold bad air with a crop duster helicopter. (6) Spray the cold inversion with warm water it turns to snow attaches to the P.M. 2.5 and drops it to the ground. (7) Read the "Deliberate Corruption of Climate Science" by Tim Ball (8) Develop water catchers for car & truck tail pipes. Water is a precursor for ice Fog. (9) Spray dry ice on ice Fog it clears the Fog out (10) Drive trucks down roads shooting up dry ice clears the Fog out. (11) Use ski resort snow-makers mounted on school roofs to clean the air for kids. (12) Use orchard Tower fans to push & mix good air with bad air (13) Boiler & Furnace internal fuel spray guns need cleaning or changed out for maximum reductions of emissions (14) Thick insulated window shutters & doors reduce fuel consumption & emissions

Comment # 15

If you have 60,000 Diesel furnaces and 10,000 wood stoves. The volume out put by Diesel furnaces producing P.M. 2.5 would be much greater than 10,000 wood stoves

Alaska D.E.C. should use
William Happer, Ph.D. to
peer-review F.N.S.B. air
quality. He has published over
200 peer-reviewed scientific
papers. The people want to see
the required 3 peer reviewed
scientific papers performed
on the F.N.S.B. air shed.

Science must have
independent verification

From Range magazine

Climate Science Fiction

Computer models just don't work. Words by William Happer, Ph.D. Photo illustration by John Bardwell.

I'm a physicist. I have published over 200 peer-reviewed scientific papers and I have co-authored several books, including one of the first on the effects of increasing levels of carbon dioxide (CO₂) on climate. I served as director of the Office of Energy Research at the U.S. Department of Energy from 1990 to 1993, where my office spent over \$3 billion a year funding basic research in many areas of science, including climate and climate models.

I know a lot about the science of the Earth's atmosphere and climate. Before coming to DOE, I invented the "sodium guide star" that is used on most big astronomical telescopes to measure and correct for the turbulence of the atmosphere. Atmospheric tur-

The Earth's climate involves the complicated interaction of two turbulent fluids, the atmosphere and the oceans.

bulence blurs the images of stars and other space objects.

I want to discuss computer models that paint frightening scenarios of climate change. These models don't work. They predict far more warming than has been observed over the past few decades. Other model predictions have also failed. The rates of sea-level rise have not accelerated. The weather has not become more extreme.

The Earth's climate involves the complicated interaction of two turbulent fluids, the atmosphere and the oceans. It is devilishly hard to predict what a fluid will do, as was noted thousands of years ago in a biblical verse: "The wind bloweth where it listeth, and thou hearest the sound thereof, but canst not tell whence it cometh and whither it goeth."

As the verse suggests, climate modeling is a very hard problem. When asked what he would ask God, Werner Heisenberg, one of the inventors of modern quantum mechanics, supposedly responded: "I would ask God two questions. Explain quantum mechanics,

and explain turbulence. I think he will have an answer for the former."

Poorly informed proponents of climate alarmism like to claim that the science of climate change is as well understood as the laws of celestial mechanics and that we can predict climate one hundred years from now as well as we can predict eclipses of the sun. Anyone who followed the forecasts of the path of Hurricane Irma in fall 2017 can appreciate how absurd such claims are. As recently as a few days before the hurricane struck, models could not even forecast whether the storm would move up the west or east coasts of Florida.

However, based on models of the climate a century from now, we are supposed to

embrace wrenching economic policies. These will be a minor inconvenience for the privileged saviors of the planet. But the policies will hurt the rest of humanity and probably damage the environment as well.

It is not hard to write partial differential equations that describe the Earth's climate: heating by the sun, cooling due to thermal radiation to space, how the motions of parcels of air and water respond to the driving forces of pressure, gravity, viscosity, the rotation of the Earth, etc. But the resulting equations cannot be solved, even by the most powerful supercomputers.

Instead, the equations are replaced with highly simplified models that throw away much of the detail of the real atmosphere and oceans. The models have lots of "parameters," numbers that are adjusted to produce whatever the modelers believe the correct results should be. In their relationship

to reality, climate models and the financial statements of the Enron Corporation have some similarities.

Our beautiful Earth is the water planet. The atmosphere holds large amounts of water vapor and clouds of water droplets and little ice crystals. And then there are the oceans that cover 70 percent of the Earth's surface. Water is probably the single biggest problem for climate models.

Water has huge effects on atmospheric heating and cooling, both by radiation and convection. Compared to water vapor and clouds, CO₂ is a minor contributor to the greenhouse warming of the Earth.

The convection of heat, oxygen, salt and other quantities through the oceans continues to provide one surprise after another to oceanographers. Oceans warm and cool yearly. They are perturbed by quasi-periodic El Niño episodes in the tropical Pacific every few years and influenced by many other cyclic phenomena. The slow convection of heat, salt, oxygen, CO₂ and other quantities from the poles to the deep oceans can take many centuries.

Few are aware that present CO₂ levels—about 404 parts per million in 2017—are low by the standards of geological history, where levels of 2,000 ppm and even much higher were common. Life flourished even more abundantly at these higher past levels of CO₂. Indeed, the only clear consequence of the increase of CO₂ levels from about 300 ppm in the year 1900 to about 404 ppm today has been a greening of the Earth and an increase of primary biological activity by photosynthesis.

I know the difference between real and phony science. My sodium guide stars work. Climate models do not. ■

William Happer is professor emeritus of physics at Princeton University. Check video on YouTube or at PragerU.com.

William Happer is professor of physics at Princeton University. See video at PragerU.com

SIP FAQs

Q: When can the area meet the air quality standards?

A: The Proposed Serious SIP shows that the area can meet attainment by 2029 if all of the proposed control measures are implemented and followed. It may be possible to attain earlier, but this is our best estimate using our current methods and models for projecting emissions into the future.

Q: Why is there a proposed regulation to require switching to Diesel #1, isn't wood burning the problem?

A: Yes, wood burning is the main source of fine particulate matter (PM2.5), however, PM2.5 is a complex mixture of small particulates and liquid droplets and is made up of more than just organic carbon (type of particulate from wood burning). PM2.5 is also made up of elements identified as precursor pollutants. Sulfur dioxide (SO2) is the second largest component of the PM2.5 problem. SO2 comes from the sulfur in home heating fuel and other diesel and coal combustion. Diesel #2 has 2,566 ppm of sulfur, while Diesel #1 has only 896 ppm. Diesel #1 is a compromise control for the FNSB nonattainment area due to its lower economic impact. Other communities use ultra-low sulfur diesel fuel (ULSD) which has only 15 ppm sulfur. However, ULSD can increase costs \$0.30 - \$0.40 cents per gallon. Diesel #1 is expected to increase costs \$0.02 - \$0.07 cents gallon.

Q: What is fine particulate matter (PM2.5) and where does it come from?

A: Fine particulate matter (PM2.5) is a complex mixture of extremely small particles and liquid droplets less than 2.5 micrometers in diameter. A single human hair is almost 30 times larger in diameter than the largest fine particle, PM2.5. PM2.5 is a product of combustion, primarily caused by burning fuels. Examples of PM2.5 sources include power plants, vehicles, wood burning stoves, and wildland fires. Further information may be found at: [Particulate Matter](#).

Q: Why is fine particulate matter (PM2.5) such a problem for the Fairbanks North Star Borough?

A:

- The Fairbanks North Star Borough faces a challenging air quality problem due to periodic extreme cold weather and the wood smoke that's produced when people burn wood to heat their homes.
- The pollutant is known as fine particulate matter (or "PM2.5"). There are National Ambient Air Quality Standards (NAAQS) set by the Environmental Protection Agency for PM2.5. These include the primary and secondary standards. It is important to remember that primary standard is meant to protect against short-term health effects from these sorts of air pollution spikes. The area where levels periodically exceed the standard is known as a "nonattainment area."
- The high levels of air pollution create a public health risk for the residents of Fairbanks North Star Borough, and a strong air quality plan is essential for reducing public exposure to these high levels of air pollution as soon as possible.

Q: Did DEC consider the costs of heating in the development of its State Implementation Plan?

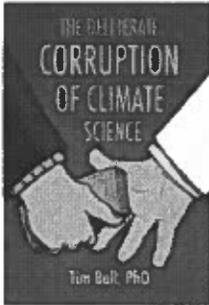
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The Deliberate Corruption of Climate Science Tim Ball



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About This Item

From the Publisher

Dr. Tim Ball exposes the malicious misuse of climate science as it was distorted by dishonest brokers to advance the political aspirations of the progressive left.

From The Critics

This book is a remarkable fact-filled tour-de-force discussion of the global warming topic. It gives much background and behind-the-scenes information of the vast chicanery and lies that have been perpetrated by a small and organized cabal of global warming propagandists. Probably nobody has followed this evolving global warming scandal more closely or has a better background to interpret the data than does Tim Ball.

Customers Also Recommend

Publisher Information

Armchair Adventurer

Thank you for shopping at Barnes & Noble

This book describes how the United Nation organization is destroying U.S.A. sovereignty using climate as a sledge hammer to shut down economics and convert U.S.A. into the globalist agenda - one world order.

Tim Ball is a highly qualified and experienced academic with an expertise in historical climatology who rejects most of the current hysteria around climate change and global warming. He is a modest, gentle man who, in spite of his enormous work in the field and the chairing of inquiries and commissions into environmental causes, is now libeled, slandered, abused and threatened for his opinions.

— Michael Coren



In *The Deliberate Corruption of Climate Science*, Dr. Tim Ball exposes the malicious misuse of climate science by dishonest brokers to advance the agenda of the progressive left. How was legitimate science twisted into a morass of convoluted gibberish? Dr. Ball explores how and why the science was distorted for political purposes.

Ten years ago I simply parroted what the IPCC told us. One day I started checking the facts and data — first I started with a sense of doubt but then I became outraged when I discovered that much of what the IPCC and the media were telling us was sheer nonsense and was not even supported by any scientific facts and measurements. To this day I still feel shame that as a scientist I made presentations of their science without first checking it. The CO₂-climate hysteria in Germany is propagated by people who are in it for lots of money, attention and power.

— Meteorologist Klaus-Eckart Puls (translated by Pierre Gosselin)

Dr. Tim Ball holds a Ph.D. (Doctor of Science) in Climatology from Queen Mary College, University of London

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Front cover illustration by Josh; CartoonsByJosh.com



Dr. Jay Lehr science
director for the Heartland
institute. Played a major
role in creating the E.P.A.
in 1971 says the E.P.A. has
become so corrupt that it
must be disbanded.

letting states regulate
their own environment.

Use the 10th amendment
states right of nullification

Secret Science

John Beale and an EPA story of fraud and deceit.

By Michael S. Coffman, Ph.D.

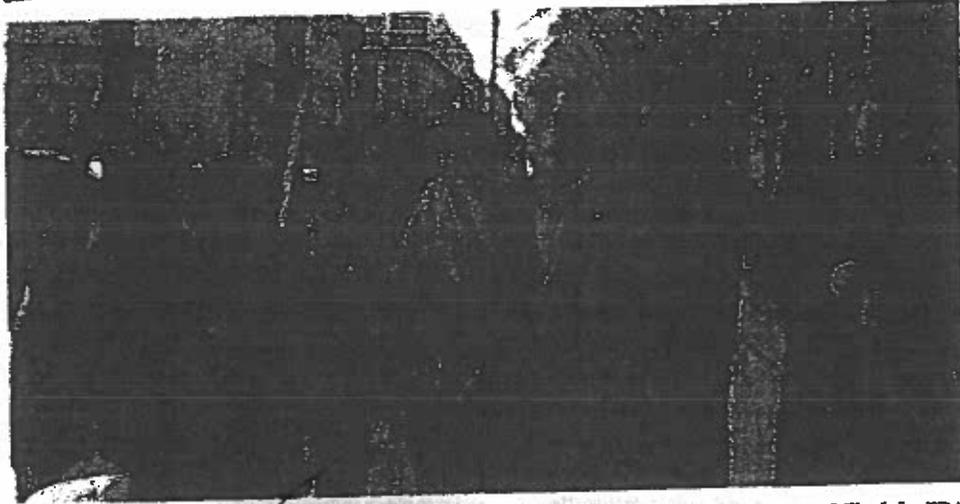
Prior to being hired by the Environmental Protection Agency in 1988, John Beale drifted from job to job in a small town, working in a law firm, on a political campaign, and even on an apple farm. He had no legislative or environmental policy experience. Yet, when he was hired by his best friend Robert Brenner (who happened to be deputy director of the powerful Office of Air and Radiation at the EPA), Beale was employed at the highest pay scale for general service employees, a post that typically is earned by those with significant experience.

That is merely the opening salvo of a riveting, very well-documented 67-page Senate

down or forcing horrendously expensive modifications to factories and businesses, as well as adding thousands of dollars to new cars. Beale created this monster based mostly on lies, just as he failed to tell the truth to his fellow co-workers about his working for the CIA and a host of other felonies. Beale represents the poster child of corruption in the EPA, and probably many other federal agencies as well.

Anatomy of Corruption

Along with most land management-based federal agencies, progressive green ideology permeates the EPA like cancer. Yet another



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Former EPA executive John Beale is now serving hard time in federal prison for fraud. He bilked the EPA out of nearly a million dollars in unmerited salary and business expenses while claiming he was an undercover CIA agent. OPPOSITE: Robert Brenner—testifying before Congress with Beale on Oct. 1, 2013—was deputy director of EPA's Office of Air and Radiation when he hired his best friend, John Beale, in 1988 at an exorbitant salary.

Minority Report of the U.S. Senate Committee on Environment and Public Works. The Senate report, "EPA's Playbook Unveiled: A Story of Fraud, Deceit, and Secret Science," shows that "the same mind that concocted a myriad of ways to abuse the trust of his EPA supervisors while committing fraud is the same mind that abused the deference afforded to public servants when he led EPA's effort on the 1997 NAAQS."

If that acronym sounds evil, that's because it is. NAAQS stands for National Ambient Air Quality Standards, the constantly changing standards that keep shutting

Senate report (see "Green Billionaires," p. 23) proves that most senior EPA positions are staffed with radical environmentalists: "The green revolving door at EPA has become a valuable asset for the far left and their wealthy donors. In addition to providing insider access to important policy decisions, it appears activists now at EPA also funnel government money through grants to their former employers and colleagues."

The EPA is driven by a nihilistic green ideology that holds that humans are destroying the earth. (See "Agenda 21: Swallowing America," RANGE, Winter 2014.) To these

activists, the job of the EPA (as well as other agencies) is to stop perceived destruction at all costs, which has resulted in the lust for power that we are presently witnessing.

In a deposition before the House Committee on Oversight and Government Reform on Dec. 19, 2013, Beale claimed he was not a radical environmentalist but only had an "interest in environmental issues." However, in conflicting testimony before another House oversight panel, Brenner said he recommended Beale for a spot in the EPA because of his "deep knowledge of and interest in environmental issues." According to the Senate report, Beale's genius lay in his "charisma" and his amoral belief that "the end justifies the means." When current EPA administrator Gina McCarthy was Beale's boss in the Office of Air and Radiation, she swooned, "John Beale walked on water at EPA."

How Beale essentially controlled EPA policy was diabolical and dazzling. He used his charm to quickly work himself into the position of absolute gatekeeper of the data used by the EPA to justify its endless air quality regulations. Although EPA's leaders had excused the use of pseudoscience for years, Beale took it to stratospheric levels. He used data from nonpeer reviewed studies often done by radical groups to justify new regulations, and then blocked any and all efforts by others to review the data. He led the effort to create the 1997 NAAQS for ozone and particulate matter (PM), which became the sledgehammer that allowed "the exponential growth of the agency's power over the American economy," according to the Senate report.

Sue and Settle

Beale's brilliance did not stop there. Both Beale and Brenner were first to use the sue and-settle method in 1997 of imposing massive regulatory changes with little scientific justification. In sue and settle, the EPA allow environmental groups to sue the agency over some perceived environmental malfeasance and the agency immediately settles out of court by paying the environmental group huge settlement costs and then crafting new rules demanded by the group.

Sue and settle is quite lucrative. The National Law Journal reports various environmental groups received \$4 million and \$3 million in legal settlements in 2012 and 2013 respectively. The environmental groups then use the settlements to sue the EPA on another

er issue. That, however, pales in significance to the impact of sue-and-settle sweetheart deals on the U.S. economy which are in the tens of billions annually. In just one EPA Utility MACT (Maximum Achievable Control Technology) Rule that was rammed through following a sue-and-settle arrangement with a coalition of environmental groups in 2009, the rule now costs utilities \$9.6 billion a year. (Also see "The Economy-Wrecking EPA," RANGE, Spring 2012.)

Meanwhile the affected states are not told about this cozy deal until they see the new rule in the Federal Register. Because they have no input into the process, states' rights are literally replaced by environmental demands of groups that get richer for their advocacy to "save the earth." When states do find out about the sue-and-settle cases and try to intervene, the EPA can usually block them.

The Senate report details how Beale avoided any criticism to new standards: "In the case of the 1997 NAAQS, [Beale] started with a sue-and-settle agreement with the American Lung Association, which established a compressed timeline to draft and issue PM standards. This timeline was further compressed when EPA made the unprecedented decision to simultaneously issue new standards for both PM and ozone. Issuing these standards in tandem and under pressure of the sue-and-settle deadline, Beale had the mechanism he needed to ignore opposition to the standards and *all* dissenting opinions."

Simultaneously, the EPA (i.e., Beale) issued a "policy call" to regulate PM2.5, which are ubiquitous, invisible tiny particles in the atmosphere that the EPA claims can cause cancer and a host of health problems. While most are natural background, the EPA claims that pollutants increase the PM2.5 to unhealthy levels for humans and its PM2.5 level was justified using two highly questionable data sets: the Harvard "Six Cities" and American Cancer Society "ACS II" studies. Both studies "rely on primary research that was conducted more than 15 years prior to their selection by EPA—well before advancements in air quality," according to the Senate report. Yet the use of such weak studies reveals the importance of Beale shielding the underlying data from scrutiny.

Corruption Breeds Absolute Corruption

By controlling the data and results of analysis of that data, and not allowing verification, Beale could control EPA's economic analysis,

For nearly 20 years and without any environmental experience, John Beale rode roughshod over every air quality standard set by the EPA, using unscientific secret data that he denied anyone else access to, while shutting down any criticism from anyone. His actions are costing the nation hundreds of billions, even trillions of dollars. Worse, he is costing families their jobs and a dramatically reduced standard of living.

overstate the benefits and underrepresent the costs of federal regulations. The Senate report found that "evidence suggests EPA inflated its original benefits estimates 40 fold" (Italics added) This technique has been applied over the years and burdens the American people today. Up to 80 percent of the alleged benefits associated with all NAAQS regulations are attributed to supposed PM2.5 reductions.

Ron Arnold, executive vice president of the Center for the Defense of Free Enterprise, has studied eco-corruption in our government for decades. When learning of Beale's shenanigans, Arnold used this analogy to better understand the magnitude of the fraud he and the EPA perpetrated against American citizens and businesses: "EPA begins with a bucket of dust (particulate matter), and promulgates a rule that's supposed to empty the bucket. No more dust. Then another rule comes along with a [brand new] bigger bucket of dust that the new rule won't empty, but adding on the old rule's 'co-benefit' will. Over time, this happens with 33 buckets of dust that magically vanish and reappear as bigger buckets of dust."

In short, the EPA's progressively constraining NAAQS standards are nothing more than a magical self-perpetuating black box that keeps spewing out the fraudulent justification needed to further destroy the U.S. economy and harm its citizens. Using EPA data, Sen. Kris Jordan (R-OH) claimed

in a statement during a July 6, 2011, House Subcommittee on Oversight and Government Reform hearing that the EPA's Utility MACT Rule alone was "projected to cost \$10.9 billion in 2016, and the Cooling Water Intake Rule could cost as much as \$4.8 billion a year. NAAQS for ozone is projected to cost a staggering \$1 trillion in costs to manufacturers and, according to the National Association of Manufacturers, lead to 7.3 million jobs lost between 2020 and 2030." Another study, claimed Jordan, shows 1.44 million jobs lost from 2013 to 2020. John Beale's fingerprints were all over these rules.

The Big Mistake

In his first major error, Beale wrote the now infamous "Beale Memo," a confidential document that was leaked to Congress during the controversy. The Senate report reveals: "[Beale] pressured the Office of Information and Regulatory Affairs to back off its criticism of the NAAQS and forced them to alter their response to Congress in 1997. EPA also brushed aside objections raised by Congress, the Office of Management & Budget, the Department of Energy, the White House Council of Economic Advisors, the White House Office of Science and Technology Policy, the National Academy of Sciences, and EPA's own scientific advisers—the Clean Air Science Advisory Committee."

EPA's own scientific advisers warned EPA that the "Six Cities" study was "not in the peer-reviewed literature" and emphasized that there were significant uncertainties with the data. Worse, according to the Senate report: "Since the 1997 stan-

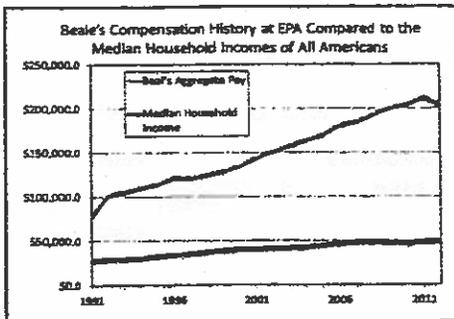
dards were issued, EPA has steadfastly refused to facilitate independent analysis of the studies upon which the benefits claimed were based. While this is alarming in and of itself, this report also reveals that the EPA has continued to rely upon the secret science within the same two studies to justify the vast majority of all Clean Air Act regulations issued to this day. In manipulating the scientific process Beale effectively closed the door to open scientific enquiry, a practice the agency has followed ever since." (Italics added)

The health impacts attributable to PM2.5 and NAAQS enforcement have never been independently verified because the EPA has refused to allow anyone to review the data. This seems to be true for every other federa

agency as well, especially those dealing with global warming—notably National Oceanic & Atmospheric Administration (NOAA) and National Aeronautics & Space Administration. This is not science because science must have independent verification.

An Outside Challenge

With no way to get EPA's data, Charles River Associates, a nonpartisan global consulting group, did its own expensive independent study of health impacts by various levels of ozone. Dr. Anne Smith testified to Congress



on Oct. 9, 2007, saying, "We reproduced EPA's risk estimates and found that *very little of EPA's estimated mortality and morbidity risk is attributable to days when the maximum eight-hour average level of ozone is more than 70 ppb.*" (Italics added) NAAQS standards currently cannot exceed 75 ppb in an eight-hour period. Yet, in spite of the now exposed fraudulent data the EPA bases its justification upon, the agency is replacing 75 ppb with a new rule, now out for public comment, to lower the standard again to 60, 65 or 70 ppb.

Smith continued to decimate EPA's justification: "We also emphasize that EPA's city-specific mortality risk estimates are statistically insignificant for most of the cities considered.... We find that the small mortality risk estimates for ozone days with a maximum eight-hour average above 70 ppb are dwarfed by a range of uncertainty that is centered around zero, making these risk estimates indistinguishable from there being no effect at all."

The Charles Rivers Associates' analysis is just one study, but at least it can be verified. If it survives further analysis, its findings will totally destroy the EPA's claim that there is any benefit to the NAAQS standard for ozone. None. In other words, EPA is not using science to justify its regulations but rather politically driven secret analyses that give it the predetermined results it needs to fraudulently justify its new regulations.

In November 2012, an EPA Human

Relations employee noticed Beale was still drawing a salary after supposedly retiring in 2011. HR brought the issue to the attention of Gina McCarthy, then Beale's boss at the EPA's Office of Air and Radiation, who then questioned Beale. Beale said he needed the EPA cover for his CIA work, but the CIA has no record of Beale as an employee of any intelligence agency. It would later be revealed that Beale was vacationing at home or elsewhere in the world and had no intention of darkening the doors of the EPA to actually work.

Mark Kaminsky, an investigator for the Office of the Inspector General, notes that Beale was atypical in that "he lied across all aspects of his life." Kaminsky eventually proved the continuous lying, forcing Beale to enter a guilty plea on Sept. 27, 2013, to felony theft of government property. Three days earlier, he had given the federal government a certified check for \$886,186 to repay his theft. Gina McCarthy, who apparently never once questioned Beale's in-your-face double life, is now the head of the entire EPA.

Beale is now serving a 32-month sentence for fraud at Maryland's medium security Federal Correctional Institution in Cumberland and two years of supervised release. The conviction was not based on his mind-bending trillion-dollar fraud against the American people by using nonscientific secret data to justify his regulations, but on "government theft of nearly \$900,000, pursuant to a plea agreement covering Beale's crimes from 2000 to 2013." He is still idolized by many within the EPA, which further highlights the despicable culture within that rogue agency.

On July 9, 2014, the negative political fallout caused by the Beale prosecution and imprisonment caused the EPA to finally agree to turn over the "secret" raw data driving the NAAQS' fraud. Nine days later Gina McCarthy was sworn in as EPA's new administrator. The hope of finally getting the EPA's secret data was short-lived. The EPA again stonewalled and, like all the other Obama "scandals," the agency's excuses were endless and the stories kept changing. Finally it was learned that there is apparently massive data-related misconduct in which primary data was not preserved, bad data storage made retrieval nearly impossible, and the final excuse that only qualified scientists can have access. Not surprisingly, these are the same excuses used by NOAA to not allow even qualified scientists to have access to raw glob-

al temperature data.

In spite of the exposure of Beale's fraud, it's business as usual at the EPA. The secret data remains in hiding and the sue-and-settle strategy continues to be used to ram new regulations down Americans' throats without review. Simply stated, corruption is the norm in the EPA, some of it likely criminal in nature. Based on what is happening in other federal agencies, this bad and often illegal behavior seems to have spread throughout our government and citizens' lives and livelihoods are suffering because of it.

The damage that has been done is the inevitable result of unconstrained "big government." With this kind of cancer so deeply embedded throughout the agency, the EPA cannot be fixed. It must be completely dismantled, firing most of the staff and letting states regulate their own environment. If a federal EPA is really needed as the result of political pressure, it must be done by creating two agencies and separating rule making from enforcement, both with very strong congressional oversight. The revolving door between EPA and leftist green groups must be shut down. The same is true for many other federal and state agencies.

Another intriguing idea comes from Dr. Jay Lehr, who is science director for the Heartland Institute. Lehr played a major role in creating the EPA in 1971 and helped write some of the legislation passed by Congress in the 1970s. He agrees the agency has become so corrupt that it must be disbanded and replaced with what he calls the Committee of the Whole, comprised of representatives from the 50 state environmental protection agencies. The changeover would occur over a five-year period. While worth considering, there will be concern that extreme green ideology has permeated state environmental agencies as well. ■

Dr. Coffman is president of Environmental Perspectives Incorporated (epi-us.com) and CEO of Sovereignty International (sovereignty.net) in Bangor, Maine. He has had over 40 years of university teaching, research and consulting experience in forestry and environmental sciences. He produced the acclaimed DVD "Global Warming or Global Governance" (warmingdvd.com) and "Global Warming, Emerging Science" (emergingscience.us). His newest book, "Plundered: How Progressive Ideology is Destroying America" (AmericaPlundered.com) is receiving wide acclaim. He can be reached at 207-945-9878 or mcoffman@epi-us.com.

This Hurst Steam Boiler
operating in Tok, Alaska
is a proven technology.

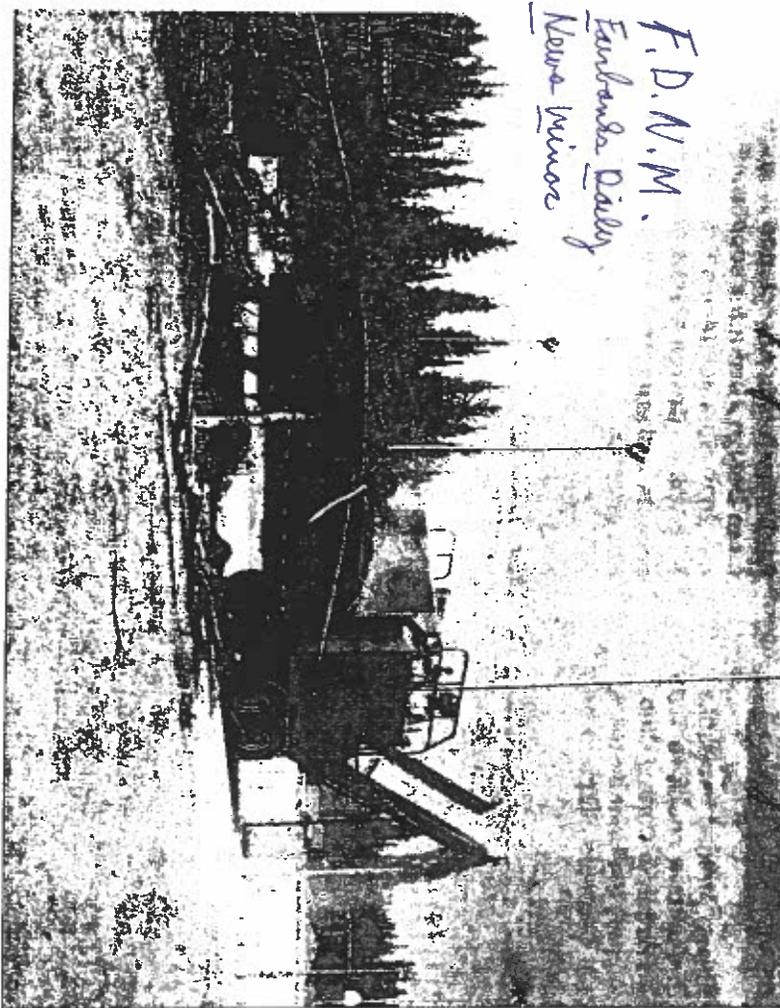
More than 100 are operating
around the U.S.A. It has an
electrostatic precipitator
all you see is steam coming
out of the exhaust stack.

Install them in North Pole and
Esibanda, Alaska schools and
villages for cleaner better
air. Governor Alan Borne
visited it.

Tok School burns biomass in big boiler

When they get done burning biomass wood over the summer to power

F.D.N.M.
Eunlaba Daily
News Miner



courtesy, Alaska Department of Natural Resources

ees and slash are fed into a chopper during the summer to be turned into wood chips that will be burned in a boiler to heat the school in Tok.

Will save \$125,000 per year on fuel

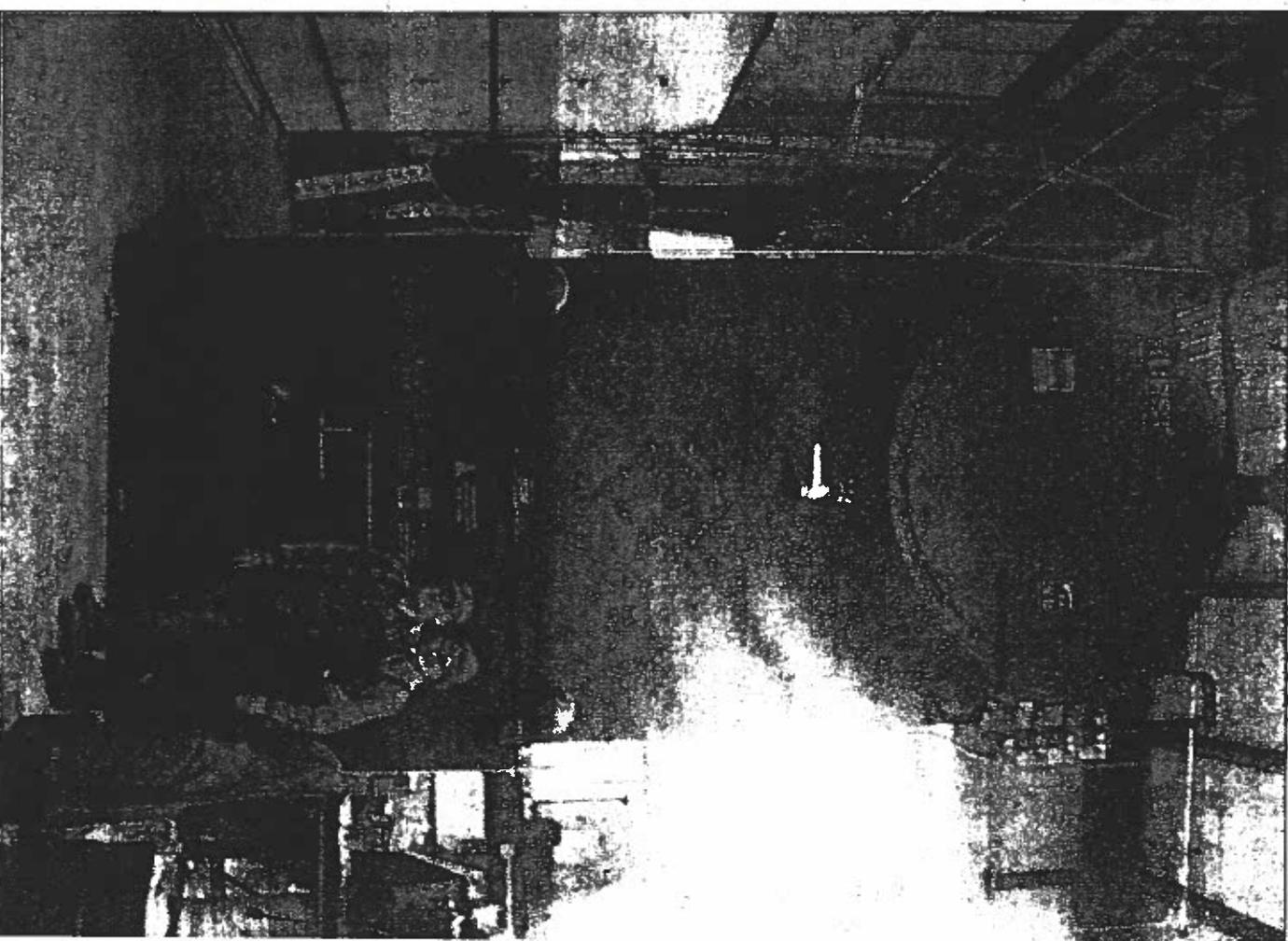
BY MOLLY RETTIG
mrettig@newsminer.com

A new wood energy project in Tok has rined surrounding forests from a fire hazard into renewable fuel. The Tok School lit a new wood chip-fired boiler for the first time several weeks ago.

The 5.5-million-BTU steam boiler provides the school's heat, saving the school strict thousands of dollars in heating fuel and saving forest managers untold costs fighting fires and eliminating waste wood. The school district plans to add a steam turbine generator to the system in May to

"We're the first school in the state to be heated entirely by wood," said project manager and assistant superintendent Scott MacMannus, who has been trying to spur wood energy in Tok for 10 years. "As far as I know, we'd be the first public school in the country to produce heat and power from biomass."

At the school's new biomass facility, trees and slash are fed into a Rotochopper grinder, processed into chips that resemble wood shavings, spit into a bin and carried by conveyor belt into the boiler, which is 17 feet tall, six feet wide and 12 feet long.



courtesy, Alaska Department of Natural Resources

BOILER: Thinning the forest lessens wildfire danger

Continued from Page B1

BOILER BASICS

The system is designed to provide 100 percent of heat most days and 90 percent of heat for the coldest days of the year. Oil-fired boilers would kick in the rest.

Extra heat produced in the summer can be used to process pellets and briquettes.

One acre of wood, which costs the state \$1,100 to harvest, produces the same energy as \$9,300 worth of heating fuel.

Tok has up to 10,000 trees per acre of forest.

to hand-limb every 3-inch tree, as with other treatments.

It's also cleaner than burning the decks because the boiler emits no smoke and little pollution. The carbon emitted by the boiler is offset by the carbon absorbed during the life of the tree.

"The beauty of it all is that it grows back. It's carbon neutral and our foresters can finally manage our forest," said Dave Stancliff, vice president of the Tok Chamber of Commerce and partner in the project.

It's also cheaper than wildfires, which cost between \$10,000 and \$20,000 per acre to fight near urban areas.

"Would you rather burn it in a really high-efficiency boiler that doesn't emit any smoke versus an uncontrolled burn in wildfire, where it's causing serious health issues and it's an emergency situation?" Hermanns said.

The boiler should burn 40 acres worth of wood per year, using only one-third of the area foresters want to clear in the boiler's 30-year life span.

Form follows fuel

Hermanns and MacManus decided on a wood chip model because it best fit the fuel source.

"You have to go out and determine what your fuel is, and then design your project around it," said Hermanns.

The grinder was key. "It effectively turns a large volume of these non-merchantable, scrawny little spruce trees, these hazardous fuels, into usable fuels," he said.

The grinder processes up to 40 trees at once. You don't need to dry, trim or treat the wood before burning it.

"It's what we call gut, feathers and all. You put the whole bird in the soup," Hermanns said.

The boiler is supposed to be as clean as burning heating fuel, and the school district will monitor its emissions. It burns at 2,000 degrees Fahrenheit and generates very little smoke, thanks to air that moves up through the wood chips and fans the flame.

"You're getting a super-efficient burn," Hermanns said.

Any smoke is removed by an electrostatic precipitator, which electronically charges smoke particles out of the exhaust.

"If you look at the stack today, all you would see is steam," Hermanns said.

The boiler system, designed by German engineers, is a proven technology. More than 100 are operating around the country. It was designed to meet any air quality regulations Tok could see in the next 20 years (Tok has none now).

School savings

Tok School spends more than \$300,000 annually on heating fuel and electricity, said school district superintendent Todd Poage. The boiler will save an estimated \$125,000 per year on fuel, and the generator will further erode their bill.

The savings will go toward music and counseling programs, student activity funding, teacher training and other programs throughout the district, Poage said.

Students have been learning about fire science through the forest thinning and boiler projects and will visit the biomass facility when it is completed.

Administrators hope the project will inspire other communities in the district and the state to take advantage of local resources.

"This is a model I think that could be used in a lot of different villages," said assistant superintendent MacManus, who grew up in Ambler, a village outside of Kotzebue, where heating fuel runs \$9 per gallon. "A lot of villages, Fort Yukon, McGrath, Galena, have access to biomass. Those communities should be able to heat themselves."

Villages without forests can consider other resources, like fish waste, peat, stream or wave power, project leaders said.

"That's the beauty of this. This system utilized a product that there is no use for in the Interior," Hermanns said.

The group is planning an open house for school districts, state legislators, tribal organizations and others who are interested in early January.

Contact staff writer Molly Rettig at 459-7590.

Fuel comes from forest thinning projects, scraps and nearby sawmills. The forest around the school has yielded enough biomass for the first year, according to Alaska Division of Forestry spokeswoman Maggie Rogers. Project leaders hope the system will be used as a model of energy independence for other school districts, communities and utilities.

The project was a partnership between the Division of Forestry, the Tok community, the Alaska Gateway School District and the Alaska Energy Authority and used research from University of Alaska Fairbanks and elsewhere. Funding came from a \$3.2 million state renewable-energy grant as well as about \$750,000 in grants from the Alaska Legislature. A long-term fuel contract is in the works between the state and the school district.

Turning hazardous fuel into energy

The project started nearly four years ago as a way to get rid of wood from thinning projects and lessen fire danger. Tok is prone to wildfire because it sits amid 40,000 acres of continuous fuel. In the past 25 years, nearly 2 million acres in the area have burned, costing more than \$60 million in fire suppression and causing six evacuations, according to the state. Last year, the Eagle Trail fire scorched 18,000 acres.

"The fire history in Tok has basically demonstrated that Tok is going to burn unless we take action," said Jeff Hermanns, Tok area forester and a spearhead of the boiler project.

A recent wildfire protection plan recommended that 3,000 acres of black and white spruce forest in Tok be removed to make the community safer, including an area around the school, Hermanns said. Foresters usually try to sell or repurpose good wood, but the trees were junk wood, he said.

"Most of them aren't any bigger than three inches. Most people won't cut that tree for firewood. It's too small. You can't sell board out of it," Hermanns said.

Foresters thinned 100 acres of trees around the school and stacked them into decks. Then they set them on fire, a pricey and smoky last resort.

"All of those BTUs, all of that energy, just went up in smoke," Hermanns said. "By the school using this material, it's saving me a minimum of \$1,000 an acre."

Sending timber to the grinder is cheaper because foresters don't have

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1) - Sodium Hydroxide + Veg oil + Alcohol = Biodiesel Fuel

RISING PHOENIX BIOFUELS

In 2005, we built the first retail biodiesel station in Oregon.

Our B99 station uses sustainable design & 100% renewable energy for the whole station & all our projects.

We know biodiesel is a small way that everyone can help make the world better for us & our children.

Thanks for supporting biofuels!

WHAT IS BIODIESEL?

Biodiesel is derived from algae, vegetable oils or animal fats, *when the glycerin is separated* *(Hemp oil converts to Biodiesel also)* Fuel-grade biodiesel must be produced to strict industry specifications (ASTM D6751) to ensure proper performance.

Biodiesel may begin to cloud or gel below 40° F, & must be *additives* handled similarly to diesel #2.*

WHY BLEND B100?

Using biodiesel blends allows flexibility to use in any diesel or compression-ignition engine.

- B5 - guaranteed compatibility
- B20 - best priced comparison
- B99 - clean and affordable
- B100 - tax breaks if you blend

WHO CAN USE B5?

- *Any diesel car, truck, tractor, boat, home heating system, and heavy machinery can use B5 blends.
- *Meets #2 Diesel standards without any modifications to equipment.

WHO CAN USE B20?

- *Most OEM's have components compatible with low-sulfur diesel & B20 blends, but contact your OEM for specific recommendations.
- *B20 has a solvent effect that may release accumulated petroleum deposits from previous diesel fuels.
- *Fuel filters should be checked and replaced as needed when changing from regular diesel to B20 biodiesel.

WHO CAN USE B99?

- *Most diesel engines manufactured after 1997 are compatible with low sulfur diesel and B99 blends.
- *Natural rubber compounds and certain elastomers are degraded by biodiesel, and should be replaced with biodiesel-compatible materials.

WHERE CAN I GET IT?

- *B5 and B100 - Deliveries in Oregon
- *B99 - Retail at Exit 24 in Phoenix & delivered all over Southern Oregon (541-535-1134) or email for details
- *B20 - 24 hr. cardlock at Exit 19 in Ashland for Pacific Pride customers
- retail & 24 hr. cardlock at Exit 76 in Wolf Creek (541-866-2711)
- retail & 24 hr. cardlock at Hwy. 62 in Shady Cove (541-878-2740)

BIODIESEL

MADE IN USA

KEY BENEFITS

- ∞ ASTM Standard 6751 Fuel*
- ∞ Boosts Cetane & Lubricity*
- ∞ Cleans Injectors & Engine*
- ∞ Renewable Domestic Fuel
- ∞ Supports U.S. Farmers
- ∞ Less Toxic Than Table Salt
- ∞ Biodegrades Faster Than Sugar*
- ∞ Promotes Energy Security
- ∞ Reduces Toxic Emissions**
- ∞ Widely Tested & Available
- ∞ Compatible With Most Current Diesel Engines*

∞* www.epa.gov/otaq/models/biodsl.htm
** please check with OEM & mechanic as we are not liable for any potential damage

BIODIESEL

FOR BLENDING WITH PETROL DIESEL

All Sequential BIODIESEL meets or exceeds
ASTM D-6751 specifications.



DIESEL
FOR ALL DIESEL VEHICLES
& EQUIPMENT
95% diesel + 5% BIODIESEL
Meets ASTM specifications for diesel
Cleans injectors, boosts cetane,
improves lubricity



BLEND
FOR MOST DIESEL VEHICLES
& EQUIPMENT
80% diesel + 20% BIODIESEL
Best emissions reduction for least cost



BIODIESEL
FOR SOME DIESEL VEHICLES
& EQUIPMENT
99.9% BIODIESEL + 0.1% diesel
Greatest emissions reduction
Domestic, renewable energy

Home oil converts to B99



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BENEFITS OF BIODIESEL

These benefits are for any percentage blend of BIODIESEL. The higher the blend, the greater the benefits.



DOMESTIC

AMERICAN-MADE VALUE

BIODIESEL is made from vegetable oil or animal fat. BIODIESEL is produced from agricultural crops grown in the United States.

Increased consumption of BIODIESEL ::

- Creates new markets for American farm products
- Creates new jobs in rural communities
- Increases energy independence
- Circulates dollars in the domestic economy



RENEWABLE

FROM THE SOURCE

The energy contained in petroleum-based fuels and the energy contained in BIODIESEL is derived from the same source :: The Sun.

Petroleum reserves required millions of years to form, but plants and their rechargeable batteries, providing a constant supply of energy with each new growing season.

Consequently BIODIESEL has a positive net energy balance :: more energy is contained in BIODIESEL than was required to produce it.



PERFORMANCE

PREMIUM DIESEL FUEL

BIODIESEL has performed favorably in over 50 million miles of road testing. Fleets using BIODIESEL report consistent engine performance, equal power and payload and similar range over extended periods of use.

BIODIESEL has a lubricating value much higher than that of petrodiesel. The higher cetane in

CLEANER BURNING :: BREATHE EASY

Fossil fuels contain complex, toxic compounds, but pure BIODIESEL, derived from plant material, contains only simple organic compounds that are non-toxic and biodegradable.

Using BIODIESEL in its pure form or in combination with petrodiesel decreases tailpipe emissions :: carbon monoxide, sulfur dioxide, particulate matter, hydrocarbons, other air toxics and carbon dioxide (a greenhouse gas).

BIODIESEL

CONSIDERATIONS

The 3 C's of BIODIESEL

Cleaning Effect ::

Petroleum diesel forms sediments that accumulate in fuel tanks over many years of use. BIODIESEL is a natural solvent, and it will dissolve these diesel deposits and send them into the vehicle's fuel filter. Fuel filters may need to be replaced more frequently with regular use of BIODIESEL.

Compatibility with Materials ::

Rubber Components
BIODIESEL will degrade natural (nitrile) rubber hoses and seals used in vehicles manufactured before 1993. Generally, vehicles manufactured after 1993 are equipped with BIODIESEL-resistant synthetic rubber, Viton or metal fuel system components.

Fuel Filters

BIODIESEL is incompatible with many water-blocking fuel filters. SeQuential recommends water-separating fuel filters. Use of BIODIESEL may increase the replacement frequency for 2-micron fuel filters.

To ensure material compatibility with BIODIESEL, consult your mechanic or equipment manufacturer.

Cold Flow ::

BIODIESEL fuel will gel at low temperatures. To ensure proper cold weather operation, blend B99 BIODIESEL with at least 50% petrodiesel when

What is BIODIESEL?

BIODIESEL is a cleaner burning diesel fuel made from vegetable oil. Simply stated, BIODIESEL is a vegetable oil molecule with the glycerol component removed. Glycerol is a compound commonly used to make soap.

Commercial BIODIESEL meets ASTM D-6751 specifications - a demanding fuel standard that ensures all commercial BIODIESEL is of consistent quality.

Like petrol-diesel, BIODIESEL contains hydrogen and carbon molecules. It also contains oxygen molecules, which create a cleaner, more complete burn of the fuel.

Can my vehicle use BIODIESEL?

Any diesel equipment can use BIODIESEL - cars, trucks, boats, tractors, generators and heating oil furnaces.

NO EQUIPMENT MODIFICATIONS are necessary to use BIODIESEL in most vehicles and equipment manufactured after 1993, as long as you understand "The 3 Cs of BIODIESEL" (inside brochure)

Gasoline engines CANNOT use BIODIESEL.



CO₂ : carbon dioxide | CO : carbon monoxide
 HC : hydrocarbons | PM : particulate matter
 SO₂ : sulfur dioxide | AT : air toxics

VISION

It is our VISION to lead the BIOFUELS industry in the Pacific Northwest ...

- By promoting the economic and environmental benefits of renewable BIOFUELS
- By developing BIOFUEL production
- By establishing convenient commercial and retail outlets for BIOFUELS

MISSION

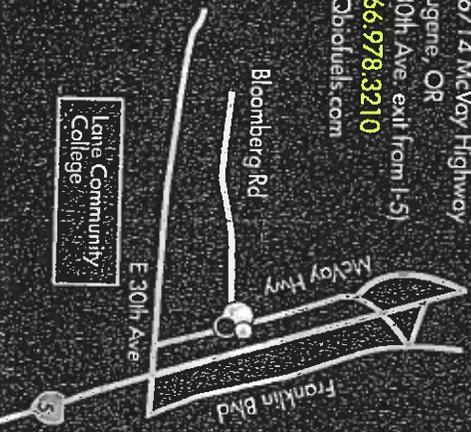
It is our MISSION to expand AWARENESS about the positive IMPACTS of BIOFUELS and to expand AVAILABILITY of BIOFUELS from distributors and retail locations throughout the Pacific Northwest.

GOALS

It is our GOAL to encourage and support production of BIOFUELS from feedstocks collected and harvested in the Pacific Northwest region.

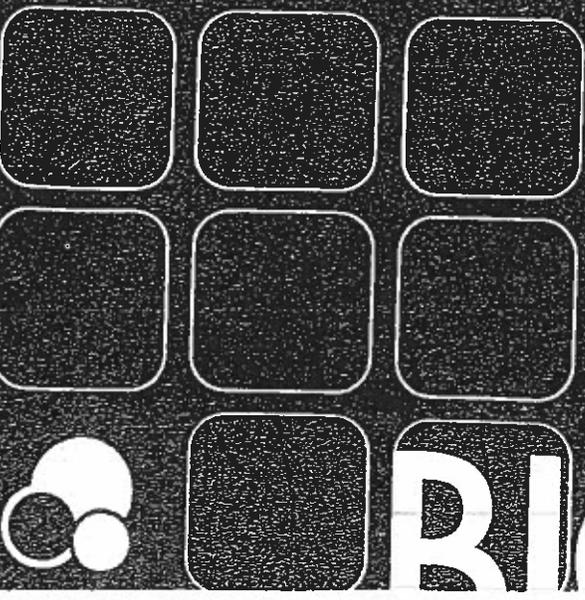
It is our GOAL to develop facilities that demonstrate innovative design concepts, renewable energy and energy efficiency technologies that operate with natural processes to minimize impact on the natural environment.

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DIESEL ENGINES
 A cleaner burning diesel fuel made from vegetable oil

BIODIESEL



mation of excess amounts of soap (an unhelpful trait), so they need to be eliminated. The way to accomplish this is to add more catalyst to the mix; the exact amount is determined either by the pH of the used cooking oil or by the trial-and-error method.

One of the main advantages of biodiesel is that the transesterification process used to produce it can be conducted at almost any scale—from a kitchen blender that makes a few liters on up to a large industrial facility capable of producing millions of gallons per year. Although an industrial-size biodiesel facility uses a lot of high-tech equipment to wring every last productive ounce out of all the ingredients (and recycles many of them for reuse), the basic transesterification process is more or less the same as that used in a small-scale facility located in a garage or backyard shed. The main difference is that very large-scale operations often are designed to produce biodiesel on a continuous basis—the continuous-flow process—while the small processor normally produces smaller, individual batches at a time—the batch process. In the batch process, the reaction and subsequent settling procedure takes place in a single tank or container over a period of time. In the continuous-flow process, however, there is a constant movement of feedstock and other ingredients through the system, resulting in finished biodiesel at the end of the process.

Here's how the basic process works (using methanol and sodium hydroxide as an example). Carefully measured quantities of methanol and sodium hydroxide (lye) are mixed to create sodium methoxide, which is then mixed with the vegetable ^{HEMP} oil and stirred or agitated (and sometimes heated) for a specified length of time. If used vegetable oil is the feedstock, the process requires a bit more testing, lye, and filtration, but it is otherwise essentially the same. During the mixing, the oil molecules are split or "cracked" and the methyl esters (biodiesel) rise to the top of the settling/mixing tank while the glycerin and catalyst settle to the bottom. (The separation process can be speeded up with the use of a centrifuge.) After about eight hours, the glycerin and catalyst are drawn off the bottom, leaving biodiesel in the tank. In most cases the biodiesel needs to be washed with water to remove any remaining traces of alcohol, catalyst, and glycerin. In this procedure, water is mixed with the biodiesel,

allowed to settle out over several days, and then removed. The wash process can be repeated if needed, but it is time-consuming. Not everyone agrees on whether this water-wash step is necessary. Some smaller producers who are making biodiesel for themselves skip the process, while commercial producers usually must perform it to meet industry standards. In the case of some larger, more sophisticated manufacturing facilities, the transesterification process itself is so carefully controlled and refined that the water wash may not be needed. There are, of course, quite a few technical variations on this entire process for large-scale industrial operations, but the general transesterification procedure is similar.

Because making biodiesel is relatively simple and can be very low-tech (an old 55-gallon drum often is used as the settling/mixing tank), it has attracted an enthusiastic community of backyard enthusiasts or "homebrewers" around the world. For those who want to make their own biodiesel, From the Fryer to the Fuel Tank: The Complete Guide to Using Vegetable Oil as an Alternative Fuel by Joshua Tickell is one of the older and more popular books on the subject. A newer reference that goes into more accurate detail is available from Maria "Mark" Alvert, and is titled the Biodiesel Homebrew Guide 2004. And Bill Kemp's 2006 book Biodiesel Basics and Beyond is another excellent source for the homebrewer (see the bibliography). "Biodiesel" By Greg Ball
Creating a New Energy Economy
2nd Edition
BIODIESEL FEEDSTOCKS

Another remarkable feature of the transesterification process is that it can use a wide range of feedstocks—virgin vegetable oils, used fryer oil, animal fats, even pond algae—to produce the same basic biodiesel end product (with minor differences in fuel characteristics). These feedstocks can be used individually or blended to produce biodiesel with specific traits. The ability to adapt the production process to locally available feedstocks and end-user needs is one of biodiesel's most attractive advantages.

There are hundreds of oil-producing plants that can be used as

CHAPTER 4

B I O D I E S E L F U E L

Biodiesel has many advantages over petroleum diesel fuel. Biodiesel fuel is reliable, renewable, and its use can strengthen the economy by creating jobs. Engines running on biodiesel have logged millions of road miles. From over 20,000 miles (32,000 kilometers) of first hand experience with biodiesel, we can personally testify that biodiesel works as well as petroleum diesel fuel.

OVERVIEW OF BIODIESEL

A Transportation Industry Fuel

Biodiesel is an ideal fuel for the transportation industry because it can be used in any Diesel engine. Everything from the food at the grocery store to the book that you are currently reading is transported on Diesel trucks. Most farming equipment has Diesel engines. Diesel mining equipment extracts the metals that are used to make electronics. Diesel trucks, trains, and boats bring computers, stereos, food, fuel, televisions, and cars from factories to stores. From planting seeds to mining copper, Diesel engines are used to make and transport the items we depend on. Every one of these Diesel engines can run on biodiesel.

Biodiesel fuel is reliable, renewable, and its use can strengthen the economy by creating jobs.

A Lubricity Additive

Between 0.4-5% biodiesel mixed with petroleum diesel fuel increases the fuel lubricity.¹ Lubricity describes how a fuel lubricates the fuel system and engine. Diesel fuel was once lubricated primarily with sulfur. When fuel containing sulfur is burned, it produces sulfur dioxide (SO₂), the primary component of acid rain.² When the legal limit of sulfur in diesel fuel was decreased in the United States, many Diesel engines experienced fuel system problems.³ Biodiesel can be used to restore the lubricity of diesel fuel.

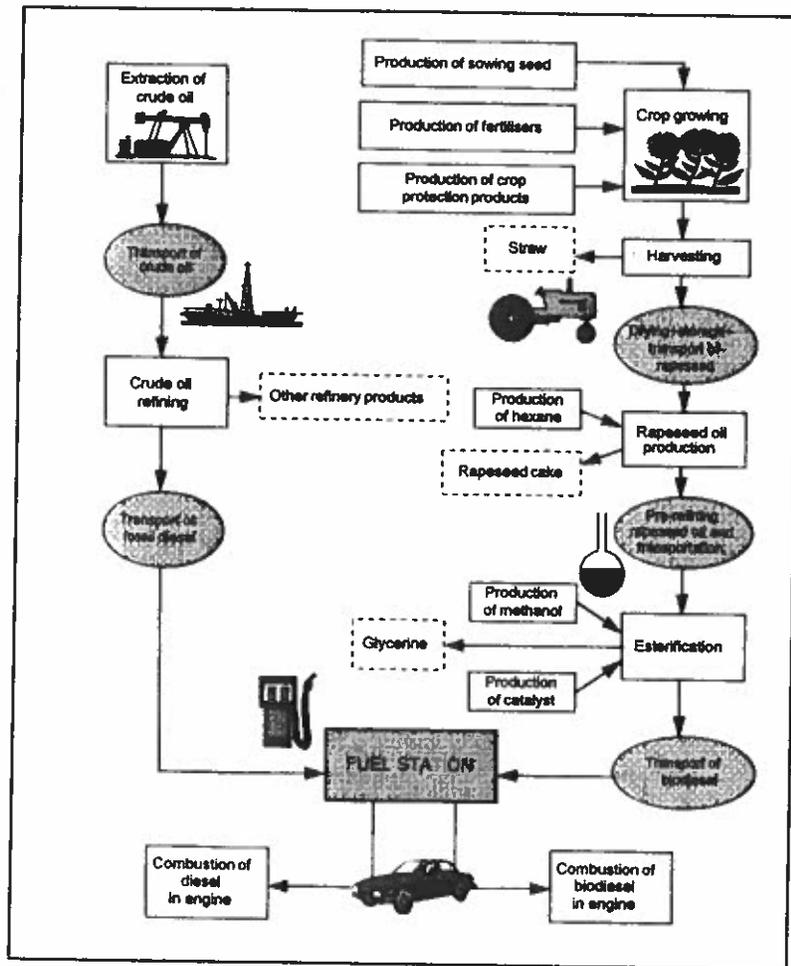
Large Diesel trucks like this fuel truck can run on biodiesel. In the future, these trucks may deliver biodiesel instead of petroleum to fuel pumps across the country.



Energy Balance Ratio

Biodiesel has a favorable *energy balance ratio*. An energy balance ratio is a comparison of the energy stored in a fuel to the energy required to grow, process, and distribute that fuel. The energy balance ratio of biodiesel is at least 2.5 to 1.⁴ For every one unit of energy put into the fertilizer, pesticides, fuel, feedstock, extraction, refining, processing, and transporting of biodiesel, there are at least 2.5 units of energy contained in the biodiesel. Biodiesel has a positive energy balance ratio because it is an efficient carrier of solar energy.

To obtain an accurate energy balance ratio for biodiesel, the quantities of energy consumed in each step of the biodiesel manufacturing process are added together. The total energy needed to produce a gallon of biodiesel is then compared to the energy contained in the gallon of biodiesel. Although the biodiesel manufacturing process has many steps, biodiesel's energy balance ratio is higher than most fossil fuels and agriculturally-derived fuels. Source: British Association for Bio Fuels and Oils.

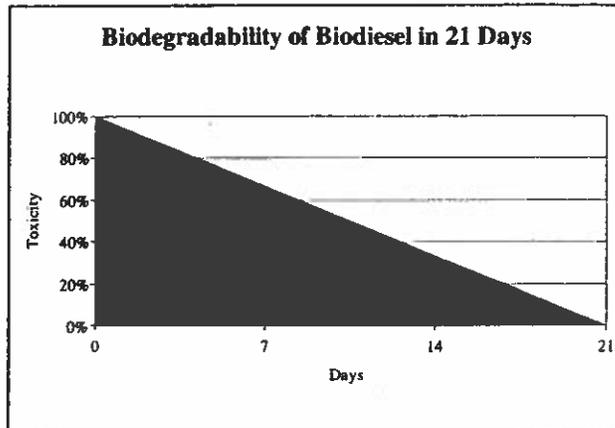


Blends with Petroleum Diesel

Biodiesel can be blended in any ratio with petroleum diesel fuel. A blend of 20% biodiesel and 80% diesel fuel is called B20. B20 is becoming a popular alternative fuel for U.S. *fleets*. A fleet is a group of vehicles operated from a central location, like buses or delivery trucks. B20 is appealing fleets because it reduces emissions considerably, is reasonably priced, and requires no engine modifications.

Biodegradability and Toxicity

Biodiesel is biodegradable and non-toxic. 100% biodiesel is as biodegradable as sugar and less toxic than table salt.⁵ Studies have shown biodiesel to biodegrade up to four times faster than petroleum diesel fuel, with up to 98% biodegradation in 3 weeks.⁶ The reduced emissions, pleasant odor, biodegradability, and safety of biodiesel make it well-suited for use in marine environments and sensitive areas such as national parks and forests.



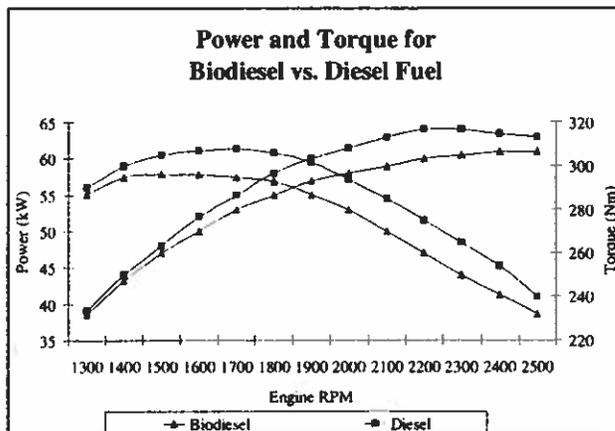
Biodiesel is less toxic than table salt and is fully biodegradable. Source: Körbitz Consulting.

Transportation and Storage Safety

Biodiesel will not spontaneously explode or ignite under normal circumstances because it has a high flashpoint, or ignition temperature. Biodiesel must be at least 300° F (150° C) before it will ignite.⁷ Comparatively, petroleum diesel fuel has a flashpoint of 125° F (52° C).⁸ Since biodiesel is not explosive under normal circumstances, it can be transported with shipping services such as Yellow Freight and UPS. When biodiesel is transported, it must have a Materials Safety and Data Sheet (MSDS). For an example of a MSDS, see Appendix 2.

Energy Content, Fuel Consumption, Power, and Torque

Biodiesel contains approximately 12% less energy than diesel fuel. Biodiesel contains approximately 37 megajoules of energy per kilogram whereas diesel fuel contains approximately 42 megajoules per kilogram.⁹ The reduction of energy in biodiesel is partially offset by a 7% average increase in the combustion efficiency of biodiesel.¹⁰ On average, biodiesel use results in a 5% decrease in torque, power, and fuel efficiency.¹¹ However, the performance of most vehicles using biodiesel is not noticeably affected.



Although biodiesel contains slightly less energy per kilogram than diesel fuel, biodiesel produces similar power and torque to diesel fuel at any engine speed. In most cases, there is no noticeable difference in performance between biodiesel and diesel fuel.

Source: University of Idaho.

Other Aspects of Biodiesel:

- Biodiesel can be stored anywhere that petroleum diesel fuel is stored.
- Because of its lubricating properties, biodiesel use can increase the life of Diesel engines in which it is used.¹²
- Biodiesel's exhaust is free of lead, sulfur dioxide, halogens, and has reduced particulates, unburned hydrocarbons, carbon monoxide, and carbon dioxide.¹³
- Biodiesel replaces the exhaust odor typical of petroleum diesel with the pleasant smell of french fries or donuts.
- Biodiesel can be made cheaply from used cooking oil, an abundant waste product.



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(All FPPF additives are compliant with EPA ultra low sulfur content requirements.)

FPPF makes your fuel better!

This info explains
how the 10th amendment
in the bill of rights can
be used to nullify
federal overreach by
the E. P. A. against
the State of Alaska

Nullification is Superior and the Majority Knows it

By [Brian Roberts](#) on May 29, 2013 in [Featured](#), [Nullification](#), [Tenth 101 5 36](#)

[Rasmussen poll](#) indicates that “38% Favor Their State Blocking Federal Anti-Gun Laws” and a whopping “52 percent of mainstream voters think states should have the right to block any federal laws they disagree with on legal grounds.” And this week, a nullification-friendly [Washington Times article](#) from the paper’s editorial board was published stating: “nullification is a growing movement with support on both sides of the political aisle.”

The Washington Times article hints at the reason for this shift in sentiment, “...something needs to be done to check the intrusion of the federal bureaucracy into our lives.” The federal government has failed to keep itself within the confines of the Constitution and state-level nullification is the best solution. Given the obvious inability of “vote the bum’s out”, “rule it unconstitutional”, or “march on DC” to curtail federal infringements it’s really no surprise.

The problem with these approaches is that they require the federal government to police itself. This is something that will never happen and the founders warned us against such foolish thinking.

Jefferson considered the Tenth Amendment and the power held by states to be the cornerstone of the Constitution’s ability to restrain the general government. In 1791, when challenging Hamilton’s proposed expansion of federal power, Jefferson indicated:

“I consider the foundation of the Constitution as laid on this ground: That “all powers not delegated to the United States by the Constitution, nor prohibited by it to the States, are reserved to the States or to the people.” [10th Amendment]. To take a single step beyond the boundaries thus specifically drawn around the powers of Congress is to take possession of a boundless field of power, no longer susceptible of any definition.”

Recently, attacks on our Constitution and Bill of Rights have become more obvious. Even fundamental American guarantees such as gun rights, due process rights, and freedom of speech rights have been challenged. Concerned citizens looking for solutions to protect themselves from the federal government’s intrusions find nullification, once discovered, quite attractive. They also find themselves in good company, as historically state resistance to the general government’s oversteps is a key component of our check on federal power.

From a practical perspective, nullification provides results that other options cannot:

- Nullification demands rights without violence
- Nullification fosters regional harmony through decentralization
- Nullification is lawful, historic and Constitutional

In other words, only nullification provides a roadmap to a local, legitimate base of political power necessary to counter aggressive actions out of Washington DC.

NULLIFICATION: PEACEFUL PATH TO LIBERTY

As further evidence of the growing frustration with federal policies, a [recent poll published by Fox News](#) suggests that “nearly a third of registered voters — 29 percent — believe an ‘armed revolution’ might be necessary in the next few years in order to protect liberties.” That’s a significant number of registered voters that feel disenfranchised.

As a Constitutional Republic consisting of several sovereign states, each state is equipped to protect liberty peacefully. The Bill of Rights strictly rejects federal liberty encroachment, and state sovereignty provides a way for differing ideas and laws to be implemented locally. Unfortunately, we have spent decades denying our own foundational principles of decentralized states and reeducating our citizens to a federal supremacist mindset. This mindset is the core problem because it hides from plain view the primary tool necessary to resolve federal infringements on liberty peacefully: state-level nullification.

When states use nullification and say “no”, the People are using a mechanism that will corner the federal government into recognizing the limitations placed on it by the Constitution. This is a demand, not a petition, not a future threat that the bums will be voted out, not a plea to a court to present an opinion that might be in line with the Constitution. They are placing their state between them and federal abuses of liberty. 

LAWFUL AND CONSTITUTIONAL

The founding fathers were quite brilliant when they designed a federal government that shared power with individual state governments. After decades of ignoring the real power of the people to use state governments to counter bad federal laws, a renewed embrace of nullification will allow state representatives to legislatively reject unconstitutional federal laws.

The federal government was created by the individual states and given a limited scope of authority. Madison explained the intended relationship between state governments and the federal government in Federalist #45:

"The powers delegated to the federal government are few and defined. Those which are to remain in the state governments are numerous and indefinite. The former will be exercised principally on external objects, [such] as war, peace, negotiation, and foreign commerce..The powers reserved to the several states will extend to all the objects which, in the ordinary course of affairs, concern the lives, liberties, and properties of the people."

States are independent, sovereign entities. They were never intended to be regional administrators of federal laws. In Federalist Paper #39, Madison discusses state sovereignty:

"Each state, in ratifying the constitution, is considered as a sovereign body, independent of all others, and only to be bound by its own voluntary act. In this relation, then, the new constitution will, if established, be a federal and not a national constitution."

The opinion of the Supreme Court was never envisioned as the absolute source of "constitutional" determination. The supremacy clause requires laws made at the federal level to be made in pursuance of the Constitution. To entrust the Supreme Court with such power was specifically warned against as reflected on by Jefferson:

"...To consider the judges as the ultimate arbiters of all constitutional questions is a very dangerous doctrine indeed, and one which would place us under the despotism of an oligarchy. Our judges are as honest as other men and not more so. They have with others the same passions for party, for power, and the privilege of their corps...and their power is more dangerous as they are in office for life and not responsible, as the other functionaries are, to the elective control. The Constitution has erected no such tribunal, knowing that to whatever hands confided, with the corruption of time and party, its members would become despots..."

Nullification is the correct response to federal oversteps. A sovereign state is well within its rights to use nullification as diplomatic means to reject an unconstitutional federal mandate. In the Kentucky Resolutions of 1798 Jefferson wrote: "...in questions of power then, let no more be heard of confidence in man, but bind him down from mischief by the chair of the constitution..." and that "...whensoever the General Government assumes undelegated powers, its acts are unauthoritative, void, and of no force. ..." Further, Jefferson provided the solution to the problem we face today stating that "nullification...is the rightful remedy" when the federal government seeks to extend its influence beyond the limitations of the Constitution.

The role of the individual 50 states in modern America has been minimized to a dangerous level that has created a system that is out of balance and ripe for disruption. In order for peaceful recourse to occur and liberty to be maintained, states must regain their proper role in the American system and they can begin by simply saying "no" legislatively, then saying "no" again.

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