2015-10-20-climatecentral-burning-trees-as-fuel-in-power-plants-is-heating-the-atmosphere-more-quickly-than-coal

As the world tries to shift away from fossil fuels, the energy industry is turning to what seems to be an endless supply of renewable energy: wood. In England and across Europe, wood has become the renewable of choice, with forests — many of them in the U.S. — being razed to help feed surging demand. But as this five-month Climate Central investigation reveals, renewable energy doesn't necessarily mean clean energy. Burning trees as fuel in power plants is heating the atmosphere more quickly than coal.

Climate Central reporter John Upton traveled to England and through the U.S. Southeast to investigate both ends of the global trade in wood pellets, interviewing scientists, politicians, policy makers, activists, workers and industry leaders. Europe has long been viewed as the wellspring of climate action. But the loophole that's promoting wood burning is so overlooked, he discovered, that it's unlikely to even be raised during global climate treaty negotiations in Paris this December.

By John Upton

Oct. 20, 2015

SELBY, U.K. - The heavy power lines and narrow roads between the steam-billowing towers of three of England's biggest power plants traverse an energy industry in upheaval. Shuttered coal mines are flanked by emerald pastures. Towering wind turbines and solar arrays have taken root in windblown cereal fields.

In the middle of the transition is the Drax Power Station — Western Europe's largest coal power plant, as big and powerful as many nuclear stations. The 4-gigawatt facility was built in the 1970s and '80s in this bucolic Yorkshire parish to burn the fruits of a local coal-mining boom. Droves of miners arrived in double-decker bus loads at a region known as Megawatt Valley.

"We used to sit on the doorstep — me and the kids — singing, 'Hi ho, hi ho,'" said Pamela Ross, a former mine administrative worker and union rep. In the dining room of a converted farmhouse between castle remnants and two village thoroughfares, where she has lived since 1988, she rifled through yellowing government documents and photos of mine groundbreakings, lamenting the wheezing of what once was a strapping local industry. "We have hundreds of years of coal still underground," she said. "But it's likely to stay there."

Nostalgia about the coal sector's misfortune is far from universal. The cheap black rock that powered the Industrial Revolution is the dirtiest of the fossil fuels. As the world cracks down on climate pollution and deadly air pollution, it's scrambling to deploy cleaner energy alternatives. The European Union has led the world in passing stringent climate laws — and urging the rest of the world to follow.

In England and across Europe, the most popular source of renewable energy is wood. But chopping down trees — many of them in the U.S. — and burning the wood heats the planet more quickly than burning coal. Yet plants like Drax receive financial support to switch from coal to wood. That's because of an entrenched loophole in the EU's climate rules.

That loophole treats electricity generated by burning wood as a "carbon neutral" or "zero emissions" energy source — the same as solar panels or wind turbines. When power plants in major European countries burn wood, the only carbon dioxide pollution they report is from the burning of fossil fuels needed to manufacture and transport the woody fuel. European law assumes climate pollution released directly by burning fuel made from trees doesn't matter, because it will be re-absorbed by trees that grow to replace them.

The assumption is convenient, but wrong. Climate science has been rejecting it for more than 20 years. It ignores the decades it can take for a replacement forest to grow to be as big as one that was chopped down for energy— or the possibility that it won't regrow at all. The assumption also ignores the loss of a tree's ability to absorb carbon dioxide after it gets cut down, pelletized and vaporized.



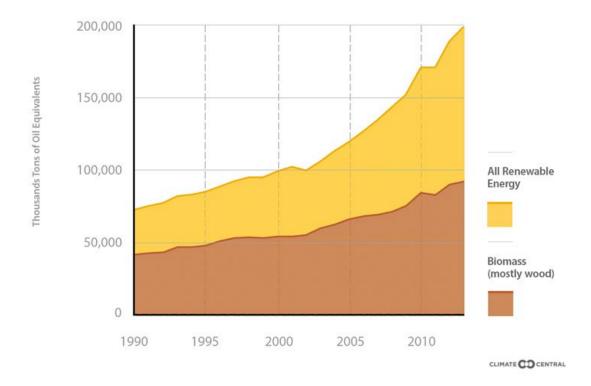
Just how "green" is wood energy? The surprising explanation in 69 seconds. The accounting trick allows the energy industry to pump tens of millions of tons of carbon dioxide into the air every year and pretend it doesn't exist.

Analysis of Drax data reveals that its boilers release 15 to 20 percent more carbon dioxide when they burn wood than when they burn coal. That doesn't even factor in the loss of a forest's ability to absorb carbon dioxide after it's cut down and used for electricity, nor does it account for pollution from drying and transporting the wood.

Drax isn't the only power plant switching to wood from coal, but it's the biggest. It's importing more wood pellets than any other as it pioneers a new biomass energy supply chain. (Biomass energy refers to the burning of organic matter to produce power, heat or electricity.) With the last active coal pit in Selby about to be boarded up, nearly half of Drax's electricity is now coming from biomass — mostly from wood pellets.

Wood has quietly become the largest source of what counts as "renewable" energy in the EU. Wood burning in Europe produced as much energy as burning 620 million barrels of oil last year (both in power plants and for home heating). That accounted for nearly half of all Europe's renewable energy. That's helping nations meet the requirements of EU climate laws on paper, if not in spirit.

Nearly Half of Europe's Renewable Energy Comes from Wood Energy



DOWNLOAD

While Europe is ground zero for coal-to-wood power plant conversions, the impacts aren't being contained inside its borders. To feed the growing appetite of power plants now burning wood, forests of the U.S. Southeast are being cut down, pelletized and shipped across the ocean. And now Asia is joining the trend, accelerating the wood pellet sector's growth — and worsening its toll on the climate.

IMPACT OF SUBSIDIES

\$62

Drax's fuel costs per megawatt-hour

\$30

Drax's actual fuel costs per megawatt-hour with renewable subsidies

(Reported for the period January-June 2015)

The utilities and other companies producing Europe's renewable energy are receiving big, publicly funded payouts that virtually guarantee profits. Because wood counts as a renewable source of electricity, power plants that burn it are receiving hundreds of millions of dollars in climate subsidies. They're also avoiding tens of millions more in fees normally levied on climate polluters.

Those subsidies mean wood energy is projected to continue to grow steeply in Europe, hastening climate change as global warming's effects become more profound. Average global temperatures have risen more than 1.5°F since the Industrial Revolution. Seas have risen more than half a foot. Global warming appears to have contributed to the drought that inflamed warfare in Syria, and it's making the drought worse in California.

Earth models warn of bleak futures unless climate pollution is radically reduced. Incinerating trees for electricity is exacerbating those dangers, say scientists.

"For mitigating climate change," said <u>Stephen Mitchell</u>, a Duke University researcher who led research a few years ago that modeled the climate effects of using forests for energy, "it makes much more sense to just continue to let them grow."

In 2011, the science committee of the EU's environment agency warned that the "bioenergy accounting error" had "immense" potential consequences for the planet's forests and climate. Attempts to introduce sustainability standards that could curtail the use of harmful wood energy across the EU have so far been blocked by Finland and Sweden. Those countries are poor in fossil fuel reserves but home to vast forests, which they harvest and burn for heating and electricity. About 100 wood pellet plants operate in those two countries alone.



"A forest isn't instantaneously renewable," said Oregon State University professor Mark Harmon, an advisor to the EPA on measuring climate pollution from wood fuel. "It renews over a time horizon that's quite long. If people go out and start burning wood from an area that hasn't been harvested for that purpose, it won't be carbon neutral."

Harmon helped Mitchell design landscape modeling experiments. They simulated how much fossil fuel use was avoided when trees were used as fuel; how much climate pollution the wood burning put into the atmosphere; and how much pollution forests sucked back out of the air.

Inside the computer model, some natural forests and plantation forests were left to grow. Others were clear-cut every few decades to provide fuel for power plants. It took centuries before using older natural forests for wood energy provided climate benefits, compared with leaving them to grow. Plantation forests took decades to centuries.¹ Other studies have shown similar results; it takes decades, or even centuries, before burning trees for electricity can be considered carbon neutral.

From a climate perspective, wood energy is unlike most other renewables. Wind turbines, solar panels and hydropower suck energy out of the environment to produce electricity. Wood must be burned to release its energy, which also releases its climate-changing carbon.

Pound for pound, burning wood releases less energy but more carbon than a fossil fuel. And burning wood releases an immediate pulse of carbon dioxide. It takes a long time for a forest to begin to recover, and then to absorb an equivalent amount of pollution as it regrows — if it ever does.

1. Mitchell, S. R., Harmon, M. E. and O'Connell, K. E. B. (2012), Carbon debt and carbon sequestration parity in forest bioenergy production. Source



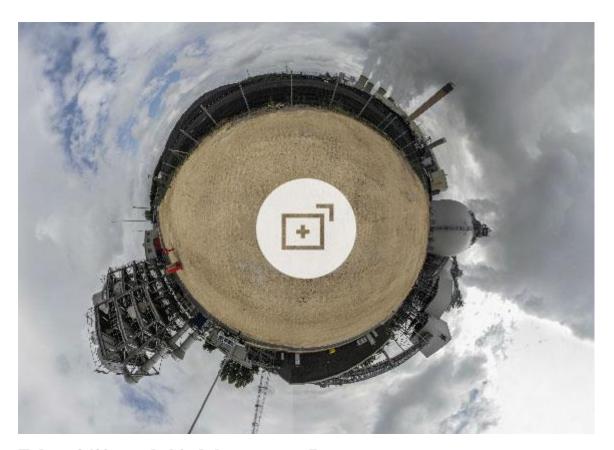
Photo by Rajan Zaveri

One wintry morning in 1998, <u>John Swaan</u> found salvation in Europe's budding appetite for wood pellet energy. He had borrowed against his home to invest in a wood pellet mill. His family faced financial ruin.

Shortly after the mill began operating in the mid-1990s, the booming market for home heating pellets in the Pacific Northwest tanked — undercut by cheap natural gas flowing from the fracking boom.

Swaan and his business partners needed a new market. He flew to Sweden where he had heard power plants were burning wood to try to reduce pollution from fossil fuels. Within a year, Swaan was helping to load up a cargo ship bound for Helsingborg, with 15,000 tons of pellets produced by his 50,000-ton-a-year pellet mill.

The shipment secured Swaan's financial future. "It was out of necessity and desperation," he said. Orders from Europe kept flowing — and growing. Nearly 20 years later, Swaan is an investor in a <u>Canadian company</u> that produces wood pellets for export to Europe and Asia, and he's a prominent <u>consultant to the fast-growing sector</u> — one that has turned to the lush forests of the Southeast for the bulk of its wood.



Take a 360° tour behind the scenes at Drax

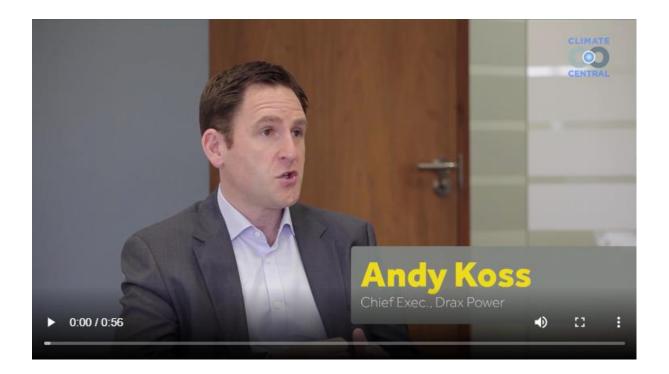
Nowadays, European power plants buying pellets are seeking expedient relief from Europe's 2009 renewable energy directive, which requires at least 20 percent of energy needs be met by 2020 from renewable sources. Biomass — including the burning of wood — and some biofuels count as renewable. Europe's "20-20-20" targets also require 20 percent improvements in energy efficiency and 20 percent reduction in climate pollution by 2020, compared with 1990.

A global wood pellet industry serving power plants is being built on the back of subsidies in Europe. Purchases of pellets are being funded with hundreds of millions of dollars in renewable energy support from national governments seeking to meet the continent's climate targets. That money could be funding cleaner alternatives.

The wood pellet trade wouldn't exist were it not for those generous subsidies — the fuel can't compete with coal or gas on price. And those subsidies are only available because of the EU's unscientifically rosy view of wood energy's effects on the climate.

Drax's ledgers reveal the critical importance of public support for the growth of wood pellet energy. The company is able to post annual profits despite rising fuel expenses from importing wood pellets. It reported nearly \$700 million in profits in 2014, which was supported by about \$550 million in U.K. green energy subsidies. The subsidies come from climate levies on electricity bills.

Much more money than that is potentially at stake. The U.K. government has estimated that using wood pellets to help meet its European climate obligations could save it more than \$50 billion by 2050, compared with relying solely on other renewables. Alternatives like solar and wind energy are cleaner than wood burning. But they're currently more expensive and, unless they're paired with powerful batteries, they can't produce a steady supply of around-the-clock electricity.



"When the wind's not blowing, when the sun's not shining, you need the plant to be there to actually keep the lights on," Drax Power CEO Andy Koss said. "When you look at the whole system-cost basis, we would say biomass conversion is one of — if not the — cheapest renewables on the system."

Drax's switch to wood pellets is sparing the plant from the threat of permanent shutdown. The company is in talks with the U.K. government to convert the fourth of its six units to run on wood pellets. The U.K. has already provided or <u>promised nearly \$1 billion</u> to help Drax meet the cost of running three boilers on wood, <u>according to estimates</u>. The company also received a <u>loan for about \$150 million</u> from a bank created and funded by the U.K. government to <u>back green projects</u>.

"There's no reason why we couldn't convert the whole plant to biomass," Koss said. "The issue is biomass is about four times the cost of coal, so we do need government support in order to make those switches from coal to biomass."

Drax will burn 6 million tons of wood pellets, equivalent to the yearly wood harvests from all U.K. forests combined

You can buy a lot of wood pellets with those kinds of subsidies. In 2015, Drax expects to burn through more than 6 million tons of them — which would be produced by dehydrating about twice that much fresh wood. That's equivalent to the <u>yearly wood harvests</u> from all U.K. forests combined.

Drax Power Station is releasing more carbon dioxide than when it was burning only coal. In 2013, when just one of Drax's six boilers was running on wood, it released nearly 3 million tons of carbon dioxide that

it was not required to report. Now burning mostly wood in three of its six boilers, the company is keeping more climate pollution off its books every year than is being produced by many small nations. And that's just for one power plant — albeit England's largest.

Drax is trailblazing through American forests — and others are following it. The owners of the 420-megawatt Lynemouth coal power plant in Northumberland have tentatively secured U.K. subsidies to convert to run on wood pellets. Uskmouth Power Station reopened in Wales this year with the intention of running on wood pellets, and numerous smaller electricity generators in the U.K. are also running on wood or planning to do so.

Similar conversions have been planned or undertaken in Denmark, France, Belgium, Germany and the Netherlands.

Europe has long used pellets to keep buildings warm; using wood pellets in power plants is new. The EU produces enough pellets for roughly two-thirds of its growing demand, <u>industry figures show</u>. The U.S. is meeting more than half the continent's rising demand for imported pellets, exporting about three times as much to Europe as Canada and nearly five times as much as Russia last year, U.S. Department of Agriculture <u>data shows</u>. Yearly wood pellet exports from the U.S. to Europe have more than doubled in the last few years — to nearly 4 million tons in 2014.

The expanding use of pellets in power plants is harming the climate, but burning wood for energy isn't always harmful. If it would have been burned in a field as logging waste, it may be better to burn it in a power plant instead. The carbon was going to enter the atmosphere anyway, and using the wood for electricity could reduce fossil fuel use. And if a forest loses a sustainable amount of firewood every year, a balance with the climate is eventually struck.

Mitchell's and Harmon's modeling experiments showed that planting a forest on an abandoned farm — and eventually cutting it down and burning it for energy every few decades — helps the climate overall. That's because carbon dioxide was absorbed by a formerly barren landscape prior to it being released to the atmosphere.

None of that is happening in the American forests where whole trees are being cut down to meet the needs of this fast-growing energy industry. Forestry waste isn't normally burned off in the Southeast, where most of the wood pellets are being made. And the industry has quickly grown too large to rely on forestry waste.

SECTION 3.

The Tiny Oversight With a Climate Hangover



Photo by Rajan Zaveri

The misnomer of carbon neutrality was spawned by a misinterpretation, and it wriggled into European policies virtually unnoticed.

When the Intergovernmental Panel on Climate Change published its <u>debut climate science assessment</u> in 1990, it listed climate impacts from energy and forestry sectors in different chapters. Energy got its own chapter. Forestry was lumped in with the "land use" chapter.

Whenever forest products were harvested for energy, the IPCC scientists noted the climate impact in the land-use chapter. To avoid duplication, they did not count it in the energy chapter. Their decision to note the climate impacts under land use instead of energy was a seemingly arbitrary decision that's being seized upon by the growing wood energy industry.

In the 1990s, little thought was given to large-scale wood energy. So the potential loophole was barely noticed when it was included in the Kyoto Protocol, the historic 1998 climate agreement. The protocol ultimately affected few nations: the U.S. never ratified it, Canada withdrew, China and India were excluded, and Australia's targets were so weak as to be nearly meaningless.



British dock workers in Immingham unload a 60,000-ton shipment of wood pellets from North American. The port is one of a handful used by Drax. Photos by Rajan Zaveri
But civic-minded Europe took the protocol seriously and the EU launched a carbon cap-and-trade program in 2005 to help it meet its pollution reductions required under the protocol. The program governs pollution produced by fossil fuels, and it treats wood energy like any other renewable.

Article 2 of the <u>EU Renewable Energy Directive</u> lists biomass right after "hydropower" and just before "landfill gas" on its list of 11 items exempt from cap-and-trade fees.

The blanket definition of biomass as carbon neutral is scientifically flawed, but it's been left unchallenged by international law. The U.N. climate agreements that came after Kyoto have all been silent on wood energy's impacts on the planet.

"There have never been very strong incentives in the global climate agreements for industrial countries to care about emissions from land, agriculture and forests," said Sini Eräjää, a bioenergy policy officer with Birdlife International. The nonprofit is involved with international climate negotiations, and it copublished a paper in March calling for reforms in how Europe treats wood energy. "It's been easy to just move emissions from the energy sector to land and forests, as in the case of bioenergy."

The EU does not report any climate pollution when wood is burned

Taking the IPCC's approach as its blessing, the EU does not report any climate pollution when wood is burned. Nor does it report any climate pollution when trees are cut down to provide the energy.

Even in the late 1990s, as John Swaan's maiden pellet shipment was forging a new path abroad for America's wood pellets, <u>scientists knew</u> that wood is not always carbon neutral.

"The idea of carbon neutrality is kind of a silly one," said <u>Gregg Marland</u>, an adjunct professor at Appalachian State University.

During the 1990s, while Marland was researching climate change at Oak Ridge National Laboratory in Tennessee, he collaborated on a <u>seminal series</u> of <u>papers</u> that attempted to grasp climate implications of burning forestry material for energy.

Different "strategies proposed for using forest management" to generate energy "can have very different paths" for any climate benefits, Marland and two coauthors wrote in a 1997 paper.²

A large team of mostly American scientists drew fresh attention to wood energy's climate impacts in 2009. Writing in Science, they described a "far-reaching but fixable flaw" of treating wood energy as zero-carbon in global climate policy — a flaw that the scientists warned would "severely undermine greenhouse gas reduction goals."

A year later, a <u>report commissioned by Massachusetts</u> convinced state officials to restrict the use of some wood electricity as a renewable. That study, led by the non-profit Manomet Center for Conservation Sciences, pushed forward the concept of a carbon debt.

When trees are cut down, they stop absorbing carbon dioxide, and when they are burned for electricity, all the carbon that had been stored in their wood becomes fresh carbon dioxide pollution. That's a debt to the climate. If the forest regrows, it may eventually absorb enough carbon dioxide from the atmosphere to pay off that debt. If wood replaces natural gas as an electricity source, the payoff time was found to be more than 90 years. Using wood to replace coal, it still took 20 years.

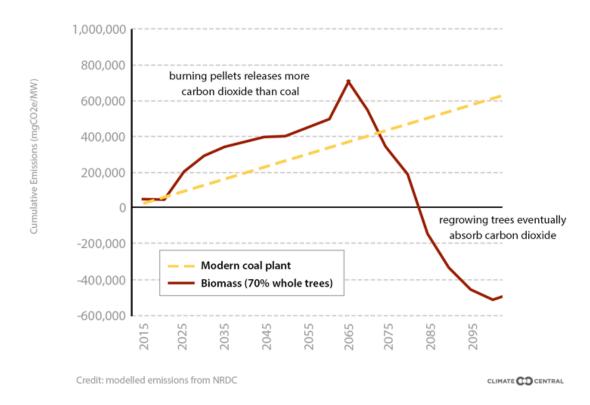
Modeling by the Natural Resources Defense Council, an environmental nonprofit, suggests it takes some American hardwood forests 40 to 70 years to soak up as much carbon as they spill to the atmosphere when they're cut down for wood pellets. Findings like those have recently turned NRDC into a vocal foe of

using biomass for fuel. "We don't need to be creative when it comes to using forests to slow climate change," NRDC policy analyst <u>Sasha Stashwick</u> said. "They're already doing all that they can do."

2. Marland, G., Schlamadinger, B. and Leiby, P. (1997) Forest/biomass based mitigation strategies: Does the timing of carbon reductions matter? Source

3. Searchinger et al. (2009) Fixing a critical climate accounting error. Source

Wood Pellets Emit More Carbon Than Coal



DOWNLOAD

Europe's IOUs to the climate are racking up with every cargo ship that docks at the continent with holds full of wood pellets.

The EU has encouraged the burning of wood for electricity, without any rules to ensure that the debt to the climate is repaid — such as requiring that forests used for pellets are replanted or allowed to fully regrow. Nor do power plants pay any interest on their climate debts through Europe's carbon trading program.

North America's oldest cap-and-trade system, the U.S. Northeast's Regional Greenhouse Gas Initiative, affecting states such as Connecticut, Maryland, Massachusetts and New York, treats wood energy in much the same way as Europe. So, too, does California's. Pollution from wood is simply being wiped clean from climate ledgers. But that isn't keeping it out of the atmosphere.

SECTION 4.

The Loophole That Won't Shut



Photo by Rajan Zaveri

Unlike the wood burning at Drax Power Station, there's no debating the climate benefits of the wind turbines or solar arrays that are sprouting in the pastures and farms that surround it. Yet, those sectors are getting their wings clipped. This year and next, the U.K. is ending some of its subsidy support for new photovoltaic farms and new land-based wind farms. By contrast, it will leave all of the subsidy programs in place for wood burning. Even with new financial rules and limits, the U.K. expects to eventually provide more than \$10 billion of support to biomass energy.

NATIONS THAT SUPPLY WOOD PELLETS FOR DRAX

58%

U.S.

21%

Canada

7.5%

Latvia

5.7%

Portugal

3.7%

Estonia

2 80/

UK

-1%

Other countries (Germany, South Africa and Poland)

The climate accounting loophole that allows such irrational climate policy is on clearest display in the EU, but it's rooted in failings at United Nations climate negotiations. While hopes are high that U.N. climate talks will deliver a historic global agreement in December, the wood pellet loophole isn't even on the agenda.

With China, the U.S. and other countries showing new interest in slowing climate change, experts fear other economies will follow Europe's lead and allow wood energy to be treated as if it's as clean as solar or wind. That could make the loophole harder to eradicate in the future.

"Once you start creating those rules, you institutionalize industry support for those rules," said <u>Tim Searchinger</u>, a research scholar at Princeton University. He was among the authors of a <u>2009 article</u> published in Science warning of the "flaw" of treating wood energy as zero-carbon.

Like a Y2K bug, the flaw seems to have infiltrated the climate community's entire digital system. It's so deeply entrenched that it pervades models used to produce leading climate research. "They assume carbon neutrality for biomass energy, and that's a real weakness," said Stanford University earth sciences professor Rob Jackson. Removing it would take painstaking work and commitment — commitment that's currently lacking.

In recent years, European Union leaders negotiated a set of <u>sustainability rules for biofuels</u>, such as gasoline made from corn. The protracted debate laid bare the detrimental effects of some biofuels on the climate, the environment and food prices, culminating in <u>April with a vote</u> in European Parliament to limit the use of biofuels as renewables.

Efforts to debate <u>potential sustainability standards</u> for wood energy have been stifled for more than five years, largely by opposition from Finland and Sweden, which rely heavily on wood burning for heat and electricity. The European Commission has <u>told</u> <u>lawmakers</u> that an "improved biomass policy" will be necessary to ensure "robust and verifiable greenhouse gas savings" from wood energy, and that it <u>plans to propose</u> one by 2017.



"If you want to get environmental legislation off the ground, you're usually a bit dependent on northwestern states — and Finland and Sweden are important," said <u>Bas Eickhout</u>, a Green Party parliamentarian representing the Netherlands.

Eickhout says wood pellet energy is "ruining the entire image of renewable energy." He has called for sustainability standards that fully account for wood's climate pollution. "I'm not saying that biomass should never be part of your portfolio but, at the moment, if I see how it's being used, I'm very critical."

In Europe, forestry has always been controlled by national governments without European Union interference. Finland and Sweden argue that wood energy is enough of an improvement on fossil fuels to count as a renewable, and they point to voluntary sustainability certification systems used by their forestry sectors in arguing that additional rules are unnecessary.

"At best, it would lead to an increase in bureaucracy," said <u>Christofer Fjellner</u>, a Moderate Party parliamentarian representing Sweden. He opposes Eickhout's efforts to introduce sustainability standards. "I think it's not only unlikely — it's impossible to agree upon correct and comprehensive legislation for sustainable forest management."

Like many of Europe's power plants that also run on wood, Drax doesn't require that its pellet producers source from forests certified by sustainable forestry programs. That's a potential threat to American forests, which receive few environmental protections under local, state or federal laws. Fjellner said that should be addressed by leaders in the U.S., where many of Europe's wood pellets are produced. "I think every community has to sit down for themselves and discuss how they prioritize their local environments," he said.

Internationally, efforts to create climate regulations for wood energy are receiving little attention — and little support. The U.N. Framework Convention on Climate Change has been silent so far on wood energy's climate impacts, despite the efforts of some environmental groups.

Diplomats have spent the year in grueling negotiations designed to produce a global climate treaty during high-profile meetings scheduled this December in Paris. Many are hopeful it will deliver history's most far-reaching agreement on climate action. Yet there are no plans to debate the nascent rise of wood energy, which threatens to undermine efforts to curb global warming below the agreed goal of 3.6°F.

"The big loophole in accounting for biomass emissions was repeatedly raised by NGOs during the negotiation of accounting rules," said Peg Putt, a former Australian Green Party politician who runs a small nonprofit in Australia that works internationally to protect forests. "It's not something that will be sorted out in Paris."



Finger-sized wood pellets, many from mills in the Southeast, are shipped across the Atlantic and burned for electricity in Europe. Photo by Ted Blanco

If not in Paris, when? The world is heating up, with 2015 virtually certain to be the hottest on record, surpassing the record set in 2014. As long as flawed wood pollution accounting rules are kept in place in Europe, it's an open invitation for other countries to do the same.

This summer, Oregon lawmakers <u>approved a bill</u> declaring wood energy to be carbon neutral and other U.S. states have similar rules. On the other side of the world, Australia passed legislation this year <u>defining energy from wood waste</u> to be carbon neutral, but with a broad definition of what wood waste can mean — including trees that are thinned from growing forests.

Korea and Japan are both burning more wood pellets in power plants. Demand there is being driven by climate policies that encourage the use of renewable energy. Many in the wood pellet industry are hopefully watching China, which is backing away from coal to help reduce air pollution and slow global warming.

Like the U.K., there's a danger that China will convert coal power plants to burn wood pellets, which can be cheaper than abandoning the coal-burning infrastructure altogether. Not only would that help cook the climate — it risks worsening deforestation throughout

Asia and in Russia, which could become a leading supplier of wood pellets to Asian power plants.

If Europe leads the rest of the world down that path, more climate-protecting trees will be cut down, and polluting wood fuel will be burned in growing volumes.

Without science-based leadership by the EU and by U.N. negotiators, hopes for protecting the climate for years and generations to come will rely heavily on the empty promise of an accounting trick.

Source: https://reports.climatecentral.org/pulp-fiction/1/