

Dan Rather Reports

Episode Number: 435

Episode Title: Carbonomics

Description: Understanding an issue you need to know. Cap and trade and a plan by the Obama administration to reduce pollution.

TEASE:

DAN RATHER (VOICE OVER)

TONIGHT... MAKING CASH FROM CARBON... A LOOK AT THE ENVIRONMENT... THE ECONOMY... AND THE BILLIONS TO BE MADE FROM "OFFSETTING" ALL THE POLLUTION WE PUT INTO THE ATMOSPHERE. BUT DOES IT WORK?

JOE ROMM, A FORMER ENERGY OFFICIAL IN THE CLINTON ADMINISTRATION

I call them rip off-sets because I think, fundamentally they're a rip off. You're making them richer and maybe that will make you feel better. But you're money isn't bringing about new emissions reduction which is the point.

RATHER (VOICE OVER)

PLUS... PLANS FOR A MASSIVE GLOBAL MARKET THAT ALREADY HAS A LOOPHOLE THE SIZE OF CHINA.

DAVID VICTOR, PROFESSOR, UNIVERSITY OF CALIFORNIA, SAN DIEGO

I don't think the international offsets program has worked well at all And I'm skeptical that we can fix it, because I don't think international regulators are ever gonna know enough to figure out which investors are cooking the books and which investors and projects are truly bona fide.

RATHER (VOICE OVER)

AND PAPER MONEY...POTENTIALLY THE BIGGEST MARKET OF THEM ALL: TREES...

KEN CALDEIRA, CLIMATE SCIENTIST WITH THE CARNEGIE INSTITUTION FOR SCIENCE

We can get estimates approximations of how much carbon is in forest we'll never get you know down to the dollar how much carbon value is in any forest.

RATHER (VOICE OVER)

WE'LL BRING YOU THE NEWS... NEXT ON DAN RATHER REPORTS...

CARBONOMICS:

RATHER (ON CAMERA)

GOOD EVENING. IF YOU THOUGHT THE FIGHT OVER HEALTH CARE REFORM WAS UGLY AND DIVISIVE, HOLD ON TO YOUR HAT. MEMBERS OF CONGRESS, LOBBYISTS, INDUSTRY EXECUTIVES AND INTEREST GROUPS ARE GEARING UP FOR A BATTLE THAT MAY BE JUST AS BRUTAL. THE TOPIC IS GLOBAL WARMING AND WHAT IS BEING DEBATED IS A COMPLICATED NEW SYSTEM CALLED CAP AND TRADE. SIMPLY PUT, POLLUTERS WILL HAVE TO BUY AND SELL THE RIGHT TO POLLUTE IN A NEW TYPE OF COMMODITIES MARKET WORTH HUNDREDS OF BILLIONS OF DOLLARS. MANY POLITICIANS ARGUE THAT THIS IS NECESSARY TO SAVE THE PLANET, BUT THOSE SAME POLITICIANS MAY BE WRITING A GIANT LOOPHOLE INTO THE LEGISLATION THAT SCIENTISTS AND POLICY EXPERTS FEAR COULD UNDERMINE THE ENTIRE EFFORT. TONIGHT WE BRING YOU A MONTHS-LONG INVESTIGATION INTO THIS POTENTIAL LOOPHOLE – AN INVESTIGATION THAT STRETCHES FROM THE FACTORIES OF CHINA, TO THE COAL PLANTS OF GERMANY, TO THE RAIN FORESTS OF THE TROPICS. BUT WE BEGIN WITH AN EXPLANATION OF OFFSETS AND HOW THEY WORK. A GOOD ILLUSTRATION HAPPENED THIS FALL AT A WEDDING IN PENNSYLVANIA, WITH A YOUNG COUPLE WHO JUST WANTS TO START THEIR LIFE TOGETHER IN AN ENVIRONMENTALLY FRIENDLY WAY.

RATHER (VOICE OVER)

AMIE MONTEMURRO AND CHRIS SCANLON CELEBRATED THEIR WEDDING VOWS THIS FALL WITH MORE THAN CAKE AND CHAMPAGNE. THE COUPLE PUT SOMETHING UNUSUAL ON THEIR GIFT REGISTRY. FOR JUST A FEW DOLLARS APIECE, FRIENDS AND FAMILY COULD BUY IN TO A TRENDY NEW WAY TO SAVE THE PLANET. IT'S CALLED AN "OFFSET" AND IT'S MEANT TO CANCEL OUT ALL THE POLLUTION THAT THIS WEDDING GENERATED. YES, EVEN WEDDINGS CAN POLLUTE THE PLANET.

AMIE MONTEMURRO

A couple of our guests rather than you know give us a china set we didn't really need were able to contribute to this fund that offset the whole day and then some so it was

really an easy but awesome way to kinda be a little more responsible with our day.

CHRIS SCANLON

We really wanted to say, like, "Look, this is a beautiful wedding, a beautiful ceremony, a beautiful reception. And we were able to incorporate some of our ideals and values into that."

RATHER (VOICE OVER)

THERE WAS A LOT TO OFFSET. BY COMPILING A LIST, AMIE FOUND OUT JUST HOW QUICKLY THE ENERGY AND POLLUTION ADD UP.

MONTEMURRO

We figured out you know the number of guests that were coming. How many were flying. What the average distance was. How many people were driving. I mean all that kind of basic info.

RATHER (VOICE OVER)

ALL THAT COMING AND GOING MEANS MORE CO₂, AND CO₂ - OR CARBON DIOXIDE - IS WHAT IT'S ALL ABOUT. THAT'S THE KEY GLOBAL WARMING GAS, WHICH IS RELEASED INTO THE ATMOSPHERE WHENEVER FOSSIL FUELS ARE BURNED, FROM COAL PLANTS, TO AIRPLANES, TO TAIL PIPES ON CARS. THAT'S WHAT AMIE AND CHRIS WANTED TO OFFSET. SO WHAT IS AN OFFSET? SIMPLY PUT, WHEN YOU ADD GLOBAL WARMING GASES TO THE ATMOSPHERE, YOU CAN CANCEL THEM OUT OR "OFFSET" THEM BY PAYING SOMEONE ELSE TO REDUCE THE AMOUNT THEY ARE RELEASING. AND AMIE AND CHRIS AREN'T THE ONLY ONES LOOKING TO DO THIS. THE WEB IS FULL OF SITES SELLING CARBON OFFSETS. CARBONFUND.ORG IS A POPULAR ONE, AND IT WAS AN EARLY STOP IN PLANNING THIS WEDDING.

MONTEMURRO

We figured out how much pollution, how many tons of carbon emissions would be created from our day through it's actually a wedding carbon footprint calculator from Carbonfund.org. So it really honestly, took, I think maybe like five to ten minutes.

RATHER (VOICE OVER)

THIS WEDDING ACCORDING TO THE CALCULATOR WOULD EMIT ROUGHLY TEN TONS OF CARBON. THAT'S ABOUT 200 TIMES MORE THAN AN INDIVIDUAL WOULD USE IN A TYPICAL DAY. AND FOR A HUNDRED BUCKS, CARBONFUND SAID IT WOULD CONTRIBUTE TO PROJECTS THAT WILL CANCEL OUT THOSE TEN TONS - MAKING FOR CARBON NEUTRAL

NUPTIALS. PROJECTS LIKE THIS, HALF A CONTINENT AWAY FROM AMIE'S WEDDING. AT A TRUCK STOP IN OKLAHOMA CITY, THESE TRUCKERS ARE ACTUALLY TAKING AWAY FROM WHAT AMIE'S WEDDING ADDED. THAT'S BECAUSE THESE BIG RIGS HAVE A NEW WAY TO POWER THEIR RADIOS AND COOL THEIR CABS WHILE PARKED. INSTEAD OF RUNNING THEIR ENGINES AND BURNING FUEL, THEY HOOK UP TO THIS YELLOW HOSE THAT PROVIDES EVERYTHING THEY NEED.

TRUCK DRIVER

I like being about to plug in because I don't have to run the truck, it saves me fuel.

RATHER (VOICE OVER)

THE COMPANY THAT PROVIDES THE HOOKUPS CALCULATES HOW MUCH POLLUTION THEY'RE SAVING AND SELLS THOSE CARBON OFFSETS TO CARBONFUND, WHICH SELLS THEM ON TO CONSUMERS LIKE AMIE AND CHRIS. THIS IS JUST ONE OF MANY PROJECTS CARBONFUND BACKS, AND AMIE AND CHRIS TOLD THE COMPANY TO USE THEIR MONEY AS BEST IT SAW FIT.

MONTEMURRO

We didn't even really have a say in what we wanted to do. We just trusted them. I mean, I talked to the folks there and they were so helpful and knowledgeable and just passionate about the cause that we basically said, "Hey, we'll raise this money. And you put it to the best use you could use- you know use it for, because you're the pros." We just wanted to help out anyway we could.

RATHER (VOICE OVER)

RETAILERS LIKE CARBONFUND SELL OFFSETS FOR EVERY ASPECT OF MODERN LIFE. GO TO THE SECTION MARKED "HOME," TYPE IN THE SIZE OF YOUR HOUSE, AND IT WILL TELL YOU YOUR CARBON EMISSIONS FOR A YEAR. ON "BE GREEN" ENTER WHERE YOU LIVE AND HOW MUCH ENERGY YOU USE, AND THEY'LL SELL YOU AN OFFSET. AND IF YOU HAVE A CAT, "BRIGHTER PLANET DOT-COM" WILL OFFSET YOUR FELINE'S FOOTPRINT. AND IT'S NOT JUST INDIVIDUALS THAT ARE BUYING OFFSETS. BIG BUSINESS IS LOOKING TO SHOW OFF ITS GREEN CREDENTIALS. EVEN HOLLYWOOD HAS JUMPED ON THE OFFSET BANDWAGON.

KEIFER SUTHERLAND

Here at 24 we are committed to reducing our impact on climate change.

RATHER (VOICE OVER)

WHILE ON TV JACK BAUER IS KEEPING THE COUNTRY SAFE, KEIFER SUTHERLAND AND THE PROGRAM 24 ARE BUYING OFFSETS TO KEEP IT GREEN. THEN THERE'S THE NFL. THEY BOUGHT OFFSETS FOR THE CARBON NEEDED TO LIGHT THE SUPER BOWL. AND THE BAND COLDPLAY BUYS OFFSETS FOR THE CARBON EMITTED TO PUT ON THEIR SHOW - FROM THE AMPS TO THE LIGHTS. YOU CAN EVEN BUY OFFSETS AT THIS AIRPORT KIOSK IN SAN FRANCISCO TO OFFSET THE POLLUTION FROM YOUR FLIGHT. IT SOUNDS LIKE EVERYONE'S TRYING TO DO THE RIGHT THING. BUT DO ALL THESE GOOD INTENTIONS HAVE ANY REAL IMPACT?

JOE ROMM, FORMER ENERGY OFFICIAL IN THE CLINTON ADMINISTRATION

I call them rip off-sets because I think, fundamentally they're a rip off.

RATHER (VOICE OVER)

JOE ROMM, A FORMER ENERGY OFFICIAL IN THE CLINTON ADMINISTRATION, IS AN EXPERT ON CLIMATE CHANGE WITH THE CENTER FOR AMERICAN PROGRESS, A PROGRESSIVE THINK TANK. HE SAYS THAT MANY SUPPOSED OFFSETS HAVE A SERIOUS FLAW.

ROMM

I think there's no question that your money is gonna end up in the hands of somebody who did something green. But I think the biggest problem is that most of the money is going to the hands of people who were already doing it so you're not actually changing anything that happened. They were runnin' their windmill, they were running their bio gas digester for years in some cases before your money showed up. So you're making them richer and maybe that will make you feel better. But you're not, your money isn't bringing about new emissions reduction which is the point.

RATHER (ON CAMERA)

AND IT IS A KEY POINT, IF A COMPLICATED ONE. THE ONLY WAY THIS SYSTEM WORKS IS IF THE PERSON BUYING OFFSETS HELPS CHANGE THE STATUS QUO. THAT MEANS IF POLLUTION GOES UP SOMEWHERE, IT HAS TO BE REDUCED SOMEWHERE ELSE.

RATHER (VOICE OVER)

FOR EXAMPLE THE COMPANY THAT PROVIDES THESE HOOKUPS TOLD US THEY COULDN'T DO BUSINESS WITHOUT PEOPLE LIKE AIME AND CHRIS BUYING OFFSETS. THAT'S HOW OFFSETS ARE SUPPOSED TO WORK, CHANGING THE STATUS QUO. BUT IT'S A DIFFERENT STORY AT THIS OFFSET PROJECT. THIS LANDFILL IN SOUTHERN NEW JERSEY DIDN'T

CHANGE THE STATUS QUO.

RATHER

We're on top of the landfill here.

GARY CONOVER

Right.

RATHER

Right. And what is this making this noise?

CONOVER

This is a typical landfill gas well.

RATHER (VOICE OVER)

GARY CONOVER OVERSEES THIS COUNTY LANDFILL, WHICH HAS A SYSTEM TO CAPTURE ITS EMISSIONS OF METHANE, A BYPRODUCT OF ROTTING TRASH.

RATHER

You dug the well down...

CONOVER

Yep.

RATHER

Right down into the landfill, it's collecting the methane gas.

CONOVER

As it's produced it comes out...uh huh

RATHER

And it's being sucked up to the top and then sucked right on through to the main facility.

CONOVER

Yep.

RATHER

And how many of these wells do you have?

CONOVER

80, we have 80 of these wells.

If we didn't collect and control the gas it's 21 times more destructive than CO2 so it's a very, very potent gas.

RATHER (VOICE OVER)

BECAUSE METHANE ALSO CAUSES GLOBAL WARMING, THIS LANDFILL HAS BEEN ALLOWED TO SELL OFFSETS FOR KEEPING IT OUT OF THE ATMOSPHERE. BUT THAT'S NOT WHY THEY STARTED COLLECTING THE METHANE THREE YEARS AGO.

RATHER

You take the gas and make it into electricity?

CONOVER

Yes.

RATHER

Do you make money for the facility, you make money out-- out of the arrangement?

CONOVER

Oh, yes.

RATHER

It makes enough to be worthwhile?

CONOVER

Oh yeah.

RATHER (VOICE OVER)

THE ELECTRICITY ALONE WAS WORTH ABOUT A MILLION DOLLARS TO

THE LANDFILL LAST YEAR. BUT CONOVER AND THE COUNTY ARE GETTING PAID TWICE. IF YOU LOOK AT HIS BOOKS, YOU'LL SEE PAYMENTS THAT HAVE TOTALED AROUND 150 THOUSAND DOLLARS FROM SOMETHING CALLED THE CCX. THAT STANDS FOR THE CHICAGO CLIMATE EXCHANGE. THERE'S NO TRADING FLOOR, BUT AROUND THE COUNTRY TRADERS HAVE BOUGHT AND SOLD MILLIONS OF OFFSETS ON THE CCX. AND SOME OF THE CREDITS ARE COMING FROM THIS LANDFILL. CONOVER FOUND THE LANDFILL WAS ELIGIBLE FOR THESE CREDITS BECAUSE IT WASN'T MANDATED BY LAW TO CAPTURE THE METHANE.

CONOVER

We were surprised. It was literally like finding found money. This is something we're gonna do anyway. Let's take advantage of this.

This one was for 28,350 the transfer to the Chicago Climate Exchange, that's our net after their- their fees... oh March 5th...

RATHER (VOICE OVER)

CONOVER'S LANDFILL NOW GETS REGULAR CHECKS FROM THE CCX FOR THOUSANDS OF DOLLARS. THEN THE CCX SELLS CONOVER'S OFFSETS ON ITS EXCHANGE TO RETAILERS LIKE CARBONFUND WHICH IN TURN SELL THEM TO CONSUMERS LIKE AMIE AND CHRIS. BUT THE QUESTION REMAINS: IS ANY OF THIS HELPING THE ENVIRONMENT?

RATHER

Now offsets are supposed to they're designed hopefully to change behavior?

CONOVER

Yes.

RATHER

But the question is for you this is just business as usual. You'd be doing this anyway?

CONOVER

So in that case put that way, yes. It's found money to us.

RATHER (VOICE OVER)

LIKE ANY GOOD BUSINESSMAN, CONOVER'S JUST TAKING ADVANTAGE OF AN OPPORTUNITY TO HELP HIS COMPANY'S BOTTOM LINE. WHAT HE AND

THE COUNTY ARE DOING IS LEGAL AND FOR THEM SOUND BUSINESS PRACTICE. BUT ALL THE MONEY HE'S GETTING FROM PEOPLE BUYING OFFSETS ISN'T REDUCING THE AMOUNT OF CARBON IN THE ATMOSPHERE BY ONE OUNCE. SO HERE AT THE LANDFILL, FUNDS FROM POLLUTERS DIDN'T CHANGE THE STATUS QUO - THERE ARE NO EMISSION REDUCTIONS TO CANCEL OUT WHAT POLLUTERS LIKE AMIE AND CHRIS ADDED TO THE ATMOSPHERE. AMERICAN CONSUMERS ARE SPENDING MILLIONS OF DOLLARS ON OFFSETS --BUT THE MARKET IS UNREGULATED AND NO ONE REALLY KNOWS HOW MUCH OF THAT ENDS UP REALLY REDUCING EMISSIONS. A DIZZYING ARRAY OF GROUPS USING A VARIETY OF CRITERIA HAVE SPRUNG UP TO TRY AND BRING ORDER TO THIS MARKET. STILL SOME USE MORE STRICT STANDARDS THAN OTHERS- WHICH LED A RECENT GOVERNMENT ACCOUNTABILITY OFFICE REPORT TO CONCLUDE THAT CONSUMERS END UP WITH "LIMITED ASSURANCE OF CREDIBILITY."

ROMM

In an unregulated market, when you buy an offset, you have no idea what you're buying. And so you are buying the equivalent, maybe a simpler analogy is just a junk bond, you don't know whether it has any value or not so you know that's why I say, yeah—you know this is caveat emptor: let the buyer beware.

RATHER (VOICE OVER)

CARBONFUND TOLD US IT RELIES ON THIRD PARTY VERIFIERS TO INSURE THE CREDIBILITY OF ITS OFFSETS, VERIFIERS LIKE THE ONLINE CARBON EXCHANGE CCX - THE ONE THAT IS PAYING MONEY TO THE NEW JERSEY LANDFILL. CCX FOUNDER RICHARD SANDOR SAYS ALL THESE ISSUES ARE JUST MINOR HICCUPS ALONG THE PATH TO A FUNDAMENTAL RE-THINKING OF HOW THE WORLD VIEWS, AND PRICES, CARBON.

RATHER

I talked to a landfill operator in New Jersey.

RICHARD SANDOR, CCX FOUNDER

Right.

RATHER

And he said that he was already making money selling methane from rotting trash before he was approached by your exchange-- offering to sell his offsets. Now there've been numerous reports of landfills selling credits on the exchange for reductions in the emissions that they were already making.

SANDOR

Yeah.

RATHER

Is that true?

SANDOR

Yeah. It's a thorny issue. We have a-- a rule that says if you're not forced by law to do it then you can get credit. It is controversial because you wanna motivate behavioral changes and you're sending a signal that you can make this additional money. Alternatively people say you're doing it anyway and so it has no value. But it's a question does it have value at the margin?

RATHER

Let me make sure I understand here. That your argument is, look, whether it helps the environment on the balance, in this particular case, of this landfill operator, that others will see this and say, "You know what? I think there's a way to-- to do this and to improve my business," and that will eventually affect the environment for the better. So at base, you don't see anything wrong with this?

SANDOR

No, not at all. I think it motivates changes of behavior.

RATHER (VOICE OVER)

AND AMIE AND CHRIS TOLD US THEY WERE SATISFIED WITH THEIR OFFSETS WHETHER OR NOT THEY ACTUALLY ERASED THEIR CARBON FOOTPRINT.

MONTEMURRO

While I understand, you know we certainly wanna make sure all our emissions were offset we believe that anything that can be done to raise awareness or encourage people to seek out information on their own you know whether this particular project that Carbonfund was doing was actually offsetting or wasn't you know, that wasn't the most important part to us. It was really the awareness raising and like I said, trying to have a teachable moment.

SCANLON

Because we wanna know that down the line when we have kids we want this world to be just as good or if not, better for them when they have their wedding

RATHER (ON CAMERA)

FOR CONSUMERS LIKE AMIE AND CHRIS, AND EVEN FOR A VOLUNTARY CARBON EXCHANGE LIKE CCX, RAISING AWARENESS AND SPURRING CHANGE MAY BE ENOUGH. BUT CONGRESS IS CONSIDERING USING OFFSETS AS PART OF THIS COUNTRY'S COMPREHENSIVE APPROACH TO GLOBAL WARMING. WHETHER THESE OFFSETS WILL WORK ON A MASSIVE SCALE IS THE NEXT PART OF OUR INVESTIGATION. THE OFFSET MARKET GOES GLOBAL, WHEN WE RETURN.

RATHER (ON CAMERA)

WE BEGAN OUR INVESTIGATION BY LOOKING AT VOLUNTARY CONSUMER OFFSETS IN THE UNITED STATES...BUT WHAT'S BEING DEBATED IN CONGRESS IS DIFFERENT. OFFSETS WOULD BECOME LAW, AS PART OF AN OVERHAUL OF OUR ECONOMY FOR THE EXPRESSED GOAL OF REDUCING THIS COUNTRY'S TOXIC EMISSIONS.

THE EUROPEAN UNION ALREADY HAS GLOBAL WARMING INITIATIVES THAT ALLOWS FOR POLLUTERS TO SHOP AROUND THE GLOBE FOR OFFSETS. BUT SOME AMERICAN POLICY WONKS SAY THE EXPERIENCE OF OUR FRIENDS ACROSS THE ATLANTIC SHOULD BE A RED FLAG BEFORE WE THINK OF PASSING OUR OWN LEGISLATION.

DAVID VICTOR, PROFESSOR, UNIVERSITY OF CALIFORNIA, SAN DIEGO

Carbon dioxide which is the main cause of global warming is a pollutant that mixes all around the planet over a period of a few years and so if you could control carbon dioxide in China or India, that's just as good as controlling carbon dioxide in Germany.

RATHER (VOICE OVER)

DAVID VICTOR IS A LEADING EXPERT ON ENVIRONMENTAL POLICY AND CLIMATE CHANGE, AND A PROFESSOR AT THE UNIVERSITY OF CALIFORNIA, SAN DIEGO.

VICTOR

The theory behind international offsets is that companies should have the opportunity to travel around the world and find the lowest cost way of controlling those emissions.

RATHER

Because the idea is to control the emissions?

VICTOR

Absolutely.

MICHAEL WARA, PROFESSOR, STANFORD LAW SCHOOL

The whole concept of carbon offsets any kind of offset is a zero sum game.

RATHER (VOICE OVER)

STANFORD LAW SCHOOL'S MICHAEL WARA STUDIES INTERNATIONAL OFFSETS AND HAS TESTIFIED IN FRONT OF CONGRESS ON THE PITFALLS THEY POSE.

WARA

Emissions are reduced in one place, so that they can be higher in another place and the net is no change. That's if everything works perfectly, but if things aren't working perfectly, if emissions aren't really different where the credit is being generated, then emissions are higher in the net.

RATHER (VOICE OVER)

AND THAT'S WHY WARA AND VICTOR ARE WORRIED ABOUT WHAT'S PENDING IN THE U.S. CONGRESS. EVEN BEFORE LAWMAKERS STARTED DRAFTING THE LATEST CLIMATE LEGISLATION, VICTOR AND WARA STUDIED HOW OFFSETS WERE PLAYING OUT ON THE WORLD STAGE. AND WHAT THEY FOUND WAS SOBERING.

RATHER

Is it working? Or is it a lot of hooley?

VICTOR

I don't think the international offsets program has worked well at all. And I'm skeptical that we can fix it, because I don't think international regulators are ever gonna know enough to be able to go inside China or India or and figure out which investors are cooking the books and which investors and projects are truly bona fide.

RATHER (VOICE OVER)

AND THERE IS NO BETTER PLACE TO SEE THE PROBLEMS WITH OFFSETS THAN CHINA. WARA AND VICTOR ANALYZED CHINA'S ENERGY SECTOR LOOKING AT DOZENS OF OFFSET PROJECTS. VICTOR SAYS BILLIONS OF DOLLARS SPENT BY POLLUTERS IN THE EUROPEAN UNION HAVE

NOT CANCELLED OUT EMISSIONS AS WAS THE CASE WITH THAT LANDFILL IN NEW JERSEY. HE SAYS CHINA IS GAMING THE SYSTEM, MAKING LOT'S OF EXTRA CASH BY CLAIMING TO HAVE MADE CHANGES TO THE STATUS QUO --WHEN IT HAS NOT.

VICTOR

Suppose in China a company wants to build a hydroelectric dam. So they, they do all the planning for this dam. They install the dam and the equipment. And the dam results in China using more hydroelectricity, which usually causes very low emissions of greenhouse gases, instead of coal. Eighty percent of china's electric power system is coal. And so the argument is if we use more hydroelectricity and less coal, we're gonna have lower emissions.

RATHER

Sounds good.

VICTOR

It sounds like a terrific idea. The problem is that if you go back and look at every single one of these projects that's claiming offset credit these are all projects that the Chinese would have built anyway. The big change is they figured out by filing paperwork, they would be get an offset credit.

RATHER

For building the dam they were gonna build anyway?

VICTOR

For building the dam they were gonna build anyway.

RATHER (VOICE OVER)

VICTOR SAYS THESE KINDS OF OFFSETS, WHICH ARE LIKELY COMING TO THE UNITED STATES, ARE IN REALITY PROVIDING AN EXCUSE FOR EUROPEAN COMPANIES TO KEEP POLLUTING—UNDERMINING EFFORTS TO STOP GLOBAL WARMING.

VICTOR

Those offset credits are then going to flow into, mainly into the European market when in reality there's been no change in emissions into the atmosphere, and so at the end of the day this actually makes the global warming problem worse.

YVO DE BOER, EXECUTIVE SECRETARY OF UNFCCC

There is a very thorough examination of your plan and of your proposal.

RATHER (VOICE OVER)

YVO DE BOER IS THE EXECUTIVE SECRETARY OF THE UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE AND IT'S HIS ORGANIZATION'S JOB TO POLICE INTERNATIONAL OFFSETS. HE TOLD US ALL OFFSET PROJECTS GO THROUGH A RIGOROUS SCREENING.

DE BOER

An international body gets together to talk about your specific proposal and decide if it should be accepted or not. And once it's accepted these guys in white coats come along and stick a thermometer in your project and see if you've actually, if you've actually delivered.

RATHER (VOICE OVER)

TO MAKE SURE YOU DELIVER, THE UN HAS A RULE WHICH SAYS A PROJECT MUST PROVE IT NEEDS FINANCING FROM POLLUTERS IN ORDER TO BE ECONOMICALLY VIABLE.

DE BOER

If you're planning to build the dam anyway, if it makes economic sense for you to build that dam anyway, then that would not qualify.

RATHER (VOICE OVER)

XIAOGUSHAN HYDROELECTRIC IN GANSU PROVINCE CHINA QUALIFIED, BUT THOSE QUALIFICATIONS HAVE BEEN CALLED INTO QUESTION AFTER AN INVESTIGATION BY PATRICK MCCULLY. HE'S THE DIRECTOR OF THE ENVIRONMENTAL GROUP INTERNATIONAL RIVERS.

PATRICK MCCULLY (DIRECTOR OF INTERATIONAL RIVERS)

Now this is a dam we looked at closely because unlike most of the dams there's actually a lot of documentation available and available in English. And from 2003 there are records from the bank that funded the dam saying this is a very economically viable project let's go ahead and fund it and let's build it.

RATHER (VOICE OVER)

MCCULLY SAYS SINCE THE DOCUMENTS INDICATE THE DAM WAS GOING TO BE BUILT WITHOUT MONEY FROM POLLUTERS, THIS PROJECT IS NOT CHANGING THE STATUS QUO AND THUS IT'S NOT ACTUALLY OFFSETTING NEW EMISSIONS.

MCCULLY

Two years later when the project's already well under construction the project developers apply for carbon offset income with the argument that the project will only happen if they get this income. But this is not true. This is nonsense. The dam is being built. They don't need this income. Yeah it's a few maybe five million dollars a year extra for the developers you know a nice bit of cash to put on your profit line. But is that necessary for the dam to be built? No, the dam's already being built.

RATHER (VOICE OVER)

BUT THE DAM IS ALREADY SELLING OFFSETS. GERMAN POWER PRODUCER RWE IS ONE OF THE COMPANIES BUYING THEM. RWE'S PLANTS BURN LIGNITE, THE DIRTIEST COAL. WITH OFFSETS FROM XIAOGUSHAN RWE CAN NOW BURN MORE LIGNITE. EVERY YEAR XIAOGUSHAN OFFSETS WILL GIVE E-U- COMPANIES PERMISSION TO PUT AN EXTRA 300,000 TONS OF CARBON DIOXIDE INTO THE AIR — THAT'S LIKE PUTTING AN EXTRA 50,000 CARS ON THE ROAD.

RATHER

International Rivers says the Gansu plant in China, the plant was approved by the United Nations, they say despite the fact that loan documents show it was being built because it made economic sense. Do you know about that case?

DE BOER

I don't know about that particular case. I know about the criticism that this organization has.

RATHER

They say that these offsets leave the climate worse off because it gives polluters permission to keep polluting.

DE BOER

Well, first of all let me say that I'm really glad that people like that are out there because they help to keep us sharp, they help to insure that what we're doing really is credible and we do that as best we can. We go into the documentation of the project. We examine whether it would be viable under normal market standards. If you're planning to use a

dam or a wind farm to produce green power, we will look at the bottom line of that activity to see if you if it doesn't make normal economic sense anyway.

RATHER (VOICE OVER)

THE UN SAYS, AFTER A THOROUGH INVESTIGATION OF THE CHINESE DAM, THAT THEY FOUND IT QUALIFIES FOR OFFSETS. VICTOR SAYS THE PROBLEM IS THAT IT'S EASY FOR DEVELOPERS TO PLAY THE OFFSET GAME, MAKING IT SEEM LIKE THEY NEED THE MONEY TO FUND THEIR PROJECTS WHEN THEY REALLY DON'T. HE SAYS REVIEWERS NEED TO LOOK AT THE BROADER PICTURE. TAKE FOR EXAMPLE CHINA'S NATURAL GAS INDUSTRY.

VICTOR

If you burn natural gas in a modern power plant generate electricity, that electricity will cause less than half the emissions of carbon dioxide, the main cause of global warming, compared with a traditional coal fired power plant. So if China and India actually went off and built more gas-fired power plants that they would have built otherwise, then that actually could reduce their emissions. Our research suggests that they're going off and building the same number of gas plants they would have built otherwise, they're just filing to get credit for it.

RATHER (VOICE OVER)

BEIJING TAIYANGONG IN EASTERN CHINA IS A CASE IN POINT.

WARA

It appears that what's happening here is credit is being given for what would have happened anyway.

RATHER (VOICE OVER)

WARA SAYS IF YOU TAKE A STEP BACK YOU CAN SEE THAT TAIYANGONG AND AT LEAST FIVE OTHER GAS PLANTS WERE PLANNED BY THE CHINESE WHEN THEY BUILT THE WEST EAST GAS PIPELINE BACK IN 2002.

WARA

Move forward a few years and the carbon markets have developed and these power plants then made the claim that they would not have been built except for the incentives created by international carbon offsets. It made no sense because the power plants and the pipeline go together as one large infrastructure project.

RATHER (VOICE OVER)

YET WARA SAYS THESE GAS PLANTS WILL ISSUE ENOUGH OFFSETS TO ALLOW THREE EXTRA COAL PLANTS TO BE BUILT IN EUROPE. AND IF CONGRESS HAS ITS WAY, U.S. POLLUTERS MAY BE BUYING MILLIONS OF INTERNATIONAL OFFSETS IN LIEU OF MAKING THEIR OWN EMISSION REDUCTIONS. AND MOST OF THOSE OFFSETS WILL LIKELY COME FROM CHINA. BY ONE ESTIMATE THE CHINESE ALREADY ISSUE NEARLY TWO BILLION DOLLARS WORTH OF OFFSETS EVERY YEAR. AND IF THE U.S. ENTERS THE MARKET, THAT IS EXPECTED TO GROW CONSIDERABLY.

RATHER (ON CAMERA)

BUT THE CHINESE ARE HARDLY THE ONLY ONES BENEFITTING FROM THE OFFSET BONANZA. BANKS AND OTHER INVESTORS HAVE HAS ALSO MADE MILLIONS ON OFFSETS, AND ONE TYPE OF PROJECT HAS BEEN PARTICULARLY LUCRATIVE. AND THAT, ACCORDING TO CRITICS, IS ANOTHER PROBLEM WITH INTERNATIONAL OFFSETS.

RATHER (VOICE OVER)

IT MIGHT NOT LOOK LIKE IT BUT JUHUA CHEMICAL IN ZHEJIANG CHINA IS A WALL STREET GOLD MINE. JUHUA MANUFACTURERS A REFRIGERANT GAS.

VICTOR

The Chinese market is a big market for refrigeration. The economy is growing rapidly lots of air conditioners and so on. A byproduct of those industrial gases is a nasty chemical that when it leaks into the atmosphere it causes an extraordinary amount of global warming. It's a thousand of times worse than carbon dioxide.

RATHER (VOICE OVER)

THAT BYPRODUCT IS CALLED HFC 23, AND BECAUSE IT'S A GREENHOUSE GAS THOUSANDS OF TIMES WORSE FOR THE CLIMATE THAN CO2, ITS CLEANUP GENERATES THOUSANDS MORE OFFSETS.

VICTOR

For small amounts of money, an investor can put a piece of technology at the end of the pipe that eliminates a byproduct that causes a lot of global warming.

RATHER (VOICE OVER)

MORGAN STANLEY AND DEUTSCHE BANK ARE TWO OF A NUMBER OF INVESTORS THAT PAID FOR THE TECHNOLOGY TO DESTROY THAT BYPRODUCT AT JUHUA. IN RETURN THESE BANKS WILL END UP WITH

CARBON OFFSETS WHICH THEY THEN TAKE AND SELL ON THE CARBON MARKET. FOR EVERY DOLLAR THEY INVEST IN THE CLEAN-UP, THEY CAN MAKE UP TO TEN TIMES THAT IN PROFITS.

RATHER

Well I call them earning windfalls. Windfalls – a misuse of that word?

VICTOR

No. It's a windfall. It's a huge windfall.

RATHER (VOICE OVER)

THE UN'S DE BOER BELIEVES THAT IT'S A PRICE WORTH PAYING.

DE BOER

If I can go to China and make a rubber duck for 2 cents and then sell it to you for 2 dollars, am I a criminal? Or am I a good businessman? Yes huge profits are being made.

RATHER

One study called these offsets “a massive waste.”

DE BOER

But in the absence of this mechanism there would be- there would be no legal or economic incentive for the company in question to destroy that byproduct. It would be emitted into the atmosphere. And here we're talking about incredibly potent greenhouse gases. So what do you want to do? Let's not reward him and accept the fact that the really disastrous gas is going into the atmosphere.

RATHER (VOICE OVER)

BUT WARA SAYS ANOTHER PROBLEM WITH THE OUTSIZE PROFITS IS THAT THEY GIVE PRODUCERS A PERVERSE INCENTIVE TO MAKE MORE WASTE IN ORDER TO SELL MORE OFFSETS.

WARA

Very early on it was recognized that companies would essentially start running their factories in order to produce waste, in order to capture it, destroy it, and produce carbon credits.

RATHER (VOICE OVER)

UN REGULATORS HAVE ACKNOWLEDGED THE PROBLEM WITH HFC- 23 AND HAVE REFUSED TO APPROVE OFFSETS FROM NEWLY BUILT REFRIGERANT PLANTS. BUT WARA BELIEVES OLDER PLANTS HAVE CLEVERLY ADJUSTED THEIR MANUFACTURING PROCESS SO THEY CAN MAKE MORE MONEY OFF THE WASTE.

WARA

By tuning their plant--essentially tinkering with the chemical reactions that produce this refrigerant gas on an industrial scale to produce more of the waste, less of the refrigerant.

RATHER (VOICE OVER)

UP UNTIL RECENTLY AT LEAST 50% OF ALL INTERNATIONAL OFFSETS CAME FROM PROJECTS LIKE THESE. BUT VICTOR SAYS THE BIGGER PROBLEMS NOW ARE THOSE DAMS, GAS PLANTS, AND OTHER LARGE INFRASTRUCTURE PROJECTS THAT ARE GAMING THE SYSTEM.

VICTOR

It's very clear that those investments absolutely would have occurred anyway. And it is the really fundamental problem. Because it is in effect a kind of fraud.

RATHER

There've been a number of reports that there are problems with the way the projects are evaluated. Is that true?

DE BOER

Absolutely. There are problems with the way in which- in which projects are evaluated. Because you know you almost need a time machine to get it right.

RATHER (VOICE OVER)

DE BOER CONCEDES THAT SOME PROJECTS GET THROUGH THAT MAYBE SHOULD NOT, BUT HE MAINTAINS UN STANDARDS ARE MUCH BETTER THAN SOME CRITICS WOULD HAVE YOU BELIEVE.

DE BOER

I think that there maybe a handful of projects that shouldn't have not made it through the system. Aside from purchasing lie detectors we're really doing the best we can to be as secure as we can. Do we get it 100 percent right? No we don't, I'm sure that we- that we make mistakes and I'm sure that we will make less of them over time as we learn from

those mistakes.

RATHER (VOICE OVER)

VICTOR AND OTHER CRITICS AGREE THAT SCREENING PROJECTS CAN BE EXTREMELY DIFFICULT AND THAT'S WHY HE SAYS MORE THAN JUST A HANDFUL OF WHAT HE CALLS "BOGUS" OFFSETS ARE ENTERING THE SYSTEM.

VICTOR

It's hard to know exactly what fraction of these credits is bogus. My best guess is that something like half of these credits absolutely do not represent reductions and emissions beyond what would have occurred otherwise, and depending on how you do the numbers that fraction could be as high as two thirds, or maybe- maybe even higher than that.

RATHER

Well that's a lotta bogus.

VICTOR

That's a lotta bogus.

RATHER (ON CAMERA)

VICTOR BELIEVES THE INTERNATIONAL OFFSET MARKET MUST BE SUBJECT TO MUCH STRICTER REGULATION BEFORE CONGRESS EVEN THINKS ABOUT MAKING IT A PART OF ITS GLOBAL WARMING LEGISLATION. WHEN WE RETURN, OUR INVESTIGATION TACKLES WHAT WILL LIKELY BE THE LARGEST GROUP OF OFFSETS. YOU MAY BE SURPRISED TO LEARN WE WON'T BE LOOKING AT FACTORIES AND POWER PLANTS... BUT RATHER FORESTS... AND FARMS. THAT PART OF OUR INVESTIGATIVE REPORT IS NEXT.

RATHER (ON CAMERA)

WELCOME BACK. SO FAR WE'VE FOCUSED ON OFFSET EFFORTS, HOWEVER IMPERFECT, TO LIMIT THE AMOUNT OF GREENHOUSE GASSES THAT GO INTO THE ATMOSPHERE. FROM A LANDFILL IN NEW JERSEY, TO A TRUCK STOP IN OKLAHOMA, AND HYDROELECTRIC DAMS IN CHINA. BUT SCIENTISTS AND POLITICIANS, AND BUSINESSMEN ALIKE SAY THE BIGGEST SECTOR OF THE OFFSET MARKET COULD BE SOMETHING FOUND IN EVERYONE'S BACKYARD: TREES. IF YOU REACH BACK INTO YOUR KNOWLEDGE OF HIGH SCHOOL BIOLOGY, YOU MAY REMEMBER THERE'S SOMETHING CALLED A CARBON CYCLE. IN OTHER WORDS NOT ONLY DO

WE PUT CARBON INTO THE ATMOSPHERE, THERE'S A PROCESS BY WHICH IT'S PULLED OUT. SIMPLY STATED PLANTS, BE THEY GIANT REDWOODS OR OCEAN ALGAE, NEED CARBON TO GROW. THE MORE PLANTS ON EARTH, THE LESS CARBON IN THE ATMOSPHERE. SOIL, TREES, CROPLAND. ALL THINGS WE'VE TAKEN FOR GRANTED SUDDENLY HAVE A WHOLE NEW VALUE. IT'S A GOLD RUSH... IN GREEN. BUT SOME SCIENTISTS SAY RELYING ON PLANTS TO RESCUE OUR PLANET COULD BE THE EQUIVALENT OF FOOL'S GOLD.

RATHER (VOICE OVER)

SKEPTICISM WAS HARD TO FIND AT A RECENT CONFERENCE IN WASHINGTON D.C. THE AGENDA HERE WAS CARBON AND MAKING MONEY. AND OFFSETS IN ALL THEIR FORMS WERE HOT TOPICS OF CONVERSATION. THIS GATHERING WASN'T JUST FOR THE ENVIRONMENTALISTS. IF THERE'S ANY QUESTION AS TO WHETHER THERE'S BIG MONEY TO BE MADE, JUST LOOK AT THE PEOPLE WHO SHOWED UP TO HAND OUT THEIR CARDS.

DEUTSCHE BANK EMPLOYEE

Deutsche Bank has moved into carbon markets very early.

ELEMENT MARKETS EMPLOYEE

We bundle what people would call, brutally efficient carbon.

MERRILL LYNCH EMPLOYEE

If you think of carbon as another commodity, a very fast growing commodity...

RATHER (VOICE OVER)

THERE WAS TALK OF GREEN INVESTMENT OPPORTUNITIES IN CHINA AND ENVIRONMENTAL ENTREPRENEURS IN THE UNITED STATES, BUT THERE ALSO WAS A GROUP OF ATTENDEES WHO WEREN'T PITCHING OFFSETS FOR WHAT THEY MAKE, BUT FOR WHAT THEY GROW.

PANELIST AT TRADE EX CONFERENCE

Everything we do needs to be based on good, solid science. When you've got good science it leads to a quality credit. And if you get a quality credit then you're much more likely to get more money.

RATHER (VOICE OVER)

IT MAKES GOOD BUSINESS SENSE FOR FARMERS AND FORESTERS TO WANT TO GET THEIR SHARE OF A POTENTIALLY MULTI-BILLION DOLLAR OFFSET MARKET.

VICTOR

Carbon is I think coming along as the next, the new, new thing in farming and in forestry.

RATHER (VOICE OVER)

AND POLITICAL SCIENTIST DAVID VICTOR SAYS THE REASON FOR THAT IS AS MUCH POLITICAL AS ECONOMIC. WHILE THE BUZZ IN THE D.C. CONVENTION HALL WAS ABOUT COUNTING PROFITS, THE CONCERN IN THE HALLS OF ANOTHER WASHINGTON BUILDING IS ALL ABOUT COUNTING VOTES.

VICTOR

One of the ideas that's being debated right now in Congress is the idea that companies could go to farmers, or they could go to foresters who would change their forestry practice--

RATHER

In this country?

VICTOR

In this country. And that they would be able to make an investment so that the farmer changes his or her behavior and then they would get a credit for the change in carbon.

RATHER

Well, I would think farm state senators and congressmen would love that.

VICTOR

And that's the key to the politics on American cap and trade. You need 60 votes for almost anything In the Senate right now, there are two senators per state. And there are a lot of states in the middle of the country and they grow a lot of food and they have a lot of farm land.

RATHER (VOICE OVER)

BUT DOES GOOD BUSINESS AND GOOD POLITICS EQUAL GOOD SCIENCE? TO GET A PERSPECTIVE ON THAT, IT HELPS TO LEAVE THE DIN OF

WASHINGTON D.C. THOUSANDS OF MILES BEHIND.-THE BLUE OF THE OCEANS AND SEAS. SCIENTISTS SAY IT IS RESPONSIBLE FOR STORING A QUARTER OF THE EARTH'S CARBON. THE GREEN FORESTS, BE THEY IN THE TROPICS, OR ACROSS THE NORTHERN CONTINENTS, THEY'RE ESTIMATED TO STORE 29 PERCENT OF ALL CARBON EMISSIONS. SCIENTISTS HAVE A NAME FOR THESE PLACES. THEY CALL THEM CARBON SINKS. AND FOR MUCH OF HUMAN HISTORY, SINKS WERE MORE THAN ENOUGH TO KEEP OUR PLANET IN BALANCE. AND THERE WAS A LOT OF ROOM FOR ERROR. BUT ALL THAT HAS CHANGED AS THE BURNING OF FOSSIL FUELS HAS EXPLODED AROUND THE GLOBE. AND AS TROPICAL RAINFORESTS-- MAJOR CARBON SINKS--HAVE BEEN TURNED INTO ONE OF THE LARGEST SOURCES OF GLOBAL WARMING. DEFORESTATION ACCOUNTS FOR 20 PERCENT OF GREENHOUSE GASES - MORE THAN ALL FORMS OF TRANSPORTATION COMBINED. NOW, WITH THE PLANET HEATING UP AND EVERYONE TRYING TO PUT DOLLAR VALUES ON THEIR CARBON FOOTPRINTS, IT'S VITAL THAT WE KNOW EXACTLY HOW MUCH CARBON SINKS ARE SAVING. IT TURNS OUT THAT'S NOT SO SIMPLE.

MARC FISCHER, SCIENTIST, LAWRENCE BERKELEY NATIONAL LAB

Different regions of the planet have very different kinds of land cover. Some are forests some are crop land. But even within forests there are different kinds of forests and we want to know how different forests are taking up carbon at this point or releasing carbon if they happen to be a source.

RATHER (VOICE OVER)

IT'S A SUNNY AFTERNOON IN CENTRAL CALIFORNIA AND MARK FISCHER, A SCIENTIST FROM THE LAWRENCE BERKELEY NATIONAL LABORATORY, IS WORKING WITH A TEAM FROM THE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION.

FISCHER

Do a little bit of up and downs. Try to get in and out of the boundary layer a little bit.

FISCHER CO-WORKER

We can do that. Sure, no problem.

RATHER (VOICE OVER)

THEY'RE STUDYING HOW CARBON DIOXIDE, METHANE AND OTHER GREENHOUSE GASES MOVE BETWEEN THE ATMOSPHERE, OCEANS, SOIL AND TREES. IN A SENSE, ONE OF HIS LABORATORIES IS UP IN THE AIR AND WE TAGGED ALONG AS HE TOOK OFF TO TAKE HIS MEASUREMENTS.

CALIFORNIA IS A GOOD MODEL FOR MEASURING THE ROLE OF PLANTS IN CAPTURING GREENHOUSE GASES, BECAUSE OF ITS VARIED TERRAIN: MOUNTAIN FORESTS, OCEAN INLETS, AND FARMLAND LIKE THESE HERE IN THE CENTRAL VALLEY.

FISCHER

You can see there aren't really thick crops on the ground yet so there's not a lot of CO2 uptake by the agriculture yet.

FISCHER

To put a large value on storing carbon in those croplands and forests will require the science to advance beyond where it is now and that is the main challenge for science today.

RATHER

Does it or does it not make sense to allow industry to burn more coal, more oil and gas if they plant more trees?

VICTOR

I think if we could- we could measure the planting of the trees and be confident in the amount of greenhouse gas that those trees absorb, then absolutely it makes sense. The planet doesn't care where the carbon dioxide comes from, whether carbon dioxide being sucked out of the atmosphere by planting more trees, or whether it's being reduced by lowering pollution directly from power plants.

RATHER (VOICE OVER)

THERE'S NO QUESTION THAT TREES AND FORESTS CAPTURE CARBON. THAT'S JUST THE LAWS OF CHEMISTRY. BUT IT IS QUESTIONABLE WHETHER FARM AND FOREST OFFSETS CAN BE A VIABLE PART OF AN INTERNATIONAL CARBON TRADING SYSTEM THAT COULD REACH INTO THE MULTIPLE TRILLIONS OF DOLLARS. ESPECIALLY BECAUSE MANY SAY TREES IN PARTICULAR COULD BECOME THE BIGGEST OFFSETS ON EARTH. THE PROBLEM ISN'T WITH THE ECONOMICS... IT'S WITH THE SCIENCE.

KEN CALDEIRA, CLIMATE SCIENTIST, CARNEGIE INSTITUTION FOR SCIENCE

There's active scientific research going on to try and understand how much carbon is stored in different forests, such as the forest that we're standing in right now.

RATHER (VOICE OVER)

KEN CALDEIRA IS A TOP CLIMATE SCIENTIST WITH THE CARNEGIE INSTITUTION FOR SCIENCE. HE SPECIALIZES IN USING COMPUTER MODELS TO SEE HOW CARBON SINKS LIKE THIS NORTHEASTERN FOREST REALLY WORK.

CALDEIRA

The amount of carbon in any given location will depend on many things, like how far you have to go down to the bedrock, how easy it is for those little leaf particles to drift into the soil and so you know even if you had to say, well how much carbon is right here around us here? If we moved 30 feet over there, we'd get a very different answer.

RATHER (VOICE OVER)

TREES AND PLANTS ONLY CAPTURE CARBON FOR AS LONG AS THEY ARE ALIVE. BACK TO THAT OLD HIGH SCHOOL BIOLOGY LESSON OF THE CARBON CYCLE, WHEN A TREE DIES ITS CARBON ESCAPES.

RATHER

This tree has either been cut down or fell down. Does it still have carbon dioxide in it?

CALDEIRA

It does, but as it's rotting that carbon's being released back to the atmosphere. There's no way to assure that this carbon will stay locked up in trees and soils for as long as the carbon will last that comes out of the power plant, which is hundreds of thousands of years.

RATHER (ON CAMERA)

THAT'S WHY CALDEIRA THINKS THAT WHAT'S BEING DEBATED IN CONGRESS NOW IS A BIG MISTAKE. HE SAYS THE POLITICIANS ARE BASING THEIR ARGUMENTS SOME VERY SHAKY SCIENCE.

BUT THOSE LOBBYING FOR TURNING FORESTS AND FARMS INTO VALUABLE OFFSETS HEAR THE CRITICISM FROM SCIENTISTS LIKE CALDEIRA AND COUNTER WITH THIS: SURE INDIVIDUAL TREES DIE, BUT HEALTHY FORESTS LIVE ON. AND WHILE WE CAN'T KNOW EXACTLY HOW MUCH CARBON IS STORED IN ANY GIVEN ACRE OF FOREST, WE CAN MAKE EDUCATED GUESSES AND FACTOR IN FOR MARGINS OF ERROR.

RATHER (VOICE OVER)

BUT CALDEIRA'S RECENT RESEARCH HAS CAUSED A FIRESTORM THAT

COULD COST AMERICAN FORESTERS BILLIONS OF DOLLARS IN THE OFFSET MARKET. THAT'S BECAUSE HE SAYS WHEN IT COMES TO TREES IN THE NORTH, THEY MAY ACTUALLY INCREASE GLOBAL WARMING.

CALDEIRA

We had published a study saying that well forests in northern areas strongly warm the Earth. Well you can imagine this warmed the hearts of foresters in Canada. And you know I got crank, threatening phone calls saying you know how could you say that these forests are warming the earth?

RATHER (VOICE OVER)

CALDEIRA'S FINDINGS CENTER AROUND THIS SURPRISING CONCLUSION: ON THE ONE HAND TREES COOL THE EARTH BY ABSORBING CARBON. NOTHING SURPRISING THERE. BUT TREES ALSO AFFECT THE TEMPERATURE BY ABSORBING OR REFLECTING LIGHT. AND CALDEIRA FOUND THAT ON AVERAGE NORTHERN FORESTS ABSORB SUNLIGHT AND ACTUALLY WARM THE PLANET. CALDEIRA SAYS THAT WHILE HIS RESEARCH MAY BE BAD NEWS FOR NORTHERN FORESTERS LOOKING TO CAPITALIZE ON CARBON OFFSETS- IT GIVES ADDED SUPPORT TO THOSE WHO SAY THE TROPICAL RAINFORESTS COOL THE PLANET.

CALDEIRA

In the tropics, in the Amazon, evaporation of water through the leaves in the forest helps to form clouds and these white clouds help reflect sunlight back to space and that helps keep the Earth cool. So in the Amazon forests are doubly cooling.

RATHER

Are the rainforests the only forests that really give an offset to a carbon footprint?

CALDEIRA

They're the ones that its most clear. We know that saving the rainforests will help climate on Earth. And there's really no question about that.

RATHER (VOICE OVER)

THE UNCERTAINTY ABOUT CARBON SINKS ISN'T LIMITED TO FORESTS. FARMERS ARE ALSO LOOKING TO CASH IN AND THERE'S A NEW TREND THAT'S TAKING HOLD IN THE HEARTLAND ALONG WITH THE PROMISE OF LUCRATIVE OFFSETS. IT HAS TO DO WITH PLOWING THE SOIL.

VICTOR

Suppose that a farmer who engages in deep tilling practices, big plows, and turns over the dirt every year, plants crops, that tilling practice causes a lot of the carbon that would otherwise stay in the soil to be released into the atmosphere. Because the plow digs down deep inside the soil. Suppose the farmer changes his or her practice and goes to no till farming. Suppose that they allow their farmland to lay fallow. Then what'll happen is carbon will build up in the soils. We don't know exactly how much. But there's a lot of evidence that huge amounts of carbon could build up in the soils if we just change our agricultural practices.

RATHER (VOICE OVER)

BUT AS WITH FORESTS, CALDEIRA SAYS STORING CARBON IN SOIL IS NOT SO STRAIGHTFORWARD.

CALDEIRA

Some studies showed that when you till the soil that actually allows more carbon to get deeper into the soil. And so you might have less carbon on the top but more on the bottom. So it's there's a question of whether it even works or not. And in some places it probably does work, other places it probably doesn't.

RATHER (VOICE OVER)

BUT MANY CLIMATE SCIENTISTS AND POLICY MAKERS WORRY THAT ALL OF THIS NUANCED DISCUSSION MISSES THE POINT. MARK TREXLER CONSULTS WITH BIG BUSINESS ON HOW TO LIMIT THEIR ENVIRONMENTAL IMPACT. HE SAYS CLIMATE CHANGE IS TOO BIG A PROBLEM TO DISCOUNT THE ROLE OF FARMS AND FORESTS.

MARK TREXLER, CONSULTANT

Trees like everything else have a role to play. If we protect forests that are otherwise being deforested, particularly in the tropics, if we plant new forests in areas that otherwise wouldn't have forests, you can clearly help sequester carbon and clearly help mitigate climate change. Is forestry a solution to climate change? No. But there is no silver bullet. All we have is silver buckshot. And forestry is one of those pieces of silver buckshot.

CALDEIRA

I like forests as much as anybody and think that efforts to save and preserve forests and restore forests are great.

RATHER (VOICE OVER)

BUT CALDEIRA MAINTAINS THERE'S STILL TOO MUCH UNSETTLED SCIENCE FOR CARBON SINKS TO SERVE AS RELIABLE OFFSETS IN A NEW MULTI-BILLION DOLLAR TRADING SYSTEM.

CALDEIRA

We can get estimates, approximations of how much carbon is in forest, we'll never get you know down to the dollar how much carbon value is in any forest.

RATHER

Because it's too complex.

CALDEIRA

It's too complex and you know to really measure it, you'd have to tear up the whole forest, to really measure it to the individual dollar level. And so all you can do is make some kind of approximation.

RATHER (ON CAMERA)

STILL CALDEIRA SAYS IT'S NOT THAT FORESTS AND FARMLAND DON'T CAPTURE CARBON. THEY DO. HE JUST DOESN'T BELIEVE THEY CAN BE PART OF A DEPENDABLE MULTI-BILLION DOLLAR TRADING SYSTEM THAT SUBSTITUTES CARBON STORAGE FOR REDUCING GREENHOUSE GASES. THE AMOUNT OF CARBON FROM A SMOKESTACK AND A TAILPIPE CAN BE MEASURED QUITE ACCURATELY, BUT IF WE'RE WRONG IN OUR ASSESSMENTS ABOUT THE AMOUNT CAPTURED BY CARBON SINKS THE WHOLE EQUATION FOR SAVING THE PLANET COULD GO HORRIBLY WRONG. WE'VE COVERED THE ENVIRONMENT EXTENSIVELY HERE AT DAN RATHER REPORTS. AND NOW WE HAVE FOR YOU AN IMPORTANT UPDATE ON ONE OF THOSE STORIES.

RATHER (VOICE OVER)

IN THE SUMMER OF 2008 WE VISITED GLACIER NATIONAL PARK IN NORTHWEST MONTANA – A MILLION ACRE WONDER TUCKED BENEATH THE CANADIAN BORDER. THIS IMPRESSIVE TERRAIN HAS LOOKED MUCH THE SAME AS IT DOES TODAY FOR ABOUT THE PAST 10,000 YEARS BUT NOW IT IS CHANGING RAPIDLY. CLINGING TO THE OPEN ROCK FACES OF THE MOUNTAINS ARE WHAT REMAIN OF THE NAMESAKE GLACIERS. WHEN THE PARK WAS FOUNDED IN 1910 THERE WERE ABOUT 150 GLACIERS TODAY THERE ARE ONLY 25. IT'S HARD TO IMAGINE THESE MASSIVE AND DRAMATIC ICE FIELDS COULD DISAPPEAR IN JUST A GENERATION. BUT THAT'S JUST WHAT SCIENTIST ARE PREDICTING. DAN FAGRE IS A U.S. GEOLOGICAL SURVEY ECOLOGIST WORKING IN GLACIER –

HE SHOWED US FIRSTHAND THE CONSEQUENCES OF CLIMATE CHANGE IN THE PARK. IN 1997 FAGRE STARTED SEARCHING THE NATIONAL PARK SERVICE ARCHIVES AND FOUND OLD PICTURES - TAKEN DURING THE SUMMER - OF THE PARK'S GLACIERS. HE THEN TOOK THOSE PICTURES INTO THE FIELD, AND FOUND THE SAME SPOT WHERE THE PHOTO WAS ORIGINALLY TAKEN AND RE-PHOTOGRAPHED THE GLACIERS

DAN FAGRE, U.S. GEOLOGICAL SURVEY ECOLOGIST

You can kinda see the glacier starting to come into view there.

RATHER (VOICE OVER)

WE HIKED WITH FAGRE TO ONE OF THOSE SPOTS ON A TRAIL BELOW GRINNELL GLACIER.

RATHER

Okay, so what's the significance of this spot? Why are we here?

FAGRE

Well, we finally found the spot where a photo was taken in 1887 of this glacier when it was obviously much larger at that time. And you can see simply from these three photos here that this vast field of ice here where everything is all connected and went almost to the tops to the mountains-- started getting thinner by 1920. But in particular, in the last-- 78 years here, it's completely disappeared. The lower part is completely gone the upper part separated and you can see how thin it's become. And so what we'll do is we'll take another photograph of it today and then we'll have one more for our collection, our series that shows you know in a visually compelling way how these glaciers have disappeared.

RATHER (ON CAMERA)

IN THE SUMMER OF 2008 FAGRE TOLD US HE ANTICIPATED THE GLACIERS WOULD ALL MELT BY 2030 - BASED ON A MODEL CREATED WITH COLLEAGUE MYRNA HALL. BUT HE HAS RECENTLY ADJUSTED THIS PREDICATION. FAGRE TELL US THE TEMPERATURE RISE IN GLACIER NATIONAL PARK HAS BEEN TWICE AS GREAT DURING THE PAST 17 YEARS AS HE INITIALLY CALCULATED AND HE NOW THINKS THE GLACIERS WILL ESSENTIALLY BE GONE IN JUST 11 YEARS - BY 2020.

IN ADDITION FAGRE REPORTS TWO GLACIERS - GRINNELL AND BLACKFOOT - HAD PARTIAL COLLAPSES THIS SUMMER WHEN LARGE CHUNKS OF ICE SPLIT AWAY FROM THE MAIN GLACIER. IT IS EVIDENCE HE SAYS THAT THE GLACIERS ARE MORE VULNERABLE AND FRAGILE TO CLIMATE CHANGE THAN HE THOUGHT.

A COUPLE OF PROGRAM NOTES: AS WE HAVE FOR YEARS WE'RE REPORTING INSIDE AFGHANISTAN. WE'LL HAVE NEW STORIES COMING OUT OF THERE SOON. WE'RE ALSO FOLLOWING UP VERY SOON ON OUR INVESTIGATION INTO THE TRUCKING BUSINESS. BUT THAT'S OUR PROGRAM FOR TONIGHT, FROM NEW YORK, FOR HDNET, DAN RATHER REPORTING, GOOD NIGHT.