



## T. Boone Pickens Media Coverage 10.3.09-10.5.09

### Total of 26 Placements

- Print: 16
- Blog/Online: 7
- Broadcast: 3

### Coverage Summary:

*The Arkansas Business Journal* published a joint op-ed by Pickens and Rep. John Boozman discussing the role natural gas can play in reducing America's dependence on foreign oil. Arkansas is home to the Fayetteville Shale Natural Gas Field, which may contain as much as 10 percent of the natural gas in the U.S. The NAT GAS Act (Boozman is a co-sponsor) is highlighted in the piece.

*The Oklahoman* ran a profile on Pickens, following him around during the Oklahoma State football game this weekend. The piece highlights many of the big names who stopped by Pickens' suite during the game to meet with him.

*Imus in the Morning* previewed Pickens appearance on the show Wednesday. Pickens will be interviewed live on the radio at 9:05 a.m. Eastern Time on Wednesday. The interview will be broadcast on *Fox Business Network* on Thursday.

*NPR* did a segment on wind energy, interviewing founder and president of the Earth Policy Institute in Washington, Lester Brown. Brown said the U.S. needs to do more, pointing toward China who is about to overtake the U.S. in its efforts in the wind energy field.

*KETA-TV*, the *PBS* station in Oklahoma City, discussed the benefits of natural gas, summarizing Pickens' view that natural gas can be used to help America move toward energy independence, while also creating jobs. An interview with Pickens is posted on the Oklahoma Horizon website, found here: [http://www.okhorizon.com/2009/Show0940/VA01\\_BoonePickens.htm](http://www.okhorizon.com/2009/Show0940/VA01_BoonePickens.htm).

### Highlighted Placements (Full Articles Below)

- **The Nat Gas Act (Guest Commentary)** – *Arkansas Business Journal* – 10/5/09
- **OSU Booster Boone Pickens is Living the Suite Life** – *Oklahoman* – 10/4/09
  - *Dallas Morning News Blog*
- **Could Climate Change Topple Modern Civilization?** – *NPR* – 10/2/09

### Print Placements (Full Articles Below)

- **Report: Global Cleantech Investment Down 22% in 3Q** – *Associated Press* – 10/2/09
  - *BlueRidgeNow.com*
  - *Charleston Daily Mail*
  - *Denver Post*
  - *Idaho Statesman*
  - *Inland Valley Daily Bulletin*
  - *Lexington Herald-Leader*
  - *Modesto Bee*
  - *News 10 NBC*
  - *San Antonio Express News*
  - *San Bernardino Sun*
  - *San Diego Union Tribune*
  - *The Lubbock Avalanche-Journal*
  - *The Spokesman Review*

- *The Wichita Eagle*
- *Tuscaloosa News*
- *WNYT*

**Blog/Online Placements** (Full Articles Below)

- **Missing from the Climate Bills: Natural Gas Power** – *Earth2Tech* – 10/2/09
- **Energy Is Not That Hard** – *Daily Kos* – 10/4/09
- **Investors Brace for a Rocky Ride** – *CNNMoney.com* – 10/5/09

## HIGHLIGHTED COVERAGE

### **The Nat Gas Act (Guest Commentary) – *Arkansas Business Journal* – 10/5/09**

By John Boozman and T. Boone Pickens

America has a dangerous dependence on foreign oil. We import nearly two-thirds of all the oil we use and it not only costs us billions of dollars, it also challenges our national, political, environmental and economic security.

From January to July 2009, we spent nearly \$137 billion on foreign oil. That is close to \$50,000 for every man, woman and child in Arkansas. Nearly 70 percent of all that imported oil is converted to gasoline or diesel and used as transportation fuel.

We must take steps to decrease our dependence on foreign energy. The good news is we have the capability in a resource found here in Arkansas, domestic natural gas.

Natural gas is an excellent replacement for gasoline and is the only replacement for diesel to move an 18-wheeler. While alternative forms like battery and hydrogen technology are being developed, natural gas is available right here and right now.

Recent studies have determined that we have some 2,000 trillion cubic feet of natural gas reserves in the continental United States. That is more energy than all the oil in Saudi Arabia and enough natural gas to last well over 100 years.

Much of this natural gas is contained in the huge shale deposits in Texas, Louisiana, Appalachia and here in Arkansas. It has always been here but we only recently discovered how to extract it.

#### Keeping Small Business Healthy Presents Healthcare Reform: A Small Business Perspective

Until the discovery of these new fields and the technology to drill, natural gas was too precious and too expensive for automobile and truck manufacturers to risk developing, building and selling natural gas vehicles (NGVs).

With enough natural gas to last over a century, and with the world's oil supplies dwindling, this is the perfect time to jumpstart an NGV industry here in the United States. There are more than 10 million NGV vehicles in the world and less than two percent are in the United States.

The Arkansas deposit, known as the Fayetteville Shale Natural Gas Field, may contain as much as 10 percent of all the natural gas in the U.S. According to a study done at the University of Arkansas, the Fayetteville shale could generate more than \$17 billion and produce about 11,000 jobs over the next several years.

A bill in the U.S. House of Representatives, H.R. 1835, is designed to do just that. The Nat Gas Act will provide tax incentives to begin transferring America's fleet from imported gasoline and diesel to domestic natural gas.

The bill takes aim at 18-wheelers, utility and express delivery companies, municipal bus systems, as well as local, county and state vehicle fleets.

Unlike your family car, 18-wheelers that move goods across and around America generally run the same routes back and forth. Drivers stop at the same places to eat, rest and refuel. Known truck stops can add natural gas fueling islands to existing facilities, so setting up a refueling system at the storage area for trucks and buses is a relatively simple and economically viable task.

Natural gas burns cleaner than both diesel and gasoline and puts virtually zero particulate emissions into the atmosphere. By switching from an imported fuel to a domestic supply, we reduce the risk of other nations attempting to use oil as a foreign policy weapon like the OPEC countries did in the 1970's with the Arab Oil Embargo.

The Nat Gas Act will act as the key which starts America's NGV industry. At the same time it can have an enormous impact on the economy of Arkansas. Washington needs to act on the Nat Gas Act and use the resources we have in America to increase our energy independence.

(U.S. Rep. John Boozman represents the 3rd Congressional District of Arkansas and T. Boone Pickens is the founder and chairman of BP Capital Management. More information about natural gas as a transportation fuel can be found at [www.pickensplan.com](http://www.pickensplan.com).)

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### **OSU Booster Boone Pickens is Living the Suite Life** – *Oklahoman* – 10/4/09

By Jenni Carlson

STILLWATER — Stepping into the Stillwater sunshine, Boone Pickens pauses a moment at the top of his jet's carpeted steps.

The Gulfstream 550's engines hiss and cool on the Stillwater Municipal Airport tarmac after the 40-minute flight from the billionaire's West Texas ranch. He used to have to helicopter to nearby Pampa to fly out on his jet, but since he built a runway on the 45,000-acre ranch a couple years ago, trips have been so much easier.

The man who made his fortune as an oil man and a corporate raider, then made his mark on Oklahoma State athletics, spent the flight lounging in one of the tan leather chairs with his initials stitched into the upholstery. A big television on the wall in front of him showed a football game while two smaller screens jutting out of the wall beside him provided business news and a map charting his plane's flight path.

"What's going on?" he had asked Mike Holder as the Oklahoma State athletic director stood in the plane's entryway last Saturday. "Anything?"

Pickens says those words often. The people around him know when he does that he expects information.

"Going to have a record crowd," Holder said.

"You know, you always amaze me as the athletic director that when we play Grambling you get a record crowd and when we play Georgia you get 53,000," Pickens needed.

Holder: "When you come for the Texas game, it'll be full."

Pickens: "Is Kendall Hunter going to play?"

Holder: "No, sir. Neither is Dez Bryant."

Finally, Holder reminds him that they'd better get going if Pickens wants to make it to join The Walk to the stadium.

With his wife, Madeleine, Pickens follows Holder to the front of the plane. Brown-tinted Ray-Bans shield his eyes, but as he stands in the doorway, you have to wonder if he is surveying the land like a monarch eyes his kingdom.

This is a place Pickens loves. It is also a place where he is beloved. Celebrities seek him. Common folks cheer him. He is a symbol of hope, a face of a school, an orange-clad ambassador to the world.

Spend game day with the man who transformed Cowboy football and his alma mater, and you realize that what happens means as much to him as anyone else in the stadium. The place just happens to have his name on it.

Boone Pickens rides shotgun.

As Holder steers a white GMC Denali through the back streets of Stillwater, avoiding traffic and skirting the south side of campus, Pickens taps on the passenger side window.

"That's where I used to work," he says.

He points toward the Kappa Alpha Theta sorority house.

"Washing dishes," his wife says.

"I was darn good at it," he says.

"He's still good at it," she says.

Pickens may be one of the richest people in America with a net worth estimated by Forbes at \$1.1 billion, but when he steps out of the Denali on the steps of the student union, he is a man of the people.

Jeremy Anderson and Josh Walker notice him first. The orange-clad pals from Chickasha approach with Sharpies and posters in hand. Even though they met Pickens a year ago and snagged his autograph then, they want it again.

Before long, dozens of fans have gathered around Pickens. There are autographs and pictures, handshakes and thank yous.

A little boy takes off his hat and hands it to Pickens. The hat looks like it was on a souvenir-shop shelf earlier that day.

"This'll mess up your hat," Pickens warns. "You want to do that?"

The boy nods.

The billionaire signs.

The love affair kicks into high gear as the team makes its way to the stadium. Pickens falls in behind the players, flanked by his wife and Cowboy coach Mike Gundy.

"Boooooone!" the fans serenade.

The man with the thinning gray hair, plaid orange shirt, khaki pants and Nike shoes waves. He gives thumbs up and handshakes and high fives. He is The Mayor of Cowboy Town.

"Mr. Pickens, can I shake your hand?" Daniel Grossman says as Pickens stands talking to students who've camped out for the game. "I'm very thankful for what you've done."

The wide-eyed sophomore isn't the only one.

The elevator doors slide open, and the aroma of warm popcorn wafts in.

"It smells so good," Madeline Pickens coos.

"It smells like a circus," her husband says.

They walk past popcorn and pretzels, chocolate and cheese sitting on different tables around the suite level. Even though Pickens is a spry, healthy 81-year-old, he loves to eat, and he is on a mission — vanilla frozen custard topped with Oreos.

He chooses not to have it available in his mid-field suite — too tempting — but he has everything else. There are hot dogs, chips and nachos as well as cheese-stuffed, bacon-wrapped jalapeños on the black marble counter in the back. Huge bowls of popcorn and mini candy bars sit on a heavy, low-slung wood table surrounded by four cushy black leather chairs. And on the side serving area with the cutout basin perfect for icing sodas, wooden bowls overflow with dried fruit, trail mix and nuts.

Dinner — prime rib, au gratin potatoes and lemon bars — comes later.

Holder pops in to check on things. Over the next hour or so, the flow of visitors never stops. Fellow donor Greg Casillas comes to say hello. So does OSU president Burns Hargis.

"It's a beautiful stadium," a visitor from Grambling State says as Pickens and Hargis stand just outside the suite chatting.

"Yes, it is," Pickens says.

"It's his," Hargis says.

"Haven't missed a payment," Pickens says without hesitation.

Pickens is proud but not content. He sees the work that remains. He focuses on what he can do. What happens on the field might be out of his control, for example, but the playing surface itself isn't.

"We're going to have to do that field again," Pickens says, nodding toward the middle of the turf. "That OSU is fading pretty fast."

He wants only the best for his school, but he only worries about what he can control. That means he doesn't get nervous before games.

He doesn't have time.

The sounds of kickoff blast through the open windows. The bass pounds. The PA blares. The stadium rocks.

Pickens is locked in conversation in the president's suite next door and doesn't notice the kick off.

That wasn't the case a few weeks back when Georgia came to town. Interrupt Pickens that day, and you did so at your own peril.

Against Grambling, though, the orange leather seat in the front row of Pickens' suite is empty much of the day. When Pickens is there, he is subdued. No clapping. No fist pumping. No high fiving.

Perhaps he's conserving energy; much of the time, he is on his feet meeting and greeting.

Right before halftime, Kevin Durant, Jeff Green, Russell Westbrook and James Harden pay a visit to Pickens' suite. The Thunder stars shake hands with Pickens and his wife, who asks where each player went to college.

When it's Durant's turn, Pickens jumps in.

"You went to Texas A&M," he deadpans.

"No, I went to Texas."

"I know where you went."

At halftime, there are more guests. Malone Mitchell, the founder of what is now SandRidge Energy. U.S. Representative Mary Fallin. Oklahoma Governor Brad Henry.

Then as Pickens stands outside his door signing a few autographs, a barrel-chested man wearing a backward baseball cap approaches.

"Mr. Pickens," he says, "Garth Brooks."

The country music star extends his hand.

"You remember Tricia?" he says.

Brooks' wife, Tricia Yearwood, extends her hand.

As they head into the suite, Pickens is stopped by a man who grew up in Holdenville. When he finds out that the man and his friends are from his hometown, he invites all of them into his suite.

Pickens knows none of them, but just like Brooks and Yearwood, they are welcomed.

Henry watches Pickens chat with the Holdenville folks and the Nashville stars.

"He is just so great," the governor says.

Time remains in OSU's rout of Grambling, but like many other Cowboy fans, the Pickens party decides to head out.

Who decides it, though, isn't exactly clear.

"I think I'm leaving," Boone Pickens says.

Easier said than done.

"This is the worst part," Pickens' publicist and right-hand man Jay Rosser said.

That's because getting Pickens and his posse from the suite to the private bus waiting on the far side of Gallagher-Iba Arena is like herding cats. There are hands to shake and backs to pat and goodbyes to say, but eventually, Pickens emerges in the parking lot. Madeline is by his side. So are grandson Michael and two of his buddies, friends Tom and Janie Cundy as well as Rosser and his daughter, Kimberly.

They board the dimly lit bus for the quick trip to the airport.

Pickens leans back and yawns.

"What part of the game was it when we left?" he asks.

"Fourth quarter," his grandson says, then finds the final score on his phone — OSU 56, Grambling 6.

Pickens nods his approval.

He says little during the ride, listening to the stories, jokes and the laughter.

When they arrive at the airport, it is dark and nearly deserted. Pickens is only a couple first downs' distance from his jet — it gets the spot closest to the door — and it isn't long before he climbs the carpeted steps, settles back into his chair and closes his eyes.

It was a good day.

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### **Could Climate Change Topple Modern Civilization? – NPR – 10/2/09**

IRA FLATOW, host:

Next up, we're going to talk a little bit more about wind turbines - but not how they affect bats, how they affect humans, maybe helping us out of a climate change pickle. The Senate is considering a climate change bill, the Boxer-Kerry Bill, that aims to cut carbon dioxide emissions 20 percent by 2020 and 83 percent by 2050. And those percentages are based on 2005 emission levels.

Some environmental groups are applauding this, but my next guest proposes a far more ambitious target. He wants an 80 percent cut by 2020, not 2050. Sound impossible? Maybe it's more straightforward than we think because there may be simple solutions that we're overlooking. And can we move – can we actually move that fast?

Joining me now to talk about is my guest - you know him - Lester Brown, author of "Plan B 4.0: Mobilizing to Save Civilization." He's also founder and president of the Earth Policy Institute in Washington. Welcome back to the program.

Dr. LESTER BROWN (Founder and President, Earth Policy Institute): Glad to be here, Ira.

FLATOW: What do you think of that bill up there on the Hill?

Dr. BROWN: Well, I have mixed feelings about it. And I think those feelings derive from the fact that on the Hill, as in other situations around the world where political leaders are looking at this issue, one of the first questions they ask is what is politically feasible? What will my constituents support? If instead of asking the question about political feasibility, we talk about scientific reality, then the question becomes how much and how fast do we have to cut carbon emissions if, for example, we want to save the Greenland ice sheet? Or how much and how fast do we have to close coal-powered power plants if we want to save the glaciers in the Himalayas and on the Tibetan plateau whose ice melts sustains from major rivers of Asia during the dry season?

When you ask the latter question, then it becomes clear that we do not have very much time, we have to move quickly. And that's why we talk about cutting carbon emissions 80 percent, not by 2050 but by 2020.

FLATOW: How can we do that?

Dr. BROWN: Well, there are any number of things that we can do. One, there's an enormous amount of wind energy in the world. You mentioned in the earlier introduction to the bats segment that we have overtaken Germany in terms of both total wind generating capacity and in annual installations. I think that was about three years ago.

FLATOW: Mm-hmm.

Dr. BROWN: But we're about to be overtaken by China. And the interesting thing about the U.S. and China, the two biggest economies in the world right now and the two principal sources of carbon emissions, is that each has an abundance of wind energy. In this country, we've known for nearly 20 years now that three states - North Dakota, Kansas and Texas - have enough harnessable wind energy to satisfy not only national electricity needs but national energy needs. That is to say we have an enormous amount of wind energy. In China...

FLATOW: Lester, let me just interrupt to remind everybody that I'm Ira Flatow and this is SCIENCE FRIDAY from NPR News, talking with Lester Brown, author of "Plan B 4.0," about wind energy. I'm sorry to interrupt, Lester. Go on. You were talking about China.

Dr. BROWN: No problem. Incidentally, "Plan B 4.0" is online at [earthpolicy.org](http://earthpolicy.org). It can be downloaded free of charge.

FLATOW: No kidding.

Dr. BROWN: Yeah.

FLATOW: Wow. You do feel strongly about this.

Dr. BROWN: Yeah. And it's interesting, people think this must reduce sales. In fact, it increases sales.

(Soundbite of laughter)

Dr. BROWN: Just between the two of us.

FLATOW: Yeah.

Dr. BROWN: The – there was a joint U.S.-China study that appeared in Science just a few weeks ago, pointing out that the Chinese now know that they have enough harness of a wind energy to increase their current electricity consumption seven times. So, in both of these countries there is an abundance of wind energy. And we're beginning to see the Chinese move very fast. They were latecomers to the wind energy field, but they have been doubling their wind electric generation each year for the last four years, and probably will do so again this year. We're seeing – thinking on the development of wind resources that we couldn't have imagined just a couple of years ago.

FLATOW: But Lester, from what I read in articles, in particular one recent Wall Street Journal article, it says that while China is building all of these wind turbines, they're also building these coal-fired power plants as backups to wind turbines. Doesn't that sort of defeat the purpose?

Dr. BROWN: Well, that's not entirely the case, though there is an element of that here of course. What has happened in China is that their sort of business-as-usual that's been doubling wind-generated electricity output each year for the last four years has now suddenly mushroomed into something even bigger with the nationally developed plan developed by – and I think coordinated by the National Development Resources Commission. I believe it now - it's a cabinet-level body in China, has a lot of authority and influence to sort of cut through things and get them done.

FLATOW: Mm-hmm.

Dr. BROWN: But they are planning and have actually begun some construction on - at least one, if not more - of six wind mega complexes, with each of these complexes having between 10 and 30,000 megawatts of generating capacity. I mean, just to put that in perspective, it totals over 100,000 megawatts. I mean, think 100 coal-fired power plants in terms of actually electricity output.

FLATOW: Mm-hmm.

Dr. BROWN: It is huge. We've not seen anything like this before. And in that situation where they're moving so fast on wind, one, they're having trouble building the transmission capacity fast enough to keep up with the wind farm construction. And two, when you suddenly have a lot of wind coming into the system, you need to be able to take care of intermittencies. Now, in this...

FLATOW: Hang on a little minute. Hang on there for a second, Lester, because we have to take a break. And we're talking with Lester Brown, author of "Plan B 4.0." Stay with us. We'll come back and take your questions. We'll talk more with Lester after this break. I'm Ira Flatow and this is SCIENCE FRIDAY from NPR News.

(Soundbite of music)

FLATOW: You're listening to SCIENCE FRIDAY from NPR News. I'm Ira Flatow, talking with Lester Brown, author of "Plan B 4.0: Mobilizing to Save Civilization." Our number: 1-800-989-8255.

Lester, so far we've talked a lot about the growth of wind power. Is wind power central to your mobilization to save civilization?

Dr. BROWN: It is. It is one of keys to backing out coal-fired power plants. And the reason it is is because, one, it's widely distributed. It's extraordinarily abundant, and it scales up quickly. One can build a wind farm in 12 months. It may take years to build a nuclear power plant, for example, even if they were economically feasible.

FLATOW: Mm-hmm.

Dr. BROWN: So we see wind - and basically we're looking at a situation where today the world gets 40 percent of its electricity from coal-fired power plants - we see winds supplying 40 percent of electricity by 2020.

FLATOW: What about solar? We're seeing huge solar farms, out in the Mojave, other places around the world with the solar thermal energy.

Dr. BROWN: Solar thermal energy is going to play an important role, and it's growing by leaps and bounds. The most interesting solar-thermal project, if you will, is one that has come alive in Europe just in the last few months for, let me guess, close to 20 years now. The Club of Rome has been promoting the idea of harnessing the solar energy in North Africa to generate electricity for transmission to Europe by undersea cable. What's happened there is that Munich Reinsurance, which is one of the world's largest reinsurance companies and therefore very much concerned about climate change, has put together a consortium of a dozen companies including Deutsche Bank, Siemens, ABB and several other large companies to develop a strategy and a financial plan to harness the solar energy of North Africa and the Eastern Mediterranean. A German research firm has pointed out that it's entirely economic to consider Europe getting half of its electricity from solar thermal power plants in North Africa.

FLATOW: Hmm.

Dr. BROWN: Now, the Algerians were already building - I think they've completed the first plant, working on the second. And they have an agreement with Germany that sort of precedes this much larger project. They point out that in the desert of Algeria, which is most of the country, they have enough harnessable solar energy to power the world economy.

Now, that sounds like a mistake, but it's not because that basic point appears in the energy literature when it's pointed out that the sunlight striking the Earth in an hour has enough energy to run the world economy for a year. So it's a fascinating situation where we have not so much governments focusing on this, but corporations who look at it as an investment opportunity. And from Munich Re's point of view, as an insurance policy against climate change.

FLATOW: Yeah. Well, how much - and here's a question from P.R. Mathis(ph) coming from "Second Life," how much of the time lag in these technologies is a factor of politics, resources, and how much is technology? And I'm thinking about our country where it seems that the politics are so polarized now that even talking about alternative energies, it's, you know, it's one side versus the other instead of saying, we're all in this together. How are you going to move anything forward like that?

Dr. BROWN: Well, things are moving much faster than perhaps most Americans realize. The state of Texas, for example, which for the last century has been our leading source of oil, is now our leading source of wind-generated electricity. They have 8,000 megawatts in production, another couple of thousand megawatts in construction and a whole bunch beyond that...

FLATOW: They just flipped the switch yesterday, didn't they? And huge.

Dr. BROWN: Oh, on probably the - I think, it's the largest wind farm in the world...

FLATOW: Yeah. And it wasn't T. Boone Pickens who did it either?

Dr. BROWN: That's right. It was a German firm actually, E.ON, that is the principal player on that wind farm.

FLATOW: Yeah.

Dr. BROWN: But when you add these up, and this has been done by an energy research firm, it comes out to over 50,000 megawatts of wind-generating capacity in operation, under construction and in development. That is more than enough to satisfy the electricity needs of the 24 million people who live in Texas. I mean, 50,000 megawatts is like 50 coal-fired power plants.

FLATOW: Mm-hmm.

Dr. BROWN: So it's huge. And the interesting thing is that the people making the investments there are not doing it because of, you know, Copenhagen is coming or because they're trying to meet Kyoto goals or what have you in the past. They're doing it because it makes sense economically to tap the enormous wealth of wind in Texas. So we're going to see that in other places as well.

One of the things that is giving solar-thermal power plant such a traumatic boost - these are power plants were mirrors concentrate sunlight on a container with water or some other liquid to produce steam and generate electricity - is that they've come up with a technology for storing heat when the sun is brightest during the middle of the day using a molten-salt technology most commonly. And that then permits the electric generators to keep going after the sun goes down for several hours, up until midnight or so, and to carry through the peak evening load. So that makes solar-thermal power plants much more appealing because their output begins to mesh very nicely with the daily cycle of peak needs.

FLATOW: So do I hear you saying that this gradual move to either solar-thermal or wind is a regional kind of thing? There's not going to be a national grid that hooks them all together?

Dr. BROWN: That's what we're talking about and looking at. That's what President Obama has said we need. That's what Steven Chu says we need to be working toward. And the interesting thing, if you look at wind power, for example, if you have a national grid with hundreds of wind farms, maybe even thousands, spread across the country, you actually have a rather stable source of electricity because no two wind farms have identical wind profiles. So the more wind farms you have, the more stable and the less fluctuation there is in the electricity supply. And it also would enable us to link the rich wind resources of the Great Plains with the Midwest and other areas that need electricity and to harness the enormous solar-thermal power resources in the Southwestern states.

FLATOW: Wouldn't we have to rebuild the grid, though, the electric grid to make this happen...

Dr. BROWN: Yes.

FLATOW: ...at the same time as we're building the solar and wind power farms?

Dr. BROWN: Yes. The answer is yes. And it's very much like the situation in the 1950s when President Eisenhower launched the construction of the Interstate Highway System which we take for granted today. But back then, there were not that many highways, you know, that were where you could drive long distances very smoothly. There were a lot of states sort of patched together, but each state was responsible for its own. And then, we didn't – we really didn't have a good system and then today we do. And so, we're in a very similar situation now with the electricity grid. We need to get beyond the local situation and integrate into a national grid.

FLATOW: But is that the plan? Is that what the – that we have as a plan or is it just an idea?

Dr. BROWN: Well, it's an idea but we're seeing pieces of it begin to take shape.

FLATOW: And who needs to lead this thing then if you want it to get it to work?

Dr. BROWN: It needs to be coordinated from Washington, and simply because to get an efficient national grid, you have to do it at the national level. You can't put pieces together from different states.

FLATOW: But your contention is that we can do this a lot faster than people think we can, we have the parts, you know, all you need is – you have the wind, all you need is the will to get this done.

Dr. BROWN: That's right. That's a good slogan: We've got the wind, now we need the will. The – it's a little bit like the situation in this country just before we entered World War II. But after the attack on Pearl Harbor, then the whole country mobilized and we restructured U.S. industrial economy, not in decades, not in years but in a matter of months.

And Roosevelt set these extraordinary arms production goals, for example, in a State of the Union Address in early January 1942. And what we have not yet quite for we realize is how serious the climate threat is and what it could translate into. And that's where I think we're going to – that's where the acceleration is going to come when we begin to realize that sea level is rising and that it is threatening coastal cities and communities, for example.

I mean, what we're looking at is the possibility in thinking in terms of economic indicators that real estate prices in coastal regions, low-lying coastal regions, could be falling, you know, could be plummeting when real estate prices in the interior of the country could be soaring as people start moving. I noticed that last year, Florida lost 28,000 people, for example, which is the first time that's happened, probably, in half a century. But that's an indication of – just an early indication of the kinds of population shifts where going to see on a large scale if we stay with business as usual.

FLATOW: Do we – are we going to have to break the gridlock in Washington to do this?

Dr. BROWN: Well, circumstances have a way of doing that and – in thinking about World War II, for example. I mean, the thing that really changed Washington was the Japanese attack on Pearl Harbor. It changed everything.

FLATOW: So you're saying we need some major event that drives home the point?

Dr. BROWN: But not so major that it's catastrophic. The...

FLATOW: You're saying the ice melting in the North Pole is not enough.

Dr. BROWN: Well, if that leads to a dramatic warming in the Arctic region as it appears to be doing as the sunrise disappears, then we're looking at some fairly dramatic melting of the Greenland ice sheet. And that would wake us up when we begin to realize what's happening there.

FLATOW: Mm-hmm.

Dr. BROWN: In thinking about social change in the last chapter of "Plan B 4.0," I talk about three models, and very quickly one of this is what I call the Pearl Harbor model where there's a catastrophic event that triggers an enormous change.

The second is the Berlin Wall model where you have a gradually rising opposition to a political system that suddenly reaches a tipping point, and the sort of the visual tipping point was the Berlin Wall coming down. But what was behind that was a political revolution that changed the form of every government in Eastern Europe but essentially without bloodshed. I mean, it was a remarkable thing. It was not anticipated.

The third model I call the sandwich model, social change, where you have strong grassroots support for change and then change at the top in the national leadership. And I'm hoping that that's what we now have in the United States, and if we do then we'll see some fairly rapid change in the years ahead.

FLATOW: Lester, I want to thank you for taking time to be with us today.

Dr. BROWN: My pleasure, Ira.

FLATOW: Good luck. Always great to talk to you. Lester Brown, author of "Plan B 4.0: Mobilizing to Save Civilization." I'm Ira Flatow and this is SCIENCE FRIDAY from NPR News.

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## PRINT COVERAGE

**Report: Global Cleantech Investment Down 22% in 3Q** – *Associated Press* – 10/2/09

By Sandy Shore

DENVER — New global investment in clean-energy companies fell 22 percent in the third quarter as government financing was offset by tight credit markets, according to new research released Friday.

From July to September, new global investment totaled \$25.9 billion, down 22 percent from a year ago and off 9 percent from the second quarter, according to London-based New Energy Finance, a global research firm.

But the sector appears to be heading toward a recovery, with investment nearly double what it was in the first quarter and investors growing more confident.

Many analysts think a turnaround will come in 2010 but caution that much depends on the U.S. economy, the health of the financial sector, natural gas prices and even electricity demand.

Asset financing, a key measure for solar and wind projects, fell 26 percent to \$19.2 billion. Venture capital and private equity investment dropped 46 percent to \$2.2 billion.

The third-quarter total, however, was nearly double the \$13.3 billion recorded in the first quarter, said Ethan Zindler, who heads New Energy's North American research arm.

"Activity has certainly bounced off of Q1 (the first quarter), which was just when things came to a grinding halt," he said.

"I think the market has recognized that this industry is getting substantially more support from the federal government and other governments around the world," he said. "I think that helps bolster confidence as well."

Global public market financing rose 45 percent to \$4.5 billion, yet shares of some companies still lag last year's value.

For example, shares of solar-power module maker First Solar Inc. closed Thursday at \$143.76, down about 24 percent from Sept. 30, 2008, and solar technology company SunPower Corp. closed at \$28.47, down nearly 60 percent.

Renewable energy is a small fraction of all power used but has gained favor globally as governments and businesses seek to curb pollution and the use of fossil fuels.

The industry lost momentum as access to credit markets dried up, natural gas prices fell and electricity demand diminished. Some companies were forced into bankruptcy while others shelved plans and cut jobs.

Billionaire oilman T. Boone Pickens put his plan to build the world's largest wind farm on hold last year amid the downturn and scrapped the plan altogether in July because of problems in getting power to a distribution system.

Many believe the industry will see immense growth in the coming years as utilities push to meet mandates to provide a percentage of electricity from renewable resources.

Governments worldwide have pledged to spend about \$163 billion on stimulus programs to promote renewable energy, New Energy said.

The U.S. earmarked about \$66 billion in stimulus money for renewable energy but more than 80 percent has yet to be allocated, New Energy Finance estimated.

In addition, the bulk of the money for announced allocations has yet to reach companies' bank accounts, analysts said.

"As you see those dollars really start to get into the system, you'll start to see some of the shovel-ready projects going first and a lot more jobs," said Scott Smith, U.S. leader of Deloitte's cleantech practice.

Some companies have found success by getting financing from both the government and investors.

For example, solar panel maker Solyndra Inc. received a \$535 million loan guarantee from the federal government to complete a manufacturing facility in Fremont, Calif. It raised \$198 million from investors.

Fuel cell maker Hoku Scientific of Hawaii delayed construction of a polysilicon plant in Idaho in June, citing financial woes. This week, it announced it signed an agreement to be acquired by TianweiNew Energy Holdings Co. Ltd., which will provide money to finish the plant.

A123 Systems of Watertown, Mass., which makes lithium-ion batteries, raised \$380 million in an initial stock offering, received a \$249 million Energy Department grant, secured \$350 million in private capital and landed \$100 million in refundable tax credits from the state of Michigan for a plant. Yet A123 Systems has never made money.

Horizon Wind Energy LLC considered using \$1.2 billion it earmarked for U.S. investment this year on projects in other countries, but changed its mind and allocated \$1.5 billion for U.S. projects because it can receive cash grants in lieu of tax credits.

"We are an example of a company that is now investing more in the U.S. than we were originally projected to," CEO Gabriel Alonso said. "Therefore, the more investments we make, the more jobs we create."

Cleantech Group LLC has forecast venture capital of about \$5 billion to \$6 billion for the sector this year, which roughly matches 2007 figures, Managing Director Dallas Kachan said.

He and Deloitte's Smith believe technologies that focus on energy efficiency, such as lighting and insulation, power storage and advanced batteries will benefit over the next year.

New Energy Finance forecast overall investment in clean energy will be \$105 billion to \$115 billion this year. That compares with \$155 billion in 2008 and \$148 billion in 2007.

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## **BLOG/ONLINE COVERAGE**

### **Missing from the Climate Bills: Natural Gas Power – *Earth2Tech* – 10/2/09**

By Katie Fehrenbacher

There's a growing laundry list of complaints about the climate bills that passed the House and were introduced into the Senate this week. But here's another very important one: the bills basically neglect to promote the use of natural gas for electricity production, points out Mark Zoback, a Geophysics professor at Stanford University, who gave a presentation at Stanford this week.

Zoback, who has given a variety of talks on natural gas before, says that newly discovered abundant sources of natural gas, combined with carbon capture and storage, could play a very significant role in fighting climate over the next several decades. As the U.S. transitions to truly clean power, he urges that incentives for natural gas — for both electricity generation and vehicle transportation — make it into the final version of the climate bill, which policy-makers will be debating over the coming months.

Yeah, we all know natural gas is a fossil fuel that emits carbon dioxide, but here's the argument: In recent years, through better technology and recovery tools, we've discovered that there's an untapped natural gas resource in the shale formations in many states. The U.S. now has an estimated resource of 2 quadrillion cubic feet of natural gas. That's — in a word — massive.

Zoback says the newly discovered resource will help to stabilize the price for natural gas, making it more attractive for both the gas producers and utilities (fluctuating prices has deterred more use of natural gas for power production). He pegs that price around \$6 per million BTUs. That could help natural gas beat coal on price, meaning natural gas could actually be an economic replacement for coal power.

Of course, natural gas has significantly fewer carbon (and toxic) emissions than coal. Zoback says that by replacing 30 percent of coal-fired generation with gas (without CCS) it would get the U.S. almost to the point of what the current climate bills call for: a 17-20 percent reduction of carbon emissions by 2020. With carbon capture technologies, gas power could cut carbon emissions even more, he says. The abundant natural gas reserves could also be used for vehicles — something T. Boone Pickens has been advocating for months.

So, why aren't companies already doing this? First, they're waiting for the price of natural gas to stabilize. Secondly, carbon capture technologies for both coal and natural gas are still under development (read: potentially a ways away). Natural gas shale drilling also needs to be done with the proper environmental considerations. But, as Zoback points out, if the climate bills take the opportunity to promote natural gas as a replacement for coal power, it could provide a needed bridge to truly clean power that would have zero carbon emissions.

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### **Energy Is Not That Hard – *Daily Kos* – 10/4/09**

When Waxman-Markey made it out of the House, I supported the bill. It isn't perfect -- isn't close to perfect. Honestly what eventually emerged from the House was such weak tea that it's unlikely to have any effect on either the course of global warming, or the structure of our energy infrastructure. I completely understand the position of those so disappointed that they feel obliged to refuse their support.

Still, it is at the very least a demonstration that we are willing to grab hold of what some of the richest interests in the country have spent million on million trying to turn into a "third rail." The same corporations that have wrecked towns, smashed unions, ruined landscapes, and made unbelievable fortunes doing it, managed to get people -- people who have suffered directly because of the policies of those corporations -- to march around carrying signs that conflated "cap and trade" with Nazism. Whether that's a measure of effective marketing, or of abject gullibility, it's still astounding. The same corporations that didn't stop

with only passing along every cost increase directly to the consumer, but used disaster and conflict as an excuse to rack up profits unmatched by any industry, ever, in the history of the world, got senators and congressmen to scream that it was government limitations on these corporations that was the problem. The same corporations that abandoned US jobs and US communities to increase their operations in areas where they could ignore safety regulations and pollute to their heart's content, used the pollution that they were helping to create overseas as a lever to help prevent any changes in the country they had all but abandoned. Then, with PR warchests fat from profits carved out of family budgets and measured in lost jobs, they wrapped themselves in the flag and presented themselves with photoshopped populism.

To see anyone oppose these corporations, even in the slightest, is refreshing. Maybe essential. Or at least it would have been, had the Senate acted quickly enough to push this legislation through in time to show the rest of the world that the United States government wasn't a marketing arm for oil and coal. That didn't happen.

With that in mind, I feel a bit more free to respond to the Clean Energy Jobs and American Power Act (which I'm going to refer to as "Boxer-Kerry" to keep from having to repeat that title and make a distinction with Waxman-Markey) put forward this week by Senators Boxer and Kerry. There are certainly things to like in the plan.

First, Boxer-Kerry contains significantly more provisions for the promotion of natural gas. If that sounds like a negative, consider this. Natural gas produces only half the carbon of coal when used to generate electricity. Not only can plants be built to burn natural gas, existing coal plants can be retrofitted to burn natural gas instead. We're so used to thinking of "oil and gas" together, that we may assume that natural gas is mostly in the hands of the same companies that control big oil, but most natural gas is actually controlled by far smaller companies (which is part of the reason natural gas has been all but ignored in previous energy bills). Finally, while peak oil came in 1970 and no new significant coal reserves have been discovered in years, natural gas has enjoyed a resurgence by discovering means of extracting gas from deep shales. Natural gas reserves are actually heading up while other fuels are going down. I don't want to sound like I've swallowed a T. Boone Pickens promotional brochure (and I still believe his scheme to be economically unworkable), but this combination of features makes gas a good bridge fuel as we work to replace electrical demand currently generated by coal.

Boxer-Kerry also contains a strong emphasis on conservation, with a series of programs designed to reward decreased consumption. The importance of this can't be overstated -- and the ability of Americans to conserve doesn't get nearly the press that it should. This past year has seen a sharp drop in electrical demand, something that opponents of energy legislation said was impossible, and only a small part of that has come from decreased manufacturing. Americans are watching the thermostat, and being rewarded by programs that help them conserve. We recently saw how effective the "cash for clunkers" program was in motivating people to make changes in their cars. Strong incentives to improve energy efficiency will leave us with both short term and long term gains, and do it more cheaply than any other provision. Without buying into the cutesy language of "negawatts," energy not consumed beats the tar out of any form of energy production. More energy is not equivalent to "progress," and using less energy is the most effective way of producing less pollution of all sorts.

On the feature that gets the most press, the carbon offset mechanism, Boxer-Kerry edges out Waxman-Markey by... actually, all the things that are being showcased as improvements (increased flexibility, a "carbon collar" that limits maximum cost, and provisions that make it easier for businesses to buy the offsets they need) actually make the bill weaker. There will be more carbon certificates available, available more readily, and available at a low price. These features ensure that the "cap and trade" structure will never impose enough of an economic cost to encourage movement from high CO2 sources. They've been so well designed to address business concerns, that they've been engineered into being inconsequential. Not that it's strict enough to have an effect under Waxman-Markey.

Boxer-Kerry also follows Waxman-Markey's lead in awarding massive payments to the biggest winner under both bills: coal. By far the biggest payments in the bill go into the pockets of the industry most responsible for the problem. If this is supposed to protect some huge number of jobs, it doesn't. There are

fewer people employed in the coal industry than there are unemployed auto workers in Indiana alone. Yes, America has significant reserves of coal, but here's the thing there's no law that says we have to burn it all. Giving billions to the coal industry didn't make any sense under Waxman-Markey, and it doesn't make any sense in Boxer-Kerry. It doesn't "improve national security," it doesn't generate jobs, and it doesn't take us one inch closer to the energy infrastructure we want. Worst of all, the coal industry is rewarded for past sins, and gives up nothing in return.

Personally, I'd propose an energy bill that's much more simple. Maybe even radical.

No cap and trade. None.

No funding for "clean coal." Zero.

If we really want to make advances, we need to provide the funding and guaranteed orders that will allow alternative sources to compete on price. For a fraction of the funding now offered for the R & D of CO2 sequestration, we can ensure that solar and wind actually outcompete coal in the marketplace. Give them the boost they need to simply undercut the bastards. If that's not coming fast enough, use the natural gas to cut your CO2 in half by retrofitting the existing plants. For God's sake, don't do anything that encourages building more of the plants now causing the bulk of the problem.

If we really want to improve natural security, we won't do it by building power plants of any type. Instead we have to entangle the two parts of our energy picture by electrifying transportation. Providing funds for mass transportation and for electric vehicles is reducing America's demand for oil. Everything else has nothing to do with it.

And hey, if you really must give money to coal why not at least demand that mountaintop removal be off the table forever so they're giving up something before you lay out the buffet of federal dollars?

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### **Investors Brace for a Rocky Ride – CNNMoney.com – 10/5/09**

By Alexandra Twin

NEW YORK (CNNMoney.com) -- The stock advance has hit some resistance in the last two weeks and it's only going to get tougher as the third quarter reporting period gets underway.

Since hitting rally highs nearly two weeks ago, the broad S&P 500 index has lost 4.3% as investors have sorted through a spate of manufacturing, consumer and jobs reports that have missed forecasts.

The standout was Friday's September jobs report, which showed the unemployment rate spiked to 9.8%, a new 26-year high. On top of that, employers cut a whopping 263,000 jobs from their payrolls during the month.

But the stock market's decline over the last two weeks was pretty minimal, considering the nearly seven-month run up that propelled the S&P 500 by 51.2%.

That rally was driven by extraordinary amounts of monetary and fiscal stimulus and a spate of "less bad" news as the economy moved from recession to stabilization to the start of a recovery.

But lately there's been a change, with the trend going from 'less bad' to 'less better' economic news, said Karl Mills, president and chief investment officer at Jurika Mills & Keifer. "The market is trying to understand that switch."

Although he says the recent trend doesn't undermine signs of a recovery, it does indicate that the road ahead is a lot more twisty than the stock market rally would imply.

Investors are now moving into a sorting period, he said, where they are separating the wheat from the chaff, in terms of good and bad assets. He said that the period of more speculative, so-called lower quality names leading the rally will end as higher quality names start to take over.

"We are moving into a new phase, from collapsing to rebounding to recalibrating," he said.

Financial results: The week ahead is pretty mild in terms of economic reports, with a reading on the services sector of the economy and Treasury's \$60 billion in debt auctions the big standouts.

But it also brings the start of the third-quarter reporting period, albeit a very small start, with only one notable company due to report.

Dow component Alcoa (AA, Fortune 500) is the unofficial start to the quarterly reporting period, as per usual. The aluminum maker is expected to report a loss of 12 cents per share versus a profit of 37 cents a year ago.

The weakness in Alcoa is indicative of a materials sector that is expected to take it on the chin in the third quarter. The sector is expected to see earnings fall 68% from a year ago, followed by energy, down 64% from a year ago. Financials, by default, are expected to show the best results, as the companies bounce off dismal results accrued in the third quarter of 2008. Financials are expected to post earnings growth of 59%.

Overall, "we're looking for another down quarter, the ninth in a row and the longest streak since we began calculating the growth over a decade ago," said John Butters, senior research analyst at Thomson Reuters.

Overall S&P 500 profits are expected to have dropped 24.8% from a year ago, he said.

On the docket

Monday: The Institute for Supply Management (ISM)'s services sector index is due shortly after the start of trading. Last week, the ISM's manufacturing index showed a surprise decline that rattled investors. The services sector report is expected to show growth, rising to 50 from 48.4.

Treasury is auctioning \$30 billion in six-month bills and \$30 billion in three-month bills, with results due in the early afternoon. Wall Street will be looking to see what kind of demand the auctions draw, particularly from international investors, as the government seeks to fund trillions in economic stimulus projects.

Federal Reserve Vice Chairman William C. Dudley is due to speak.

Tuesday: The World Business Forum runs Tuesday and Wednesday in New York, with participants including Bill Clinton, T. Boone Pickens, Jack Welch, George Lucas and Paul Krugman.

The IMF and World Bank Group annual meeting in Istanbul runs through Wednesday.

Wednesday: August consumer credit, the September Treasury budget and the weekly oil inventories report are all due throughout the session.

Thursday: The weekly initial claims report from the Labor Department is due before the start of trading. No analyst estimates were available as of Friday.

Wholesale inventories are expected to have fallen 1% in August, after declining 1.4% in the previous month. The Commerce Department report is due shortly after the start of trading.

Federal Reserve Chairman Ben Bernanke is due to speak on the Fed's balance sheet.

Also Thursday, Federal Reserve Governor Daniel K. Tarullo is due to speak.

Friday: The August trade balance is due before the start of trading. The trade gap is expected to have widened to \$32.9 billion from \$32 billion.

Federal Reserve Governor Donald L. Kohn is due to speak.

The bond market closes early ahead of the Columbus Day holiday.

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## BROADCAST COVERAGE

### 1. World Business

DMA: N/A

**CNBC World (---) National**

**10/03/2009 12:30 PM - 01:00 PM**

Available formats: QuickView, DVD, CD, digital link, videotape, transcript, NewsBoard

00:11:36 (guest is Warren Buffet)..oil is finite.... we have five hundred thousand producing oil wells United States ... the average production is 11 barrels a day ...most fields are depleting at a pretty good rate ...who knows what the equilibrium price will be... with that in mind, Warren some of the biggest bets that get talked about on this show are from the likes of **Boone Pickens** who says he likes wind or it's the tar sands or it is a play on on water here at GE it when it comes to energy is there a next generation play,an alternative play that has caught your eye? ... well we're using more and more wind..we have a big enregy company...that is not a big answer to the kind of energy demand that is coming along...I do not see that as a cureall... 00:14:15

### 2. Imus In The Morning

DMA: N/A

**Fox Business Network (---) National**

**10/05/2009 06:00 AM - 07:00 AM**

[CC] 00:14:17 Crude **oil** under \$70 a barrel again. **T. Boone Pickens** will be on Wednesday.What did he say last time we talked to him? Charles: \$100. Don imus: very close to them. 00:16:10

### 3. Oklahoma Horizon

DMA: 45

**KETA-TV CH 13 (PBS) Oklahoma City**

Spot Cost: \$76

**10/04/2009 03:00 PM - 03:30 PM**

Est. Audience: 12,178

Available formats: QuickView, DVD, CD, digital link, videotape, transcript, NewsBoard

[CC] 00:04:07 So consider this, while Oklahoma produces well over a trillion cubic feet of **gas** per year, only about one-third of it gets used, resulting in a growing surplus, brimming storage facilities, and most dramatic, declining prices. Wilkerson: the last **natural gas** wells that were drilled were so productive and then demand fell off so quickly, prices will stay low for a while. Russ: a fiscal tailspin in 2008 that sent prices from thirteen dollars per thousand cubic feet to just two dollars, prompting a sixty-six percent cut in **gas** production. Wilkerson: but the intermediate term and longer term fundamentals are still in place for **natural gas** to be a key part of the economy heading forward. We need a bridge. St two of my plan begins to replace foreign **oil** with American **natural gas** for cars and trucks. Russ: and that's exactly what many in Oklahoma are banking on. **Energy** tycoon, sees **natural gas** as **T Boone Pickens**, toward **energy** independence. Our country's first step **Boone Pickens**: you have only one resource in America that will replace foreign **oil**. I'm talking about gallon-for-gallon, barrel-for-barrel, there's only one resource

that'll do that, which is **natural gas**. Russ: **Pickens** hopes that **gas** produced here in Oklahoma may one day replace the diesel that **fuels** our **nation's** burgeoning fleet of tractor trailers. **Pickens**: it will create over 300,000 jobs. You'll build 1200 stations. Who pays for those? Let private industry pay for them. The government doesn't have to pay for them. Let them give the incentive for the truck, and the rest of it will come together. Russ: an incentive that will keep America on the road to success. 00:05:59

[CC] 00:08:04 Alisa: yet for all this to work, it's going to take more **fueling** stations with cng. Something Speaker Bengé says the state is promoting with incentives. Chris Bengé: we have a goal of doubling the publicly accessible **fueling** stations over the next five years. And we're trying to do that through a couple of way. one in a private sector carrot, if you will, or an incentive, for companies that wish to, to be able to put a **fueling** station in place that would also be accessible to the public. Alisa: a kind of "if you build it, they will come" attitude, one AT&T is buying into. Gonterman: that is a big impact on the announcements and the investment that we will ultimately make. As the infrastructure grows, we will be able to bring more cng vehicles to the state and elsewhere in the country. One of our main decision points on where we're actually making this investment and where these number of vehicles are going will be dependent upon available infrastructure to refuel these vehicles. Alisa: it's win-win in greening up Oklahoma. Alisa: now the tax credit available for putting in a cng fueling station is about seventy-five percent of the cost, and they've also extended the credit for purchasing a cng vehicle. Rob: now that's quite an incentive for the private sector. But what about government fleets? Alisa: well there's already programs in place that cities, schools and counties can use to be able to put in their own cng **fueling** station. And what Speaker Bengé is hoping will happen is that these stations will become available for public use. And hopefully, maybe encourage the public to go out and buy a cng vehicle. Rob: thank you, Alisa. Now we do have more about the future of compressed **natural gas** on our website. There we have the full interview with **T Boone Pickens**, as well as, a feature on an Oklahoma company that makes cng pumps for the international market. 00:09:49