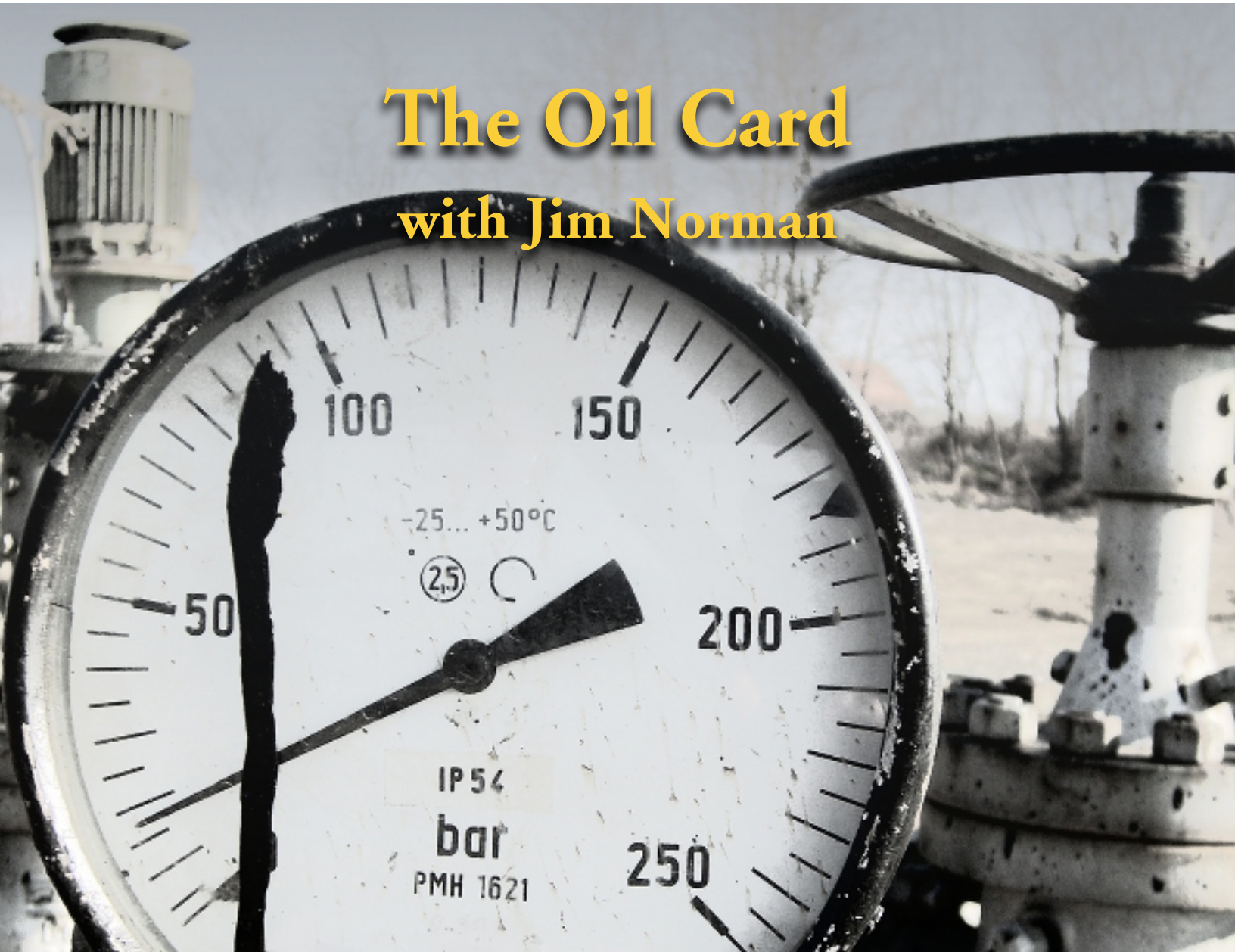
BUILDING WEALTH IN CHANGING TIMES

The Solari Report

DECEMBER 12, 2013



The Oil Card

with Jim Norman

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C. AUSTIN FITTS: Well, ladies and gentlemen, it's my pleasure to welcome back to The Solari Report, Jim Norman, who of course needs no introduction. One of my favorite things about doing the work that I do is I get to talk to Jim. So Jim, as I've been reading the news, there is so much in the news on energy, and I've been waiting to get you back on The Solari Report because this is where I get the real sort of 411 on what's going on. So welcome…

JIM NORMAN: Yes. Good morning. How are you?

C. AUSTIN FITTS: Fine. So we're reading in the news every day that the U.S. is not an exporter of energy and is self-sufficient. Then, of course, the complementary articles are "that's all ya-ya." So bring us up on what has been happening in terms of U.S. domestic energy and whether or not we have become self-sufficient.

JIM NORMAN: Okay. Well, we are far, far from being energy self-sufficient. I mean those are the wrong words to use by far. We still import almost half of the oil that we use. Our oil production is going up again after many, many years, mainly because of new technologies and opening up of shale and stuff like that. Plus, our energy use has been moderating. Gasoline demand – not recently, but it's been down, down, down.

C. AUSTIN FITTS: And household income has been going down since 2000, and expenses are going up, so the consumer is getting squeezed. How much of it is the consumer versus manufacturing is just using less?

JIM NORMAN: Well, what's interesting is that manufacturing of energy demand is actually going up a little bit, and the key fuel there is natural gas. Now, the crazy thing about these energy markets is that natural gas in relation to oil is really, really cheap. I mean natural gas in the United

States sells for about one-fourth the equivalent BTU price or energy content of crude oil. It's been completely out of whack for more than a decade now, which is one of the points of the book I wrote: *The Oil Card*.

Which basically says for geopolitical purposes, the United States like high oil prices, and we've basically propped up that market, and kept crude prices very, very high. At the same time, we've let natural gas fall, fall, and fall. So what we are actually doing is drawing manufacturing back into the United States, and partly we're doing it with very a cheap dollar, but also with cheap energy costs and it's slowly starting to get some traction.

So you have this basic irrational dichotomy in the energy market. Gas is cheap. Oil and liquid fuels are expensive, we're importing less of the liquid fuels, and we're actually starting to export of natural gas. And we could export a lot more, I think.

C. AUSTIN FITTS: You mean exporting it liquid, as LNG, or –?

JIM NORMAN: Yes, LNG.

C. AUSTIN FITTS: Now, I was just reading a money manager complaining about trying to get the permits of out Washington and the West Coast so that they could bring stuff out of North Dakota and convert it with –

JIM NORMAN: For LNG, or for oil probably?

C. AUSTIN FITTS: I think it was both. They were talking about the difficulties of getting the infrastructure in place to do the exporting both of oil and the LNG.

JIM NORMAN: Right. Well, for 40 years, U.S. policy has been to not export energy, but we're in a position now where we could rethink that and ought to.

C. AUSTIN FITTS: Now, tracking, of course, is very controversial. One of the

things I struggle with is trying to understand what the truth is because there is a very wide opinion on the part of informed people about whether or not it's feasible or safe. You know, the concerns being on the water supply. So I'd love to know – and of course there is very great controversy about whether or not the wells being fracked are really going to produce in a meaningful way.

So maybe if you could just describe what fracking is and when it started, and how it's evolved, and what you think the real situation is in terms of whether it's something that we should be doing or not.

JIM NORMAN: Okay. I'll give you my contrarian version. By the way, I'm all for fracking. It makes imminent sense. It's safe if you do it right. The real problem is with fracking – and not with fracking, per say, but rather with the liquid disposal afterwards. There have always been laws on the books to regulate that, and there have always been crooks that have dumped the stuff in the wrong place. So there is nothing new under the sun there.

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But fracking is just a process of drilling a hole in the ground, and then pumping fluids in there to bust up the rocks so you can get some cracks so that the oil or gas can flow into the well bore, and you can get it out. They have been doing it for 50 years or more. There is nothing new about that.

What's new is that with the combination of horizontal drilling, where you drill down a mile, and then you go horizontal into a oil or gas spring, you could drill like a mile long lateral, or two miles long, and then you frack it in stages, frack the rock in various places along there, to get tremendous flows of hydrocarbons out of the well. All that cracking of rock goes on so far below any aquifers that it's really just not an issue in terms of groundwater.

Where there is an issue with groundwater is near the top, it's a few hundred feet near the surface. The problem there usually is not fracking

but old well casings, the steel pipe that goes around the well that goes through the aquifer. A lot of these get corroded or cracked, and they need to be plugged and abandoned, but states are slow about doing that. Companies are negligent.

That's where you could get seepage of natural gas or even hydrogen sulfide, which is a poisonous explosive. If you get that into water and then, you know, people can set their water faucets on fire, I suppose, if they wanted to. But that problem has been around for a long time, and it has really nothing to do with fracking. So fracking gets a bum rap, I think, and it's going to be – we just have to get used to it.

We drill about 45,000 wells a year in the United States. More than half of those are horizontal wells, and virtually all of those get fracked. It just makes so much more sense to drill horizontally and frack them. Most of the vertical wells that are drilled, I think, would eventually go back and they'll drill them horizontally. They just drill them vertically so they could hold the lease with some production.

You're going to see much fracking. What they've done is they've actually advanced the fracking technique so now you can have many, many stages at a frack and oil, small frack so you're not busting these huge cracks in a rock that go a long distance.

C. AUSTIN FITTS: See, what I've always believed is the political problem on fracking is that you can't trust the municipality and the companies to fix it if there is something wrong. So nobody knows when they come in to frack, if you got a bunch of responsible players or a bad dog. Do you know what I mean? So the problem is when something goes wrong, it's not fixed for the consumer.

JIM NORMAN: Yes. Well, that's where I think if you want to go look for bad guys, I would go look at state governments that have failed to enforce the playing and abandonment laws on wells and on the surface disposable issues, maybe unlicensed truck drivers and people like that who are dumping drilling fluids of all kinds, and not just frack fluids, into municipal waste systems and so forth.

C. AUSTIN FITTS: Right.

JIM NORMAN: The other thing is about the longevity of these wells. Actually these kinds of wells have very long tails in terms of their production. Some of the gas wells, the decline curve are not as bad as you would thing, and the long tails go out 30 years or more in some cases. They don't know how long they'll produce. And you can go back and frack them again. So I think these wells have legs to them. I mean there is a lot of life here.

C. AUSTIN FITTS: Right. Now, I know that there is talk now that the fracking is going to move into Europe. Do you know what the status is of that?

JIM NORMAN: I think it's inevitable. I think it will eventually. It just makes so much sense.

C. AUSTIN FITTS: Is that going to change Russia's position vis-à-vis natural gas in Europe?

JIM NORMAN: Yes. Well, now here is where you get into the geopolitical backdrop of all of this stuff. Actually, I think a lot of the environmental hoo-ha you see going on the surface is really just a cover for what are essentially geopolitical issues in the background over pricing and supply. And my basic position, one of the reasons the U.S. likes high oil prices right now is that we've got to keep the Russkies solvent in some way.

As much as we might not like them, they are a necessary foil against the Chinese. And although Mr. Putin can have some rather nasty rhetoric, the bottom line is he plays ball with us pretty much down the line on our geopolitical agendas.

C. AUSTIN FITTS: Without looking like he's doing it.

JIM NORMAN: Well, I think he is because I think he knows on which side his bread is buttered, and I think he knows that if we wanted to, we could tank the oil price, again, as we have in the past, and he would be out of luck because the Russian economy is still very weak. It still depends

heavily on oil life supports, and also gas. So I think we're happy now to finally let some Russian gas into Europe, and let him make some money on that stuff.

C. AUSTIN FITTS: Did I ever tell you about the time that one of his advisors tried to recruit me? No, I'm serious. I was up speaking at a Gold Conference in the Yukon, and one of his national security advisors was there. The next thing I know, and this guy was unbelievable. I was very impressed by him. He was very, very smart. They are all very serious members of the Russian Orthodox Church, so they think very long-term, very spiritually, very strategically anyway.

So, anyway, before I know it, as we're leaving, we're flying out together and I always find this guy sitting next to me. He basically put the move on about I was on the wrong side and I should come over to their side, and there were no particulars. But I just turned to him and I said, "Look, nobody likes a traitor." Then when I got home, I said, you know, there is something wrong about this. This is 2005 right before the housing bubble burst.

So I looked it up and I realized, oh, the Russian sovereign wealth funds in the big institutions is the second largest soldier of Fannie Mae securities. So I wasn't talking to another country, I was basically talking to a big Fannie Mae investor.

JIM NORMAN: Right. Right.

C. AUSTIN FITTS: Anyway…

JIM NORMAN: Yes. So…

C. AUSTIN FITTS: So things are never as they seem.

JIM NORMAN: That's right. The amazing thing to me about this whole energy market on a broad scale is how little volatility there is in the pricing. I mean you look at the oil price, it's hovered around this, basically, $100.00 a barrel mark for five or six years now. I mean it dipped in 2008

with the financial crisis, but then bounced right back and it's hovered right in there. The price has really fluctuated very little around that $100.00 mark.

Russian exports have hardly budged at all. They have been bumping along four million barrels a day ever since 2003, which is the year when they signed basically a market sharing deal with the Saudis. The Russians produced four million barrels of exports a day; the Saudis export eight million barrels a day. It has moved along in lockstep like that ever since. I mean it just cries out to say market regain here.

C. AUSTIN FITTS: Right. I should say for those who have listened to the previous interviews with Jim, including the ones on his fabulous book *The Oil Card*, you absolutely want to do it. Because if you want to sort of understand how this market is managed, it's absolutely the best available book and some great interviews. So I would encourage you to do it. But needless to say, China is getting taxed because they are the ones who are paying an arm and a leg for that oil –

"Needless to say, China is getting taxed because they are the ones who are paying an arm and a leg for that oil."

JIM NORMAN: Right. Right.

C. AUSTIN FITTS: – and now the Japanese too.

JIM NORMAN: Well, you know the Japanese – when oil was cheap, their big gig was buying crude cheaper and refining it and selling gasoline and making money as an export of gasoline. But a lot of that business has gone away. They have closed down their refineries. Now they have to burn oil for boiler fuel, basically, in place of nuclear power.

But heavy crudes, they sell at quite a bit of a discount too. There is a light sweet crude, which means lowest sulfur, which are preferred for making gasoline. So yes, the Japanese are in a difficult situation on a number of fronts, and energy is a big one right now. But I think we've been doing a lot to keep some wind in their sails and help them along through this, not to mention bolstering them against any kind of a

Chinese threat. So I think the Japanese and the U.S. have grown much closer lately for a bunch of these reasons.

C. AUSTIN FITTS: Really? So the nuclear ban in Japan as a result of Fukushima. Does it continue? It is easing? What's going to happen? It's stripping on the energy strategy.

JIM NORMAN: I don't know. I don't follow nuclear that much, but every casual headline I read on it, it looks bad. The radiation just keeps getting worse, and they don't really have a fix for it. I'm sure with human ingenuity, they'll figure out some way to get plants back on the line and keep them running. But the idea of building more of them is pretty remote. I think that industry is pretty much dead now.

C. AUSTIN FITTS: I've put the quote up on the blog from one of our last discussions, where you said energy is 40-50 percent of the cost to manufacture in the United States, and I think labor is only five percent. So if you look around the world at Asia, whether it's China, Japan, or the Tigress, or Europe or the United States, one of the most important questions I think about a lot is what is the relative cost of manufacturing in these different places.

So where is the manufacturing flow going to go? If you look at the statistics, the employment, labor as a percent of total costs in the U.S. companies just keeps coming down, down, down, down. With robotics and some of the new technologies, I'm assuming it's just that slope is going to continue to go down. So energy is the critical component, is it not?

JIM NORMAN: Right. And that's what I'm saying is actually U.S. manufacturers are significantly advantaged because of the low cost on readily availability natural gas in this market. I think U.S. policy will be to keep that gas price down. I think that's why they drag their feet on LNG exports. They want to keep as much gas in this market as they can to keep the price down.

But now, remember, the price of gas and oil, they are really not

determined so much by physical supply and demand. It's really driven by the futures market, the NYMEX. What you see there is a massive amount of market management both ways, up on oil, and down on gas. If you look, the statistics are very limited and poorly aggregated.

But if you look at in terms of managed money positions in energy, there is a massive long position in oil, and a huge short position in gas. That kind of tells you the rest. To me, it makes no sense from an investment standpoint, why you'd be buying crude futures to begin with, unless you have a physical demand that has to be hedged. It's suicidal and ludicrous. Unless, your agenda is to basically manage that market in some way. So you have huge amounts of money – actually, not that much money, it only takes like five percent down for your so-called margin to take out a position.

Then you just keep rolling that over. You maybe make a little money, lose a little money, but with a relatively small amount of actual cash, you can control a significant amount of oil in the futures market. I think that's what we've been doing.

C. AUSTIN FITTS: Right. When a decision is made at the National Security Council level, you then are trading the large companies like Exxon or you have JP Morgan as an agent trading the exchange stabilization fund. You basically are up against 100 percent of the credit in the world. One hundred percent of the credit of the world, it's decided it's going to go to the right. You can't trade against that.

JIM NORMAN: Right. Anybody who has tried to short oil has just been slaughtered. There are no shorts left out there, and there are probably no longs left in gas.

C. AUSTIN FITTS: Yes, it's the house. The house has decided where this is going to go. When you are talking about, you know, the governments that have a nuclear arsenal plus the largest companies in the world, and a currency that is on an oils standard, then you can't – that is the house. Anyway, in Washington, we called it puppy training. When you squeeze out all the shorts, you think that markets are markets.

JIM NORMAN: That markets are rational. Yes.

C. AUSTIN FITTS: Right. Well, they are rational in a way. Anyway, okay, so talk a little bit about the politics of Russia vis-à-vis Europe because obviously Europe is a ready market for Russia. But if Europe starts to frack, what does that do to Russia? We discussed that. But then we're seeing the tensions on the Ukraine with Putin basically snatching the Ukraine back out of the European union. So it seems to me there is some tension there, and my question is how much does it have to do with oil and gas?

JIM NORMAN: Well, Russia and the Ukraine, they have been at each other's throats for a while. I mean the Ukrainian government actually tilts more towards Moscow now. But I think the Ukraine people hate those guys. So yes, there is a lot of bad blood there that goes back a long ways. How much of it is energy, I don't know really.

The trouble Putin has is the only thing he's got to sell that is worth any money is oil and gas. The Russians just don't have much else to sell to the Europeans. In the meantime, you've got the Germans and everybody else selling all kinds of expensive stuff – or wanting to, into Russia. So Russia ends up being more and more dependent on oil and gas.

I think Putin is just trying to keep the Europeans from basically cannibalizing the former Soviet Union, and just encroaching on them to the point where it's just kind of total irrelevancy. So he's trying to keep Europe at bay. At the same time, he's trying to keep the Chinese at bay. Now, that's just a real problem.

The Chinese and Russians basically hate each other. They've fought wars with each other. They have a long, long boundary. The Chinese lusts for Russian oil and mineral reserves in Siberia. They could just take them if they wanted to. They could just ride their bicycles up there, and the Russians could hardly stop them.

So Putin has basically been trying to keep the Chinese happy with their oil and gas deals, some arms deals (the terms of which are really not that

good for the Chinese), and the stuff hardly ever arrives on time and maybe not work. So he's trying to keep them happy by selling them more oil. Now, the Chinese have to pay through the nose for that oil.

"It would actually be cheaper for the Chinese to buy tankers of oil in the Persian Gulf and ship them halfway around the world, than to buy oil off that Russian pipeline in the east."

It would actually be cheaper for the Chinese to buy tankers of oil in the Persian Gulf and ship them halfway around the world, than to buy oil off that Russian pipeline in the east. But it's always better to have a pipeline supply. It is much more secure than floating oil. So Putin has been doing that. He's got a deal pending to sell on some gas. But not only does he charge them an arm and a leg, but he makes the Chinese pay in advance, like ten years in advance.

C. AUSTIN FITTS: You're kidding. Well, they are probably trying to dump their dollars.

JIM NORMAN: There's an interesting thing. The Chinese have recently gone to something like bilateral agreements on trade, which lets them, more and more, pay in their own Yuan currency. Now this is very intriguing to me because the essence of the Chinese strategy has been to keep their currency low so that they are able to sell into other people's markets, particularly the U.S.

What I think has been happening – people look at this Yuan export-pricing phenomenon as some kind of sign of strength on the part of the Chinese. Actually, I tend to look at it in reverse because what I think it means is that the Chinese realize they are being crippled by this very low currency they have. It costs them – they are buying very expensive commodities with a very unvalued currency.

So they are looking for a way to basically get the value of their currency up without crashing their exports. One way to do that would be with these bilateral deals. But what the net effect of that is basically it's pushing up the value of the Chinese currency in these bilateral deals. In

the long term, that's going to be difficult for them.

The Chinese, I think, are in a very difficult currency situation, and every other kind of situation. I mean they are short on energy. They are buried in debt. They have a very vertical political system. It's ripe with corruption. They are totally dependent on exporting into other people's markets. The whole world is starting to gang up on them now.

It doesn't appear that way to the public, but I think the U.S. actually has a significant upper hand against the Chinese now as a result of all this accumulation of strategies that I think are being pursued.

C. AUSTIN FITTS: Right. I agree with you. I think for the Chinese, the biggest problem they have – if you live in China, you wake up each day and you think, "How am I going to keep a billion people employed?" And in a world where automation is completely changing the competitive landscape, vis-à-vis on manufacturing and all these things you're doing.

How are you going to keep those people employed, and how are you going to keep them employed in a world where you have significant pollution and water and natural resource issues? Because there is oil, but then there is water as well. So I don't think it's so easy to be China now. I used to live in Hong Kong, and I've traveled to China.

The Chinese people are the most amazing. They are unbelievably productive, as are the Japanese. So I never like to underestimate the power of what they can do because they are about the hardest working people on the planet. So they are pretty amazing.

JIM NORMAN: Right. I think the U.S. attention, though, is at the ruling elite in the people of the public. Those are the guys we'd like to see go away probably. I think with enough – with actually even a modicum of social unrest there, I think you could wake up one day and that whole Beijing crowd could just be gone for the hills. It's just, it could be that kind of a thing, very sudden and very dramatic, and then the whole deck would get reshuffled some way.

In fact, now I may be hallucinating on this one, but even this Iran situation is intriguing to me. My contrarian self is tending to look at that as yet another case of whether the U.S. may actually be prying away from China. They are potentially a valuable client state here in the Iranians. I just have a suspicion that that's what's going on here. But basically what's really going on is saying, hey look, Iran, play ball with the west.

Don't go with the Chinese. Don't buy their arms. Don't build their nuclear plants, and don't get in bed with them geopolitically, and life could be nice for you again. That sort of thing.

C. AUSTIN FITTS: Well, this feud with Iran only happened when basically the invasion of Syria got shut down. In other words, I remember right after 911, I was in church and we were presently, literally, with a battle plan in various sermons. First, we were going to go to Afghanistan, and then we were going to go to Iraq, and then we were going to go to Libya, then we were going to go to Syria, and then we were going to go into Iran.

I'll never forget, there is a video up on my blog of Wesley Clark saying – he was over at the Pentagon and the same thing happened. He was given the battle plan then. When the president basically came forward and said we've got to bomb; we've got to attack Syria, literally, there was no traction. There was no way you could get Congress to go along with it.

If anything, Putin stepped in and saved the administration from embarrassment because congress was going to turn them down. So something happened there, and that was the Americans couldn't do what they wanted to. I've never quite understood what the real story was.

JIM NORMAN: Right. Well, what I wonder about that is whether we might have won without firing a shot. I mean it's possible that, in fact, the deal was, look, the Russians and the Chinese knew that they could not effectively defend Syria if we really went after them. So maybe they were the ones that actually would have backed down on that.

I mean as it is now, we are openly arming the rebels there, and they still remain a force in being. Assad isn't home free yet. Sooner or later, he is going to go. So I wouldn't say the Russians and Chinese had a particularly strong hand to play there, and it looks like –

C. AUSTIN FITTS: I don't mean to say that they had a strong hand; I just think that we're in a funny situation where the U.S. administration – the discrepancy between the story and the official story has reached unbearable distances. So trying to get something like that accomplished politically has become very difficult.

JIM NORMAN: Yes. Right. Well, as we said, nothing is what it appears to be. That's a good rule of thumb in many of this stuff.

C. AUSTIN FITTS: Well, what do you think will happen with Iran?

JIM NORMAN: Well, given the amount of bits, this deal will probably fall apart before it gets consummated. We'll be back at each other's throats before long.

C. AUSTIN FITTS: Is it possible to make a deal?

JIM NORMAN: It's hard for me to see how you do that. I mean it's not just the bad blood between the U.S. and Iran, but the Saudis are in this too, and the Saudis hate those guys, are scared to death of them and don't trust them. We're not going to cast adrift the Saudis no matter what. So I don't think Iran is going to get that much out of this deal. Again, my contrarian view is that U.S. defense policy really doesn't care one way or the other whether Iran has a bomb.

I think the way the U.S. looks at that is in a de facto sense; they probably already do have that capability. You have to assume that they do. But the thing is, you can't use a weapon like that without basically ending your own civilization. So those types of weapons become more of a liability than as asset. I think the U.S. attitude is, "Okay. Go ahead. Build yourself a bomb and see where that gets you."

Iran having a bomb is its own worse punishment, I think, and they ought to know that. But I think they are desperate – they are absolutely desperate. I mean the crude exports are down to half of what they ought to be, a couple of million barrels a day. They should be doing four or five million barrels a day. I think the sanctions are hurting them bad, and they are desperate. So I think they are willing to trade whatever they can to try and get some breathing room.

"The crude exports are down to half of what they ought to be, a couple of million barrels a day. They should be doing four or five million barrels a day."

C. AUSTIN FITTS: So is it possible that they could ever improve relations with the Saudis, or is that just an impossibility?

JIM NORMAN: I would not hold my breath on that. It would just be a very long time, I think. It's possible. The Saudis and Russians cut that market sharing deal back in 2003. They get along okay now, I think. It's always possible. But the main problem is making enough room in a very sloppy oil market to let these guys in. This is the problem: The world is basically swimming in crude. I know, people think I'm crazy when I say that. But it's true. I mean there is ample crude oil all over the place. OPEC has basically restricted production in order to keep the price up. The Russians could be exporting twice as much as they are. They are holding back. With us increasing our crude production, it certainly doesn't help things. It's backing crude out back into Mexico and Venezuela.

Venezuela used to sell like four million barrels a day mostly in the U.S. Now there they are selling less than a million barrels a day. We are actually exporting gasoline to Venezuela now. I mean the world is upside down. So Venezuela has basically been taken off of the charts. Nigeria is limping along. They used to be cheating like mad; now they can barely support themselves. Libya is producing 200,000 barrels a day.

That's like a tenth of what they used to do. There is a bunch of these other problematic countries that have just kind of been taken off the

order of bail here. Sudan. South of Sudan, their production is like nothing anymore. But you have to do that because, otherwise, the physical crude market would be swimming in oil. I mean world inventories of crude now; they are like double what they ought to be in terms of a day's supply.

C. AUSTIN FITTS: So our holding up the oil prices is causing a lot of the producer's pain – the smaller producers a lot of pain.

JIM NORMAN: Holding up the oil price?

C. AUSTIN FITTS: Yes.

JIM NORMAN: Well, I don't know, this is – well, the smaller producing countries. Yes, I think that's true because I think they are having a harder time finding the way into the market here. I think that with just a little bit of monkeying around, you can cause enough havoc, pipeline explosions here and there and rebel movements, et cetera, et cetera.

C. AUSTIN FITTS: It's amazing that when the price starts to fall, you get those explosions.

JIM NORMAN: We have ways of dealing with cheaters in the oil market, and that's always been the case. So basically OPEC has had to pull its forms, and everybody else has to keep this market from getting sloppy. If you're going to control the price on an NYMEX, you just need to keep the market snug physically out there. That's why this whole Keystone Pipeline thing, to me, is intriguing.

I mean this cannot be an environmental issue over whether you build a pipeline over the aquifer or whatever it is. No. I think it's all about keeping Canadian crude bottled up there so you don't trash them by dumping huge amounts of crude on the Gulf Coast.

C. AUSTIN FITTS: So talk a little bit about the Keystone Pipeline. What is it, and who is for and who is against, and what's really going on?

JIM NORMAN: Yes. Well, this is, again, what I think – what meets the eye is not necessarily what's really going on. Whether the Canadians want to build another big pipeline out of Canada and move Syncrude from the tar sands down first to Cushing, Okalahoma, which is a big storage point, and a delivery point for the NYMEX contract. Then from there on, down to the Gulf Coast, where you could basically displace yet more Mexican and Venezuelan heavy crude in the refineries down there.

Well, they've already got that big pipeline system that goes into Chicago and Illinois and all that stuff, but the key thing would be to get this heavy crude down to Cushing because that's where it would really – then they have another lake, which is just opened, but it's filling up now. They would take this stuff from Cushing down to the Gulf Coast to Houston and Port Arthur, where the big refineries are.

What that would do, first of all, is it would bring a whole bunch more Canadian crude into Cushing. Now Cushing is already chock-a-block with crude reserves. I mean there is like 60 million barrels sitting around in tanks there for no good reason. So that's then a drag on a NYMEX price for a while. This is not good. They need to leave that inventory overhang there.

So what's happening is they are opening this new pipeline to the Gulf Coast. I think that's actually going to raise the NYMEX price because I think it'll take some of these excess inventories of Cushing, move them to the Gulf Coast so they won't be such a drag on the NYMEX price.

Then I think they are probably going to continue to dally and drag their feet on bringing the other pipeline down from Canada to Cushing so that you won't flood Cushing with more of that crude. That's what I'm thinking. That's just my guess. But I think if you were to open the floodgates and let that Canadian crude flow into Cushing and into the Gulf Coast, it would be more difficult to keep the NYMEX crude price inflated the way it is. There would be a drag on it. You just don't want to do that.

Unless you could come up with some the way, politically, that would

allow crude oil exports, but I just don't think that's ever going to happen, not as long as we are still importing half of our crude, and to let the Canadians export crude to the Gulf Coast, I just don't think it's going to happen. So my hunch is that –

C. AUSTIN FITTS: So you don't think the pipe thing will happen?

JIM NORMAN: I think they are going to keep it bottled up as long as they can, yes, until they can find a real home for that crude.

C. AUSTIN FITTS: So that means more money flowing to environmentalists?

JIM NORMAN: Yes, who I think – you know, in my cynical view, and I know I'll be pillared for this…

C. AUSTIN FITTS: Not me because you know something? Whenever the environmentalist's activity skyrockets, and you dig back down, what you find is, sure enough, that's where the money is coming from.

JIM NORMAN: That's right. I mean it's from the government or some rival corporate interest. They use these environmental groups at shills for whatever self-interest they have.

C. AUSTIN FITTS: Right. Most of them have no idea that is how they are being used. They really don't know.

JIM NORMAN: No. It's shameful, but it's completely understandable and should be expected, I guess.

C. AUSTIN FITTS: So speaking of shills, I want to talk about renewable energy. But before I do, I want to start with a couple of weeks ago. Suddenly Al Gore is on the TV talking about there is a tremendous amount of market capitalization in the equity markets and the financial markets from oil and gas stocks, and it's all about to become worthless because of renewable energy.

Everybody should be careful about putting money in oil and gas. Of

course he is a partner in a money management firm. Now, in fact, this follows an article about a month or two ago from *The Economist* saying that half a trillion dollars of utility stocks in Europe has been shaved by renewable energy.

Anyway, so Gore is trumping around on TV screaming all of this, and suddenly, magically, campaigns start across the country at lots of universities to get the endowments to the oil and gas stocks. I'm looking at this shaking my head saying, "Okay. What's this?" Because you never have a campaign rollout like this, with this much force, unless it's centrally planned. So I said, okay, what is the story on the Al Gore and university endowment campaign attack on oil and gas stocks? Where is this coming from?

I'm a person who's given the Harvard Endowment plenty of hard time, including the guys who used to run their oil and gas portfolio or the guys who used to run their real estate portfolio. Their shenanigans in Washington were so horrible, my belief it was for tax exemption.

"I'm a person who's given the Harvard Endowment plenty of hard time, including the guys who used to run their oil and gas portfolio or the guys who used to run their real estate portfolio."

But, anyway, so I'm somebody who has certainly given the Harvard Endowment a hard time. But it was really wonderful because the person who spoke for the endowment at the university, said with a plaintiff plea, "I have a hard time selling stocks of companies whose products everybody is using."

Meaning the people campaigning against those stocks, of course, are driving around cars and buying gas from the same people at the same time, so the hypocrisy is off the charts. But anyway, it's all very funny. You kind of shake your head and you say, well, what's this about?

JIM NORMAN: My hunch is that this is a shakedown. It's extortion in the simplest terms. The oil and gas industry now is loaded with cash. I mean you can't help but make lots of money at $100.00 a barrel. In fact…

C. AUSTIN FITTS: What is their cost per barrel? If the price is $100.00, what is their price per barrel?

JIM NORMAN: Exxon Mobile's finding and development cost, all in, to find and develop and bring on production of a barrel of oil is under twenty bucks. But get this: this is a company that its capital spending is less than half of its cash flow. In other words, they are reinvesting only half of the cash they're generating on the business.

They are paying these huge dividends. They are buying back lots of their stock. Their cash on the balance sheet is more than their debt. They are just a huge cash cow. Most of these majors are in similar positions. So I think the political powers of be have targeted this whole class of people to figure out how we can shake money out of that tree. And direct taxation probably doesn't look good.

But if you can basically shake them down, scare them, and persuade them to funnel money to you in other means, you know, then you're home free. What it will mean is a ramp up in lobbyist spending and all that kind of stuff to stave off these kinds of punishments. They have lots of ways of moving that money around, and I think that the political powers are going after it.

C. AUSTIN FITTS: Right, or certain factions, not necessarily everybody.

JIM NORMAN: Yes.

C. AUSTIN FITTS: Before we go to renewable coal, natural gas prices being as low as they are is certainly reducing coal's market share. What's the future of coal?

JIM NORMAN: Well, coal is still hard to beat as an energy source. I mean there are just so many BTUs there and the Chinese understand this. They are burning more and more of the stuff because it is the most cost effective BTUs they're going to find anywhere. Even if they have to ship it halfway around the world from the United States, they are going to burn coal.

There is no way you're going to shame them into burning natural gas, I don't think, even if they are choking to death on the smog. So I mean there is going to be a market for coal. I think, though, it's going to be a much longer haul before you get the coal gasification movement going full steam, which would basically be you take coal, you cook it.

You make carbon monoxide and hydrogen, so you get sim gas, and then you can put that in a pipeline and take it anywhere, burn it and turn it into petrochemicals, all kinds of things. I mean it would be a brilliant thing if you could do it economically. There are just still a lot of technical problems, and the price tags on those plants are in the multiple billions of dollars. It just doesn't seem to be getting off square one.

So that's probably a ways down the road. It's just hard to beat coal for BTUs for energy, oil for transportation fuels. So I think that those industries still have a long life to them, especially if the manufacturing was back in the states, and maybe you'd see a bit of an up peak in steel production in the U.S., then you could see more coal demand there too.

C. AUSTIN FITTS: Well, the facilities here still have a big coal-using infrastructure.

JIM NORMAN: Right. They're not going to shut that down, I don't think. I think they could extend the lives of these plants many, many years. I mean coal use; it's quite clean. There is very little soot and sulfur going up in a flue anymore. There are still trace elements of stuff. Yes, you get a little bit of mercury and everything like that when you burn coal, but I think even the amount of that stuff is being reduced.

C. AUSTIN FITTS: Renewable energy, every sign seems to be it's increasing by small amounts steadily. I know we certainly often get reports about the price of solar panels coming down. There seems to be sort of a policy commitment to trying and using a little bit of everything. So what's happening with renewable energy, and is there any hope of it becoming price competitive?

JIM NORMAN: Well, the short answer is no. I don't think it's really going to

become price competitive without massive subsidies. I mean the reason solar panel costs are coming down is because that whole industry was so overbuilt; half the makers have gone bust. So you've got these idle plants sitting around. You got to run them if you can, and just make whatever you can.

The wind power energy, I think that thing has hit or will hit a brick wall here because it's just not generating the kind of returns they expected, it's turned into an environmental eyesore and a gigantic bird-killing machine. California, they've got like 10,000 of these windmills just sitting there idle, just dangling there because they are not worth fixing.

They are so expensive to go up there and replace the generator and all that stuff, so they just sit there. The motors go bust, and then who does it? I mean it's subsidies, they create a whole new set of problems here. When you subsidize fundamentally uneconomic behavior, somebody ends up paying big time for it.

C. AUSTIN FITTS: About a couple of years ago, I remember reading a piece in the Council on Foreign Relations in foreign affairs, that was promoting the idea of we ought to have a robust energy base so we ought to try and use all these different renewable energies and develop them. The question was why. Why is the policy commitment coming to try and use lots of these different energies if we haven't gotten to a point where they are cost competitive?

JIM NORMAN: Well, I don't know. There is something fundamentally illogical about this. I mean doing uneconomic things. Actually though what it seems to me is a lot of this is just window dressing. There is a lot of talk, but nobody is really making it work very well.

I mean when you talk about shaving vast amounts of market value off of European utilities, it's because they have to pay through the nose to buy this overpriced alternative energy. It fundamentally lowers the value of that company to do that. You get that in the United States too, these mandates to buy –

C. AUSTIN FITTS: So it's really the subsidies that are shaving the money off.

JIM NORMAN: Yes. It works in reverse.

C. AUSTIN FITTS: Well, is the theory by trying this stuff and subsidizing it, we'll learn how it works and we'll figure out how to make it economic? What's the theory behind doing it?

JIM NORMAN: Well, I really don't understand the theory. I mean the idea is that there is a free lunch out there somewhere, but there isn't. But these technologies don't work anywhere near what they were expected to. They are much more expensive and they are not reliable. They are not as reliable as tried and true fossil fuels in most cases. I think we're stuck with oil and gas for a long time.

"The idea is that there is a free lunch out there somewhere, but there isn't."

C. AUSTIN FITTS: Well, part of the issue is even if you could get solar or some other renewable energy to be very economic, the reality is that the dollar is on oil standard, and you can't change the energy model without changing the currency model. So it's a financial ecosystem. It's very difficult to change one without changing the other.

So to me, this is not just about the energy, it's about how you organize the financial system and changing the global currency is a pretty complex big thing to do. I was just out at a conference in Boulder called Breakthrough Energy, and they had one in Holland last year, and then one in Boulder this year. It's all the inventors working on other forms of energy that are supposed to be more efficient or more productive than renewable energy.

There is wide divergence as to whether people believe that stuff exists. Now I believe it exists, but getting it to the point of where it could be integrated into the infrastructure and economic and risk managed, that's a whole different kettle of fish. But I didn't know if you had any thoughts on that?

JIM NORMAN: Well, it seems to me that they ought to be able to find a multitude of forms of economical renewable energy sources. But there is no free lunch. I mean a lot of these have significant pollution effects with them that you have to mitigate in some way. Biofuels, you burn that stuff, you get nasty stuff as well. We do need to be working on many, many fronts to do other stuff.

But my basic feeling is that to make the United States really work well, like the way it used to, is you have to remain a low-cost supplier of stuff. What's unfortunately happened over time, we've larded up our whole governmental and business structure with huge layers of costs, which maybe have no noble social intent, but I think are probably not so effective and basically priced us out of the global market in many ways. We're trying to…

C. AUSTIN FITTS: You are being way too nice.

JIM NORMAN: Well, we're trying to compensate for that now by driving down our own currency, which is kind of like shooting yourself in the foot.

C. AUSTIN FITTS: Well, we've layered on centuries of control rules that have created an unproductive complexity, which is ridiculous. I posted a rant on the blog the other day because Black Friday was clearly disappointing for many of the retailers, and literally the next day, the president is out saying you should increase the minimum wage. At which point I said, "Well, why don't you just stop doing the 4,550 million things you're doing to destroy people's income?"

JIM NORMAN: Yes, really.

C. AUSTIN FITTS: Instead of mandating that their income increase when it really has become like *Atlas Shrugged.*

JIM NORMAN: People are just getting more and more frustrated and running out of patience. But of course there is nothing that anybody can do or it feels like that.

C. AUSTIN FITTS: Well, the funny thing is markets work. Markets really work. One of the challenges we're facing is if you have a national security goal of wanting to keep the Chinese in check, then you manage the price of oil to a much higher thing so the market can't work. So we've reached this point where we have all sorts of policy goals that have us intervening with markets, whether it's holding the oil price up or making more rules here in the United States. But at some point, you choke on the absence of markets.

JIM NORMAN: Right. The big thing is the whole interest rate and currency thing. I mean our strategy has been to drive down the dollar to basically squeeze the Chinese, and you do that by zeroing out interest rates basically. That's what Burnanke has been all about. Quantitative easing is not about stimulating our economy; it's about trashing the dollar. The trouble is everybody else is trashing their own currencies too.

So it's a global currency war to try and drive down everybody's currency. So we end with zero interest rates all over the place, and anybody with any wealth can't get any return on it without taking absurd risks. You end up with all kinds of stupid risky investments going on, and money being directed in the wrong directions all the time. This is where markets just have fallen apart.

C. AUSTIN FITTS: Right. Well, it's back to, are we going to use the financial system for economic warfare, or are we going to use it to allocate and manage resources in a market economy? I get in groups of very well meaning young people or activists, and they say, "Capitalism is bad." I said, "How do we know it's bad? We've never tried it."

JIM NORMAN: What we have is hardly what I would call capitalism.

C. AUSTIN FITTS: Right. Before you oppose markets, you ought to try them. Okay. So we've got a whole bunch of questions from subscribers so let me –

You know something, Jim, one of the reasons I so appreciate you and I so love having you on The Solari Report is in the name of economic

warfare. You have seen a significant amount of corporate or governmental interests, fun, well meaning people, who don't know better, to adopt and promote all sorts of heart-wrenching, heartwarming stuff; it's all stuff that manipulates our emotion into all sorts of hooey that just doesn't make sense. You have a great way of unpacking it, so I hope you always feel free to do that, certainly here on The Solari Report because this is what people need to hear.

JIM NORMAN: This is why I'm in trouble. Okay.

C. AUSTIN FITTS: Why are you in trouble?

JIM NORMAN: Well, because as you can tell, I'm a contrarian, and just about every time I open my mouth, I think – and certainly with my wife, so it's…

C. AUSTIN FITTS: I have one member of our team who always says to me, "You're always getting in trouble with the fourth chakra for people." Do you know what I mean by the fourth chakra? I'm always getting in trouble with the four-chakra people because I'm telling them things like what you're saying here, but this what we need to hear. We need to hear the facts.

Okay. So a few questions and thoughts for Jim's upcoming interview: "How many fracking holes are there present in the lower 48? What's the average production life of a fracking well?"

JIM NORMAN: Well, I don't have all the specifics, but I think, as I might have mentioned earlier, we drill about 40-45,000 wells a year in the United States. Of those, about three quarters now are drilling for oil because that's the target du jour. In the past, at least half gas drilling. If you added it all up, the total number of wells in the United States has got to be into the millions easily.

Now most of those are old vertical wells, but more than half the wells we're drilling now are horizontals, and so those are all fracked. So you are adding probably 20 or 30 millions horizontal fracked wells a year

now so production is going up. We are drilling wells and actually the per well production is going up, up, up, even in these mature provinces because the technology is relentless.

You can drill longer laterals. You can frack them more often. You've got just better stimulants, all kinds of stuff. It's getting more stuff out on the ground. The life of the well is holding up amazingly well. They say you can expect actually a 30-year life on many of these wells. Now, the production after ten or fifteen years would fall to maybe half the initial production, or less maybe.

"The life of the well is holding up amazingly well. They say you can expect actually a 30-year life on many of these wells."

C. AUSTIN FITTS: Help me with the numbers because you said we're drilling 40-45,000 a year, and then you said 20-30 million. I didn't understand.

JIM NORMAN: Oh, I'm sorry. The total wells cumulatively drilled in the United States would be in the tens of millions, I think.

C. AUSTIN FITTS: Right. But those aren't active.

JIM NORMAN: Many of them are still. A lot of oil wells are still active. Yes. I mean that's the thing. Once you drill a well, it just sits there. Even if you are getting just a modest amount of gas out of it and particularly oil. A lot of old oil wells that have been shut in, have been brought online because the oil is so valuable now. It's worth putting a pumping unit out there and pulling out a couple of barrels a day. It pays the electric bill.

C. AUSTIN FITTS: So how many new wells need to be drilled every year just to keep up with the declining –

JIM NORMAN: We are drilling more wells than we need to now.

C. AUSTIN FITTS: So we're adding capacity?

JIM NORMAN: The new ones are producing more than the old ones. So you

are actually able to grow the country's hydrocarbon production with a somewhat declining rig count. The rig count now is under 1,800. It had been 2,000 or more. Back in the early eighties, it was like 2,500 rigs working at any given time. So we are getting more efficient all the time with this, and I think we've really only started to cap some of these vast shale plays. There is probably more out there that we haven't even thought about yet.

C. AUSTIN FITTS: So the refining capacity, do we have the refining capacity to be self-sufficient?

JIM NORMAN: Oh yes, or we could if we wanted to. Actually we are exporting about two or three million barrels a day worth of gasoline. We import maybe a million barrels a day of refined product. So we are net exporters of refined product. That's where people get the impression that we're exporting energy now. We're not really exporting energy, but we are a net exporter of gasoline, distillate, and natural gas liquids, a bunch of that kind of stuff.

So, once you have a refinery in place, you can expand that. It's just a matter of throwing money and steel at it, and you can build more refining capacity in place. The refining industry chronically has been characterized by over capacity, particularly on the distillation side, the point where you just boil the stuff – the pots where you boil it.

There has long been a significant over capacity and under utilization in the refining. That's why it was always kind of a doggie industry because it has such low capital utilization figures. In a typical manufacturing industry, if you're running at less than 90 percent of your capacity, you are probably losing money because you've over invested. You are not making good use of your assets.

Well, the refining industry would chronically run about 80 percent of its distillation capacity, and it's kind of bumped along making margins. Only the really big guys made much money at it. But then when prices ran up and the margins expanded, then even smaller refiners could do well. Plus, we mandated much more expensive gasoline formulations and

stuff like that, so you put more units on the end of your refinery to clean stuff up. You can make more money on that.

I don't think there is any fear about a shortage of refining capacity. Look at Sunoco, they are a big East Coast refinery. They basically turned off the lights and shut the place down, and sold it to an airline. Was it Delta that bought one of their refineries just to make jet fuel because there was too much capacity around? I think Sunoco probably made a bad decision, but that's the way they read the cards. I don't think we're short on refining capacity, and if we needed more, we could build it in short order.

C. AUSTIN FITTS: So if you look at the profitability of our domestic oil and gas space, how do some of these other things compare? So let's just look at the Canadian tar sand and solar panels. How do they compare in terms of cost, competitiveness, and profitability?

JIM NORMAN: Well, the question the person raised may have been more in terms of energy in versus the energy out, and what is the energy return on investment. That's one way of looking at things and whether they make economic sense or not. But it's not a great measure because, for instance, with like tar sands, what you get out of that is liquid fuel. That's ultimately why it's refined.

You get liquid motor fuels, which are very valuable. What you put into it is tar sand and natural gas, which up in Canada is dirt-cheap. So you can dig the stuff up and process it with cheap natural gas, and you can get very valuable liquid fuels. Now on a BTU basis, the gas is probably on an equivalent basis with the oil that you get out of it, so on strictly an energy input/energy output basis, it's kind of a wash.

But you're trading cheap natural gas for valuable motor fuels, so economically, it's a home run. It makes a lot of sense. Solar panels, in theory, you get the electricity for free when you set them up, but how much energy really goes into making those things, and how much rarer, materials, labor, financing, all of that stuff goes into it. Then the trouble with it is you don't always get power out of it when you need it, and you

can't store it very well.

So the actual functional utility of the product you get out of it is handicapped, I think. So I guess what I'm saying is it's very hard for solar and wind, and a bunch of these other technologies, to compete with oil particular for liquid motor fuels. That's where the real need and the value is, an economic way to move vehicles and move people around. So even if tar sands don't look like a great deal on an energy input/energy output basis, economically, they are a homerun.

C. AUSTIN FITTS: Right. Right. It's funny, in the embrace for energy world; you'll see all of the Japanese inventors. He claims he can run cars on hydrogen, water, or these other things. I've never known what to make of them. The one thing I will say is if such a thing ever came into being, I would think it would have a devastating impact on – I mean changing the infrastructure over an entire industry worldwide is an enormous and gut-wrenching thing to do. So I have no idea if any of these technologies really work or if you have an opinion on that. But if they ever do, if you think fracking is going to cause water problems, wait until you see what that would do. I don't know. Do you have any comments?

JIM NORMAN: Well, I just think that it's just really hard to beat gasoline as a medium for transporting and using energy in a really powerful way. I don't own a car because I live in New York. If I were to buy a car, I might buy a hybrid, but chances are, I'd get much more bang for my buck if I just bought a fuel-efficient gasoline-powered automobile. You could probably buy and throw away three of those for what you'd pay for some expensive hybrid.

Besides that, the cost of operating a car, fuel is de minimis almost when you look at the total cost of owning a car, especially in New York. You've got insurance. You've got to park it. You got to pay the tickets.

C. AUSTIN FITTS: Right. Well, I remember in 1985, I was paying $450.00 a month for parking in New York.

JIM NORMAN: Yes. Well, it's that much and more. I mean it's total piracy. In

New York – well, think of all the time you spend sitting in traffic jams. What's that worth? I mean this is one of the reasons that miles driven have been on decline. People are just tired of sitting in traffic, and we can work at home now. Why bother?

C. AUSTIN FITTS: So let me turn to transportation because one of the things I'm very interested in to follow is what's happening in railroads. We are seeing more and more indication that one of the big plans for moving around and increasing domestic production is with rail. Shipping oil from North Dakota out by rail to the West Coast. How is this stuff going to be moved? How much is going to be a pipeline? How much is it going to be rail? What are the implications for the transportation infrastructure?

"We are seeing more and more indication that one of the big plans for moving around and increasing domestic production is with rail."

JIM NORMAN: Well, I think rail makes lots of sense. It's not as cheap as pipelines if you could get a pipeline built in the long run. But on the other hand, if the production subsides or moves around somewhere else, you don't have a lot of embedded infrastructure. You can move those railcars wherever they need to go. So rail makes sense. Plus, you can batch – you can move small batches of different grades of crude oil. With a pipeline, you don't really want to be mixing lots of different grades of crude in a pipeline because it kind of fouls things up.

C. AUSTIN FITTS: How much can you move by ship? Is there any amount that can be moved by barge or ship?

JIM NORMAN: Well, within the United States, you know, it's awkward. There is some oil barge traffic out in Mississippi, but I think that's not real popular. There is not a whole lot of that. See, I think that it's better to use rail. You can take the railroads down to Mississippi, and get oil to exactly where you want it without having to handle it as many times. If you are moving oil between U.S. ports, you're subject to The Jones Act, and so that's expensive.

C. AUSTIN FITTS: Well, when Buffet had bought Burlington Northern, I sat up and said, okay, what's up? Then when he took it private, I said, okay, now I really want to know what's up because he wants to keep this secret. Then Carlyle came in and bought one of them, and I said, okay; I started looking at railroads. So clearly, they are planning on using railroads for a lot.

JIM NORMAN: Well, when they are not in expansion mode, they are cash machines. I mean they generate vast amounts from the tax deductions and depreciation and so forth.

C. AUSTIN FITTS: Right. Well, the other thing is I drove through the ice storms when I was coming back from California this time, and what was interesting is I've never seen as many trucks totaled as in this particular storm. The railroad – the trains had hundreds of cars that were just flying by in the middle of the blizzard. So I think if you're worried about weird weather, there is a compelling case to be made for railroads as well.

Let's see. So let's talk about investors. If you are an investor and you are looking at the world of energy, and you're watching the debate about U.S. self-sufficiency. You are watching the debate about renewable, and you're watching the debate about nuclear, you are watching the claims on breakthrough energy.

Al Gore saying all of this is going to wipe out the stock market valuation of fossil fuels; it can be very confusing. You are almost tempted as an investor to say, you know something, I'm just not going to have anything to do with energy. I'll go focus on industrial. So if you were talking to investors in terms of areas or sectors, what do think is important to know? So I would say that from our conversation, one is that the oil and gas is going to be quite long-lived.

JIM NORMAN: Well, that's my hunch – until it's not. I mean if the geopolitics changes, and it could slip over night, then you're back into the early 1980s mode where everybody was going bust. So I think that's why a company like Exxon and the majors don't go hog wild over investing and play their cards very cautiously because it is a commodity industry.

As I say, the fundamentals don't look good. I mean there is plenty of oil out there. If markets were allowed to equilibrate, oil prices would be much lower, and probably a significant amount of investment, as we've seen lately, would be uneconomical.

C. AUSTIN FITTS: Well, if you go back and read *The Oil Card*, you're describing the years in which the price was brought way down to kind of bust the Russian and Soviet Union.

JIM NORMAN: Right.

C. AUSTIN FITTS: And I agree with you. I think that was the lead strategy in sort of busting the Soviet Union. If that kind of scenario were to happen again, you're talking about a dramatic change in fortune in this industry.

JIM NORMAN: Yes. Right, and especially now because in good times like this, I mean everybody has flocked into the oil and gas business. So there are lots of new companies and lots of IPOs, huge numbers on the stocks. But oil and gas companies, I found, are notorious in basically squandering wealth.

They find various ways to squander wealth. I think that perhaps a more cautious approach would be to look at the oil-filled service industry. Those guys make money in good times or bad generally, and I think have much more control over the price of their products. So it's kind of an indirect way of benefiting from it. The big guys pay some dividends, and I think they are well managed by in large, and transparent.

C. AUSTIN FITTS: Well, the area that I've been much more interested in is if you're going to significantly drop the cost of production in the United States, then you are talking about potentially rebuilding the industrial base of the United States, and then the transportation base as well. To me, what could happen there could be very, very interesting.

Now, my prejudice, which is a different topic, is if you look at what they're doing in terms of rebuilding our capacity to do certain things, including private space programs, I think there is tremendous demand

for a strong industrial base here for reasons having nothing to do with bringing the price down.

But the combination, to me, is much more interesting. So it's not so much energy or oil and gas, itself, or the different forms of energy, but what does a lower, steadier supply of energy allow you to build and to do as a society. To me, that becomes very, very interesting.

JIM NORMAN: Yes, I think that's true. Technology is relentless, and who knows what's going to come down the pike here. As an industry, though, it is very frustrating because you can be killed on some of these new fangled things. I tend to gravitate towards known technologies and assets that you can see and touch, and cash flows and good balance sheets.

C. AUSTIN FITTS: I used to have a partner who would say that cash flow is more important than your mother.

But that is the ultimate test: Does is cash flow and can it cash flow? I think to me, the most important takeaway for investors is if a society can have a long-lived and steady supply of low-cost energy, then it has a platform to do many very powerful things. On one hand, if you're going to invest in energy, you're tortured by the issue of am I in a market economy or in a politically managed economy, where the economic warfare is increasingly unpredictable and mean, and that creates great risk for me.

So that is one way of looking at it. The other is saying, well, wait a minute. As a society, what this is all coming together to do is to give us an incredible North America platform of low-cost, a rich supply of energy, and what does that mean as a society what we can do? That's where there is something that's much more steady from an investment standpoint. So, to me, that's the big takeaway.

JIM NORMAN: Well, there is always New York real estate. It just goes up and up and up.

C. AUSTIN FITTS: It's funny. When I lived in New York, I got there in '78,

and the only conversation anybody would have for ten years is how they got their apartment for a steal during the fiscal crisis, which was three years before I got there. It was all very irritating. Anyway, so Jim, I can't thank you enough. This has been a great conversation.

In closing, anything you'd like to add? I'd like for you to tell us how we can keep up with your work, and of course ladies and gentlemen, if you haven't read *The Oil Card*, it is the must-read book in the whole energy world. It's the one if you want to understand what's really going on, you have to read. I made the mistake of taking *The Oil Card* with me to dinner. In California, I was having dinner when I first got it, I sat down and of course I shut down the restaurant because I couldn't put it down. But I read it, literally, in a four-hour dinner.

JIM NORMAN: You are very kind. Actually, the book, I think we're at a point where we have to decide if we're going to do another printing or not because I think we've finally sold out everything we've printed. You can still get in on Kindle on Amazon and stuff like that. I have not been doing much writing lately. My wife had got me embarked on a whole massive remodeling program, so I'm long on power tools right now, and having a lot of fun doing that. I might get back to writing at some point.

"I have never seen anybody analyze what, to me, is kind of obvious stuff, and the book has held up exceptionally well for the five years it's been out there."

I do try and watch this stuff. It's very fascinating and I'm so glad that you are still interested in this. I have to say, *The Oil Card*, nobody else has ever actually analyzed things that way. I have never seen anybody analyze what, to me, is kind of obvious stuff, and the book has held up exceptionally well for the five years it's been out there. I mean things have come out just about the way we said they would.

As I wrote the book, I said, look, I don't know a lot of what's going on, but this is the way it looks to me. It's held up well. It's been a useful paradigm for looking at the world and it does explain a lot.

C. AUSTIN FITTS: It explains a lot and it's the one book on oil and gas that I've ever read that fit with reality. There are a lot of books out there that will describe the official reality, but this one really fits with reality.

JIM NORMAN: Okay. Well, thanks again for having me on. It was great talking with you and best of luck to you.

C. AUSTIN FITTS: Have a wonderful holiday season for you and yours. Thanks Jim.

JIM NORMAN: Likewise. Bye.