

Center for Strategic and International Studies

TRANSCRIPT  
**The Reopening**

**Daniel Yergin on "The New Map"**

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SPEAKERS  
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Andrew Schwartz: You're listening to The Reopening. The podcast that asks, "How will America work through the COVID-19 pandemic? How will we innovate, and how will it change our global economy?" Each week we invite top business leaders to share their insights on the road to economic revival here at home, and around the world.

Scott Miller: Our guest today is Pulitzer Prize winning author and energy expert Daniel Yergin. Daniel is vice chairman of the research firm IHS Markit and has served on the Secretary of Energy's advisory board under the last four presidential administrations. Daniel talks with us about his latest book, *The New Map*, which is a story of how energy revolutions are shaping geopolitics, security, climate, and health.

Andrew Schwartz: I'm Andrew Schwartz.

Scott Miller: And I'm Scott Miller.

Andrew Schwartz: And this is The Reopening.

Andrew Schwartz: Daniel Yergin, Pulitzer Prize winning author and global energy expert joins us today because he has a new book out, *The New Map: Energy, Climate, and the Clash of Nations*. It's a terrific book, it's one of his epic studies of the energy landscape, and today on the Reopening we want to ask him questions about what that landscape means for the future of our geopolitical economy as it relates to energy, as it relates to great power. So, Daniel, I wanted to open by asking you, you know, and at its heart, *The New Map*, your book, is about power, both in the sense of power as fuel to move cars, and tractor trailers, and ocean-going ships, and planes, to run factories and light up cities, but also power in the sense of political power. In the sense that nations wield power to drive their economies forward and great competition. Can you tell us what's your thesis in writing this book? What did you find out?

Daniel Yergin: Well, certainly, writing a book like this is really a process of learning and discovery. And it is a new map. And it's a new map of energy and geopolitics together and how they interact. It's about a change of position in the United States, very dramatically different from it was a decade ago in terms of energy. But it's also about the conflicts in the world. It's about the growing rift between the United States and China. We can say it's about the Shale Revolution, but it's also about the solar revolution, the energy transition. So, all of that adds up to this new map, and really trying to guide the readers and to make sense of it and know where we're going.

Andrew Schwartz: When you look at this new map, what were the players that stand out? Obviously you have the United States, you have Russia and China, but how do they interrelate to each other in your book?

Daniel Yergin: In terms of oil, traditionally, people thought about OPEC versus non-OPEC, you know, in the global oil market. But now we think about it, at least I think about it in the book in terms of the big three. The United States, Saudi Arabia,

and Russia. And the U.S. is the biggest of the big three because it's the world's largest oil producer today, which would not have been imagined a decade ago. And that really does change the balance. It means that you can have an attack by Iranian drones on a Saudi major oil processing facility and it ends up when you look back on it, two or three weeks later, it's a blip. So, it's changed the security calculus, this growth of U.S. production. In terms of Russia and China, you know, I wrote my first book many years ago on the origins of the Cold War, and I never expected to be writing a book about the emergence of new Cold Wars, and yet that's what we have with China, and that's what we have with Russia. And as I was writing the book, it was just becoming more and more apparent that that's the direction the world is going in.

Andrew Schwartz: Scott do you want to jump in here?

Scott Miller: Sure. Yes. A lot of the discussion in the book, which I read in the last several days and I recommend to all our listeners, is the role of technology. In particular disruptive technology. Clearly the book starts talking about the Shale Revolution and how no one expected hydraulic fracturing and shale gas production to turn into what it, what it did. Same goes for tide oil in the Balkan region and the Permian Basin. We talked about the discoveries and the technology efforts that led to there being oil serves and gas reserves in what we call the Eastern Mediterranean. So all these things, there's a disruptive element of technology. We seem to be seeing that as well in a lot of aspects of life post-Covid. And I wonder if you could talk about that, how some of the technology that's disrupted the energy markets might also get us to an energy transition faster. Things like remote work, the application of technology to distance learning, all the kinds of things we're seeing elsewhere in society outside of energy markets.

Daniel Yergin: The big question is to what degree will electrons replace molecules. That is digitalization versus travel between going places. And I think you're quite right to say shale is a disruptive technology. I think the plummeting costs of solar make that a disruptive technology too. But of course Covid is a huge disruption, and I think we'll look back and almost not comprehend the full impact of what did continue to work, what didn't continue to work, what the political impact has been of course, and the impact on the lives of people and shuttered shops, as you walk through parts of cities. But I think that you could say that six years of digitalization have been compressed into six months. So, work will be different, we can see it just in our own company. And you know, the fact that people are connected electronically this way, through the internet this way. And so commuting will probably, you know, there'll be less commuting to some degree. The office of the future will be at home. On the other hand you also see that people are not keen to go on public transportation. They don't want to mingle. And so you see this surge in people buying used cars right now. So that kind of offsets some of those things. But, you know, so I think we'll still see what the impacts are, but we won't fully see it until this crisis is over. And we see what kind of GDP growth we have, how deep the economic wounds are. But you know, education, just, you can go down the list of how things will be changed and

people are struggling to assess how differently their organizations will run things and how different life will be.

Scott Miller: You know your book covers a lot on the transportation sector, which is a big user of energy worldwide and you focus on developments in autonomous vehicles of electric power vehicles, shared vehicles. You talk about the invention of Uber in the book, which is great. At the same time, one way to get cars off the road is to work from home, as we've noticed that in the traffic around metro Washington. The 5 percent of us worked from home before Covid, maybe 20 percent after. That seems like about as big a step change as maybe conversion to electric cars. What do you think?

Daniel Yergin: I think that you can see it in companies are looking at commercial real estate office space to see it, how different, will people – do people need to be in offices five days a week? Do you need that interaction with other people or can you do it all digitally? And how do you mentor people, how do you bring new people on? But I do think, I talk about in the book that part of the new map is the road map, and the road map is about not one kind of technological disruption, but three. Electric cars are still cars, you know, they're just propelled differently. It's the rebirth of Thomas Edison, reincarnated as Elon Musk. But the second change is ride hailing whether it's mobility as you own a car or mobility as a service when you need it. And then the third one is self-driving cars. So I say if you bring the three of those together in this kind of new triad, that would be a whole new form of mobility that really would change the basic structure of the automobile industry and automobile ownership, as it has been since the Model T rolled off Henry Ford's assembly line more than a century ago.

Andrew Schwartz: You talk a lot in the book about Alexandria Ocasio-Cortez's Green New Deal. What do you think about the effect of climate change, as it relates to the hydraulic fracturing debate and the other energy debates that we're having in the United States right now?

Daniel Yergin: I think things become confused in fusing them together. I mean, there are 280 million cars in the United States. About 279 million of them run on gasoline. The average American car stays on the road about 12 years, so you know our oil demand is not going to disappear overnight. If you say, let's stop fracking, what happens? Well it means we import oil, a lot more oil. So, you know, stopping fracking, heavily regulating it from going forward would be basically an important oil policy. So I think sometimes the slogans, I get confused with the reality of how the markets work. You know, people are not going to throw away their cars. So, and of course, there's much more use of oil than just for transportation, right. It's used for many other things. If you think about a hospital operating room. It's dominated by things that are plastic. You look at medicines, they're made with oil products. You just kind of go down the list, and the N-95 masks that people wanna wear for safety is an oil product. So, it's not just a question of transportation, although that's a big segment of the demand. But there are many other parts of life and in fact, what's quite noticeable if you take an electric car, it has a lot of plastic in it.

- Scott Miller: That's right. Your book points out the benefits of low cost, widely available, plentiful natural gas to the manufacturing industry, I call it a manufacturing Renaissance. In one of the early chapters of your book talks about Dow chemical, who had plants on the drawing board ready for production in the Middle East. They canceled them and built them in the U.S. instead because of cheap, plentiful natural gas. Certainly organic chemistry comes from hydrocarbons. And so, this does seem to create some advantages for the U.S. over the medium to long term. How do we stack up competitively?
- Daniel Yergin: Well those are the economic advantages that are not well recognized in terms of employment, in terms of manufacturing. This was a major positive for manufacturing in the Midwest. Very substantial part of fixed business investment was going into the sector. And a number that really strikes me, is that as a result of this shale revolution, over 200 billion dollars, 200 billion dollars of new manufacturing plant built in the United States that before this Shale Revolution would have been built in the Middle East or somewhere else. And so, that's money that stays in our economy. And it feeds the entire economy. And you know that's a very big deal and it's a very important segment, part of GDP, employment directly and indirectly.
- Andrew Schwartz: Can we be leaders going forward on climate change issues, and be energy self-sufficient as well?
- Daniel Yergin: I think that might well be what happens, depending on who's president. You know, the Biden campaign has made clear, Joe Biden's made clear that climate is a very high priority. He has a \$2 trillion climate plan that has multiple aspects to it. But you know, you hear him in western Pennsylvania, just a few days ago saying I'm not going to ban fracking. I repeat, I'm not going to ban fracking. So, I think, not everybody, if there is a Biden administration, would agree with it, but I think some people would agree that you can move ahead on climate but also in the world that we're in now, having the U.S. in the energy position now, is more beneficial to the country than not being in that position.
- Andrew Schwartz: But is it possible to be both at the same time?
- Daniel Yergin: Well, it depends what you mean. Because, remember, the oil and gas industry that's primarily a private sector activity and what the Biden plan is, is primarily public sector activity.
- Andrew Schwartz: Well yeah, he said we're not going to ban fracking on private lands. He said, they will ban fracking on public spaces.
- Daniel Yergin: Well, and if he does that, that certainly will have a diminishing effect on the position of the United States. You know, public lands is such a confusing issue. People don't realize how big the public lands are in the United States. If you take the western states, it's like 48 percent of the entire western part of the United States is owned by the federal government, and some of that is fantastic national parks and things but 48 percent is a lot of land that not much is happening on.

Scott Miller: True. And it's one of those things that among many things that change fast. I will note that there was a section in your book that talked about the relative price stability 2011 to 2013 where oil stabilized around \$100 a barrel, and everyone thought it was what the quote "new normal" end of quote. I almost laughed out loud when I read that, because today it's oil's \$37. We've gone everywhere from 100 to negative 17 on May futures last March. How much of what we see in energy markets is going to have to remain kind of unpredictable rather than lulling ourselves into a new normal?

Daniel Yergin: Well I've heard the new normal term many times and I kind of think when you hear the new normal you should maybe get your running shoes on, because things will change. And whatever the consensus is -

Scott Miller: Sell short, yeah. [laughs]

Daniel Yergin: Yeah, whatever the consensus, it lasts for two to three years and then events come along, change it. So you know the new normal now is \$40 to \$50. And you now, in 2021 or 2022 the new normal could be \$60. So, this is a volatile commodity and it's very much affected by the available supply but it's really also affected by GDP. I mean we went through what I called in *The New Map* an economic Dark Age for several months in the United States and we're only partly out of it now. So, and that'll translate to economic activity. That's why it's, you have to be careful about generalizing about the future by where we are now. I think a year from now is what I would be looking for kind of the real clarity, greater clarity.

Andrew Schwartz: Let's change gears for a second and let me ask you about the United States and China. You talk in the book about how the US and China's engagement is changing dramatically, and part of that is because of energy. Can you explain what you mean?

Daniel Yergin: So, I invented this concept for this book or came to my mind kind of the WTO consensus, which was the notion that the U.S. and the Chinese, opening up the world economy, China would be part of the world economy. And that would be beneficial for China, that it'd be beneficial for the rest of the world, and political tensions would recede. Well, even before President Trump became president, that was changing that view around, that in the United States and certainly China seems to see it differently as well. So that's why, you know, in the last few months you've seen an acceleration of this. The question I ask is where does it go? What's the result? But energy is an important part of it in several dimensions. China is where we were a little over a decade ago: it imports 75 percent of its oil. It regards dependence on imported oil as a strategic problem, and in particular strategic problem because a lot of that oil passes through the Straits of Malacca (The Malacca dilemma) and into the South China Sea. So, you know, with the perennial questions about Taiwan, what's going to happen. The Chinese, their concern is if the U.S. navy would interdict their oil supplies. And so I think that the security of their oil is as they see it in their view, is part of what this is about. And the South China Sea also happens to be the most important commercial

waterway in the world. So, now the book, I take the view based upon the geologists I work with and talking to companies, that people have exaggerated the potential of the South China Sea as a source of oil in itself. It produces right now less than 1 percent of world oil. And the geology, based upon what is known today, isn't very conducive. So I mean there is supplies there and you see contention between Vietnam and China right now over whose waters those resources are. So their significant for the companies but they're not going to change the world balance. But we also see energy as an important element in the Belt and Road. The \$1.4 trillion Chinese plan to quote connectivity in the world economy that would make China more at the center of the global economy. And again, securing energy is a very important part of it. And what really shows up right now, and it was so interesting for me when I was writing *The New Map*, to realize that last December at the same time, within days almost, that we were putting sanctions on the North Stream 2 pipeline to try and prevent Russian gas from, additional Russian gas, from going to Europe, although we can come back to that. At that very same time, there was an elaborate ceremony with Vladimir Putin and Xi Jinping in three different locations where they started the flow of gas through the Power of Siberia pipeline. So that Russian-Chinese relationship, which I say used to be based upon Marx and Lenin, is to a significant degree today based upon also oil and gas.

Scott Miller: No doubt the geopolitics are changing almost as we speak. And these rivalries never really go away, but the essence and the driving forces certainly seem to change.

Andrew Schwartz: Well, one of the things that you said in the book that really struck me is that you talked about the United States and China relationship changing from an engagement to a strategic rivalry and you explain why this rivalry resembles Great Britain and Germany on the eve of World War I. Can you expand on that?

Daniel Yergin: It really does. I mean you know, the Chinese used to talk really before Xi Jinping became president. Now he talks about the China dream but then they talked about being a rising, peaceful rising power. And there's that interconnection. And you know, I think the two economies are - we discover are much more connected than people actually recognize. But what you see is this issue around technology, the sense of competition, the sense of growing inevitability about the rivalry. The military's increasingly sort of planning for dealing with each other. And, sort of strategic competition and then the economic interconnectedness and it does resemble not what was before World War II, but what was before World War I. And of course that ended badly, very badly and you have to be concerned where is this going to go? Is it only going to in a direction of where we see China as overreaching, aggressive, trying to overturn the existing international order? They see the United States is trying to contain them, restrain them. And this fundamental disagreements about where borders are. And I have the map of the nine-dash line in the book as well as the map of the Belt and Road. And I think all of those things just, it does echo when you hear both sides, talking about great power rivalry that echoes the years before the First World War. And so,

that's, I think a caution. You know, Henry Kissinger has written on that and talked about that analogy. Then he sort of concludes that historical analogies are by definition inexact. But the fact that, you know, he puts it out there is something to reflect upon. How do you manage this competition? And you know we've had a Cold War, Soviet-American Cold War, where more than anything else was about nuclear weapons. But the Soviet Union was not a major factor in the world economy. China is so embedded in the world economy, as are we, that it's a very different kind of competition. And I've been striving, as I've been in different countries, where you could do that before Covid, and in discussions on the internet since then, where you hear countries saying, don't force us to choose. We don't want to have to choose between the United States and China. And yet, there's a kind of growing apprehension that they will have to. And to paraphrase Deng Xiaoping, is a consequence, instead of one country two systems, which was the case before for Hong Kong, will it be one world, and two systems? Will we have two sets of technologies and so forth? So, you know two economies that are very-

Scott Miller: You're definitely, there's a great deal of hedging going on.

Daniel Yergin: Yeah. So, I think all of those come together to say, this is going to be the most important relationship, and continue to be the most important relationship in the 21<sup>st</sup> century. And it's gotten a lot more complicated and a lot more difficult.

Andrew Schwartz: Daniel, I want to ask you how Coronavirus has changed the energy markets and the future roles of the Big Three. You talked about the Big Three earlier in this conversation, United States, Saudi Arabia, and Russia, that now dominate world order. How in your estimation has Coronavirus changed the energy markets and what do you see on the other side of Covid-19?

Andrew Schwartz: Well, I think the energy markets has created a crisis for all oil producers. If you mainly produce oil, like Saudi Arabia, it's a very big problem. If you're highly dependent on Russia like Russia, it's also a big problem. It's been a crisis for the domestic U.S. oil industry as well. And I think what you've had is a big cutback in investment which raises a question, when we come out of this and economic growth resumes, will there be tightness in the market? But I think one other party to mention here is China, because we also talked about energy transition. And the country that could be a big winner in the energy transition is China, because it would be less dependent upon oil, less worried about the South China Sea. And it has a very strong position in the new energies and really a leadership position whether you're looking at solar or lithium battery chain. So, these energy issues will very much continue to be part of the political dynamic among the major countries of the world. You know, these energy issues, these geopolitical issues are really complex and they tend to be compartmentalized over here or over there. And what I've really done and it really, just occurs to me as we're talking in *The New Map* is to bring this together in a coherent way, to not only provide a map for people, but a framework for assessing these questions which are going to be front and center for a long time to come.

Scott Miller: We thank you for spending time with us today. The book's a great read and the conversation was equally illuminating, so thank you.

Andrew Schwartz: Thanks for listening to The Reopening. If you liked this episode, please write us a review and subscribe wherever you find your podcasts. You can also find other podcasts from the Center for Strategic and International Studies at [csis.org/podcasts](https://www.csis.org/podcasts).