



'We Need to Raise Our Energy IQ'

A Q&A with Scott Tinker

July 2022 [David Brown, Explorer Correspondent](#)

Scott Tinker holds numerous official titles, including those of director of the Bureau of Economic Geology at the University of Texas at Austin, member of the U.S. National

Petroleum Council and fellow of the Geological Society of America. He is a former president of AAPG, as well as of the American Geosciences Institute and the Association of American State Geologists.

Unofficially, he's a visionary-in-residence for the oil and gas industry and an expert frequently quoted in the media on energy topics. Since 2016, Tinker has served as chairman of the Switch Energy Alliance, a non-profit organization dedicated to energy education and collaborative work on energy challenges.

Tinker shared his thoughts about the current state of the oil and gas industry and other issues in a recent interview with the EXPLORER.

The past two and a half years have been a wild ride for the energy industry, and the whole world. What do you see on the horizon for oil and gas now?

The public in the developed world does not know what to think. They just know gasoline is expensive and every major weather event is somehow unprecedented. They hear about "net zero emissions" and think that is somehow possible in a few years.

They don't understand that no source of energy is "clean."

They do not feel safe.

The public in the emerging and developing world – about 80 percent of global population – is clearer on what to think. They want affordable and reliable energy. And they don't have enough of it now. They are mostly choosing coal and oil.

The global horizon for oil and gas is thus a function of how much courage the industry has to speak boldly and broadly, with truth and humility.

What's your future outlook for oil and gas demand?

To begin, we should separate oil from gas in these discussions. Even though they are sometimes produced together, they are used for different things and have different environmental impacts.

Oil and refined products remain critical. This includes transportation, because liquids are so energy-dense and difficult to replace for moving heavy vehicles around.

Natural gas is very versatile. It's used in making electricity, transportation, heating, cooking, fertilizers, plastics and more. Like oil, it's energetically dense, but with lower CO₂ emissions when burned than coal or oil per unit of energy output. Natural gas is also a reasonably affordable source of hydrogen.

For these reasons, natural gas demand is increasing steadily in almost every geopolitical region of the world.

So, demand for oil and fuels stays strong, even if it levels off. Demand for natural gas actually increases. What about the industry?

The oil and gas industry is quite diverse. The national oil companies, which are underpinned by state support, are doing quite well. International oil companies, which are unfortunately shrinking in number, don't really control much of the world resource. Nonetheless, it is the IOCs that politicians and the public love to hate. And there are independents of all sizes. All of these are vital to our future.

One of my great concerns is that we (in the industry) won't be able to deliver the oil and gas that will be needed in the coming decades. It will take capital, access, infrastructure, public license and more.

If oil and gas become truly constrained – before we have actual, affordable and reliable options – the world will get pretty ugly.

“Pretty ugly” is good wording. What would you advise for the industry today? What should oil companies, and petroleum geologists, be doing right now?

The industry needs to speak up. And people who work in the industry need to speak up. Let the public know what the industry has done to provide energy for the world. And, also, the many steps it has taken to reduce the environmental impact.

Notice I did not say “eliminate impact.” All industries and human activities impact the environment to some degree. We do a disservice representing otherwise.

Always lead with the facts, as Exxon has done recently with its letter in response to the Biden administration's misguided accusations and claims. Fortunately, other courageous CEOs are beginning to do so as well. And not just in the energy sector.

The industry needs to be proud of the work it's done to lift the world from poverty, and to communicate that with humility. There is more work to do.

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And the outlook for geologists?

Anyone who works in the subsurface is going to be needed to analyze, model and develop resources. This includes production of oil, gas and heat/geothermal, storage of H₂ and other liquids and gases and disposal of produced fluids and gases, like water and CO₂.

Demand for critical minerals and metals is increasing, and their price is going up and becoming volatile accordingly. Check out nickel, copper, cobalt, lithium and the like. Importantly, these are all subsurface resources, which are mined, used in products like turbines, panels and batteries, wear out and are disposed of. None of them are renewable or “clean.”

What’s the status of the energy transition at this point? People appear to be realizing that any transition will be a long-term process, not a short-term adjustment.

I don’t call it an “energy transition.” I call it an “emission transition.”

It’s an important differentiation. How do we reduce emissions while providing affordable, reliable energy to everyone on the planet? The reality is that nothing has gone away from the global energy mix, not even wood and biomass. In fact, globally, all forms of energy continue to increase in consumption, as the population and economies grow.

Regionally, we see transitions happening. In the United States we peaked in coal, for now, and it is half of what it once was, replaced mostly by natural gas and wind. As we look around the world, there are myriad transitions under way, and not just in energy. Politically, economically, socially, educationally and more.

If 80 percent of the global population is living with unreliable to non-existent energy, we must accept that for several decades, we will need more energy, not less. Once we get our heads around it, I think an emission transition is possible, but not if we place a misguided and often political focus on eliminating fuels, rather than emissions.

Adding solar, wind and batteries is a good thing. They have a role to play, and they help create a more diverse portfolio. Let’s end the facade of competition between energy sources, and instead get to work expanding optionality and energy resources for everyone.

Is there anything you wish the Biden administration understood about oil and gas, or the energy industry in general, that it doesn’t seem to know?

That the industry doesn’t control the price of oil. That refining capacity is what it is, until you add more. That we need pipelines built to move natural gas to LNG facilities in order to increase exports to Europe and the rest of the world.

That oil and gas production declines and requires more drilling to maintain stable supplies. That no form of energy is “clean” or “renewable.” That EVs are good for some uses, like small vehicles, but not for others, like large vehicles.

That batteries are not “clean” and neither is producing electricity to charge them. That China now controls the global processing of all major mined resources needed for solar, wind and batteries. Shall I keep going?

What would you say to the administration at this point?

If you talk to policymakers and regulators individually, they know quite a bit. If you listen to what they say publicly, that knowledge goes on holiday. It's unfortunate that we're playing politics, and to be clear, that didn't begin with the Biden administration. But they are certainly making it an art form.

The administration, and former administrators like Al Gore, tell the public that oil and gas must go away. Investors get scared off. Students hear that. It's a misleading, confusing and in many ways harmful message.

It needs to end. We can't keep trying to play one energy sector off against another – quit competing oil and gas against renewables and nuclear. Stop playing politics.

We must continue to invest in and develop the infrastructure to produce energy and deliver it. If we don't do that, we are putting our national energy security into other hands in the world. And they are not as interested in U.S. security as we are. They are interested in their own security, as they should be.

What else do you think the average citizen, the average energy consumer, needs to understand about the current situation?

An endless list, unfortunately. I don't think most people understand where energy comes from or how energy is used across the spectrum, beyond filling up the tank and turning on a light. But ironically, they think they do. We need to raise our energy IQ, and understand the reality that energy is vital in everything we do.

This lack of energy IQ allows the public to speak boldly about something of which they have little knowledge. If it stopped there, it might be OK, but it continues with aggressive shaming and canceling of those who do not agree, often attacking the very ones who know the most.

We have to commit to raising the energy IQ in K-12, college and university campuses, continuing education, public discourse, museums, state houses, churches, civic groups – across the board.

I committed my initial career in industry, and in the last couple of decades at the Bureau of Economic Geology, Switch Energy Alliance and Tinker Energy Associates, to inspiring an energy-educated future. It is not simple, but it is solvable. I hope you will join us.