The Myopia of a Carbon-Only Lens

The terms of the Energy and Environment debate must change, says Tinker

Scott Tinker, director of the Bureau of Economic Geology at the University of Texas at Austin, will grant no quarter about either the history and benefits of energy in our lives or its potential to improve our future.

"Access to affordable, reliable energy is the foundation of modern economies," he said.

This subject has been on his mind of late, for he has spent the last two years studying those who are, as he puts it, suffering from "energy poverty."

Some 2.5 billion people worldwide live in some form of energy poverty today.

"Access to secure energy," Tinker said – and he includes those in urban slums, "impacts all other major humanitarian issues, including hunger, shelter, clean water, education, healthcare, human migration, empowerment of women, and more. Those who do not have energy access suffer from energy poverty."

For the past two years, he has been traveling the world to film "Switch On," the follow-up to his award-winning "Switch," a non-partisan effort to chronicle the 21st-century energy transition. "Switch On" focuses on the crisis of the aforementioned energy poverty in approximately a third of the world. The problems are enormous and the truculence on both sides primed, so he said we should, first off, stop the name-calling.

> **"By way of analogy, we would not eliminate food – another form of vital energy – just because growing it consumes vast amounts of water, requires fertilizers, depletes soils and impacts rivers and aquifer systems. Instead, we work to minimize these impacts."**

The Need for the 'Radical Middle'

"We all have biases and are partisan, based on our own experiences. Some lean heavily toward industry and technology, others towards policy and regulatory, and others towards the environment," he said.

He sees a need for both.

"In reality, each of these sectors has an important role to play, and finding the balance is vital. I call the overlap space the 'radical middle,' where things actually get solved with hard work, data, facts and compromise," he said.

More specifically, describing the energy transition as the switch from carbon-based fuels to non-carbon fuels, as many do, is divisive and unproductive.

"It attempts to pit the environment against the economy; the Left against the Right. Completely ignoring the potential impacts of CO_2, methane and other atmospheric emissions is just as myopic as focusing only on the most extreme output from complex, non-linear, multi-variate model forecasts of the future."

Here is the money shot.

"Both the economy and the environment must be solved for simultaneously," he said.

Partisan Prejudice

The elephant in the field, if you will, is coal and oil.

It's an easy piñata for critics.

"Simply stated, coal and oil are not the problem; the energy they provide has improved nearly all facets of the modern world. The emissions produced by their combustion – CO_2, SOx, NOx, mercury, particulates – are an issue. So we must focus on the emissions," he said.

The solution he said is not to throw out the baby or the bath water, much less the entire tub.

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Tinker, who is also the Allday endowed chair in the Jackson School at the University of Texas-Austin, said that understanding the horizon, problems and solutions, will be found in that aforementioned radical middle.

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Continued on next page ▶

◀ Continued from previous page

solved for simultaneously," he reiterated.

Tinker will be speaking on this subject at this month's NAPE Summit in Houston, in his presentation, "The Myopia of a Carbon-Only Lens."

The conversation about the energy transition—this Switch—is inexorable, he said.

He'd like for all involved in the debate, which is most of us, to "grow up."

"The energy transition is being described by some through a carbon only lens: climate change is caused by human CO_2 emissions; the oil industry is to blame; and the answer is wholesale government intervention in energy and economic markets," he explained.

"Not only is this political viewpoint myopic, it is fallacious," Tinker added.

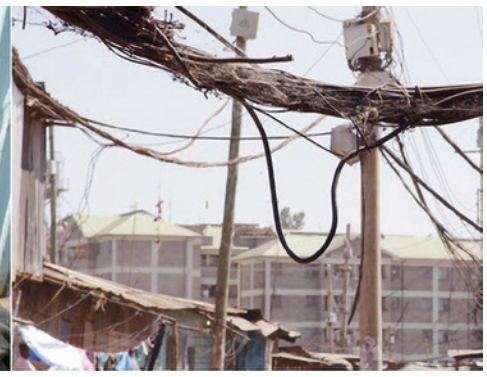
Enough Blame to Go Around

To that end, he said no form of energy collection is "renewable."

"The energy landscape has been changing for millennia. From solar to grow plants and hay to feed animals; to wood for heating and cooking and wind for sailing; to coal (carbon); to oil (hydrocarbons); to hydro and natural gas (mostly hydrogen); to hydrogen, uranium, and thorium. We have recently added back some of the original forms of energy (solar, wind and biomass) to help supplement demand, mostly in poor urban areas and wealthy rural areas. From drilling rigs, pipelines and refineries, to dams and nuclear power plants, to solar panels, turbines and batteries, all forms of energy collection require extracting non-renewable materials from the earth and eventual disposal in landfills or oceans," he said.

Tinker's point is that if we are going to spend time pointing fingers, we're going to run out of digits.

"We are all producers and consumers.



If you want to go after oil industry CEOs whose companies produce energy, then you need to add CEOs from an endless list: technology, fashion, Hollywood, agriculture, automobiles, bitcoin, steel, cement, air transport, shipping, trucking, rail and all other major corporate consumers. Not a realistic, or even productive approach."

The Switch Has Begun

He is sanguine about it happening, mostly because it already is

"For the one billion, mostly rural off-grid people without access to electricity, the transition has begun," he said.

And it's mostly, he said, as a result of distributed renewable energy, predominantly solar PV.

"Such systems provide electricity for such things as lights, radios, televisions, cell phones and water pumps for irrigation. But these are typically small individual panels, or micro grids serving community buildings."

The challenge he believes is in the scaling up.

"And that will happen as micro markets develop, requiring more electricity, which will likely come from a grid-scale source. That is the transition."

There is something else, too.

"It is critical that young people are armed with the facts about energy so they can think critically about the pros and cons of each form of energy: from lifting people out of poverty to broad environmental impacts of all forms of energy," said Tinker.

Iran
from page 12

sanctions on the country's energy, financial and shipping sectors in 2018.

"If we keep going down this road, it's a recipe for war. It's not tenable for Iran to be under this much pressure for long," Krane said.

"The U.S. sanctions on Iran are unbearable. They're going to have to do something," he added. "Iran doesn't have much of a choice. Their country is in pretty bad shape unless those sanctions are lifted."

Iran's Options

Iran has a number of alternatives and "things could go in a lot of strange directions," Krane predicted. Those include the possibility of some kind of international détente involving Iran, or Iran trying to wait out the Trump administration, or Iran turning to Russia or possibly countries in Europe for assistance.

"They seem to be playing this interesting diplomatic game, trying to drive a wedge between the U.S. and its European allies," Krane observed.

Several times Iran has threatened naval action to close the Strait of Hormuz, a strategic chokepoint for oil shipments as the only sea passage for Persian Gulf crude. Or Iran could resume a campaign of harassing oil tankers in the region.

But it's still hard to imagine Iran responding in a way that would have a substantial long-term effect on the global oil picture, given today's world crude-supply conditions, Krane said.

"There's so much more and so much diversity in oil supply coming on that's not being matched by demand growth," he noted.

Despite their differences, the United States and Iran are not necessarily natural enemies and the relationship between the countries has to be assessed in the light of today's political realities, Krane observed.

"Iran shares our interests in Afghanistan and Iraq. We fought side-by-side with Iran, like it or not, against ISIS," he said.

"We're in this period of uncertainty – there's a resurgence of nationalism and populism, there's concern about climate change. It's having some seemingly distressing effects on politics," he added.

In the end, the flap over Iran has found the international oil industry more or less unflappable, Krane observed.

"With all this chaos going on around it," he said, "the oil industry just seems to be carrying on in stride."