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Explorer: Energy should be secure, affordable, clean

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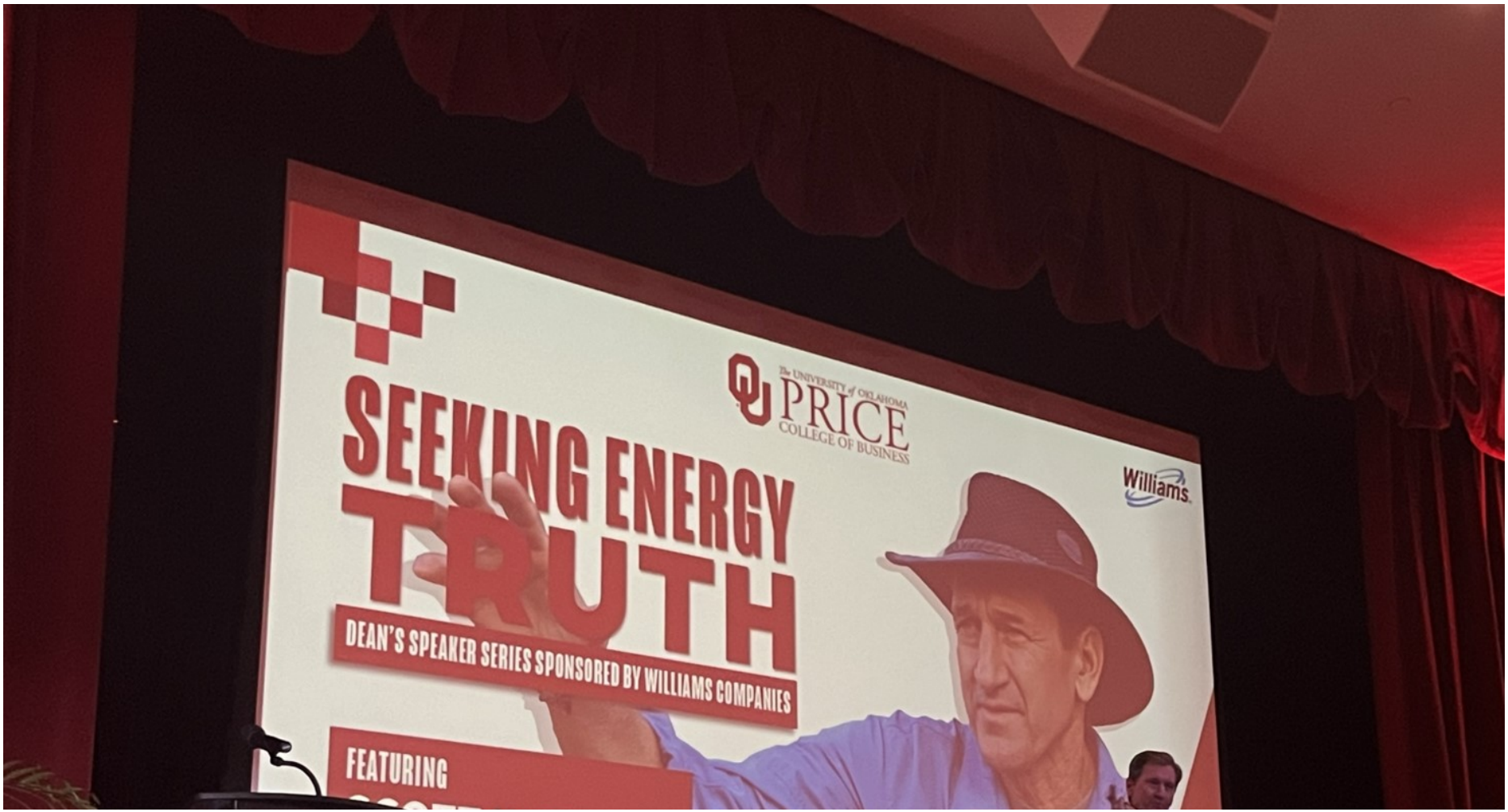

Energy explorer Scott Tinker addresses an auditorium filled with students, faculty and scholars from various fields of study in the opening remarks of his presentation.

Zack Wright | The Transcript

A renowned energy explorer and scholar delivered a presentation on energy disparities and solutions to students, faculty and scholars at the University of Oklahoma Wednesday night.

Hosted by OU's Price College of Business as part of their "Seeking Energy Truth" Dean's speaker series, attendees packed Meacham Auditorium Wednesday night to hear Scott W. Tinker's findings regarding the state of energy worldwide.

Known for his two award-winning documentaries, "Switch" and "Switch On," as well as various Tedx talks and scholarly presentations regarding energy consumption, Tinker described three main components of energy: security, affordability, and cleanliness.

“We want [energy] to be reliable, affordable and [produce] low emissions. Wouldn’t it be nice if we could have it all? But, we can’t,” Tinker said. “In the real world, if you want low emissions, you’re not going to get much of anything else – that’s just how trade-offs work.

“And trade-offs aren’t bad,” Tinker continued, “But you’ve got to compromise, look at the data and really get in where the meat of the problem is.”

After contextualizing the overarching issue, Tinker continued by explaining that energy is in everything in the world, adding that many components contributing to a good quality of life relate to energy availability.

“Everything depends on energy – it powers the world and improves lives, but the tough reality is there’s a lot of people in the world who don’t have it,” Tinker said. “They don’t have shelter, clean water, food, light, and this is one of the world’s greatest challenges.”

To help illustrate energy inequality in real life, Tinker showed attendees a graph comparing the yearly energy consumption totals between his refrigerator and an average citizen from specific countries, such as Ethiopia, Kenya and Ghana. The graph showed that his refrigerator consumes up to 20 times more energy than people in some of those specific African countries.

“Twenty times more than a person? This is energy poverty,” Tinker said. “This is what it looks like. And it’s vital – energy is vital for human beings.”

Further illustrating his point, the explorer showed pictures from these energy-deprived countries and told stories of children dying in hospitals or crossing mountains of pollution to get to school. Tinker also explained that these

countries are often the most polluted because their poor governments can't afford to clean the environment wrecked by the consumption of cheap energy.

Although wind and solar energy are currently the fastest-growing energy industries and could provide more clean energy in the future, Tinker contextualized these claims with data listing the most used forms of energy worldwide. He pointed out that they only make up a small percentage of usage compared to cheaper and reliable options like oil and coal.

"We consume more coal and oil than anything else in the world combined today, by a lot. That's the data, and nothing has gone down over time," Tinker said. "[Wind and solar] are a piece of the growth of our energy demand, but we consume so much energy that these industries represent about 5% of global energy today."

This is the case because most leaders around the world prioritize energy security over climate security, Tinker claimed. Wind and solar can be cheap to generate, but solar panels need to be fixed or replaced over time and wind is expensive to store and transfer.

As Tinker mentioned at the start of his presentation, it's nearly impossible for energy to be clean, secure and affordable – there has to be a tradeoff somewhere that will neglect one of those three factors. To illustrate his point, Tinker compared the types of energy used and the price of gas in Florida compared to California.

As his graph showed, California proportionally used more clean energy than Florida, but Florida's gas prices were lower because policies prioritize producing dirtier sources of energy like oil and natural gas. Furthermore, Tinker showed the audience a picture of a Tesla's electrical framework, claiming that the equivalent of nearly 7,000 phone batteries go into one electric vehicle.

Given the material-intensive nature of battery manufacturing and the mining required to produce the materials needed for these electric vehicles, Tinker expressed that even clean energy can be dirty in its own right. Essentially, all forms of energy have their benefits and drawbacks.

So if cheap reliable energy is dirty but clean energy is unreliable and expensive, how does Tinker think the world can address energy poverty worldwide without continuing to pollute the atmosphere?

Tinker's answer? Sustainable, affordable and reliable sources of energy. But how do these poverty-stricken countries obtain such a vital resource given their lack of supporting infrastructure?

"The challenge, of course, is accelerating economic growth. And this may sound counterintuitive, but we've actually got to accelerate [energy production]," Tinker said. "We've got to get emerging economies out quicker – grow them a little faster so they can afford to invest in our environment like we do."

Tinker expressed that, despite many doomsday opinions about the future of our environment, we have the time to make the necessary changes, but encouraged students in the auditorium to step up and assume the challenge to ensure Earth's beauty for future generations.

"We have time to think critically and act wisely… It's not simple – it's solvable. And there's a lot of complexity, but we need you," Tinker said. "It takes science, engineering, business, economics, policy, law and communications – it takes everything you're trying to do to solve this complex problem.

"Everybody has to protect the environment, but I have confidence in you – I know you will solve this," Tinker concluded.

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