

For the opening episode of our five-part series titled 'An Emerging Energy Framework for the 22nd-Century', Todd Buchholz joins **Keith Krach**, Former US Under Secretary of State for Economic Growth, Energy, and the Environment and Former President, CEO, and Chair of DocuSign.

Announcer 00:00: Welcome to Smarter Markets, a free weekly podcast featuring stories from the entrepreneurs and icons of commodities, capital markets and technology ranting on the inadequacies of our systems and riffing on ideas for how to solve them. Together we explore the question: Is capitalism in crisis? And will building smarter markets be the antidote.

Todd Buchholz 00:27: Welcome to Smarter Markets, a weekly podcast that explores how financial and technology markets can be redesigned and improved to better serve market participants and society as a whole. Smarter Markets is brought to you by Abaxx Technologies. And I'm Todd Buchholz, host of the upcoming five-part series titled, "An emerging energy framework for the 22nd century."

Joining me today for the opening episode of the series is Keith Krach, former US Under Secretary of State for Economic Growth, Energy and the Environment, a position he was unanimously confirmed to by the US Senate on June 20, 2019. Mr. Krach was selected for the position after a 42-year private sector career in which he spearheaded transformations at companies in the engineering, technology and business to business commerce fields, as well as at academic institutions.

Krach most recently served as Chairman, CEO and President of DocuSign, a company that became the global industry leader in electronic signature and digital transaction management. Previous to DocuSign, Krach co-founded Ariba and as Chairman and CEO took the company public, ultimately achieving a market capitalization of \$40 billion, before being acquired by SAP in 2012. Krach and his wife Metta were recognized with a distinguished City Year 2018 Citizen Leadership Award for their service, dedication and impact to philanthropic causes, and are dedicated to paying it forward through the mentorship of a new generation of transformational leaders in the public, private and social sectors. Stay tuned. My conversation with Keith Krach is coming up next.

Announcer 02:28: And now back to this week's episode of Smarter Markets.

Todd Buchholz 02:34: Keith Krach thanks for being with us today! A man of wide-ranging experience, from a boiler maker in Ohio to CEO of DocuSign in Silicon Valley, to negotiating across the table from the hard-nosed Chinese, under the Trump administration State Department, we're going to cover a lot of ground in a relatively short amount of time. And so, I want to start a little bit speaking about Silicon Valley.

At this time, Democrats and Republicans in Washington are holding hearings. Many of the senators and congressmen want to start breaking up big tech, and all sorts of bills have been introduced to apply antitrust law. People accuse Amazon of favoring its own basic products over others. They accused Google of favoring Google searches, Google services and products. And of course, Apple is under attack because the App Store is the only way to download many apps. What do you make of this as a Silicon Valley insider? Is there a kind of golden goose we don't want to touch that creates wealth in the United States, or have these big players simply become not a matter of too big, but a matter of too integrated and too powerful?

Keith Krach 03:56: I think it's a natural tension when companies are successful. Obviously, these big tech companies are the most valuable companies in the world. So, they help drive the US economic competitiveness and technological innovation. So, they're really important to us. The objective of the game, though, out here in Silicon Valley, is to be the category King, because when you're the category King, you get 80% of the market resources and 80% of the market cap. So, these are companies that have achieved that level of status, like a DocuSign, so there's some checks and balances, and that's why there's regulation but also, they're a very important aspect of United States national security.

Todd Buchholz 04:42: Matter of national security. I presume we're going to get into discussions of intellectual property theft, and so on, but I don't want to let you off that easy on this question of whether these companies dominate too much. Wait, let me put it this way. Is DocuSign or was DocuSign on the app store?

Keith Krach 05:04: Oh, absolutely. You know, so much of the DocuSign business comes from app downloads, because now there's a billion users worldwide and close to a million companies on DocuSign. So that's a key part of the distribution strategy.

Todd Buchholz 05:20: Did you resent paying, what, 30% to Apple? By the way, I should back up and say my own personal view is fairly laissez faire when it comes to tech companies. I've written pieces in the Wall Street Journal, LA Times and elsewhere, where I've not been very aggressive about thinking about applying anti-trust, because the way I see it, companies, especially in social media, can come and go pretty quickly. I don't know whether you ever had a MySpace account, or an AOL email address, but those aren't worth very much anymore.

So, I could easily see where Facebook, Instagram, Tik Tok, are replaced by new generations. My own bias is for the government to put hands off. On the other hand, I do think we need to take seriously those who feel as if in the end, it's the consumer who might be aggrieved if DocuSign has to charge more to the consumer, because they've got to cough up 30% to Apple. Did you and your people ever have to negotiate across the table from Apple or is it pretty much take it or leave it?

Keith Krach 06:28: For that, in particular, it's almost pretty much take it and leave it. I understand their position on that, because they have to negotiate with literally 1000s and 1000s of companies. Now, there's some special things they do for you, once you hit the level of a DocuSign status in terms of marketing. So, we never thought that much about it, because the value that it provided us was absolutely huge. I mean, to be able to get that level of reach, particularly when you're starting out, is key.

I think you really bring up a good point. And that is, there's constant disruption in the high-tech world in Silicon Valley. So, when there's a technological paradigm shift, just like when it happened, from mainframes to workstations, workstations to PCs, PCs to the internet, then to cloud, then to mobile; the old players go back to zero, they might even go negative. So that's the time when you see these companies start disrupting. If you're the category King, you're able to weather the storm, when you do have these technological paradigm shifts, but not always, not always, I mean, look at IBM, they dominated mainframes, by the way, they made it through multiple paradigm shifts, but not to the level of power that they once had.

Todd Buchholz 07:48: I jump very quickly into that discussion, because it really does bring up an issue of culture. The culture of Silicon Valley. You've lived and worked in disparate cultures; I know you take great pride in being a Midwestern boy. So, you grew up in that space, and then moved to Silicon Valley, and then ended up in Washington, DC. So, give our listeners a couple minutes about how you perceive those different cultures. And whether you had to think in a different way, when you worked at General Motors compared to when you moved to Silicon Valley compared to when you moved to Washington DC.

Keith Krach 08:31: So, I grew up in Cleveland, Ohio, where my dad had a five-person machine shop. And that was in good times or bad times. It was just me and him. I was welding at age 12. So those good old fashioned Midwest work ethic, I was taught that, and I was taught the values of our market capitalism, I'm a manufacturing guy. And also, the importance of things like integrity and trust. And I really do believe trust is the most important word in any language, you partner with people you trust. You do business with people you trust.

And so, then I went on to be a vice president of General Motors. And at that time, it was the undisputed world's most powerful company, we had 1.5 million employees. And I started off there as a production foreman on a chassis line, second shift, Cadillac plant, the oldest plant in the world, right in the middle of Detroit. There, it was interesting, because I definitely saw the

work ethic, but I also definitely saw the bureaucracy of big, huge companies. But I could also see the power as well.

Then I took a gamble when I was 30 years old and headed out to Silicon Valley. To me, that's the "west point" of capitalism. It's a total meritocracy. There's a premium placed on youth. It's the land of risk taking, and the only way you can be a failure in Silicon Valley is not to have failed. We wear it like a badge of honor out here. But the rules of work ethic and integrity still apply and they're even more of a premium because the value creation is so vast and so quick.

Todd Buchholz 10:20: I want to come back to General Motors for a moment. So, you were there, what was probably the tail end of the heyday, and I recall when I was a kid, and Cadillac, of course, was the mark of excellence. It was just before Lexus and Mercedes and BMW came through and just rolled over Cadillac. The GM guys, they got lazy, right? Because the Cadillac DeVille was really the same car as the Oldsmobile '98, or the Buick Electra—I forgot what the large Chevy Impala, whatever that would have been at the time—and they seem to be resting on their laurels to use an old cliché. But that's not really permitted in Silicon Valley. You can't get away with that or you get eclipsed immediately, right?

Keith Krach 11:08: Yeah. So, I've got a good little mini-story for you on General Motors. So, working on that production line, Cadillac was the only place in the world where they were making Cadillac, and back then it was the standard of the world. And what I could see is about 50 cars coming off the assembly line, we were making one every minute, we're going into repair gigs, because of quality issues, it's so I go to the general foreman, my boss, I'm 19 years old, and I've going, I can't believe this quality, he goes, "Keith, I'm going to teach you something this summer."

So, he would invite me to meetings as it would move up the chain. So, I would see him report out to the plant superintendent, and he would say, "we've got these five issues. They're really serious." Boom, boom, boom. And then I would go to the next one, and I would see the plant Superintendent report out to VP of manufacturing, "we got this one major issue, but I think we can get it done." Then I saw him report out to the corporate vice president of Cadillac, "we got to really work on our quality."

And then the next summer, I worked in the New York treasurer's office for Rick Wagner, he ended up being CEO and chairman. And basically, we were a staff for the board of directors. So, I could see a go from the corporate VP to the executive VP, and say, "Cadillac is a great standard." and then it would go up to the group VP and it's like, "we're the standard of the world!" And then it goes up to the board meeting, and it would say, "we have no competition."

And so, if you want to call that lazy, I don't know, maybe being too arrogant. But what I learned from that experience was that you've got to find out what's going on where the action is happening. And that's on a production floor. That's out in dealerships. Once you hit a certain status of a VP, they give you your car, you don't go to the dealership, it's cleaned every time. It's

perfect. You know, you get up to a group VP, you got a driver, you don't even drive a car. So, you get out of touch. And that's a dangerous situation. So, in all the companies that I've built, I've made sure that first of all, the communication is based on direct open and honest communication, but also to make sure you understand what's going on where the action is.

Todd Buchholz 13:30: Yeah, that's a great point. It seems to me what improved General Motors cars was foreign competition. It was because of people, my parents in that era started buying Toyotas and Nissan's and Datsun's that didn't break down and didn't rust. And it was not simply embarrassing to General Motors and Ford and Chrysler, but it forced them to up their game. And if we had kept out Japanese cars in the 80s, Americans would be spending 1000s of dollars every year just to keep repairing broken down Fords and General Motors, which to me is an often-unrecognized fact of international competition, it forces domestic companies to raise their game and provide better products at better prices to domestic consumers. Which is why protectionism is often a wrongheaded approach, although, as we'll get into occasionally, tariffs might do some good if you're trying to change the behavior of your foreign competitors.

Keith, when you went to Washington, DC, to serve as Under Secretary of State, a lot of your attention was put on China and having come from Silicon Valley, a lot of attention on intellectual property theft. Tell me what you found when you showed up at initial meetings in Washington DC and what the mindset had been at USTR, the US Trade Representative's Office, State Department and others in the prior administration, the Obama administration, who'd been negotiating with the Chinese and with the Europeans.

Keith Krach 15:09: Sure, the reason why I went out to Washington in the first place was because of China, because when I was running DocuSign, we were at this time, we were up to about a half a billion users, and we were in every major country, except China. So, I went on a two-week listening trip. Now, I've been going there since 1981. But this time, it was different, because what I could see was the increased aggression of the Chinese Communist Party.

I'm over there, tell me the download's 10 cents every 30 minutes, I could see that surveillance state, I saw their drone swarm technology. And I came back to Silicon Valley, and I go, all I know is the guys with the best technology wins the war. And these guys look like they're up to no good. So, when I went out to Washington, I only knew one person in Washington. I went up to them, and that person said, "Hey, have you ever thought about serving your country?" And I go, "that would be a dream I never knew I had." I go, "I'd be honored." He goes, "can you move?" I go, "I could move anywhere in the world." So I went.

So, my mission at the US State Department running economic diplomacy, was to develop an operationalized global economic security strategy that drives economic growth, maximizes national security, and combats economic aggression. So basically, I was the economic statecraft guy for China. My remit was China.

Now, I've seen their weapons of mass production, how it devastated companies like my father, in the Midwest and gutted the heart of our economic engine. I could also see from my General Motors perspective, that when you build a plant in China, you're not just giving them the blueprints, you're giving the process engineering, and you're teaching them how to do it. And then I also had my intellectual property still at Ariba. And this is when we invented b2b e-commerce.

Now, when I went there, I'll tell you what I saw. It was beyond my imagination in terms of the Chinese intellectual property theft, their subsidies, their non-tariff barriers, I could see they have no regard for human life. I was very involved in the human rights side, I could see their genocide, and I stated it on TV over a year ago. And so, what we did in this global economic security strategy, we had three basic pillars.

The first one is to turbocharge our economic competitiveness and our technological innovation. The second is to safeguard America's assets, not just technology and IP, but financial markets, our education system, our healthcare system. And then the third one was to build a trusted network of partners around the world. And so that's basically what we implemented. But I'll tell you, they're the biggest existential threat. And they are a real and urgent threat to democracy.

I also hosted, about a year ago, as Under Secretary of State, 36 of the top Silicon Valley CEOs at my home in San Francisco. And I said, Look, they're not just a threat to democracy, they're a real and urgent threat to your companies. Because they don't want to just compete, they want to put you out of the business. And at the end of the day, I think Americans are free traders. But when somebody comes to the market, and they don't play by the rules, the market is no longer free. And you've got to do something.

Todd Buchholz 18:32: There's an old quotation from Lenin, who said, "when we go to hang the capitalists, they will sell us the rope." So, tech companies and manufacturing companies that go to China willingly signed contracts in which they turn over IP or offer to train employees and so on. Is there a sort of freedom of contract problem here, that is, if General Motors says, hey, we want to enter the Chinese market, the price for doing that is showing them how to create better lithium batteries for our new Volt. And they agree to do it. What's the US government supposed to do about that?

Keith Krach 19:17: Todd, you bring up a really valuable point. I mean, let's face it, we all thought that capitalism would equal democracy. And you've been involved in a previous administration. And we were all proven wrong! Businesses, government, Wall Street, but now there has been an awakening and you can really see this stepped up aggression.

You could also see; this is a dictatorship that's making some of the worst surveillance tools that dictators of the past could have only dreamed of. So now we have to do something about that on multiple fronts. Not just technology, but also in our capital markets as well, because

unknowingly, the average American investor has been financing the Chinese military buildup, their surveillance systems, and their human rights abuses and genocide.

And from a technology standpoint, you're absolutely right, we've given them a lot. But here again, now, we have to stop treating them as how we hope they would be. But we need to treat them how they truly are. Because this is really led down a path of some of the things that citizens of the world are waking up to. Last fall, I went to 40 nations as we were building out the clean network. And here's what I could see, Todd.

I could see that citizens of the world are waking up to what I call the Chinese Communist Party's "Three C's Doctrine", of concealment, co-option, and coercion. And the citizens world now understand that the pandemic is a result of the concealment of the virus. The citizens of the world saw the co-option of Hong Kong, resulting in the evisceration of its citizens' freedoms. And world now is hearing about the coercion at Xinjiang has grown to genocide, and these citizens don't like it. And now it's beginning to give the political will to government leaders and to CEOs to stand up to that China bully. And the thing also that's really powerful is that this is probably the most bipartisan, unified issue on Capitol Hill.

Todd Buchholz 21:34: And I certainly can see that and obviously, Donald Trump had been a huge critic of China. At the same time, Nancy Pelosi on the Democratic side has been a steadfast critic of China, especially on the human rights side. So, you're right, it is bipartisan. Well, we look to Europe, though, in terms of Europe's relationship with Vladimir Putin and Russia, as well as with China, we see that the gas pipeline from Russia to Germany is going to go through, President Biden is no longer opposing that. At the same time, Boris Johnson, whom in many ways I admire was one of those who bucked Donald Trump and the United States when we asked Britain not to allow Huawei to be as deeply embedded as they are. So, while there's bipartisan agreement in the US, are there similar allies in the European Union or in the UK?

Keith Krach 22:35: There certainly is. By the way, the Boris Johnson story on 5G turned out to be a happy story because he did reverse that decision. And that was one of the things that we were involved with, and that is the clean network. Objective number one of the clean networks was to form an alliance of democracies and companies to defeat the CCP's master plan to control 5G communications. And when I got the authorities for that, with our team, a little over a year ago, Huawei had 91 5G deals, 47 in Europe, and looked like they were going to run the table. Ended up that we knocked them down to probably less than a dozen and a half.

So, we went over to Europe and now 26 of the 27 EU nations are on the clean network. 27 of the 30 NATO nations are on the clean network. 11 of the 12 Three C's nations are on these are the former, most of our former Soviet Union countries. First place I went to was to visit the European Union. There's a guy over there, the EU Commissioner Thierry Breton, he's an old friend, I knew him when he was CEO of Bull and CEO of French Telecom before becoming Orange, and we combined forces on that.

The second guy I went to go see was Deputy Secretary Geonă of NATO. And yeah, I go over there he goes, "Keith, we need a clean NATO network." Because we can't have fractured data. We need these 5G systems in peacetime and wartime. You're only as strong as your weakest link. And you know, the beauty of the clean network is that it applies to all areas of technology. It applies to things like clean infrastructure, clean energy, and in this last G7 nations meeting, it adopted what's called the B3W and that is the extension of our clean infrastructure program called the Blue Dot Network. And this is an equitable and unified alternative to the belt road initiative.

The entire clean network is based off of trust principles, you can look at them as democratic values. Things like integrity, transparency, reciprocity, respect for rule of law, respect for property, respect for sovereignty, of all kinds. Respect for the planet, respect for human rights. And because what China had been doing, is they've been using those principles against us.

So, think about it: if you're competing against a company, and they don't have to be transparent, they can steal intellectual property. They don't have to obey the rule of law, they can use slave labor, they could use coal fired power plants, they're going to win every time. So, we did in one move was to take these trust principles, and basically do jujitsu and flip them on their back and use them against them. In essence, we weaponized the very principles that underlie the freedom that we're trying to protect.

Todd Buchholz 25:41: How suspicious should people be? There are a lot of a lot of my friends and family who just shrug and say, "Oh, I assume that CIA, KGB, the Chinese, anybody with a modicum of sophistication, including some 12-year-old across the street, probably knows what's on my browser and what I've been looking at on my iPhone, and there's just no stopping it." Because their ability to tap into us becomes greater, and it's an arms race, innocent people can't possibly win. So, while Huawei may not be in the state of California, where you and I are today, I've got my iPhone with me. Many of these components, I assume, are made in China, some are made in Taiwan. Should I be confident that we're not being monitored at this moment? And so just because we win the headline battles against Huawei, does that really mean that at a granular level, we are much safer?

Keith Krach 26:46: Todd, you're talking to a guy who ran DocuSign for quite some time. Think about it. We have trillions of documents, these are people's most important documents, ones you sign. What keeps a guy like me up at night? It's always that security breach, right? So, this is not like you get a mint on your pillow at the end of night and it's like night night. You have to be ever vigilant. But it's very important for US citizens and citizens around the world to understand that China's great one-way firewall, where all the data comes in, but none goes out, and it comes in for nefarious reasons, and also things like the social credit score, which we could talk quite a bit of time about.

And then also, all the propaganda goes out, but the truth does not go in. And so, what the Chinese Communist Party is doing is extending that great China Firewall now to other countries. And Huawei is the backbone of that surveillance state. And so now, what you see in China, the Chinese Communist Party is exporting "dictator out of the box," in terms of money in terms of infrastructure, and in terms of these surveillance tools.

Todd Buchholz 28:06: Did your work also include Russia? Because obviously, in the past week, President Biden and Vladimir Putin had met and discussions about the kind of surveillance and espionage and closing down pipelines and those sorts of dastardly deeds. I'm wondering whether your view of Russia is any different from your view of China in this realm?

Keith Krach 28:32: Well, it's extremely different than my view of China. Russia is perhaps just as maligned. But China is by far a much bigger threat in terms of their size, their economy, their ambitions, all of those capabilities. So, it was my team that put the sanctions on the Nord Stream 2 pipeline, but my primary focus was on the big one. And that is the Chinese Communist Party.

Todd Buchholz 29:05: How will we know that we're making progress? Now, I think Taiwan Semiconductor, which has been in the news because of the worldwide semiconductor shortage, and it's probably one of the most strategic assets in the world economy, I believe is going to be building a plant in Phoenix. That's terrific news in terms of spreading or diversifying its presence and national security. Samsung may also be building semiconductor chip factories in the US. Is that a sign of the US winning in this war against China for technology prowess?

Keith Krach 29:45: It's a huge sign, Todd. So, this was something that our team was able to pull off. It was the biggest onshoring in United States history with getting Taiwan Semiconductor to build a state of the manufacturing plant, \$12 billion plant, in Phoenix. TSMC, which is Taiwan Semiconductor Manufacturing is definitely the most strategic company to United States national security that foreign. I mean, it's right up there with defense firms, because the semiconductor business underlies so much of the technology and weaponry and all those kinds of things.

And when we did that, we had two theories. One was that we could get other companies to build domestically, because unfortunately, even though the United States invented semiconductor technology, only 12% was being manufactured in the United States. And that's not just a loss of jobs. That's a loss of critical skills. So, the two theories were this; one was, because all these other countries had bought it from us, one was that it could be a catalyst for getting the other companies to build here.

So, you're right. So, Samsung now is going to be doing a \$16 billion onshoring. And then also Intel, which we're really trying to get off the dime, is building a \$20 billion facility in Phoenix,

where in the past, they had been building it in China and Israel and Ireland, around the world. So, to bring it back, it's critical in order to keep current in terms of technology.

The other theory we had was, it would be a catalyst for the United States Congress to dedicate some investment in this area. And so, we helped write the Chips Act. The Chips for America Act, it got combined into the new act that just passed to the Senate, the China Competitive Act, and that's a \$52 billion act. Then that's also combined with another one that we started in terms of dedicating \$150 billion to government funded research in our 10 most critical national security sectors.

So that's a \$150 billion bill. So those \$200 billion are incorporated in that \$250 billion bill, and in the rest of that bill, is also significant funding in terms of economic statecraft. And by the way, that was my response, can you continue to raise the bar in terms of economic statecraft? Because China has been in economic war with us for 40 years, we're just waking up to it. It's just like, if you're going into a military battle, you need people skilled in the art of military warcraft!

Guys who've gone to West Point, got bloodied in Battlefield combating troops. In government, you need guys who are skilled in the art of economic warcraft. Those people, they don't teach that stuff in the State Department or Commerce Department, or Treasury, or even the DoD. And that doesn't come from lawyers, or lobbyists, or wealth transfer industries like banking. That's in areas like tech and manufacturing, where you get bloodied in the ring. And so, when I was at the State Department, I brought in 12 of these results-oriented executives who were skilled in the art of economic warcraft, that's why we were so successful with the clean network.

It was really the first government led initiative that defeated "China Inc." And that's really significant, because we exposed their biggest weakness, and that is nobody trusts them. And it's also significant, because it provides a model for all these other areas. And it also gave us a head start in building that alliance of democracies for all those other areas. Because at the end of the day now there's 61 like-minded countries representing two thirds of the world's global GDP. 200 telcos, a host of industry leading companies that are on that clean network. So, it's a great head start.

Todd Buchholz 33:51: And as a result of visit the great work you've done; I think you've been declared persona non grata in China. Are you also persona non grata in Russia? Are there any other countries that you're unable to visit with your family this year?

Keith Krach 34:05: I can go anywhere in the world except for China. As you know, the way I look at it, man, look, I grew up in humble beginnings in Ohio, I'm welded there. And for this small-town Ohio boy to be number three on a sanction list of the Chinese Communist Party, I mean, what better honor could I have? If they'd given me a certificate, I'd probably sleep with it under my pillow at night.

But the way I looked at it is, that's a shot across the bow to the guys who are in office now. I'm kind of at a stage in life where that really doesn't affect me. I'll tell you what, it's really important that we act, and we don't react, and also that we don't bend a knee to dictator Xi.

Todd Buchholz 34:53: Part of your purview at the State Department was also energy in the environment. So, I wanted to turn to that as well. China, of course, says that it's going to be reducing carbon emissions and reducing the coal plant presence compared to wind and solar power and renewable and so on. Do you believe it?

Keith Krach 35:18: No.

Look, we honor agreements. They do not. They only honor as long as it suits their purposes. And they've proven that over and over again. If you don't believe me, ask the people of Hong Kong.

But here's the issue. And this is the inconvenient truth of the Inconvenient Truth—and by the way, I'm an environmentalist and I think innovation is the key, clean technology is the key and industry experts say that by the year 2050, 70% of the world's energy will be solar energy—now, here's the inconvenient truth, of the inconvenient truth, is that China owns that market.

The other thing is that the solar panel manufacturing business is a very heavily energy intensive business. So, in other words, the amount of energy that a solar panel puts out in three years is what's required in that manufacturing process. So, they're usually the two biggest coal fired plants in the world. in Xinjiang, where all the open pit coal mines are. So here we are, by buying their solar panels, we're violating the Human Rights side. The "S" part of the ESG. Where they're committing genocide.

They have eight of the top 10 solar panel manufacturers, we have one, its First Solar, it's 2% of the market, there's a Korean one that has 5%. And most of those solar panels and the material that goes on them are made in Xinjiang. And they are made with slave labor, their average labor wage there is about \$700 per hour. I mean, Europe in the US and Japan can't compete with that.

We're also using stuff that's coming from coal fired power plants. But one of the biggest things is that we know that energy security is national security. Wars are begun and wars are lost because of energy. So now we run the risk if we do nothing, of going from energy independence or abundance, however you want to put it, to total energy dependence on China. And I don't think that's the place where we want to be as a nation.

Todd Buchholz 37:34: Well, would you favor then keeping out Chinese solar panels?

Keith Krach 37:39: Absolutely.

Absolutely, and by the way, this is a key part of, for example, the Endless Frontier bill that we put together. One of those key national security technology sectors is clean energy. And this is something that the United States has to get in the game and be the leader in because the clean energy business is going to be bigger than computers and software. So just from the standpoint of jobs and GDP alone, it's critical, but then you also throw in the national security sector. So, I don't know, let me ask you Todd, will you feel comfortable buying solar panels where they're using slave labor? A place where they're doing genocide? And coal fired power plants? I mean, I wouldn't.

Todd Buchholz 38:26: No sir. Certainly not. Although, one has to recognize when dealing with China and importing cheap goods, that there is some benefit to that. You know, this winter, lower income families in the United States who need winter coats and shoes for their children will be able to go into Walmart, and for \$10, \$20, \$30 be able to buy coats and shoes and socks for their kids and have enough money left over, that they'll be able to make a meal for dinner.

If China was not pumping out all this stuff, then those sorts of goods would be more expensive. Now that obviously does not justify slave labor. It does not justify polluting the world's atmosphere. So, I would be on your side. But I do think we need to recognize that American consumers do benefit from the low wages in China, and from their determination to just pump out as much stuff as possible to keep their government and their economy going. It is a bit of a paradox. It really does come back to Lenin and the capitalist selling us the rope.

Keith Krach 39:39: Well, I would agree with you if China was playing by the rules. But what you've seen where they've systematically targeted industry after industry, including the apparel industry! By the way, for those people who are going into Walmart, and you know, I came from that neighborhood, without China's subsidies and what they've done in terms of weapons of mass production, they'd probably make a lot more money. So, you can look at it on the other hand.

Todd Buchholz 40:10: Well, but Keith, let's be honest, those jobs would have also been going to Mexico. Back in the 1990s Ross Perot was fighting against the North American Free Trade Agreement, he talked about a giant sucking sound of jobs to Mexico, I think really, China was stealing a lot of jobs from Mexico and other poor countries. And so, the idea that the shoe industry in New England, or in the Midwest would have stayed alive. I really don't know, honestly, whether that would have happened.

Keith Krach 40:39: By the way, I don't disagree with you at all Todd on that one. All's I'm saying is that these guys don't play by the rules. And we're either going to do something about it, or we don't. And I think the world has woken up to it. You saw that at the G7. The primary focus was on China. And it takes courage. Because I'll tell you, the biggest issue out there is the Chinese strategy of seduce with money and reinforce with intimidation and retaliation.

They terrify. I could see it. They terrify other countries, they terrified companies. You saw the NBA. Seven-word tweet goes out sympathetic to the Hong Kong protesters. And within 24 hours \$100 million dollars of sponsorships from the Chinese apparel companies go to the NBA, and they shut him out of TV. And they demand an apology, a seven-word tweet. Now all's I know is that's got to come from the top. And by the way, not even in the Chinese government you can move that fast. So that's literally in a playbook.

Todd Buchholz 41:49: Well, hey, LeBron James knows the playbook. He came out immediately. And if a guy with all that put aside the talent, put aside the fame, with all that cash in the bank, whether he was intimidated or what his motivations were, but he wasn't going to stand up. Then when you got Hollywood actors, John Cena ends up giving an apology in Mandarin. I'm sure Richard Gere can't get an acting job these days, because Hollywood producers are afraid they won't be able to sell a Richard Gere movie in China, because of his sympathy towards Tibet.

So, I'm totally on your side about the intimidation and in many ways, the cowardice of companies and individuals in the face of the intimidation of China, I wanted to move on to the military side because you've used some military metaphors. Keeping in your discussion today. But it's gone beyond metaphoric. I mean, China has now launched I think its third aircraft carrier. It's certainly building Navy ships at a very fast clip at the same time that the US Naval Forces seem to be, figuratively, in retreat. We talk about Taiwan Semiconductor. At the same time, we can't avoid a discussion about whether there'll be an acquisition of Taiwan Semiconductor because China will physically and militarily acquire Taiwan. How concerned are you about those sort of actual physical incursions as opposed to electronic incursions?

Keith Krach 43:23: Well, focusing on Taiwan, obviously very concerned. And that was a big focus of mine, at the US State Department. I had six undertakings there, accomplished all except the last one. The first one was the other countries that recognize Taiwan and building up support for all of them. Then I was also the highest-ranking State Department official to visit the island in 41 years. I was really with 40 fighters and bombers. We put together a US-Taiwan economic prosperity partnership in multiple areas, everything from jack to manufacturing, to economic empowerment of women across all dimensions of economic cooperation.

Then we also did the science and technology cooperation agreement, which usually takes about a year in the US government, we were able to pull it off in a month. All that was leading up to a TIFA, which is the final step in doing a free trade agreement. That is really strategic for Taiwan. Because right before I went over on my trip, they reduced their restrictions on beef and pork, which were really the reasons we were using to say this is why we're not doing a free trade agreement.

So, they took that away, and that cost them a lot of political capital inside Taiwan, because the agricultural lobby is really strong there as it is in pretty much every country. So, we really needed to do this to bolster because one way China can take over Taiwan is in their election process. To

have somebody, a candidate who is sympathetic to Taiwan, we were afraid of that a few years ago. The other is, when you do a free trade agreement, here's what happens. It's not the value of the trade. What it does is it creates a halo effect. So, US private sector invest a lot more, if that's what they want at the end of the day. And when the US invests, then the Allies invest. And so, we want the Allies to invest so that they come help defend Taiwan in case of a military incursion.

Todd Buchholz 45:30: Well, is on the radar screen. And let's hope the radar screen doesn't fill up with real sorties as opposed to these sorts of discussions. Well, Keith, it's been fascinating to be with you today to talk about China, and energy and trade and your roots at General Motors. Let me just ask you this. What's next for Keith Krach? As you look out from your home in San Francisco and see how the world is changing, you've been in so many different environments, what are your priorities right now?

Keith Krach 46:04: Well, I don't think I'm going to go back and build more companies. I've had the blessing of an all-American dream. Really, the good fortune of it. I feel really grateful that I was able to serve or give back to my country that has given so much to my family and me. But I am very focused on building a technology trust network. That's a continuation from the private sector side of building out that clean network, because I really believe in what I said during my Senate confirmation committee hearing when I was asked about what my strategy would be on the China challenge. I said, harnessing the US' is three biggest comparative advantages.

Number one, rally our allies and our partners. We got a great start on that. The second is, leverage the innovation and resources of the private sector. To me, that's where the biggest delta is. And then the third one, of course, was amplify the moral high ground of democratic values. So, it's really a way to rally the private sector, with the tech titans of the United States, and then also of our closest technological allies. Because we are experiencing economic war right now. With China, I call it China Inc.

One of the big areas is the capital markets. What I really love with what the Biden administration did, is they institutionalized capital markets sanctions, which is the most powerful non-military weapon we have against China Inc with the 59 countries on that. It's called the OFAC list, the Treasury list. And there's a lot of work to be done to get those same sanctions applied to commerce entity lists, which are export controls, and then also the Pentagon lists. Which has to do with supply chains. So, spending my time in the private sector, but still in a game.

Todd Buchholz 48:01: We hope you enjoy this week's episode of Smarter Markets with Keith Krach. An Emerging Energy Framework for the 22nd Century will continue next week, when I sit down with Jacob Parker, Senior Vice President of the US China Business Council.

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spreading the word about Smarter Markets via social media and word of mouth. On behalf of Abaxx Technologies. I'm Todd Buchholz, see you again next Saturday morning.

Announcer 48:48: That concludes this week's episode of Smarter Markets. For free episode transcripts visit smartermarketspod.com. Smarter Markets is 100% listener driven, so please help more people discover the podcast by leaving a review on Apple Podcasts or your favorite podcast platform.

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