

Dr. McSparren: Public Policy and Administration program. Dr. Price focuses Research on Social Public Policy. His research interest and some of the themes that he's covered, he is an extensive empirical work regarding the United States justice system with an important contributions to Public Policy issues such as prison privatization, Social justice issues school-to-prison pipelines, additionally his work covers a governance and International Development as well. And that's one of the topics that we're going to be talking about here today. Dr. Price is also known for his student mentorship and also as a philanthropist recently, Dr. Price led a group of 14 Suny College of the City University of New York students to a trip to South Africa where they covered six cities as part of a global public administrations course. Professor Price, called that the study the study abroad trip for the office of International Education and not only did he lead the students, but he also spearheaded a fundraising and donate a portion of his own salary raising more than \$12,000 for the students to join him on this fantastic experience trip abroad.

Today, Dr. Price is here to talk with us about Clean Coal Technology in a presentation he titles Clean Coal and Sustainable Development: Harnessing Clean Coal technology to mitigate harmful emissions. As you all know coals are hydrocarbon fuel therefore, emit greenhouse gases as a result there have been efforts to create Clean Coal Technologies through a number of different processes. Coal is widely used around the world, especially in terms of the developing world. It is going to take time to phase out coal-fired electric plants and there a different research projects out there looking for ways Carbon Dioxide Removal which is termed CDR strategies in some of these strategies are called 'Carbon Capture and Storage' very often CCS strategies and these are emerging and that's we're going to hear a little bit about today. Some of these CDR methods are direct air caption enhanced weathering in carbon sinks where the carbon is extracted from the air and then relocated to the ground. Dr. Price is here to tell us about a process that removes the toxins from coal, toxins such as Arsenic and sulfur and Mercury so that the coal Burns cleaner and is an interim strategy in the pursuit of negative greenhouse gas emissions, which is one of the sustainable development goals and goals of countries around the world. So ladies and gentlemen in the audience. Can we please warmly welcome Dr. Byron Price to the green room today? Dr. Price hello.

Prof. Price: Hello Dr. McSparren. Thanks for having me and thanks for the kind introduction and I have to correct just real quick. I raise \$20,000 on behalf of the students to South Africa.

Dr. McSparren: That's wonderful. Okay, it's okay.

Prof. Price: Thanks for this great opportunity

Dr. McSparren: Certainly

Prof. Price: I know the topic is kind of like you later a nice little introduction. I know a lot of people flag and antenna went up when we say Clean Coal and so for the sustainable development, you talked about sustainable development couple with the sustainable development goal go away of Millennium development goals as well. So what I like to talk about first is sort of lay the context around coal and so forth.

So, according to carbon grief since 2001 has doubled his Coal fire power capacity to around about 2045 gigawatts after growth and explosive growth in China and in India and there is a further 200 Giga watt is being built in 300 gigawatt is plan. Okay, the coal industry has for the most part supply cheap electricity

to the world for decades as you pointed out earlier this stuff. And they provide the foundation for Global industry and progress. But when you think about you also touched on the fact that we as citizens have paid a high price due to the pollution of air, water and soil. And when you think about it, many of our leaders, they have been forced into a delicate balancing act and a choice between the lesser of two evils per se that is prohibitively. That is expensive power versus environmental damage, meanwhile when we look at the electricity generation from coal. It basically has plateaued since 2014. So they spending Fleet is running a few hours this arose a cold by the line as just competition from other fields per se and so it would now be cheaper to build a new wind and solar than to keep running half of his existing coal plants. The way Coal's next chapter unfolds is key to tackling climate change and that's why I think the answer the technology is I'm gonna introduce sort of will help mitigate and help coal basically address this conundrum that they have. So, Global unabated coal use must fall around 80% and the decade of warming is to be limited to less than 1.5C above the pre-industrial temperatures according to the carbon brief analysis in Kyoto and the Paris agreement also basically support are reducing it by 1.5 centigrade. So Global coal capacity actually grew every year between 2000 and 2019 nearly doubling from 1066 gigawatts to 2045 gigawatts and as far back as 1950 coal capacity has basically risen, notice, this date is old and less reliable per se and so coal growth is slowing dramatically.

Okay, so we think about coal, coal generates nearly 40% of the world's electricity close to his high sharing decades. And there are about 80 countries using Coal Power Up from 66 in 2000, another 13 plan to join the club. Notably, Egypt and the United Arab Emirates though this is down from 16 last year and CO2 emissions from existing plans are enough to breach the carbon budget for 1.5 or 2°C. UN secretary-general is leading calls to look at new coal plant development again, when we talk about the technology can discuss when I will share my screen with a slide will be able to show how we can partner with coal fire plants and not be perceived as sort of a competitive coal fire plant and but also to sort of appease to Sierra Club and a lot of other environmentalist because we definitely are proponents of it and protecting our environment and how technology can demonstrate that we are Partners in this goal to reduce climate change. And so all unabated coal would have to close by 2040 to stay well below 2C according to the International Energy agency. This will mean Coal closing 100 gigawatts of coal capacity every 20 years roughly one coal unit every day until 2040. Okay, so for more ambitious 1.5C limit Global coal used for all purposes would need to fall around 80% this decade. According to this brief analysis of Pathways gathered by the intergovernmental panel on climate change. This will be equivalent to close every coal plant in the world. York newspaper headlines energy projections to suggest coal growth will not stop. And this bleak about the climate tip about size and Rapid change.

Dr. McSparren: Let me share my screen, so this is a map of the world right now and what you see in terms of these colorful bulbs or spots are the different types of coal plants around the world. Now there was a tab here earlier that if I can find okay that was telling us that different types of let's just click on one of these. So if you can see if you click on some of these this is over North America, then I'm clicking in it gives you the capacity, In terms of megawatts, the type of coal that is being burned there, the type of technology that the plant is running on, the CO2 emissions from this plant, the country that it's located in, the year that it opened in the age of the plant. So with this is joining us ladies and gentlemen, the audience if you can really see the intensity of coal-fired electrical plants throughout the developed and developing World. Okay, you can see the strong concentration in North America, in Europe as well. And then you can see even over in Asia again China and India as Dr. Price was saying has been really ripping up its capacity.

Thank you very much. Okay, and so are going back to some of the information I want to share before I dive into the PowerPoint presentations is in a report published in March 2020 found that more than 60% of the world coal plants are generating more expensive electricity today than could be supplied by building new wind or solar plants. Okay. He says that this figure will rise a hundred percent of plants in the world major markets by 2030. So this in many respects marks the second Tipping Point for coal according to Bloomberg new energy Finance founder. The first Tipping Point has been passed in most regions where the renewable energy is now already cheaper than new coal. The second Tipping Point was for new Renewables to be cheaper than existing coal as shown in the carbon track analysis. Analysis for the majority of the world plant, know that coal plants may remain open in the face of unfavorable economic conditions for other reasons, for example, due to capacity market governments. And when you talk about capacity market is the Governor's Primary policy for insurance security of electricity Supply. It offers payments to power generators for be available to generate a certain times and to demand response providers for being able to reduce electricity demand. Now according to Dr. Bhatti and others in many ways hydrogen is an excellent view source, since it can be combined with air and oxygen and fuel cells to produce electricity cleanly and efficiently, generally hydrogen is produced from water electrolysis natural gas or coal gasification.

However, each of these methods has its disadvantages, natural gas has limited supplies worldwide and water electrolysis require significantly have a power so Coal is an attractive source for hydrogen production. Coal gasification has been used extensively in the past as inexpensive methods of hydrogen production via gasification according to Dr. Bhatti and others. However this method according to the author requires high temperatures above 800°C. And its Associated will have cause to separate in gas product and in deal with pollutants such as sulfur oxide and nitrogen oxide and idea method of hydrogen production from cold eliminate these calls while operating significantly at lower temperatures. So the electrolysis of coal is a technology that can realize many improvements over gasification, environmental advantages of this process and economic analysis have been discussed and many studies and even Carflin 25 years ago talked about electrolysis of coal. He proposed at 25 years ago, Dr. Bhatti have shared in this study. So to the question that many of our probably audience members are sort of a asking now is how can coal assist with sustainable development?

So look at Kentucky, they put out some information about how coal has benefited them and so, one of the points is cheapest source of energy, it is by far cheaper than nuclear, natural gas

Sharing her wisdom stop this and then I want to go to here and I want to share my screen share screen.

Prof. Price: There here we go. So when you think about the new age new ways can create cleaner future

When you look at new age process have a single pad process do simultaneously remove toxic waste from coal gas and produces hydrogen for clean sustainable electricity and harvest the rare earth elements. The rare earth elements that were talking about are mercury, arsenic and sulfur. Which are leached when it

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rains and sulfur runs into the water and the soil and sulfur and we can clean it up on the front end and the back end also and you can monetize those rare earth elements as well. So when you look at in 2019, it was founded in 2019 in Dallas and so when you think about one of the things that that I like about New Age that they're committed to investing ten percent in the community revealing jobs and technical retraining and so when you think about South Africa, South Africa requires you to sort of to provide funding to the widows and minor children and so the desert investment from New Age into those with communities and helping those communities become owners as well a part of the organization as well. So when you look at the how we're trying to position the company is a rapidly emerging hydrogen Market, that's how we try to position.

A company sort of sustainable capitalism and embraces sustainable capitalism, but also community investment putting money from out of the revenues into the community and having people in the community who does not benefit from the resources that are being sort of taken out of the ground. So new age is committed to investing 10% of into the community.

So he hears the hydrogen market 145 billion dollars. Hydrogen provides a huge opportunity to reach deep down in terms of some of the most carbon intensive Industries. Demand is going up and then Market Trend. That's one way to kind of build out sizes, you know Market sort of some sort of like mitigate the fact that one of the challenges of hydrogen as a energy source is the fact that you don't had a the fueling stations and I'm going to ask Mike Wilson to come on later during The question and answer to kind of expound more on a particular area. So you look at Toyota's also produces hydrogen heavy duty trucks. Again a reason why we call it super coal because we can remove the arsenic mercury and sulfur and we can burn Coal 85 percent cleaner, which means we can reduce CO2 emissions by 85% and we can burn it 35% . And as I said, we can extract .The rare earth elements and the coal using the same technology process. So that was just the intellectual property in the patents and so forth with the electron and that's the process.

So the technology I'll processing Hardware uses modular technology which provides easier maintenance replacement scalability and transportation. One of the things we're trying to do is make it much smaller. So we can it be much more portable. So the application process is equals multiple streams for so when you look at the inbound Roca, let's look at this.

You process the coal, you generate hydrogen and then you harvest elements and the outbound you have the toxic gas also, but you can remediate the fly to remove the arsenic, sulfur and mercury and again, you can generate hydrogen and you can harvest the rare earth elements. Okay, the technology allows us to engage the customer on the front end and the back end too.

Next slide, let us talk about opportunities and Texas for the most part because they have existing coal power plant near easel and I went to South Dakota where is real high is the real high. He left this really

like sort of sort of have environmental challenges and Resort Texas one of the issues that we are working to address. Okay. Again that 8535 Flare remediation and hydrogen.

And so the approach is these are some of the relationship you see. We have a relationship with Nicola and so we have relationship with a lot of these companies of with respect to sort of our process how we can sort of collaborate as well.

The NSL slash Projected valuation of the company which some pretty significant proud of the week stay there. So you have Montana, you have Montana you have full Coal Fire plants too close. Yeah, Virginia you have Louisiana, Texas and Arizona and to Opie Hopi Indian tribe. So you have South Africa which basically has its largest emitters of greenhouse gases per se and has 14th largest emitter of greenhouse gases, right fortunes largest emitter of greenhouse gases. South Africa has 97 coal fire plant and are building 24 more, remember earlier I talked about the Energy company S-cam is gone to sort of a repurpose those Coal Fire plants because the interesting thing about South Africa they have really have a super coal. So without process and we if we can partner with that particular South Africa, we can help them sort of sell their coal after we've cleaned it and so because they really have a form of super coal which is a high quality and burns more efficiently than any coal. When you look at China, China has 2653 Coal Fire plants and they are building a thousand more. So I think without process, you know other countries are going to look at their best interest, you know, like economics is we all except interested. So companies are going to utilize what they have but I think I'll process we can be partners with those countries and partners in the United States and we can help address the issues that make sure we take into concentration the Kyoto Protocol and the Paris agreement and the 1.5C reduction that has been sort of embraced. That's put two potential. You see sales 6.5 billion in total.

Dr. McSparren: Mike Thank you very much for joining us on the conversation

Eng. Mike: Thank you

Dr. McSparren: We are really pleased with this interesting technology, my question was, Dr Price talked about through this process you are eliminating some of the toxins of arsenic, mercury and sulfur coming up out of the coal before it burn but I am a little bit unsure of where the hydrogen fuel come in, is it a by-product of burning this coal or we are using the coal to process in which hydrogen is split or something like that?

Eng. Mike: What is happening Jason is that, we got what is called electrolysis. Basically an electrolyte cell. A group of cells that has coal crushed and mixed with electrolyte and it run through the cell and has it passes over the electrodes, it separate the mercury, sulfur and arsenic and other rare earth elements from that coal particularly. And as it passes through the cell, it develops like hydrogen fumes around the outside of that chamber. We termed that gas Hydrocarbon plus. Super coal was referred to super oximade but it blown up the when put into furnace. So they kind of back off from super coal and called it Hydrogen plus. What happen next is that the rest of the rare elements when coal particulate is separated from the rare element, hydrogen bubble is created in that process. The rare earth elements remain in solution as it passes through. Then, u have hydrocarbon plus, that means you have burn the sulfur, arsenic and mercury

in the air, so it is 85% cleaner. Won't want to say burn less CO₂, it is still the same amount of CO₂ but not bad CO₂.

People think the CO₂ is bad for us, but for the plant, there is kind of relationship with human where we breathe out CO₂ and they are exchanged out for O₂ but what is now happening is that we don't have the mercury, the sulfur and arsenic and rare element that stack up and also create hydrogen in the process. So you are right, hydrogen is not necessarily an energy but is a vector that comes between coal processes. Does that answer your question?

Dr. McSparren: Yes it does, I appreciate that very much. I am going to follow up, one of the major thing you mentioned are these derivatives elements and people in the audience might be wondering, what are rare earth element? I am not going too deep but these are several elements that do have this particular electronic property and widely used in wide technology. Now, is this rare earth by-product also commercially viable or... because rare earth are strategic minerals, there is this global strategic quest for who control these minerals. The US is felt behind, so my question is, Is rare earth by-product or is something that is commercially viable in the nearest future?

Eng. Mike: So, there's a couple of things that's a that's kind of a two-pronged question. The Rare Earth elements that come out of coal you'd have to process it's like hundreds of millions of tons of coal and still be able to quantify enough of The rare earth elements like neodymium or whatever it is for magnets and speakers. You have to process hundreds of millions of tons of coal to actually get enough to justify the cost for the extraction. Does that make sense of the harvesting of that? There's other places for us to be able to use the same technology to extract Rare Earth elements, right? So the harvesting of rare Earth elements from coal, coal electrolysis, there is also we're using the same process in solution to extract or harvest Rare Earth elements from say the flares that's on the compound. We're actually cooking cleaning up what's going through and coming out the other side. So now what comes out as opposed to the toxic flares is now more of a nutrient rich soil that can be utilized again in monetized more effectively without having the contaminants in it. Then you also have the flares that's on their compound or that's been stored up for years and we actually process that again mixing it with coal, so that we're creating the same amount of hydrogen were able to extract those things and then separate The rare earth elements from the mercury, the sulfur and the arsenic and then monetize that that's something that we're in the process of even right now actually is so perfect that process

Dr. McSparren: Fantastic. So the reason why I asked that question is, you know, essentially maybe in the medium and long term you could be kind of addressing two problems at once, right? The nasty greenhouse gases as well, finding an alternative source for some of these minerals that are so strategically important

Eng. Mike: It creates quite frankly when you're processing the hydrogen are in your processing the flares you're still creating hydrogen and that's kind of one of those things that you guys were talking about. It goes to infrastructure the places that we have that are strategically placed between we've looked at projects and in Virginia and Louisiana, Texas, Arizona particularly with The Naval Nation there's a large percentage of coal and coal assets. I don't really consider flare a toxic air contaminant. I'm looking at that

more of a fuel source, right so that we can create that Vector then the hydrogen energy while we're cleaning it up and the same thing happens in Montana. Those are all strategically placed. So someone like Nicolette decided that they wanted to but they started building the additional 780 fueling stations that we would be able to provide hydrogen to those things. Object below stations and we have some other technologies working with a few of our vendors that the hydride storage where you can actually store hydrogen. There's a kind of you are kind of dispel the rumor that it's a volatile when you're shipping has a solid as opposed to a liquid and a gas that kind of takes that out of place so that you can actually do that. You can do it effectively.

Dr. McSparren: Okay, interesting fantastic. One of the things again just within these discussions in these debates. A lot of the new technologies are coming out there talking about them in the category categorizing them as a carbon capture and storage. Is this a form of carbon capture and storage or is this some other process again a different product

Eng. Mike: You know, Bill Gates and his group they have the carbon capture process where they're pulling carbon from the atmosphere and then there's throwing that they take that and they're basically creating a fuel to run in the cars, right? So, is that a and ideal world that works but it still uses a tremendous amount of energy to create the fuel too. You know, and so you're kind of go back if you're going to use the coal fire plants to generate the electricity to the carbon capture. Then you're kind of defeating the purpose as far as I'm concerned. I think it's a complement each other though quite frankly. Like we have zero emissions in our process that does not say that they're zero emissions when they burn the hydrocarbon plus but in high in creating the hydrogen from the coal the reverse is zero carbon. That carbon anything that we have is absolutely captured but I think the carbon capture that you're describing is something different because they're pulling that from the atmosphere and I wouldn't have let me jump on their dish and real quick. The other thing that they need to understand is there's a debate between electric and hydrogen right the Tesla Nickvo conversion and quite frankly what we've got right now is you have hydride storage so we can put the hydrogen into a high drive storage unit and then there's an hydrogen electrical generator very much like a you have a generator that it says outside a job site that you're burning diesel or you're burning gasoline right chip, but it burns hydrogen and it generates electricity. So if you can imagine one of our fuel pump setting there at a gas station, we can put hydrogen into your hydrogen vehicle or the hydrogen goes through the electrical generator and charge your Tesla vehicle. So there is no far as I'm concerned we're dealing with infrastructure issues. We've already kind of cause the debate right, it whether you're using hydrogen for anything over 300 kilometers or you're using electric vehicle servicing under 300 kilometers, you kind of fixed that, that makes any sense.

Dr. McSparren: Yes, it does make sense to you seen is your process actually recharges both of those systems whether it's a hydrogen car or an electric car in the process in your product.

Eng. Mike: The process creates the hydrogen and then the product the hydride storage stores tremendous amounts of hydrogen and the same space right and it's not volatile. It's not explosive. It is stored as a solid that hydrogen unit that containment unit is actually pumping a hydrogen generator that generates electricity for Tesla or we take the titers and ride out and pump it into your hydrogen fuel cell to drive your car.

Dr. McSparren: Okay. Fantastic this is again something that Dr. Price had mentioned earlier. Just to see if Mike you can add a little bit to this, Can you talk a little bit about the pros and the cons of this technology in comparison to the transition to new wind and solar power sources

Eng. Mike: Quite regularly the facilities that we have designed your using some wind to generate the to start the process. Once the process has started. Then you're using that electric generators to generate the process that actually creates the process of the coal. So really I mean if there's any point where you can take it's already been proven and tested out where you can take a diesel generator and have it burning hydrogen and generate electricity. Okay. So say we take the press that you take a decommissioned power plant and then you put the decommissioned power plant and you put a diesel generator on there not a coal firing furnace, but a diesel generator set in we start putting we're processing the flares in the coal. We're creating hydrogen, it goes into the diesel generator that has now been converted to burn hydrogen to create electricity. Now, you have a zero carbon emission process you're getting electricity with zero emissions period, from start to finish. Now, the ball front of the other thing I'll say is this is you get as you're generating as you're processing the coal you can process that up multiple times to create hydrogen as opposed to burning the coal. Just keep processing the fuel over and over again so that you're creating hydrogen, eventually the carbon winds out after using it all and then you have to replenish that source, but it's not the same as just taking and burning it and it's gone in one shot. Now, you can run your 900 year coal source in the United States and it can be 9 or 300 year co-sourcing United States can now be you know, nine thousand years or something. I was just crazy the multiplication process.

Prof. Price: Let me jump in, about sustainable capitalism real quick info real quick before we go back to Mike we got to Martinez

Dr. McSparren: Welcome to our discussion. Dr. Martinez.

Dr. Martinez: Okay, thank you so much, I have been teaching for 40 years. My area of teaching has been law, business ethics, and social policy. Okay, but now focusing primarily in proponent of sustainable capitalism under the new direction of what they refer to ESG or environmental social governance proponents, the purpose of sustainable capitalism is really a counterbalance to the environmental issue that coal raises in other businesses. So at the moment, I've been spending a lot of time getting up to date on what the roundtable proposes ever. In fact, it is now their policy in terms of what they are saying their companies should be in their company should be more focused on stakeholder primacy. Not just the traditional shareholder focus again. Yes, you're kind of a bleep rum from the bill Freeman philosophy of 20 30 40 years ago or so as soon as much more focus on the stakeholder Primacy, which basically is broader. Now the key consideration moving forward causes, you know, how is our economy, our society and our planet... So today investor, regulators, employees, the public or mortgage in this discussion arise the question of how new companies like new age or going to manage the environment have social impact and I'm very confident in fact, this is what we're doing, New age is an alternative option for energy. One of the Communist course is lot of issues having to do with the current pandemic, racial Injustice, types of inequality, climate change issues and so forth. And so the considerations that are very important as any new company ventures into specially Marina that is in some circles a questionable arena and the sense that it has a, you know, basically an ugly history, but what we're talking about is really to change their,

you know new age is a bridge to that and so I just want to add one other comment and that is the terms of one the business roundtable the saying that whatever concerned about is all companies should be focused on all stakeholders, including the value to customers invest in our employees, even we with suppliers and supporting to which people who communities work at an example event like you cells force in the Bay Area which they support extends vendor worldwide. I mean, I think they have over 50,000 nonprofit agencies based worldwide. Salesforce is one example to that in to the final point of that is to generate long-term value for shareholders. That is really still very important concern.

Dr. McSparren: Right? Well, I appreciate you explaining that it's really very fascinating because that is really kind of one of the conundrums where you mentioned to Milton Friedman in his whole idea that the business of business is to do business, right and all idea that business should not have any sort of social or any social responsibilities, but that perspective is really changing quite a bit over the past several years a couple of decades. I think he had said that in 1970s, but it really did kind of leave things up until the 1990s early 2000s. I think it really was in it's about that time that they corporation started to look at the stakeholder issues. So thanks very much for explaining that I'm Sorry by the way, and then he said about my thing that they can cut him off.

Question from Audience: Can this be replicated in Sub-Saharan Africa?

Dr. McSparren: I just want to kind of rephrase that question good because that's one of the things I was thinking about as well in saying, you know any sort of new plant building, right? It is an extremely expensive endeavor, however, you've been talking about maybe retrofitting decommissioned plants. So again, is this question this is probably something that developed countries can afford but is it cost effective for developing countries across the world but in sub-Saharan Africa particular

Eng. Mike: All right, the power plants that were working with we've come in to partner with the power plant. There's not a cost associated with to them about processing their coal and making it cleaner. We create hydrogen that creates enough profit for us to be able to pay for that for us to be able to clean up their Rare Earth elements that they have on their compound and four and a half years. We can do that also. We create hydrogen in the process so we don't have to add to their debt load. We actually had to their bottom line because they can actually benefit from the hydrogen revenue stream and it's the same thing when you go overseas quite frankly the way New Age is doing this is partnering with investment groups the certainly the power plant can invest with us and be and be a partner in the process but soaked in the community, never mind the EPA that he owe me whatever they can actually participate. In this and that we put the money back quite frankly, even if they know our investment groups is the investment bankers the people that were dealing with right now, we can build a processing plant and start to generate profit in the very first year right while we're doing this so for developing nations and places that you know, like Botswana and Zimbabwe some of the South African Union, It doesn't necessarily processing plant itself. That's the idea is why we're here in the states. We're going to build our Parcels here and then our processing class here and then we start to develop the more and more of the plants as we go along if you started some place like Zimbabwe or whatever your partner was a group there and we manufacture our

processing cells will there and then we build a processing plant so there and then we integrate the community, you know from the very beginning from my perspective was to we made a pledge to put 10% of the profits back into the community that was for churches, bridges, schools. Whatever needed to do in the community. We have a whole brilliant group of people that do the business aspect of the segment my job of kind of come in on the ground and work with the community. So we come into this particular area. We met with the Mayors and multiple cities, the church leaders, the elders in the community to figure out what they need. What I figured out over the years is quite frankly people don't want your help they want to be a partner and the solution right there. I want you to come in and fix everything for them. They want you to be there and they want to be a partner. And so really I mean, I've said it for a long time as that the power plants are strategic partners for us the coal mining operations are a strategic partner for us, but the communities where we work those are our customers, right the people that are on the ground the people that were going to employ and so there's a lot of things that are happening when you're when you put 300 people to work in a plant and then you put in a urgent care. For example in the plant will take care of those people and their families right if you own it and there's a profit to be made from it. Could we all have insurance then? Why wouldn't we take care of the other people in the community that don't have insurance? There's a lot of things that are this. This is a socially responsible way to do business and I think that you know, again it goes back to New Age, right? It's a new alternative green energy, but this is a new way to do business and we're kind of asking question absolutely in those developing countries. And I think as far less expensive than what they might think same thing with the Navajo Nation. I look at the environmental challenges that they have. They're actually really great opportunities for us and for them, right and we want to have that we want to make sure that they have some ownership in this thing. It's not like coming in and just taking over it's actually working with the community making sure they have some ownership any time that we're dealing with the United States or any town I'm in right now Texas, that's one thing when I start to do with a Sovereign Nation like the Navajo Nation. I have to be very aware. Their business of doing business, right? And then the same thing was somebody in South Africa you're dealing with Sovereign Nations and they have some very specific issues that they want to deal with and they want to partnering company, right? And that's really what we're trying to be as a partner with these guys not to come in and take advantage not at all.

Prof. Price: And in addition is I think one of the things that's not really done as I've been afforded 54 African countries a lot of times they come in and they don't how to local content. That's not the emphasis on local content, employing the people because you're building in those countries, building in those communities. I mean a lot of people sort of import their own sort of Labor in and so forth. That's something you got that we're totally against it's all about and then that's why you collaborate with the academic institutions also to begin to sort of help ensure that they that the skills Gap is not there so you can make sure they have the skills to work in those factories and facilities and you know, there's a lot of things you can do with The candidates will be partnered with the academic institutions as well to make sure that their career or their degrees are lined with those plants if they're plants are built or whatever facilities are built that those degrees are aligned with the jobs that will be offered by the plants and so forth that are built.

Dr. McSparren: Okay. Great. There's no I have to again commend you on your business model. This is a really good idea, you know a lot of times when you look, at the extractive industries around the world. And this is where I focus my research in. These multinational corporations come in and they establish their

relationships with the government's and they set up their mines or they're drilling fields and they kind of become Silo Industries, you know, they don't really buy the whole idea of local content. This is a huge debate that they have their corporate social responsibility programs, but they don't necessarily partner with the locals. They kind of Institute some sort of policy whether it's building schools or roads. Roads, but they don't necessarily reach out to local leaders and get that sort of input in very often in the literature. It talks about how the local communities not feel the benefits of having the industry.

Prof. Price: But I think even to stand that down more Jason is a lot of times the politician you can speak with the politicians in the country, but it still didn't get to the people but we're going to make sure that the people I at the table as well, so it's just not the politicians, a broker in everything for the politicians. The people now are also a part of the process as well,

Dr. McSparren: That's actually what I was going to say because listening to your model I was commending you on that because you go in with this whole idea that you are a partner not only with the corporations that are existing there either the mining companies or the electric companies, but you're planning on partnering with the local communities and I think that that right there is, you know, a mile ahead of the curve of so many other corporations that are out there, you know, especially in the in the energy industry, so I want to commend you on that.

Is there any interest from the US federal government in a process like this or are you really working at the local, you know state level or directly connecting with corporations?

It seems to me like you're doing a little bit of both you're talking to different than Native American reservations. And are you also talking to State leaders as well. How does that work?

Prof. Price: Absolutely, speaking to State leaders, and I think Michael can come in on some of the other particular peep. That is that they spoke to put absolutely again. We're basically understand collaboration. I think we're big on sort of collaborating bringing all the state.

Dr. McSparren: I just want to thank you three gentlemen for showing up today on the Green Room. This has been a really great discussion. Mike Wilson. Dr. Mike Wilson? Mike Wilson, and please ladies and gentlemen out there in the audience. Let's thank Mike Wilson. Dr. Anthony Martinez and Dr. Byron Price for the discussion today on how clean coal energy, their new technology, their new company can mitigate the emission of greenhouse gases and is a bridge technology from the old carbon based technology to a new futuristic hydrogen or near future hydrogen economy. So ladies and gentleman. Let's thank these three gentlemen and wish them the best of luck on their commercial Adventures. Thank you very much.