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GENERATING EQUITY:

DEPLOYING A JUST AND CLEAN ENERGY FUTURE

TUESDAY, APRIL 20, 2021

House of Representatives,

Subcommittee on Energy,

Committee on Energy and Commerce,

Washington, D.C.

The subcommittee met, pursuant to call, at 10:32 a.m. via Webex, Hon. Bobby L. Rush, [chairman of the subcommittee], presiding.

Present: Representatives Rush, Peters, Doyle, McNerney, Tonko, Veasey, Schrier, Butterfield, Matsui, Castor, Welch, Schrader, Kuster, Blunt Rochester, O'Halleran, Pallone (ex officio); Upton, Burgess, McKinley, Griffith, Johnson, Bucshon, Walberg, Duncan, Palmer, Lesko, Pence, Armstrong,

Rodgers (ex officio).

Also Present: Representatives Tonko; and Latta.

Staff Present: Jeff Carroll, Staff Director; Waverly Gordon, General Counsel; Tiffany Guarascio, Deputy Staff Director; Perry Hamilton, Deputy Chief Clerk; Fabrizio Herrera, Staff Assistant; Mackenzie Kuhl, Press Assistant; Kaitlyn Peel, Digital Director; Tim Robinson, Chief Counsel; Chloe Rodriguez, Deputy Chief Clerk; Sarah Burke, Minority Deputy Staff Director; Michael Cameron, Minority Policy Analyst, CPC, Energy, Environment; Nate Hodson, Minority Staff Director; Emily King, Minority Member Services Director; Mary Martin, Minority Chief Counsel, Energy & Environment; and Michael Taggart, Minority Policy Director.

*Mr. Rush. The Subcommittee on Energy will now come to order. Today the Subcommittee is holding a hearing that is entitled "Generating Equity: Deploying a Just and Clean Energy Future.'' Due to the COVID-19 public health emergency today's hearing is being held remotely. All members and witnesses will be participating via video conferencing.

As part of our hearing, microphones will be set on mute for purposes of eliminating any background noise. Members and witnesses, you will need to unmute your microphone each time you wish to speak. Documents for the record can be sent to Leto Pena Martinez [phonetic] at the email address we've provided to the staff. All documents will be entered into the record at the conclusion of the hearing.

The chair now recognizes himself for five minutes for the purposes of an opening statement.

The Subcommittee on Energy convenes today in continuation of its work to advance a 21st Century clean energy system with the guiding principles of equity and justice mainly in mind. Historically, the impacts of climate change and the consumption and production of energy have disproportionately burdened the health and environment of our nation's most vulnerable communities.

A University of Washington and Stanford University study

lays these alarming facts bare for all to see. Black and low-income people have the highest risk of death from pollution linked to energy production. This awful truth is compounded by the fact that these same communities lack adequate access to clean energy solutions.

As an illustration, a Lawrence Berkeley National Laboratory report shows that low-income households represent only 15 percent of the U.S. solar energy adoptions. The vast majority of these low-income households instead rely on environmentally polluting alternatives. In addition to this, DoE's Low-Income Affordability Data [LEAD] Tool shows that the national average energy burden for the percentage of gross income spent on energy costs is three times higher for low-income households than for non-low-income households.

Frankly, the poor pays more for its energy needs even though these very same needs are met with disastrous outcomes. These inequities also affect rural communities, and they face some of the highest energy burdens of any U.S. household group.

With these factors in mind, and given that the clean energy transition that is already underway, it is incumbent upon this body to advance policies that ensure resilient, reliable and equitable clean energy systems for all. The

CLEAN Future Act includes a series of policy proposals that seem to balance the scales by delivering clean energy solutions to our nation's underserved and disadvantaged communities.

The CLEAN Energy Future Act also includes my bill, the Energy Equity Act of 2021 of which would provide everyone more access to clean energy technologies through the creation of an Energy Equity Office within the Department of Energy.

I applaud the Biden-Harris administration for their work to ensure that underserved and disadvantaged communities receive their fair share of benefits through their Justice40 initiative. I also applaud Secretary Granholm for recruiting Ms. Shalanda H. Baker, a clean energy justice leader, who is working to integrate the Department of Energy's mission around this very work. Therefore, I look forward to working with my colleagues across the aisle toward those ends.

[The prepared statement of Mr. Rush follows:]

**********COMMITTEE INSERT**********

*Mr. Rush. With that I want to yield to my dear friend, the great gentleman from Michigan, the ranking member, the one and only Mr. Frederick Upton.

*Mr. Upton. Well, thank you, Mr. Chairman. It is good to be with you. It is nice to see you down the hallway, I think, right? I want to thank our witnesses as well, and certainly I look forward to today's hearing that is going to explore the opportunities to take full advantage of America's energy abundance, our economic strength, our spirit for innovation.

We're also going to examine what is at stake with the Biden Administration's executive orders attacking American energy production and manufacturing and also the majority CLEAN Future Act which would enforce a de facto ban on hydraulic fracturing, pipeline infrastructure and even plastic manufacturing.

Over the last decade the U.S. has become the world's leading producer of oil and natural gas, and we are proud of that. And as a result we import less from the Middle East, and we're certainly more energy secure today than ever before. And thanks to hydraulic fracturing and the shale revolution in a good number of states we are all reaping those benefits in the form of good paying jobs and, yes,

affordable and reliable energy at a much reduced cost than otherwise it would have been.

So today we're going to hear from Gillette Mayor Louise Carter-King and Mr. Perez. Jobs in fossil energy, mining, manufacturing certainly provide meaningful, family-sustaining work for millions. States and local governments also rely on those revenues to pay for hospitals, schools and roads.

We're not just talking about a few people's livelihoods. We're talking about entire communities who could be harmed by a transition to lower-paying jobs, poorer performing schools and, yes, underfunded local government services under this CLEAN Future Act.

So as we discuss this so-called just transition that certain friends across the aisle are advocating for let's review some of the recent history to remind ourselves how we got to where we are today. From the days of the gas lines in the 1970s, and yes, I remember those, to the mid-2000s America was trapped in an energy scarcity mindset. Energy prices always seemed to be going up. Our domestic production was, in fact, declining, and we faced ever-growing dependence on oil from the Middle East.

In 2008, something remarkable began to happen within the energy industry. In the face of global economic recession,

private companies started investing billions of dollars in new technologies to unlock oil and gas from America's shale resources that, in fact, had been overlooked, and thanks to the free market and states with pro-growth regulatory policies, domestic production flourished, and we were able to cut our imports from more than two million barrels a day to zero. Not bad.

In fact, in 2020, for the first time in our history, we became net energy exporters. Today as a result of the shale revolution and the rise of natural gas production we are also leading the world in carbon emission reductions, a good thing, and we didn't need the top-down federal mandate, a price on carbon, or even the Paris Agreement to get there either. We owe that to the free market and competition that rewards efficiency and innovation.

So let's recognize that the states and local governments rather than maybe the federal government are the primary drivers of the trends that we see today, which is why I believe it is so important to hear from our mayors and the workers who live and work in those communities.

So with that, Mr. Chairman, I look forward to the testimony, engaging with the witnesses, and I yield back.

[The prepared statement of Mr. Upton follows:]

**********COMMITTEE INSERT**********

*Mr. Rush. The gentleman yields back. The chair now recognizes the chairman of the full committee, the gentleman from the great state of New Jersey, Mr. Franklin "Frank'' Pallone. Chairman Pallone, you are recognized for five minutes for the purposes of an opening statement.

*The Chairman. Thank you, Chairman Rush. This is an important hearing. I know that you've been a champion for ensuring inclusion of underserved communities and communities of color in the clean energy transition, including the bill that you recently introduced, the Energy Equity Act of 2021. So I know how important this issue is for you.

And we're going to talk today about how we can improve Clean Energy Act's inequity, which is a critical part of our efforts to tackle the climate crisis. The equitable deployment of clean energy technologies is crucial for our energy transition. We have to ensure that all committees have access to the environmental benefits and economic opportunities of clean energy.

The committee has held several hearings on this critical topic. Last Congress this subcommittee held a hearing on energy burdens faced by low-income communities and communities of color and how the pandemic exacerbated those burdens, and last week the Environment and Climate Change

Subcommittee held the hearing on important legislation to address the needs of environmental justice communities, and through these hearings we have heard about the urgent needs of these communities, and we have explored different strategies to address existing and longstanding disparities.

The equitable deployment of clean energy will produce a lot of positive results. It will improve local air quality, help us to meet climate goals, stabilize and lower energy prices, provide access to good jobs and help stimulate local economies in both urban or rural areas. And for too long underserved communities and communities of color have disproportionately faced the negative effects of fossil fuel generation and climate change. These communities are often the most impacted by the climate crisis and our country's history of reliance on fossil fuels because they are oftentimes located in close proximity to power plants or urban heat islands.

They also frequently endure housing conditions that lack proper weatherization, and by gaining access to clean energy technology such as through community solar subscriptions or energy efficiency upgrades these households can see reduced energy burdens and health risks as well as increased economic opportunity.

So I think we all know that the energy industry is changing, and this is good news for our efforts to tackle the climate crisis and to create good paying jobs for American workers. According to the 2020 U.S. Energy and Employment Report, solar and wind jobs paid higher wages than those in the fossil fuel sector, and the clean energy sector employed roughly three times more workers than fossil fuel sector in 2019.

And despite these promising trends I believe the federal government needs to do more to speed up and incentivize the clean energy transition, and that is exactly what we accomplish with the CLEAN Future Act, a plan to combat the climate crisis and achieve net zero greenhouse gas pollution by no later than 2050. And our bill includes several provisions that support clean energy development and deployment including in underserved areas. It also includes a robust set of provisions on workforce development in transition.

This is the kind of comprehensive approach that we have to take. I outright reject the notion that we must choose between addressing climate change and the communities that currently rely on fossil fuel jobs. That is a false choice because that transition is already happening. For example,

market forces are already driving down coal revenue. Coal generation fell 10 percent from 29 percent in 2017 to 19 percent in 2020.

And clean energy is the future, and it is time that we worked together to ensure that these communities don't get left behind. Yesterday the nation's largest mining union put out a document about this transition. And they said, and I quote, "Change is coming whether we seek it or not.'' And the president of the mining union said, and I quote, "We're on the side of job creation, of a future for our people.'' And I just want to say emphatically so are we.

Make no mistake. The rest of the word is already embarking on a major transition to clean technology. We simply can't stand idly by as the world moves on without us and American workers and industries get left behind. I don't want that to happen. So it is time we come together to ensure everyone regardless of who they are or where they live has access to cleaner, cheaper energy and the jobs that come with growth in the clean energy sector. That is what this hearing is about.

And I want to thank you again, Chairman Rush because this has always been at the forefront of your concerns, and that is why you're having this hearing today. Thanks again.

I yield back.

[The prepared statement of Mr. Pallone follows:]

**********COMMITTEE INSERT**********

*The Chairman. I think he is -- do you hear him, guys? I don't. Bobby, I think you're muted.

*Mr. Rush. Thank you, Mr. Chairman. I was muted. The chair now recognizes the gentlelady from the great state of Washington, Ms. McMorris Rodgers, the ranking member of the full committee, for five minutes for the purposes of an opening statement.

*Mrs. Rodgers. Good morning, Mr. Chairman, and everyone.

*Mr. Rush. Good morning.

*Mrs. Rodgers. Good morning. And to the chairman of the full committee I just want to say on behalf of the Republicans that we, too, support clean energy, but it doesn't just mean wind and solar. It is hydro. It is nuclear. It is natural gas. America is leading the way on all kinds of clean energy sources. It is great to be with all of you today.

Making sure people have access to affordable, reliable energy must remain a priority of this committee's work on energy. Americans have led the world in lifting people out of poverty, raising the standard of living, and we must recognize the tremendous value of our existing energy system. It is central for expanding economic growth and spreading

opportunity. The evidence is in plain sight. The shale revolution has brought tremendous opportunities, an American energy renaissance. It has revitalized communities with hundreds of billions of dollars in economic activity, thousands of new jobs. It has meant the equivalent of about $2,500 extra in the average family's annual budget with low-income households benefitting the most from reduced energy burdens.

It has raised the promise of a better quality of life for families along the Ohio River Valley, in Pennsylvania, Ohio, West Virginia. It has increased opportunity through Texas, New Mexico and from Wyoming to California helping people of all incomes. To continue to address energy poverty and climate risks Republicans seek to build on these current achievements In Energy and economic opportunity.

We also want to keep electricity rates low. I have noted in several recent hearings the Department of Energy data on energy poverty and how new regulatory regimes will raise electricity rates and stretch the family's budget's last dollar. Instead we should focus on innovative energy technologies that will reduce emissions while using all of our resources including hydro, natural gas, nuclear as outlined by the ENC Republicans Securing Cleaner American

Energy agenda. Many of the Securing Cleaner American Energy bills are included in the energy innovation agenda launched this week by House Republicans.

We are committed. The energy innovation agenda focuses on innovation, clean energy, conservation policies for tackling climate change risk, building energy infrastructure and developing new technologies because to win the future we should be about building, not dismantling American opportunity.

Unfortunately, dismantling is a feature of the CLEAN Future Act and the administration's job-crushing agenda. The rush to green undermines many of the goals we all share to address energy poverty. For example, the CLEAN Future Act will restrict permitting of the kind of projects that provide good jobs and raise community prosperity. They would restrict natural gas development and supply for jobs, low energy rates and even the expansion of renewable energy.

Provisions in the CLEAN Future Act would force top-down federal requirements on state regulation of hydraulic fracturing dismantling the proven innovation and this approach that has helped drive the shale revolution.

Two witnesses this morning, Jose Perez of Hispanics in Energy, and Louise Carter-King, Mayor of Gillette, Wyoming,

will talk about the trillions of dollars of new economic opportunity in the oil and gas development and how this American resource fits into a cleaner energy future that benefits everyone. The pace of transformation in the majority bills makes no time for the practical reality of ensuring the lights stay on when people need it most.

California is a case study for what can go wrong. Its unrealistic policies have driven the growth the weather dependent, unreliable solar and wind and shuttered natural gas, nuclear and other traditional generators while all the time driving up electricity rates. California's policies have dismantled large amounts of base load and generation when the wind isn't blowing and the sun isn't shining. A review of the National Regulatory Research Institute shows California's dreams have created a huge gap in reliable, affordable energy.

When the sun goes down and the energy demand goes up, all those homes that enjoyed inexpensive power during the day now the grid has a huge spike in demand. We see this happen every summer. My friends in California are having to buy generators. This is resulting in unreliable, inexpensive energy.

I'm proud of the work of this committee. America is

energy independent. It was a goal that we had for decades. We're leading the way in bringing down carbon emission. Let us avoid the California experiment and make sure that America continues to lead with affordable and reliable energy.

[The prepared statement of Mrs. Rodgers follows:]

**********COMMITTEE INSERT**********

*Mrs. Rodgers. And with that I'll yield back, Mr. Chairman. Thank you.

*Mr. Rush. The gentlelady yields back. The Chair would like to remind all members that pursuant to committee rules all members' written opening statements shall remain part of the record. Now it is my fervent and distinct honor to welcome our esteemed witnesses for today's hearing. I would like to thank each and every one of them for taking time out from their precious days to come before this committee. I'm going to introduce them to you now, and I hope that I am pronouncing their names correctly.

The first witness is Mr. Subin DeVar, who is the Director of the Initiative For Energy Justice; Ms. Chandra Farley, Just Energy Director for the Partnership for Southern Equity; Mr. Donnel Baird, Chief Executive Officer of BlocPower; Mr. Jose L. Perez, President and Chief Executive Officer of Hispanics in Energy; and Ms. Louise Carter-King, the Mayor of the City of Gillette.

I want to thank each and every one of our witnesses again for joining us for today's hearing, and we look forward to your testimony.

Mr. DeVar, you are now recognized for five minutes for the purposes of an opening statement.

STATEMENT OF SUBIN DEVAR, DIRECTOR, INITIATIVE FOR ENERGY JUSTICE

*Mr. DeVar. Thank you, Mr. Chairman Rush, Mr. Ranking Member Upton and members of the committee. My name in Subin DeVar, Director of the Initiative For Energy Justice and am honored to testify on equity in the deployment of clean energy.

The COVID-19 vaccine deployment provides a useful point of comparison for our conversation today. Experts knew we needed to have a phased deployment of the vaccine given the time necessary to vaccinate millions of Americans. There was a recent debate about the priority groups, and in the end efficiency used logical and ethical parameters to set phases of vaccine deployment focusing first on vaccinating frontline workers and vulnerable populations.

Equity in the energy system is not that different. You can't transition the whole system all at once, so how do you do it in the most fair and broadly impactful way? That is energy equity, the just distribution of the holistic benefits of the energy system including nonenergy benefits such as economic and health benefits. It particularly focuses on remediating the harms of the existing pollution heavy energy

system centering frontline communities and vulnerable populations.

A simple way to think about energy equity is in terms of who benefits from the energy system and how much people benefit from the energy system. I will discuss both of these topics in turn in the context of obstacles to the equitable deployment of clean energy.

First, there are two key obstacles regarding equity and who benefits from clean energy. One, most energy regulatory jurisdictions do not have comprehensive definitions and strategies for target customer groups to pay special attention to in the transition. Without such definitions it is impossible to accurately assess the state of equity in clean energy deployment or to implement effective solutions.

Therefore, my first recommendation is to identify priority groups or, in other words, marginalized or underserved communities. This should include mapping geographically defined groups based on cumulative health impacts and demographic data as well as other volatile populations such as low-income households, customers who rely on home electricity to power medical equipment, fossil fuel workers, rural and tribal communities.

The second obstacle to ensuring that marginalized

communities benefit from the energy system is the absence of their voice, insight and perspective at the stage of energy system design and policy-making. In response to this obstacle, my second recommendation is to invest in robust outreach, inclusive practices for soliciting feedback and providing resources, including financial compensation, for community participation in rule-making.

Next is the question of how much do various groups benefit from clean energy. There are two primary obstacles regarding equity in this sense. One, the absence of equity goals and metrics is a fundamental barrier to people benefiting from the whole suite of potential clean energy benefits. Accordingly, my third recommendation is to require the equitable distribution of clean energy benefits, including a minimum of 40 percent of benefits targeted to marginalized and underserved communities. Enforceable accountability mechanisms should track and report on metrics of benefits every few years or every decade alongside decarbonization targets.

A final obstacle is that overly broad clean energy requirements combined with the profit incentive of investor-owned utilities could fail to prioritize specific approaches to clean energy that maximize public benefits across

different sectors. So my fourth recommendation is to focus on renewable distributed and community-led energy resources.

A federal clean electricity standard, for example, should allow only energy that meets international definitions of renewable energy, require that at least two-thirds of electricity come from distributed energy resources and that at least 25 percent of energy generation is community-led through nonprofits, cooperatives or public entities.

To close, I'd like to reiterate my main points. Equity can be understood in terms of who benefits and how much people benefit from the energy system. Second, inequities regarding who benefits from clean energy can be mitigated by, one, identifying priority groups including through mapping and, two, investing in meaningful community participation.

Third and finally, inequities regarding how much Americans benefit from clean energy can be addressed by requiring the accounting of benefits and advancing renewable distributed and community-led energy resources. Thank you. Look forward to your questions.

[The prepared statement of Mr. DeVar follows:]

**********COMMITTEE INSERT**********

*Mr. Rush. Thanks. The gentleman yields back. The Chair failed to introduce one of the witnesses for today's panel. I want to introduce right now Mr. Kiran Bhatraju, and Mr. Bhatraju is the Chief Executive Officer of Arcadia Power. Mr. Bhatraju, please forgive me. It was a failure of the head and not the heart. So welcome to our subcommittee hearing.

STATEMENT OF KIRAN BHATRAJU, CHIEF EXECUTIVE OFFICER, ARCADIA

*Mr. Bhatraju. Good morning. First I'd like to thank you, Chairman Rush, and no offense taken, and Ranking Member Upton for inviting me and acknowledge Chairman Pallone and Ranking Member McMorris Rodgers as well.

I'm glad to be here today to talk about how we can combat climate change, spur economic growth and also lower consumer power bills with community solar. I'm Kiran Bhatraju. I'm the founder and CEO of Arcadia. We're a software company making it easy for customers anywhere to choose clean energy in all 50 states no matter where you live whether you rent or own and no matter how much you make. Our software platform has enabled over a billion dollars In Energy investments in communities across the country.

Before I talk a bit more about community solar and my company's work I want to talk a bit about why this topic is so important to me. I was raised in Pike County Kentucky in the heart of coal country. In elementary school, we took a field trip into a coal mine, and my father, who is a physician, treated black lung patients. Today I run a company that serves customers in all 50 states, and I can tell you that people everywhere are extremely interested in

solar energy, Republicans and Democrats all over the country.

In Kentucky, they want to talk about solar because they want to hear about economic development resilience and job opportunities in light of a transition away from coal. In cities, they want to hear about solar because of the threat of climate change. People everywhere want to save money, and in both places people think solar is hard. They think you have the wrong roof, you have no roof or that you can never afford it, and that is when I like to tell then that the answer is community solar.

Simply put this is the best way for everyone to access the benefits of solar energy no matter your income, whether you rent or own or how much sun hits your particular roof. By joining a community solar project, customers get guaranteed savings, and that is important. It is guaranteed savings against the traditional utility rate. There is no long-,term commitment, no upfront cost, and if you move, your solar can move with you. And all of that is from a new resilient distributed solar project nearby, not one on their roof.

It is hands down the best energy product in America, and I'm not just saying that because my company works in community solar. It is the reason I started this company.

Literally everyone would be better off if they joined a resilient community solar project.

Today our software is delivering savings to customers in eight states, including a lot of places represented by folks on this subcommittee. For some examples, we manage a project in Kankakee County Illinois savings customers close to 10 percent on their power bills. We managed the first project in New York incorporating battery storage in Yorktown Heights, and we manage a project in Logan County Colorado where the proceeds from the leased land benefit the state's school trust.

These are just a handful of our projects. We have got 185 projects across the country. Community solar is particularly important, and I know it is new, so I want to make this point very clear is that it is the only way for the majority of Americans to actually share in the benefits of solar. Only a third of American households came put a power plant on their roof. The families who are excluded from rooftop solar because they rent, because they have a low credit score these are disproportionately people of color, women-led households or people without college degrees.

Community solar, on the other hand, is available to everyone who can pay a power bill. It doesn't matter if you

have a roof or can put a power plant on your roof. And so these are so unique because they are offsite.

A lot of our projects are actually found on farmland. If you're a farmer struggling with prices, and you have got some land that isn't great for farming, getting a lease payment from a solar project might just be your lifeline. In fact, in Pennsylvania, the Farm Bureau is actually promoting community solar because farmers can get thousands of dollars a year in lease payments, basically, a lifeline for their families.

Our projects are also often located in economically distressed areas. Close to 22 percent of our projects are in what are called opportunity zones representing millions of dollars of investment in places that need it the most. So what I'm describing to you is just one of the most exciting competitive energy trends happening in America today. It is happening everywhere, red states, blue states, deregulated and regulated the markets, and it can work everywhere.

The problem is other states need to catch up. The best way to do that is to pass a law that would require public utility communications to consider a community solar program. The proposal was introduced in the last Congress as the Community Solar Consumer Choice Act, and the same language is

in Section 225 of the Clean Teacher Act.

And to be clear, this legislation only asks states to consider. They can do what they want and embrace community solar when they learn more about the equity and the benefits. I'll just close by saying my job as CEO of this company is to make it easy for people to use clean energy and to help them save money. I've been doing this since 2014 and hands down community solar is the only way to make that mission a reality. I'm incredibly excited to be here and talk to you about this new segment of solar today. Thanks for having me and look forward to answering any questions you have.

[The prepared statement of Mr. Bhatraju follows:]

**********COMMITTEE INSERT**********

*Mr. Rush. The gentleman yield back. The Chair now recognizes Ms. Farley for five minutes for the purposes of an opening statement.

STATEMENT OF CHANDRA FARLEY, JUST ENERGY DIRECTOR, PARTNERSHIP FOR SOUTHERN EQUITY

*Ms. Farley. Thank you. Good morning to Honorable Chairman Bobby Rush, Ranking Member Upton and all members of the Subcommittee on Energy. Thank you for the opportunity to provide this testimony today. My name is Chandra Farley, and I am the Just Energy Director at the Partnership For Southern Equity, a racial equity organization based in Atlanta, Georgia.

The American South is a region laid bare by racial, economic and class inequities due to the legacy of slavery. These facile barriers have hampered the opportunity for black communities, community of color, rural and low-wealth communities to lend their perspective to the shaping of their clean energy future. To combat this we created Just Energy, our framework for advancing energy equity, which we define as the fair distribution of the benefits and burdens of energy production and consumption. We advance Just Energy through relationship centered strategies like organizing that build civic power with communities across the South.

The data is clear. Historically disinvested communities in the South bear a disproportionate burden of the negative

impacts of our climate emergency and climate based energy production. The South experiences a higher frequency of billion-dollar climate disaster events than any other region. The Southeast is home to 84 percent of all U.S. counties that experience persistent poverty.

Some of the biggest carbon polluters in the power sector are in the South, and southern states rank at the bottom of lists for energy efficiency policies and programs while also consistently posting the highest rankings for energy burden. Pile on the fact that we now have millions of laid off and unemployed workers that are losing access to their utilities due to the economic fallout from COVID you can see why Just Energy is an urgent and pressing matter.

The Clean Teacher Act can deliver on many of the Just Energy policies and community accountability tools that address systematic issues and generate equity through increased deployment of clean distributed and democratic energy by focusing on four strategies, reducing energy burdens by lowering utility bills and stabilizing energy costs through clean energy investments like weatherization, energy efficiency, rooftop solar and community micro grids; two, improving household financial stability by providing thriving wage job opportunities and supporting clean energy

entrepreneurship that can lift people out of poverty and advance an economic inclusion agenda; three, reducing harmful carbon emissions that pollute our air and exacerbate disproportionate impact of this pollution on environmental injustice communities through the Environmental Justice For All Act; and four, promoting clean energy centric economic development that build community wealth.

The levels of funding now possible across energy, water, housing, transportation and broadband sectors presents a transformative opportunity for reparation and restoration of historically disinvested communities that are locked out of the clean energy transition. This movement moment is meeting critically needed investment mechanisms such as the Clean Energy and Sustainability Accelerator. Combined with the Justice40 initiative that must be frontline community informed the $100 billion commitment for the Clean Energy and Sustainability Accelerator can transform the underlying systems of racial oppression while building lasting institutional change.

We must also commit to taking care of the fossil fuel and coal country communities that have kept this country growing for the last 150 years. Through proposals such as reforming the Rural Utility Service Hardship Loan Program we

could direct $100 billion to facilitate the retirement of coal plants in exchange for new investment in distributed energy resources, highspeed broadbands, storage and electric transportation.

When we ask ourselves how deploying a just and clean energy future can generate equity, we must recall the definition of equity itself. Just and fair inclusion. An equitable society is one in which all can participate, prosper and reach their full potential. We also need a racially equitable society, one where society's benefits nor burdens would be skewed by race.

In short, an equitable and just transition creates an antiracist path from hope to change. Together we can flip the systematic inequities imbedded in our social, economic and environmental systems to a forward-thinking equitable and regenerative future. Thank you.

[The prepared statement of Ms. Farley follows:]

**********COMMITTEE INSERT**********

*Mr. Rush. I thank the gentlelady. The Chair now recognizes Mr. Baird for five minutes for the purposes of an opening statement. Mr. Baird, you're recognized.

STATEMENT OF DONNEL BAIRD, CHIEF EXECUTIVE OFFICER, BLOCPOWER

*Mr. Baird. Good morning, and thank you, Mr. Chair. I'm delighted to be here and have the chance to virtually meet the Honorable Bobby Rush, who is the only human being who ever defeated Barack Obama in an election head to head and whipped him good is what I understand. My name is Donnel Baird, and I run a climate tech startup called BlocPower. We focus on analyzing, financing and installing efficient and all-electric equipment in low-income buildings.

Clean energy in low-income buildings across America is central to economic recovery in all of our communities and central to the survival of our species as human beings on this planet. I am on the board of the Climate Reality Project with Vice President Al Gore, Columbia University's Entrepreneurship Committee, the Sierra Club Foundation, the Sunrise Movement, Better Markets, the New York City Workforce Development Board, the New York City Tech Alliance and the New York Federal Reserve Bank Advisory Board. All of these organizations must work together in order to ensure clean energy investments in low-income communities because it is complicated, and it is hard.

Community ownership of clean energy, energy efficiency

and internet connectivity infrastructure must, in my view, be owned and controlled by low-income communities across America. Low-income communities need ownership and equity, not just ownership in the sense of morality of ownership and equity in the sense of justice and equality but literal economic ownership, an equity ownership of stock, of shares of special purpose corporations that house infrastructure assets.

In low-income communities, I know that we all see lots of waste. We see wasted fossil fuel energy in the buildings where we burn oil to overheat these buildings, and we see a waste of human potential due to high rates of unemployment, incarceration, poor education and opioid addiction. I started my tech company to fix that waste both of fossil fuels and the waste of human potential.

This is 2021, and this is America. This is not ancient Mesopotamia. We do not need to heat buildings across our country by burning dead dinosaurs in our basements and causing high asthma rates amongst our children. We can turn millions of buildings across America into Teslas, all electric, healthy, using cutting-edge software and creating up to 25 million American jobs.

Electrifying millions of American buildings will require

sensors, smart grid, solar batteries, carbon capture and storage, the Internet of Things, cloud computing, mobile computing, edge computing. These are new industries that we can and will launch and own and manufacture right here in America including in West Virginia. We believe that as many as five million permanent jobs will be created.

To date BlocPower has focused on learning how to finance and analyze and reduce fossil fuel waste and health disparities in New York City buildings in partnership with the New York state government, the New York City government and Goldman Sachs. We've greened 1,100 apartment and community buildings in New York City and low-income communities. We've raised over $70 million of private capital, including a $50 million loan from Goldman Sachs.

We've designed a community-owned clean energy solar micro grid in part with New York state because community ownership of clean energy, assets and internet broadband assets, again, is critical. We've launched a community-owned WiFi network to help low-income families in the Bronx who have no broadband access to have internet access, and in a few weeks that mesh system will serve millions of New Yorkers with free internet --

[Audio malfunction.]

*Mr. Rush. We've lost the sound, the audio. We've lost audio.

*Mr. Baird. -- Caucasian 55-year old white dudes, immigrants, students, Americans of all kinds to work in our company, and we've done this -- in closing, we've learned a few quick things that I believe are useful to this committee. We believe that pay for performance public/private partnerships are critical because they combine the best thinking and learning from community groups, workers, finance, Wall Street, Silicon Valley and the best and brightest in government policy and ensure that each and every taxpayer dollar that is spent is wisely invested and that performance is assured. We believe that we can leverage each dollar of taxpayer subsidy with $5 to $10 of private capital which we have demonstrated in our partnership with Goldman Sachs to invest in clean energy and low-income communities.

And in closing, clean energy must include low cost internet connectivity at scale. All of the clean energy devices that we install require internet, and we must provide community internet in low-income communities, and that community internet must be owned by low-income communities, which is a core part of the White House plan. America has a unique opportunity in front of all of us right now --

*Mr. Rush. Mr. Baird, pardon me. You started out with such a bang, but your time has expired --

*Mr. Baird. Thank you, Mr. Chairman.

*Mr. Rush. -- and will you bring your comments to a close.

*Mr. Baird. Yes, sir. We have opportunity to launch several new industries, and we should not waste it. Thank you, Mr. Chair.

[The prepared statement of Mr. Baird follows:]

**********COMMITTEE INSERT**********

*Mr. Rush. The gentleman yields. The Chair now recognizes Mr. Perez for five minutes for the purposes of an opening statement.

Mr. Perez, you are recognized for five minutes.

STATEMENT OF JOSE L. PEREZ, PRESIDENT AND CHIEF EXECUTIVE OFFICER, HISPANICS IN ENERGY

*Mr. Perez. My apologies. I didn't have the unmute button on. It is on now. Good morning. My name is Jose Perez, and I'm the President and CEO of Hispanics in Energy, and I want to make a few remarks before I get into my statement. And that is I want to personally thank you, Congressman Rush and Congressman Upton for speaking at our former events, one in Chicago and one in Washington, D.C. We really have followed your career, and thank you very much for your service to this country.

Let me begin by saying that Hispanics in Energy, a nonprofit, strongly supports the goal of a clean and healthy environment, and we are eager to contribute towards that goal. We must all fight carbon emission induced climate change. Providing a healthy future for our families is a core value for our community, and we support practical and well thought out efforts for clean energy development.

However, this proposed new direction of clean energy needs much more thought and analysis before such a radical approach is adopted. We do not think it demonstrates enough appreciation or concern for the Hispanic energy workers

community or other communities, including our African American and Indigenous brothers and sisters. There is no evidence that Hispanics will benefit economically and prosper from the emerging clean energy economy.

With 18 percent of the American people, Hispanics are America's largest minority group, over 60 million people. We have the highest labor force participation rate as compared to any other group. We like to work. We quickly pick up our roots and move to follow the jobs. We don't complain about having to get up early in the morning to go to work.

Many in our community have chosen to work in the oil and gas fields in Texas, California, New Mexico, Colorado and other critical oil-producing states. In California, 30 percent of the 385,000 oil and gas workers are Hispanic. That is 115,000 jobs with an average salary of $100,000. So that is an $18 billion infusion into Hispanic households and families every year. Of all the oil and gas jobs available to Hispanics, none beats the job opportunities as in the 86,000 square mile Permian Basin, a land many times bigger than Delaware where the locals are 65 percent Hispanic.

The Permian Basin is gigantic, and it sits between the Southeastern part of New Mexico and the Western part of Texas. In this particular area, the development has a

potential of $3 trillion with over 400,000 new jobs. Clearly, Hispanics are already a large part of the workforce in the shale plates of Texas, Colorado, Utah, North Dakota and Oklahoma. The same can be said about oil exploration and leasing along the Gulf of Mexico. This proposal would take away those jobs and the economic infusion going into California's Hispanics community and those in Texas, New Mexico, Oklahoma, North Dakota. Is that what we want? We don't think so.

America's energy policy should include a complete mix of energy strategies, including the expansion of nuclear energy generation because of its safe technology, inexpensive 24/7 operation and pure clean energy as an output. The expansion of natural gas is the primary reason for the lowering of carbon emissions in this country. There is still much more benefit that could be gotten out of natural gas, the development of new technologies to neutralize the harmful effects of carbon emissions in burning fossil fuels, and there is a lot of great developments. It seems like we ought to be putting more resources to make sure that we come up with a solution for that.

And then finally we should encompass principles that do not harm American energy workers, that help to enhance their

training and capacity to increase their economic success and security. Taking away from American workers doesn't make any sense to us. Our country's transition to a low carbon clean energy economy must include all communities to be sustainable. The clean energy sector can do way more to diversify and embrace equity and inclusion with our Hispanics community.

Thank you for being asked to provide thoughts about energy strategy and policy. As large as our community is in America it is too rare for the government to ask for ideas about energy.

Thank you very much for that, Congressman. I look forward to answering any questions you may have.

[The prepared statement of Mr. Perez follows:]

**********COMMITTEE INSERT**********

*Mr. Rush. The Chair thanks Mr. Perez. The Chair now recognizes Ms. Carter-King for five minutes. You're recognized for five minutes for the purposes of an opening statement.

STATEMENT OF LOUISE CARTER-KING, MAYOR, CITY OF GILLETTE

*Ms. Carter-King. Thank you and good morning, Chairman Rush, Ranking Member Upton and members of the committee. Thank you for the opportunity to allow me to speak. I am here today as the nonpartisan elected at-large Mayor of the City of Gillette, Wyoming. On behalf of the community that proudly bills itself as the energy capital of the nation, I wanted to share a few considerations from our city regarding the transition to a decarbonized power sector.

Located in the heart of the Powder River Basin containing significant deposits of coal, oil, gas and uranium, our community has a vested interest in the continued responsible use of our region's abundant natural resources. For decades, our residents have quite literally been on the front lines of powering the country. Our municipal revenue and subsequent governmental operations are largely dependent on these industries. The loss of this revenue will have an immediate and direct impact on the public safety of our residents from the officers that we have on the street to the doctors and nurses we have in our hospitals not to mention what it will do to our public education system which is already facing steep cuts.

We recognize that the global demand for how energy is produced is changing. We have worked hard to forge partnerships with other local, state and private entities all dedicated to both expanding and diversifying our local economy. We are also acutely aware that these major changes do not occur overnight or without significant financial resources.

As is true for any other elected body our primary goal at the city of Gillette is to preserve and improve the quality of life for those that we represent. Aggressive goals for the decreased use of fossil fuels will directly result in the loss of revenue, jobs and wellbeing for the citizens of our community and many others like it. While we understand the desire to transition to a carbon neutral energy matrix we believe a measured, thoughtful approach is prudent and necessary.

We are actively working with other public and private entities to not only work towards reducing carbon emissions but also to identify new uses for carbon. Partnerships with local utilities, the XPRIZE Foundation, the University of Wyoming School of Energy Resources and the U.S. Department of Energy have spurred research into uses of the carbon created from energy production as well as finding the value-added

products created from our abundant fossil fuel. We will need the continued support of the federal government to see these projects come to fruition for the benefit of everyone in our nation.

Thank you for the opportunity to hear this perspective and for your important work. Thank you.

[The prepared statement of Ms. Carter-King follows:]

**********COMMITTEE INSERT**********

*Mr. Rush. I want to thank all the witnesses for their exemplary testimony, and we have concluded the opening statements for this morning. Now we will move toward member questions. Each member will have five minutes to ask questions of our witnesses. I want to start by recognizing myself for five minutes.

This month Chairman Pallone, Chairman Tonko and I introduced the CLEAN Future Act to put the nation on a path toward a clean energy future by no later than 2050. Among these policies is my bill, the Energy Equity Act of 2021, which would drive principles of equity and justice in our energy system by establishing a federal program office solely dedicated for these purposes.

My first question is to Mr. DeVar. Mr. DeVar, will you briefly describe the importance of federal policies to advance the equitable distribution of clean energy and why they should be a requirement.

*Mr. DeVar. Yes. Thank you, Chairman Rush. The reason why these policies need to be a requirement in brief stem from many of the points and questions that have been raised by all the members here and all the witnesses. There is a key question in who will benefit, and, in fact, there is a lot of agreement here.

I'm astounded to hear the concern about wages, about income and about jobs and which communities benefit from that. And so the federal government has a key role in ensuring equity. The federal government has a key role in leadership, and the Office of Energy Equity that you're proposing would be essential for closing the gaps that folks have mentioned whether there is evidence that these benefits will actually be realized by the communities and populations that folks have raised.

*Mr. Rush. Thank you, Mr. DeVar. Ms. Farley, as you know, clean energy transmission must be just, must be equitable for all communities both urban and rural. How will a Federal Energy Equity Office support community-based groups in meeting the energy needs of all communities?

*Ms. Farley. Thank you, Chairman Rush. It is critically important that any activities with goals to be more just and equitable include direct input from the communities who are first and most impacted by any of the negative impacts that we have discussed today whether that is the climate emergency overburdened by electricity bills and legacy pollution.

So the opportunity to establish an Energy Equity Office within the Department Energy is this kind of critical

opportunity. It is important that we have the infrastructure that is needed to deliver on these benefits, and an office like Energy Equity would be there to support Shalanda Baker, who we are very excited about. But this is a massive undertaking, and --

*Mr. Rush. Thank you very much. I'm sorry to cut you off, but I only have a few more seconds, and I would like to ask now Mr. Bhatraju and Mr. Baird how would a Federal Energy Equity Office support public/private partnerships in delivering greater clean energy access to underserved communities?

*Mr. Bhatraju. I'll be quick. The community of solar at its heart is expanding access to communities that haven't had access to rooftop solar. It is a competitive energy trend, but it requires public cooperation to set up the structures to enable private developers and investors to actually build these projects. So that public/private partnership is incredibly important to expanding access.

*Mr. Rush. Thank you. Mr. Baird, would you contribute to answering the question?

*Mr. Baird. Mr. Chair, thank you. My company was started by a $2.1 million contract with the U.S. Department of Energy, and I believe the opportunity to create similar

companies started by people of color, by women, by our country's veterans would be greatly assisted by having an Office of Equity in the Department of Energy given our corporate experience and partnership with the Department of Energy. That Office of Equity is very necessary.

*Mr. Rush. Thank you. The Chair yields back the balance of his time. The share now recognizes Mr. Upton for five minutes for purposes of an opening statement.

*Mr. Upton. Well, I'm going to ask questions, but thank you --

*Mr. Rush. Questioning. I'm sorry.

*Mr. Upton. Thank you, Mr. Chairman. Mr. Perez, I think that we share similar views on the need to address climate change and certainly the benefits of clean energy. It is something that we know is happening and what we want. With that said, I want to talk a little bit about some of the actual policies that have been proposed and impact that they would have on communities especially the Hispanic energy workers that you represent.

First of all, let me ask what is the volume of folks, in fact, that you think that you represent with your position? What are some of the numbers?

*Mr. Perez. Thank you for that question, Mr. Upton.

There is about 10 and a half million people that work just in the oil and gas side, and I would say that the total Hispanic workforce in that sector is about 10 percent, or about a million, and that doesn't include utilities or the clean energy space. It is only the oil and gas side. That includes pipelines, refineries, all the upstream. So it is a very large part of the working population of energy workers.

*Mr. Upton. I appreciate that. As you know, there was some news that was made just in the last week to ban fracking in California. They actually had a vote in the state legislature. As I understand, it was defeated because, in fact, of its impact it would have on the Hispanic community. What kind of impact do you think a nationwide ban on fracking would have on the Hispanic community and not only there but throughout the country?

*Mr. Perez. Thank you for that question. We believe that the impact would be devastating because you're talking about in the case of the Permian Basin where it is being developed right now with a $3 trillion potential. That community around there is 65 percent Hispanic. The workers are a higher percentage. So if you can imagine just wiping out all that opportunity and the significant economic impact it has not just to the workers but to their families and

their communities.

In other places like California that are more established, the oil and gas business is fairly centralized in Southern California and parts of the current county in Bakersfield. Those communities would also be severely impacted. And in Texas with Eagle Ford and some of the development that goes on in Texas very significant impacts. So you are, basically, taking a whole community and throwing it under the bus.

*Mr. Upton. So as you know, a frequent line that certain many of us in Congress and on this committee have used is all of the above strategy. I support all of the above. Always have. Needs to be a strong source of renewables. We need efforts on new technologies whether they be clean coal or carbon capture. I mean, all those things are very important, but the argument has been made time and time again by some that if, in fact, if you eliminated a number of these jobs, maybe millions, that they would be able to find some alternative line of work at equal pay in some other energy sector. Do you see that as actually holding water that argument?

*Mr. Perez. No. That is not our experience. I have been working in this environment for nine years when we

organized forums around the country around jobs and energy, and the people who are, for example, the trainers of clean energy workers, for example, the rooftop solar installers, they average about $13 an hour. There is no benefits. There is no security in their jobs. There is no career ladder. Once a job is complete they, essentially, have to go out and -- they are on their own. They have to go out and find another job, whereas we find that in at least the oil and gas business because the union protection that is offered that there is long-term security.

And a lot of people that even if they are working at the lower level of the working hierarchy, you know, they still find enough incentive to stay and make it a career and retire from that because there is that sustainability.

So we have not seen any evidence that the clean energy space as least for the Hispanic community is a good option, a good alternative, and so it really concerns us that we are drawing a lot of assumptions without really any evidence. So we just think that we need to research this thing very carefully because we are talking about a very significant, very negative economic impact at least to our community. And so we need to have some very sober discussions around this.

*Mr. Upton. Well, I see my time has expired, but I

appreciate everybody's testimony and looking forward to participating through the rest of the hearing. With that, Mr. Chairman, I yield back. Thank you.

*Mr. Rush. The gentleman yields back. The Chair now recognizes the gentleman from New Jersey, Mr. Pallone, the chairman of the full committee, for five minutes for questioning the witnesses. Mr. Pallone, you are recognized. Chairman Pallone, you are recognized.

[Pause]

The Chair now recognizes Mr. Peters from California for five minutes for questioning the witnesses.

*Mr. Peters. Thank you, Mr. Chairman. I was just trying to grab a bite to eat there. I'm happy to be here and thank you for the hearing. I had a question for Mr. DeVar. Just yesterday United Mine Workers of America, the largest mine workers union in the race to transition to clean energy jobs, has paired with robust investment in the communities they call home. The union says that, "Change is coming whether we seek it or not.'' Coal production in the electricity sector has been falling for years for market reasons irrespective of any federal policy, and we can support these communities and these workers by investing in technologies like carbon capture, utilization and storage and

by funding reclamation of abandoned mines.

We need to stop acting as if we have to choose between clean energy and fossil energy and instead focus on solutions for workers in the clean energy transition that is clearly already happening. So can you please expand on the types of policies that are needed in order to ensure we maintain and develop strong energy economies in diverse regions of the country?

*Mr. DeVar. Yes. Thank you, Mr. Peters. I would say the first thing that we need to stay true to that hope that this transition is paired with protections for communities is to think about where we need to set goals and metrics to ensure that we deliver on that, and I think that is the key role of this hearing, and I think that is the key role of the federal government.

And so there are policies that can ensure that we put in labor protections and that we incentivize those approaches to clean energy that actually do the most to protect workers and do the most to protect particular communities.

*Mr. Peters. Thank you. Another question for you, sir. In your testimony, you highlight the gaps in data collection that can hinder the fair allocation of resources. In particular, you identify the lack of definitions for what you

call energy deployment priority groups. Since we're talking about definitions could you expand on what you mean by "energy deployment priority groups,'' and what data should the federal government be collecting that we aren't?

*Mr. DeVar. Sure. So first, as far as priority groups, I don't have all the answers, but if we look at communities' and states' research, we know that question have moved the needle in understanding at least two ways of thinking about priority group, geographically based priority groups and identity or population groups. Some key places to start would be groups that have higher pollution rating or health impacts, but we also know we need to include low-income communities, communities that are -- or households that are reliant on medical equipment. So these are just some examples.

We need two sides of data and evidence to address the issues that everyone here has raised. We need to identify groups, and we need to identify harms or benefits. Some of those example are, to the point that Mr. Perez has made, what is the evidence that certain communities, particularly Hispanic and Latino communities are benefiting? We need data both that starts to disaggregate about customer groups as well as what are the harms and benefits. And that way we

would have more data and evidence as to whether there is equity in the clean energy transition.

*Mr. Peters. Speaking about the discussion about fracking bans from some of my colleagues, if California didn't do it, it is probably a little bit of a Chicken Little sky is falling kind of discussion. North Dakota is not going to do it. Texas is going to do it. And I think we can have constructive policy discussions assuming that is not going to happen.

I guess, finally, directing to all panelists the committee has put forth a comprehensive bill under Chairman Pallone's leadership and the leadership of Chairman Rush to support the equitable deployment of clean energy technologies. Do you have any thoughts for us in the last minute I have about what we could do to improve what the committee has introduced? Anybody?

*Ms. Farley. I'm happy to just increase that support and making sure that any of the recommendations and any of the policies are done in partnership directly with communities and/or in partnership with those who represent communities. The new White House Environmental Justice Advisory Council I think is a great place to start. It seems to be the first mechanism that we have in place across the

administration to have that direct input and support.

And I along with a number of other groups have previously submitted a letter to Honorable Chairman Frank Pallone and this committee regarding support for inclusion of the Energy Resilient Communities Act Low-income Solar Energy as well as new rural Just Energy financing programs. So we would really want to make sure that these jobs that we discuss adhere to High Roads labor standards and incentivize unionized labor.

*Mr. Peters. Okay. Thank you. My time has expired. Mr. Chairman, I'd also ask if we could add to the record an article from yesterday's New York Times on the coal miners renewable energy pleas. I yield back.

*Mr. Rush. Hearing no objection so ordered.

[The information follows:]

**********COMMITTEE INSERT**********

*Mr. Rush. The Chair now recognizes Ms. McMorris Rodgers for five minutes for questioning the witnesses.

*Mrs. Rodgers. Thank you, Mr. Chairman. Thank you to all the witnesses for being with us today.

I mentioned in my opening statement some of the benefits of the shale revolution not only in jobs but really in leading in resulting in bringing down carbon emissions. America, in fact, is leading the world in bringing down carbon emissions but also in lowering energy spending on average $2,500 per household.

The White House Council of Economic Advisors estimated that most of the benefits of the shale revolution went to low-income households which spend the highest portion of their budgets on energy as has been mentioned by others. The flip side to these benefits for low-income households is what happens if policies limit natural gas delivery or, shudder, natural gas generation and raise electricity rates.

In California, we've seen rates increase seven times faster than the rest of the nation and now are close to double what people in the Southeastern states are paying in Energy costs. We saw last summer that California wasn't able to maintain reliable operations of its electricity system for the first time in two decades. Wealthy people buy generators

to prepare for potential rolling blackouts caused by these policies. Low-income households don't have this luxury, so on top of their prices being higher there is less reliability.

Mr. Perez, in your testimony, you stated that in California the Hispanics are 30 percent of the workers in the oil and gas industry, about 115,000 employees, good paying jobs. Average of these workers is about $100,000 per year plus benefits and overtime. I wanted to ask you, Mr. Perez, what role do you see for natural gas resources to ensure low rates and reliable and resistant energy?

[Pause]

*Mrs. Rodgers. Mr. Perez, I think you may be muted.

*Mr. Perez. Apologize for that. I was saying that we believe that to assure resiliency and low-cost energy to energy consumers that we clearly need to have an all energy strategy to deal with our demand and our needs. And the way to do that is to take a look at each sector and see how we can move towards a level where there is zero carbon emissions.

In the natural gas/oil space really it is technology. I know they are working on carbon sequestration. They are working sequestration. We have some generation plants that

are now producing very close to zero in carbon emissions especially in the Houston area, and so there is potential for achieving some of these goals without having such we what consider to be very harsh actions that have severe consequences on workers and, in our case, our Hispanic workers.

So clearly we think that resiliency for energy, low-cost assurance is guaranteed by natural -- I'm sorry, by several strategies, and natural gas is a critical one.

*Mrs. Rodgers. Thank you for that. Thank you for highlighting the impact on jobs. It is really exciting, though, to hear about American ingenuity and creativity, technology leading the way. It is definitely worth celebrating, and I believe that that is going to be the way forward.

Ms. Carter-King, I wanted to, well, first of all, applaud Gillette, Wyoming, as the energy capital in the United States of America and your all of the above approach. Would you just speak to the impact on state finances as well as impact on local schools and community services? Department of Interior shows that federal oil and gas revenues fund between 19 and 30 percent of New Mexico and Wyoming state budget.

*Ms. Carter-King. Yes. Thank you, Ms. Rodgers.

It has been devastating to our state and our economy here with trying to curtail the oil production that we have for so many years had in our community and our state. So it has cost already lots of jobs and a lot of our youth having to leave our state to find employment otherwise. So I plead with the committee and all to please work with us. Work with our community and our state and others that need -- that cannot sustain such a quick devastation of our economy. We can work with you. We can work with everyone to make sure that we can research other ways that can help with the energy. We can work with energy.

*Mrs. Rodgers. Thank you.

*Ms. Carter-King. The people of Wyoming we were environmentalists before it was the in thing to be.

*Mrs. Rodgers. Well, I appreciate your leadership and your plea because the technological transformation in fossils is very real, too, and we need to allow that to develop. So thank you, Mr. Chairman. I yield back.

*Mr. Rush. The gentlelady yields back. The Chair now recognizes the gentleman from Pennsylvania, Mr. Doyle, for five minutes.

*Mr. Doyle. Mr. Chairman, thank you for holding this

hearing, you and Ranging Member Upton.

I've been listening to the testimony, and a couple things that I would like to just reflect on before I ask questions. I'm sympathetic to what I heard from Mr. Perez and the mayor of the city of Gillette. I live in Western Pennsylvania. Pittsburgh is surrounded by Marcellus shale gas not in the city of Pittsburgh but the counties around the city of Pittsburgh. A lot of people have good jobs there.

And as Mr. Perez said, the reason they have good jobs is they're unionized, which means they have pensions, and they have benefits. So I hope all my Republican colleagues will support the unionization of these new industries that we're going to be bringing online as we address climate change because that is the key to having good paying jobs that you can support a family with, and I think that point needs to be made.

I would say secondly, too, that as Democrats we have to understand the people who are working in industries that are making good wages and have pensions and healthcare benefits aren't going to just buy into the idea that magically there is going to be something else to replace those jobs. It isn't that these people in oil and gas industry don't care about a clean environment, but they care about eating, and

they care about supporting their families. And if you show them an alternative way to make a living in the clean energy industry, they're going to flock to that industry, but they're not going to just take our word for it. They want to see these jobs develop.

So that is why I think it is also important as we're building energy storage systems -- and I heard the ranking member say, "What do we do when the sun doesn't shine and the wind doesn't blow?'' Well, we have technologies for that. I have a tax credit bill which I hope all my Republican colleagues will sign onto which provides a tax incentive for these companies that are developing and scaling up energy storage systems so that we can store renewable energy so that when the sun doesn't shine and the wind doesn't blow that that energy is available to pick up that thing.

And the other thing I would say is we are not shutting down the natural gas and oil industry overnight. This is a transition that is going to take place over a decade or so. Our scientists have told us that we are still going to need carbon capture and sequestration. There is still going to be a role for some fossil in this picture down the road.

But colleagues, this change is coming. It is coming, and if we're going to be successful in achieving our climate

change goal to get to net zero carbon by 2050 we are going to have to utilize a lot of technology that doesn't exist today. We need to fund it and research and development so that we can get where we want. We can get 80 percent of the way there right now. It is that last 20 percent that is going to be the tough part, and we need to invest in that.

So I have used up almost all of my time, but let me just ask Ms. Farley what do we have to do at the federal level to ensure the jobs we are creating in the clean energy and manufacturing and installation that these are good paying jobs, that they are stable jobs like Mr. Perez talks about that people can support families on?

*Ms. Farley. Thank you, Representative Doyle.

I think that we have to make sure that we are in partnership with people. There are strong standards around unionized labor, what we mean by a thriving wage, jobs, what we mean also by supporting clean energy entrepreneurship. So I think that we have to make sure to your point we are all concerned with supporting our families, being strong contributors to healthy communities.

I am a product of the American Recovery and Reinvestment Act. When the housing market crashed, my housing sector job disappeared literally overnight. I was able to regain an

opportunity to join the energy efficiency industry through a nonprofit in the Southeast that focused on building science that jumped into and exploded with training and opportunity to train the workforce.

*Mr. Doyle. Ms. Farley, thank you. I want to ask Mr. Baird one question, and I only have 30 seconds left. Mr. Baird, how do we make sure that companies that are installing energy efficiency systems or clean energy systems have a workforce and that people have the skills they need to do this work especially in historically disadvantaged communities? How do we make sure we are giving people the skills they need?

*Mr. Baird. Congressman, all of the highly skilled construction workforce of America is nearing retirement age, as you know. We must train up a new generation of Americans who are going to use software from day one as they execute and implement clean energy jobs across the country. That can happen in community colleges, local workforce development, nonprofits and of course labor unions training people for the jobs of the future.

*Mr. Doyle. Thank you very much. Mr. Chairman, thank you for your indulgence, and I yield back my time.

*Mr. Rush. The gentleman yields back. The Chair now

recognizes Dr. Burgess for five minutes. I don't see him on the monitor. Dr. Burgess, you are recognized for five minutes. Then the Chair recognizes Mr. Latta of Ohio for five minutes. Mr. Latta, you are recognized for five minutes.

*Mr. Latta. Thank you very much, Mr. Chairman, for holding today's hearing, and thank you very much to our witnesses. I think Dr. Burgess is over in Rules Committee right now.

As this subcommittee continues its hearings on many different aspects of the clean energy policies I have to say I am still a little baffled that the majority continues to ignore one of the most reliable sources of clean energy in our country, and that is nuclear. The people that work in the industries all along the nuclear fuel cycle, including miners, engineers, operators, machinists and are proud of the work that they do and should have our full support.

Unfortunately, government restrictions and regulations impeded the growth of our nuclear sector for decades, and we have fallen behind the rest of the world. We have seen our supply chains become more vulnerable due to our heavy reliance on foreign entities for the resources we need to power our nuclear sector especially when it comes to uranium.

In order to regain our leadership role in nuclear power, protect ourselves from threats to our national security interests and reduce carbon emissions, we should be doing all we can to help our domestic nuclear sector beginning with our uranium miners. These are some of the many reasons I introduced H.R. 1351, which is the Nuclear Prosperity and Security Act. The bill would direct the Department of Energy to establish and operate a uranium reserve to ensure the availability of the uranium mined in the United States in the event of a market disruption.

I was glad to see this bill was included in the Republican Securing Cleaner American Energy agenda because it will ensure that the United States continues to lead the world in reducing emissions while also keeping the lights on and maintaining lower energy costs.

Mayor Carter-King, if I could start with a few questions with you. The state of Wyoming has been at the forefront of this industry as the United States leader in uranium mining and production, and also my colleague, your representative, Ms. Cheney, is my co-lead on H.R. 1351. Would you speak to the importance of maintaining a healthy domestic uranium mining industry from both an energy and a national security aspect?

*Ms. Carter-King. Yes. Thank you, Congressman Latta.

The uranium industry has really fallen in Wyoming in, I'd say, the last decade because of decreased demand, but lately there has been more interest in it, and that is why the Department of Energy is also in our community now to look at uranium and other rare earth elements that they can find in carbon. So yes, we would be very interested in reviving our uranium industry here around our community as well in the state of Wyoming.

*Mr. Latta. Thank you. I know that our ranking member had asked you some questions about the effect of oil and natural gas on your community. What about uranium? How would that affect your community especially when you think about the importance in Gillette and also in Wyoming?

*Ms. Carter-King. Well, I think if we could get into the production once again of uranium it would help our county as well as the state of Wyoming. Right now it is not -- it is kind of lower on the scale of the energy resources just because the demand is not there. And like you said, if we would start looking at nuclear energy, which is one of the cleanest forms of energy, I believe that would be a boost to our state.

*Mr. Latta. You also talked about when you're thinking

about the economy and making sure that you keep people in the state and have people coming into the state. If we would have a situation where we would see our uranium mining going down and also those jobs being lost right there in Wyoming, what is going to happen to these workers? Are there other mining jobs out there for them, or are they just going to have to either leave the city, look someplace else? What would you anticipate.

*Ms. Carter-King. Your question is what would I anticipate if uranium continues to decrease?

*Mr. Latta. Well, right. Where would the workers end up right now? Are there other jobs out there for them, or what would happen?

*Ms. Carter-King. Not with the current state of what is happening with energy. So no, they would have to leave our state, and I don't know where they would go with their particular skills as far as uranium mining goes because where else would they go?

*Mr. Latta. Thank you very much, Mr. Chairman. My time has expired, and I yield back.

*Mr. Rush. The gentleman yields back. The Chair now recognizes the gentleman from California, Mr. McNerney, for five minutes.

*Mr. McNerney. I thank the chairman and the witnesses.

*Mr. Rush. I see the chairman of the full committee has returned.

*Mr. McNerney. I'll yield.

*The Chairman. I mean, you can do Jerry first if you want to.

*Mr. Rush. Well, he has just yielded to you, Mr. Chairman. So why don't you go, Mr. Chairman, and then he'll wait to become the next Democratic member to speak.

*The Chairman. All right. I'm sorry. All right. Thank you, Mr. Chairman.

I wanted to try to ask a couple questions of Mr. DeVar and Mr. Bhatraju. Mr. DeVar, in your testimony, you spoke about the role of outreach and participation. You said that lack of access to state and federal rule-making processes prevent marginalized groups from benefiting from the energy system. Would you just expand on this, particularly on how the federal government can better ensure that these impacted communities are properly represented in decision-making?

*Mr. DeVar. Yes, Ranking Member Pallone. Thank you.

I'd say there are three ideas that come to mind. Let's think about it this way: Who is at a deciding-making table, and if there is a problem with someone not being there, what

do we do? The first thing you do is you reach out to people. So there needs to be a robust outreach. You have to go to community groups and leaders and trusted parties to actually reach people in the first place. So that is one role that the federal government can play.

The second would be actually resourcing people to be able to participate meaningfully. So that could look like investor compensation in rule-making proceedings, and that could be through support at the federal level and guidelines and encouragement of what is occurring at the state level.

And finally, I would say there has to be follow-through. Take the example of being at a table. That would be like having confirmation that you paid and that someone knew that you had spoken. And so the same is true in rule-making proceedings. We need to have clarity that those comments were heard and responded to.

*The Chairman. Right. And then you also talked about the role of data in propping identifying these vulnerable groups. What more could we do at the federal level to identify these communities of need, and what are the ramifications of improperly targeting federal assistance?

*Mr. DeVar. I'd say first in terms of improperly identifying groups and targeting assistance the downside

would be if we don't get this right we are going to have wasted resources, and we are going to have growing inequity. The issues that everyone here is raising actually is getting to the heart of constituents, of communities, lost jobs either from one sector or to the other.

So what we actually agree on here in this hearing is that we need to get to the bottom of those things, and inevitably it is just going to be more costly if we don't really have data about these communities and the benefits. But I'll also note that we can have accounting and iteration, and so if we have data, goals and metrics, we can track and in a few years see if we're not reaching certain groups, if we're not achieving the goals of reducing rates for energy customers, particularly low-income communities, and then we iterate our approaches after that.

*The Chairman. Thank you. I wanted to go to Mr. Bhatraju. In your testimony, you detailed your company's business model and how community solar can be used to increase clean energy access, and then you detailed some of the obstacles you face in enrolling customers, especially low and moderate income customers. Could you please give us some insight into community solar? In other words, do customers know that it is an option for them, and what are the

challenges you face with outreach?

*Mr. Bhatraju. That is a great question, Congressman. When I am sure any of you talk about solar to anyone, they're thinking about a power plant on someone's roof, and community solar is actually just a totally new way of delivering solar because it is offsite. It is somewhere else. And so it is a very new product in the market that has expanded pretty rapidly, and, frankly, customers absolutely love it. You can live in an apartment. You don't necessarily have to have the world's greatest credit score. You don't have to have a roof.

One of the challenges at least our business faces is awareness. The expansion of these programs will inevitably increase aware because people want energy options. They want to be able to choose how they power their homes and their businesses. I think what is one of the more exciting things about community solar is the investment community loves it. Customers love it. Utilities actually appreciate building large centralized distributed generation sites, not individual rooftop sites everywhere. It is an awareness that I think the legislation and having a national legislation can really help with.

*The Chairman. Well, thank you so much. Thank you,

Mr. Chairman. This has been very helpful in terms of what we want to do with the CLEAN Future Act. Thank you.

*Mr. Rush. The Chair yields back. The Chair now recognizes the gentleman from West Virginia, my good friend Mr. McKinley, for five minutes. You're muted. Unmute.

*Mr. McKinley. I got it now. Mr. Chairman, thank you. You're one of the few Democrats that I think really grasps the impact of what we're talking about here today because at church on Sunday we had a prayer that asked God to enlighten all who inflict darkness on others, asked God to enlighten all who inflict darkness on others, so, in essence, to educate our political leaders that there are consequences to their policies.

Mr. Chairman, the Democrats control the House, the Senate and the Presidency. You all can force a restructuring of fossil fuel economies all across America, but I don't believe you fully understand the consequences of your action will result in higher utility bills and lost jobs. How many coal mines, oil wells, refineries, coal-fired power plants are in cities like New York, Chicago or San Francisco. People working in these fossil fuels are not statistics, but they're real people with families. They've maintained their way of life for over a century, but now liberal Democrats are

using a political timeline to eliminate the use of fossil fuels in ten years or less.

Now, I've heard the promise of a just transition. It just won't happen. Look at what has happened over history with the steel, the electronics and the textile industries. The government said all the same promises but betrayed the American people. Mr. Chairman, there was an editorial in today's Wall Street Journal. It was their effort, I think, to educate its readers on the consequences of Biden's energy agenda. It begins with, "Beijing is clear that it would ignore any carbon emission commitments that impinge on China's economic growth.'' It goes on to say, "Chinese leaders don't mind the Paris Accord because they know it doesn't bind them to anything while Western nations will harm their economies with new regulations and misallocated resources.''

"The Chinese must be dumfounded,'' the article goes on. The editorial says, "They must be dumfounded. The United States administration wants to kill the shale and natural gas boom that has kept energy prices low and made the U.S. less reliant on foreign oil,'' and then it ends with, "No wonder Beijing thinks America is in decline.''

So much for China's commitment to climate change. We

can't trust them on trade, South China Sea, Taiwan, Hong Kong, human rights, intellectual property. Why should we think we can trust them on pollution? So let me get this straight. America will have higher utility bills, lost jobs, a less reliable grid, and we're still going to experience extreme weather events all the while China continues to pollute.

If I could, I'd like to turn to the mayor in Gillette. Mayor, wouldn't it make more sense for us in America to perfect carbon capture so that we can continue to use our fossil fuels and maintain a stable economy in the coal fields and natural gas production, for example, in Wyoming?

*Ms. Carter-King. Absolutely, Congressman McKinley, and thank you for the question.

That is what we have been advocating for for years now. Work with us. We have some of the cleanest coal in the country. We already have perfected some -- you know, we have started at least on working on cleaning the carbon out of the coal, and our research that we've done at our integrated test center, which also has the XPRIZE which awarded a multimillion dollar prize yesterday for using carbon in construction --

*Mr. McKinley. So Mayor, I've got a couple more

questions for you.

*Ms. Carter-King. Okay.

*Mr. McKinley. How would you recommend -- what would you recommend? How do we do this to educate our members of Congress about the injustices that their policies will inflict on their fellow Americans? How do we educate them?

*Ms. Carter-King. Well, we would invite people to come and visit us here where we can show them what we have been working on. We've got the Department of Energy here. We've got universities from across the nation here working on our research. Work with us. We can do this.

*Mr. McKinley. Thank you. Thank you. Mayor, you referenced you are the energy capital of America, and earlier you heard Chairman Pallone say that renewables will create more jobs than are currently in fossil fuels. Now, I'm aware of the number of jobs that the coal-fired power plants and gas-fired power plants, but could you tell me out in Gillette what is the size of the parking lot, employee parking lot outside a wind farm?

*Ms. Carter-King. You know, I'd have to be truthful and say I have never seen a parking lot outside of a wind farm.

*Mr. McKinley. Thank you. Mayor, I don't think we have either. So I think this is disingenuous for us to be

thinking we're going to create long-term jobs by switching over. I think we can find a mix that works out and so that we keep our fossil fuels as part of all of the above. So I thank you, and I yield back the balance of my time.

*Mr. Rush. The gentleman yields back the balance of his time. Mr. McNerney. The patient Mr. McNerney is recognized for five minutes.

*Mr. McNerney. I thank the Chairman again and the witnesses again. It is a great hearing.

First, I'd like to respond to the ranking member's opening remarks in which she continued the Republican tradition of bashing California's energy system, but please be careful. The Texan Republican members of this committee used to do the same thing until they had their own big freeze.

For the record, California's energy challenges are largely due to wildfires and other climate related disasters which are caused by excessive carbon emissions. Let's focus on the real problems at hand and not on phantom issues. Mr. DeVar, in your testimony, you write about the equity benefits of distributed resources and the goal of demographically managed grid. Would you further explain how the distributed nature of resources like community solar

contributes to energy equity?

*Mr. DeVar. Yes. Thank you, Representative.

There are a few ways, and I think to get to the heart of unpacking the difference between the current energy system and the options in front of us and the clean energy system. So one of the benefits that has come up many times here is the question of rates and the income and expense ratio of families, of households.

Distributed energy generation has the most potential to really reduce someone's energy bill anywhere from 15 to 50 percent, and that is one area in which distributed resources are really meaningful. Another metric or benefit sort of relates to what you just addressed is the question of resilience. It really only distributed generation of solar care with storage that could really allow the flexibility of keeping the lights on on a particular home or a microgrid for a particular community in the face of disasters.

And third, for the issue of how distributed generation would also allow us to target where we want to really reduce pollution and wind down peaking power plants. There are plans, for example, in New York City to think through pairing solar and storage with the reduction of pollution and the use of these plants that we don't need very often, and they both

are expensive and cost a lot of money.

*Mr. McNerney. Thank you. Mr. Bhatraju, in California, we've seen the value of locally sited distributed resources. Can recourses like community solar contribute to grid resilience especially in underserved communities?

*Mr. Bhatraju. Absolutely. To hammer this point home, and thank you, Congressman, for the question, is community solar allows people who move, people who rent, people who don't have the right roof to access the benefits of the cheapest energy source out there. We often get asked the question is community solar -- how does it compete, and who can benefit?

In reality, building larger scale solar projects is cost efficient. It builds resiliency to build these distributed generation assets. These are all things that I think have been talked about at the hearing especially highlighting California. A community solar program there would benefit the grid. It would benefit resiliency, but it would also share the benefits broadly with folks who just have been traditionally left out of the solar revolution that we have seen in the last few years.

*Mr. McNerney. Thank you. Mr. Baird, I cochair the Artificial Intelligence Caucus, and I care deeply about

reducing carbon emissions and increasing the use of clean energy and renewables. How can AI help accomplish these goals especially in underserved communities? And do you have examples that you can share for the work that BlocPower is doing?

*Mr. Baird. Congressman, thank you.

We do use artificial intelligence and machine learning to help us analyze and size the correct size of solar battery or all electric heating and cooling systems on a house-by-house basis. As the committee knows, each American home is an individual home that needs its own specific mix of energy efficient and renewable energy equipment. Artificial intelligence and machine learning will allow us to recommend the appropriate clean energy equipment, the appropriate healthy equipment on a building by building basis for over 120 million American homes.

We can either do that by manually going house to house and doing an assessment, or we can use the tools of Silicon Valley to help us reduce the soft costs of clean energy so that we can unlock more and more green construction and installation jobs.

*Mr. McNerney. Thank you. If you could submit policy recommendations on using AI. And I want to say by finishing

that I sympathize with Mr. McKinley. He emphasizes the consequences of a transition, but what about the consequences of continuing carbon emissions? We need to make the transition. That is exactly what we're attempting to do, and we really prefer Republican participation in this process. I yield back.

*Mr. Rush. The gentleman yields back. The Chair now recognizes the gentleman from the greatest state in the Union, Mr. Kinzinger from the great state of Illinois, you are recognized.

*Mr. Kinzinger. Well, thank you, Mr. Chairman. Appreciate you holding this.

I agree that there is a disparity in energy costs that we should debate and address in a responsible manner. I have consistently supported a true all of the above energy broach, and I understand the fundamental importance of preserving our resources and natural heritage and agree that the consideration of environmental impacts is essential to energy policymaking.

I have a record demonstrating support for renewable energy technologies and expect their use to expand over time, but the United States cannot simply afford to continue pushing a renewables-only energy strategy to the detriment of

abundant and reliable sources, including nuclear and natural gas.

My colleagues and I sent a letter to President Biden in February stating as much and asked him to work with us to calibrate or national energy strategy, and I'll ask unanimous consent to include that into the record.

*Mr. Rush. Without objection so ordered.

[The information follows:]

**********COMMITTEE INSERT**********

*Mr. Kinzinger. Thank you.

According to the Nuclear Energy Institute, nuclear power generates 20 percent of America's electricity, and in 2018 it prevented the emission of 528 million metric tons of carbon dioxide. In Illinois, six nuclear power stations, including four in my district, provide 88 percent of the state's emission-free electricity. Unfortunately, due to nonmarket governmental forces giving preferential treatment to certain renewables two of these plants, Byron and Dresden, are now slated for closure.

When I visited schools in Byron or I talked to control room operators and engineers in Dresden, I am able to see the incredible impacts and legacy of this technology. These two plants represent 1,500 direct jobs and millions of dollars municipal revenues. If these plants shut, the lost revenue would devastate my communities and make it extremely difficult to pay for high quality schools, hospitals, emergency personnel and other critical services. All this not to mention the prospect of blackouts, unreliable electricity costs, increased carbon emissions and job losses.

Reserving the existing nuclear fleet will take a concerted national approach, but I am doing what I can on my part. In December, my colleague, Mike Doyle, and I

introduced the Preserving Existing Nuclear Energy Generation Act which would help save nuclear plants that are on the chopping block, including Byron and Dresden by providing financial credits through an emissions avoidance program. The bill would also soften the blow to local communities by providing resources to help shore up municipal budgetary shortfalls, preserve critical services and promote economic development. And last week I reintroduced the Nuclear Licensing Efficiency Act which builds upon the recent efforts by Congress to modernize nuclear licensing fees and procedures.

So to bring this home, yes, there are disparity in utility costs for households across the nation. These disparities can be seen across racial and ethnic lines in geographical terms, and putting the rural/urban divide with the answer is not to simply put solar panels on the rooftops of lower income households, wipe our hands and walk away, and the answer cannot heavy-handed intervention to artificially reduce utility prices without regard to market forces.

So question to Mayor Carter-King. Your testimony mentions the municipal revenues associated with the energy industry. Can you elaborate? Specifically what financial

effect would your community suffer if these energy extraction and power generation jobs were to disappear?

Mayor, you might be muted.

*Ms. Carter-King. Thank you, Congressman Kinzinger.

It will be -- it is devastating for our community. Was that your question?

*Mr. Kinzinger. Yeah. If you could just kind of elaborate on those impacts.

*Ms. Carter-King. Okay. Well, just the city alone we had to cut a million dollars from our budget, and then you have the school district, the hospital, everybody. It is a domino effect on our community. We have got to cut people. We have got to cut safety people on the streets, our teachers. It is devastating for a community like ours especially when we can help the situation just given the chance.

*Mr. Kinzinger. Well, thank you. So as my colleagues and I said in our letter to the President, it is long past time that elected officials finance business organizations and environmental lobbyists put down pitchforks and come to the table and have honest discussions about the future of our energy. Many have done so, but a handful of influential partisans have become the loudest voices stoking fear and

talking past one another as each perpetuates a my way or the highway approach.

The issues at their core require thoughtful debate and compromise. I hope this committee can again be that voice of reason and a beacon of congressional bipartisanship when it comes to finding the appropriate balance of solutions just as we have in the past.

Thank you, Mr. Chairman, and with that I'll yield back the balance of my time.

*Mr. Rush. The gentleman yields back. The Chair now recognizes the Chairman of the Subcommittee on Environment, the gentleman from New York, Mr. Tonko, for five minutes. Mr. Tonko is recognized for five minutes. All right.

The Chair now recognizes the gentleman from Texas, Mr. Veasey, for five minutes. The gentleman from Texas, Mr. Veasey, you are recognized for five minutes. I don't see him on the screen.

Ms. Schrier from Washington state, you are recognized for five minutes.

*Ms. Schrier. Thank you, Mr. Chairman.

Well, I am proud to say that I come from Washington state, a leader in carbon-free electricity and conservation, and most of the electricity in Washington comes from carbon-

free resources like hydropower wind and solar. We've also made significant investments on the public and private side to ensure equity and energy efficiency investments, and this is by providing grants or low or no cost loans for families to conserve literally tens of millions of kilowatt hours of electricity while keeping their homes warmer, safer particularly during the winter months.

Through conservation our state has sort of acquired new affordable carbon-free resources without having to build anything but just by saving, and those saved electrons can be used to reduce emissions in other sectors, and it is really a win/win. Yet there are still thousands of homes, especially rental homes and multifamily buildings that need upgraded heating systems, added installation, double-paned windows that could save energy long-term for low-income customers, and we need to encourage rental property owners that energy efficiency is good for everyone's bottom line.

Now, the CLEAN Future Act would reauthorize the Energy Efficiency and Conservation Block Grant program for ten years providing another valuable tool for electric customers to lower their bills and perhaps deal with some of these more complex challenges all while creating jobs.

Mr. Baird, can you tell me what suggestions you would

have for the committee to ensure that those dollars are distributed in an equitable way to underserved communities?

*Mr. Baird. Congresswoman, is that question for me?

*Ms. Schrier. Mr. Baird, yes.

*Mr. Baird. We recommend that a map be built that houses census tracks with low-income communities all across this country and that budget distributions through this bill and other infrastructure investments be mapped onto that map in order to help all employees of the federal government understand the social and environmental benefits of the investments and grants that are being made and to track and analyze those investments post disbursement. We think that a centralized visualization of low-income communities is a critical part of supporting this plan.

*Ms. Schrier. Thank you very much. Now I have another question. I am just going to change gears slightly to talk about solar energy and low-income community solar deployment. We've talked about the community solar projects, but Mr. DeVar, I have a question for you that is a little bit different, and I am listening to other questions like my colleague, Ms. Rodgers, also from Washington state, pointed out, lack of equity in terms of having a generator for outages or looking at Texas, and sometimes these communities

are the last to have power restored.

So my question is not so much community solar, but is there any role here for solar roofing or solar panels and then connecting that to something like a power wall, a Tesla power wall or something else that could store enough energy for a few days and to do this on the individual home level for low-income homes? Any comments about that, Mr. DeVar?

*Mr. DeVar. Yes. Congresswoman, this is an important issue not just for the sake of keeping lights on, but keeping power on particularly for low-income communities has more relevance than many other Americans may realize in California or Texas.

I grew up in Houston, so I knew a lot of family and friends who went through those issues there, spent time in California, but folks with limited means spend a sizeable portion of their income on every grocery bill. And so when the power goes out and your refrigerator stops working that's your livelihood.

I appreciate this question because the role of solar and storage at a local household level is crucial, and without distributed energy resources which starts with solar but compare that with household storage or without storage at the community level to have shelters or the local grocery store

somehow having backup power through storage or on a microgrid these are all ways in which we would have safer, stronger communities if we deployed resilient storage technologies.

*Ms. Schrier. Thank you for that answer. I really appreciate it, and I yield back.

*Mr. Rush. The gentlelady yields back. The Chair sees that Dr. Burgess has returned. Dr. Burgess, you are recognized for five minutes.

*Mr. Burgess. Thank you, Chairman Rush. My apologies that I'm having to toggle between several hearings today, but that's not atypical. But of course with all of the disparaging remarks being offered by the state of Texas I thought it was important that I be back and at least be prepared to defend the Lone Star State.

I have a couple questions for Mr. Perez. Mr. Perez, in particular -- well, first off thank you for being part of the hearing today. The CLEAN Future Act that is the subject of this hearing does, in fact, include some significant burdens on the traditional energy sector, and there's the risk that energy producers would raise prices, cut jobs or just go out of business.

So let me just ask you if traditional energy jobs promote economic stability in diverse and minority

communities? You may be on mute.

*Mr. Perez. The answer to your question is absolutely. Aside from Hispanics In Energy I've served in a lot of leadership roles with trade associations, in particular the Hispanic Chambers of Commerce, president of the Sacramento Hispanic chamber and vice chair of the California Hispanic chamber. So yes, economic stability is definitely part of the equation as it relates to energy and in particular that portion of energy in California. But all energy includes -- for us includes the utility companies and all the emerging companies that are in the clean energy space.

*Mr. Burgess. I thank you for that answer. Of course, being from Texas you are familiar with -- and it is not the area that I represent. That is up in the Midland Odessa area, but the Permian Basin certainly seems to have benefited the local minority and disadvantaged communities because of the jobs boom in the Permian Basin. Would you agree with that?

*Mr. Perez. Absolutely.

*Mr. Burgess. And again then as a natural consequence of that anything that restricted the energy production in that sector would likely have a deleterious effect on those jobs, would it not?

*Mr. Perez. Absolutely. And not just the jobs but the cascading effect on families and communities is just incredible.

*Mr. Burgess. Right. So if those energy jobs disappeared, would workers in those jobs be able to just quickly transition to one of these other technologies that we're hearing about today?

*Mr. Perez. I don't see how, Congressman Burgess, because that area, as you well know, is really almost -- it is very plain landscaping out there, mostly desert and cactus. So the answer is no. There is no alternative. If those folks moved to metropolitan areas, it would be a very huge stretch of reality to see that population do that.

*Mr. Burgess. Thank you. I thank you for your prior answers. I thank you for your participation today. I wonder if I could ask Mayor Carter-King just briefly as I wrap up earlier this week it was announced that there was a power plant in Gillette that will be carbon capture technologies to produce concrete. That's a fairly novel approach. Can you tell us a little bit about that?

*Ms. Carter-King. Yes. Thank you, Congressman Burgess.

That did just happen yesterday that a team up here at the XPRIZE was awarded a multimillion dollar prize for that

technologies of extracting an element that they can use in concrete for building purposes. So it was quite innovative and something that can happen from the research that is going on with carbon. They were just one of many teams that are looking at other ways to use carbon. So it is a valuable resource in more ways than just burning it for energy.

*Mr. Burgess. Right. Well, I appreciate you bringing that up. I had an opportunity to visit with the good folks at Occidental Petroleum, and one of the projects that they are working on is removing carbon from ambient air, not just from an emission stack but from ambient air and using that as a feedstock to be able to produce ethylene and then a variety of plastic products. So it is fascinating technology that people are working on. I am glad we have such smart people in our country that are working on innovative solutions to problems that have perplexed generations.

Thank you, Chairman Rush. I will yield back.

*Mr. Rush. The gentleman yields back. The Chair now recognizes the chairman of the Environmental Subcommittee, the gentleman from New York, Mr. Tonko, for five minutes. The Chair now recognizes the gentlelady from California, Ms. Matsui, for five minutes.

*Ms. Matsui. Thank you very much, Mr. Chairman. I want

to thank the witnesses who are here today for this very, very important hearing.

Mr. Chairman and witnesses, in addition to decreasing carbon emissions, clean energy deployment also improves public health and lowers energy prices. Despite this many of these benefits are not available to low-income customers and communities of color who are disproportionately affected by high and severe energy burdens, heat islands and pollution from fossil fuel energy production.

The COVID-19 pandemic has only exacerbated these disparities. With more parents and children staying at home and increased household electricity demand, energy affordability and home electrification are now more crucial than ever. To tackle some of these issues I led efforts to lower energy bills through residential tree planting, and in my district energy equity organizations such as the Community Resource Project are focused on home retrofits, energy efficient appliances and solar panel installations in low-income homes and multifamily units.

Earlier this year I led a letter to the administration encouraging the establishment of a federal program to upgrade HVAC units and improve energy efficiency in our nation's schools. This effort would enhance indoor air quality in

schools disproportionately affected by air pollution and also create jobs and electrification and energy efficiency.

Mr. Baird and Ms. Farley, what initiatives can Congress support to ensure that local vulnerable populations have access to energy efficiency jobs and training? Mr. Baird first.

*Mr. Baird. Congresswoman Matsui, thank you for the question.

We believe that low-income communities should own the microgrids, the solar, the electric wires that serve their communities and keep their low-income communities from being vulnerable to the ravages of climate change and the deteriorating electricity grid. Once we start from a framework of low-income communities owning these new emerging clean energy assets of course we will train and hire community residents to maintain those systems.

Of course we will develop the skills to maintain those systems because we will be the owners of those systems. And of course we will embrace the jobs, the living wages, the increased health benefits that come from embracing this equipment, and so the traditional distrust that prevents a lot of these technologies from being embraced from our communities will be removed through ownership. Thank you.

*Ms. Matsui. Thank you very much. And Ms. Farley, would you like to make a comment on that also?

*Ms. Farley. Yes. I think it is critically important to marry the technologies and those job opportunities with programs such as the National Institute of Environmental Health Science Environmental Career Working Training Program. This provides job safety and training for disadvantaged members of communities of color and low-income communities to secure jobs in these skills and technologies that we are talking about.

There is also the Environmental Workforce Development and Job Training Program, and I think when you marry the training with the technology you begin to generate a greater buy-in and support that we need to advance --

*Ms. Matsui. Thank you very much. I want to move on to another topic. Mr. Bhatraju, in your testimony, you mentioned that community solar contributes to grid resilience and help reduce large grid expansion. How can community solar help with wildfire resiliency?

*Mr. Bhatraju. Thank you so much, Congresswoman, for the question.

So community solar projects, they are acres large solar products distributed that don't require new transmission

build. So first of all, they are cheaper to put on the grid because you can build large-scale projects that are part of the distribution grid. So to the question earlier it certainly helps with resilience and making sure the power stays on if transmission wires go down like what happened in Texas.

But on the second point, these projects can also -- they don't catch on fire. Solar generally will use the sun to create power and just don't have the same combustion as traditional fossil fuel. So it is simpler in that respect.

*Ms. Matsui. Okay. Well, thank you. I have already run out of time here, so I yield back. Thank you.

*Mr. Rush. The gentlelady yields back. I don't see Mr. Griffith on the screen. Mr. Griffith, you are recognized for five minutes. I don't see him. We will move on to Mr. Johnson, the gentleman from Ohio. You are recognized for five minutes.

*Mr. Johnson. Well, thank you, Mr. Chairman.

As our nation recovers from a once in a lifetime pandemic and economic downturn it is evident that working class Americans have suffered greatly, and many are still struggling to get back on their feet, pay the bills and care for their families. But in listening to some of my

Democratic colleagues and their witnesses today their message to these hard working Americans seems to be, hey, don't worry, here is a government subsidized solar panel for your roof. I mean, are you serious? How can we be that out of touch?

Unemployed Americans don't need wasteful green energy projects and top-down mandates. They need jobs, the kind of good paying jobs that come with energy dominance. What we see in proposals like the CLEAN Future Act is a two-pronged attack on working Americans. The first attack includes provisions that will increase their energy prices and decrease reliability. This will hurt lower income earners the most. The other attack goes after fossil fuel jobs which threatens the livelihoods of millions of Americans.

So Mayor Carter-King, from your testimony today, it is clear that you represent a town that obviously punches above its weight. I'd like to think my district in Appalachian Eastern and Southeastern Ohio is similar. We might be in an isolated sometimes forgotten corner of our state, but the folks I represent take pride in keeping the economy moving by producing the coal, oil and gas that our region is blessed with.

So can you talk to this committee today about what it

means to your constituents and to our nation's security for such a small dot on the map to have such a significance, as you noted in your testimony, not only with fossil fuel resources but also rare earth minerals and uranium?

*Ms. Carter-King. Absolutely. Thank you, Congressman Johnson.

It is very important here with especially since you said rare earth elements that we get all of that -- we depend on China for all of those, and we have plenty here in the United States and especially here in Wyoming that would help us with United States security and defense. So that is a great point.

Also, we do have hard working people here who for 30, 40 years have supplied the country with energy, with goods, low economical energy, and to just kick us to the side without even trying to help us and even see what we can offer with our new research and everything it is going to be devastating for communities like ours and I'm sure yours as well.

*Mr. Johnson. Okay. Well, thanks. And Mr. Perez, the message from our Democratic colleagues and from the mainstream media is the idea that if someone is part of a minority group the American dream is somehow now out of reach, and hard work just won't get you ahead. I know that

you represent many immigrants and the children of immigrants from very poor backgrounds who work in the oil and gas industry. It is not easy work, of course, but as we've examined in this committee it pays well.

So in your opinion, does the oil and gas industry, a great American industry, still provide a path to achieve the American dream and with it a better future for the next generation?

*Mr. Perez. For the Hispanic community, Congressman Johnson, the answer is yes. And there is no stronger evidence of that as we see Mexico recommitting itself to the oil and gas industry with the current president, and the reason he is doing that is exactly for that one reason is jobs, good paying jobs in an industry that offers family security and family economic growth. And so we just need to realize that it is not going to be an easy transition. There is some very hard human impact issues that we have got to seriously consider as we move in this direction.

And we believe that technology is a great answer, nuclear power expansion and national gas and all the technology. We have got a lot of innovation. We have got a lot of smart people in America. We ought to put them to work.

*Mr. Johnson. All right. Well, thanks, Mr. Perez. Mr. Chairman, I yield back a total of eight seconds.

*Mr. Rush. The Chair certainly appreciates the gentleman for yielding back. I see that the Chairman of the Committee on Environment has returned. The Chair now recognizes the gentleman from New York, Mr. Tonko, for five minutes.

*Mr. Tonko. Thank you, Mr. Chairman, and thank you for the great work you are doing as Subcommittee Chair on Energy, and thank you to our witnesses.

Before I ask my questions I just wanted to make something abundantly clear because there has been a lot of talk about nuclear energy today, and the CLEAN Future Act, which both you and I have helped author along with Chairman Pallone and others on the committee, would indeed support nuclear generators. So I wanted to get that on the record.

One challenge we see is that landlords are rarely incentivized to make investments that will reduce the energy bills of their renters. This has definitely been the case of energy efficiency and weatherization. So Mr. Bhatraju, can you discuss how community solar can help overcome this barrier if a landlord doesn't want to invest in rooftop solar on his or her building?

[Pause.]

*Mr. Rush. Are you muted?

*Mr. Baird. That was Mr. Bhatraju or Mr. Baird?

*Mr. Tonko. Mr. Bhatraju.

*Mr. Bhatraju. I'm sorry, Congressman. I just had an issue with my audio. Could you just repeat the question quickly?

*Mr. Tonko. Kindly will do. Can you discuss how community solar can help overcome the barrier of landlords who are rarely incentivized to make investments that will reduce the energy bills of their renters? What about rooftop solar on their buildings?

*Mr. Bhatraju. Yeah. Absolutely. It is a great question, Congressman. And apologies for that.

As you know, you can't really put panels on everyone's roof, and some landlords who even can won't allow -- there may be residents in their building that want to get it, but they make it hard to actually install even though it will save everyone money. The beauty of community solar is you can actually build a project distributed elsewhere. Like I was saying earlier in my testimony, on farmland oftentimes we find farmers who have unused land who are on the same distribution grid as maybe a multi-dwelling unit and can

build a project that can then serve that multifamily housing unit and any customer inside that actually wants the benefits and savings to solar energy.

And that is really the beauty of this product. Again, you know, we tend to think of solar as something that has to be on the perfectly southern facing roof that a customer owns, and the reality is a lot of Americans don't own their home, don't have the perfect roof and don't have the right credit score for that. So this is what I love about community solar. Everyone can access it even if you live in an apartment.

*Mr. Tonko. Right. Thank you. We want to make certain that this energy transition is affordable, that we are not impacting especially our poorer neighborhoods. Can you give us a sense of how community solar can result in reduced electricity bills for people?

*Mr. Bhatraju. Yeah. Absolutely. It is a given now, but I think this still is a thing people don't know. Solar is the cheapest form of energy in the market. Every single project we manage at Arcadia is at a 5 or 10 percent savings to the traditional local utility rate, and that is indexed to the utility rate over a 20- 25-year period. So the savings are effectively guaranteed to the customer.

Now, the question you may ask, as any business owner, like, nothing is free, so who takes on the risk? Well, it is developers. It is investors. It is big investment banks, tax equity investors. They are the ones who also realize this transition. They realize it is an amazing economic opportunity, and they realize they can sell cheaper power by investing in these projects. So it is an amazing customer value prop because they can choose cleaner energy and save money.

But to that broader point it is the larger investment in financial community that also loves this because you are delivering a great customer value prop. It is a steady asset that can produce returns over a long period of time.

*Mr. Tonko. So are there any state regulatory barriers that might make it difficult to deploy community solar or utilize the business model that you have established?

*Mr. Bhatraju. So we are a software business. We make it so that we can manage hundreds of megawatts of projects and deliver the credits and actually size it properly. You may have large homes. Someone in an apartment can use different sizes. There are barriers. Today there is only a handful of states that have these programs. They are regulated and deregulated energy markets, as I mentioned

earlier. It can happen everywhere.

And part of what we are hoping to pass this Congress with your support is the ability to do a national program and somewhere every state realize that you can do community solar, create a resilient grid, give people cheaper energy bills and produce jobs that can be everyone where. A lot of fossil fuel jobs tend to be in very specific locations. You can put community solar everywhere in this country, in all 50 states.

*Mr. Tonko. Well, our legislation would empower states, so this is good, or compacts of states. So this is good to know, and we thank all of you for providing witness testimony today. And with that, Mr. Chair, I yield back.

*Mr. Rush. The gentleman yields back. The Chair now sees Mr. Griffith has rushed. The Chair now recognizes the gentleman from Virginia, Mr. Griffith, for five minutes.

*Mr. Griffith. Thank you very much, Mr. Chairman. I apologize. I had to step out for a couple of minutes to go make a presentation at the Rules Committee.

Earlier in the testimony as we were discussing all of this we had Mr. Doyle, who indicated that we weren't going to get rid of fossil fuels immediately, that we would have a decade or so. I don't think we have to get rid of fossil

fuels at all particularly if we work on new carbon capture technologies like is being worked on in my district by Mova Technologies for panel filtration, and I think it is important that we continue to use base fuels whether it be nuclear or fossil and that we do an all of the above.

One of the things I thought was interesting, though, and I think it shows a weakness in some of the legislation that is being discussed is that one of the witnesses in a prior hearing who was a Democrat witness, Allison Silverstein, when I asked her would it take more than 20 to 30 years to build the high-voltage power lines that she thinks are necessary in order to have a completely renewable energy system, her response was yes. And the bottom line is that somebody has got to have these high-voltage power lines to come through the areas to make sure that we are wheeling the electricity to the areas that need it, wherever the sun may not be shining because of weather conditions or where the wind hasn't blown, but they've got solar in the area, but it isn't working. They have to wheel it from other areas that have an abundance.

Now, I know we've got some battery technologies, and so forth. The problem is Mr. Doyle and some of the legislation anticipates even in a best case scenario that we are looking

at a decade or so, but quite frankly we can't build the infrastructure necessary to wield that electricity as your witnesses showed in a prior hearing unless -- it is going to take more than 20 to 30 years to do so.

And then I asked this question that I think is an important question because I represent one of the poorest financially -- it is a great district, but it has financial issue right across the line from Pike County Kentucky in Virginia. So I know that one of our witnesses knows about that. But I represent an area that is pretty poor. So where are we going to put these high-voltage power lines? Because historically what we do is we put those high voltage power lines where the poor folks live, and that is who is represent, folks who don't have as much money.

And I don't want to see the beautiful mountains of Central Appalachia crisscrossed with high-voltage power lines any more so than they already are. And wouldn't the members of this panel agree with me that that is not where it should be, that they should put these new power lines closer to the big cities where they need more of those power lines to draw the power to? Anybody on the panel want to address that?

*Mr. Bhatraju. I'm happy to, Congressman. Look, I don't think -- you know, I think there are tons of issues

with siting transmission. We will need it. You are absolutely right. We also need hardened distribution grids. Some of these large community solar projects they are on the distribution grid. They do not actually require large scale transmission.

And to the earlier questions about resilience these projects can create a more resilient grid in tandem with battery storage and other fuels by being on the specific distribution grid not requiring new transmission buildout, which I think a lot of other types of renewables do.

*Mr. Griffith. Go ahead.

*Mr. Baird. Congressman, I'm joining this hearing via my iPhone, my Smartphone. Computers used to be great big pieces of equipment that used to take up entire rooms. Now they're small enough to fit in your pocket or to fit in your lapel pin. That is the same thing that is going to happen to our energy equipment and energy infrastructure. It is going to shrink from large, centralized energy production systems to smaller and smaller systems that can fit in each and every American home.

That transition will occur, and it is simply a question of who owns it. Is it going to be us, or is it going to be China? But the technology is here, and the macro trends are

clear as to what is going to be happening in terms of the transition of the energy industry.

*Mr. Griffith. But do you truly believe that will happen in the next decade? I think it will happen but not in the next decade.

*Mr. Baird. I think it will happen within five to seven years. It is already happening across America.

*Mr. Griffith. Well, I hope you are right because that is what we are going to be gambling on, apparently, with America's power system and hoping that we have enough power and hoping the technology catches up. I would rather we had that plan already in place. And with that, Mr. Chairman, I yield back.

*Mr. Rush. The gentleman yields back. The Chair now recognizes the gentlelady from New Hampshire, Ms. Kuster, for five minutes. Ms. Kuster, you are recognized for five minutes. You are muted, Ms. Kuster. Ms. Kuster, you are recognized for five minutes. All right.

The chair now recognizes Ms. Blunt Rochester. Ms. Blunt Rochester, you are recognized for five minutes.

*Ms. Blunt Rochester. Thank you, Mr. Chairman. And I would like to thank you also for holding this important hearing, and thank you so much to the witnesses.

This Thursday marks the 51st year we commemorate Earth Day, and for the second year in a row amid social distancing measures, most Earth Day events will be virtual. The ongoing pandemic and the racial and income disparities in COVID-19 deaths, in hospitalizations are an important reminder that the health of our planet and the health of our people are inextricably linked.

Transitioning to clean energy is not only necessary to protect human health and the environment, but it is also an enormous opportunity to create a more equitable economy. Generations of inequalities and injustices have placed a disproportionately high energy burden on our low-income indigenous and black and brown communities.

The average low-income family in Delaware spends nearly 10 percent of their income on home energy cost. Too often environmental justice communities are excluded from considerations on clean energy perpetuating underinvestment in these communities. We need to work together to ensure that environmental justice communities have a seat at the table as we transition to clean energy.

And my first question is for Mr. Bhatraju. Sorry for that. Bhatraju. We recognize that the transition to clean energy will not be seamless, but we also know clean energy

creates good paying union jobs. Prior to the pandemic there were nearly 14,000 Delaware residents working in clean energy. Can you explain how clean energy investments like community solar provide jobs for Americans while increasing access to energy and high-burdened and low-income communities?

*Mr. Bhatraju. Thank you, Congresswoman. And no worries at all. My name is not phonetic.

So community solar, and I want to go other this point again, it can happen everywhere, and the benefits are broad because it is offsite and requires skilled electricians and tradesmen to actually install these projects. There is a great story out of West Virginia, for example, where a company called Solar Holler where they have retrained coal miners to actually install megawatts now of solar in West Virginia as an example.

But even if urban areas you are seeing community solar as an amazing benefit to the question earlier, people living in apartments, and creating resilient distribution grids, hardened grids. We know that the climate is getting weirder, and there is more storms, and having these hardened grids is especially beneficial for low-income populations and communities.

So the benefits of community solar are going to be more widespread by virtue of the product itself but by virtue of the fact that it can happen in all 50 states.

*Ms. Blunt Rochester. Great. Thank you. And Ms. Farley, High Road businesses apply a collection of collection of labor policies that take a more sustainable approach to treating workers, the planet and the local community which includes racial justice, racial equity hiring practices, prevailing wage standards, unionization and environmental sustain ability. We often hear from critics that clean energy is antilabor, but the two are not mutually exclusive, and we do know that we don't have to choose between our good jobs and the environment.

How can we incorporate the High Road business model into the clean energy industry to stimulate good job growth and create jobs for all Americans?

*Ms. Farley. Thank you, Congressman Rochester. I think that we have strong models for this. There are many equitable High Road job policies and programs that have been developed and create great models and demonstrate great models of this. We know that the President Biden's American Jobs Plan specifically speaks to the promise of higher paying unionized clean energy jobs with families sustaining

benefits.

And so I think that the clean energy industry has a lot to learn from the labor industry, and I have been encouraged to see more coordination between traditional unions and the clean energy industry. And I think that both industries have a lot to learn from each other as soon as we begin to see each other as mutually supportive and not mutually exclusive.

*Ms. Blunt Rochester. Thank you so much. And thank you, Mr. Chairman, for your leadership. I yield back.

*Mr. Rush. The gentlelady yields back. The Chair now recognizes the gentleman from Indiana, Mr. Bucshon, for five minutes. You are recognized, Mr. Bucshon.

*Mr. Bucshon. Thank you, Mr. Chairman.

First of all, I just want to dispute a little bit the comments made that says the rest of the world are doing what is in the Democrats proposals. Well, India and China don't seem to be listening, so we don't want to economically disadvantage ourselves.

I'm deeply troubled by the legislation to keep CLEAN Future Act before us. The partisan bill not only jeopardizes America's energy security and affordability, but worse it destroys the livelihoods of hard working Hoosiers and Americans across the country. I want to make it clear I

support an all the above energy approach, and I support decreasing CO2 emissions. Innovation and technology advances such as carbon capture are critical to this goal. We don't need to ruin the economy and our energy leadership to do that.

The legislation proposed before us I believe is somewhat out of touch with reality and moves to get rid of the fossil fuel industry with its overreaching provisions. I want to read from the bill itself, in fact, in Section 1002, the Energy and Economic Transition Impact Studies section. The Democrat bill says that, "The Secretary shall seek to enter into an agreement with the National Academy of Sciences under which the Academy agrees to conduct studies on matters concerning potential impacts of achieving net zero greenhouse gas emissions on workers and communities dependent on employment related to fossil fuel as follows.''

I think I know the answer to the question, but I will read you what the study they are proposing would do. "Identify types of occupations related to fossil fuels that may be impacted by the nation's transition to achieving net zero greenhouse gas emissions, including occupations with the extraction of fossil fuels, the refinement of fossil fuels, the generation of electricity from fossil fuels, the

production of energy intensive industrial products, the manufacture of light- medium- and heavy-duty vehicles that utilize an internal combustion engine and other opponents for such vehicles and the construction, operation and maintenance of infrastructure to deliver fossil fuels for domestic use and for each type of occupation identified under subparagraph A, estimates of the number of employees serving in each occupation and the locations of the employees for each type of occupation.''

So even in the bill it is recognized that there is going to be a substantial impact. I don't think we need to have the Secretary study that to prove that. In regard to the all of the above approach, I think my record speaks for itself with respect to my support for hydro and nuclear energy as well as other renewable sources of energy, but I represent with great pride a district that is responsible for providing the bulk of energy generation from coal, the whole state of Indiana.

Mr. Chairman, it is personal to me. I grew up in the coal fields in central Illinois. My father was a proud United Mine Worker for his entire career. Over the past four years, however, thousands of hard working Hoosier coal miners in my district have lost their jobs, and we are having more

power plant retirements. As more plants are set to retire partially because of stringent regulations like we see in this legislation there will be an increase in hard working folks who will be laid off and struggling to find work. Why don't we innovate and implement advanced carbon capture technology before all of these jobs are lost?

Mr. Perez, this transition will have serious impacts on the fossil fuel industry. What economic opportunity alternatives to energy workers have should their years of experience and valued skill sets no longer be needed or warranted?

*Mr. Perez. Well, it is very limited especially at the scale when you deal with millions of people that would be displaced across the country. I mean, the Hispanic community is only maybe a million of those workers, but when you are dealing with ten million people it is very difficult because it is essentially taking a worker, retraining them, so it is going to be very expensive to do that, very time-consuming. Some folks will filter out because they don't like the new work, and so by the time it all ends up it might be years down the road, and you may only have partial success while at the same time you are increasing economic distress for some of these workers and their families.

And so in our case, we are seeing the Hispanic community is coming out of poverty. We definitely are in an upward mobility mode. We are great contributors of the country's economy with $2.3 trillion purchasing power. There is a lot of opportunity there, and so we are very concerned about the shift over. And we are saying let's stop. Let's really take a good look at what we are trying to do and figure this out before we put so many people in harm's way.

*Mr. Bucshon. Thank you for that. I would agree. Mr. Chairman, I yield back.

*Mr. Rush. The gentleman yields back. The Chair now once again recognizes Ms. Kuster for five minutes. The gentlelady from New Hampshire, you are recognized for five minutes.

*Ms. Kuster. Thank you very much, Mr. Chairman. I appreciate it.

This is an important hearing, and I am grateful to our panel for being with us today. As Congress works to help the country transition to net zero carbon emissions we must ensure that low-income Americans and communities of color will benefit from this revolution in our energy sources, and I want to make sure that everyone has the chance.

So according to the Department of Energy, the average

low-income family spends nearly 9 percent of their income on home energy bills, three times more than the national average. These burdens are even more acute in rural communities in New England where the average low-income family spends nearly 11 percent of their income on energy bills. It is unacceptable that low-income Americans are forced to spend one out of every ten hard-earned dollars keeping the lights on and keeping their family warm. We need to help low-income Americans spend less money on their energy bills, and one way we can do that is by reducing the cost of electricity itself.

In my district, the Plymouth Area Renewable Energy Initiative has done just that. Partnering with the Common Man restaurant and the New Hampshire Electric Cooperative, they built a community solar project that sells clean energy into the local grid and uses the revenue to subsidize energy bills of local low-income families.

Mr. Bhatraju, what can Congress do to help develop more of these projects that strengthen the grid, reduce carbon emissions and make the clean energy revolution more equitable?

*Mr. Bhatraju. Thank you, Congresswoman. As a lot of you know, the power grid is not actually competitive in a lot

of parts of the U.S. The community solar projects I talked about that we manage are right now across eight states. Again, these are red states, blue states, deregulated, regulated markets. Community solar can happen everywhere, but it is a form of competitive energy that we need to promote everywhere.

And it is part of the legislation that we are discussing here today is to give every public utility commission, and there is 50 states, 50 public utility commissions, the ability to consider creating a community solar program. And they can go through their own deliberations of how to do it, how big, where to put it, et cetera, but that is all we are asking.

And I think, hopefully, it came through today that the benefits of community solar are so much more widespread than traditional rooftop solar that opening up the ability for these policymakers to consider these programs, put them in all 50 states benefits everyone, the communities and folks that are left out of the transition.

*Ms. Kuster. Great. Thank you very much. Another way to reduce energy bills is by helping families operate their homes more efficiently. Heat pumps cost less to operate than a traditional natural gas or oil furnace. Because heat humps

run on electricity instead of carbon-based fuels they can help us meet our carbon reduction goals as we electrify the grid.

Mr. Baird, what are some the barriers that you see to broader heat hump utilization, and should Congress consider incentives to help more Americans adopt this technology?

*Mr. Baird. Thank you for the question, Congresswoman. Heat pumps will be a central technology in the American economy over the next 30 to 50 years. Right now they're being primarily produced in Japan. They are new models of heat purposes that use carbon as refrigerant. So for our friends across the aisle who are interested in carbon capture and storage, heat pumps actually present a multitrillion dollar use case for capture carbon and using it as refrigerant in heat pumps.

The barriers to deploying heat pumps at scale include a lack of homeowner awareness. Americans are not aware of the benefits of heat pump as is the case in Europe and Asia where heat humps are the top home energy technology. And second, we must train up a new highly-skilled construction workforce that has the ability to do plumbing and electrical work and hazardous materials construction work that is necessary to install heat pumps in 120 million American homes. Thank you.

*Ms. Kuster. Thank you very much. I did have another question about The Low-Income Home Energy Assistance Program, LIHEAP, but I will submit that for the record. Thank you. I yield back.

*Mr. Rush. The gentlelady yields back. The Chair now recognizes my friend from the great state of Michigan, Mr. Walberg, for five minutes.

*Mr. Walberg. I thank the Chairman, and thanks to the panel for being here.

This is an important issue that sometimes I think we ought to step back and really, really consider what we are talking about for the future especially as we are thinking about 20, 30, 50 years. Mayor Carter-King, I'd like to talk to you about carbon capture since I know there is work being done on a storage facility at Dry Fork Station in Gillette which my staff had a privilege to visit.

I agree with you that there are many good uses for carbon rather than keep it in the ground, which is not practical in my view, not necessary either, I believe. We should invest in carbon capture utilization and storage. This is a bipartisan solution since we need to figure out how to manage carbon across the value chain, but we need to make sure we're not duplicating existing regulations or imposing

impractical permitting requirements that may undermine future development of this technology.

The Federal Tax Code can be a tremendous tool, but we can also look at speeding up the infrastructure process for companies to obtain federal permits needed to inject CO2 into storage. And so Mayor King, do you support equipping the EPA for the federal government with the ability to process these infrastructure permits at a faster rate and helping other states take the lead like you are doing in Wyoming?

*Ms. Carter-King. Absolutely. Thank you, Congressman Walberg. That is absolutely what we would appreciate here so that we can fast track more of the research that is going on here. When President Biden was running for election, he said he would work with the red states as well as the blue states. Well, we here are willing to work with him on subjects like this because we do need his help now.

*Mr. Walberg. I think that is called primacy, isn't it? Could you also speak to the importance of new technologies and innovations in carbon capture utilization and storage? And then secondarily, what would that mean for your community of Gillette, and shouldn't we give your state a strong opportunity to lead in this space?

*Ms. Carter-King. Absolutely. Thank you again. That

is a great question. We do need the help to continue this vital research in such an abundant resource that we have here that can help the nation as well as the world. Other nations do recognize this, and we have other countries here working on the research as well. We need to work more with the rest of the world. This is a global problem that we can help with right here in the Powder Basin. It is vital that we continue this important research into carbon capture.

*Mr. Walberg. Well, I think we forget -- so often we forget our primacy itself in all of the above energy opportunities and solutions that we don't necessarily need to throw them all out or throw certain ones out, but we can use them appropriately.

Mr. Perez, thank you for being here. We keep hearing about the job potential of this so-called just transition and no doubt there is huge potential in clean energy jobs, but I think we need to be realistic. Even former Secretary of Energy Moniz concluded that new replacement green jobs pay significantly less not to mention impediments to retraining our entire generation of workers.

I just think it is silly to think that a government transition czar and task force are going to take care of all of those workers who lose their jobs. Mr. Perez, can you

speak to your workforce and the need to reserve jobs that folks are training for today?

*Mr. Perez. Oh, absolutely. Well, first of all, we found that there is a huge need to develop a workforce in energy STEM, and the reason for that is 25 percent of K-12 students in America today are Hispanics, which means 10, 15 years down the road that is your workforce. So we need to be thinking about how we are going to create the new intellect to innovate and develop the technologies necessary to not only carry our industry forward but our country and, of course, hopefully the world.

So we initiated a program called the Hispanic American Energy STEM Institute two years ago. We launched it in Arizona. We have similar discussion on this with very influential people, including the top leaders of education in Californian the CEOs of the utilities there to talk about how the industry and the academia and the community can develop a pathway to create 25,000 Hispanic and other minority group energy STEM graduates by the year 2025. Very ambitious goal, but if we don't throw it out and have some discussion, who knows? Maybe we might be able to pull it off.

But in terms of the comparison to the clean energy space, we have connected with people who train solar

installers. They tell us that those jobs don't pay very well. It is about $13 an hour, no benefits, no union, no sustainability, no career ladder. Once a project is over that person has to go out and find another project.

So on the other hand, in the oil and gas side, we can take assistant welders, for example, right off the street they go through the union training. They put them on the job. It is $23 an hour, $20 an hour for benefits and then $64 a day for per diem, which is how they house themselves and feed themselves when they have to move across the country for these very special jobs.

So there is a big difference in terms of the scale of security, income, opportunity, training, education and development that is offered in one sector compared to another.

*Mr. Walberg. Great. I yield back.

*Mr. Rush. The gentleman yields back. Now the Chair does not see Mr. O'Halleran on the screen. Mr. O'Halleran you are next. So the Chair now will move to Mr. Duncan. I don't see Mr. Duncan on the screen. The Chair now recognizes Mr. Palmer from Alabama for five minutes. Mr. Palmer, you are recognized.

The Chair now recognizes Mrs. Lesko for five minutes.

Mrs. Lesko, you are recognized for five minutes.

*Mrs. Lesko. Thank you, Mr. Chair, although I see Mr. Palmer waving his hand. So I don't know if you want to go back to him first.

*Mr. Rush. Mr. Palmer, you are recognized for five minutes.

You are muted, Mr. Palmer. All right. Mrs. Lesko, why don't we just go with you. You are recognized for five minutes.

*Mrs. Lesko. Thank you, Mr. Chairman. I appreciate this hearing, and I thank you for being here.

I think it is important that we talk about things like equity, that we have an honest conversation about what equity really means. For my colleagues, many of them on the other side of the aisle, achieving equity requires the creation of an Office of Energy Equity, but I believe the easier way to serve our communities is to have policies that promote affordable and reliable energy and maintain good paying American jobs.

We can continue innovating and deploying clean technology as well as a lot of traditional forms of energy like natural gas to be a choice for Americans. I represent nearly 180,000 fixed income senior citizens and 173,000

Hispanics in my congressional district in Arizona, and I want to make sure that these people and this energy policy we consider doesn't lead to higher prices especially on the seniors who are living off fixed income. I also want to make sure that policies proposed in the name of equity or environmental justice aren't taking away good paying jobs from working class communities.

Mr. Perez, in this bill -- and I would like to read part of this bill. It is on page 953 of the CLEAN Future Act -- It identifies types of occupations related to fossil fuels that may be impacted, meaning lost, by the nation's transition, and it is a fast transition, to achieving zero net greenhouse gas emissions and includes, "occupations involved with the extraction of fossil fuels, the refinement of fossil fuels, the generation of electricity from fossil fuels, the production of energy-intensive industrial products, the manufacturing of light- medium- and heavy-duty vehicles that utilize an internal combustion engine and other component parts for such vehicles and the construction, operation and maintenance of infrastructure to deliver fossil fuels for domestic use.''

That is right in the bill, and you have testified in advance, but I want you to repeat again the impact that the

loss of these jobs is going to have on the Hispanic community and the 173,000 Hispanics that I have in my congressional district.

*Mr. Perez. It will be a very devastating impact economically. It would create a depression made by government, and so we really caution against that. We think that there needs to be a lot of research and a lot of study. Otherwise I hate to say this, but you probably won't want to claim responsibility for that if that happens.

*Mrs. Lesko. Thank you, Mr. Perez. Mayor Carter-King, I am really concerned about the increased cost of electricity and energy if we rush too fast to replace the oil and gas industry and not have an all the above energy policy. Do you think that a quick rush -- I think in this bill it is 14 years we only have until electric generation plants have to totally be at zero carbon emissions, meaning no natural gas. Do you think that would lead to increased utility prices for these low-income and communities of color?

*Ms. Carter-King. Thank you, Congresswoman Lesko. Absolutely. I don't think people are even thinking about how expensive power would be. And who would that hurt? Your lower-income people. It would be so -- I can't even manage without having the low cost of these fossil fuel energies in

the mix at least. It will be devastating to people that won't be able to afford to turn on lights. We have spoiled our country with low energy prices all these years. So yes, it will quite an impact on the price of energy across the board.

*Mrs. Lesko. Well, and I am concerned for all people and what the impact will be on the cost of utility rates and also the reliability of the utilities of energy. And so with that I yield back, Mr. Chair.

*Mr. Rush. The gentlelady yields back. The Chair now recognizes Mr. Palmer. Mr. Palmer.

*Mr. Palmer. Thank you, Mr. Chairman. Can you hear me now?

*Mr. Rush. Yes, Mr. Palmer.

*Mr. Palmer. Perfect. I am going to make a couple statements here about energy justice. It is widely reported that low-income households can spend up to 20 percent of their household income on their energy cost. It is disproportionately a heavy burden on low-income families. I also want to point out that they suffer energy poverty in the sense that they can't afford to adequately heat and cool their homes. And this is especially problematic when the homes are cold for people with respiratory and cardiovascular

issues, particularly asthma.

Mr. Perez, there is a study from IHS Market, one of the most highly-respected research groups in the world, and they predicted that by 2035 there would be 1.9 million jobs in oil and natural gas, that 700,000 of those would be African Americans and Latinos. What do you say in regard to how it would be impact those communities if those jobs were not available? Would you agree those would be very high-paying jobs?

*Mr. Perez. There is no questions about it. We partner very closely with the American Association of Blacks In Energy, AABE. They have been around since 1977. We are a fairly new organization. They actually incubated us for a couple years when we got started ten years ago. So we have done projects together. One of them is focused on energy jobs.

We toured around the country in ten different cities to meet with leaders and talk to them about the opportunities in the energy space as it relates to jobs, and it was all-exclusive. And I can tell you that the effect from my perspective -- I cannot be a spokesperson for them -- but I think that it definitely would have an impact on the African American community almost as dramatically as it would in the

Latino community.

*Mr. Palmer. The thing about these jobs they are longer-term jobs as opposed to the jobs in the green industry.

*Mr. Perez. Yes.

*Mr. Palmer. For instance, Germany in 2011 they reported 300,000 green jobs that had fallen to 150,000 by 2018. Ant then if you go back and look at the first version of the Green New Deal, which was the 2009 stimulus package, Obama-Biden administration passed, the Democrats passed in 2009, they were predicting that it would create five million new green jobs, but they could only account for 2.7 million. And according to the Brookings Institute, most of those were bus drivers, sewage workers and other types of work that didn't fit the green jobs of the future. And the Bureau of Labor Statistics even included jobs like lobbying for green industries.

That makes no sense that there were people in the septic tank and portable toilet servicing industry had 33 times more green jobs than solar electric utilities. This is the kind of stuff that really concerns me is the misrepresentation of what the Green New Deal will provide for the country and particularly the cost increases.

In California, their energy costs are 60 percent higher than the national average, and that is a tremendous burden on low-income families. Wouldn't you agree, Mr. Perez?

*Mr. Perez. It is higher than other states. Absolutely. I moved from California recently, and I live now in Minnesota, and so big difference in terms of our energy bill. Absolutely.

*Mr. Palmer. I appreciate the response. I would also like to ask again, and I have done this in two or three hearings in Pembroke Township in Illinois. It is a city of 2,100 people, 80 percent black population. They have no natural gas. Many of these people heat their homes with wood-burning stoves or more expensive propane, and the Reverend Jesse Jackson is leading an effort to get a gas line in Pembroke Heights to provide these people with lower costs and more reliable fuel for heating their homes.

I just want to know from the witnesses how many of you would support Reverend Jackson's efforts to get a natural gas pipeline into Pembroke Township? How many of the witnesses period, the Republican or -- would you support that, Mr. Perez?

*Mr. Perez. Well, I am a Democrat, and the answer is yes.

*Mr. Palmer. How about you, Mayor Carter-King? Any of the Democrats would you support that? Seeing no takers, I yield back.

*Mr. Baird. I oppose gas pipelines. Thank you, Congressman.

*Mr. Rush. The gentleman yields back. The Chair now recognizes the gentleman from Arizona, the great state of Arizona, Mr. O'Halleran, for five minutes. Mr. O'Halleran, you are muted.

*Mr. O'Halleran. Thank you, Mr. Chairman and Ranking Member, and I want to thank the panel also for all their information from today.

Changing energy economies means that rural communities like those in my district with generating stations have lost and will continue to lose jobs as coal becomes less economically viable. With support like that provided by my legislation, the New Promise Act, communities across the country will be able to transition to the next generation of good paying clean energy jobs. Ensuring that federal resources are available and communities are driving the direction of those resources will support communities through its transition that is already being driven by market forces.

I believe that we should ask ourselves how federal

investment into clean energy can improve the lives of our constituents and our communities. Asking this question allowed me to develop the New Promise Act to support rural economies and make sure that hardworking Americans continue to have opportunities to pursue good jobs.

Mr. DeVar, how will federal transition assistance to both local governments and workers promote rural equality in an energy transition?

*Mr. DeVar. Thank you, Congressman.

Well, first of all, the focus on local governments and workers has to be built into recognizing where there will be shifts in workforces. Actually, I think this question really connects to issues that have been raised. Where are there going to be job losses? Where will there be local governments that have different shifts in revenue streams?

And approaching this overall transition not as one that is simply an energy transition but approaching it as one that focuses on American families and jobs would elevate. If we set the goal of this transition equally to look at American families and how they benefit and if we set metrics to ensure that we reach cities, towns and have local governments connected to the transition, then we would ensure that we were able to build distributed generation, for example, which

can reach all of our cities and towns as opposed to types of resources that may leave certain communities out as well at rural communities.

That is the other important issue where we need to think about the benefits of a decentralized and distributed approach which could really bring jobs to all of our communities.

And lastly, I will just say this is actually an important question to think about that issue of job loss, but I think we have to connect that also to communities that are thinking about their income as well as communities that are facing risks of pollution. So this isn't a simple tradeoff of one harm to another harm. It is a complex web, and if we are honest with ourselves we really need to analyze what the tradeoff of benefits and burdens on, and that will really get to the heart of addressing specifically local governments and workers.

*Mr. O'Halleran. Thank you. I have follow-up question. Can you speak to some successful examples of rural communities successfully transitioning coal jobs to clean energy jobs?

*Mr. DeVar. I myself am not an expert in specific job training programs. I think some of the other witnesses here

would. But I think what I can point to is that the vehicle for ensuring that just transition happens is often rural electric cooperatives that are responsive to their customers, that care about fossil fuel workers. And so if again we connect to local governments and those institutions that care about folks there, care about those jobs and tie that into our transition, we will ensure that we have training and support for workers from one industry to another.

*Mr. O'Halleran. Thank you. Those rural coops are also important to broadband distribution throughout our country also. Mr. Chairman, I yield.

*Mr. Rush. The gentleman yields back. The Chair now recognizes the gentleman from Indiana, Mr. Pence, for five minutes.

*Mr. Pence. Thank you, Chairman Rush and Ranking Member Upton for holding this hearing, and thank you to the witnesses for appearing before us today.

The academic ideas incorporated in the majority's aggressive energy policies are neither equitable nor just for my constituents in Southeast Indiana. Under this bill, a just transition means less reliable energy for a higher price, fewer jobs and economically depressed communities in my Hoosier state.

If we want a preview of a similar rush to green, we can look to the outcomes and looming energy shortages in Germany. The country's premature shift has left consumers with the highest cost of electricity in the European Union. All the while Germany still relies on their neighbor for coal and nuclear generation to meet peak energy needs.

At a time when gas prices are already straining the budgets of Americans in rural and suburban communities, we simply cannot afford to foot the bill to bring renewable energy and electric vehicles just to the urban areas. As the attack on fossil industries intensifies it is important to remember the impact on the entire value and distribution chain.

That includes the trucking industry, manufacturing plants, our farmers and Hoosier products that fuel the country. Just the other week I had the opportunity to meet with Superior Oil in Connersville, Indiana. This company is helping lower our carbon footprint by recycling and reusing different types of liquid fuels for chemical, plastics and manufacturing industries.

Consider companies in my district like Cardinal Ethanol and POET who are leaders in the high tech ethanol and biofuel development all from the locally sourced agriculture

products. What would be the just transition for these workers in my district when we shift to complete electrification? What happens to the local economy and tax revenue that grows a community? Unfortunately, President Biden and the House Democrats one size fits all approach to energy catches rural Hoosiers in the crossfire.

Mayor Carter-King, your community faces a serious threat from the policies coming from CLEAN Future Act. In your testimony, you detailed the real world impact of these aggressive policies. Eliminating fossil fuels result in the loss of revenue jobs and wellbeing for the citizens of Gillette. One of the reasons I ran for Congress was because I watched the destruction of the manufacturing sector hollow out entire communities across Indiana in my district. It is my fear that the very policies we're talking about today will replicate this situation for my constituents.

You have been investing in new, cleaner ways to use coal, oil and natural gas. This would benefit small rural towns by keeping anchor institutions in place. My question. Before we unjustly destroy entire communities on the way to green shouldn't we give these innovations more time to develop so we can transition these communities in an orderly manner?

*Ms. Carter-King. Thank you, Congressman Pence. Absolutely. That is all we're asking is for time to develop these innovations that the great minds the world are coming up with here in our community and in other communities. We just need more time. They can't happen overnight. But they will benefit everyone. These could have worldwide implications some of the technology that they are working on now just like the concrete solution they came up with yesterday in the XPRIZE. So yes, thank you. We need more time.

*Mr. Pence. All right. Thank you today for being here, and championing our smaller communities. And Mr. Chair, I yield back.

*Mr. Rush. The gentleman yields back. The Chair now recognizes Mr. Armstrong for five minutes.

*Mr. Armstrong. Thank you, Mr. Chairman. I have heard it several times today that the free market is what is continuing the cause of the decline of coal, and I think it is important to go through this because if we're talking about creating new energy standards, understanding how the electric grid works economically is probably pretty important, and anybody who says that market forces and not government regulation is what killed coal simply doesn't

understand how the economics of the electric grid work.

To be sure, abundance of natural gas from shale plates has a free market factor in what continues to cause the decline of coal, but that is literally the only free market portion of this conversation. Every other thing has been created by government regulation.

It actually started under the H.W. Bush administration but was aggressive and effectively pursued under the Obama administration. The emission of CO2 to the New Source Review standard was significant because it made the decision to retire coal plants instead of retrofit them. The cost and uncertainties weren't worth it. It was a bad policy, and it was administered poorly. Rather than risk an NSR review coal plant were shuttered. And while the clean power plant was never fully implemented it was really effective in one thing. It gave states the message that the federal government was going to shut coal plants down and that states plan accordingly, which brings us to probably the most important thing.

There is no real free market in the electric grid. Electric companies in most states are government approved monopolies. They have guaranteed market share. State regulators set the rates, and the utilities aren't allowed to

make a profit from the sale of electricity. It is a cost of service business model. Regulated by the government it covers expenses and builds in a profit margin which is usually around 10 percent.

We have created a system where utilities have a guaranteed profit when they spend on capital assets, but the profits they make on assets declines every year as an asset depreciates. As coal plants get older, it makes utilities less -- they make less money on that asset, and as plants are paid off the electricity is cheaper, and rate payers benefit, but government controlled utilities don't.

Through a perverse regulatory incentive utilities have strong financial reasons to retire depreciated coal plants and build wind, solar and natural gas, and this is before we talk about regulatory and economic advantages renewables continue to have over coal with the never ending production tax credit. 2019, 4.7 billion in market manipulation. 2020, 4.3 billion in market manipulation. 2021, 4.3 billion in market manipulation not the least of which renewables are granted primacy on the grid.

So when we talk about a just transition, let's be honest what we are talking about, and we should just tell the people in my communities like Beulah, Hazen, Watford City, Williston

and yes, Gillette, Wyoming, that we are going to kill their communities because whether it is coal or oil or natural gas none of these renewable jobs that we continue to say will exist will scale up to allow these communities to survive.

And I am going to let everybody in on a little secret. Everybody who lives in Watford City, North Dakota, is in the energy business. Everybody from the teacher to the cop to the government officials. If there is 15 clean energy jobs that are created in Rochester, Minnesota, that does nothing for the people in my communities in Western North Dakota. And we're seeing these same fights coming in different ways right now.

One of the things we're seeing in the oil and natural gas space is how we continue to attack pipelines. Somebody said earlier states aren't going to ban fracking, and that's probably true mostly because when it comes to oil and gas which where there is a difference to coal states have too much control over production, but you don't have to kill fracking to kill the industry. All you have got to do is continue to sue pipelines out, sue pipelines out, sue pipelines out, make the cost of compliance so hard the time built to get that infrastructure in the ground is so burdensome that the capital to deliver the products to market

matters.

And if we want to talk about equity in the setting that it is talking now, I would have everybody read the declaration of Mark Fox, who is the chairman of the three affiliated tribes in North Dakota. They transport 60 percent of their oil by the Dakota Access Pipeline. It accounts for 80 percent of their travel budget. Everybody who lives on that reservation is in the oil and gas industry, and every single person on that reservation is going to be negatively impacted if the Dakota Access Pipeline shuts down, and those are the real cause for real concerns.

And finally, when we are talking about community solar projects and all of these different issues, we have a model for that. It is called a coop. We can do these things under current existing structures. My problem is and my guess is in order to make a coop economically viable you are going to have to have a carbon fuel source so back it up when the wind doesn't blow or the sun doesn't shine. So with that I would ask unanimous consent to enter into the record the declaration of Mark Fox, and I'll yield back.

*Mr. Rush. The gentleman yields back. And if the gentleman will hold on to his recommendation I do have a series of documents, and included in the documents that I

have for unanimous consent is a letter from Mr. Mark Fox.

So that concludes the witnesses questioning and answers, the questioning of the members and answers by the witnesses. I again want to thank our esteemed witnesses for their participation in today's hearing. I want to thank you for your perseverance and for your endurance, and thank you so very, very much for your exemplary testimony.

I must remind members that pursuant to Committee rules they have ten business days to submit additional questions for the record to be answered by our esteemed witnesses who have appeared before us today, and I would ask each witness to respond promptly to any such questions that you may receive.

Before we adjourn I want to request unanimous consent to enter into the record the following documents: A report from the University of Wyoming School of Energy Resources on federal leasing and drilling ban policies, a report from the NRRI Insights, Resource Adequacy Needs dated March of 2021, a letter from the Hispanics In Energy regarding opposition to SB-467, a report from the Executive President of the United States CEA on the value of U.S. energy innovation and policies, a letter from the said Mark N. Fox with the chairman of the Three Affiliated Tribes, an article from the

New York Times entitled, "Coal Miners Union Indicates it Would Accept a Switch To Renewable Energy in Exchange for Jobs,'' a letter to President Biden regarding Winter Storm Fed Assistance Supporting Masonite Energy, and lastly an article from the Wall Street Journal entitled "John Kerry's Climate Kowtow.'' Hearing no objections so ordered.

[The information follows:]

**********COMMITTEE INSERT**********

*Mr. Rush. And I now declare that the Energy and Power Subcommittee do hereby stand adjourned.

[Whereupon, at 1:56 p.m., the subcommittee was adjourned.]