

**A BIG CLIMATE DEAL: LOWERING COSTS,  
CREATING JOBS, AND REDUCING POLLUTION  
WITH THE INFLATION REDUCTION ACT**

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**HEARING**  
BEFORE THE  
**SELECT COMMITTEE ON THE  
CLIMATE CRISIS**  
**HOUSE OF REPRESENTATIVES**  
**ONE HUNDRED SEVENTEENTH CONGRESS**

SECOND SESSION

HEARING HELD  
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CREATING JOBS, AND REDUCING POLLUTION  
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**THURSDAY, SEPTEMBER 29, 2022**

HOUSE OF REPRESENTATIVES,  
SELECT COMMITTEE ON THE CLIMATE CRISIS,  
*Washington, DC.*

The committee met, pursuant to call, at 12:47 p.m., in Room 210, Cannon House Office Building, Hon. Kathy Castor [Chairwoman of the committee] presiding.

Present: Representatives Castor, Bonamici, Casten, Escobar, Graves, Palmer, Carter, Miller, and Crenshaw.

Ms. CASTOR. The committee will come to order. Without objection, the Chair is authorized to declare a recess at any time.

As a reminder, members participating in the hearing remotely should be visible on camera. Throughout the hearing, members are responsible for controlling their own microphones and can be muted by staff only to avoid inadvertent background noise.

As a reminder, statements, documents, and motions must be submitted to the electronic repository, to [SCCC.repository@mail.house.gov](mailto:SCCC.repository@mail.house.gov).

Finally, if you are experiencing any technical problems, please inform the committee staff immediately.

Well, good afternoon, everyone. Thank you all for joining this hybrid hearing, A Big Climate Deal: Lowering Costs, Creating Jobs, and Reducing Pollution with the Inflation Reduction Act.

We are going to talk today about how the Inflation Reduction Act will help families lower electric and fuel bills, create jobs, and expand investments in U.S. manufacturing, clean energy, clean vehicles, and climate solutions.

I will recognize myself right now for a shorter opening statement. I am going to submit my full statement into the record.

Welcome again, everyone. The Inflation Reduction Act is a “cost cutter” that puts money back into the pockets of Americans by making the largest investment in clean energy and energy efficiency in the nation’s history.

And it is more poignant today that action to address the climate crisis, that we act urgently. And I want to thank everyone who has relayed their concerns for my Florida neighbors in the path of that monster Hurricane Ian, to the Ranking Member, especially for his outreach.

Rep. Graves, I truly appreciate you offering your advice and counsel, because folks in Louisiana certainly have too much experience at that as well.

And as the devastation unfolds, we really owe it to the hard-working people across America to reduce the risks and costs of climate fueled disasters, whether they are these juiced-up hurricanes or the scorching heat or drought or wildfires.

And that is why the Inflation Reduction Act is so important. It will put the United States on a path to reduce our heat trapping pollution by roughly 40 percent by 2030. And it will strengthen our energy security, lower costs for Americans, and create millions of jobs.

By reducing our reliance on expensive and volatile fossil fuels, the Inflation Reduction Act will allow more Americans to enjoy the cost-saving benefits of renewables, like wind and solar, which are now the cheapest sources of power; more money for energy efficiency, to also save them money, make it cheaper for them to electrify their homes; make energy and their appliances more energy efficient. And those who buy electric vehicles will get thousands off the sticker price, and those EVs can save you about \$500 a year on fuel costs alone.

According to the BlueGreen Alliance, the new law will also help create more than 9 million good jobs over the next decade. That includes 150,000 jobs expanding environmental justice, which means deploying clean buses and garbage trucks in areas with poor air quality, and building new solar and wind projects in working class communities and on Tribal land.

The Inflation Reduction Act is an enormous step forward, but we know there is more yet to do. So we have some outstanding witnesses here today to help us talk about implementation and how we get those dollars back into the pockets of our neighbors. So I look forward to today's discussion.

And I will yield back my time and recognize Rep. Graves, the Ranking Member, for 5 minutes.

[The statement of Ms. Castor follows:]

**Opening Statement of Chair Kathy Castor**

**Hearing on "A Big Climate Deal: Lowering Costs, Creating Jobs, and Reducing Pollution with the Inflation Reduction Act"**

**September 29, 2022**

*As prepared for delivery*

In today's hearing, we'll examine the financial benefits of the Inflation Reduction Act to American families. The Inflation Reduction Act is a "cost cutter" that puts money back into the wallets of Americans. And it includes the largest investment in clean energy and energy efficiency in our nation's history, answering the call to mitigate the growing impacts and costs of the climate crisis.

Action to combat the climate crisis is urgent. And I want to thank everyone who has relayed concern for my Florida neighbors in the path of monster Hurricane Ian. As the scale of the devastation unfolds, we owe it to the hard-working people of this nation to reduce the risks and costs of climate-fueled disasters, whether they be juiced-up hurricanes, scorching heat, droughts, or wildfires like we see out West. In Puerto Rico, nearly 350,000 homes and businesses remain without power long after Hurricane Fiona made landfall. And in Alaska, a powerful storm brought floods, power outages, and new threats to food security. These costly harms underscore the need to strengthen our infrastructure and reduce climate pollution. That's why the Inflation Reduction Act is so important. It will put the United States on a path to reduce our heat-trapping pollution by roughly 40% by 2030. And as you'll hear today, it will do so while strengthening our energy security, lowering costs for Americans, and creating millions of jobs.

By reducing our dependence on expensive and volatile fossil fuels, the Inflation Reduction Act will allow more Americans to enjoy the cost-saving benefits of cleaner, cheaper energy. Renewables like wind and solar are now the cheapest source of power. And by installing more, we'll pass cost savings to consumers while meeting their energy needs. Speaking of savings, the rebates and credits in the climate law will make it cheaper for Americans to electrify their homes and make them more energy efficient. That includes rebates to switch to cost-saving electric appliances and vehicles; to buy clean water heaters and cooling systems; and to install rooftop solar and battery storage. According to Rewiring America, the average household could receive more than \$10,000 in benefits to fully electrify their lives, leading to an additional savings of \$1,800 a year on energy bills. Those who buy electric vehicles will get thousands off the sticker price—and they could save more than \$500 a year on fuel costs alone. Imagine that: No more pain at the gas pump!

The new law will also create millions of good-paying jobs. Under President Biden, America reached 3.5% unemployment this summer, matching the lowest unemployment rate we've had in half a century. President Biden's climate law builds on that progress. According to the BlueGreen Alliance, the Inflation Reduction Act will help create more than 9 million good jobs over the next decade. That includes 5 million jobs expanding renewables and bolstering our grid; 900,000 jobs expanding clean energy across rural communities through electric cooperatives; 900,000 jobs in clean manufacturing; and much more.

Crucially, the Inflation Reduction Act will also put 150,000 Americans to work expanding environmental justice. That's because the climate law invests in Environmental and Climate Justice Block Grants, which will support community-led projects to address environmental harms and public health in vulnerable neighborhoods. Thanks to the climate law, we're also deploying zero-emission buses and garbage trucks in areas with poor air quality. And we're incentivizing new solar and wind energy projects in low-income communities and Tribal lands. Finally, the new law directs at least 60 percent of the Greenhouse Gas Reduction Fund to EJ communities, empowering our workers to deploy rooftop and community solar where they are most needed.

The Inflation Reduction Act is an enormous step forward. It was recently described by the head of the International Energy Agency as the "single most important action" in addressing climate change since the Paris Agreement. But we know there is more to do. Our Select Committee will keep pushing for further progress. Congress will keep working with the Biden Administration to fulfill this Big Climate Deal. And together, we'll keep forging the path to energy independence, which will require harnessing the immense potential of American clean energy and American ingenuity to lead the world in this transition. For now, I look forward to today's discussion with our witnesses.

Mr. GRAVES. Madam Chair, thank you for holding this hearing. I want to thank the witnesses and thank you for your flexibility as well. I know we are shifting times a little bit.

Madam Chair, I do want to just offer our prayers and support to your constituents and the residents of your state. I wouldn't wish a hurricane on anyone, and watching this one bearing down on your state in one of the worst trajectories you could probably have, going along that West Coast with the strong side up against the coast and the state, I am very, very sorry for what you and your other congressional delegation members and citizens of Florida are going through. And just know that we are here to offer whatever support we can to you and to fellow Floridians in the response and recovery phase.

Madam Chair, the Inflation Reduction Act—and I am going to give a peek to Mr. Rossetti's testimony because I had a chance to look at it a little bit. One thing that is noteworthy in the testimony is that, according to his projections, approximately two-thirds of the emissions reductions—I will say this slowly and carefully—approximately two-thirds of the emissions reductions that are, I guess, being taken credit for under the Inflation Reduction Act would have happened had that Act not been passed. So we are talking

about hundreds of billions of dollars—hundreds of billions of dollars being spent on projects that were already going to happen.

Look, we have been clear in this committee, I think the Chair and I share the objective of a trajectory that is lower emissions, that is a more diverse, cleaner energy portfolio. But making sure—from my perspective, making sure that we do so in a way that is based on U.S. resources, that is efficient, that continues the trajectory of downward emissions in a way that looks globally.

As the United States has led the world in reducing emissions, China has increased four tons for every one ton we have reduced. That is not—that doesn't affect the United States. That doesn't benefit the United States.

I quickly want to say in regard to hurricanes, because we need to make sure that we are staying factual here. Number one, virtually every study, including the journal *Nature Climate Change*, has found that there has been a 13 percent reduction in hurricanes—13 percent reduction in hurricanes this century. And number two, there have been some studies that have shown increased intensification of hurricanes, while a lower number, increased intensification. Got it.

One study that recently came out from NOAA indicated that part of the intensification could be tied to the fact we actually have cleaner air today, lower particulate matter which was reflecting the energy back up and, therefore, we now have a warmer Gulf of Mexico and other areas that are resulting in higher or faster intensification of hurricanes.

So I just think it is really important that any solutions we focus on are truly based on science and data.

Madam Chair, I look forward to hearing from our witnesses today. I apologize, as I mentioned to you earlier, I do have to take off for a few other meetings, but I yield back and look forward to hearing from our witnesses.

Ms. CASTOR. Thank you very much.

Now I want to welcome our witnesses. Thank you all for being here. Thank you for moving up the schedule a little bit.

Dr. Quinta Warren is the Associate Director of Sustainability Policy at Consumer Reports, where she helps develop winning strategies to address the impacts, inequities of the climate crisis, and local air pollution, and to build a more sustainable future for consumers. Previously, Dr. Warren founded Energy Research Consulting, and also served as a Fellow at the Department of Energy.

Philip Rossetti is the Senior Fellow for Energy and Environment at the R Street Institute, where he conducts research on energy, climate, and environmental policy. Mr. Rossetti previously served as a Fellow on the minority staff of our committee, so welcome back to him.

Josh Nassar is the Legislative Director of the International Union of United Automobile, Aerospace, and Agriculture Implement Workers of the UAW. He leads the team responsible for implementing the union's policy agenda as well as designing legislative strategy on labor, trade, environment, and healthcare, defense, energy, tax, and other issues. Welcome.



And finally, Samantha Sloan of First Solar was one of our scheduled witnesses. She was not able to join us in person today due to a family emergency. So we are sorry to miss her, but I ask unanimous consent that Ms. Sloan's testimony be added to the hearing record.

And hearing no objection, so ordered.  
[The statement of Ms. Sloan follows:]

**Testimony of Samantha Sloan**  
**Vice President, Global Policy, Sustainability, and Marketing**  
**First Solar, Inc.**

**Before the House Select Committee on the Climate Crisis**  
**Hearing on "A Big Climate Deal: Lowering Costs, Creating Jobs, and**  
**Reducing Pollution with the Inflation Reduction Act"**

**29 September 2022**

Good afternoon Chair Castor, Ranking Member Graves, and distinguished members of the Committee. My name is Samantha Sloan, and I am the Vice President of Global Policy at First Solar, America's leading solar technology company. I have been at First Solar for 13 years.

Founded in Ohio in 1999, we operate the largest solar manufacturing footprint in the Western Hemisphere, with two existing factories in Ohio, a third factory scheduled to come online in the state next year, and a fourth planned in the U.S. Southeast by 2025. First Solar is proud to be America's solar company: U.S.-headquartered and making solar panels in America, using American content.

I am honored to represent First Solar today and would like to thank the Committee for convening this hearing on the intersection between economic growth, industrial strategy, and fighting climate change. I would like to begin by adding context that, in our opinion, is crucial not just for this discussion today but also for understanding the current state of solar manufacturing in the United States.

Today, control of the global solar supply chain is concentrated in one country, China. By all accounts, China has bought this dominance through unfair and illegal subsidies and anti-competitive practices that have decimated American solar manufacturing. While solar panels were invented here, it is an unfortunate fact that today, First Solar is unique among the world's ten largest solar manufacturers: We are the only company of the ten headquartered in the United States, and the only company of those ten that does not engage in any manufacturing activity in China.

Viewed through this lens, the Inflation Reduction Act (IRA) of 2022 delivers a powerful legislative counterpunch, creating America's first durable solar industrial strategy and an opportunity to dismantle China's dominance of solar manufacturing value chains. Doing so creates a viable pathway to the secure supply of critical clean energy technologies, enabling the fight against climate change and capturing value for our economy.

It is difficult to overstate the economic value that the IRA will deliver. Solar is the lowest cost form of new electricity generation capacity, with system prices falling an average of 15% per year over the past decade. The energy transition is well on its way here at home. However, according to National Renewable Energy Laboratory data, less than a third of the almost 24 gigawatts of new solar panels installed in 2021 were produced in the United States.

Quite simply, incenting the creation of domestic solar supply chains allows the United States to harness this opportunity. When a greater percentage of solar panels installed in America are competitively made in America, we ensure that the benefits of investment, economic growth, and job creation are retained here at home rather than exported to China.

Our own experience, which will span about \$4 billion in U.S. manufacturing investment since 1999 (excluding our overseas manufacturing investments), has shown that:

1. **American solar manufacturing is competitive.** Our newest factory in Ohio is expected to establish a highly efficient manufacturing template for our next generation technology, delivering higher efficiency and wattage solar panels, while lowering costs on a delivered basis.

2. **American solar manufacturing creates steady, good-paying jobs.** We expect to have more than 3,000 employees on our payroll by 2025, making us the largest employer in the sector. Our average manufacturing salary is \$65,000, and every one of our workers has access to comprehensive benefits, including healthcare. In addition to the direct jobs we create, it is estimated that we will support approximately 15,000 indirect jobs by 2025.<sup>1</sup>
3. **American solar manufacturing delivers economic benefits.** Our next generation solar panel, which will roll off our production lines in 2023, will use an estimated 90% American content, including glass and steel, which has already led to supply chain investments in the state. As we grow, our supply chain must grow with us, and it is estimated that our recently announced \$1.2 billion expansion plan will add \$3.2 billion to the U.S. economy.<sup>2</sup>

Moreover, the IRA amplifies the benefits of solar manufacturing by providing the scaffolding for the entire industry to grow, and we expect to start seeing other investments in the United States across the clean energy value chain, including critical minerals, allowing the United States to capture further value.

I will conclude by bringing my testimony back to the primary purpose of this House Select Committee: the climate crisis. Crystalline silicon, the solar semiconductor primarily produced by China, is heavily dependent on coal power, and its producers are accused of using forced labor. The fact is that deploying PV systems using carbon-intensive solar panels from China *would result in significant carbon dioxide-equivalent emissions*.

Just because the smokestacks are not visible from here in Washington, DC does not mean that they are not harming the planet. By encouraging manufacturing here at home, the IRA helps ensure that our transition to a sustainable energy future is fair to all and enhances, not damages, the global fight against climate change while allowing the United States to capture economic value in the process.

First Solar is pleased to be here today to participate in these discussions. We are proud of our U.S. manufacturing capabilities and our past, current and future contributions to the U.S. economy, and we and believe that the IRA will significantly advance efforts to grow our country's economy, create jobs in America and combat the climate crisis. I would be happy to answer any questions you may have. Thank you.

Ms. CASTOR. So, without objection, the witnesses' written testimony will be made part of this record.

And, with that, Dr. Warren, you are recognized for 5 minutes to present your testimony. Welcome.

**STATEMENTS OF DR. QUINTA WARREN, ASSOCIATE DIRECTOR OF SUSTAINABILITY POLICY, CONSUMER REPORTS; PHILIP ROSSETTI, SENIOR FELLOW FOR ENERGY AND ENVIRONMENT, R STREET INSTITUTE; AND JOSH NASSAR, LEGISLATIVE DIRECTOR, INTERNATIONAL UNION, UNITED AUTOMOBILE, AEROSPACE AND AGRICULTURE IMPLEMENT WORKERS OF AMERICA (UAW)**

**STATEMENT OF DR. QUINTA WARREN**

Dr. WARREN. My name is Dr. Quinta Warren, and I am the Associate Director of Sustainability Policy at Consumer Reports. Thank you, Chair Castor, Ranking Member Graves, and members of the Select Committee on the Climate Crisis, for inviting Consumer Reports to testify today.

Consumer Reports is supportive of the Inflation Reduction Act because it helps more consumers than any vehicle tax credit in history, saving them fueling and energy costs, reducing public and consumer costs tied to air pollution and greenhouse gas emissions,

<sup>1</sup>Assuming five workers added in the overall U.S. economy for every one manufacturing job (Source: *National Association of Manufacturers (NAM)*, using 2020 IMPLAN data).

<sup>2</sup>Assuming economic impact multiplier of \$2.68 per \$1.00 spent on manufacturing (Source: *NAM*, using 2020 IMPLAN data).

and ensuring overburdened communities can have access to clean technologies.

Consumer Reports is a nonprofit, nonpartisan organization founded in 1936. Our mission is to help create a fair, safe, and just marketplace for all consumers. We test and rate thousands of products and services, and we advocate for consumer laws and policies.

One of the things that Consumer Reports is best known for is testing cars. Every year, our testers drive about a half a million miles to put new cars through their paces, and we work with policymakers like you to advance policies for safer and cleaner cars.

Our analysis show that consumers can save a lot of money by using cleaner technology, and our surveys and analyses also show that the majority of consumers want them, but there are barriers preventing them from purchasing and owning these technologies.

Early this year, we conducted our largest ever nationally representative consumer survey on better electric vehicles and low carbon fuels. We found that 71 percent of Americans expressed some level of interest in buying or leasing an electric vehicle, or EV. Within that, 14 percent would definitely buy or lease an EV today. That is more than triple the number from 2020. And this strong interest crosses racial and ethnic groups where people see EVs as saving money on fuel and maintenance costs. And they are right.

Our own analysis shows that owning and maintaining an EV saves \$6,000 to \$10,000 over the life of the vehicle, compared to a comparable gas car. But there are still barriers standing in their way, including costs associated with buying an EV.

The IRA helps tackle this barrier through purchase incentives for both new and used EVs. The expanded tax credits in the IRA directly address the upfront cost problem, encouraging every car company to offer more EV models and giving consumers expanded clean vehicle options for decades to come.

Just as important is the used EV tax credit that will directly help the overwhelming majority of consumers who buy their cars used. This credit will be especially helpful for low-income communities which are disproportionately impacted by air pollution and climate change, and are often frozen out of the new car market due in large part to redlining and other discriminatory policies.

Having EV tax credits go directly to dealerships will ensure greater accessibility to the tax credit for low-income consumers who did not have the tax liability to benefit from the entirety of the tax credit themselves.

EVs are a fantastic money-saving technology, but our economy will also need other ways to cut greenhouse gas emissions from vehicles. For example, two-thirds of Americans would fill up their tanks on liquid low carbon fuels made from sustainable biomass, for example, if they did not have to shift the kind of vehicle they used and it did not have an additional cost. And 62 percent would be likely to choose a flight that ran on a similar fuel, assuming there is no cost premium.

The vehicle purchase incentives in the IRA for fuel cell vehicles and tax credits for sustainable aviation fuel will go a long way to ensure that consumers have options for low carbon fuel vehicles, as will the research funds for analysis of the impacts of fuel on the environment and public health.

Of course, the IRA also delivers more money-saving benefits for American homes, especially for low-income households which spend a larger share of their income on energy costs.

In summary, cleaner technologies save consumers money on fuel and electricity and maintenance costs. However, upfront purchase costs prevent consumers from buying and owning these technologies. We applaud the Inflation Reduction Act as the incentives therein will help to ensure that consumers can save money and cut down on the many costs tied to air pollution and greenhouse gas emissions. And this is particularly important for low-income consumers who have too often been left out of the transition to cleaner and more money-saving technologies.

Thank you for the opportunity to speak.  
[The statement of Dr. Warren follows:]

**Testimony of Quinta Warren, Ph.D.**  
**Associate Director, Sustainability Policy**  
**Consumer Reports**

**Before the United States House of Representatives**  
**Select Committee on the Climate Crisis**

**Hearing on “A Big Climate Deal: Lowering Costs, Creating Jobs, and Reducing Pollution with the Inflation Reduction Act”**

**September 29, 2022**

Thank you Chair Castor, Ranking Member Graves and members of the Select Committee on the Climate Crisis for inviting Consumer Reports (CR) to testify on the benefits that the Inflation Reduction Act (IRA) will bring to consumers across the country.

The IRA is a landmark piece of climate legislation that will bring cleaner, cost-saving technologies to all consumers. This legislation has the potential to give more Americans access to clean vehicles and more energy efficient homes.

This transition to cleaner technologies is a win-win: it will help consumers save money on fuel and electricity costs while also reducing consumer and public spending on healthcare tied to air pollution, particularly in overburdened communities.

***Introduction***

CR is an independent, nonprofit and nonpartisan organization that works with consumers to create a fair and just marketplace. Known for its rigorous product testing and ratings, CR also advocates for laws and corporate practices that are beneficial for consumers. We survey millions of Americans every year, report extensively on the challenges and opportunities facing today’s consumers, and provide ad-free content and tools to 6 million members across the United States. CR is dedicated to amplifying the voices of consumers to promote safety, digital rights, financial fairness, and sustainability.

Surveys and analyses conducted by CR show that consumers care about the environment and want access to cleaner and less polluting technology, but there are barriers such as cost preventing them from purchasing and owning these technologies.

Air pollution and greenhouse gas (GHG) emissions have adverse impacts on the health of consumers, the environment, and climate. These impacts can show up in various ways that will increase costs for consumers, not only for fuel and energy use, but for other consumer costs, such as healthcare and insurance. Providing consumers with cleaner and more energy efficient technologies can dramatically lower these costs, and presents them with the ability to make purchasing decisions that save them money. GHG emissions are contributing to extreme weather events such as extreme heat, flooding, and drought. Criteria pollutants such as ozone and particulate matter cause health issues such as respiratory diseases, lung cancer, pre-term births, and neurological damage.<sup>1,2</sup> Introducing EVs and other low carbon fuel vehi-

<sup>1</sup>Air Pollution: Everything You Need to Know, NRDC, 2021, <https://www.nrdc.org/stories/air-pollution-everything-you-need-know>

<sup>2</sup>Traffic-Related Air Pollution: A Critical Review of the Literature on Emissions, Exposure, and Health Effects, Health Effects Institute, 2010, <https://www.healtheffects.org/publication/traffic-related-air-pollution-critical-review-literature-emissions-exposure-and-health>

cles into California’s market has saved the state \$1.84 million in public health impacts, and helped to avoid more than 200 premature deaths due to reduced toxic air pollution from vehicles.<sup>3</sup> These issues affect overburdened communities such as communities of color most due to redlining and other discriminatory policies.

In order to reduce emissions, we must bring clean technologies, such as electric vehicles (EV) and energy efficient appliances, to market at a scale that can help establish their widespread adoption. By increasing the scale at which these technologies are available in the marketplace, we will see greater options for consumers, driving competition, reducing costs, and increasing consumer savings. By giving consumers incentives to adopt newer, cleaner, cost-saving technologies, we empower them to make decisions that will benefit their wallets and support a lifestyle with fewer emissions.

### 1. Consumers and the Environment

Consumers are making an active shift to support and adopt clean technologies.<sup>4</sup> According to a 2022 nationally representative CR survey on consumer attitudes regarding the transportation industry’s impact on the environment and consumers’ willingness to make environmentally-friendly decisions, over 70% of consumers in the United States find the issue of climate change to be an “important” or “very important” issue, and 61% of Americans say impact on the environment is important when considering buying or leasing a vehicle.<sup>5</sup>

Similarly, a 2022 nationally representative CR survey of more than two thousand Americans shows that 55% of Americans who purchased large appliances in the last five years say that environmental concerns were “extremely” or “very” important to them when they purchased those appliances.<sup>6</sup>

The incentives in the IRA will help to ensure that all consumers gain the cost-saving benefits of EVs and energy efficient appliances, especially low-income and overburdened communities, which have historically borne the brunt of air pollution and GHG emissions.

### Provisions for Low and Zero-Emission Vehicles

Transportation accounts for 27% of total U.S. GHG emissions, the largest of any sector.<sup>7</sup> Transitioning to EVs and other Zero-Emission Vehicles (ZEV) is an obvious strategy to achieve significant emissions reductions in this high-emitting sector.

#### 1. Battery Electric Vehicles

In January and February 2022, CR conducted a nationally representative survey on consumer perceptions and awareness of battery electric vehicles (BEV) and low carbon fuels.<sup>8</sup> The survey found that 71% of Americans express some level of interest in buying or leasing an electric-only vehicle. Within that 71%, we found that 14% of American drivers would “definitely” buy or lease an EV today. That is up from just 4% who said the same thing in a 2020 CR nationally representative sur-

<sup>3</sup> California’s Low Carbon Fuel Standard, California Delivers, 2018, <http://www.cadelivers.org/low-carbon-fuel-standard/#:-:text=California%27s%20Low%20Carbon%20Fuel%20Standard&text=In%202018%2C%20the%20California%20Air,groundbreaking%20climate%20policy%2C%20SB%2032>

<sup>4</sup> Shifting sands: How consumer behaviour is embracing sustainability, Deloitte <https://www2.deloitte.com/ch/en/pages/consumer-business/articles/shifting-sands-sustainable-consumer.html>

<sup>5</sup> January/February 2022 Consumer Reports nationally representative Battery Electric Vehicle and Low Carbon Fuels Survey of 8,027 US adults. View topline results [here](https://article.images.consumerreports.org/prod/content/dam/surveys/Consumer_Reports_Breakthrough_Energy_18_February_2022) ([https://article.images.consumerreports.org/prod/content/dam/surveys/Consumer\\_Reports\\_Breakthrough\\_Energy\\_18\\_February\\_2022](https://article.images.consumerreports.org/prod/content/dam/surveys/Consumer_Reports_Breakthrough_Energy_18_February_2022)) and full report [here](https://article.images.consumerreports.org/image/upload/v1657127210/prod/content/dam/CRO-Images-2022/Cars/07July/2022_Consumer_Reports_BEV_and_LCF_Survey_Report.pdf) ([https://article.images.consumerreports.org/image/upload/v1657127210/prod/content/dam/CRO-Images-2022/Cars/07July/2022\\_Consumer\\_Reports\\_BEV\\_and\\_LCF\\_Survey\\_Report.pdf](https://article.images.consumerreports.org/image/upload/v1657127210/prod/content/dam/CRO-Images-2022/Cars/07July/2022_Consumer_Reports_BEV_and_LCF_Survey_Report.pdf)).

<sup>6</sup> March 2022 Consumer Reports nationally representative Home Sustainability Survey of 2,240 US adults. View topline results [here](https://article.images.consumerreports.org/prod/content/dam/surveys/Consumer_Reports_Home_Sustainability_March_2022) ([https://article.images.consumerreports.org/prod/content/dam/surveys/Consumer\\_Reports\\_Home\\_Sustainability\\_March\\_2022](https://article.images.consumerreports.org/prod/content/dam/surveys/Consumer_Reports_Home_Sustainability_March_2022)).

<sup>7</sup> Sources of Greenhouse Gas Emissions, EPA <https://www.epa.gov/ghgemissions/sources-greenhouse-gas-emissions>

<sup>8</sup> January/February 2022 Consumer Reports nationally representative Battery Electric Vehicle and Low Carbon Fuels Survey of 8,027 US adults. View topline results [here](https://article.images.consumerreports.org/prod/content/dam/surveys/Consumer_Reports_Breakthrough_Energy_18_February_2022) ([https://article.images.consumerreports.org/prod/content/dam/surveys/Consumer\\_Reports\\_Breakthrough\\_Energy\\_18\\_February\\_2022](https://article.images.consumerreports.org/prod/content/dam/surveys/Consumer_Reports_Breakthrough_Energy_18_February_2022)) and full report [here](https://article.images.consumerreports.org/image/upload/v1657127210/prod/content/dam/CRO-Images-2022/Cars/07July/2022_Consumer_Reports_BEV_and_LCF_Survey_Report.pdf) ([https://article.images.consumerreports.org/image/upload/v1657127210/prod/content/dam/CRO-Images-2022/Cars/07July/2022\\_Consumer\\_Reports\\_BEV\\_and\\_LCF\\_Survey\\_Report.pdf](https://article.images.consumerreports.org/image/upload/v1657127210/prod/content/dam/CRO-Images-2022/Cars/07July/2022_Consumer_Reports_BEV_and_LCF_Survey_Report.pdf)).

vey of 3,392 licensed drivers.<sup>9</sup> The 2022 survey also showed that other racial and ethnic groups showed a similar level of interest in EVs as whites.<sup>10</sup>

When we asked consumers why they would consider purchasing an EV, the most common answers were saving money on fuel, lower lifetime costs, and lower maintenance costs. When we asked consumers who did not say they would “definitely” buy an EV what would prevent them from getting an EV, among the top 3 barriers was the cost associated with buying, owning and maintaining an EV.<sup>11</sup> Our vehicle Total Cost of Ownership analysis shows that owning and maintaining an EV is cheaper than owning and maintaining a comparable gasoline-powered vehicle, as EV owners save \$6,000 to \$10,000 over the life of the vehicle.<sup>12</sup>

The purchase incentives in the Inflation Reduction Act can help offset the cost of purchasing EVs. The removal of the 200,000-unit lifetime EV production cap will give more consumers the ability to access EV incentives for the next decade, and encourages manufacturers to offer more EV models without being locked out of the incentives. The inclusion of income caps and MSRP caps for vehicles will ensure that these investments are going to the hands of consumers who will benefit from them the most.

The used EV tax credit will help to ensure a robust secondary EV market as 70% of consumers buy their cars on the used car market. This credit will be especially helpful for low income communities, which traditionally rely on the secondary market for their vehicle purchases. The tax credits and investments into commercial EVs will help improve air quality in these communities. Provisions in the IRA which allow EV tax credits to go directly to dealerships will ensure greater benefit from the tax credit for low-income consumers who do not have the tax liability to benefit from the entirety of the tax credit. Historically, since these tax credits are non-refundable, consumers who do not have a tax liability of \$7,500 or above would only receive the tax credit to match their liability. This shift will enable consumers to see immediate savings from the incentive up to the maximum tax credit for their vehicle of choice.

Low-income and disadvantaged communities bear the brunt of the emissions associated with e-commerce. A recent CR investigation showed the extent of that impact in underserved communities who live near ports, last mile shipping facilities, and highly utilized transportation corridors, highlighting the need for investments to reduce emissions in all facets of the transportation sector. The IRA proposes to do this, including through investments in zero-emission heavy duty vehicles.<sup>13</sup>

## 2. Low Carbon Fuels

Low carbon fuels (LCFs) are transportation fuels that produce lower GHG emissions than traditional fossil fuels. Our BEV/LCF survey found that 67% of American consumers would use drop-in LCFs in their vehicle if the cost per gallon was the same as the cost for traditional fuels. Sixty-two percent (62%) say they are “very likely” or “somewhat likely” to choose a flight on a plane that uses Sustainable Aviation Fuels, if the cost of the ticket was the same as flying on a plane that uses traditional jet fuel.<sup>14</sup>

<sup>9</sup>July/August 2020 Consumer Reports nationally representative Fuel Economy and Electric Vehicles Survey; Electric Vehicles section showed to 3,392 US adults with valid driver’s licenses. View topline results *here* ([https://article.images.consumerreports.org/prod/content/dam/surveys/Consumer\\_Reports\\_Electric\\_Vehicles\\_Fuel\\_Economy\\_National\\_August\\_2020](https://article.images.consumerreports.org/prod/content/dam/surveys/Consumer_Reports_Electric_Vehicles_Fuel_Economy_National_August_2020)) and full report *here* (<https://advocacy.consumerreports.org/wp-content/uploads/2020/12/CR-National-EV-Survey-December-2020-2.pdf>).

<sup>10</sup>Across Racial Demographics, Interest in Purchasing Electric Vehicles is Considerable, but Systemic Barriers Persist, Consumer Reports, EVNoire, GreenLatinos, and the Union of Concerned Scientists, 2022, [https://advocacy.consumerreports.org/press\\_release/across-racial-demographics-interest-in-purchasing-electric-vehicles-is-considerable-but-systemic-barriers-persist/](https://advocacy.consumerreports.org/press_release/across-racial-demographics-interest-in-purchasing-electric-vehicles-is-considerable-but-systemic-barriers-persist/)

<sup>11</sup>January/February 2022 Consumer Reports nationally representative Battery Electric Vehicle and Low Carbon Fuels Survey of 8,027 US adults. View topline results *here* ([https://article.images.consumerreports.org/prod/content/dam/surveys/Consumer\\_Reports\\_Breakthrough\\_Energy\\_18\\_February\\_2022](https://article.images.consumerreports.org/prod/content/dam/surveys/Consumer_Reports_Breakthrough_Energy_18_February_2022)) and full report *here* ([https://article.images.consumerreports.org/image/upload/v1657127210/prod/content/dam/CRO-Images-2022/Cars/07July/2022\\_Consumer\\_Reports\\_BEV\\_and\\_LCF\\_Survey\\_Report.pdf](https://article.images.consumerreports.org/image/upload/v1657127210/prod/content/dam/CRO-Images-2022/Cars/07July/2022_Consumer_Reports_BEV_and_LCF_Survey_Report.pdf)).

<sup>12</sup>New analysis from CR finds that the most popular electric vehicles cost less to own than the best-selling gas-powered vehicles in their class, Consumer Reports, 2020, [https://advocacy.consumerreports.org/press\\_release/new-analysis-from-cr-finds-that-the-most-popular-electric-vehicles-cost-less-to-own-than-the-best-selling-gas-powered-vehicles-in-their-class/](https://advocacy.consumerreports.org/press_release/new-analysis-from-cr-finds-that-the-most-popular-electric-vehicles-cost-less-to-own-than-the-best-selling-gas-powered-vehicles-in-their-class/)

<sup>13</sup>When Amazon Expands, These Communities Pay the Price, Consumer Reports, 2021, <https://www.consumerreports.org/corporate-accountability/when-amazon-expands-these-communities-pay-the-price-a2554249208/>

<sup>14</sup>January/February 2022 Consumer Reports nationally representative Battery Electric Vehicle and Low Carbon Fuels Survey of 8,027 US adults. View topline results *here*

The vehicle purchase incentives in the IRA for fuel cell vehicles, the clean hydrogen credit, tax credits for SAF, and research funds for SAF and other biofuels will help increase consumer options for low carbon fuel vehicles beyond EVs.

### *3. Reducing Emissions Beyond Passenger Vehicles*

The emphasis that the IRA places on adopting electric technology is commendable and critical to decarbonizing our country's overall footprint. We support these investments to ensure that the United States is on a path to zero-emissions, and also acknowledge the IRA's investments in other LCFs that will support the decarbonization of other transportation sub-sectors that are harder to electrify. The emissions associated with the shipment of goods from warehouses to doorsteps, from aviation industries, and from maritime industries, among others, can be reduced with investments in LCFs.

The IRA investments into the development of clean hydrogen are especially important to shifting to the production of cleaner fuels, and will support the development of a market for more fuel-cell technology vehicle and infrastructure options. The investments made into Sustainable Aviation Fuels (SAF) will support critical transformation in one of the more difficult transportation sub-sectors to decarbonize, and consumers are prepared to support this technology.

CR appreciates the IRA funding allocation that will fund research into the impacts of biofuels on the environment and on public health. These findings will better serve advancements in understanding the impacts of different fuel technologies on consumers and the impacts on overburdened communities.

### ***Provisions for Home Energy Efficiency and Electrification Upgrades***

The incentives provided by the IRA will reduce purchasing costs for cleaner technology, making buying decisions easier for the consumer who is looking to transition but is concerned with upfront costs. One of our nationally representative surveys showed that cost still proved to be the top factor that people who purchased a large appliance in the past five years considered in their decision to purchase: when asked what the top three most important factors were to them when they made the purchase, 73% selected price—almost three times as many as selected impact on the environment (24%).<sup>15</sup>

The IRA takes a holistic approach to providing consumers with resources to bring cleaner, cost-saving technology throughout their homes. From solar tax credits to incentives for the installation of electric appliances, this legislation can transform the American household as we know it, saving consumers money on energy costs, and improving indoor air quality. More energy efficient appliances reduce energy use, bringing cost benefits to consumers that can also be helpful in easing energy burdens. This is especially critical for low-income and other disadvantaged households which spend a disproportionate amount of their income on energy bills.<sup>16</sup>

Electric appliances such as heat pumps and electric ranges bring considerable benefits to households in both cost savings and a reduction in both indoor pollution and GHG emissions. For instance, studies show that gas ranges not only release significant amounts of unburned methane and NO<sub>x</sub> while in use, more than 75% of leakage of unburned methane occurs when a gas-fueled stove is turned off.<sup>17</sup> For a consumer concerned with these emissions in their home and looking to make the switch away from the gas-fueled stove, the IRA can provide considerable incentives to reduce the upfront cost of a new electric range.

As consumers consider transitions to cleaner technology in their home to reduce their energy use, there are considerable challenges preventing them from making the switch. For consumers living in older homes, they may need to undergo a process of retrofitting their homes and electrical panels to better accommodate new elec-

([https://article.images.consumerreports.org/prod/content/dam/surveys/Consumer\\_Reports\\_Breakthrough\\_Energy\\_18\\_February\\_2022](https://article.images.consumerreports.org/prod/content/dam/surveys/Consumer_Reports_Breakthrough_Energy_18_February_2022)) and full report [here](#)

([https://article.images.consumerreports.org/image/upload/v1657127210/prod/content/dam/CRO-Images-2022/Cars/07July/2022\\_Consumer\\_Reports\\_BEV\\_and\\_LCF\\_Survey\\_Report.pdf](https://article.images.consumerreports.org/image/upload/v1657127210/prod/content/dam/CRO-Images-2022/Cars/07July/2022_Consumer_Reports_BEV_and_LCF_Survey_Report.pdf)).

<sup>15</sup> March 2022 Consumer Reports nationally representative Home Sustainability Survey of 2,240 US adults. View topline results [here](#)

([https://article.images.consumerreports.org/prod/content/dam/surveys/Consumer\\_Reports\\_Home\\_Sustainability\\_March\\_2022](https://article.images.consumerreports.org/prod/content/dam/surveys/Consumer_Reports_Home_Sustainability_March_2022)).

<sup>16</sup> Low-Income Households, Communities of Color Face High “Energy Burden” Entering Recession, ACEEE, 2020, <https://www.aceee.org/press-release/2020/09/report-low-income-households-communities-color-face-high-energy-burden>

<sup>17</sup> Methane and NO<sub>x</sub> Emissions from Natural Gas Stoves, Cooktops, and Ovens in Residential Homes, Lebel et al., *Environ. Sci. Technol.* 2022, 56, 4, 2529–2539, <https://pubs.acs.org/doi/10.1021/acs.est.1c04707>

tric appliances, heat pump systems, or even solar panels.<sup>18</sup> For those looking to make changes to their home to improve their energy efficiency and save on energy costs, they will likely need to consider weatherizing upgrades as well. For these reasons, we applaud the IRA language that will allow for a portion of these incentives to be used to support installation costs, weatherization upgrades, and electrical panel upgrades.

These critical provisions will assist in breaking down cost barriers for consumers looking to save money, make their homes more energy efficient, and reduce emissions tied to home energy use.

### **Conclusion**

Cleaner technologies save consumers money on fuel and electricity, and maintenance costs. However, upfront purchase costs prevent many consumers from buying and owning these technologies.

The incentives in the Inflation Reduction Act will go a long way towards helping consumers save money on fuel and electricity costs while also reducing consumer and public spending on healthcare tied to air pollution, particularly in overburdened communities. In order to support the expansion of the clean energy market in a way that reduces costs and increases consumer savings, we must continue to support investments like the IRA in addition to strong GHG and smog standards that encourage manufacturers to increase the supply of cleaner technologies. Strong standards and complementary incentives to adopt clean technologies are particularly important for low income consumers who would otherwise not be able to participate in the transition to cleaner technologies.

Ms. CASTOR. Thank you very much.

Next, Mr. Rossetti, you are up. You are recognized for 5 minutes to present your testimony. Welcome.

### **STATEMENT OF PHILIP ROSSETTI**

Mr. ROSSETTI. Thank you, Chairwoman Castor, Ranking Member Graves, and Honorable members of the committee, for inviting me to testify on the Inflation Reduction Act today.

I want to cover three key points about the Inflation Reduction Act. One is the overall potential environmental impact of the legislation; two are the barriers to actually achieving that outcome; and three is the overall economic impact as the incidence of subsidies are going to have to be paid for by taxes elsewhere in the economy and what effect this might have.

So overall on the environmental impact, at R Street, we took a look at the total estimated costs of the IRA and just took an honest value, the CBO's estimate, and said, okay, you know, if this is true, how much clean energy can this buy, and compare that to the Energy Information Administration's projected baseline.

And looking at that, the sheer volume subsidy, which is hundreds of billions of dollars, does result in an increase in purchases, and we would expect about a 37 percent increase in clean electricity production over the baseline and some modest effects in the transportation sector, with overall a potential about 12 percent emission reduction relative to 2005 levels, which is very consistent with the Rhodium Group that estimate about 8 to 12 percent in other studies.

The caveat to this, though, is the low cost of renewables and high investment potential already means that most of this technology would have already been deployed, irrespective of the IRA.

<sup>18</sup>Hot, Cold and Clean: Policy Solutions to Promote Equitable and Affordable Adoption of Heat Pump Retrofits in Existing Buildings, Berkeley Law, UCLA Law, 2022  
<https://law.ucla.edu/sites/default/files/PDFs/Publications/Emmett%20Institute/Hot-Cold-Clean-Heat-Pump-Retrofit-Report-1.pdf>



So we estimate about 67 percent of the clean electricity subsidies will go to clean energy production that would have occurred even absent the IRA. Similarly, with the EV tax credits, we do see a huge increase in the—or excuse me—we see a large amount of the subsidies go to EVs that probably would have been deployed anyways. The EIA expects that close to 6 million new EVs being deployed and the tax credits support about 1 million new EVs.

In this environment, we expect that the additionality of these subsidies and the potential environmental benefit is mitigated by the fact that most of the money would go to efforts that would already occur without the IRA.

In terms of actually getting to that potential 12 percent emission reduction, it is largely locked behind regulatory factors. Increasingly, we are hearing from the clean energy space that they are facing regulatory barriers rather than cost barriers to new deployment. So there is close to a thousand gigawatts of low carbon electricity in the interconnection queues in the United States right now. The interconnection queue timelines have gone from about 2 years to close to 4 years, and we hear from some developers that can even be about 8 years in some areas.

The transmission adequacy is not really good. The transmission congestion costs on many of the interconnections are increasing, you know, sometimes by multiple times.

We also have increasing curtailment in the renewable space. So a lot of areas are already saturated with new renewables, and deploying more renewables means that there is a diminishing return.

So without that increased transmission and availability to actually get new clean energy to where it needs to go, you are not going to get environmental benefit. And the REPEAT Project, which is probably one of the most optimistic estimates of the IRA's effects, that estimated that about 80 percent of their emission potential is locked behind transmission growth.

So actually getting to this environmental outcome requires structural changes in regulatory policy. Especially on the permitting, it has been very interesting. At R Street we looked at the DOE and BLM's permitting for clean energy, and we note that about 42 percent of DOE's projects were related to clean energy, conservation, transmission. Only 15 percent were fossil fuel. Similar ratios in BLM.

And just looking at the Federal Permitting Dashboard today, 65 percent of the energy projects are renewable projects. So addressing these issues are key to clean energy growth and are largely absent from the IRA.

Additionally, it is important to consider the full economic impacts of any legislation. Every dollar that is going to be spent on subsidy by the U.S. Government is going to result in a dollar of tax somewhere else. So who is going to pay that tax is largely going to determine the overall economic impact of any legislation.

So when it comes to the IRA, we already know that a huge portion of it is going to be from corporate taxes. We also have to ask, okay, who is going to be paying those taxes? The CBO notes that higher corporate rates are going to overall reduce the incentives to invest in the United States are going to have negative economic effects.

The Tax Foundation similarly, in looking at the IRA, estimates about a 0.2 percent lower GDP in the long run and lower long run incomes across the board for Americans.

There are some positive effects of the IRA, namely the deficit reduction, and these can offset, to a certain degree, the negative impacts of the tax increases. But overall when we look at the studies, it generally shows about a wash.

So, with that, you know, it is important to consider that—what are we getting, how much is it going to cost, and who is going to pay for it.

And I look forward to your questions. Thank you.  
[The statement of Mr. Rossetti follows:]

**Submitted Statement of Philip Rossetti  
Senior Fellow, Energy and Environment  
R Street Institute**

**Before the Select Committee on the Climate Crisis  
United States House of Representatives**

**Hearing on “A Big Climate Deal: Lowering Costs, Creating Jobs, and  
Reducing Pollution with the Inflation Reduction Act”**

**September 29, 2022**

Chairwoman Castor, Ranking Member Graves and honorable members of the Committee,

Thank you for inviting me to testify on the policy effects of the Inflation Reduction Act (IRA). My name is Philip Rossetti, and I am a senior fellow for Energy and Environment at the R Street Institute. The R Street Institute is a nonpartisan, non-profit think tank that emphasizes market-based solutions to policy challenges in the United States. My work at R Street specifically focuses on providing policy analysis and education around climate change, energy policy, energy security and other environmental challenges facing the nation.

In my testimony on the IRA, I would like to make three key points:

1. While we expect the IRA could have a substantial impact on U.S. greenhouse gas (GHG) emissions assuming minimal regulatory barriers to new clean energy deployment, the already low costs of renewable energy means that most of the IRA's subsidies will go to clean energy that would have been produced anyway.
2. Our own estimates of emission impact from the IRA, as well as others, are likely overstating the environmental benefits of additional subsidy due to the challenges of modeling permitting and regulatory constraints to clean energy growth. Increasingly, research is showing these factors play a greater role in clean energy growth than cost competitiveness with fossil fuels.
3. While government spending stimulates economic activity in subsidized sectors, that spending is balanced by higher taxes elsewhere in the economy. The expected overall economic effects of the IRA are slightly negative, and the legislation is not expected to have any improving effect on inflation. While we praise the deficit-reducing outcome of the legislation, lawmakers should appreciate that the effect of the legislation is to transfer wealth from taxed Americans to subsidized energy companies or other subsidy claimants.

**Effects of the Inflation Reduction Act on U.S. Greenhouse Gas Emissions**

In our own analyses, we compared the estimated subsidy expenditures from the Congressional Budget Office (CBO) with the projected clean energy generation and alternative fuel vehicle deployments projected by the Energy Information Administration (EIA).<sup>1</sup> Essentially, we took at face value that the CBO's estimated level of subsidy is correct and modeled a projection of clean energy growth assuming this as representative of the volume of clean energy and alternative fuel vehicle deploy-

<sup>1</sup>Philip Rossetti, “Potential Effects of the Inflation Reduction Act on Greenhouse Gas Emissions,” *R Street Institute*, Sept. 27, 2022. <https://www.rstreet.org/2022/09/27/potential-effects-of-the-inflation-reduction-act-on-greenhouse-gas-emissions>.

ments through 2031. We then compared this to the projected levels in the EIA's 2022 Annual Energy Outlook (AEO) to estimate the effect of the IRA.

We caveat these assessments with the fact that such a methodology, which has been similarly employed in other modeling exercises of the IRA, assumes that there are minimal barriers to the market entry of new resources aside from cost, and further in my testimony I will explain the mounting evidence against such an assumption. As such, our assessment should be considered highly optimistic as a scenario that assumes minimal regulatory barriers to clean energy and infrastructure growth.

We found that the IRA, at estimated subsidy volumes, could support a 37 percent increase in clean electricity generation by the year 2031, and transportation-related carbon dioxide emissions could be 5 percent lower than the reference case. Overall, energy-related carbon dioxide emissions in the United States after the IRA could be up to 35 percent below 2005 levels by 2030, whereas the reference case projects 23 percent below 2005 levels by 2030, for an effect of the IRA of reducing energy-related carbon dioxide emissions by up to 12 percent relative to 2005 levels. This estimate is consistent with similar analyses, such as that of the Rhodium Group which estimated the IRA to bring emissions down an additional 8–12 percent below 2005 levels by 2030.<sup>2</sup>

The seemingly large effect of the IRA is mostly attributable to the sheer volume of subsidy that is directed at clean energy, and especially at the electric power sector. The IRA dedicates approximately \$391 billion of subsidy toward climate and energy related priorities.<sup>3</sup> R Street's estimate of the IRA's impact on electricity focused on \$179 billion of subsidy. With such significant spending, there is certain to be an effect. However, we feel it is important to note that we found that 67 percent of new clean electricity generation that would be eligible for subsidy under the IRA would have been produced even if the IRA had never been signed into law. While the large volume of subsidy will incentivize some new market entry, most of it will reward clean energy investors for doing what they would have done anyway.

In the transportation sector, we note that the additionality of the IRA's subsidies is even more diminished. The IRA is estimated by the CBO to expend \$7.5 billion on tax credits for new alternative fuel vehicles. At a tax credit value of \$7,500 per vehicle, the IRA would support the market entry of one million new clean vehicles through 2031. However, the EIA projects that through 2031 there will be 9 million new alternative fuel vehicle sales, including 5.8 million electric vehicle (EV) sales.<sup>4</sup> The large difference between subsidy-supported vehicle sales and projected vehicle sales indicates that this particular government expenditure will have minimal environmental benefit.

The IRA does deliver some improvements to the design of clean energy subsidies though. The IRA's eventual transition to technology-neutral production and investment tax credits and clean fuel tax credits that are awarded based on emission ratios will help to mitigate the technological favoritism that has plagued clean energy subsidies for decades. Additionally, the income thresholds for vehicle subsidies will mitigate their regressive nature in the tax code. Overall, the IRA's changes that enable the market entry of new clean energy technologies on an equal footing to incumbent ones that may already be receiving subsidy is praiseworthy.

But it is important to caveat this acknowledgment with a reiteration that the large volume of subsidies directed toward environmental benefits that are projected to be attained anyway (clean electricity, EVs, etc.) yield no additional emission mitigation despite their burden to taxpayers. Continued subsidy of technologically mature energy sources, especially ones that are already cost-competitive with incumbents, functions as a wealth transfer from taxpayers to energy investors.

It should also be noted that the estimates referenced above are based on the CBO's expected changes to revenue from the IRA. If alternative claims that the IRA has a greater emission benefit than our estimate are true, then one should also expect that there will be more claimants to the IRA's subsidy and thus the overall cost of the bill will increase and the deficit reducing effects of the legislation would

<sup>2</sup>John Larsen et al., "A Turning Point for US Climate Progress: Assessing the Climate and Clean Energy Provisions in the Inflation Reduction Act," Rhodium Group, Aug. 12, 2022. <https://rhg.com/research/climate-clean-energy-inflation-reduction-act>.

<sup>3</sup>"CBO Scores IRA with \$238 Billion of Deficit Reduction," Committee for a Responsible Federal Budget, Sept. 7, 2022. <https://www.crfb.org/blogs/cbo-scores-ira-238-billion-deficit-reduction>.

<sup>4</sup>*Annual Energy Outlook 2022*, U.S. Energy Information Administration, March 3, 2022, Table 38. <https://www.eia.gov/outlooks/aeo/data/browser/#/?id=48-AEO2022&region=1-0&cases=ref2022&start=2020&end=2050&f=A&linechart=-----ref2022-d011222a.59-48-AEO2022.1-0-ref2022-d011222a.62-48-AEO2022.1-0-ref2022-d011222a.63-48-AEO2022.1-0-ref2022-d011222a.67-48-AEO2022.1-0-ref2022-d011222a.80-48-AEO2022.1-0&map=ref2022-d011222a.5-48-AEO2022.1-0&ctype=linechart&sourcekey=0>.

be reduced, worsening its net-economic outcomes. Similarly, if—as can be contested—our claims are too optimistic, then there would be fewer subsidy claimants and the costs of the legislation would be reduced, which would improve its deficit-reducing effects and overall economic impacts.

### **Regulatory Barriers to Clean Energy and Other Factors Mitigate Potential Benefits**

A large portion of the IRA's subsidies focus on clean energy production, especially electricity. To realize these benefits, investors must be able to readily construct new facilities, and in the case of electricity interconnect them with the electric power grid. However, increasingly, research is showing that regulatory barriers are playing a larger factor in clean energy deployment than capital costs, which are not readily addressed by subsidies.

According to Lawrence Berkely National Laboratory (LBL), by the end of 2021 there were over 1,000 gigawatts (GW) of energy generation capacity in interconnection queues, and 427 GW of storage capacity.<sup>5</sup> Of this, 930 GW was zero-carbon with solar (676 GW) being the largest share.<sup>6</sup> LBL noted that fossil generation seeking grid interconnection is on the decline, with 75 GW of natural gas and less than 1 GW of coal in interconnection queues. For comparison, the entire existing U.S. electric grid has a capacity of 1,144 GW.<sup>7</sup> LBL also noted that time spent in queues for projects has increased from an average of 2.1 years to 3.7 years.<sup>8</sup> The Department of Energy (DOE) notes that the IRA's additional subsidy for clean energy deployment will exacerbate delays.<sup>9</sup>

Prior to the IRA, the largest wholesale electricity market operator, PJM, planned to delay interconnection reviews for applications filed in 2021 until 2026.<sup>10</sup> The other major grid operators face huge backlogs as well, and renewables developers report project development timelines ballooning to eight years.<sup>11</sup> This casts serious doubt on the additional deployment effects the IRA could have under current conditions.

Aside from grid interconnection, conventional permitting issues are increasingly playing a larger role for clean energy-related projects than they are for fossil ones. Last year, an R Street report noted that the median timelines for environmental impact statements under the National Environmental Policy Act (NEPA) have increased from 2.3 years in 2010 to 3.5 years by 2019 and peaked at 4.7 years in 2016.<sup>12</sup> R Street also noted last year that for projects requiring either an environmental assessment or an environmental impact statement under the DOE, 42 percent were related to clean energy, conservation, or transmission and 15 percent were related to fossil fuel.<sup>13</sup> Similarly, 24 percent of the Bureau of Land Management's (BLM) active environmental impact statements were for renewable energy and only 13 percent were for fossil fuels.<sup>14</sup> Additionally, BLM data shows that only 0.3 percent of oil and gas projects required an environmental impact statement, but 12 percent of renewable projects did.<sup>15</sup> More recently, an R Street assessment of the projects listed in the Federal Permitting Dashboard noted that 65 percent of the energy-related projects were for renewable energy and 16 percent were for electricity

<sup>5</sup>“Queued Up: Characteristics of Power Plants Seeking Transmission Interconnection,” Lawrence Berkely National Laboratory, April 2022. <https://emp.lbl.gov/queues>.

<sup>6</sup>Ibid.

<sup>7</sup>“Electricity Explained: Electricity generation, capacity, and sales in the United States,” U.S. Energy Information Administration, last updated July 15, 2022. <https://www.eia.gov/energyexplained/electricity/electricity-in-the-us-generation-capacity-and-sales.php>.

<sup>8</sup>“Queued Up.” [https://emp.lbl.gov/sites/default/files/queued\\_up\\_2021\\_04-13-2022.pdf](https://emp.lbl.gov/sites/default/files/queued_up_2021_04-13-2022.pdf).

<sup>9</sup>“DOE Launches New Initiative to Improve Clean Energy Interconnection,” Department of Energy, Aug. 15, 2022. <https://www.energy.gov/eere/wind/articles/doe-launches-new-initiative-improve-clean-energy-interconnection>.

<sup>10</sup>Ethan Howland, “PJM proposes ‘first-ready, first-served’ interconnection review process, steps to clear backlog,” *UtilityDive*, June 15, 2022. <https://www.utilitydive.com/news/pjm-interconnection-request-ferc-proposal/625544/#:~:text=Dive%20Brief%3A,the%20Federal%20Energy%20Regulatory%20Commission>.

<sup>11</sup>Emma Penrod, “Why the energy transition broke the U.S. interconnection system,” *UtilityDive*, Aug. 22, 2022. <https://www.utilitydive.com/news/energy-transition-interconnection-reform-ferc-qcells/628822/>.

<sup>12</sup>Philip Rossetti, “Addressing NEPA-Related Infrastructure Delays,” R Street Institute, July, 2021. [https://www.rstreet.org/wp-content/uploads/2021/07/FINAL\\_RSTREET234.pdf](https://www.rstreet.org/wp-content/uploads/2021/07/FINAL_RSTREET234.pdf).

<sup>13</sup>Ibid.

<sup>14</sup>Philip Rossetti, “The Environmental Case for Improving NEPA,” R Street Institute, July 7, 2021. <https://www.rstreet.org/2021/07/07/the-environmental-case-for-improving-nepa>.

<sup>15</sup>Ibid.

transmission projects which are needed for clean energy growth, while only 19 percent of projects were fossil fuel related.<sup>16</sup>

Overall, the data increasingly shows that renewable energy projects get caught up in red tape even more frequently than fossil fuel ones. There is increasing recognition that interconnection and permitting reform is needed for clean energy growth, and Sen. Brian Schatz (D-Hawaii) noted in a tweet that, “The environmental movement of the last generation was partly organized around stopping things. But to save the planet we are going to have to build things at unprecedented speed and scale.”<sup>17</sup>

As the IRA was passed as a budget reconciliation effort, its provisions were constrained to budgetarily related policies. As such, permitting reforms outside of additional funding are not present in the IRA, and, overall, this blunts the level of impact that the IRA can have for clean energy deployment.

As noted above, R Street’s own estimate of the IRA’s potential climate impact, and others, presume environmental benefits are attained because capital is deployed to facilities that are built and utilized. These assumptions, though, are likely far too optimistic given current evidence of clean energy interconnection timelines, minimizing the likelihood that the potential climate benefits of the IRA will be fully realized, or even mostly realized. Perhaps the most optimistic assessment of the IRA was Princeton University’s REPEAT Project, but that study caveated that 80 percent of their emission benefits would be unrealized without transmission growth.<sup>18</sup> Given the regulatory barriers to clean energy growth, it would have been more prudent for Congress to pursue either a bipartisan clean energy package that includes permitting reform or to have passed legislation on energy permitting before allocating substantial subsidies towards clean energy priorities.

In addition to overcoming massive regulatory barriers to new project development, integrating higher levels of renewables face growing economic headwinds and yields diminishing emissions displacement. The geographic profile of renewables create congestion on the transmission system, inhibiting the ability to transport the energy to areas of high demand or greater emissions displacement. In other words, the most profitable opportunities for clean energy have been claimed first, and parts of the grid are becoming saturated with renewables.<sup>19</sup> This is inducing a sharp uptick in transmission congestion and renewables curtailments. For example, from 2019 to 2021, renewables curtailment in Texas tripled; wind curtailment in the Great Plains increased fivefold; and curtailment increased in other renewables-rich areas like California and the Midwest.<sup>20</sup> From 2019 to 2021, transmission congestion costs have increased by between 8 and 1,173 percent across the seven organized wholesale electricity markets, which incorporate most of the country.<sup>21</sup>

In short, energy policy analysts are increasingly concerned that clean energy and the transmission needed to support it cannot readily be built, and the IRA’s budget reconciliation-oriented design means that it will exacerbate rather than mitigate these trends, independent of other policy changes.

### **Economic Effects of the IRA Involve Tradeoffs**

The IRA’s provisions are expected to increase federal savings and revenue by \$738 billion, while at the same time expending \$499 billion, resulting in a net revenue

<sup>16</sup> Philip Rossetti, “Permitting reform is key for renewable energy, transmission and LNG exports,” R Street Institute, Sept. 20, 2022. <https://www.rstreet.org/2022/09/20/permitting-reform-is-key-for-renewable-energy-transmission-and-lng-exports>.

<sup>17</sup> Brian Schatz @brianschatz, “The environmental movement of the last generation was partly organized around stopping things. But to save the planet we are going to have to build things at an unprecedented speed and scale. We need to make it easier, not harder, to build big, planet saving projects.” April 30, 2022, 2:22 PM. Tweet. <https://twitter.com/brianschatz/status/1520468607293030400?lang=en>.

<sup>18</sup> Jesse Jenkins @JesseJenkins, “2. Over 80% of the potential emissions reductions delivered by IRA in 2030 are lost if transmission expansion is constrained to 1%/year, and roughly 25% are lost if growth is limited to 1.5%/year.” Sept. 22, 2022, 1:18 PM. Tweet. <https://twitter.com/JesseJenkins/status/1572998749131264000>.

<sup>19</sup> Devin Hartman, “Liberty never looked so green: Policy implications of private carbon-free energy commitments,” *UtilityDive*, Aug. 17, 2022. <https://www.utilitydive.com/news/liberty-never-looked-so-green-policy-implications-of-private-carbon-free-e/629625>.

<sup>20</sup> Adam Wilson, “As IRA drives renewables investment, attention turns to transmission upgrades,” S&P Capital IQ, Sept. 21, 2022. <https://www.capitaliq.spglobal.com/web/client?auth=inherit#news/article?id=72172110&KeyProductLinkType=6>.

<sup>21</sup> *Ibid.*

increase of \$238 billion.<sup>22</sup> The revenue raising provisions of the IRA primarily come from changes to corporate taxes, specifically the implementation of a new corporate minimum tax. Whenever the government spends money, the recipients of that subsidy are beneficiaries. For this reason, it is common for industry-specific analysis to claim substantial economic benefits from legislation. However, equally important is the other side of the equation, which is how the government either is raising or will raise funds to pay for that subsidy, which in this case will partially come from corporate taxes and other tax increases.

The clean energy industries that are on the receiving end of hundreds of billions of dollars of subsidies, as well as workers in those industries, will be beneficiaries of the IRA. But there is also the question of whether there will be harm caused to Americans outside of the subsidized industries through changes in the corporate tax structure. Despite the name of the policy, corporations do not pay taxes; ultimately it is people who pay taxes, and the burdens of corporate taxes fall among corporate investors, workers and customers to varying degrees depending on the prevailing economic conditions at the time.<sup>23</sup> Who bears corporate taxes is largely dictated by the openness of the economy to global competition, and empirical estimates of corporate tax incidence have found that between 50 and 100 percent of corporate income taxes fall on corporate workers.<sup>24</sup> Even corporate taxes on “super-normal” returns, like the corporate minimum tax in the IRA, are estimated to have half their costs fall on corporate workers.<sup>25</sup>

My testimony today will not cover the literature or state of debate on corporate taxes in tax policy, but I do wish to draw attention to several key findings from modeling exercises of the IRA. Firstly, the CBO in its assessment of the IRA noted that the higher corporate taxes will negatively impact the U.S. economy:

In CBO’s assessment, the proposed new corporate minimum tax would reduce the incentive for those large corporations to invest, primarily by limiting the tax benefit of accelerated depreciation and by decreasing the after-tax return on their new investment . . . By setting a new minimum tax, section 10101 would limit the tax benefit of accelerated depreciation for affected corporations and, all else being equal, reduce their business investment.<sup>26</sup>

The CBO noted that reduced deficits could offset the negative effect of the changes in corporate taxes but stated that achieving as much depends on various factors. Additionally, the Joint Committee on Taxation (JCT), in estimating who will bear the costs of the IRA’s tax increases, noted that the distributional changes are most prominent at the top and bottom income ranges. Americans earning less than \$10,000 per year are expected to have a 3.1 percent increase in federal taxes in 2023, and a 1.8 percent increase in 2031.<sup>27</sup> Americans earning more than \$1 million per year are expected to have 1.9 percent higher taxes in 2023, and 0.1 percent higher taxes in 2031.<sup>28</sup>

The governmental analyses from the CBO and the JCT are also consistent with the estimated effects on GDP and income by the Tax Foundation. The Tax Foundation estimates that in the long run, the IRA will reduce GDP by 0.2 percent, reduce real wages by 0.1 percent and reduce capital stock in the economy by 0.3 percent, resulting in a loss of 29,000 full-time equivalent jobs overall.<sup>29</sup> The Tax Foundation also finds that although subsidies may buoy incomes in the near term, in the long run all income groups have lower income.<sup>30</sup>

Any impact on inflation, which would potentially improve after-tax incomes, is expected to be minimal. The CBO estimated that the IRA will have between –0.1 and

<sup>22</sup> “CBO Scores IRA with \$238 Billion of Deficit Reduction,” Committee for a Responsible Federal Budget, Sept. 7, 2022. <https://www.crfb.org/blogs/cbo-scores-ira-238-billion-deficit-reduction>.

<sup>23</sup> Greg Mankiw, “Corporate Tax Rates,” Greg Mankiw’s Blog, May 3, 2006. <https://gregmankiw.blogspot.com/2006/05/corporate-tax-rates.html>.

<sup>24</sup> Stephen J. Entin, “Labor Bears Much of the Cost of the Corporate Tax,” Tax Foundation, Oct. 24, 2017. <https://taxfoundation.org/labor-bears-corporate-tax>.

<sup>25</sup> *Ibid.*

<sup>26</sup> Phillip L. Swagel, “Economic Analysis of Budget Reconciliation Legislation,” Congressional Budget Office, Aug. 4, 2022. <https://www.cbo.gov/system/files/2022-08/58357-Graham.pdf>.

<sup>27</sup> “Distributional Effects of Title I—Committee on Finance of an Amendment in the Nature of a Substitute to H.R. 5376, The Inflation Reduction Act of 2022,” Joint Committee on Taxation, July 29, 2022.

[https://www.finance.senate.gov/imo/media/doc/jct\\_distributional\\_effects\\_inflation\\_reduction\\_act.pdf](https://www.finance.senate.gov/imo/media/doc/jct_distributional_effects_inflation_reduction_act.pdf).

<sup>28</sup> *Ibid.*

<sup>29</sup> Alex Durante et al., “Details & Analysis of the Inflation Reduction Act Tax Provisions,” Tax Foundation, Aug. 12, 2022. <https://taxfoundation.org/inflation-reduction-act/>.

<sup>30</sup> *Ibid.*

+0.1 percent change in inflation next year, which is consistent with the Tax Foundation's estimate that the IRA's impact on inflation is "likely close to zero."<sup>31</sup>

In effect, the IRA has two sides to its provisions. On the one hand, deficit reduction and subsidy yield benefits to select sectors, but the method of paying for these creates hardship in other sectors of the economy that counteract these benefits. R Street also noted in its analysis of the IRA that monetized environmental benefits are unlikely to make the IRA net-beneficial, due to its inefficient subsidy structure. When considering opportunity costs, the IRA is more likely to be a negative event for the U.S. economy than a positive one, but overall, the counteracting positive and negative effects of the law largely cancel each other out.

### Conclusion

Thank you again Chairwoman Castor, Ranking Member Graves and honorable members of the committee for holding this hearing. If I can be of any assistance to members of the Committee, please feel free to contact me or my colleagues at the R Street Institute.

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Ms. CASTOR. Thank you, Mr. Rossetti.

Next up, Mr. Nassar, you are recognized for 5 minutes. Welcome.

### STATEMENT OF JOSH NASSAR

Mr. NASSAR. Thank you, Chairwoman Castor, Ranking Member Graves, and members of the Select Committee. On behalf of the 1 million members and retirees of United Auto Workers, our President, Ray Curry, the Executive Board, just want to thank you for this opportunity to share our views on the Inflation Reduction Act and, you know, express what an honor it is to talk before this committee today. The work of this committee is extremely important, in our view.

So the Inflation Reduction Act is an unambiguous win for working people, in our view, and here is why. Number one, it deals with what is actually, you know, putting a pinch on people's wallets and pocketbooks, which is—you know. Big thing is the high cost of prescription drugs, which in the United States is often, you know, four times or more than other countries. And remember, as taxpayers, we subsidize a lot of the research for pharmaceutical drugs as well.

But not just that, the energy. By having a diversity of sources, you know, it will lead to lower costs for people, you know, over time.

But we—you got to—we look at Inflation Reduction Act in tandem with the Bipartisan Infrastructure Law, CHIPS, Recovery Act, and it is a very productive Congress. Those are four very important laws, and they work together, and I will be happy to, you know, get into that more.

But just a couple things that I just want to make sure to set the record straight on. One is, you know, on the taxes. So this bill is paid for by having, you know, enforcement on the richest folks, IRS. And, you know, it has been estimated over, you know, \$160 billion a year from the top 1 percent are not paid in taxes. So it is really—it is really a focus up there, which makes a lot of sense.

<sup>31</sup> Phillip L. Swagel, "Economic Analysis of Budget Reconciliation Legislation," Congressional Budget Office, Aug. 4, 2022. <https://www.cbo.gov/system/files/2022-08/58357-Graham.pdf>; Durante et al. <https://taxfoundation.org/inflation-reduction-act>.

And then the other thing is having this corporate minimum tax, which, you know, right now, that will—that by not having a minimum, we basically are, you know, creating environment where it is—it is—there is a premium for kind of exporting jobs, and it actually becomes some incentive. So it actually is good for workers.

And also, just the corporate share of tax receipts has dropped precipitously over time, so this kind of makes things a little, you know, a little more equal, where they are paying their fair share.

As far as inflation itself, you know, we at Auto Workers, you know, have suffered greatly because of, for example, the chip shortage. Well, why was there a chip shortage? Because of the pandemic.

The pandemic is the root cause of all the chaos with the supply chains and, you know, is really—can be traced back to why, you know, a big reason why inflation—but the truth is that inflation is for many, many factors. It is not just one thing.

But we know this much. The cost of prescription drugs, the cost of energy, are really, you know, hurting people, and this directly addresses those major cost factors.

The other thing I want to talk about is what it does actually for manufacturing. We have lacked manufacturing policy for a long time in this country. And the truth is that China and all those other countries that are deploying EVs, a lot of them are really far advanced, and they have been supporting those industries and those investments for a long time. So we have been competing with one arm tied behind our back.

And now one might say, well, why should we care? Well, the reality is that EVs are here, and they are global, and they are going to become a larger percentage.

So people are going to be driving EVs more over time. The question for us is, where are they going to be built? We want them to be built in the United States, and we want them to be supporting good union jobs. So that is our view on that.

And what it does is it—between ATVM, the various, you know, tax programs that are here, the conversion grants, et cetera, what it does is it will enable factories to change over to be able to build electric vehicles. It will also allow a lot more of the battery supply, the battery manufacturing to be here, where we are way behind.

And we think that the entire supply chain, you know, should be in the U.S., that we should have a—we should be able to dominate this just like we used to dominate auto manufacturing.

Now, you know, are they going to be good jobs all created from here? That is—that is something that is to be determined in auto, because what we have to see is, are workers going to have a choice to collectively bargain or not? A lot of automakers go through great lengths to fight against workers having that choice. So what is going to happen there?

We are also seeing a lot of companies who are automakers teaming up with battery manufacturers and creating joint ventures, and, you know, what kind of jobs are those going to provide? We think they should be good union auto jobs because they are about moving the car forward.



So, you know, this is—and the other thing I will say is just, this will speed up the transition to EVs, and these are investments that were badly, badly needed.

Happy to answer any questions you might have. Thank you.  
[The statement of Mr. Nassar follows:]

**Submitted Statement of Josh Nassar**  
**Legislative Director, International Union**  
**United Automobile, Aerospace, and**  
**Agricultural Implement Workers of America (UAW)**  
**Before the Select Committee on the Climate Crisis**  
**United States House of Representatives**  
**Hearing on “A Big Climate Deal: Lowering Costs, Creating Jobs, and**  
**Reducing Pollution with the Inflation Reduction Act”**

**September 29, 2022**

Chairwoman Castor, Ranking Member Graves, and members of the Select Committee, on behalf of the over one million active and retired members of the International Union, United Automobile, Aerospace, and Agricultural Implement Workers of America (UAW), UAW President Ray Curry, and the UAW International Executive Board (IEB), I want to thank you for the opportunity to share our perspective on the Inflation Reduction Act. It is my honor to appear before you today.

The recent passage of the Inflation Reduction Act is an unambiguous win for the American people. The law squarely takes on two of the main drivers of inflation: energy costs and astronomical prescription drug costs. The law addresses energy costs by investing in a wide variety of domestic energy sources of energy production, which is projected to reduce carbon emissions by 40 percent by 2030.<sup>1</sup> It is the single biggest investment, \$369 billion, to address climate change in our history. It will cut household energy costs by an average of \$500 a year, tackle the climate crisis by significantly reducing carbon emissions, and create thousands of good-paying jobs.<sup>2</sup> Importantly, the new law is “paid for” by placing a minimum tax on corporations and ensuring the wealthiest pay their fair share of taxes.

The 117th Congress and the Biden Administration have been highly productive and have succeeded where prior Administrations and Congresses from both parties have fallen short. The American Rescue Plan Act (ARPA), Inflation Reduction Act, CHIPS and Science Act, and bipartisan Infrastructure Investment and Jobs Act (IIJA) work in tandem to strengthen our economy and national security. The laws put our country in a position to have a brighter future by investing in our manufacturing base that is essential to ensure industries and jobs of the future are made in America. These four laws stand to benefit UAW members and retirees for decades to come.

**Urgency of Climate Change**

A large body of scientific research predicted for decades that climate change would increase the number and strength of extreme weather and climate events, such as heat waves and droughts. Unfortunately, these predictions have already been proven right by mother nature. We are witnessing the impacts of climate change in real time. Higher water temperatures intensify hurricanes and other extreme weather events. Addressing climate change will become increasingly difficult as time marches on. The realities of climate change demand action. We have a responsibility to current and future generations. The Inflation Reduction Act takes critical steps that will be looked kindly upon by our children and grandchildren in the decades ahead.

Before discussing specific provisions, I must address some of the misinformation about the Inflation Reduction Act that is being widely disseminated by deep-pocketed special interests in a clear attempt to convince working people they will pay higher taxes because of the law. These claims are demonstrably false. No one earn-

<sup>1</sup> <https://www.whitehouse.gov/omb/briefing-room/2022/08/23/New-OMB-Analysis-The-Inflation-Reduction-Act-Will-Significantly-Cut-the-Social-Costs-of-Climate-Change/>

<sup>2</sup> <https://www.whitehouse.gov/briefing-room/statements-releases/2022/08/15/by-the-numbers-the-inflation-reduction-act/>

ing under \$400,000 will pay more in taxes due to this law.<sup>3</sup> The tax provisions in this law will ensure that some of the largest corporations in the world pay their fair share by imposing a 15% minimum corporate tax on corporations with profits exceeding \$1 billion. The Joint Committee on Taxation (JCT) estimates that this provision will generate \$222.2 billion in revenue from FY 2022 through FY 2031.

The minimum corporate tax is long overdue. Thirty-nine profitable corporations in the S&P 500 or Fortune 500 paid no federal income tax from 2018 through 2020, the first three years that the Tax Cuts and Jobs Act (TCJA) was in effect.<sup>4</sup> These same corporations generated \$122 billion in profits during that period. The corporate share of federal tax revenue has dropped by two-thirds in the last 60 years, from 32% in 1952 to 10% in 2013.<sup>5</sup>

The Inflation Reduction Act also invests \$80 billion in the Internal Revenue Service (IRS) to modernize and strengthen enforcement to ensure the wealthy are paying their fair share. The law substantially increases the budget of the IRS and staffing levels to go after ultra-wealthy tax evaders. The richest 1% evade paying \$160 billion in taxes every year.<sup>6</sup> The Congressional Budget Office (CBO) estimates that the IRS will collect about \$203.7 billion because of improved tax compliance.<sup>7</sup> Inflammatory rhetoric about armed IRS agents going after ordinary Americans is misleading and dangerous.

Further, the new law imposes a 1% excise tax on corporate stock buybacks to encourage investments to grow the business instead of enriching stockholders. The UAW has long supported creating disincentives to curb stock buy backs. Taxing stock buybacks will, in addition to raising \$74 billion over the next ten years, limit excessive compensation of corporate insiders and promote sounder investment decisions that are more likely to benefit workers and communities.<sup>8</sup>

## Inflation

There is a great deal of confusion about the causes of inflation. There are no simple answers and inflation is caused by multiple factors. The COVID-19 pandemic contributed greatly to the spike in global inflation as supply chains have been continuously interrupted which limit production and distribution of goods. Just as the COVID-19 pandemic is a global problem so is inflation, as the Eurozone and other countries have recorded their highest inflation rates on record ever.<sup>9</sup>

Annual U.S. inflation in the first quarter of this year averaged just below 8.0%, the 13th-highest rate among the 44 countries examined. According to Department of Commerce data, corporate profits rose 35% last year.<sup>10</sup> Chevron's 240% profit spike in early 2022 was part of "the best two quarters the company has ever seen."<sup>11</sup> Shell said adjusted earnings were \$11.5 billion for the second quarter of 2022 and topped their previous record of \$9.1 billion in the first quarter.<sup>12</sup>

To make matters worse, multinational corporations in many industries have capitalized on rising costs to mark up prices to increase profits. Over the past several decades the oil, consumer goods, beverage industry, pharmaceutical industry, and many other sectors have become less competitive. When there are only a few major players in an industry, it becomes easier to price gouge consumers.

In the U.S., the motor vehicle sector has been one of the largest contributors to inflation as many Original Equipment Manufacturers (OEMs) cannot keep up with demand due to the shortage of auto-grade semiconductor chips and other supply shortages. The CHIPS and Science Act puts us in a better position to avoid future disruptions but does not solve the current shortage as it takes years for new facilities to be built and ramped up.

<sup>3</sup> <https://www.whitehouse.gov/briefing-room/statements-releases/2022/08/19/fact-sheet-the-inflation-reduction-act-supports-workers-and-families/>

<sup>4</sup> <https://itep.org/corporate-tax-avoidance-under-the-tax-cuts-and-jobs-act/>

<sup>5</sup> <https://americansfortaxfairness.org/tax-fairness-briefing-booklet/fact-sheet-corporate-tax-rates/#:~:text=Corporate%20share%20of%20federal%20tax%20revenue%20has%20dropped,no%20federal%20income%20taxes%20from%202008%20to%202012.>

<sup>6</sup> <https://home.treasury.gov/news/featured-stories/the-case-for-a-robust-attack-on-the-tax-gap>

<sup>7</sup> [https://www.cbo.gov/system/files/2022-08/hr5376\\_IR\\_Act\\_8-3-22.pdf](https://www.cbo.gov/system/files/2022-08/hr5376_IR_Act_8-3-22.pdf)

<sup>8</sup> <https://www.washingtonpost.com/us-policy/2022/08/12/inflation-reduction-act-biden-buybacks/>

<sup>9</sup> <https://www.reuters.com/world/europe/euro-zone-inflation-confirmed-91-energy-food-prices-surge-2022-09-16/>

<sup>10</sup> <https://www.bloomberg.com/news/articles/2022-03-30/2021-was-best-year-for-u-s-corporation-profits-since-1950>

<sup>11</sup> <https://www.theguardian.com/business/2022/apr/27/inflation-corporate-america-increased-prices-profits>

<sup>12</sup> <https://www.reuters.com/business/energy/shell-reports-record-profit-115-billion-2022-07-28/>

### **Inflation Reduction Act's Manufacturing Investments**

The Inflation Reduction Act stands to help the U.S. become less reliant on China, which dominates the electric vehicle battery market. According to the Financial Times, Chinese firms, either owned or supported by the Chinese government, currently produce 60% of passenger EVs sold around the globe and produce almost 70% of battery cells as China has invested more than \$60 billion to support EV manufacturing. China also controls approximately 80% of the supply of rare earth minerals, which are essential for aerospace, defense, and EV production, and may impose export controls on these vital materials.<sup>13</sup>

The Inflation Reduction Act also includes significant investments that stand to benefit workers, their families, and communities including:

- Fully funding the Advanced Technology Vehicle Manufacturing (ATVM) loan program and expand to additional vehicle sectors.
- Domestic Manufacturing Conversion grants will support the conversion and retooling of vehicle technology manufacturing facilities, including those at risk of closure, to onshore and build batteries and other advanced vehicle technologies. Funding, updating, and targeting the 48C tax credit is included to support the establishment, retooling, and expansion of clean energy and technology manufacturing facilities.
- The Investment Tax Credit (ITC) and Production Tax Credit (PTC) are big wins for clean energy projects like wind and solar and they include a 10% bonus credit for projects located in an energy transition community.
- Robust funding is also available for rural renewable energy investments through the United States Department of Agriculture (USDA) including over \$1 billion for the Rural Energy for America Program, with prioritization of “underutilized renewable energy technologies” and technical assistance. Assistance will be provided for rural electric co-ops with \$9.7 billion in loans and grants for new renewable deployment, carbon capture and storage, and fossil fuel debts.
- More than \$9 billion is included for federal procurement of American-made clean technologies to create a stable market for clean products, including \$3 billion for the U.S. Postal Service to purchase zero-emission vehicles.
- Commercial Vehicle Tax Credit and the Heavy-Duty Fleet Conversion Grants has \$1 billion available in grants to support adoption and deployment of vehicles until 2031. \$400 million is carved out for replacement of vehicles serving one or more communities in non-attainment areas for any air pollutant.
- \$4,000 tax credits for lower/middle income consumers to help purchase used electric vehicles (EVs), and up to \$7,500 for new EVs. The \$7,500 tax credit for new clean vehicles requires that final assembly of the car be made in North America. The 200,000 cap has been lifted beginning in 2023, but Tesla, GM, and Toyota have surpassed the 200,000-vehicle cap for 2022. Without the Inflation Reduction Act, many established automakers would be unable to utilize the tax credit to lower the price of the vehicle.

### **Electric Vehicle Manufacturing**

The global auto market is moving towards even more efficient vehicles, including hybrid and electric vehicles. Global electric car registrations increased by 41% in 2020, despite the pandemic-related worldwide downturn in car sales, in which global car sales dropped 6%.<sup>14</sup> It has been projected that by 2040, over 50% of new car sales globally will be electric.<sup>15</sup> The industry is preparing for EVs to be a much larger part of the market going forward, both in the U.S. and abroad. Major automakers around the world have announced billion-dollar EV investments and ambitious new product plans and target dates. The Inflation Reduction Act stands to facilitate more manufacturing of electric vehicles. Without such incentives we will fall further behind China in the race to build the vehicles and batteries of the future.

EV sales have grown steadily over the past decade, but they still represent a small percentage of vehicle sales. EVs and PHEVs (Plug-in Hybrids) combined to represent 4% of U.S. auto sales in 2021<sup>16</sup> and EVs face challenges to mass-adoption.

<sup>13</sup> <https://www.ft.com/content/d3ed83f4-19bc-4d16-b510-415749c032c1>

<sup>14</sup> <https://cleanenergynews.ihsmarkit.com/research-analysis/global-electric-vehicle-sales-grew-41-in-2020-more-growth-comi.html#:~:text=Global%20electric%20vehicle%20sales%20grew%2041%25%20in%202020%2C,...%205%20Looking%20ahead%20...%206%20inevitability%20>

<sup>15</sup> <https://edition.cnn.com/2019/05/15/business/electric-car-outlook-bloomberg/index.html>

<sup>16</sup> <https://wardsintelligence.informa.com/W1966151/US-Light-Vehicle-Sales-December-2021>

EVs are more expensive to produce, making them less profitable and dependent on consumer incentives. In most parts of the country, EV charging infrastructure is inadequate, and the electrical grid is unprepared. Consumers shopping for an EV have been known to have concerns about battery range and charging speed as they have a limited selection of models and segments. Fortunately, the Inflation Reduction Act along with the previously mentioned laws contain investments in the infrastructure needed to support EV deployment.

The greener vehicles of the future are going to be built somewhere and other countries are preparing for these innovative technologies. We could see the U.S. auto industry fall behind on advanced technology, hurting the American economy and American workers. Ignoring these realities is not an option because it concedes our future to other nations that have a significant auto manufacturing footprint.

To lead the future, electric vehicles and other green technologies must be harnessed to create good U.S. union jobs where workers have a voice on the job. It is important to ensure all manufacturing workers can join a union free from intimidation by employers seeking to maintain the status quo. Manufacturers of EVs should be required to pay family and community-sustaining wages and provide benefits that workers can count on to care for themselves and their loved ones as a condition for receiving taxpayer assistance.

The domestic vehicle assembly and parts industries are vital to our manufacturing base, and it is imperative that we stay strong and competitive now and into the future. Auto manufacturing is not regional and extends well beyond the upper Midwest. For example, in the past year, significant investments in motor vehicle and battery manufacturing have been announced in Tennessee, Georgia, Michigan, North Carolina, and Kentucky. The auto industry's supply chain extends far and wide throughout the country. Fortunately, the Inflation Reduction Act and other aforementioned laws put us on the right track, yet more work remains.

To be clear, the transition will take time and will occur at different rates throughout our country and world. However, there is little doubt that the transition will happen. The Administration's goal is to have at least 50% of new vehicles be EVs or PHEVs by 2030. They announced nearly \$5 billion will be made available to build out an electric vehicle charging network over the next 5 years and \$3 billion to advance the domestic EV industry in communities that have historically been part of the auto industry.

As automakers improve technology, decrease battery costs, and produce at scale, EVs will become increasingly more competitive with ICEs (Internal Combustion Engine). And in the coming years, automakers plan to launch EVs in the segments that are most popular with American consumers: CUVs, SUVs, and pickups. Electrification is not limited to the light-duty auto industry. Companies that produce heavy-duty trucks and off-highway vehicles are also investing in future technology for electrification and autonomy.

The U.S. is behind other nations in public and private investments needed to make the U.S. a competitive player in vehicle electrification. The European Union (EU) has established the European Battery Alliance to promote production of batteries and key components within the EU.<sup>17</sup> South Korea is home to LG Chem, the world's largest producer of lithium-ion batteries for electric vehicles, with a 24.6% market share. The company has plans to triple its battery production.<sup>18</sup>

### **Creating and Maintaining Good Auto Jobs**

Over the past several years, U.S. automotive production workers' wages have fallen significantly. When adjusting for inflation between January 2006 and January 2021, average hourly earnings for production workers in auto assembly declined by 21% while wages in the auto parts sector have decreased by 19%.<sup>19</sup>

For the transition to benefit auto workers, the entire supply chain, from the gathering of minerals needed to power batteries to the manufacturing of the battery and other parts to final assembly, must support the creation and preservation of good union jobs. Of course, it is far from certain that growth in EV sales will lead to more good union jobs. If new entrants are hostile to unions and provide subpar wages and benefits, it will further erode job quality in the industry. This is not a theoretical concern as foreign-based automakers typically resist efforts to unionize in the United States. This strong opposition exists even though every foreign-based light duty Original Equipment Manufacturer (OEM) is unionized in its own country. A report by Professor Gordon Lafer details the array of tactics foreign-based auto-

<sup>17</sup> [www.eba250.com/about-EBA250/?cn-reloaded=1](http://www.eba250.com/about-EBA250/?cn-reloaded=1)

<sup>18</sup> <https://www.autoblog.com/2020/10/21/lg-chem-to-triple-ev-battery-production/>

<sup>19</sup> <https://www.bls.gov/cew/data.htm>

makers have utilized to prevent unionization.<sup>20</sup> Professor Lafer's research serves as a strong reminder as to why we need the PRO Act to become of the land. Congress has not strengthened our nation's labor laws in over 85 years.

In the auto industry, Toyota, Nissan, Hyundai, Mercedes-Benz, BMW, Volkswagen, and Honda have all hired "union avoidance" specialists to guide their anti-union campaigns in the United States. Nissan's anti-union campaign led the National Labor Relations Board (NLRB) to issue a formal complaint charging the company with twenty-four counts of lawbreaking. The fact Nissan engaged in such tactics so soon after having been forced to post public notices vowing to respect the law is a testament to the near total absence of meaningful penalties under current law. All of Nissan's plants in other countries are unionized.<sup>21</sup> Corporations like Amazon spends millions of dollars to hire anti-union consultants to interrogate and intimidate workers when they seek union representation.<sup>22</sup> It has become all too common for employers to threaten relocation or shutting down operations if workers seek to form a union.

We must also look at the impact that procurement has on job quality. In February 2022, Oshkosh Defense was awarded a contract to design and build the next-generation vehicles for the United States Postal Service (USPS). Oshkosh Defense is a defense contractor that manufactures products for the U.S. military in its unionized plants in Oshkosh, Wisconsin. Oshkosh workers have been UAW members since 1938. Despite these facts, Oshkosh, upon winning the contract, announced they are planning to take the \$6 billion contract to a new, non-union plant in South Carolina instead of having UAW members in Wisconsin carry out this lucrative contract by building the next-generation vehicles in Wisconsin. It is far from clear that USPS gave any meaningful consideration to the impact on workers and communities when awarding this significant contract. We urge Oshkosh to reverse course and build the next generation vehicles in Oshkosh with its proven workforce.

We cannot allow this to continue to happen. Our procurement policies across the board need to hold employers accountable and support working families. More work remains to improve labor standards in the federal contracting process as the U.S. government spends hundreds of billions of dollars through a wide variety of grant programs and contracting on an annual basis.

### **Investing in American Autoworkers**

We are at a pivotal juncture as automakers are transitioning many of their fleets from gas and diesel-powered vehicles to electric ones. The shift to EVs cannot come at the expense of good wages and benefits and it is critical that we do not leave workers behind as the industry transitions to electrification.

To meet the ambitious EV targets put forward by major automakers and elected officials, we will need to invest in workforce capabilities. Luckily, the U.S. economy is not starting from nothing thanks to the large pool of American workers who not only assemble vehicles but build a wide range of materials and components for those vehicles. The UAW has around 200,000 members in auto-related manufacturing throughout the country from Michigan to Texas. These workers have a high baseline knowledge of manufacturing and a familiarity with manufacturing training programs. As we see a growth in battery pack, cell, and component manufacturing, material processing, and recycling, UAW workers are well positioned to transition into these new types of manufacturing. With investment in key EV and battery-specific training programs for the current workforce, these workers can hit the ground running building the vehicles of the future and require less investment than starting with a whole new workforce.

The UAW has a long history of supporting investments to train American manufacturing workers with labor input. For example, the UAW has a Skilled Trades Department with a long and successful history of building a strong pipeline of skilled workers critical for auto companies to grow their business and compete in a global economy. And through collective bargaining, the UAW has pushed the industry to continually invest in skilled trades and production workers, whether through work-based training, apprenticeships, or tuition assistance for skill development. With new vehicle and manufacturing technologies, the union is exploring all avenues for productive partnerships with employers, government, and educational institutions to promote upskilling and reskilling related to batteries, motors, material processing, recycling, fuel cell technology, and electric vehicle assembly.

<sup>20</sup> <https://nwlaborpress.org/wp-content/uploads/2022/01/BuildingBackReport.pdf>

<sup>21</sup> <https://nwlaborpress.org/wp-content/uploads/2022/01/BuildingBackReport.pdf>

<sup>22</sup> [https://www.huffpost.com/entry/amazon-anti-union-consultants\\_n\\_62449258e4b0742dfa5a74fb](https://www.huffpost.com/entry/amazon-anti-union-consultants_n_62449258e4b0742dfa5a74fb)

If there is one thing that is a “constant” in the auto industry, it is that it is constantly evolving and changing. Jobs that were once done by hand are now done by robots and machines. UAW joint training programs work hand in hand with local training coordinators to determine what additional education and training is needed for journeymen and apprentices when innovative technologies emerge, such as EVs. Training programs also need to coordinate with local community colleges to modify curriculum and classes to prepare the workforce for such changes.

As changes occur, we also need to simultaneously provide comprehensive re-training programs to prepare displaced workers for this shift to new technologies. Federal and state governments must invest in improving and expanding vocational training and apprenticeship programs, with an active role for unions to ensure quality training and high road working conditions. These programs must provide workers not only with the skills to make EV vehicles and components, but also prepare them for the changing nature of manufacturing work as automation and other new technologies change the production process. Congress should also incentivize the development of joint training and apprenticeship programs between employers and unions and push employers to commit to retraining workers displaced by new technology.

In addition to investing in American autoworkers, we must ensure that the investments to build vehicles and components are made in the communities where autoworkers are currently building traditional gas-powered vehicles and powertrains. We cannot wait for ICE jobs to be lost as we need to target new investments for auto manufacturing communities now. Auto manufacturing is central to the economy of many communities, creating community-sustaining manufacturing jobs and stimulating economic activity in other sectors. Government support for EV investments should prioritize investments that create jobs in communities currently producing ICE vehicles and powertrains, hire incumbent autoworkers, and provide wages and benefits on par with unionized auto industry standards.

Union workers must lead this transition. In fact, UAW members are currently building the vehicles of the future. Our members currently make advanced technology vehicles that include battery electric (Chevy Bolt, GMC Hummer, Ford F-150 Lightning, Ford E-Transit), plug-in hybrids (Jeep Wrangler PHEV, Jeep Grand Cherokee PHEV, Ford Escape PHEV, Lincoln Corsair PHEV), and autonomous vehicles (GM’s Cruise Autonomous Vehicle). UAW employers have announced plans to make EVs and PHEVs at UAW plants in a range of segments, including CUVs, SUVs, pickups, and delivery vans.

The EV transition reinforces the continued importance of putting in place policies that facilitate vehicle and parts production in the United States and ease impediments to workers at non-union automakers to organize. As the nation invests in a transition to innovative technology, we must seize upon these opportunities to preserve and increase quality jobs. We have an opportunity, right now, to ensure that future EV investments incentivize production of EVs in the United States, made by union workers. Unionized workers earn on average 10.2% more than their non-union counterparts.<sup>23</sup> Union workers are more likely to have paid sick days and health insurance compared to non-union workers. Ninety-four percent of union workers participate in a retirement plan compared with 67% of non-union workers.<sup>24</sup> Policies that strengthen labor standards and support workers’ right to collectively bargain are foundational to building a strong middle class. There is little debate about whether the auto industry is going to change significantly because of the growth of electric vehicles (EVs) and plug-in hybrids. While we do not know how quickly EV markets in the U.S. will expand, we do know EVs will become a larger component of fleets in the decades ahead. A proactive policy approach at the federal and state level can potentially mitigate disruptions and harness the opportunities of the EV transition.

The full impact of EVs on U.S. auto industry and job quality are to be determined. There are many open questions about the future. For instance: Will EV’s support help create good new jobs over time? Will EV battery assembly work? Where and how will the supply chain operate?

Our union is working to ensure the answers benefit workers. Decisions by policy makers can help ensure that the advanced technology vehicles of the future are made here in the U.S., thereby promoting U.S. competitiveness, and creating quality manufacturing jobs. We have an obligation to advocate for workers and ensure that our ideas are shaping the future of the domestic auto manufacturing industry.

<sup>23</sup> <https://files.epi.org/uploads/226030.pdf>

<sup>24</sup> <https://files.epi.org/uploads/226030.pdf>

As we work toward the future of clean transportation, it will be critical to ensure this transition benefits American workers in both the short and long term and enhances U.S. competitiveness and economic security.

### Conclusion

The passage of the Inflation Reduction Act in conjunction with the CHIPS and Science Act, ARPA, and the IIJA will take meaningful steps to reduce costs, create jobs, bolster domestic manufacturing, and tackle climate change. We stand ready to work with this Committee and all other stakeholders to ensure the transition is good for working people, the U.S. economy, and our planet. It is critical that policy-makers fully implement these laws and build upon them in coming years.

Thank you for considering the views of autoworkers. I look forward to answering your questions.

Ms. CASTOR. Thank you very much.

Thanks to our witnesses for their informative testimony. I will recognize myself for 5 minutes to start the questions.

Thank you all for weighing in on how the Inflation Reduction Act is a win-win-win. It is a win for American families, it is a win for workers, it is a win for businesses across this country.

It really puts us in a—as Mr. Nassar pointed out, a great competitive era. The global competition for who is going to make these technologies and how we expand them across the world, it is on. That competition is on, and it is America that should be in the lead on all these, and it is our families and our workers that should benefit.

But I want to take us kind of out of the Washington, D.C. committee room and take us to kitchen tables of families across the country that have been grappling with higher costs, and try to make this real for them. Because they hear Inflation Reduction Act, they may have heard, oh, okay, this has a clean energy and climate piece, but what does this really mean for families?

And Consumer Reports, Ms. Warren, is a trusted source for consumers across the country. We see rebates and discounts for all sorts of, not just electric vehicles, but appliances, air conditioning, heat pumps, insulating your homes. How can we get the information out, how can you help us, and how can other organizations help us get that information into the hands of families who really need it? They are hungry for ways to save money right now. What is your advice?

Dr. WARREN. Thank you, Chair Castor, for the question. Yes, the IRA has a lot of good benefits for consumers. As you mentioned, energy costs can be high, especially for low-income consumers for whom the spend on energy is the highest.

This bill offsets the cost of more efficient appliances, allows them to weatherize their homes, and allows them to save costs over time on vehicles, appliances, and so on.

I think everybody would agree that switching to more efficient appliances is a good thing, and I think consumers already know that, and they are clamoring for these clean technologies.

It is a matter of creating awareness, and that is part of what we do as Consumer Reports. For example, we have information and buying tools on our website. One of those is directly tied to electric vehicles. We are actually—people can go in and put in their location information, and EV incentives will come back out specific to where they are and their income and so on. And we plan to update

that tool once the IRA is also implemented so that people know what the new benefits are to them.

So as Consumer Reports, we certainly can do our part in just educating people on how they can take advantage of these incentives once they are implemented.

Ms. CASTOR. I think that is going to be so important. One good website that I have come across is [RewiringAmerica.org](http://RewiringAmerica.org) where, what you said, you know, some of these are location based, you can put in your ZIP Code and the discounts and rebates and tax credits come up.

Some of these are available now, and we are talking about clothes dryers, if you are going to replace your air conditioner, get a more efficient fuel pump and save money at the same time. Just insulating your home, things like even the electric panel in your—the electrical panel in your home. These are going to be available to you.

And I appreciate you pointing out that the Inflation Reduction Act is really targeted at working class, middle-class families. If you are a millionaire or billionaire, you do not qualify for—you cannot use this to help you save money on your next model Tesla. These have to be—these are targeted to working families, middle-class families. There are some income limits, and it is going to—it has the potential to create millions of good-paying jobs.

Mr. Nassar, it is hard to keep up now with the announcements from car manufacturers, battery plants now, on their new factories and plants. What are you watching right now, and how can we keep up with the job opportunities that will be available?

Mr. NASSAR. I think it is—thank you for the question. I think it is really going to be important to watch the decisions very closely made by companies as far as what are they going to do as far as their workforce. You know, are they going to make sure that they actually have a choice whether to join a union or not, or are they going to fight it? Are they going to, you know, pay below manufacturing wages or not?

And I think that the Congress and the administration really need to put a spotlight—

Ms. CASTOR. Well, and the incentives are tied to if there is more money back into people's pockets when they purchase an EV, if it is made in America, the component parts are made in America, and we do it with the union labor. Is that right?

Mr. NASSAR. The provisions were changed in the Senate. The House version was—that was completely the House version. The EV tax credit, what is really good about it is, right now, there were several companies that weren't able to offer at all, like GM, and now the cap has been lifted, so that should enable some more union-built cars to get out.

Ms. CASTOR. Yeah. We will get into it a little bit more—I am over time. We will get into that a little bit more.

But at this time, we will recognize Mrs. Miller for 5 minutes. Welcome.

Mrs. MILLER. Thank you, Chair Castor. Thank you all for joining us today.



One of the most wonderful things about America, it is made up of many, many people, with many, many opinions. And I appreciate the opportunity to talk about the so-called Inflation Reduction Act.

Every economist worth their salt has concluded that this legislation would do the exact opposite. It will make inflation worse. It will punish working class Americans, and it will make America less competitive by chilling innovation.

Today I get to share with my colleagues what damage this bill will really do to our families, our communities, and our country.

First of all, it is telling that we are speaking of this bill in this particular committee. This bill does nothing to reduce inflation for working class Americans, but it does force taxpayers to pony up hundreds of billions of dollars for Green New Deal slush funds that will ultimately do little to nothing to lower global emissions.

It will put hardworking American energy workers out of a job and send billions of dollars to the Chinese Communist Party to buy supplies for their boondoggles.

The bill also includes a \$250 billion slush fund at the Department of Energy to provide taxpayer subsidies for risky renewable technologies that no traditional bank would ever invest in, even with their ESG-centric leadership.

The Department of Energy should be laser-focused on lowering the price of energy for the American people and ensuring that our electrical grid is reliable. Instead, Americans this year have faced record-high gas prices when they fill up their tanks, record-high heating prices for their home, and are staring down a cold, dark winter, with rolling blackouts and brownouts already common across the country.

I am thankful that we still have coal and natural gas to keep our homes powered when renewables cannot possibly fill this need at this time. If this administration had its way, our most reliable baseload energy would be dismantled as well.

The attacks on American energy production aren't the only disastrous provisions of this bill. It also increases taxes on American companies who are already grappling with high inflation, further increasing prices, creating fewer jobs, and lowering wages across the board.

I look forward to the Republicans taking control of Congress next year to put a stop to this madness being perpetrated by this bill and holding the out-of-control Biden administration accountable and to put Americans back to work.

Mr. Rossetti, in your testimony, you state that the impact of this bill will transfer wealth from American taxpayers to subsidize energy companies. Proponents of the bill claim that most of the taxes raised by the legislation are paid for by wealthy corporations.

Can you explain why that is a misleading assumption, and who will actually bear the burden of the book minimum tax?

Mr. ROSSETTI. That is an excellent question. So when you think about the effects of the corporate tax, the important thing to keep in mind is that, at the end of the day, humans are the ones who pay taxes, even corporate taxes.

So most people who say that we should do corporate taxes try to say, well, you know, it is the investors of the corporations who bear the tax, and that might have been true in an environment where

you had a more closed economy, but now we have a globally competitive economy, and corporations have to compete everywhere.

So under those conditions, the research increasingly shows that workers and consumers of corporations pay a larger share of the corporate income tax. So the IRA's tax on what they call super-normal returns, which is kind of a more recent term, even that is expected to have about 50 percent of its costs fall on corporate workers.

So when we look at these taxes, we have to understand if investors are able to shift the incidence of the tax onto other entities, we would expect them to do so, and I don't think the IRA is any different in that regard.

Mrs. MILLER. So is the taxpayer-funded renewable subsidies the best way to lower global emissions or would money be better spent more effectively elsewhere?

Mr. ROSSETTI. I would say that is probably not the best policy, because one of my concerns with climate change is this is a global challenge. So when I look at this sort of policy of continued indefinite subsidy for renewable energies and other energy priorities, it is communicating to the rest of the world, especially the developing world where they have far lower incomes relative to Americans, that these technologies are only viable with continued subsidy, and really the key is actually having lower real costs, not lower subsidized costs.

Mrs. MILLER. I yield back my time.

Ms. CASTOR. Next, Rep. Bonamici, you are recognized for 5 minutes.

Ms. BONAMICI. Thank you, Chair Castor, and thank you to the witnesses. And, Chair Castor, I just want to also add, my thoughts are with your constituents in the State of Florida.

I do want to respond to Ranking Member Graves' comment, which I found a bit surprising today, about the number of hurricanes decreasing. From what I could tell in my brief research, according to the Center for Climate and Energy Solutions, the number of smaller hurricanes has decreased, but the number of major hurricanes has increased. And, in fact, even the sources that confirmed that the number of hurricanes has decreased, it is true in other ocean basins but not the North Atlantic. So I just wanted to respond to that comment.

I am tempted to respond to Representative Miller's comments as well, but I want to cheer for the Inflation Reduction Act because it is a significant step moving forward in meeting our goals of a net-zero emissions future.

We know it is not the only step we need to take. It is anticipated that the Inflation Reduction Act will create about 9 million jobs over the next decade and among other fields: clean energy, clean transportation, and clean manufacturing. So this means that we need to train and onboard new workers to work for us in apprenticeship programs. I want to talk to Mr. Nassar about that.

Mr. Nassar, you may know I grew up in the Detroit area. I love Oregon and I have lived there a very long time, but my childhood was spent in the Detroit area.

So I know that U.S. companies are making more electric vehicles. So can you talk a little bit about what is involved in converting the

infrastructure for manufacturing and how the Inflation Reduction Act will help?

But also, I wanted to talk about the workforce issues, both in autos, and I know your union also represents aerospace workers. How will the Inflation Reduction Act help meet these needs? Because as I mentioned, tremendous number of jobs, and new skills, are going to be needed, and it is exciting.

Mr. NASSAR. Very exciting. Thank you for the question. First of all, just on the workforce for a second, you know, through collective bargaining and other unions, we have very successful apprenticeship programs where people able to upskill, and I think taking a look at that, having more help for vocational education, and building up that part of the workforce more would be helpful Federal policy, but also take a look at what some of the companies and unions are already doing, because we don't need to reinvent the wheel so to speak.

Ms. BONAMICI. Right. We are trying to update the National Apprenticeship Act for the first time since the 1930s. We are working on that.

Mr. NASSAR. But the other thing is, you know, talking about the jobs, I mean, the truth is that these are very competitive industries, the manufacturing industries. And if you are not on the cutting-edge, if you are not making the new product, you know, you can fall way, way behind.

So there has to be risks taken first of all. Not every idea necessarily pans out. But what is the cost of not doing it?

Well, the cost is, we are going to continue to have—we will have a decline in leadership, as far as creating the industries of the future. We would fall further behind on EV production and battery production, and that means ultimately those jobs won't be here.

Ms. BONAMICI. Right.

Mr. NASSAR. So we got to anchor the jobs here. As far as what we can do to make them better jobs, I mean, I would say, you know, the Senate follow the House's lead and make sure that workers have a voice on the job by passing the GROW Act would be one thing.

Ms. BONAMICI. I agree with you on that.

Mr. NASSAR. And then the other thing, I think, is just to really, you know, have tight scrutiny on the way that companies are using those funds and making sure that it is, you know, as intended.

Ms. BONAMICI. Great. Well, and I look forward to working with you on that. And, of course, the CHIPS and Science Act, as a member of the Science Committee, I know that is going to help—

Mr. NASSAR. Oh, yeah.

Ms. BONAMICI [continuing]. Greatly, because everything has chips in it now.

Dr. Warren, thank you for being here. Your testimony, you mentioned that low-income and overburdened communities have historically borne the brunt of the climate crisis, including experiencing more harmful effects from air pollution and greenhouse gas emissions.

So why does reducing emissions from the transportation sector, which the Inflation Reduction Act does through the investment in

zero emission, heavy duty vehicles, how does that benefit low-income and disadvantaged communities?

And also, just to follow up on Chair Castor's question, how can the Inflation Reduction Act help Americans save on energy costs?

And I just want to mention that, in Oregon, we heard from Sammie Lewis in a roundtable conversation, who said that through the programs that Oregon offers through Oregon Energy Trust, she was able to do efficiency upgrades like are anticipated with this bill, and she has a credit on her energy bill right now from doing that. So can you talk about that as well?

Dr. WARREN. That is excellent to hear. Thank you for the question, Representative.

So low-income and other overburdened communities have borne the brunt because of, you know, discriminatory policies that place them more in proximity to high transportation corridors, warehouses, ports, and so on. So they feel the impact of air pollution and greenhouse gas emissions the most.

Now, electrifying heavy duty vehicles means that there will be, you know, reduced air pollution in those neighborhoods. And, of course, there are other parts of the IRA that are great for them because they get to participate in buying and owning and using clean technologies as well.

I am trying to come back to your second question, but I forgot—

Ms. BONAMICI. Oh, I was just asking about the energy savings that people are experiencing and what a difference that will—

Dr. WARREN. Oh, yes. Yes. So more energy efficient appliances obviously means you use less energy, which means that you are saving money. And, frankly, again, low-income consumers tend to have a higher energy burden. So this is great for them because they will get to keep more money in their wallets.

And similar with electric vehicles, which, as I have said, save something like 60 percent on fueling costs alone, so that over the life of the vehicle, they will save between \$6,000 and \$10,000, which is fantastic.

Ms. BONAMICI. Thank you. And I know I am out of time, but as I yield back, I just want to mention in regard to transportation, that when the Select Committee on the Climate Crisis came to Oregon, both Chair Castor and Representative Carter were able to see our Electric Island where they recharge school buses made in Georgia and city buses that are electric.

I yield back.

Ms. CASTOR. All right. Next, I will go to Rep. Casten. You are recognized for 5 minutes.

Mr. CASTEN. Thank you, Madam Chair, and thanks so much to our witnesses.

Mr. Rossetti, I would like to focus on you, and I really want to emphasize the areas that we have a lot that we agree on, but I don't want to presume on what we agree. So let me just start with things that I am thinking we are on the same page on, but, number one, would you agree with me that competition helps lower inflation? Competitive markets make things cheaper.

Mr. ROSSETTI. Well, I say supply is probably going to be the key to lowering inflation. Inflation is caused by too many dollars chasing too few goods—

Mr. CASTEN. I am just asking a yes or no. Are you pro-market competition as a tool to lower inflation?

Mr. ROSSETTI. Yeah, we are pro-competition.

Mr. CASTEN. Okay. Terrific. We are on the same page.

Do you agree with me that subsidies make markets inefficient?

Mr. ROSSETTI. I would agree that subsidies make markets inefficient.

Mr. CASTEN. Terrific. And I know you used to be a Hill lobbyist. Is your experience similar to mine that it is vastly more common that corporations lobby for lower taxes than it is that they come in and lobby for higher minimum wages?

Mr. ROSSETTI. I have never been a lobbyist—

Mr. CASTEN. Would that be your experiences?

Mr. ROSSETTI. I can't speak to that.

Mr. CASTEN. But you were on the Hill for a while. Surely you ran into some people who were coming and making asks of us?

Mr. ROSSETTI. Well, I know that, you know, lobbyists are always going to pursue more tax breaks—

Mr. CASTEN. Do you find that Corporate America is regularly asking for higher minimum wages or lower taxes? This is not a trick question.

Mr. ROSSETTI. I would say that, you know, corporations are always going to ask for lower taxes because—

Mr. CASTEN. Okay. Terrific, terrific. The reason I established those things we agree on is because competition lowers inflation. The IRA gives consumers choice. If you can't afford a solar panel on your roof, you don't have a choice. We just made that cheaper.

If you can't afford to buy an electric vehicle, we just made those things cheaper. Those people who can't afford that, they are buying more expensive gasoline to run their car if they can't afford an electric vehicle.

They are buying more expensive energy from their utility. Once they have those solar panels, they run them. Once they have the EVs, they drive them. They are inherently cheaper.

The permitting bill that just failed yesterday, why did it fail? Because the regulated electric utility, which does not know what market competition looks like if it bit them in the posterior, lobbied against it to kill it because they can't bear the thought that we might actually get transmission that would bring cleaner, cheaper energy to market.

We both hate subsidies. The fossil fuel sector gets \$664 billion a year in subsidies, according to the International Monetary Fund. About 10 percent of that is through direct taxes.

I cannot get a single Republican to support the People Over Petroleum Act; me and my colleague, Mr. McEachin, have introduced that would cut those taxes and give \$500 back to every American. Because at the end of the day, you all are not pro-market. You are pro-corporate welfare.

The third point is, you said in your testimony—I am quoting your written testimony—"50 and 100 percent of corporate income taxes fall on corporate workers." Are corporations idiots or do they

actually know that that is not really true? Because if it was, they would be pushing for higher minimum wages because they are agnostic, right, and it is the same as taxes.

Now, the truth is the IRA is going to create jobs, it is going to lower energy bills, create energy independence, improve health outcomes. It is an investment in our future. It is going to save the typical household \$1,800 a year. That is anti-inflationary, that is less money.

But we actually have a lot of stuff that we agree with. We agree that we need transmission reform. We agree on your analysis that there are vastly more barriers to deploying clean energy than there are to fossil energy.

Your own analysis says that the fossil fuel projects are basically doing fine, not surprisingly because they are so heavily subsidized.

We agree that we should get rid of all these distorting market subsidies, especially the biggest ones in the fossil fuel sector. But to do that, we need policy reform, not just spending.

And in order to make those policy reforms, we either need to get rid of the filibuster in the Senate, because we all know the reason why we had to do this through reconciliation was because of Senate procedural rules, or we need a Republican Party that is committed to competitive markets. That is committed to the idea that if you give consumers choice to have cheaper energy, that is the best outcome. That is committed to the idea that science matters, not just crony capitalism.

And we are here in this moment. I sit on the Financial Services Committee. We had a whole long conversation with the big banks last week about woke capitalism.

Exxon is trading at a 10 times multiple on earnings. Tesla is trading at a hundred. Capital markets are 10 times more desirous of putting their hard-earned dollars into companies that are providing things that people want.

Shell is trading at a seven times multiple on earnings. First Solar is trading about 70. Again, 10 times factor.

Capital markets choosing to invest in people who are giving things, what people want, in spite of all those subsidies is not woke capitalism. It is capitalism.

Let's embrace it, let's move forward, let's be responsible. Let's recognize the areas where we have an agreement and not get into the silly polemicism, because we do not have time to sit around here in rhetorical gymnastics that are basically just lies.

Thank you and I yield back.

Ms. CASTOR. Next up, Mr. Carter, you are recognized for 5 minutes.

Mr. CARTER. Thank you, Madam Chair, and thank all witnesses for being here today.

I want to start with you, Mr. Rossetti. Appreciate you being here, albeit virtually. Of the many things that I have concerns about in the IRA, in the Inflation Reduction Act, the electric vehicle subsidies are a big concern of mine and to my district, and I will explain that, the reason for that.

Setting aside the issue of the actual emission impacts of EVs, I am concerned about the actual policy we rushed into law. If you will remember, the Inflation Reduction Act did not go through reg-

ular order. It didn't go through the committee process. It went straight to the floor. And there is a problem with that.

Also as you are aware, the law expands EV tax credit incentives, but it also puts in place new requirements for manufacturing those vehicles and batteries in the United States. The goal of this is to bring more manufacturing into the U.S.

We all agree with that. Republicans, Democrats, we all want more manufacturing in the U.S. We all agree with that.

Unfortunately, a major company, Hyundai, Hyundai announced, in my district, the largest economic development project in the history of our state. They announced that they were going to be building an electric vehicle plant that is going to be a \$5.5 billion investment in the First Congressional District of Georgia. It is going to create 8,100 jobs. And that is not the—that is just their plant. It is not the subsidies and the other companies that are going to be there as well.

They expect for subsidiary companies to invest another billion dollars, for a total of about \$6.5 billion investment right there in the First Congressional District of Georgia, 8,100 jobs, plus the other jobs that are coming about as a result of the ancillary jobs that will be affiliated with the other companies that come there.

But now it is all at risk. All of it is in jeopardy. The largest investment in the history of the State of Georgia in jeopardy because of the Inflation Reduction Act. And let me tell you why.

It says that Hyundai will not be able to qualify for this—for these credits because they won't have their plant built for 18 to 24 months from now. So they are not going to be able to participate in these EV tax credits. They are considering withdrawing that.

Now, a couple of things I want to point out. This is egregious in the sense that we did not go through regular order. You know, none of us is as smart as all of us. If it had gone through regular order, perhaps we could have—we could have realized what was going on here, we could have vetted it and understood that this was a problem.

But more so than anything, the President of the United States was in South Korea the week before and assured the leaders of this company that they would be taken care of in the Inflation Reduction Act. And then they go and announce it, and the following week, 2 weeks from when he had been in South Korea, this Inflation Reduction Act is introduced and passed, rammed through without regular order. And all of a sudden, that promise that was made to them, they find out they are not going to be eligible for this.

Let me ask you something, Mr. Rossetti. Most electric vehicle models on the market today won't qualify for this EV tax credit. Is that your understanding of that?

Mr. ROSSETTI. That is my understanding. The narrower constraint of the new EV tax credit is going to mitigate the eligibility across existing EV producers.

Mr. CARTER. Is that going to result in more EVs on the road?

Mr. ROSSETTI. Well, according to the estimates of the new EV tax credit, which we show would only support about a million EVs, that is far lower than the projected uptake even without the IRA.

So I don't see that specific tax credit having a huge benefit to the new EV market uptake.

Mr. CARTER. The EV tax credits that are in the Inflation Reduction Act, who do they—that are written into law, who benefits from them?

Mr. ROSSETTI. That is a great question. So when we think about the tax credits for new EVs, that is obviously going to benefit people who are buying new EVs.

But I am also a bit skeptical of the used EV tax credit, because the expectation is that people who are buying used vehicles would benefit the most from having their purchasing power increased. But I would also expect people who already have EVs that are going to sell them would do so anyway. So they might be able to charge a higher price because of the used EV tax credit, which might actually inadvertently benefit people who already own EVs and are generally—

Mr. CARTER. Well, I am about out of time. I thank you for your answers. But, again, I want to reiterate, the largest investment in the history of the State of Georgia in jeopardy because this bill was rammed through. It didn't go through regular order. It wasn't vetted like it should have been. Because promises were made to these people that weren't kept, and now it is in jeopardy.

Thank God we are the number one forestry state in the Nation, and we can afford this.

Thank you. I yield back.

Ms. CASTOR. Next up, Representative Escobar, you are recognized for 5 minutes.

Ms. ESCOBAR. Thank you so much, Madam Chair. And I think it is really important first to recognize what is happening in your State of Florida and to tell you just how much I, and I know others, have been keeping Floridians in our prayers. Just seeing the devastation that families are living through has been so heartbreaking.

And to see really kind of—the irony of it is, here we are talking about the Inflation Reduction Act and all of the benefits that can and will come from this historic piece of legislation, while at the same time, you know, on TV screens across America, we are witnessing the devastation happening in Florida as a result of the climate catastrophe.

And the fact of the matter is, and the tragic reality is, we have taken far too long to act. And for decades we have heard from people who were either climate deniers or who loved to list all of the obstacles or, you know, any potential downsides to investment in order to address the climate crisis, instead of all of us being on the same page about solutions.

And I have to agree with my colleague, Mr. Casten, who said that we—and we had to pass climate action legislation through reconciliation without a single Republican vote because, tragically, too many of our Republican colleagues either want to obstruct progress on this or deny that this is a challenge altogether.

And so, you know, while I am very excited about the investments in the Inflation Reduction Act, I am also very cognizant of the fact that we are acting decades too late.

I have said this before. You can't unmelt an ice cap, you know, and so we are going to have to do the best we can, as quickly as



we can, in order to make sure that those dollars go out the door and are as effective as they can be.

I would like to start with a question to Dr. Warren. And to all of our panelists, thank you all for testifying today. Thank you for taking time to have this really important conversation.

Dr. Warren, I represent the community of El Paso, Texas, which is an economically disadvantaged, mostly Latino community on the U.S.-Mexico border. And we have seen the impact of severe drought in our community, followed by historic rainfall that leads to flooding and that leads to complete topsoil erosion, destruction of infrastructure. So we have been having to balance both of those things.

But I will tell you, I have a community eager to lean in on addressing the climate crisis and also taking advantage of the Inflation Reduction Act. And our Chairwoman kind of mentioned this in her questions and her comments as well, you know, wanting to make sure that—that communities understand how to access those funds. But my particular interest is underserved communities and making sure that we get as much information and get those dollars directly to them.

And so I would love for you to highlight for us how underserved communities can benefit from these incentives in the Inflation Reduction Act, please.

Dr. WARREN. Thank you for the question, Representative. I am sorry. I was going to say, I am sorry for the things that your community is going through. That is actually where I wanted to start.

In terms of how they can take it—or how they can benefit from these incentives, again, these clean technologies are actually good for consumers because they cut down on operating costs, they cut down on energy costs, which communities exactly like the one you are describing will benefit from. So that will save them money that they can keep in their wallets.

The problem has been that they generally cannot afford these technologies. So the IRA comes in and actually brings down these purchase costs and allows them to be part of this clean energy transition.

In terms of vehicles, the fact that we have used EV credits is a huge thing. This is the first time that tax credits can be used for the secondary car market, and communities like this generally buy their vehicles on the secondary car market.

So once again, this gives them the opportunity to participate. They can transfer those credits to dealerships, which will allow them to actually take advantage of the full incentive rather than just what would be limited to their tax liability.

So even besides cars, in the homes as well, they can reduce the cost of energy efficient appliances, and they can weatherize their homes, all that leads to lower energy spend and energy costs, which allows them to save money that, once again, they can keep in their wallets.

Ms. ESCOBAR. Dr. Warren, thank you so much for your work. And you are right, the secondary car market is going to be huge, and we have got to make sure that our communities, especially communities in need like mine, stand ready to take advantage. Thank you so much. Appreciate it.

I am out of time. I yield back, Madam Chair.

Ms. CASTOR. Thank you.

Next up, Mr. Palmer, you are recognized for 5 minutes.

Mr. PALMER. Find my talk button. Thanks.

And, Chair Castor, I am glad to know that your family and community were spared, and we do continue to monitor what is going on in Florida, and I know all of us are committed to helping any way we can.

I do want to talk about what you call the Inflation Reduction Act. I call it the income reduction act. We were talking with economists, including left-of-center economists, economists that were in the Obama administration, that believe that this is going to make inflation worse.

And we have been following this very closely. The more money you pour into the market, the worse it makes inflation. But when you add to that these, I think, very devastatingly damaging energy policies that are being implemented by the Biden administration and supported by the Democrats in Congress, it is going to make life even harder for American families.

We are in a cost-of-living crisis. We are not only seeing the price of goods and services go up, food, just basic living items. There are 20 million Americans that are already behind on their utility bills, and it is going to get even worse this winter.

I am very concerned about the number of excess winter deaths that we will see as a result of people not being able to keep their homes adequately warmed and still be able to afford their food and medicine.

We have seen the impact that the passage of this bill had on the stock market. And there are millions of families all over the country that had invested in the market with the hopes of using the returns from those investments to pay for their kids' college. They are not planning on getting the government to pay for their kids' college. They were going to pay for it.

You have got families where people in their late 50s, early 60s, planned to retire, they can't do that now. You have got retirees that are needing to find another job because their investments are not keeping up with inflation.

And then looking at what is happening to the market—it was actually predicted—that if we passed another stimulus bill like the income reduction act that it would result in the Dow going below 30,000. They actually predicted, you know, 29,500, and almost hit it spot on.

And I know, you know, my Democrat colleagues like to claim that we are climate deniers. That couldn't be further from the truth. We understand climate. And having worked in engineering, as I have said many times, I understand what it takes to build out the infrastructure that you have to have to go to lower carbon emissions.

This idea that you are going to go to zero carbon emissions in the near future is a pipe dream. It is not possible, from an engineering side, and it is only going to make things worse. And I am very concerned about how this is impacting.

This idea that this—this is one of the lowest hurricane—instances of hurricanes in hurricane season in a long time—we went one 12-year period where we didn't have really any significant hur-

ricanes—that even the Intergovernmental Panel on Climate Change admits that there is no consensus that man-made activities or climate change have any impact on the number, frequency, or intensity of hurricanes. This is what you get when you live on the Gulf Coast. You have hurricanes. We have had them for years.

The interesting thing is, is that since 1900, in terms of loss of life attributed to natural catastrophes, there has been a 98 percent reduction. A lot of that has to do with the fact that we have learned how to prepare for these natural disasters and mitigate against them. And that is what we ought to be doing in preparation for the climate change that is coming that we can't do anything about.

I hear misrepresentations about the history of drought as though drought is a new thing in the southwestern part of the United States. I first would remind my colleagues that that is a desert, arid region. It is an arid region. There is enormous numbers of people living there relative to what there have been in the past, so it creates a tremendous demand for water. But we have had droughts in the southwestern United States that lasted 50 to a hundred years, a thousand years ago.

So we have got to get back, not only to the science of climate change, but also to the history of climate change if we want to have any impact that truly helps people. And throwing more money at it is not the answer.

And we are going to face a time when we literally have blackouts in the Midwest, because they have changed the energy mix that fuels—that provides the power to our grid.

And, with that, Madam Chairman, again, I am very concerned about what is going on in Florida for family and friends down there. And if we can be of any help, let us know.

I yield back.

Ms. CASTOR. Thank you.

Next up, Ranking Member Graves, you are recognized for 5 minutes.

Mr. GRAVES. Thank you, Madam Chair. Madam Chair, thanks again for the hearing. I want to thank you all for being here, and I apologize, I had to take off.

I understand that there was maybe a little bit of an unpleasant dialogue earlier, and I am very sorry that I missed it, but I want to make note that that is the second time in 2 weeks that there has been a member of—in this case, this committee, and the same member on another committee that attacked a witness that they didn't agree with.

Last week it was Michael Shellenberger, and I think that it was attacking the witness because they didn't agree. And disagreeing is fine, but if we are going to truly address climate change, we have got to stay focused on emissions. We have got to stay focused on emissions.

I think there are three things that we have got to stay focused on. I think it is the affordability of energy, I think it is energy security in regard to the supply chain, and it is the emissions.

I want to remind you all, as the United States has led the world in reducing emissions, for every one ton of emissions we have re-

duced, China has increased by four. China has increased by four for every one ton of emissions we have reduced.

It is infuriating to sit here and watch us continue to go on this path where right now the United States emissions are actually increasing. You know, read it in the press, U.S. emissions are increasing right now.

The Inflation Reduction Act, as I noted earlier in quoting Mr. Rossetti's testimony, projected that two-thirds of the emissions reduction under that legislation were already going to be—were already going to happen.

Mr. Casten made note in his comments earlier about how the economics are being distorted or volatility or whatever. Look, if you want to talk about volatility or distorting economics, it is by stepping in and making things economic—distorting or making economics perverse in a way that there is not a path to economic sustainability.

We always talk about environmental sustainability. What happens when subsidies dry up, when they phase out? If these projects aren't on a path to economic sustainability, that causes volatility.

By making or distorting economics in a way that makes people invest in projects or technologies that aren't economically sustainable, that just doesn't make sense. We are creating the volatility by not thinking about a sustainably—an economically sustainable glide path for some of these technologies.

Mr. Rossetti, I understand that you took some lumps earlier in regard to some of your statements on the IRA. I wanted to give you a chance to clarify some of your remarks.

Mr. ROSSETTI. Sure. You know, one thing that I thought was a little interesting is that Representative Casten I think correctly pointed out that subsidies do distort markets and actually reduce competition and, therefore, make things more expensive in the long run, yet then defended the extremely large subsidies in the IRA. It seems to be contradictory.

But one thing I also think is important to note is, the IMF is frequently cited for its estimate of fossil fuel subsidies, but that estimate is almost entirely contingent upon estimate that if carbon is not taxed, that therefore that equates to a subsidy, which is kind of similar in logic to saying that you are, you know, subsidizing your local bank by not robbing it.

If the Democrats wanted to implement a carbon tax to address that, if they truly believe that, then they certainly could have under budget reconciliation provisions.

Mr. GRAVES. Thank you, Mr. Rossetti. Mr. Rossetti, are you a lobbyist?

Mr. ROSSETTI. Absolutely not.

Mr. GRAVES. And are you advocating for solutions that are economically sustainable?

Mr. ROSSETTI. Economically sustainable climate solutions are key to actually bring down global emissions. You look at where emissions are growing, it is developing nations. So if you want something that is going to help us in the long term especially address these impacts that many are so concerned about, you need to have technology that is low in cost, exportable, and going to be

deployable in communities that might have a fifth or less of the income of a typical American household.

Mr. GRAVES. Madam Chair, I think the point Mr. Rossetti just made is absolutely key, that ensuring that the technologies that the Federal Government is involved in, that there is a path to economic sustainability because that is the only way that you achieve a path to environmental sustainability. And otherwise, you are creating the volatility.

And I think Mr. Rossetti just made the point that the government's actions right now, we are seeing higher emissions. As I noted in my opening statement, we are seeing one-quarter of all Americans unable to afford food, medicine, or energy.

And we are seeing greater energy insecurity. Even Secretary Blinken, just this week, went to other countries asking them for critical mineral supplies that we have right here in the United States.

So I think, again, we share objectives in regard to lower emissions and a sustainable trajectory, but I think maybe a different pathway of getting there would make a lot more sense.

I yield back.

Ms. CASTOR. All right. Next up, Mr. Crenshaw, you are recognized for 5 minutes.

Mr. CRENSHAW. Thank you, Madam Chair. Thank you for holding this hearing and allowing us to disagree on whether or not this is good for America or bad for America and certainly answer the question about whether it is good for inflation.

Although I did notice that in the final hours of passing this bill, everyone basically agreed that this was not about reducing inflation, and instead it began being branded as a climate and energy bill.

So let's take it as a climate and energy bill and ask the question, is it even good for energy security, is it even good for the environment?

I would argue that it is not. Fundamentally, this bill took a bunch of taxpayer money, about \$257 billion to be exact, and it invested it in intermittent energy sources, solar and wind to be exact. Now, these are known to increase the price of electricity on whatever grid they are prevalent, whether that is in California or Germany, while also causing grid disruptions because of their intermittency.

And even if we decided that that is what we really wanted, you probably still can't accomplish what you want to accomplish because of the sheer physical challenges that you face.

So under the rosiest of scenarios where there is—let's imagine this world—no bureaucratic red tape, no litigation, no weaponizing of the court system, and a well-functioning permitting system, we might get 155 gigawatts of new energy capacity brought online by 2030. That is the estimates from optimistic, left-leaning sources.

So in this best scenario, you would get an extra 25 percent in total capacity for the United States. But you got to remember, when you are talking solar and wind in particular, you can't just talk capacity. You have got to talk actual energy production, which is usually only 30 percent of capacity. So that number gets reduced again. And eventually we realize we are really only adding 10 per-

cent additional electricity production under the rosier of scenarios and at quite a great cost.

So what is the cost? Well, it is not just the \$250 billion plus in taxpayer money, it is not just the increases in electricity cost to the consumer. But there is also an environmental cost in terms of land and materials that are required to build these new sources of energy. Because to get to the power capacity of wind that Democrats are hoping for, you would need wind turbines covering the entire State of Maryland, about 12,000 square miles. I am not sure that is good for the environment.

It is not just about space, it is that to save the environment, you have got to hurt it first. You have got to dig up a lot of materials. And to build 100 megawatt wind farm, you need 30,000 tons of iron ore, 50,000 tons of concrete, 900 tons of nonrecyclable plastics. Multiply all that by 850 to get to the 85 gigawatts needed, and you get 25 million tons of iron ore, which means doubling the mining at our five largest iron ore mines in America.

It is also 52 million tons of concrete, and that is enough concrete for 3 million new homes, or more than enough concrete to finish the remaining hundreds of miles of the I-69 highway that will drive economic benefit for the entire country. And, of course, it is 765,000 tons of plastic which require a drastic increase in oil and gas production.

Finally, it reduces property values by 7 to 12 percent. It will kill wildlife like the golden eagle and hurt agricultural production.

And that is not to say I am opposed to wind and solar at all. I am not opposed to using our natural resources to give ourselves energy, but throughout history, energy has been about getting more energy with less resources by utilizing energy dense materials. More energy for less costs, more energy with fewer air pollutants.

But these tradeoffs, just to get 10 percent of our total production, are simply not worth it. And as policymakers, we have to be looking at the cost-benefit analysis in what we are doing and what will actually yield us the results that we want. And I think this bill will fail to do that.

I yield back.

Ms. CASTOR. Thank you very much.

I want to thank our witnesses for your testimony today, especially how these clean, cost-saving technologies will benefit consumers, businesses, workers.

The American people put us—give us a competitive edge against other countries across the planet. The Inflation Reduction Act is a tremendous step forward.

It was recently described by the head of the International Energy Agency as the single most important action in addressing climate change since all of the countries on the planet came together to tackle the crisis. But we know there is more to do, and it is on all of us now to work with the Biden administration, work in our own hometowns to fulfill this big climate deal.

Together we can keep forging this path towards energy independence, harness the immense potential of American clean energy, and I know that American ingenuity will help get us there.

So thank you very much. We will make sure that your testimony is included in the record.

Without objection, all members have 10 business days within which to submit additional written questions for witnesses, and I ask you to please respond quickly if you are able.

Thank you all very much. We are adjourned.  
[Whereupon, at 2:01 p.m., the committee was adjourned.]

**United States House of Representatives  
Select Committee on the Climate Crisis**

**Hearing on September 29, 2022**

**“A Big Climate Deal: Lowering Costs, Creating Jobs,  
and Reducing Pollution with the Inflation Reduction Act”**

**Questions for the Record**

**Dr. Quinta Warren  
Associate Director of Sustainability Policy  
Consumer Reports**

THE HONORABLE KATHY CASTOR

**1. Climate impacts are already underway in communities across the country. Electric power infrastructure is especially vulnerable to extreme weather, as we saw with the devastation from Hurricane Ian. Dr. Warren, how would the consumer incentives in the Inflation Reduction Act help families have access to rooftop solar and backup storage that could help them keep the lights on during, and immediately after, extreme weather events?**

In light of rising electricity and home energy costs, the incentives in the IRA make installing solar panels and storage batteries an even more attractive investment for many homeowners than it was just a couple years ago.<sup>1</sup> By allowing consumers who install solar the ability to subtract 30% of the costs of their system as a tax credit, the IRA empowers consumers to make decisions that will give them greater control over the energy resilience in their homes, which will be critical during extreme weather events that cause blackouts.

**2. Dr. Warren, increasingly consumers want access to clean energy and clean vehicles. How would the incentives in the Inflation Reduction Act help increase access to these clean technologies for all Americans?**

Our 2022 nationally representative surveys on electric vehicles<sup>2</sup> and home sustainability<sup>3</sup> show that one of the largest barriers preventing consumers from adopting cleaner technology is purchase costs. The IRA will alleviate that directly by providing consumers incentives to purchase new electric appliances in addition to new and used electric vehicles. By ensuring that the incentives go to middle- and lower-income consumers, the IRA will help support a clean energy transition for those who have not historically benefited from federal incentives. Not only have we seen that these clean technologies help consumers save money on fuel and maintenance costs, there are also cost savings associated with the positive health benefits that come with transitioning to cleaner technology.

<sup>1</sup> U.S. Energy Information Administration, Short Term Energy Outlook.  
<https://www.eia.gov/outlooks/steo/report/electricity.php>

<sup>2</sup> January/February 2022 Consumer Reports nationally representative Battery Electric Vehicle and Low Carbon Fuels Survey of 8,027 US adults.  
[https://advocacy.consumerreports.org/press\\_release/more-americans-would-definitely-get-electric-vehicles/](https://advocacy.consumerreports.org/press_release/more-americans-would-definitely-get-electric-vehicles/)

<sup>3</sup> March 2022 Consumer Reports nationally representative Home Sustainability Survey of 2,240 US adults.  
[https://article.images.consumerreports.org/prod/content/dam/surveys/Consumer\\_Reports\\_Home\\_Sustainability\\_March\\_2022](https://article.images.consumerreports.org/prod/content/dam/surveys/Consumer_Reports_Home_Sustainability_March_2022)

**Questions for the Record**

**Josh Nassar**

**Legislative Director**

**United Automobile, Aerospace, and Agricultural Implement Workers (UAW)**

THE HONORABLE KATHY CASTOR

**1. Mr. Nassar, are there vehicles that will qualify for the new electric vehicle tax credit in the Inflation Reduction Act?**

Yes, following the passage of the Inflation Reduction Act (IRA), the Department of Energy (DOE) published a list of plug-in vehicles with final assembly in North America, using data from National Highway Traffic Safety Administration (NHTSA) and the Environmental Protection Agency (EPA). Please see below for the DOE's published list of electric vehicles (EVs) and plug-in electric vehicles (PHEVs) made in North America, as of October 6, 2022. ("X" symbol is used to indicate vehicle models that were ineligible for the credit before passage of the Inflation Reduction Act).

Model Year	Vehicle	Manufacturer Sales Cap to be Lifted
2022	Audi Q5	
2022	BMW 330e	
2022	BMW X5	
2022	Chevrolet Bolt EUV	X
2022	Chevrolet Bolt EV	X
2022	Chrysler Pacifica PHEV	
2022	Ford Escape PHEV	
2022	Ford F Series	
2022	Ford Mustang MACH E	
2022	Ford Transit Van	
2022	GMC Hummer Pickup	X
2022	GMC Hummer SUV	X
2022	Jeep Grand Cherokee PHEV	
2022	Jeep Wrangler PHEV	
2022	Lincoln Aviator PHEV	
2022	Lincoln Corsair Plug-in	
2022	Lucid Air	
2022	Nissan Leaf	
2022	Rivian EDV	
2022	Rivian R1S	
2022	Rivian R1T	
2022	Tesla Model 3	X
2022	Tesla Model S	X
2022	Tesla Model X	X
2022	Tesla Model Y	X
2022	Volvo S60	
2023	BMW 330e	



Model Year	Vehicle	Manufacturer Sales Cap to be Lifted
2023	Bolt EV	X
2023	Cadillac Lyriq	X
2023	Jeep Grand Cherokee PHEV	
2023	Jeep Wrangler PHEV	
2023	Lincoln Aviator PHEV	
2023	Mercedes EQS SUV	
2023	Nissan Leaf	

Source: Department of Energy.<sup>1</sup>

GM and Tesla reached the 200,000 mark before the pandemic and several other automakers were approaching or had recently crossed the threshold. Over time, fewer and fewer models would be eligible for the credit if Congress had not acted. IRA's elimination of the cap enabled consumers to gain access to the EV tax credit therefore undoubtedly helping to strengthen the EV market. Clearly, the number of models that qualify for the credit under the North American final assembly requirement is extensive.

Bloomberg New Energy Finance estimates 76% of the EVs sold in the U.S. in the first half of 2022 would qualify for the North American assembly requirement.<sup>2</sup> In addition to the list above, nearly all major automakers have announced plans to produce additional electric vehicles in North America. IHS Markit forecasts significant increases in North American battery electric vehicle (BEV) and PHEV production over the next decade, reaching 3.6 million vehicles in 2025 and 6.5 million vehicles by 2029.<sup>3</sup>

## 2. Mr. Nassar, will the Inflation Reduction Act incentivize additional electric vehicle deployment beyond what would have happened without the law?

Yes, the IRA has several provisions, if properly implemented and enforced, that could help significantly boost U.S. EV and PHEV manufacturing. In addition to the EV tax credit, there are several other programs to note. Without this law, our domestic industry would fall further behind in the global EV auto market. According to Benchmark Mineral Intelligence, China continues to dominate these supply chains, including 78% of global cathode production and 91% of global anode production, as well as significant shares in all of the key minerals required for lithium-ion battery production.<sup>4</sup> The European Union (EU) has established the European Battery Alliance to promote production of batteries and key components within the EU.<sup>5</sup> South Korea is home to LG Chem, the world's largest producer of lithium-ion batteries for electric vehicles, and plans to triple its battery production.<sup>6</sup> If the U.S. does not also invest in the upstream battery supply chain, U.S. manufacturers will continue to be dependent on imports, even as we build up battery cell production capacity. Without proper planning, our dependence on imports will become greater over time as EV production increases.

— The *Advanced Technology Vehicles Manufacturing (ATVM) loan program* broadly expands the number of vehicles and other modes of transport eligible to receive grants and execute the full \$17 billion in remaining loan authority. Qualified sectors include ultra-efficient vehicles, light- and medium-duty vehicles (that meet standards), heavy-duty vehicles (that meet standards), trains and locomotives, maritime vessels, aircrafts, and hyperloop technology. There is a priority on projects most likely to create quality jobs (*legacy facilities* are

<sup>1</sup> Department of Energy. "Electric Vehicles with Final Assembly in North America": <https://afdc.energy.gov/laws/electric-vehicles-for-tax-credit>

<sup>2</sup> Bloomberg New Energy Finance. September 20, 2022. "US Climate Law Shifts EV Race to Warp Speed," p. 12.

<sup>3</sup> IHS Markit. "Light Vehicle Powertrain and Alternative Propulsion Forecast."

<sup>4</sup> Benchmark Mineral Intelligence. "Infographic: China's Lithium Ion Battery Supply Chain Dominance":

<https://www.benchmarkminerals.com/membership/chinas-lithium-ion-battery-supply-chain-dominance/>

<sup>5</sup> EBA250. "About EBA250": [www.eba250.com/about-EBA250/?cn-reloaded=1](http://www.eba250.com/about-EBA250/?cn-reloaded=1)

<sup>6</sup> Autoblog. "LG Chem to triple its EV battery production capacity": <https://www.autoblog.com/2020/10/21/lg-chem-to-triple-ev-battery-production/>

prioritized for assistance). UAW has supported the ATVM program since its inception over a decade and a half ago. We fought several efforts in Congress to strip all funding from the program.

- An additional \$2 billion in funds are allocated for *Domestic Manufacturing Conversion grants* to support the conversion & retooling of existing auto manufacturing facilities to manufacture clean vehicles, including those at risk of closure, onshore and build batteries, and other advanced vehicle technologies.
- The Inflation Reduction Act provided \$10 billion for the *48C tax credit* to support the establishment, retooling, and expansion of clean energy and technology manufacturing facilities in communities that have lost fossil fuel energy jobs and to partially counteract the impacts of the carbon footprint in the area from the previous industry. It is prioritized for communities that have not received prior funding under 48C. It included \$10B in tax credits to qualifying projects (\$4B earmarked for communities impacted by coal-related loss of work) and a \$30 billion investment in production tax credits to accelerate U.S. manufacturing of solar panels, wind turbines, batteries, and critical minerals processing are included. (Please see the list below of UAW-represented facilities that could be impacted by the expansion of electrified vehicles in the short, medium, and long term.)

Company	City	State	Product
Allison Transmission	Indianapolis	IN	Transmissions
American Axle	Fraser	MI	Transmission Components
American Axle	Royal Oak	MI	Transmission Components
American Axle	Troy	MI	Transmission Components
Amstead Means Industries	Saginaw	MI	Transmission Components
Anderson Cook	Chesterfield	MI	Transmission Components
Blue Ridge Pressure Casting	Leighton	PA	Engine & Transmission Components
Camshaft Machine	Jackson	MI	Engine Components
Dana	Lafayette	IN	Transmission Components
Dana	St. Clair	MI	Transmission Components
Detroit Diesel	Detroit	MI	Engines; Transmissions
Dura	Fremont	MI	Transmission Components
Eaton	Auburn	IN	Transmission Components
Ford	Livonia	MI	Transmissions
Ford	Woodhaven	MI	Engine Components
Ford	Romeo	MI	Engines
Ford	Dearborn	MI	Engines
Ford	Rawsonville	MI	Transmission Components
Ford	Sterling Heights	MI	Transmissions
Ford	Sharonville	OH	Transmissions
Ford	Lima	OH	Engines
Ford	Brook Park	OH	Engines
GKN	Gallipolis	OH	Transmission Components
GM	Bedford	IN	Engine Components
GM	Romulus	MI	Engines; Transmissions

Company	City	State	Product
GM	Saginaw	MI	Engine Components
GM	Grand Rapids	MI	Engine Components
GM	Bay City	MI	Engine & Transmission Components
GM	Flint	MI	Engines
GM	Buffalo	NY	Engines
GM	Rochester	NY	Engine Components
GM	Toledo	OH	Transmissions
GM	Defiance	OH	Engine Components
GM	Spring Hill	TN	Engines
GT Technologies	Toledo	OH	Engine Components
GT Technologies	Defiance	OH	Engine Components
Hastings Manufacturing	Hastings	MI	Engine Components
Huron Manufacturing	Lexington	MI	Engine & Transmission Components
Jones L. E. Company	Menominee	MI	Engine Components
Kellogg Crankshaft	Jackson	MI	Engine Components
Kelvion Inc	Burkesville	KY	Transmission Components
Maclean Curtis	Buffalo	NY	Transmission Components
Ohio Crankshaft	Cleveland	OH	Engine Components
Stellantis	Kokomo	IN	Engines & Transmissions
Stellantis	Tipton	IN	Transmissions
Stellantis	Trenton	MI	Engines
Stellantis	Dundee	MI	Engines
Tenneco	Burlington	IA	Engine Components
Tenneco	Sparta	MI	Engine Components
Tenneco	Greenville	MI	Engine Components
Tenneco	Cambridge	OH	Engine Components
Textron	Muskegon	MI	Engine Components
ThyssenKrupp AG	Danville	IL	Engine Components
Transtar—Dacco Browser	Cookeville	TN	Transmission Components
Volvo-Mack	Hagerstown	MD	Engines; Transmissions

The IRA's significant investments sends a clear signal to the industry and investors of our national commitment to expand our EV and PHEV manufacturing footprint in the U.S.

**3. Mr. Nassar, how will the Inflation Reduction Act help encourage automakers to invest in manufacturing vehicles that will meet the new standards in the Inflation Reduction Act?**

Thank you for the question. There are numerous ways that the Inflation Reduction Act will encourage automakers to invest in manufacturing electric vehicles.

Thanks to the passage of the IRA, Chips and Science Act, and the Infrastructure Investment and Jobs Act (IIJA) the Biden Administration is now able to make a once-in-a-generation investment in domestic manufacturing. As the industry gradu-

ally transitions to electrified vehicles, automakers and battery manufacturers can take advantage of a wide range of subsidies, including:

- The IRA's 30D Clean Vehicles Consumer Tax Credit extension (Sec. 13401), which provides up to \$7,500 per vehicle in savings on EVs and PHEVs with the new North America final assembly requirement.
- The BIL's Battery Material Processing Grants (Sec. 40207(b)) and Battery Manufacturing and Recycling Grants (Sec. 40207(c)) provide \$6 billion in grants to invest in domestic battery production.
- The IRA expands the Department of Energy's Advanced Technology Vehicle Manufacturing (ATVM) by lifting the loan program cap and appropriating \$3 billion fund direct loans (Sec. 50142). With these changes, the ATVM program now has \$55 billion in loan authority for low-interest loans for clean vehicle manufacturing investments.<sup>7</sup>
- The IRA appropriates \$2 billion for Domestic Manufacturing Conversion Grants (Sec. 50143) to support domestic production of EVs, PHEVs, and fuel cell vehicles.
- The IRA's 45X Advanced Manufacturing Production Credit (Sec. 13502) provides battery manufacturers with tax credits of \$35 per kilowatt-hour for domestically produced battery cells and \$10 per kilowatt-hour for battery modules. These battery production tax credits are worth thousands of dollars per electric vehicle and covers approximately one-third the cost of producing an EV battery today. The program further reduces the cost of battery inputs through a 10% production tax credit on critical battery minerals and electrode active materials.
- The IRA's Extension of the Advanced Energy Project Credit (Sec. 13501) allocates \$10 billion for the 48C investment tax credit for advanced energy projects, including electric vehicles, components, and materials.

**4. On Sep. 27, 2022, the Biden-Harris Administration announced it approved Electric Vehicle Infrastructure Deployment Plans for all 50 States, the District of Columbia and Puerto Rico ahead of schedule under the National Electric Vehicle Infrastructure Formula Program, established and funded by the Bipartisan Infrastructure Law. This is a good example of how the Inflation Reduction Act incentives will build on the climate investments Congress recently passed. Mr. Nassar, could you please elaborate on how the Bipartisan Infrastructure Law electric vehicle charging investments and the electric vehicle incentives in the Inflation Reduction Act will work together to accelerate electric vehicle deployment?**

The success of the electric vehicle transition in the U.S. will depend largely on three factors: strong consumer demand, robust infrastructure investments, and significant EV supply-side investments. The IIJA's infrastructure investments will be crucial to ensure that advanced vehicle technologies are built in the U.S. and create quality jobs for American autoworkers.

The IIJA makes significant investments in the nation's electric vehicle infrastructure. IIJA contains \$7.5 billion to build out a national network of EV chargers in the United States. A historic \$5 billion investment was included for the replacement of existing school buses with zero emission and clean school buses from 2022–2026.

It is essential to have the infrastructure in place to support the increasing numbers of EVs on the road. EV sales have grown steadily over the past decade, but they still represent a small percentage of all vehicle sales. EVs and PHEVs combined to represent 4% of U.S. auto sales in 2021. In most parts of the country, EV charging infrastructure is inadequate, and the electrical grid might have difficulty handling extreme temperatures and more electricity consumption. It has been noted that consumers shopping for an EV have often express concerns about battery range and charging speed as they have a limited selection of models and segments. Fortunately, the Inflation Reduction Act along with the IIJA contain investments in the infrastructure that are needed to support greater EV deployment.

Under IIJA, the \$5 billion investment in electric school buses through the clean school bus program will allow school districts around the country to upgrade school's aging public-school infrastructure and reduce emissions from older buses. These provisions work in tandem with the IRA, which incentivizes companies to invest in new technologies including electric school buses. UAW members proudly build electric school buses throughout the country. To give an example, Maryland Montgomery

<sup>7</sup> Department of Energy, Loan Program Office. "Inflation Reduction Act of 2022": <https://www.energy.gov/lpo/inflation-reduction-act-2022>

County school system signed a \$169 million deal in 2021 to lease 326 buses that are proudly built by UAW members.<sup>8</sup>

**5. Climate impacts are already underway in communities across the country. Electric power infrastructure is especially vulnerable to extreme weather, as we saw with the devastation from Hurricane Ian. Mr. Nassar, how would the electric vehicle incentives help families increase their resilience to climate impacts? Could some electric vehicles provide backup residential energy storage?**

We are witnessing the expanding impacts of climate change in real time. We cannot ignore this reality and must act to better prepare communities for extreme weather events. Sadly, addressing climate change will likely become increasingly difficult as time goes on and air and water temperatures continue to rise.

To be clear, I am not suggesting that recent hurricanes were “caused” by climate change. At the same time, there is no denying that the number and strength of extreme weather and climate events, such as heat waves and droughts, have been on the rise and record temperatures continue to be shattered across the world. Higher water temperatures intensify hurricanes and other extreme weather events, such as the case with Hurricane Fiona. It hit Puerto Rico on September 18th, causing catastrophic damage and flooding across Puerto Rico, and leaving more than 1.4 million people without power in the immediate aftermath. Again, the effects of climate change did not cause Hurricane Fiona to occur, but it did increase its intensity. The realities of climate change demand action, such as reducing emissions, and preparing ourselves to address the consequences of climate change by increasing mitigation efforts. We have a responsibility to current and future generations to tackle obstacles and protect ourselves and the world around us from the harmful and dangerous impacts of climate change.

In terms of EVs providing back up residential energy storage, there is significant potential for EVs to provide back-up energy or contribute to grid resilience, but that technology is not yet widely deployed. EVs are essentially batteries on wheels. You can store energy in those batteries, and if EVs are equipped with something called vehicle-to-grid or vehicle-to-home technology, they can also be used to keep the lights on in emergencies.

By using efficient electric motors and plugging into a grid using more renewables, plug-in electric vehicles, including PHEVs and BEVs, can significantly reduce greenhouse gas emissions.

Additionally, the UAW is working with new companies to create union jobs, such as reaching a neutrality agreement with Forever Energy at its planned vanadium flow battery facility in Shreveport, LA.

**6. According to a study conducted by the BlueGreen Alliance and the University of Massachusetts Amherst Political Economy Research Institute, the Inflation Reduction Act would create more than 9 million good jobs during the next decade. Mr. Nassar, could you please elaborate on why is it important for the Federal government to invest to create jobs in clean energy and clean vehicle manufacturing in the United States where we have high road labor standards?**

The IRA is a great law for working families and retirees. In addition to lowering the skyrocketing costs of prescription drugs, investing in the U.S. manufacturing base, and addressing climate change by investing in low-CO<sub>2</sub> energy sources and mitigation strategies, the IRA puts our country on a strong footing by creating 9 million jobs over the next decade. The PERI study notes that of the 9 million jobs being created by the IRA during the next decade, more than 900,000 jobs will be part of building clean manufacturing supply chains and more than 400,000 jobs will be created in the electric vehicles and clean transportation sectors. Working families need them to be good union jobs.

As more funding and tax incentives become available to companies, high road labor standards must be built into the process. Key conditions or considerations should be met. Does the company support workers’ right to collectively bargain? Are the full-time and part-time workers provided family-sustaining benefits that promote economic security and mobility? Do the workers have a safe, healthy, and accessible workplace built with input from workers and their representatives?

<sup>8</sup> Bloomberg, “Biggest Electric Bus Deal in U.S. Approved in Maryland”: <https://www.bloomberg.com/news/articles/2021-02-24/biggest-electric-school-bus-deal-in-u-s-approved-in-maryland?leadSource=uverify%20wall>

In addition, we must ensure that the investments to build vehicles and components are made in the communities where autoworkers are currently building traditional gas-powered vehicles and powertrains. We cannot wait for ICE jobs to be lost as we need to target new investments for auto manufacturing communities now. Auto manufacturing is central to the economy of many communities, creating community-sustaining manufacturing jobs and stimulating economic activity in other sectors. Government support for EV investments should prioritize investments that create jobs in communities currently producing ICE vehicles and powertrains, hire incumbent autoworkers, and provide wages and benefits on par with unionized auto industry standards.

The EV transition reinforces the continued importance of putting in place policies that facilitate vehicle and parts production in the United States and ease impediments to workers at non-union automakers to organize. As the nation invests in a transition to innovative technology, we must seize upon these opportunities to preserve and increase quality jobs.

The union advantage is noteworthy. Unionized workers are more likely to earn more, have paid sick days and health insurance, and participate in a retirement plan.<sup>9</sup> Policies that strengthen labor standards and support workers' right to collectively bargain are the building blocks for creating a stronger middle class. The shift to electric vehicles cannot come at the expense of good wages and benefits and it is critical that we do not leave workers behind as the industry transitions.

**7. Mr. Nassar, you mentioned in your testimony that significant investments in motor vehicle and battery manufacturing have been announced in Tennessee, Georgia, Michigan, North Carolina, and Kentucky. Mr. Nassar, how can we ensure that many of these new jobs will be available in environmental justice and energy justice communities?**

Implementation, strong oversight, and vigorous enforcement will largely determine the success of the Inflation Reduction Act. The law includes support for communities' long-standing fight for clean air, climate resilience, and environmental justice. These investments will create about 150,000 jobs over the next decade. That includes environmental justice grants focused on creating 30,000 jobs for community-led projects that address the disproportionate health and environmental impacts from pollution; and creating 5,000 jobs from investments to reduce air pollution in schools, particularly in environmental justice communities.

As battery and clean vehicle production ramp up in the U.S, workers' must have an ability to have a voice in the workplace and family-sustaining wages. There are deeply troubling signs for workers in the developing battery supply chain. Auto companies, including union automakers, are often creating joint ventures or strategic partnerships with foreign-based battery companies. This trend can be seen in battery cell production, material processing, and battery recycling. The White House report on critical supply chains found that the quality of new battery industry jobs is far below the automotive powertrain jobs they are replacing.<sup>10</sup> We have significant concerns about whether companies in the battery supply chain will respect workers' rights to a free and fair choice to join a union. The EV transition must not result in increased outsourcing or an erosion of job quality in the auto industry.



<sup>9</sup>Economic Policy Institute. Unions Help Reduce Disparities and Strengthen Our Democracy, April 2021.

<sup>10</sup>The White House. June 2021. "Building Resilient Supply Chains, Revitalizing American Manufacturing, and Fostering Broad-Based Growth": <https://www.whitehouse.gov/wp-content/uploads/2021/06/100-day-supply-chain-review-report.pdf>, p. 120.