

Nearly 2 Years In... Is the Inflation Reduction Act Delivering Yet?

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Greg Dalton: I'm Greg Dalton.

Ariana Brocious: I'm Ariana Brocious.

Greg Dalton: And this is Climate One. This week - we're checking in on the impact of the largest US climate bill ever passed - the Inflation Reduction Act.

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Ariana Brocious: Let's back up for a minute: you'll probably remember that in August 2022, Congress passed a bill intended to jumpstart our transition to a clean energy economy.

Greg Dalton: And a lot of other things... but today we'll be focused on the climate aspects. The IRA was a **huge** bill with many tax incentives for investors, manufacturers, business owners and homeowners. - about 400 billion dollars over ten years.

Ariana Brocious: The legislation was trying to do two things. Number One: to push "mature" clean energy technologies further into the mainstream - think solar panels, electric cars, batteries. And it's also supposed to help emerging technologies - like green hydrogen, carbon capture, and sustainable aviation fuel - get more fully developed so they can be useful in curbing carbon emissions down the line.

Greg Dalton: There's something in it for everybody - big industrial companies and small growth companies. Notably: Most of the benefits are focused on tax incentives for individuals and companies that **choose** to do things. So it's not a big regulatory stick **forcing** anyone to do anything.

Ariana Brocious: It's only been about 20 months since the bill passed, and of course, an effort as massive as shifting the way we power our country is going to take time. But it's still worth checking in to see how much the law has done so far, and what direction we're headed.

Greg Dalton: On today's show we'll hear from a think tank analyst, a climate justice advocate, and a clean energy investor on how they grade the Inflation Reduction Act's progress so far. And it's not all glowing reviews.

Ariana Brocious: Right. One of the major criticisms of the IRA was that the law continues to support fossil fuels. And that was by design – the design of West Virginia Senator Joe Manchin, a Democrat with deep ties to the fossil fuel industry. He was instrumental in writing the bill and getting it passed.... AFTER he blocked President Biden's Build Back Better bill, because he thought it cost too much. But Manchin says he was ready to support new green energy technologies... as long as they ALSO aligned with the goals of his constituents.

Joe Manchin: I didn't think this administration was committed to fossil production so we weren't getting leases done, weren't getting production done. So I made sure when we wrote the bill that you're not going to put a solar farm or a wind farm on BLM lands or territorial waters unless we're extracting the minerals we have under our feet. So they can't do one without the other and that's why we have a balanced approach.

Ariana Brocious: That's Manchin back in March, speaking at CERAWEEK by S&P Global... a major oil and gas conference. He explained that as he sees it, the IRA was designed to ensure U.S. energy security, and he pointed to **record** domestic oil and gas production as proof of its success.

Joe Manchin: It was done basically so the United States of America could have the energy we need to be energy independent, provide energy for our allies across the pond, and be able to invest in technology for the energy of the future.

Greg Dalton: A lot of climate people villainize Manchin– after all, he does represent coal country... but that's his job and he did get this bill passed. And that's how change happens, it can be messy and full of compromise... but it is a way forward. The way it includes policies favored by the fossil fuel industry and Republicans **does** give the IRA broad support. For example, I heard the CEO of a major US oil company praise it at the UN climate conference in Dubai last year. It's a little like Obamacare — people like the policies in it even though they may bash the law and the president who signed it.

Ariana Brocious: And there's an important way that the IRA is different from other climate legislation that came before it. I talked about that with Trevor Houser, partner at the Rhodium Group, an independent think tank that focuses on the transition from fossil to clean energy.

Trevor Houser: So the last time there was a big push in Congress to pass large-scale climate legislation was in 2010, and the beginning of the Obama administration, and that was in the form of a cap and trade system. So the way that operated is you put a price of carbon on the kind of emissions and energy system activity you're trying to discourage. So if you're burning coal in a power plant, if you're burning natural gas in a house, if you're burning oil in a car, there's an additional tax that's put on that to try to discourage that activity. That legislation did not pass. It passed the House of Representatives and it didn't pass the Senate.

Ariana Brocious: And that was Waxman Markey.

Trevor Houser: That was the Waxman Markey bill, exactly. So the Biden administration, kind of

learning from that history, decided to take a different approach, which was, instead of trying to make energy more expensive, they decided to make clean energy cheaper. That would be a more politically palatable approach and using the types of mechanisms that were already in place for different types of technologies, grants, loans, tax credits, but really supercharging those programs and expanding their scope. And so what the Inflation Reduction Act does is it makes a wide range of clean energy technologies and transportation sources much cheaper. And it effectively makes them cost competitive with fossil fuels almost everywhere in the country and in almost all applications.

Ariana Brocious: So carrots instead of sticks.

Trevor Houser: Carrots instead of sticks.

Ariana Brocious: The Rhodium Group has been tracking clean energy investment throughout the economy in collaboration with MIT. A couple months ago, they released a sort of IRA progress report that shows how different projections of the law's impact actually stack up against what's happened so far.

Trevor Houser: And what we found is that overall, the IRA is working largely as expected. The pace of deployment of clean energy technology is accelerating dramatically. Last year, there was 239 billion of investment in clean energy technologies throughout the economy. Up 38 percent year on year, double the pace just a few years ago. Within that there's some technologies and sectors that are doing a little bit better than expected and some that are doing a little bit worse than expected, but by and large, the legislation is operating consistent with what was expected.

Ariana Brocious: So it's doing what it was intended to so far.

Trevor Houser: So far it's doing, in broad strokes it's doing what it was intended to do, which is using public dollars in the form of tax credits and grants and loans to attract private investment into clean energy technology and to accelerate the sales of that technology by making it cheaper for consumers. So if you look at fiscal year 2023, We estimate that there was 220 billion in total investment in clean energy across the country. Of that only 34 billion was taxpayer funded.

Ariana Brocious: Wow. So, one thing that we've been following on Climate One is the recent surge of electric vehicles or zero emission vehicles and battery factories that have been popping up all over the U.S. There's this new so-called, you know, battery belt. So how has the IRA impacted the manufacturing and clean energy supply chain for electric vehicles and batteries here in the U.S.?

Trevor Houser: It's been pretty transformative. So the IRA provides tax credits for manufacturers of critical minerals, of battery component materials, of a battery cell and module assembly. So the whole electric vehicle supply chain can receive incentives under the IRA. And we have seen really explosive growth in clean energy manufacturing in the U.S. largely as a result of that legislation. So over the past two years, there's been 156 billion in new investments in manufacturing announced in the U.S. And that's 165 percent increase over the two years before that.

Ariana Brocious: Whow!

Trevor Houser: So we're really seeing a dramatic amount of investment in manufacturing. And in places that I think people were skeptical, there would ever be U.S. manufacturing.

Ariana Brocious: And so there's this manufacturing side but then there's also the consumer side, and there were provisions in the IRA that give tax credits to average people who want to buy electric vehicles or zero emission vehicles, up to 7,500 for a brand new vehicle, I think 4,000 maybe for a used vehicle.

Trevor Houser: Yep.

Ariana Brocious: But those had some specific restrictions about where those vehicle components were made, if they were U.S. made and so forth. So it did actually limit that pool of what was eligible. So, as you take a look back at the EV market, how did that all shake out?

Trevor Houser: So there were, before the IRA, there were tax credits for electric vehicles, but they were limited to the first 200,000 vehicles that any manufacturer sold. So like the biggest producers of EVs, Tesla, GM, buyers of those vehicles were no longer able to take tax credits. So what the IRA did is it extended that. So that's 7,500 tax credit is now available for any manufacturer, for the purchase of those vehicles. But as you noted, there's some new restrictions. One is income based. And then the second set of restrictions are around the content in the battery itself. So, whether the battery assembly happens in North America and whether the critical minerals that go into the battery come from either North America or a country with which the U.S. has a free trade agreement.

Ariana Brocious: There've been reports that EV sales are declining or that there's sort of a, you know, a lull, but actually your report shows that they're doing well, right? Better than expected.

Trevor Houser: Yeah, so last year, EV sales grew by 52 percent year on year, and accounted for 9.2 percent of all passenger vehicles sold in the U.S. And that's up from just 2 percent a few years ago. So the growth has been really dramatic. A lot of what the news reporting is focusing on is that the pace of sales growth is starting to slow. That doesn't mean total sales are declining. It means that that really rapid pace of growth is going to slow down, and that is normal and expected.

Ariana Brocious: And one thing I'm wondering about here is whether, and this is sort of more speculation, but you know, there's sort of a psychological role that some of these incentives play because I was interested in getting an electric vehicle, looked at the incentives, ended up getting a vehicle that was used, did not qualify for the credit so I'm not actually taking advantage of it, but it was kind of like there was a lot of momentum you know, I was seeing more of them around my neighborhood and whatever. There was more talk about them in the news. And so I wonder if that also has some effect, though it's not actually a financial impact.

Trevor Houser: Yeah, part of the goal with these incentives for the early deployment of technologies is you want to get enough of them into the market to normalize the technology and to dissuade concerns, right? And you can see this with electric vehicles. I mean, we've driven electric vehicles since 2015 in our household and, you know, each generation of cars gets better and better. And as anyone who's driven an EV knows, they are incredibly fast. The acceleration beats any gasoline car by a mile. And when people start to experience the performance benefits of EVs, plus the convenience, that for 360 days out of 365 days a year, you're just charging by plugging it in your house overnight and never have to go to a gas station. Once people experience that convenience, it broadens the appetite and market for the technology.

Ariana Brocious: Mm hmm. Okay, so we've talked a bit about some of the consumer incentives but where are we at with utility scale electric generation and how has that industry or those sectors benefited from the IRA?

Trevor Houser: Yeah. So we had a record year in 2023, almost 33 gigawatts of new utility scale, clean electricity generation and storage was added. And the pace of growth in wind and solar and storage has been accelerated by the Inflation Reduction Act. We're coming in at the lower end of the range of what was expected by modelers for the IRA. And there's a couple of reasons for that. First, high interest rates hit clean energy particularly hard, because all of the cost of a clean energy

facility, like think about a wind farm, all of the costs of that is the capital. It's the equipment that you're installing compared to right up front compared to like a natural gas power plant, where a lot of the cost is just the natural gas you're buying on an ongoing basis to operate it. So when interest rates rise, it creates particularly strong headwinds for renewable electricity. Second, renewable electricity has to be moved from where the resources to where the demand is. If you think back to the power system we've had in the past, you moved the fuel to where customers were, right? So you'd build a natural gas plant near a city, and then you would move the natural gas to that plant and burn it there. So, but you didn't have to transport the electricity that far. With wind and solar, you can't move the wind and you can't move the sun, right? So you need to generate it where those resources are best. And then you have to move the electricity to where demand is. And so while the cost of building a wind farm is quite low now, with the exception of the high interest rates over the past year or two, you also have to invest in transmission lines to connect that electricity to the market. While there's no cost barrier to building those transmission lines, it does require getting permitting approvals for the full distance that a transmission line has to go through. And sometimes you have individual communities that are opposed to having a transmission line routed through their community or don't want the wind farm sited in a place where they can see it. And so renewables compared to fossil fuel is a little bit more vulnerable to these types of non-cost barriers of delays and siting and permitting and transmission construction.

Ariana Brocious: And some of this is simply because they are newer and, you know, these coal and gas plants, in many cases, have been in communities forever, and they have their own share of downsides of pollution, air pollution, noise, so forth, but maybe it's just become embedded in the fabric of life, whereas a new wind farm going up in your farming community can be a more visually distracting thing.

Trevor Houser: So that's a useful frame. So think about if I'm going to, if I want to build an offshore wind project off of Cape Cod in Massachusetts, right? That is going to allow a coal or natural gas fire power plant to shut down and the shutdown of that coal and natural gas fire power plant is going to have huge public health benefits for the communities that live around that power plant. But the people who live along the coast in Cape Cod that are upset that there might be a wind turbine in their view, they're not the ones who live near the coal fired power plant. And so the challenge for policymakers is figuring out how to navigate those issues, in a way that is the best for everybody involved, even if it means that certain people lose out in the process.

Ariana Brocious: Yeah, and this is a super critical part of this transition, you know, because there has been a very unjust distribution of power generation and siting thus far. A lot of the communities where those power plants exist now are bearing the brunt of that pollution. So there was a focus of some of this legislation to really target certain communities that have been disproportionately impacted. So of the 118 billion in federal programs in the law, 40 percent of the benefits are required to go to disadvantaged communities. Can you tell me a little bit about how the implementation of those programs has gone so far?

Trevor Houser: So looking at the first year, low income communities account for about 38, 39 percent of the U.S. population, if you're looking at a census tract level. And 41 percent of clean investment went to those communities, so they received a larger share of total investment than their share of the population. It's even more impressive for energy communities. Energy communities account for 18 and a half percent. of the total population, but they received 37 percent of total investment, in the first year following the Inflation Reduction Act.

Ariana Brocious: So it's working as intended, so far.

Trevor Houser: Yeah, so far the communities that policymakers were most focused on helping are

receiving an outsized share of the investment under the IRA.

Ariana Brocious: The major goal of the Inflation Reduction Act is to reduce emissions. The act seeks to accomplish a 40 percent reduction by the year 2030. Taking a look now, how are we doing in that ultimate goal of reducing emissions?

Trevor Houser: If we look at the pace of progress in 2023, it looks just from that year that, you know, we're certainly on track to come in on that range. But if pace of utility scale, clean electricity investment does not increase meaningfully over the next couple of years, then we'd likely fall a little bit short of that 40 percent reduction. We would come in, you know, more in the thirties range. To get to a 40 percent reduction, let alone a 50 to 52 percent reduction, we need to dramatically expand the amount of wind and solar and storage and other clean electricity technologies like geothermal that we're adding to the grid. The good news is that the cost of those technologies is very cheap now, thanks to the IRA. The challenge is, can we build it fast enough? Can we train the labor source needed? Can we mobilize supply chains? And can we expedite the process? Permitting processes so that those plants can get built in the timeline needed.

Ariana Brocious: Trevor Hauser is a partner at Rhodium Group. Thank you very much for joining us on Climate One.

Trevor Houser: Thanks, Ariana.

Greg Dalton: When a fossil fuel plant closes, the skies clear... But whole communities can be left behind. President Biden's climate agenda is supposed to address that too, with job opportunities and direct investment. Coming up, how are those programs going?

Bineshi Albert: I think where this kind of project sort of missed the mark is creating opportunities, even for tribal nations to change their economic base.

Greg Dalton: Where the IRA is coming up short. That's up next, when Climate One continues.

Ariana Brocious: Please help us get people talking more about climate by sharing this episode with a friend. And we'd love to know what you think of the show. Please give us a rating or review. You can do it right now on your device - and it really helps people find the show. Thanks!

Greg Dalton: This is Climate One. I'm Greg Dalton.

Ariana Brocious: And I'm Ariana Brocious. This hour, we're talking about the Inflation Reduction Act. It allocated 400 billion dollars for climate friendly initiatives. A big chunk of that money is supposed to go to places that have been supported by or disproportionately hurt by fossil fuel production. Now it's been about a year and half since the bill passed and we're checking in - are the promises of the IRA being fulfilled in those places?

Greg Dalton: Bineshi Albert is an Indigenous leader from Oklahoma of the Yuchi and Anishinaabe peoples. She's a longtime climate and environmental justice organizer and recently served as co-director of Climate Justice Alliance. I asked her to give me her sense of how the Inflation Reduction Act is playing out for the communities she serves.

Bineshi Albert: Legislation like that is, you know, there's the hype at the beginning and then there's the implementation, right? And the cogs of implementation move incredibly slow. So, you know, I think there's still yet to be seen, some of the like real output and outcomes of it. But there

are some pieces being implemented for sure, but you know, it's a slow process with the government. It's like trying to get the Titanic to turn on a dime.

Greg Dalton: Right, and some of that's by design, the way our government was designed, a lot of rules to be written, etc. A lot of money moving, we want to make sure that it goes in the right way to the right places. What are the bright spots that you see of things that are happening? What's happening well in your view?

Bineshi Albert: You know, we were always optimistic about some of the funds that were addressing some harms that had happened in system communities. But also around, you know, some of the funds that were reducing different kind of emissions. But even in those funds, like my grandma would say it's the salt with the sugar, right? There are some that are investing in reducing diesel emissions. Absolutely great. Reducing emissions through forestation can be a little tricky, and nuanced, particularly as it impacts the communities surrounding those forests.

Greg Dalton: So you mentioned things are just starting to move and moving slowly and yet climate is seen as this urgent crisis. We got to move quickly. So how does that make you feel with like, Oh, it's going slow, but everyone's saying we gotta go faster, faster. And sometimes that can be at tension with tribal consultation and community input.

Bineshi Albert: Yeah, absolutely. And how, how do we ensure that these resources actually get to community and not just to industry who are in community, right? You know, because a lot of these are still accessible to oil and gas companies, and some of them are primarily directed to oil and gas companies. And so it's both, you know, the things that we're looking forward to, that would be helpful, like around some of the rebate programs, some stuff around rural electric, but even in the rural electric, like some of the language, oil and gas corporations can say, oh, we're doing that work -

Greg Dalton: By bringing methane gas, electricity built from methane gas, that sort of thing.

Bineshi Albert: Yeah. And it, you know, some of those, some of those projects also, you know, allow for some initiatives that are really not getting us to the benchmark that we need to. People use the term false solutions or, I call them, climate scams. It says we're reducing emissions, but it's also a way to just allow the industry to keep producing if they can say they're doing offsets in other ways.

Greg Dalton: Yeah, and those are always a little squishy and murky.

Bineshi Albert: Yeah. They're murky and they continue to contribute to the problem. Right. So if you have, you know, a climate scam where it says, Oh, we're going to do emissions in this, rural agriculture kind of project, but you're still producing the megatons of carbon emissions, then we will never meet our mark, right? We will always fall short of meeting the carbon reduction marks that we need to, if we're still producing at the levels that the U.S. and other countries have always produced. And so that I think that was the missed opportunity with the IRA, you know, how can we include not just the funds and the programs, but how can we include how we're going to phase out coal or how we're going to phase out, you know, producing energy in this kind of way that produces carbon. And instead, we have these programs in the IRA, which basically say, okay, you can still produce as long as you invest in these offsets or invest in these programs that, you know, you can reduce carbon in other ways.

Greg Dalton: Right, so it sounds like you're saying that the programs are adding renewables, but not really shrinking the core problem of fossil fuels. Both can happen, right? The IRA contains over 700 million for tribal specific programs like tribal electrification, climate resilience. Can you speak to

any specifics about where that is happening?

Bineshi Albert: My most recent work with the Climate Justice Alliance included lots of communities, not just tribal communities. But yeah, like there are a number of tribes who are like trying to think through what does that mean? What does the resiliency mean? And I think where this kind of project sort of missed the mark is creating opportunities, even for tribal nations to change their economic base. I mean, I'm based in Oklahoma, right? And, you know, Oklahoma as a whole state, its identity and economy is based on oil and gas extraction. So, for example, in Oklahoma, you know, we have, special fees if you want to do residential solar on your home, you have to pay extra fees to have that. It's almost like a tax to have solar.

Greg Dalton: Wow. Taxing the sun. That's the kind of thing that, yeah.

Bineshi Albert: So that's the kind of government that we have here in Oklahoma. And so, there's 39 tribes here. You know, they all have oil and gas leases, right? And so it's an economic base for them. And, you know, even though I have very strong feelings about that kind of extraction and what it means, it also means that those tribal nations are able to take care of their nations, right? And so if we're not providing a sort of economic opportunity for Tribes to like shift their economic development away from fossil fuel extraction, then you're, you're just pitting them to like continue to support it.

Greg Dalton: That's interesting. Because I often think, you know, fossil fuels often hurt communities of color, turn them off and people of color will benefit. And you're saying, oh, that's more complicated than that. There's actually quite a complicated relationship and even dependence with tribes and communities on fossil fuels. So turning it off today is not, it ain't that easy or that simple.

Bineshi Albert: Yeah. I mean, definitely. I'm an advocate of keep it in the ground like that will always be my point of reference, but I'm also not going to demonize tribes for taking care of their people. I will push against the economic system that we have as a nation that relies pretty heavily on fossil fuel extraction, right? Our whole country is based on that. Our history, you know, the oil boom, built the economic wealth that we have in this country. And, I live in a state who have, you know, professional sports teams called the oilers and the drillers. We have national sports teams who are called the oils and the drillers.

Greg Dalton: hmm. Mm hmm.

Bineshi Albert: But we have to create more sort of economic opportunities and that was one of the missed opportunities with the IRA is, yes, there's lots of funds here, but much of it was still funding the existing oil and gas infrastructure and doubling down on some even. And then, you know, there was some investment into some other pieces that are also, you know, kind of scary when you think about it. So, you know, the investment into nuclear.

Greg Dalton: Yeah, the IRA has a little bit for everybody. There's hydrogen, there's nuclear, there's like something for everybody in that, you know, some of that was needed to be in there to get the votes. Justice 40 is an initiative of the Biden administration that's meant to direct 40 percent of the overall benefits of federal investments to disadvantaged communities. Many of the elements in the IRA fall within that initiative of Justice 40. How's that working out? Is it meeting its expectations? Is money going to the places you think it should go to?

Bineshi Albert: I think there are some places where that's happening well. There's some places where community voices, even EJ voices, are giving input into what Justice 40 can be. When I was

with Climate Justice Alliance, you know, we helped engage communities to talk to the WEJAC, the White House Environmental Justice Advisory Committee about their input about Justice 40, but also their input in other areas, you know, like, CCS, hydrogen and -

Greg Dalton: Carbon capture and sequestration. And that, that White House group was a big deal when it was created, like, this is the first time we have this group at the White House level advising on climate justice and environmental justice.

Bineshi Albert: I think they get it and they are giving their input and advice. And their purpose was to give input advice to the White House about what should be done. And so I think that was definitely an opportunity to like, engage communities. But then what happens to that, those reports and advice, right?

Greg Dalton: I heard a term recently from the activist Kumi Naidoo, who talked about handshake activism and he said he learned that, you know, access doesn't mean influence. Getting a photo or getting a report to the White House doesn't mean that the White House listens or acts, acts upon that, that consultation and that input.

Bineshi Albert: Oh, yeah, because even with tribal nations, like you have that act of consultation, which means I've just discussed with you. Consultation doesn't mean I have to do what you say. So a lot of tribal nations now have been engaging also in this term of consent.

Greg Dalton: Prior consent, yeah.

Bineshi Albert: Yeah prior informed consent. It's like, yes, you can't just do consultation. You have to also engage to say, yes, do we want this or no, do we not want this? Tribal nations are pushing that. And I think that kind of consent should also be for communities to say, we don't want this. This is not what we're signing up for.

Greg Dalton: Last time you were on the show, you said that President Biden should declare a climate emergency. Haven't heard about that as much lately. There was some reporting from E and E News and others that the administration seriously considered declaring a climate national emergency. And then the inflation reduction act passed, and it was like, okay, we don't need to do that because now this is legislation. What's your reaction to that? Do you still think that declaration would be helpful?

Bineshi Albert: I have mixed feelings about the climate emergency now. And for a couple of reasons, one, I absolutely think that the Biden administration, the world governments in general need to move with the urgency of emergency, right? Like they need to move with that kind of haste. And that's not what we're seeing. And so that part I'm 100 percent you know, will double down on that. The actual enactment of a climate emergency, you know, I started thinking about like, what are the what, what gets implemented if that happens? You know, like, me asking for a climate emergency was, you know, I want the government to move like their pants are on fire, right? That's what I want.

Greg Dalton: Mm hmm. Yeah. Yeah.

Bineshi Albert: But when I think about the history of a state of emergency being declared in this country for any other acts, like, would that be the same for climate emergency? And in those situations, I worry then about communities of color, right?

Greg Dalton: Well, I think of Japanese internment, right? That's one thing that comes to mind.

Bineshi Albert: Yeah, I think I, I worry about communities of color and what does it mean for an emergency to be declared for the military to be engaged you know, does that mean that there's a engagement of martial law and then I don't know, these are questions I honestly don't know, but I was started thinking through some of these questions of what does it actually mean to implement in policy and in practice, a state of emergency.

Greg Dalton: Biden is losing voters of color. Can you see why? Yeah.

Bineshi Albert: Absolutely. I mean, there, communities of color are, are really pushing for, we need immediate relief now, both in environmental issues and social issues and, and funding, for a number of different programs and are just not seeing that investment and are really, you know, had some hopefulness, in the previous election, like, all right, this is, this is the champion. And now a lot of folks are like, you know, the two party system, neither of the parties are looking out for our best interest. And, and so, you know, it becomes, are they just invested in the health and wellbeing of corporations? Of our current economic system. And even though I, you know, I want to see a shift in our economic system. I'm very clear what the impacts of the poorest of the poor in a shift in the economic system, right.

Greg Dalton: And, you know, climate is not a leading message of the Biden campaign in this season. What would you say to the Biden camp, from your perspective as a leader, on climate justice?

Bineshi Albert: I mean, I would say, if your term is coming to an end and you may or may not be elected going forward, then go out with a big bang, do something big on climate and just be like, this is it. This is my legacy. And instead, the legacy is pretty ho hum when it comes to climate, you know?

Greg Dalton: But to be fair, I mean, you know, he got through historic investments, the IRA, the Infrastructure Act, the CHIPS Act, it's not enough, but, you know, his climate wins are not trivial, they are significant and historic.

Bineshi Albert: They're significant, they're historic, but it was like, yeah, but we didn't have anything before. So-

Greg Dalton: Compared to nothing. Yes.

Bineshi Albert: It's great. It's great. It's phenomenal. But it doesn't mean that I don't still expect more from the administration and from any administration. I mean, regardless of how I vote, I'm holding whoever's feet to the fire to make sure they do this because I need my government and world governments to act like their pants are on fire, and to move in that urgency because, if we don't change how we are moving forward, even in the next five to 10 years, we're coming to, there's no turning back. There's no fixing, you know, we're, we're very close to that, tipping point.

Greg Dalton: Bineshi Albert, thank you so much for sharing your insights on Climate One.

Bineshi Albert: Thank you.

Ariana Brocious: Communities across the country are trying to protect themselves from the impacts of climate change - everything from shoring up coastlines to raising roads. And that's expensive. The IRA and the Bipartisan Infrastructure Bill aim to send tens of billions of federal dollars to help. But actually getting that money? can be very difficult. Now we're going now to a small island off the coast of Georgia, not far from Savannah... Emily Jones of WABE and Grist has this report.

Emily Jones: Tybee Island has a rain problem. The stormwater system, fed by storm drains across

the island, funnels into a pipe that comes out on the beach at the southern tip of Tybee. But that pipe gets regularly buried by sand.

“What happens is when it gets covered with sand, and the tide rises, there’s nowhere for the stormwater to go,” said Alan Robertson, a Tybee resident and consultant for the city.

The water backs up in the system and wells up out of the drains, flooding the roads. It’s a problem the city is trying to solve, Robertson said. And it’s a daily hassle.

“The city has to clear this every day,” Robertson said.

Tybee’s not alone. All over Georgia, old stormwater systems struggle to keep up with increased rainfall due to climate change. On the coast, rising sea levels — also from climate change — squeeze the systems from the other end. Infrastructure like roads, hospitals and wastewater plants need to be shored up against flooding. Residents need protection from heat and floodwater.

All of that is expensive. The good news for local governments tackling these problems is that lots of state and federal money is out there to fund resilience projects. The recent federal infrastructure law and Inflation Reduction Act are adding hundreds of billions of dollars to the pot.

But there’s also bad news: that money is often hard to actually get, and that difficulty can amplify inequities for communities that need help most.

“One of the major capacity constraints of a lot of these local governments are that they have few grant writers on staff,” said Michael Dexter, director of federal programs for the Southeast Sustainability Directors Network.

The funding often comes through competitive grants, which are complicated and highly technical to apply for. Local government staff, often under-resourced and with plenty of work on their plates, can struggle to stay on top of the different funding opportunities, coordinate the necessary partners or come up with the local match funding some grants require.

“A lot of communities shy away from going after grant funds just because of that,” said Jennifer Kline, the coastal hazard specialist with the Georgia Department of Natural Resources Coastal Management Program.

Without a dedicated, expert grant writer and plenty of staff, communities may miss out on these huge amounts of money. That’s especially true in communities of color where old, racist policies like redlining discouraged investment and growth, according to Nathaniel Smith, founder and chief equity officer of the Partnership for Southern Equity.

“If you look at many of the communities that face the greatest challenges, a lot of times people just assume that it happened by happenstance,” Smith said. “And that couldn’t be furthest from the truth.”

For many of the same reasons, those communities stand to be hit hardest by climate change: they often have less shade to reduce heat, are less protected from flooding and face more of the health problems that climate change makes worse.

The Biden administration is trying to address this disparity with its Justice40 initiative, which promises to put 40% of federal climate funding toward [historically disadvantaged communities](#). Through a program called the Justice40 Accelerator, Smith’s group offers funding and technical support to help eligible places get that money.

"It takes real resources and time and support to ensure that local communities are positioned to compete," he said.

Many of the state and federal agencies that dole out grants offer help as well. Kline's DNR Coastal Management Program provides assistance. Dexter said his group, the Southeast Sustainability Directors Network, does too.

What's not clear is whether all of that is enough.

"I was gonna say that's the \$100 million question," he joked. "No, that's the \$1 trillion, multiple-trillion-dollar question."

Tybee Island faced down these challenges when Hurricane Matthew devastated the island in 2016. But that city got lucky: Robertson, a resident with grant writing experience, stepped up.

"We're in a pretty good space now," he said. "We can be much more responsive to many more opportunities because we have identified these projects."

While stormwater remains a problem, they've gotten grants to build protective dunes and elevate flood-prone houses. Now, Robertson works with the city to keep a running list of projects to fund.

As the wave of new federal funding comes, other communities could use similar help.

Emily Jones, WABE News.

Ariana Brocious: That story was part of a partnership between WABE in Atlanta and Grist. Thanks to them for sharing it with us.

Greg Dalton: We're spending today's show checking in on the Inflation Reduction Act - how well is it addressing climate disruption? Coming up, trying to pivot from old, dirty energy sources to new, clean ones:

Danny Kennedy: You know, the better, cheaper version of a future energy system is definitely wind and solar powered, not fossil fuel based. But we invested heavily in the latter for much of the century so far.

Greg Dalton: That's up next, when Climate One continues.

Ariana Brocious: This is Climate One. We've heard from an analyst and climate justice advocate, now let's bring in the perspective of someone from the clean energy industry. What are they seeing of the 400-billion-dollar investment from the IRA? Danny Kennedy is CEO of New Energy Nexus, which offers funding and programs to boost the development and innovation of renewable energy. He chatted with my co-host Greg Dalton.

Greg Dalton: So let's talk about the IRA, the IRA, I guess people call it the inflation reduction act now about 18 months old.

Danny Kennedy: Uncle Bill and Auntie Ira, I've heard it referred to in the Beltway, yeah.

Greg Dalton: Right. The bill being the bipartisan-

Danny Kennedy: Bipartisan infrastructure law.

Greg Dalton: Yeah. Bill and IRA. Okay. So what grade would you give IRA so far? We start simple here in terms of implementation. How would you rate it?

Danny Kennedy: Good way of putting it, I think, the grading of the student is probably a B in intent, and the first, draft or first semester performance, which was the production of the actual legislation was a B. I think we're looking to see in the second semester, the actual implementation or execution of the vision that was written into the law, and I'm not sure they get a B yet.

Greg Dalton: Ah, so what's going well, what's lagging? Where does the student need to kind of up their game a little bit?

Danny Kennedy: Well, clearly the inflation reduction act has spawned a whole lot of commitments, a lot of announcements. America, however, has a risk of what some people call checkism, which is kind of writing checks, but never really spending them, you know, never really cashing that and putting concrete in the ground and factories up and running. And you know, certainly that is the fear some of us have that while there's been many battery factories and downstream EV factories and all sorts of energy infrastructure declared, we've got other reasons those things may not be made manifest in the world. Interconnection queues we've heard about with solar and wind farms into the grid and other permitting snafus, which delay to the point that final investment decisions can't be made and factories may not get built. We need just a quicker response rate and more alacrity from those that are promulgating it. I know it's too important to rush and I understand that, but I think we need to work out how to build things with intent. You know, we get in our own way sometimes we need yes in my backyard sort of approaches and concierge services from state development agencies and people that are in the business of clearing the lines and connecting the dots so that these developments can be built. We've got a decade to do this work and we can't take 18 months to just sort of get the instructions.

Greg Dalton: Right. I hear you saying there could be lots of announcements, but those announcements may not always follow through. I think of Rivian, which is a big factory announced, billion dollar factory announced in Georgia. You know, a lot of buzz around that, other things happening in Georgia, and then Rivian just pulled back and said, Well, we're not so sure. So that's one example. We heard a lot last time after the global recession of, you know, shovel ready projects. I don't hear that term, these days, where has that gone? Are we concerned about shovel ready things that can happen fast?

Danny Kennedy: Look, I think the scope and scale of the IRA is so big that, you know, there probably weren't enough shovel ready projects to fill the book that it described, so they've actually had to go back out to market and inspire and incept some big projects and that's fair. That's what an industrial strategy is, which our great nation, the United States, is undertaking, is whether the strategy can be seen through is kind of the question now, but, there have been some shovel ready projects and it's not to say that they're not doing anything. We're clearly building in places and parts and in California where we work with New Energy Nexus, we've seen factories open that are already, Putting the production lines in place and groundbreaking down at Lithium Valley in Imperial County for a large lithium production facility combined with a new geothermal power plant. That's exciting to see, you know, the shovel in the ground for that first turn of the sod. But we need more of those, I guess, and, and soon.

Greg Dalton: Though big picture, you know, global investment in energy transition technologies was 1.8 trillion last year compared to 1.1 trillion for fossil fuels. That's according to Bloomberg NEF, the gap has steadily widened since 2020. How do you hold those, those two things in your mind that both, there's more money going into clean, and yet we seem to be not meeting, not on track for meeting the decarbonization goals that we need to make.

Danny Kennedy: Well, there's a couple of levels there. One is the global, where you're absolutely right. You know, we are now way outpacing and have been since 2015, spending more money on the clean side of the ledger than the dirty side. Year on year, it's more solar and wind added to the grid than anything else. And last year it was like 80 percent globally. Not so true in the US. is the reality. We've had a hush hush boom. I don't know if you've heard of that. That was what some pundit called the gas fracking phenomenon and the recent gas export in interests that have grown in the United States. You know, we don't want to talk about it. Hush hush. But we're having a boom. Largest producers of oil and exporters of gas. You know, so, the reality that you described globally is not so true in the States even though we've also passed these laws to try to create new industries and, and spawn this shared prosperity. And the results matter. And last year, natural gas was the thing that grew by a country mile and generation from combined wind and solar grew a lot less, you know, and the rates of growth of one versus the other are quite marked and that's going the wrong way.

Greg Dalton: So does this mean that the IRA is not delivering on its promise? And are some of these things outside the influence of the IRA, which is just getting started because the fracking boom you're talking about started under Obama, right? The U.S. became the number one global oil producer, changed the law so it could export crude oil, which was previously outlawed. So we're a big energy producer. That's a good thing for some people, investors and jobs, but we're, we're more of a carbon source. So yeah, connect that for me.

Danny Kennedy: I think this is the challenge, you know, I don't want to say that it hasn't worked yet. We still have to let it run its course, but in the early innings, if you will, it's complexified by the fact that, we ran an industrial policy as a country since the turn of the century to make gas and oil cheap and then to export it to the world. And that's been a common position of all the administrations. It was the confusion of an all of the above energy policy in an era when we needed to switch to clean energy for carbon and cost reasons. You know, the better, cheaper version of a future energy system is definitely wind and solar powered, not fossil fuel based. But we invested heavily in the latter for much of the century so far, and just in the last few years have been trying to turn that ship around with the IRA and the rest.

Greg Dalton: There's been some tension between should we build solar in this country? And there is some manufacturing renaissance in this country with some people of solar, which some people thought would never happen. So is it better to get the cheapest, most readily available inputs solar panels or so things from China? or isn't there a tension between going cheap and fast? There's a tension between kind of the political economy and the global climate.

Danny Kennedy: Look, Greg, there's a tension in a lot of these things, and the tension's been created by a century of burning fossil fuels and sticking carbon in the atmosphere and causing the planet to heat, and now the time value of carbon that we generate today is really important to consider. So, you know, cheap and fast might be an important thing to do, and it's not cheap in the sense of not well made, it's cheap in the sense of low cost, you know, and, and the, the, the incredible machine that was invented in America in 1954 called the solar panel is now being made in scales and, and, and cost structures that we didn't even imagine a decade ago. And I think the world should take advantage of that. That doesn't mean don't diversify the supply chain. Don't build elsewhere, including in America, and maybe blend the costs of the different inputs and supply chain so that you get an average blended cost that's still really great for photovoltaics, the solar panels. But, you know, we've got to think about time as a factor here, but we can't go fast if we don't do fair, I think is the reality. So it's gotta be fast and fair as we drive this energy transition.

Greg Dalton: You say that finding money used to be a bottleneck for clean energy growth companies, and you've been working in this field for some time. Now there's trillions of dollars. Most of the new investment is going into the clean side. Now you say that one of the bottlenecks is finding

human talent. Where is the evidence of that? And what's the labor piece of this?

Danny Kennedy: Yeah, I mean, you know, we could always have more money of the right kind at the right time in the energy transition value chains that we're talking about, you know, there is a lot more of it, a trillion dollars, as you cited up top, we need probably two or three trillion dollars more in the system by 2030 annually, so we've got a triple sort of spend right, but the good news is that capital's around and it's looking for something to do because the stuff that used to invest in is no longer viable, but the constraint now is more of the human capital if we can call people capital, you know, talent effectively.

Greg Dalton: You're such a capitalist, Danny.

Danny Kennedy: You know, there's, there needs to be another million electricians in America to electrify everything, all the heat pumps we want to install, all the circuit boards we want to upgrade, all the EV charges we want to implement. We just need a lot more sparkies, uh, electricians. Where we're working in Imperial County in Southern California on power and prosperity for the inland counties of California, which are fairly, you know, broke in some ways, um, socially and economically, the limiting constraint there is not the lithium that's coming out of the geothermal power sector bubbling up from underground, it's not the money which is willing and able to invest, particularly with the inducement of the IRA support that they can attract. It's, there's not enough workers. There's not people to stand on factory lines, if we build the factories. This is true across the states, by the way, you know, the kind of vocational training for production line engineers, you know, the two not four year courses, we just don't do as much anymore. And so community college districts and all of these different institutions need to gear up for the new skills and new workforce. We call them new energy skills. training opportunities, which are huge, and very exciting. Yeah, and you know, this is not to say we take shortcuts, we've got to work out how to do it right, and so we don't have unintended consequences and harm folk in any sense, and in fact, you know, the idea was to do it right and lift people up that have historically been harmed by the other energy system of the 20th century of the past, but going into the future, we have to work out how to do it right with some alacrity, But if this drags out, the enthusiasm for it, the faith in it will drain. And I think that's one of the biggest consequences. We need a narrative strategy, you know, the mission economy that JFK set the country on when he said, let's go to the moon and back safely, you know, 400,000 companies were engaged in that all sorts of government agencies. It wasn't NASA, it was a whole of economy effort and we did an historic, amazing thing. This is bigger than that. And how do we engage government to enable private sector and public sector, civil society to do all of those things is the question.

Greg Dalton: Danny Kennedy, Chief Energy Officer at New Energy Nexus. Danny, thanks so much for sharing your insights into Uncle Ira or Mr. Bill. Uncle Bill and auntie Ira.

Greg Dalton: Auntie Ira. Okay. Thanks, Danny. Appreciate it.

Danny Kennedy: Thank you.

Ariana Brocious: It's been 20 months since the IRA passed - and a lot of its investments have flowed into conservative states. Now that we're on the precipice of a presidential election, there's a lot of talk about how this policy and the climate priorities set by the Biden administration could change if Donald Trump is reelected. Before we end today's show, I want to return to my conversation with Trevor Houser, a partner at Rhodium Group, the think tank that's been tracking the progress of the IRA. I asked him how durable he thinks this law is now that the money has started flowing.

Trevor Houser: So I think for a large-scale repeal of the provisions of the IRA, you would need not just a change in administration, but Republican control of both chambers of Congress. Even then, I think it's unlikely that we would see the totality of the IRA repealed. There no doubt would be desire among political leadership and the Republican Party to roll back what was a marquee legislative achievement of the Biden administration. At the same time, that would be at tension with the very real economic interests of a number of Republican members who are seeing new factories, new job creation occurring in their districts, in their states as a result of the IRA. So it's a little unclear to know how the Republican Party would navigate those tensions. But the fact that so much money is already flowing, the fact that the IRA is, is working largely as intended means that repealing it would have real costs. And as long as over 2024, the IRA continues to expand the amount of clean energy investment that's occurring, continues to drive job creation, then I think the politics of wholesale repeal would be pretty tough.

Ariana Brocious: And that's our show. Thanks for listening. Talking about climate can be hard, and exciting and interesting — AND it's critical to address the transitions we need to make in all parts of society. Please help us get people talking more about climate by giving us a rating or review. You can do it right now on your device. Or consider joining us on Patreon and supporting the show that way.

Greg Dalton: Brad Marshland is our senior producer; Our managing director is Jenny Park. Ariana Brocious is co-host, editor and producer. Austin Colón is producer and editor. Megan Bisciegia is producer and production manager. Wency Shaida is our development manager, Ben Testani is our communications manager. Jenny Lawton is consulting producer. Our theme music was composed by George Young (and arranged by Matt Willcox). Gloria Duffy and Philip Yun are co-CEOs of The Commonwealth Club World Affairs, the nonprofit and nonpartisan forum where our program originates. I'm Greg Dalton.