STUDY

CLIMATE CHANGE, ENERGY AND ENVIRONMENT

JUST TRANSITION IN THE U.S.

A Harsh Mirage Absent A Fundamental Revolution

Jonathan Tasini
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A "high bar" Just Transition national strategy is a crucial element of decarbonization to ensure livable wages for workers displaced from fossil fuel industries, and a matter of economic survival for their communities.

Relative to most advanced economies, the United States is poorly positioned to execute a Just Transition of workers in fossil fuel industries due to its existing social safety network and job retraining framework, which are riddled with substantial weaknesses.

The Biden Administration has deployed strong rhetoric to safeguard workers but the administration's words have yet to be matched with concrete, properly-financed plans.

FRIEDRICH EBERT STIFTUNG

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Content

1

INTRODUCTION

"Just Transition" is a core principle of forward-looking climate change efforts to advance the decarbonization of the global economy. Just Transition demands that, hand-in-hand with the shuttering of the fossil fuel-based economy, a structured policy agenda ensures that workers who lose jobs or incomes because of the shift away from fossil fuels are economically supported, with expansive aid also flowing into the communities whose economic health was entirely or substantially dependent directly on fossil fuel industries or on the industries supporting fossil fuel production.

This paper will set forth the general principles for what the author calls a "high bar" Just Transition using the Biden Administration's Just Transition plans as an entry point to assess the current state of the Just Transition debate in the U.S. It is important to note that this evaluation takes place in the relative early days of the new Administration, and it will take time to see whether the rhetorical markers the president has set forth during his campaign and initial policy proposals match execution.

However, it is possible, even in the infancy of the Biden Administration, to juxtapose, on the one hand, the clear outlines of actions candidate Joe Biden promised, and some initial policy commitments since President Biden was sworn into office; versus, on the other hand, the significant long-standing policy and ideological barriers that, if not removed, pose major challenges to any Just Transition, let alone a "high bar" approach. It is also already possible to discern whether there is any indication the new Administration either intends to dismantle those barriers, or understands that barriers even exist.

This paper examines the underlying challenges to a "high bar" Just Transition in the U.S. that arise from three factors:

– Past Just Transition efforts have failed because of a lack of money to underpin rhetorical policy commitments;

– A "high bar" Just Transition cannot succeed as long as the country is in the grips of an ideological framework that assumes that when wrenching economic changes take place, it is natural that workers will suffer because that is the way the free market has always operated;

– A "high bar" Just Transition is not possible without remaking the economic foundations of the country and fixing long-standing, significant economic structural deficits.

In its simplest articulation, the author considers a "high bar" concept ensuring *all workers effected by decarbonization be made whole in their incomes and benefits, and for communities to be robustly financed to make up fully for any decline in economic benefits fossil fuel-related activities contributed*. To date, there is no "high bar" standard expressed in any significant proposal with *real dollars* attached to myriad promises, either by the Biden Administration, or other U.S. governmental or non-governmental organizations. Even the most ambitious Green New Deal plan proposed by Senator Bernie Sanders caps Just Transition wage support at five years.[1] Public Citizen, which describes itself as a "non-profit consumer advocacy organization that champions the public interest in the halls of power", lays out a Just Transition proposal that does not go beyond general statements, calling for funding for local communities and a very modest "Guaranteed income and benefits for at least three years – preferably five years – for all affected workers".[2]

There is no doubt there will be a transition away from fossil fuels. That debate is over. The economics of transition, powered by market decisions (the decline of the price of coal because of pressure from the competitive price of natural gas, for example), and the politics around climate change are already driving a transition.

The question this paper examines is what is the meaning of "Just" within a decarbonization transition? Because that one word – "Just" – embodies the crux of a wide variety of philosophical postures that translate into differences over the scale and cost of a transition and, in human terms, what workers' lives and their communities look like at the tail end of a process that will take place over the next several decades.

In fact, the framework of Just Transition is far from settled in the U.S. or in other countries where the concept is either being debated or has not advanced to an implementation stage. Generally speaking, most Just Transition agendas are bursting with flowery language and well-meaning philosophy, but it is hard to find a single Just Transition plan that does not come up short when turning from rhetorical promises to concrete, measurable guarantees that are attached to a commitment of money for workers and their communities. To date, "high bar" standards for Just Transition are rare—and those with specific committed dollar figures attached are even rarer.

This paper will argue that the reasons for the under-financing of Just Transition efforts span a wide spectrum, including the failure of climate change advocates to comprehend the challenges workers face – especially older workers – when they are forced to enter into the current perilous job market, as well as stiff resistance from the array of interests who, explicitly or implicitly, do not want to consider a "high bar" standard because of general ideological opposition rooted in a refusal to embrace shared sacrifice – including higher taxes – as a core value needed to save the planet.

In the United States, the almost-impenetrable barriers to Just Transition, or even understanding what those barriers are, exist because any story told about the failure of the economic system always fails to paint the full landscape and the linkages that make permanent, effective solutions elusive: fundamentally, the debate over climate change and Just Transition is a struggle for power and coming to grips with who wields economic power in the United States, and how the exercising of that power has imposed long-standing, corrosive power relationships between corporations and workers. We cannot compartmentalize this debate by trying to create a Just Transition process that ignores the harsh components of the American economic system built on low wages, gross inequality, excessive executive compensation and a culture of greed among a tiny sliver of the elites.

Economic transitions are not new. This is not the first time workers have faced the gauntlet of deprivation and destitution brought on by rules fashioned by policy makers at the behest of powerful economic interests who use the sweat and blood of workers, then cast off those workers and communities perceived to be no longer useful, leaving regular people to pick up the shattered pieces of their lives with a pittance left in their pockets. In fact, *workers have essentially underwritten transitions and subsidized corporate or national policy decisions out of their own pockets* through lost incomes, displacement and bleak futures.

This abuse has a long history stretching back to the Robber Barons of the 19th century, through to the coal and steel titans of the early 20th century and, now, continuing into the 21st century at the hands of those corporate owners who are steering the rapidly expanding world of technology.

What is the common thread connecting three centuries of exploitation? A job, whether a type that has existed for decades (for example, a coal miner) or a relatively new job (for example, installing solar panels) is not inherently a "good" job or "bad" job for a worker. Not too long ago, in the early part of the 20th century, the industrial jobs people bemoan are vanishing today and wax romantically about – in auto, steel, and other heavy manufacturing – were miserable, low-paying, dangerous jobs that would by contrast, make today's low-paying Wal-Mart jobs seem relatively benign.

What changed in the early 20th century was unionization: unions turned low-paying industrial jobs into middle-class, relatively safe jobs. That was even more true for non-white workers, especially for African Americans who belong to unions at a higher rate proportionate to their workforce representation.[3] Moreover, African Americans have high rates of participation in industries that will be significantly affected by decarbonization efforts, including utilities, coal, petroleum, and transportation.[4]

Today, any job —even one at Wal-Mart—could be a great job, if unions were widespread. Modern janitorial jobs in New York City, for example, were dangerous and low-paid occupations until the Service Employees International Union organized tens of thousands of janitors, turning the jobs into solidly-paid jobs and, not insignificantly, transforming those united workers into a powerful political force. The data is clear: the decline of unionization—and, therefore, the decline of collective bargaining—has been a major factor in the undermining of wages throughout the economy, and, thus, the weakening of middle-class living standards.[5]

That must be part of the calculation of Just Transition: it is inconceivable to speak seriously about a "high bar" Just Transition or even a middle-of-the-road solution, if broad, deep unionization is not part of the plan. Yet, the principle that unionization is central to Just Transition, not a secondary element, is either not-well understood by well-meaning climate change advocates, or, more obviously, quite well-understood by corporations who will promulgate reams of promises to "go green" but will maintain a hard-nosed anti-union posture. As the paper will outline, the Biden Administration's positions are chock full of commitments to create unionized "good-paying jobs". However, the unwillingness to challenge economic power, or even to articulate the obvious truths about economic power in America, is the key reason the many well-intentioned climate change advocates offer insufficient, general Just Transition plans: they are themselves corseted by a narrow scope of economic vision and ideology embedded in a national culture that has been built and maintained over many generations. Most environmental leaders have never been through a pitched battle to organize a union. So, when a large company commits to "go green", climate change advocates celebrate the announcement, embracing the company – without examining a company's posture of anti-union behavior which subsequently translates into lower wages for workers. Amazon is perhaps the best example of the dynamic: in 2019, Amazon committed to be carbon neutral by 2040[6] yet it spends millions of dollars on aggressive anti-union tactics.[7]

These shortcomings are not unique to the United States. In Victoria, Australia, a recently released plan by the Labor Party-run state government for transition in the timber industry[8] imposes tight caps on income support for workers losing their jobs, which, as one top union official explained, not only is grossly insufficient, but was imposed on union members with no negotiations with the union and provides for relocation retraining and assistance for impacted communities that falls far short.[9] In Canada, a federal government task force looking at phasing out traditional thermal coal-fired electricity by 2030 recommends wage "top-offs" of up to 90 percent of previously earned income—but only for up to two years for workers who go back to work in lower-wage jobs.[10]

This is a conversation the U.S. political class, including the president, is loath to pursue because it raises a challenge to the elites (read: campaign donors) who shape and control the contours of the economy. So it would be a mistake to structure any Just Transition by solely calculating dollars and cents.

This paper comes at an opportune moment to consider expanding the narrow framework of how we look at a bigger economic vision for Just Transition. The COVID-19 pandemic unleashed governments, along with central banks, to take unprecedented fiscal actions to replace incomes obliterated when nation after nation had to shutter economic activity because of the virus' spread. In the U.S., the dual actions of massive fiscal intervention by Congress and monetary policy by the Federal Reserve Board injected large sums of money into the economy on a scale not seen before – and those steps were even accepted by free market, small government conservatives, albeit reluctantly, and with a good number trying to reduce the economic stimulus needed. Globally, during a one-year pandemic arc, countries poured $13.8 trillion (13.5 percent of global Gross Domestic Product) into relief – more than four times the relief injected to support people during the Great Recession sparked by the financial crisis of 2008.[11]

There is a growing realization—even a majority consensus globally—that leaving our fates to markets and a hands-off, shrunken government has disastrous consequences and, conversely, that effective, *expansive* government intervention and action is needed when facing a massive crisis – a category clearly appropriate for the climate change crisis. Just Transition, then, in a world ravaged by COVID-19, should reinforce the mindset that large-scale financial support, coordinated and disbursed by governments, with large corporate financial contributions and the participation of citizens, is a key element of moving the planet to a sustainable place, and should be carried out without hollowing out the livelihoods of millions of workers. In the U.S., as this paper will explore, COVID-19 harshly illuminated the untenable status of the American safety net – the wobbly unemployment insurance system, the lack of paid sick leave, and a reckless disregard by employers for keeping their workers safe on the job – all of which makes a successful Just Transition unlikely and, as a result, feeds the understandable wariness among workers well-versed in the shortcomings of the American social benefits system.

In other words, the core question facing Just Transition is fundamental: can it succeed without a major re-envisioning of economic power and the dominance of free market capitalism? An honest assessment of climate change has to conclude that the threat to the planet is principally a direct outcome of the post-WWII economic system. That is, the same forces of free market capitalism that have driven down wages, hollowed out communities globally, shifted jobs to countries where people labor for slave-wages, and a concerted effort to destroy unions, are the same forces that have brought the planet to the brink of irreversible ecological collapse.[12]

2

WHAT ARE THE PRINCIPLES OF A "HIGH BAR" JUST TRANSITION?

Put simply, a "high bar" Just Transition means that no worker displaced from a job because of the decarbonization process—a shift away from fossil fuels and the attendant technologies—will experience a decline in her or his standard of living. The universe of workers eligible for Just Transition support must span far more than those employed directly by fossil fuel companies; it must include people who work for secondary suppliers, or public sector workers whose jobs are affected because of decarbonization. A comprehensive "high bar" Just Transition, of course, must invest in job training but, given the over-hyped promises of job re-training and the realities of the 21st-century job market, there must also be an iron-clad commitment to individual workers beyond the hope of a potential job sometime in the future. Specifically, a "high bar" would mean:

- Full incomes—a worker, or a household, will maintain 100 percent of their earnings, with a Just Transition fund allocating funds to "top up" an income reduced because of a job lost in the process of decarbonization;

- Pension protection and expansion—pensions must be fully guaranteed at the levels promised. Some workers facing job loss still maintain, thanks to a union contract, one of the dwindling number of defined benefit pensions in the U.S. Those pensions have been under significant pressure as companies who participate in multi-employer pension plans have filed for bankruptcy.

- Full healthcare coverage—every worker losing their job should be covered under the author's proposed new category in Medicare (explained further in "Leaving A Legacy on Just Transition" in the final section of the paper).

- A national policy, buttressed by iron-clad legal provisions, to encourage, support and advance comprehensive unionization in the private sector, partly by recognizing that unionization provides sustainable economic benefits to the nation.

Without a doubt, such a "high bar" standard would require large-scale funding of a magnitude never previously considered, and dwarfing, for example, the post-World War II GI Bill which poured more than $129 billion in today's dollars to assist 15.4 million returning veterans. Whereas previous failed Just Transition proposals certainly hurt scattered communities and consigned people to long-term economic malaise and depressed living standards, the overall effect was barely a blip compared to the economic hurt the nation will suffer if the climate change-induced Just Transition is bungled. One relatively narrow estimate of the number of jobs lost if the U.S. converts to 100 percent water, wind and sunlight (WWS) has been pegged at about 3.86 million jobs lost in the fossil fuel and nuclear-related industries, resulting in an annual wage loss of $270 billion based on an average annual wage of $69,930. However, that is a relatively conservative estimate which undercounts the related secondary jobs dependent on the fossil-fuel and nuclear industries.[13]

This author estimated in 2015 that the cost of a "high bar" Just Transition standard just for the 700,000 workers connected to the coal industry (a 2015 workforce estimate by the American Coal Council of the number of people in the mining, transportation and power generation sectors which make up broader coal-related industries) would cost, for an income and benefits level of $80,000-per-year, minimally $1.1 trillion over 20 years ($55 billion per annum). This could be significantly more if union-contract wage increases (2% a year) and pension payments are taken into account (the United Mine Workers paid out $1.1 billion to 120,000 retirees in 2013).[14]

The critical component to having a nationwide acceptance of the monetary outlays is to emphasize, every day, the economic return from trillion-dollar investments paid out over a long-time horizon. For every dollar that was invested in the GI Bill, for example, the economy reaped nearly $7 in economic growth and taxes. Out of 16 million veterans, the program provided a living wage and tuition to 2.2 million GIs who entered college and graduate school, with another 5.6 million choosing trade schools and other programs.[15] Put more plainly, working people with money in their pockets will spend that money.

Beyond the direct monetary support for workers in fossil fuel industries, then, the economic vision of a "high bar" Just Transition must have an extremely broad footprint throughout the community because a drawdown of fossil fuel employment sends ripple effects into every corner, affecting everything from government services to schools to the local corner market. To cite one example, in Boone County, West

Virginia, the county government had to enact deep cuts in services because it faced a $2.5 million budget deficit in 2019—a huge budget gap for the county—due to the decline in coal mining, which depressed property values, led to an exodus of tax-paying residents and reduced coal severance taxes; overall, property values in the county went from $1.7 billion in 2013 to just $955 million in 2019.[16]

Just Transition will even determine whether young children will have a good education. For better or worse, U.S. school funding is highly dependent on homeowners and corporate property taxes. Corporate property taxes (when they are not granted unwise property tax waivers as part of other socially deleterious economic incentives) evaporate in places where decarbonization requires the shuttering of factories, mines or support offices. Without making up the deficit in school funding, communities could find themselves short of teachers and materials, and children will be educated in crumbling schools (which is already a trend due to the consistent decline of school funding over many years[17]).

A "high bar" Just Transition process should not be evaluated simply by looking at the bottom-line dollars and cents. It is also a question of transparency of the process and a broad inclusion of all sectors of civil society. In Tonawanda, New York, a small community just north of Buffalo, the impending closure of a coal-fired power generation plant caused a labor-community alliance to spawn a Just Transition committee to try to get ahead of the approaching hit to the local economy[18]. Though the effort was earnest and stumbled due to predictable differences of opinion among stakeholders and a lack of concrete financial support from government entities, it had the makings of a template for broad community input. In New Zealand, the government coordinated a "bottom-up, transparent, inclusive exercise capturing new information from a far more diverse group of stakeholders" to come up with a Just Transition plan in Taranki, a coastal region on the western side of the North Island.[19] The process involved a series of 23 workshops on 12 transition topics that were held throughout the region, supplemented by five additional evening community workshops.[20] In Canada, a federal taskforce on coal organized community meetings in 2018 but, for some participants representing workers, the meetings felt superficial and, indeed, to date the taskforce has yet to translate into any significant financial commitment.[21,22]

Certainly, all these examples do not imply that the outcomes, absent a significant revamping of economic power and decision making, will result in a "high bar" Just Transition. But, the important takeaway is that the only way to push the envelope to end up with the right Just Transition standards is to fashion a decision-making process which gives leverage to the constituencies facing the greatest economic disruptions—workers and their communities.

3

HOW DOES THE BIDEN ADMINISTRATION ADDRESS JUST TRANSITION?

To set the context for analyzing the prospects for the development of a "high bar" Just Transition in the Biden Administration, we should first examine the president's overall views on climate change that were outlined initially in two principal campaign documents: "The Biden Plan for a Clean Energy Revolution and Environmental Justice"[23] and "The Biden Plan to Build a Modern, Sustainable Infrastructure and an Equitable Clean Energy Future"[24] (subsequently, featured in a dramatically pared down summary of key initiatives[25]); subsequent executive orders issued once the Biden Administration took office; and, finally, the $2 trillion infrastructure proposal unveiled as the "American Jobs Act"[26]. While history is littered with poll-tested but unfulfilled campaign promises made principally in pursuit of votes, both campaign documents do fit closely to Biden's philosophical perspective honed during his service in the U.S. Senate and as vice president in the Obama Administration: a predominant focus on U.S. industrial policy, which is given additional political and emotional heft by weaving in the preservation of American Exceptionalism in the service of "national security". In other words, Biden believes that a broad revamping of the economy at every level to foster U.S.-based climate change-oriented industries, would not just create jobs for millions of people, but also maintain U.S. global security and dominance. Biden has also had a long-held belief that government investments can be targeted to support specific industries or populations (e.g., women and communities of color) – investments the Biden Administration has now valued at about $2 trillion over four years.

Finally, Biden also has held the view that government action taken on behalf of workers in the private sector is constrained, partly by the limitations of what government intervention can, in his view, do, and partly by the current political realities of Congress' close-to-paralyzed partisan divide that repeatedly shrinks the ambitions of expansive progressive fiscal policy. Thus, rebuilding the power of unions – who represent just 6.2 percent of the private sector workforce[27] even though public support for unions is strong[28] – is a linchpin to higher wages and an expanding middle class, in the Biden view.

Yet, the campaign documents were devoid of concrete, specific dollar estimates to execute Just Transition, making it difficult to analyze at the time how a future Biden presidency planned on paying for his commitments.

Biden promised to pursue the decarbonization of the economy using massive fiscal investments to encourage innovation and growth in clean energy industries, pursue large public infrastructure spending, to employ regulatory tools to favor decarbonization efforts (from carbon emission standards to energy efficiency to suburban sprawl) and, finally, to set up punitive measures against polluting industries - partly by ending subsidies for fossil fuel industries - and countries that cheat on their global commitments to reduce emissions.

The documents addressed the future of workers and Just Transition with various commitments. In two campaign documents, Biden pledges to create "high quality, middle-class jobs", while, at the same time, "fulfilling our obligation to all worked impacted by the energy transition like coal miners and power plant workers and their communities." He says he sees unions as crucial to ensuring that commitment, promising to "empower workers to organize unions and bargain collectively with their employers as they rebuild the middle class and a more sustainable future", and he puts special emphasis on helping women and people of color gain access high-quality training and job opportunities [See Appendix One for a more detailed look at the documents' content].

The lack of specificity during the campaign regarding costs remained once Biden took office. An extensive set of presidential executive orders promulgated on January 27th 2021 tracked quite closely to his campaign positions, outlining philosophical goals, administrative actions and economic plans—though no specific dollar amounts were articulated to reach the goals in these first orders.[29] Of note, for the purposes of this paper, the executive orders repeatedly emphasize principles that are, effectively, Just Transition components, but *the specific term is not utilized.*

The 2021 executive orders put a heavy emphasis on "opportunities to create well-paying union jobs to build a modern and sustainable infrastructure" that "spurs well-paying union jobs and economic growth, especially through innovation, commercialization, and deployment of clean energy technologies and infrastructure" [Part II, Section 201]. The "Mission and Work" of a newly-created "National Climate Task Force" include a directive to "spur well-paying union jobs and economic growth" [Section 203, (b)]. In keeping with the president's private-public partnership, the orders promise to help "catalyze private sector investment into, and accelerate the advancement of America's industrial capacity to supply, domestic clean energy, buildings, vehicles, and other necessary products and materials" [Section 204, Policy]. The orders reflect significantly the president's stated commitment to unions, directing that the climate change plans "ensure that the United States retains the union jobs integral to and involved in running and maintaining clean and zero-emission fleets, while spurring the creation of union jobs in the manufacture of those new vehicles" [Section 205 (d)].

The slight nod to Just Transition comes via several references to jobs, retraining, and income protections in the orders: "This Nation needs millions of construction, manufacturing, engineering, and skilled-trades workers to build a new American infrastructure and clean energy economy. These jobs will create opportunities for young people and for older workers shifting to new professions, and for people from all backgrounds and communities" [Section 212, Policy] "[…] Mining and power plant workers drove the industrial revolution and the economic growth that followed, and have been essential to the growth of the United States. As the Nation shifts to a clean energy economy, Federal leadership is essential to foster economic revitalization of and investment in these communities, ensure the creation of good jobs that provide a choice to join a union, and secure the benefits that have been earned by workers" [Section 217, Policy]. The executive orders also direct a to-be-created Interagency Task Force to "assess opportunities to ensure benefits and protections for coal and power plant workers" [Section 218, (b) (i)—emphasis added] […] to "support and revitalize the economies of coal and power plant communities" [Section 218, (b) (ii)]. However, the specifics remain vague, without any dollar commitment nor clear standard for benefits and protections.

Finally, the outlines of the Biden Administration's infrastructure proposal is replete with references to "good jobs", "good wages and benefits", "good-paying jobs", all of which, the plan envisions, will result from workers belonging to unions.[30] Without a doubt, the content of the plan contains perhaps the most vigorous and explicit pro-union, pro-worker stance in the modern era—it mirrors Biden's campaign documents, pledging to "strengthen the capacity of our labor enforcement agencies to protect against discrimination, protect wages and benefits, enforce health and safety safeguards, strengthen health care and pensions plans, and promote union organizing and collective bargaining", *and* repeating multiple times the tying of good jobs to "ensuring workers have a free and fair choice to organize, join a union, and bargain collectively with their employers" and arguing that union jobs "can also impact our economic growth overall by improving productivity" [See Appendix Two for more details on the infrastructure proposal].

WHERE DOES THE BIDEN ADMINISTRATION STAND ON THE TOOLS TO BE USED TO GENERALLY FINANCE CLIMATE CHANGE?

The Biden Administration has directed "federal agencies to eliminate fossil fuel subsidies as consistent with applicable law"[31] – targeting only a small portion of the $20 billion in direct subsidies since a large portion of the total sum is set by Congressional action, not executive action under the president's sole control. The president has not expressed any view about the larger question of the externalization of the costs outlined in the analysis by the International Monetary Fund.

Taxation is the clearest insight into the yawning chasm between the rhetoric around climate change generally versus the lack of political courage to demand the scale of changes needed. President Biden has said, "The United States and the world face a profound climate crisis. We have a narrow moment to pursue action at home and abroad in order to avoid the most catastrophic impacts of that crisis and to seize the opportunity that tackling climate change presents."[32] Yet, his proposals – when it comes to raising revenue to address this crisis – are meek by historical standards. For example, to grapple with the early 20th Century Great Depression, the highest marginal income tax rate went from 25 percent in 1931 to 63 percent in 1932, and rising throughout World War II to 94 percent in 1945. A high marginal tax rate remained fairly consistent during the post-war boom years of the 1960s and beyond, until the Reagan-era tax cuts which slashed marginal tax rates, eventually resulting in today's highest marginal tax rate of 37 percent in 2020.[33]

Despite record corporate profits and escalating CEO pay[34], President Biden is only proposing to raise the *corporate* tax rate from 21 percent to 28 percent – which is still 50 percent lower than the 35 percent rate corporations paid prior to the enactment of the 2017 Tax Cuts and Jobs Act.[35] As a percentage of Gross Domestic Product, the tax on corporate profits has been declining in the past five years, reaching just 0.96 in 2019 – among OECD countries, only Latvia, Hungary and Greece taxed corporations at a lower rate.[36] The Biden Administration has also indicated it will not impose a wealth tax, foregoing significant revenue.[37]

Significantly, President Biden has undermined the ability to raise revenues for Just Transition as well as other priorities by pledging during his campaign not to raise taxes on people earning $400,000 or less. It was an understandable political stance to garner support from upper middle-income voters, but it was fiscally unwise and, if he adheres to the promise, it will deprive the Treasury of important revenue.

Carbon pricing is also an area where the Biden Administration has charted, to date, a cautious path.[38] There are multiple federal legislative proposals for carbon pricing as a tool to simultaneously reduce carbon emissions (by making the emissions "expensive") and create revenue sources to pay for climate change mitigation.[39] On the one hand, the Biden Administration restored the interim carbon pricing standard set during the Obama Administration—a $51-per-ton-of-carbon standard that was rolled back significantly by the Trump Administration.[40] On the other hand, Biden has declined to hike the standard to a far higher level advocated by scientists, economists and climate change advocates because Biden views a much higher carbon price hike, which would raise prices on a wide variety of goods, as clashing with his pledge not to raise taxes on people earning less than $400,000.[41]

To reiterate, outside of money proposed for retraining dislocated workers in a draft infrastructure proposal, *nothing in the Administration's plans cites a specific appropriation figure for a broad plan for "high bar" Just Transition for workers that would include permanent, long-term income support*.

4

U.S. JUST TRANSITION – STRUCTURAL OBSTACLES AND CHALLENGES

To understand the obstacles to setting a high-bar approach to Just Transition, we must explore *structural obstacles and challenges* that are embedded in U.S. economic policy that pre-date the Biden administration, as well as *political realities* specific to the Biden administration.

The path to establish "high bar" standards is treacherous for the same three deeply entrenched structural weaknesses that have caused Just Transition to previously fail in the U.S.: the barebones social benefits system which provides inadequate health care, unemployment insurance and pensions; the failure of economic development programs; and, finally, the outlook for pay and prospects for future job occupations that are tied to broader economic trends which have been taking hold for well over four decades. Unless these three structural deficiencies are dealt with, Just Transition will fail again.

SOCIAL BENEFITS SYSTEM

The first significant structural challenge for any Just Transition effort is the wobbly U.S. social benefits system which has deficient health care, unemployment insurance and pension schemes relative to other countries. Separate and aside from the climate change debate, part of the long-standing challenge facing U.S. workers is that losing a job in the United States is far more devastating than losing a job in Europe and other advanced economies. Because of the dramatically underfunded, or non-existent, social safety network in the U.S., significantly greater costs are imposed on the unemployed in the U.S. compared to Europe or other non-European democracies, like Australia, which have extensive social welfare benefits. The U.S. spends far less on family benefits than most other countries, all of which make up the financial assets available to workers trying to navigate a job loss. Over two decades, U.S. expenditures on family benefits significantly trailed Canada, Japan, Norway, South Korea and Sweden.[42] It is the only advanced economy that does not guarantee paid vacation or holidays.[43] In fact, the U.S. ranks dead last in workplace benefits overall among advanced economies.[44]

The well-known principal difference between the U.S. and Europe, as well as other advanced economies, is health care coverage, which for historical reasons, for millions of U.S. workers is tied to a job – it is not a benefit provided for by the state until a person qualifies for Medicare at the age of 65. Thus, losing a job can, overnight, saddle workers with thousands of dollars in insurance premium costs and out-of-pocket medical costs that can frequently trigger bankruptcy,[45] a threat that has led millions of Americans to turn to GoFundMe campaigns to pay for medical costs.[46]

However, the income chasm unemployed workers fall into goes further than health care, encompassing unemployment insurance (UI), pension plans, and retirement schemes. The unemployment system is an under-funded patchwork of 53 state and territorial systems with a dizzying array of rules on eligibility – for example, "gig" workers are not eligible, though they were given access to the special COVID-19 pandemic CARES Act.[47] The system's many flaws were exposed with the eruption of the COVID-19 pandemic when a crush of millions of people, many of whom were unfamiliar with the system, were pushed to try to access the unemployment benefits within a short time frame because of the swift shutdown of the economy. Many states experienced on-line technical failures leading to massive network shutdowns—partly because the majority of states had never upgraded from a 1970s-era Cobol-based system—that, then, led to significant delays for people trying to file paperwork so they could begin to receive benefit checks.[48] The decline in the investment in the national unemployment insurance system's administrative technology over the past twenty years was met with 2020 record-breaking new claims: 3.3 million for the week ending March 21, 6.6 million in the two following weeks, and 5.2 million in the week ending April 11.[49] The chaos was so pronounced that people turned to Reddit to try to navigate the unemployment insurance system morass.[50]

To understand the herculean task of fixing UI as part of Just Transition, it is imperative to note here that the technological failures exposed by the COVID pandemic are merely a symptom of *political decisions* made to weaken the UI system. At the time of the 2009-2010 Great Recession, the UI system, buttressed by add-on emergency federal benefits, was essential in stabilizing the economy before and after the collapse: two-thirds of the 12 million unemployed workers received regular state or federal UI benefits, UI kept an estimated five million people from falling into poverty, and UI prevented 1.4 million home foreclosures.[51] At that time, all states provided a maximum of 26 weeks of UI benefits. Since the Great Recession, between 2011-2016, "nine states made permanent cuts in the statutory maximum number of benefit weeks […] three states cut maximums from 26 to 20 weeks (MI, MO, SC), one state cut maximum benefit duration to 16 weeks, (AR) and five states have adopted sliding scales tied to state unemployment rates (FL, GA, NC, KS, ID)."[52] The upshot:

> "In 2016, only 27 percent of unemployed workers received unemployment insurance (UI)—a near historic low—compared with 36 percent in 2007."[53]

Technology, under the guise of "modernization", became a tool to frustrate people from accessing benefits. In Florida, for example, after gutting benefits, the state added a 45-question "initial skills assessment" gauntlet to effectively discourage people from applying, adding on a very aggressive "flagging" system to kick out any application that might have a small error.

More important, benefits are meager and vary by state, both in terms of the level of benefits and how long the benefits last, as *Graph 1* and *Graph 2* illustrate (graphics via the Pew Research Center)[54,55]:

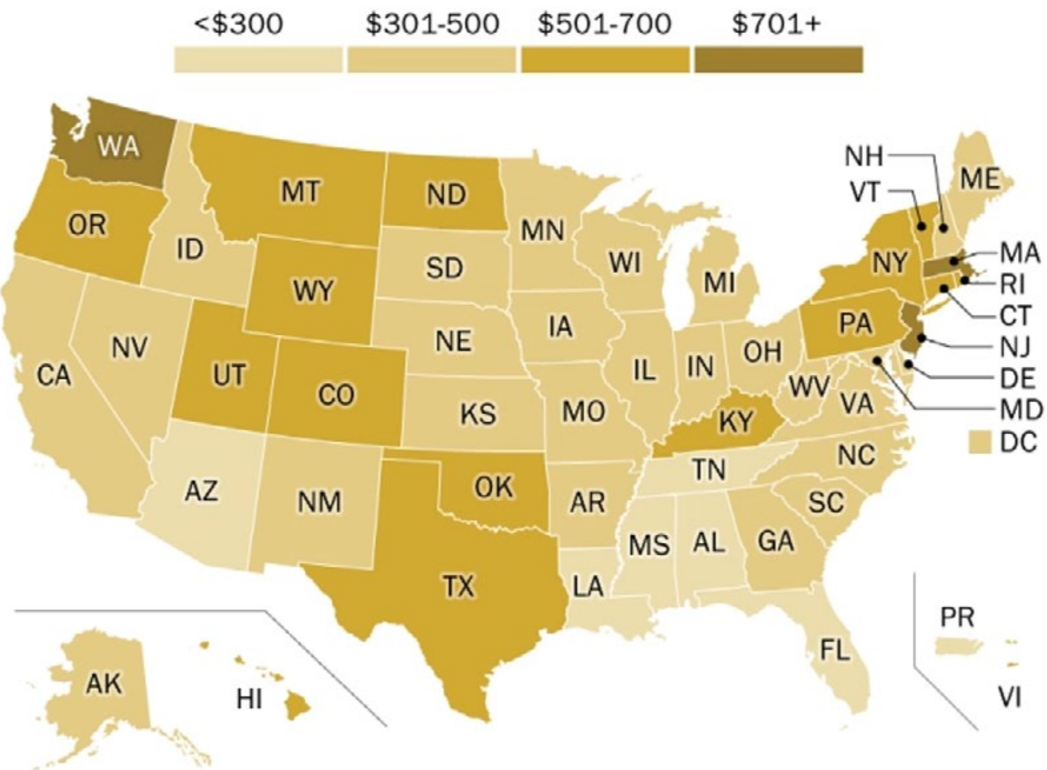
In considering the maximum weekly benefits amount in Graph 1 consider that the official U.S. poverty level (a designation used to determine eligibility for certain government benefits that understates the actual cost of living in many localities) for a family of four is $26,200[56,57]. Thus, the majority of the states provide a weekly benefit that would fall below a family-of-four poverty threshold, leaving a family of four in poverty during extended unemployment (as an example, while the maximum pre-COVID-19 weekly benefit in Massachusetts is $823, it is just $235 in Mississippi).

To sum up, the miserly, incoherent and inefficient unemployment system is a feature, not a bug: its architecture reflects a political ideology that views unemployment as the fault of workers, not an exploitative economic system. What follows from that ideology is a belief that the government should play a very limited role in shaping an economic system. In fact, the UI system, as currently constructed, explicitly undermines workers' economic security because it *encourages* and *subsidizes* corporate job-cutting by imposing very tiny unemployment insurance costs on corporations, who can easily throw workers off payrolls because of restructuring decisions made to increase profits or share price.

A THREE-LEGGED STOOL ISN'T

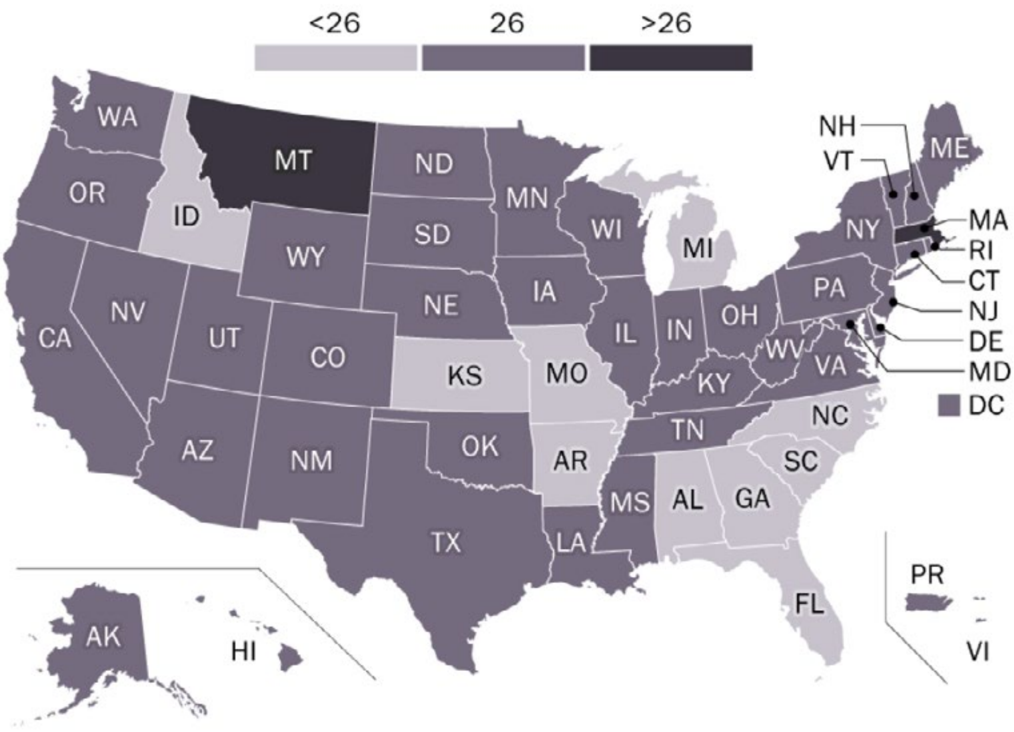
A certain segment of older workers facing job losses due to decarbonization may choose a faster, more direct option to retire. The U.S. pension system had, until the late 1970s,

Graph 1
Maximum weekly benefit amounts,



Note: In Colorado, maximum weekly benefit depends on which of two alternate formulas applies. Louisiana's maximum weekly benefit varies from year to year depending on which formula is in place; figure shown is for current year.
Source: PEW Research Center / Employment & Training Administration, U.S. Labor Department.

Graph 2
Maximum number of weeks individuals can receive unemployment benefits



Note: In Alabama, Florida, Georgia, Idaho, Kansas and North Carolina, maximum depends on state’s unemployment rate. In Montana, maximum depends on how individual’s wages are distributed. In Massachusetts, the maximum is 26 weeks during periods of extended benefits and low unemployment. As of April 23, 2020, Georgia, Kansas and Michigan have temporarily raised their caps because of the COVID-19 pandemic.
Source: PEW Research Center / “Comparison of State Unemployment Laws 2019”, U.S. Labor Department.

envisioned a metaphorical three-legged retirement stool composed of Social Security, employer-based defined benefit pensions and savings accumulated by individuals. However, one of those legs (defined benefit pensions) is vanishing, a second one (individual savings) is badly frayed and a third (Social Security) is too meager to make up for the badly tattered status of the other two.

Social Security is not enough to live on for most people, especially in the context of Just Transition for higher-earning workers who effectively will be forced into retirement and give up multiple years of wages: if a person retires in 2021 at the age of 65, she would receive a maximum of $2,841 per month in Social Security benefits, but only if their monthly earnings had been just over $10,000-per-month, a monthly wage that is a far cry from the average earnings of millions of Americans who work for the federal minimum wage. Prolonging one’s retirement date to age 70 would boost that monthly maximum to $3,895—for a person earning $9,150 per month, again a wage level that most Americas never attain, especially those who are employed in many of the fossil fuel-related jobs.[58] For people retiring at age 65 who earned an average income, Social Security only replaces about 40 percent of their earnings, with that level dropping to about 35 percent in the future because of the rise to 67 years for full retirement age by 2022[59]. In addition, because most retirees choose to enroll in Medicare’s Supplementary Medical Insurance (Part B), which is deducted from Social Security checks, the monthly benefit will continue to erode as health care costs continue to rise sharply.

In fact, the security of non-Social Security pensions in the U.S. has been eroded over the past three decades by the steady disappearance of defined benefit pension plans (a plan that produces a monthly payment based on various employment metrics) in favor of defined contribution plans (the latter are tied to the state of investment returns, most commonly via 401(k)-type plans). In 1981, 64.2% of all pension plan participants were in defined benefit plans; as of 2017, that figure stands at just 25.4%. More worrisome, of the workers who were part of a multi-employer defined benefit plan, 10% to 15% of participants are in plans projected to become insolvent in the next 20 years.[60] As of March 2020, just 15 percent of private sector workers had access to a defined benefit pension versus 64 percent who participated in a defined contribution scheme. In other words, more than six out of ten workers will face a retirement that is largely dependent on the state of the financial markets.[61]

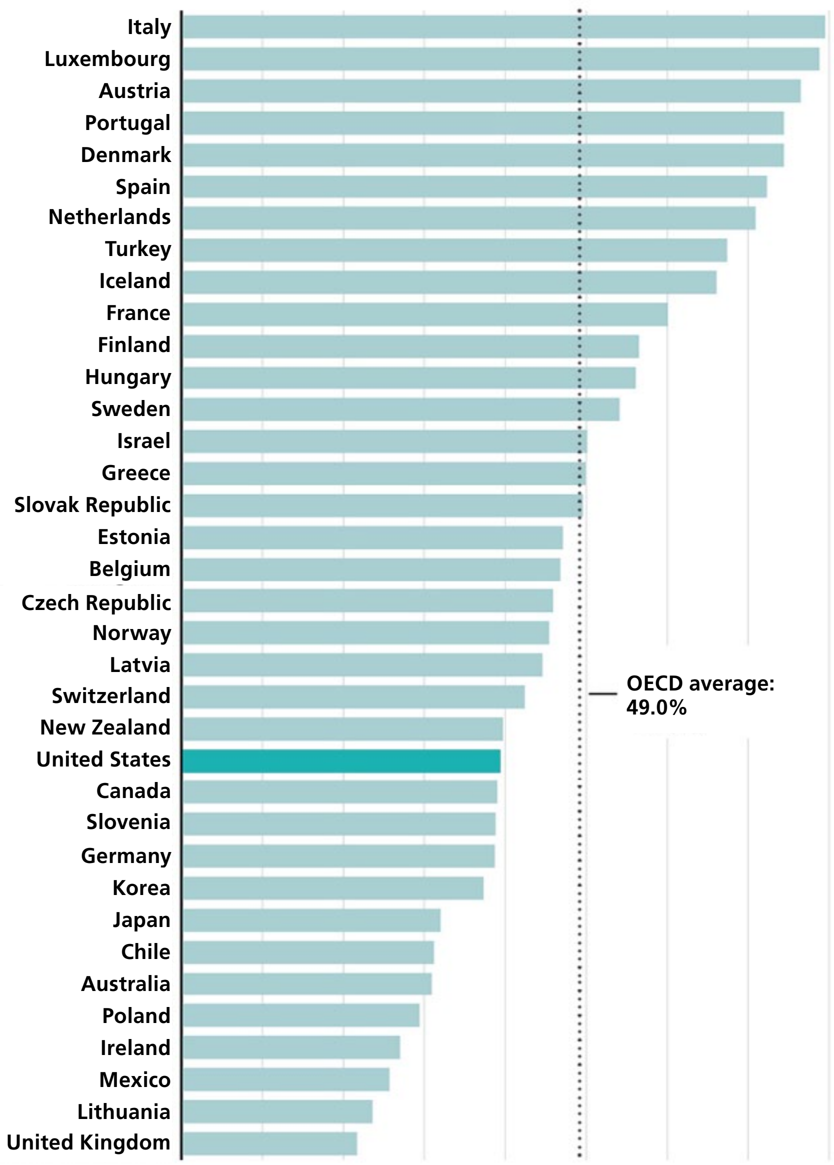
A more revealing statistic tells a broader story that is relevant to Just Transition. In the private sector, 64 percent of unionized workers have access to a defined benefit plan, with 54 percent participating. In the public sector, the proportion is even more staggering, with 94 percent of full-time workers having access to a defined benefit plan, and 83 percent participating. By contrast, just 11 percent of non-union workers in the private sector have access to a defined benefit plan, with just 8 percent participating.[62] This yawning gap tells a straightforward story: the decline in union power across the private sector has been matched by the decline in retirement security.

The COVID-19 pandemic exacerbated the pension security (people who were unemployed had no ability to save and often had to tap into existing retirement savings), negatively shifting a "retirement risk index" so that, "half of today's households will not have enough retirement income to maintain their pre-retirement standard of living, even if they work to age 65 and annuitize all their financial assets, including the receipts from a reverse mortgage on their homes."[63]

Taken together, the picture is quite dire—with significant consequences for a "high bar" Just Transition: if part of the calculation of softening the blow of employment shifts because of decarbonization includes middle-aged and older workers moving into early retirement, the overall plan will require significant financial support just to fill the hole of retirement security because workers lack the kind of savings to carry them through retirement, not to mention late-career joblessness brought on by decarbonization.

Again, this extreme void in retirement savings is not the case in other advanced economies. By contrast, in France, while the mandatory system is fragmented and complex (some pension schemes are state-operated, others are employer-union run), the overall approach has helped France maintain, according to the Organization for Economic Co-operation and Development (OECD), one of the "lowest old-age poverty rates" because "Replacement rates for average-wage workers are well above the OECD average."[64] As *Graph 3* clearly shows, the U.S. Social Security system trails most developed nations in the average earnings replacement level.

Graph 3
Social security benefits are lower than in many other developed nations



Note: Data depict the gross public-pension benefit (in the U.S. context, Social Security) for an average worker in each country who enters the workforce today and works steadily until full pension age (in the U.S., age 67), as a percent of pre-tax earnings.
Source: Center on Budget and Policy Priorities / Organisation for Economic Co-operation and Development, Pensions at a Glance 2019: Retirement Systems in OECD countries

Overlaying the weaknesses of the social safety net for all workers is racism. For every economic shortcoming or cut facing white workers, workers of color carry an added financial ball-and-chain due to the legacy of 250 years of slavery in the U.S. and centuries of racism. Most eye-popping is the vast gap in household wealth between white and non-white households—an important yardstick because household wealth can often be an accurate bellwether for how long a displaced worker can absorb the shock of losing a job. The Federal Reserve Board's Survey of Consumer Finances calculates the median African American family wealth to be $24,100 and the median Latino family wealth to total $36,050, compared to the $189,100 in wealth owned by the typical white family.[65] Those figures are even more precarious because a significant amount of wealth for whites is tied up in an individual's housing, while non-whites typically carry larger housing debts.[66]

In sum, these three elements – health care, unemployment insurance, and pensions – expose a substandard social safety network in the U.S. as well as hurdles to clear as the country weighs the Just Transition history and looks to the future: *the amount of direct social benefits costs shouldered by individual workers, who end up unemployed, will carry a substantial price tag for any "high bar" Just Transition plan if the U.S. wants to be serious about supporting workers*. Framed another way: any sketching out of a "high bar" Just Transition plan must account for large gaps in health care, unemployment and pension income, all of which leave millions of workers with high living costs and extremely low financial assets. Thus, either the frayed elements of health care, pensions and the unemployment insurance systems must be corrected or the gaps in those systems have to be properly costed out and backfilled with targeted funding.

5

THE BIDEN ADMINISTRATION'S PLANS FOR REVAMPING THE U.S. BENEFITS SYSTEM

If the goal is to stand up a "high bar" Just Transition, the Biden Administration has a mixed, and ultimately insufficient, stance on fully revamping the U.S. benefits system due to a combination of ideology and, at best, a political assessment view that political obstacles stand in the way of creating a 21st Century social benefits system that would support Just Transition.

HEALTH CARE

President Biden has a strong expressed commitment to maintain and expand the Affordable Care Act. But, the ACA, while giving millions of previously uninsured people *access* to health care, still imposes *significant premium costs and out-of-pocket expenses* that weigh on the average person's annual finances—a burden that will be even more apparent to workers losing employer-based coverage.[67] Biden has never supported an encompassing single-payer, "Medicare For All" approach but has not ruled out proposals to lower the qualifying age for Medicare.

UNEMPLOYMENT SYSTEM (UI)

In regards to a deep overhaul of the UI system, as of the writing of this paper, the Administration took two modest steps: First, as part of the American Rescue Plan[68], it supported an extension of unemployment benefits in the midst of the COVID pandemic and allocated $2 billion for UI system modernization. Second, in the American Families Plan[69], the Administration proposes to "automatically adjust the length and amount of UI benefits unemployed workers receive depending on economic conditions". However, it is still unclear whether the broad policy commitments will lead to a detailed extensive policy to fix UI—a failure that if left untouched and unaddressed will severely hamper any Just Transition, not to mention doom the notion of a "high bar" approach.

SOCIAL SECURITY

Finally, as it concerns Social Security pension benefits, Biden supports increasing Social Security benefits for lower-income earners, increasing Social Security taxes on upper-income earners, hiking the benefit for older retirees and, crucially, upping the minimum benefit for all retirees. Yet, again, these proposals are insufficient.

To begin, the proposal for a minimum benefit for all retirees should be seen in context to actual living expenses: President Biden proposed setting the minimum payment at 125% of the official poverty level—which, with the poverty level currently set at income below $12,413 for an individual 65 years and older, would total slightly above $15,000 per year. While that concept would add badly needed money to lower-income retirees, that is simply not enough to survive on.[70]

Biden's campaign pledge on taxes – promising not to raise taxes on people earning less than $400,000 per year – is perhaps most disturbing when Social Security funding is considered. Currently, taxpayers only pay into a Social Security Trust Fund up to a cap of $142,800 – an increase over the $137,700 cap in 2020. This has been a long-standing inequity in Social Security funding – richer people do not pay into Social Security on any dollar above the statutory cap. Biden has proposed requiring individuals earning above $400,000 to pay into the trust fund, which creates a so-called "donut hole" that exempts taxing dollars earned between the current cap and $400,000. Since the cap rises each year with cost-of-living adjustments, eventually a "donut hole" will be closed but that would take many years. In fairness, many alternative proposals to increase Social Security Trust Fund revenues create similar "donut hole" gaps,[71] with the smallest "donut hole" proposal covering all income above $250,000.[72]

THE FAILURE OF ECONOMIC DEVELOPMENT PROGRAMS

The second structural challenge arises in the arena of economic development. Without a significant commitment of Just Transition funds targeted for towns and cities heavily affected by decarbonization, communities will implode. In the countries that are weighing Just Transition programs, providing substantial community funding is part and parcel of Just Transition. The German federal government's Commission on Growth, Structural Change and Employment – whose brief focused on the decommissioning of coal-fired power generation in the former Ruhr, Saar and East German coalfields (Lusitia, Brandenburg and Saxony & Saxony-Anhalt), in the coastal regions and along inland waterways – recommended that "the Federal Government should create an extra budget allocation of €1.3 billion per year for 20 years to finance individual projects from the national budget in the federal states affected by a premature phasing-out of coal-fired power generation."[73]

However, community "economic development" initiatives in the United States have often failed because of the way in which such efforts have been structured, favoring tax breaks for large businesses which ultimately cost taxpayers as shortfalls in local government revenues eventually have to be made up, and encouraging competition between communities for the capturing of new jobs – usually at a prohibitive cost – in return for promises to create a certain number of jobs, even when these promises more often than not are not even met. Nationally, the giveaways to corporations cost states and localities *$70 billion a year*, according to Good Jobs First, the leading U.S. organization on corporate subsidies.[74] The scale of corporate giveaways comes despite recent research that there is:

> "little evidence that they generate new jobs or other direct economic benefits to the states that employ them" and mostly are the product of an environment in which large establishments have greater bargaining power and thus are able to extract incentives, *even though they are not producing or promising higher than average employment gains*.[75] [Emphasis added].

Indeed, choosing one large state as an example is instructive to the national picture: during one full decade, the cost of the New York state subsidies soared from $4.4 billion in 2000 to $5.3 billion in 2010, even though in that period there was, as one analysis determined:

> "*little credible analysis of whether the cost to the state is worth the number of jobs created,* few if any guarantees about job quality, minimal analysis of whether alternative uses of funds would generate more or better jobs, and no guarantee that the jobs promised actually will materialize. Indeed, *so little accountability is there that in many cases there is not even a public report about whether promised performance targets have been met.*"[76] [Emphasis added].

At every turn in new iterations, government support for economic development ends up benefiting those constituencies who are least in need. As the Institute for Taxation and Economic Policy observed, Opportunity Zones which were created as part of the Tax Cuts and Jobs Act of 2017 to theoretically increase investment in undercapitalized communities, increased gentrification and diverted resources as:

> "yet another windfall for wealthy investors and may *encourage displacement of people in low-income areas,* working against the provision's intended goal" because "additional investment driven by opportunity zones could have the unintended effect of fueling higher real estate prices that serve to displace low-income citizens and businesses rather than benefit them."[77] [Emphasis added]

Ironically, economic development incentives have been grossly misbalanced to favor big businesses over small and local businesses – which flies in the face of the rhetorical embrace, and deification of the role of small businesses in the country. Using five years of data, Good Jobs First found that, "Across the 16 programs in 14 states examined, large companies are receiving 80 to 96 percent of the subsidy dollars, and somewhat smaller but still very disproportionate shares of the deals (indicating that deals granted large businesses are more lucrative). Overall, big businesses received 90 percent of the $3.2 billion awarded, and 70 percent of the deals" thus, "… when on average only two percent of a state's employers have more than 100 employees, yet such firms are receiving 80 or 90+ percent of incentive dollars, there is a deep policy mismatch that disfavors most U.S. employers."[78]

This mismatch is not a secret to small businesses. Fully 92 percent of small business owners in one study believed, "that the spending balance on incentives between small and large businesses in their state is biased toward big businesses", 72 percent did not believe "their state's current incentive policies are effective in promoting economic growth", and 62 percent believed that "traditional incentives like tax breaks are less valuable to small businesses than other forms of assistance."[79] The poster child for the imbalance is Amazon: over two decades, the company, which had a market capitalization in April 2021 of $1.7 trillion and whose CEO (the richest individual on the planet) increased his net worth by $64 billion in 2020[80], pocketed just shy of $3.8 billion in state and local economic subsidy deals—for virtually no rational economic development reasoning.[81]

The failure of economic development has a significant racial component as well, which Just Transition must account for and adjust for in calculating how to direct funds. From red-lining to environmental racism, decades of "policy choices and insufficient public and private investment have made the infrastructure needs of these communities acute, especially in many communities of color where past policy choices affected by racism, combined with continuing racial bias and discrimination, have resulted in a lack of needed economic resources".[82,83]

The reason for this mismatch can be traced directly to the perversion of the nation's political process. Economic development money – whether in the form of grants or tax breaks or other incentives – is not handed out based on sound economic calculations. Rather, large corporations use their lobbying prowess, oiled by campaign contributions, to engage in the tedious legislative and appropriations steps at the federal, state and local levels – a game that small businesses simply do not have the resources of time, money and expertise to wade into. This scenario is still deeply embedded within the political system and will almost certainly hobble, if not cut short, the most efficacious Just Transition programs.

This is critical because a significant slice of support in Just Transition must support communities at the Main Street level. If the past models are replicated, hundreds of billions of dollars will be misdirected and diverted, boosting company share prices but delivering very little in terms of jobs and long-term economic development. The closing section of this paper will propose steps to reform economic development.

THE OUTLOOK FOR PAY AND PROSPECTS FOR FUTURE JOB OCCUPATIONS

The third, and final, structural challenge goes directly to the broader macroeconomic trends underway throughout the globe. One aspect of the trend is the rise of what IndustriALL calls "Industry 4.0" which it describes as "a basket of disruptive technologies and work structures that are rapidly transforming the world of work. These include advanced digitalization, artificial intelligence, semi-autonomous interconnected machines, advanced robotics, 3-D printing, nanotechnology, advanced biotechnology, and platform work, among others. The technologies themselves are not the problem; *it is the logic driving their introduction, which at this time is to reduce labour costs and labour standards*."[84] [Emphasis added]

Indeed, the macroeconomic trend of reducing labor costs and labor standards has been underway for a number of decades. Globalization and de-unionization – especially the stretching and expansion of the global supply chains into countries where labor costs and standards range from minimal, to non-existent, to outright slavery – define the kinds of jobs and wage levels filling the options available to workers threatened by decarbonization.

Let us look at the reality of job creation in the United States. The Bureau of Labor Statistics' most recent forecast for the 30 fastest growing occupations from 2019-2029 paints the following picture[85]:

- More than one-third of the occupations pay a median wage of less than $35,000 a year, which is less than the national median wage; almost two-thirds (18) of the occupations pay a median wage of less than $50,000 a year.

- Close to one-third of the total growth over the decade of a projected 6 million jobs will come in three occupations—home health and personal care aides; cooks, and fast food and counter workers—where the median wage is less than $30,000 a year.

- By contrast, the highest earning occupations that also show the fastest percentage growth over a decade—physician assistants (median wage of $112,260; 39,300 jobs); nurse practitioners (median wage of $109,820; 117,700 jobs); and medical and health services managers (median wage of $100,980; 133,200 jobs)—require a four-year college degree or higher.[86]

- Per the BLS, "the manufacturing sector is projected to lose 444,800 jobs, the most of any sector over the projections decade. This sector also contains 12 of the 20 industries projected to have the most rapid employment declines."[87]

The above facts regarding job creation, then, lead to the following conclusions:

- Wage levels for future jobs are substantially lower than those of the many jobs expected to be lost due to decarbonization, especially jobs covered under union contracts;

- The wage levels are low even without comparing jobs to higher-paying union jobs: in 2020 the U.S. government set $24,500 as the poverty level for a family of four—which understates the real cost of living to stay out of poverty in many parts of the country, especially urban areas. So, a projected median wage of $35,000-a-year for one-third of the future jobs is hardly a middle-class standard of living;

- The skill set required for higher-earning occupations are not going to be satisfied by retraining programs that do not provide anywhere near the funding to make it possible for an individual to attend a four-year college.[88]

Consider the contrast comparing the future jobs data with today's fossil fuel workers. A Grade 3 unionized miner—which is the middle grade of five grades in the United Mine Workers of America contract—is paid $31.75 per hour, with comprehensive health care and other good benefits. Solar installers, on the other hand, earn between $14 and $20 per hour, depending on the location. But, they are almost all contractors, not employees of a company, and, thus, do not have a unionized-miner level of health care and retirement benefits, not to mention they shoulder a significant payroll tax burden as independent contractors. If one assumes each worker labors 40 hours per week, 50 weeks a year (in reality, a unionized miner will have more generous vacation time) a Grade 3 unionized miner will earn north of $64,000 per annum, compared to a solar installer who, taking the highest pay in the range, would earn just about $40,400 per year—an almost 60 percent wage gap and an even more yawning gap if one includes the financial impact of benefits.[89]

Herein lies the "green jobs mirage" – a misleading promise of a deep well of many jobs at healthy wages compared to the reality of a very limited pool of jobs offering healthy wages with most of the remaining jobs clocking in with wage levels that are far below a job currently held.

The point cannot be stressed enough: unions make the difference in the level of wages offered in the economy, and a bulwark against exploitation and the use of slave labor. The so-called "green jobs economy" has a dearth of union representation. For example, only 6% of U.S. wind energy employees are unionized, according to a report released last year by the National Association of State Energy Officials and the Energy Futures Initiative.[90] In the solar industry, China is dominating the global supply chain at each level, including producing 40 percent of the world's supply of polysilicon using slave labor in the Xinjiang region.[91]

Thus, the Biden Administration's vocal support for unions, especially its support for the PRO Act, may be the most tangible, long-term position that offers some promise for a "high bar" Just Transition. The PRO Act is the most significant legislative effort to overhaul the collective bargaining and union organizing framework in half a century. It would increase penalties for violating labor laws (Section 109); require employers to disclose how much money is spent on anti-union activities, principally the hiring of powerful law firms to breake union organizing drives or to block progress towards contracts (Section 202); expand the definition of who can be included in a bargaining unit (Section 101); ban permanent replacements of striking workers, which has been a significant deterrent to workers exercising the legal right to strike (Section 104); and strengthen the protections for workers who vote for a union to gain a first contract and empower the National Labor Relations Board to force an employer to bargain in good faith (Sections 104 and 105).[92] However, the political realities are such that the Pro Act is unlikely to become law.

6

PREVIOUS JUST TRANSITION EXPERIENCES IN THE UNITED STATES

There have been relatively small-scale Just Transition efforts in the U.S. over the past half century. In most cases, Just Transition took place in large part because of the presence of a union, which typically had rights inscribed in collective bargaining agreements to enforce general provisions for temporary or permanent layoffs (for example, severance payments) during a cyclical economic downturn or, in the worse-case scenario, a company's complete demise through bankruptcy or liquidation. For example, in the 1990s, a powerful hospital workers union in New York – Local 1199, now the largest local within the 1.9 million-member Service Employees International Union – gave up wage hikes in return for a Job Security Fund, which guaranteed full pay for 18 months while workers took retraining classes and looked for new jobs.[93] When new computer technologies replaced hot type in the newspaper industry, unionized pressmen working for the *New York Times* negotiated lifetime salaries. More generally, when a company shut down a facility or filed for bankruptcy, local governments sometimes allocated "economic redevelopment" money for workers and effected communities.

In the past four decades, two large-scale Just Transition efforts in the U.S. are noteworthy because their scope touched millions of workers and a multitude of communities.

DEFENSE INDUSTRY

In an in-depth analysis[94], researchers Laura Powers and Ann Markusen looked at the Just Transition for the 1.4 million U.S. defense industry workers who lost their jobs between 1987 and 1996 as a result of the unwinding of the Cold War. Through the Defense Reinvestment and Conversion Initiative, which distributed $16.5 billion from 1993-1997, the Departments of Defense, Energy, Commerce, and Labor implemented a series of transition programs. On the whole, these workers were better-paid, highly-skilled and more likely to belong to a union than other manufacturing workers. In theory, then, such workers would have acquired highly valued skills that could be marketable in other manufacturing sectors.

While laudable in some respects, the programs failed for two basic reasons, according to Powers and Markusen. First, far more workers lost their jobs in the defense-related industries than the post-Cold War restructuring required because policy makers encouraged or allowed the industries to focus on corporate re-engineering to protect profits and market share, rather than place workers and communities as the top priority. In fact, in the ensuing years, while the number of defense industry firms shrunk, profits and stock prices rose—which benefitted shareholders and CEOs, whose annual compensation in the U.S. is far more dependent on stock options than a bi-weekly paycheck.

Second, and most important, the authors concluded, "Local displaced-worker programs, while they varied considerably from place to place, were frequently unprepared—in terms of financial resources or administrative capacity—to serve this population. Although a strong economy in this period helped to keep aggregate unemployment rates low, our research indicates that private sector defense workers did not, on average, experience rapid re-employment at wages comparable or better to those they had received in their former defense-related occupations. We estimate that *a majority of the workers displaced from defense-related industries between 1987 and 1997 now work at jobs that pay them less than their former wages and that fail to take advantage of their defense-bred skills. And a sizable minority has experienced a drop in earnings of 50% or more."*[95] [emphasis added]

TRADE ADJUSTMENT ASSISTANCE

The other large-scale Just Transition efforts were dotted throughout the history of global trade arrangements. Over the course of the last seventy-four years, the U.S. has entered into global and regional trade agreements, from the on-going rounds of the General Agreement on Tariffs and Trade (GATT) that eventually led to the establishment of the World Trade Organization (WTO) in 1995, to the series of country-specific so-called "free trade" agreements modeled after the North American Free Trade Agreement (NAFTA) that included deals such as the Central American Free Trade Agreement (CAFTA) and the most recent failed attempt to pass the Trans Pacific Partnership. Generally speaking, the trade agreements have garnered bi-partisan support, especially in the U.S. Senate where globalization has traditionally had a more welcome reception. Indeed, NAFTA only passed into law because of support by House Republicans which counter-balanced a large bloc of opposition by Democrats. To win votes, proponents of trade agreements would proffer economic adjustment funds, a trade-related version of Just Transition. The most familiar national program is Trade Adjustment Assistance (TAA) which is administered within the U.S. Department of Labor and permits workers, unions, and companies to apply for training and temporary income assistance for workers who have been laid off due to rising imports or offshoring.

Put simply, retraining has been a failure. Thus, a key indicator that a Just Transition proposal is simply not serious – or is simply going through the rhetorical motions to satisfy foundation funding or other organizational imperatives – is any advocacy for retraining without a recommendation, first and foremost, for a rethinking of the entire retraining system and a brutally honest assessment of its past track record. We now explore this point further in detail because retraining has been a core aspect of the promise of climate change Just Transition, not just in the U.S. but in other countries that have mapped out decarbonization plans.

The TAA has never been up the task of fully absorbing the losses of jobs. In fact, in 2001, the General Accounting Office underscored the significant shortcomings of the NAFTA-related TAA programs, finding that, "providing trade adjustment assistance cannot resolve all the workers' or communities' long-term challenges—particularly those faced by lower-skilled workers and less economically diverse communities. For example, based on the most recent national data, approximately 80 percent of the TAA and NAFTA-TAA workers using benefits in fiscal years 1999 and 2000 had a high school education or less, compared to 42 percent in the overall labor force. In addition, many of these workers have been out of the educational system for 20 years, and in some communities, many have limited English skills. Because of these and other challenges, TAA-sponsored training is unlikely to complete the match between these workers and the kinds of jobs available in the current economy."[96]

That passage from the GAO's 2001 report encapsulates two intertwined central reasons for the TAA failure, and other shortcomings of retraining: without paying attention to what jobs the economy is generating, the under-resourced TAA programs will fall far short of responding to broader economic redevelopment obstacles in communities where good-paying options are limited.

The entire TAA funding allocated to states in the decade from 2009-2019 totaled just under $7.9 billion—a drop in the bucket of what a climate change Just Transition effort would cost. In 2020, planning for the fiscal year 2021, the Department of Labor's budget was forecasting a cut of $1.1 billion in discretionary spending over the previous year, which included a total freeze in funding for Adult Employment and Training Activities.[97]

One of the most prominent voices in trade, Public Citizen's Global Trade Watch, points out that significant numbers of workers never see any TAA benefits:

> "The TAA program is a significant undercount of total U.S. jobs lost to trade. It is limited by several factors. First, a worker or union or company or state labor department must know to apply for the program and choose to do so. Unlike the Worker Adjustment and Retraining Notification Act (WARN), there is no affirmative reporting requirement. Then, if someone knows to apply, it requires initiative to obtain the information to file a petition and make the case that the job losses are trade related. The program is so difficult to qualify for that some unions direct workers to other assistance programs. The next hurdle is that the program only covers a subset of jobs lost to offshoring. The criteria have changed several times since the 1990s, but during the mass layoffs related to NAFTA it only covered a subset of the jobs lost at manufacturing facilities. Even if an entire auto plant relocated to Mexico, only those workers directly engaged in manufacturing line activities could qualify. Service sector workers have largely been excluded although in more recent years some service sector job losses due to trade can qualify."[98]

A review of a 2013 evaluation of the TAA[99], which is an assessment made by the federal Department of Labor, is instructive. Understandably, such a review would try to shed the best possible light on TAA because, after all, the point is to make sure the programs continue to be funded. The most revealing part of the review is the discussion of the success stories. All of the success stories, with a heavy dose of positive advertising lingo, talk about finding a new job. To wit:

> "Stephen Haight lost his job after working for the same company for 33 years. He knew he needed to acquire more education and new skills in order to be competitive and find a good job. With the support of his case manager, Stephen enrolled in an Associate's Degree program in Natural Gas Technology. Upon completion of his program, Stephen not only achieved a 3.9 GPA but started a full-time position the very next day in the field of his training."

Not a single one of the "success stories" mentioned speaks about what the jobs pay. It ignores the real world where unions are weak and new jobs in many industries pay Wal-Mart-level wages. In most coal-producing communities, for example, a coal-related job – which had impressive basic standards which were set when the United Mine Workers could shut down the entire country – is likely to be replaced with a new job at lower pay, rudimentary health care coverage and, if any, a flimsy pension ("flimsy" is defined here as a *defined contribution* plan that is dependent on the ups-and-downs of the stock market, as opposed to a *defined benefit* pension that was once the gold-standard for a middle-class retirement but is now a rare benefit in any new private sector job).

EMPLOYMENT AND TRAINING FAILURE

The failure of employment and retraining should not come as a surprise; extensive evidence accumulated over many years showcasing the threadbare nature of retraining outcomes. In

July 2013, the General Accountability Office released a report that explicitly questioned whether programs focusing particularly on "green jobs" were delivering on promises due to a combination of clashing external economic factors; a lack of real information on jobs available; and over-promising on so-called "green jobs". In extensive interviews with the organizations and institutions who put on the programs, the GAO heard a litany of shortcomings, from a lack of credible information on the existence of "green jobs", the overall challenging economic conditions that pitted displaced workers against other unemployed workers for a small number of jobs and, finally, the misplaced focus on molding workers for "green jobs" rather than supplementing traditional skills training *with* green skills that could be used on any job, rather than just preparing workers for specific jobs identified as "green".[100]

The most devastating picture of the disorganization and ineffectiveness of retraining comes via a March 2019 report from a probe by the General Accountability Office of employment and training (E&T) programs.[101] The report found:

> "… [of] 47 E&T programs […] 44 had overlap with at least one other program in that they provided similar services to a similar population."

> "… little was known about the effectiveness of most programs because only five programs had conducted impact evaluations."

> "… without knowing whether these actions are working to improve program coordination and integration, agencies may persist in activities that are ineffective, fail to expand those that work, or ignore unintended consequences. Further, the lack of evaluation focused on program coordination has resulted in a void of information on programs' collective impact. Without strategically planning the use of evaluation resources, DOL and other agencies will not learn efficiently about whether their efforts to coordinate the programs have been successful and what impact the newly coordinated programs are having, collectively, on their shared objectives."

Coupled with the failures to create effective programs, the GAO noted the precipitous drop in funding for retraining from $20 billion in 2009 to $14 billion in 2017. The decline was principally due to the expiration of funds allocated as part of the Great Recession-financing of the American Recovery and Reinvestment Act of 2009. Still, $14 billion as a baseline for an effective retraining program is minimal.

THE MYTH OF EDUCATION

A central fallacy of the entire retraining philosophy is its heavy reliance on the notion that education is key to a successful next job chapter. This is false: the overriding factor in jobs today is based not on competition over skills but competition based on wages. No matter how smart a person is, there will always be someone who will do a job for less if there is no minimum standard – minimum standards set by unions or, at the very least, a livable federal minimum wage.[102] So, education, which in the abstract is not objectionable, is the wrong answer to the question of how people will have any kind of economic stability.

In the U.S., the education myth endures for three reasons. First, it appeals to our inner child because, after all, many people were told, throughout their youth, that if you did not do your homework, you would not get into college – and college was portrayed as the ticket to the middle-class and higher. Second, and perhaps more importantly, people have not adjusted to the shift in global economic power: China and India and other emerging economies are no longer the repositories of massive plants turning out lower-skilled products (assembly-line electronics, clothes and other durable goods), but have turned into powerhouses, manufacturing higher-end goods up and down the skills ladder like airplanes and biotechnology products. In many of those countries, workers are paid sub-standard to slave-level wages and, thus, present a global competitive challenge to workers in the U.S.

Third, and perhaps most importantly, focusing on education means the U.S. can dodge the real challenge: corporate power. Offering education as part of retraining is much easier than imposing significant taxes on fossil fuel industries, revamping the country's social safety net to meet humane needs in the 21st Century, significantly rewriting labor laws to allow mass unionization, and imposing some community investment demands on the flows of capital.

At the end of the day, the re-training debacle is best understood not as an economic imperative but rather as a political device. With inadequate funding and the unwillingness of its proponents to rebalance power in the marketplace, retraining has always been proposed as a way to mollify critics or sell skeptics on a policy. As explained previously, NAFTA was fiercely opposed by a large majority of the Democratic Party's base, forcing then-President Bill Clinton to buy votes, legally bribing members of Congress with a bridge here, a road there, or the promise of funding for a development bank.[103] A few dollars sprinkled on re-training was part of the sales job to muscle NAFTA through Congress by a very slim margin—a vote that heralded three decades of NAFTA-cloned trade agreements that carried similar wage-reducing frameworks.

The conclusion, then, is straightforward: re-training has, as a whole, failed workers and communities, and its current model needs to be overhauled to match the realities of today and end the false promises of a high-wage job waiting at the end of the retraining rainbow in the "green jobs economy" whose industries are made up of mostly non-union companies.

On the surface, the Biden Administration does not appear to address the systemic failure of re-training. In its announced March 2021 infrastructure bill, the Biden Administration, at

Box 1
Invest in Workforce Development:

As more Americans rejoin the workforce or seek out new opportunities in a changing economy, there is a greater need for skills development opportunities for workers of all kind. In order to ensure workers have ready access to the skills they will need to succeed, and to improve racial and gender equity, President Biden is calling on Congress to *invest $100 billion in proven workforce development programs* targeted at underserved groups and getting our students on paths to careers before they graduate from high school. His plan will:

Pair job creation efforts with next generation training programs. President Biden is calling on Congress to invest in evidence-based approaches to supporting workers. This includes wraparound services, income supports, counseling, and case management, paired with high-quality training and effective partnerships between educational institutions, unions, and employers. Specifically, he is calling for a $40 billion investment in a new Dislocated Workers Program and sector-based training. This funding will ensure comprehensive services for workers, who have lost jobs through no fault of their own, to gain new skills and to get career services they need with in-demand jobs. Sector-based training programs will be focused on *growing, high demand sectors such as clean energy, manufacturing, and caregiving, helping workers of all kinds to find good-quality jobs in an ever-changing economy.*

best, papered over the problems and, at worst, extended the life of false assertions regarding dysfunctional retraining. The relevant passages in the plan follow, with the paper highlighting in bold very questionable assertions:[104]

As this paper has illustrated, there are no "proven workforce development programs" nor does the future job market as it is currently structured in a predominately non-union, low-wage environment, promise "good-quality jobs". While the amounts of money the plan promises are stout – though not astonishing levels of spending over the projected eight-year time frame of the bill (which will be paid for over 15 years) – pouring funding into programs with a woeful track record is disingenuous, at best, and, more important, will funnel large numbers of workers through a dizzying obstacle course at the end of which many will confront dire economic circumstances. The Biden Administration appeared to solidify its approach in its 2022 Fiscal Year budget proposal[105], slotting $285 million for Registered Apprenticeships and $203 million to Workforce Innovation and Opportunity Act state grants to, per the Department of Labor, "make employment services and training available to more dislocated workers, low-income adults and disadvantaged youth who have been hurt by the economic fallout from the pandemic"[106]—without recognizing the dubious strategy of continuing to invest money in partially deeply flawed programs.

7

HOW WOULD THE MONEY FOR A "HIGH BAR" JUST TRANSITION BE RAISED?

Funding "high bar" Just Transition will require a mix of sources. What follows here in summary form is a catalog of the main suite of options in order to measure funding options available compared to the Biden Administration's proposals.

GOVERNMENT FISCAL OUTLAYS VIA TAXATION REVENUES

The government's financing role rests directly with the power to allocate money raised through taxation. Exploring the options requires that policymakers adopt a First Principle: *the United States does not have a government spending problem*. Rather, it's a revenue shortage created by ideological policy decisions, not a dearth of sources or options in the richest nation in human history.

Indeed, the United States imposes one of the lowest tax burdens on corporations and its citizens in the developed world, especially on upper-income earners. Put more bluntly, the U.S. tax system is rigged, encouraging massive tax avoidance by the wealthiest individuals and corporations, costing roughly $175 billion per year.[107]; 55 of the "largest corporations in America paid no federal corporate income taxes in their most recent fiscal year despite enjoying substantial pretax profits in the United States".[108] The lack of broad, progressive taxation for ideological reasons has led to a bare-bones social welfare system, one that showed its frailty during the COVID pandemic.

The following options highlight the main tax options, acknowledging that, with other non-climate change budget priorities in the mix, there would certainly be a tug-of-war over how the sums cited for each tool would be allocated. However, the taxation options illustrate an over-riding theme of this paper – the resources exist for a "high bar" Just Transition in the context of a broader revamping of the economic system:

WEALTH TAXES

The U.S. does not impose a tax on wealth itself (as distinct from taxes paid on the income *generated* by wealth) on assets such as corporate stocks, other business interests, real estate or other types of wealth. During the 2020 Presidential campaign, Senators Elizabeth Warren[109] and Bernie Sanders[110] each proposed a wealth tax – Warren's campaign proposal would have taxed net worth in excess of $50 million at 2% and would add another 1% for net worth in excess of $1 billion. Sanders' wealth tax proposal of 1% would target net worth between $32 million and $50 million and included a ladder of progressive rates, rising one point higher than each previous rung capped at 8% for net worth in excess of $10 billion. A modest wealth tax, which is broadly popular among voters of both parties, would raise $1.3 trillion between 2020 and 2029, according to one of the nation's leading taxation experts.[111] Warren's updated proposal released in March 2021 would begin in 2023, and would raise an estimated $3 trillion over a decade from 100,000 households, which reflects the large increase in wealth – 40 percent – accumulated during the COVID pandemic by the 100,000 households the Warren et. al. wealth tax would cover.[112] Or to put it more plainly, paraphrasing Willie Sutton, who, when asked why he robbed banks, replied simply, "because that's where the money is".

The rationale for setting aside a portion of a wealth tax for Just Transition is sound: every household qualifying for a wealth tax accumulated some of its wealth from fossil fuel industry activity, either directly (because of ownership in fossil fuel companies) or indirectly (for example, think of the extraordinary wealth of Jeff Bezos that benefitted from Amazon's reliance on transportation emissions for the delivery of millions of packages or its need for vast energy resources to keep the lights on in Amazon's huge warehouses).

CORPORATE TAXES

Fossil fuel companies have reaped hundreds of billions of dollars in revenues over the past half century partly because of direct subsidies and tax breaks unique to the broader industry, as well as the long-term ability of fossil fuel companies to externalize on to society-at-large the costs of its operations, primarily the environmental damages. While the direct federal and local subsidies handed out to fossil fuel companies is around $20 billion[113], this is a pittance to the far bigger cost savings that translate effectively into subsidies, and, thus, profits for the industry, because the industry avoids paying the real costs of the damage of its actions to

Graph 4
Corporate Tax Income Revenue
(Fiscal years 1934–2019)

Source: Office of Management Budget. Historical Tables.

society: the costs to health from local air pollution, environmental clean-up, traffic congestion and, of course, climate change. The International Monetary Fund pegs that more expansive definition of subsidies at $649 billion in the United States.[114]

Therefore, targeted higher corporate taxes to underwrite climate change remediation and avoidance are long overdue. The IMF figure suggests that Just Transition could be significantly funded by calculating the actual cost imposed by the activities of fossil fuel companies and, then, legislating the costs into a funding stream to underwrite Just Transition.

However, those higher taxes should not be confined simply to the fossil fuel industry. Every corporation has benefitted from the subsidies afforded fossil fuel companies, through cheaper energy prices, which, for example, kept fuel transportation costs low. *Graph 4* illustrates the opportunity to raise significant funds via higher corporate tax rates in a country in which corporate tax rates have steadily declined[115]:

CARBON TAXES

There are a raft of proposals at the federal level on carbon pricing.[116] Several of the proposals envision allocating some of the revenues towards "Transition assistance for workers" or "transition assistance for workers and businesses in energy-intensive and fossil-fuel industries". However, those amounts are typically a small portion of the overall revenues generated, indicating the low priority assigned to Just Transition.

For example, the American Opportunity Carbon Fee Act, which sets one of the higher prices for carbon at $52 per metric ton, was estimated by its sponsors to raise $2.3 trillion over ten years [117] but only allocates an unimpressive $10 billion-a-year to states for a whole menu of uses including worker transition. However, this underscores the role carbon taxes can play in funding Just Transition – the amount of money allocated to Just Transition from carbon taxes can be, and should be, significantly increased. It is important to note, as well, that carbon taxes are somewhat controversial within the debate among those who recognize climate change as real and also acknowledge workers' transition is a critical issue.[118]

FOSSIL FUEL RECLAMATION AND SEVERANCE TAXES

One precedent for dunning fossil fuel companies for the impacts created by extraction and processing is the Abandoned Mine Land Reclamation Program (AML), which charged coal mining companies fees to be used to remediate mine sites. Importantly, as a precedent, in 1990, Congress authorized the allocation of some of the interest accumulated on unspent funds to pay for a portion of the costs of health plans for the United Mine Workers of America.[119] In 2019, the AML fund stood at $11.496 billion, made up of 9.857 billion collected in fees and $1.639 billion in interest earned.[120] While on its own the fund is quite small relative to the overall potential cost of Just Transition, the AML precedent suggests a path for additional revenues.

State fossil fuel severance taxes – which are levied on the extraction of natural resources – have also brought in revenue but even the drips and drabs have been confined to a small number of states. "State and local governments collected a combined $8.8 billion in revenue from severance taxes in 2017, or less than 1 percent of general revenue. That total was up from $7.9 billion in 2016 but down from $13.2 billion in 2015 and $17.9 billion in 2014. However, even at its peak in 2014, severance tax revenue was still less than 1 percent of state and local general revenue", according to the Urban Institute.[121] Indeed, Oklahoma collected $630 million in severance taxes (called "gross production taxes") for its 2020 calendar year – less than five percent of gross revenues in a state where the oil and gas industry is the largest employer (it is home to the largest oil storage facility in the world – and accounting for 14% of the state's gross domestic product).[122]

Thus, higher reclamation and severance taxes could be part of the mix of the financing of Just Transition

GOVERNMENT JUST TRANSITION BONDS

Throughout World War II, millions of citizens bought "War Bonds" because it was seen as a patriotic duty. The bonds sold during WWII would equal $3 trillion in today's dollars. The key issue: to date, Just Transition is not central to the structure of climate change bonds issuance – which totaled $258 billion in 2019[123]. The Climate Bonds Initiative, which asserts it is "the only organisation working solely on mobilising the $100 trillion bond market for climate change solutions", offers an entire taxonomy and standards for climate bonds to guide evaluating what projects are highly rated for a decarbonization initiative—*without a single marker* for workers' wages, unionization or Just Transition standards.[124, 125]

CONSUMER "WIRE CHARGE" CONTRIBUTIONS

Every energy consumer in the country—past, present and future – has benefited from the output of fossil fuel industry workers. Gasoline, for example, is highly subsidized in the U.S. compared to fuel costs in Europe partly because fossil fuel companies have been able to externalize onto society the costs of exploration, pollution, and waste disposal. Thus, though the lion's share of the non-government funding should come from corporate coffers, society, as a whole, should contribute to upgrading our society – using the principle of progressive taxation to set the rates.

In fact, partly funding Just Transition via a regular "wires charge" would fit easily with current practice. Virtually every power consumer pays small, relatively insignificant charges for a myriad of reasons that are tucked away in monthly bills – charges so small that, on a regular billing basis, consumers are unaware of the charges. A few examples illuminate: Pacific Power collects from its Oregon customers an "Energy Conservation Charge" and a "Low Income Assistance"; Georgia Power imposes a monthly "Environmental Compliance Cost" and "Nuclear Construction Cost Recovery"; Detroit, Michigan-based DTE Energy has a "LIEAF Factor" charge (a Low-Income Energy Assistance Fund charge) and a "Nuclear Surcharge"; and the Los Angeles Department of Water and Power bill includes a variety of tiny charges including one for "Water Infrastructure" and "Low-Income Subsidy".

In 2019, there were more than 135 million household rate payers in the U.S.,[126] who paid an average monthly bill of $115 in 2019.[127] A wires charge system could take various shapes. For example, every rate payer could be assessed a base monthly charge of $5 for every $100 bill, or fraction thereof, for the first five years of a national Just Transition Fund, and then a declining sum every five years capped at $1 at the end of 20 years. That sum would be electronically deposited, in full, directly to the national Just Transition fund. In the first five years, under this scenario, the wires charges would raise a minimum of $8.1 billion annually and up to $11 billion just from rate-payers with average consumption levels. A one-time initial Just Transition "launch" charge of $200 and special annual higher charges should be levied on households with reported incomes of over $250,000 per year – data that can be provided securely from the Internal Revenue Service. Finally, the entire scheme should provide for a low-income reduced rate. In addition, there are close to 20 million industrial and commercial customers, ranging from large facilities (an Amazon warehouse, for example) to a small business in a strip mall.[128] A wires charge for each of those customers should be assessed.

8

THE POLITICAL REALITIES

A brief observation is warranted here to take the measure of the political realities that the Biden administration will confront and which will pose significant obstacles to implementing its climate change commitments. In its first two years, the Biden administration is working with a Democratic Congress, thanks to the two January 2021 victories in the U.S. Senate run-off elections in Georgia. However, the 50-50 Senate balance (in which Vice-President Harris casts tie-breaking votes when needed) gives extraordinary power to every individual Democratic Senator, which, together with a very slim majority in the House, is already translating into significant horse-trading within the Democratic caucus.

In the Senate, on the one hand, non-spending measures require a super-majority of 60 votes to pass, as long as the filibuster lives on. Democrats could change the filibuster rules by a simple majority vote but, at this juncture, just one Democrat opposing such a move would doom the rule change. In a body where most Senators value their individual power rather than the common good, there does not appear to be unanimity to do away with the filibuster that confers outsized power to individual Senators. It would be possible, but hard-fought, to try to attach climate-related measures to a must-pass general spending bill, which under the Senate rules of "reconciliation" only requires 51 votes.[129]

Another avenue the Biden administration pursued was folding some of the targeted climate change spending into large coronavirus relief-stimulus packages and a separate infrastructure spending bill which the administration unveiled in March 2021.[130] Under the guise of job creation and fiscal support for small business, states, and local governments, the proposed plan would funnel money towards projects that advance the decarbonization of the economy. For example, large rebuilding infrastructure projects or even the standing up of a national network of electric charging stations to serve fleets of electric cars would be funded, along with, as previously discussed, $40 billion devoted to retraining.

However, even within the Democratic caucus, the Biden administration has opponents to its articulated climate change agenda, not to mention a much more expansive "Green New Deal" championed by progressive Senators including Bernie Sanders (Independent-Vermont) and Ed Markey (D-Massachusetts). Markey's 14 co-sponsors on a 2019 resolution "Recognizing the duty of the Federal Government to create a Green New Deal" included six Senators who ran for president, including now-Vice President Kamala Harris. Yet among the Democratic Senators who did not sign the resolution were neither of the two Senators from Michigan – where the auto industry still has significant influence – nor Senator Joe Manchin (D-West Virginia), perhaps the most conservative Democrat in the Senate who is deeply invested in protecting the coal industry. Manchin has already proved to be a stumbling block to the most progressive, activist policy ideas.[131] In early 2021, he blocked the hiking of the federal minimum wage to $15-an-hour,[132] and, then, subsequently opposed the most generous stimulus checks payments during consideration of the 2021 American Rescue Plan.[133]

In this political environment, with the specter of an almost-certain multi-million dollar lobbying blitz by business interests seeking to minimize the bill to the corporate bottom line,[134] the notion of a "high bar" Just Transition would face significant headwinds. Indeed, as has been true to date, the ranks of labor unions will potentially split on full-throated advocacy for "high bar" Just Transition, if the choice comes down to long-term, massive funding for Just Transition versus immediate projects like the Keystone Pipeline – which President Biden cancelled in his first days in office – which create a small number of jobs in the short-term.

To reiterate, the Biden Administration's strongest initiative in favor of Just Transition is its stated commitment to assist in rebuilding the labor movement – though the connection is not made explicitly. However, chances are remote at best that the key provisions which would ignite rapid labor union density growth will become law as part of the PRO Act.

9

LEAVING A LEGACY ON JUST TRANSITION

This final section seeks to address what the Biden Administration can do, given the past weaknesses of Just Transition efforts and the inherent weaknesses of the U.S. support systems for workers, by encapsulating the challenges laid out in this paper: *the United States is not positioned to enact a serious, effective "high bar" Just Transition – or even a mid-level Just Transition – because of long-standing fundamental structural economic deficiencies that are the direct result of a continued embrace of a free-market ideology that has engendered historic inequality. Without a re-envisioning of economic power, millions of workers and their communities will end up bearing the harsh brunt of decarbonization.*

The author recognizes that a legitimate dose of some skepticism is warranted here in the following recommendations: it is not clear that the idea of charting a "high bar" Just Transition, and its attendant cost, is even aligned with the president's vision or guiding philosophy, or with that of any of the key members of his climate change or economic teams. If Just Transition becomes tangled up politically or is rebuffed by the president from the outset, the value of a portion of the recommendations here have merit because they support any Just Transition framework. They would also offer standalone salutary effects for workers and should be pursued separate and aside from the Just Transition discussion.

EXECUTIVE BRANCH POSITION

Within the Executive Branch, the new Administration should set out long-term markers for a "high bar" Just Transition and a path to create a permanent new body, a Just Transition Authority. The most logical place to situate the work would be within the U.S. Department of Labor (DOL), whose mission is, "*to foster, promote, and develop the welfare of the wage earners, job seekers, and retirees of the United States; improve working conditions; advance opportunities for profitable employment; and assure work-related benefits and rights.*"[135] The DOL's programs incorporate most of the areas Just Transition touches on: health plans and benefits; retirement plans, benefits and savings; hiring; wages; unemployment insurance; workers compensation; and, crucially, training.

A second option would be to create an interagency effort between the Departments of Labor and Energy. While the Department of Energy has traditionally been far more focused on supporting company long-term expansions in energy exploration and development (and also oversees the maintenance and modernization of the country's nuclear weapons), it now has an explicit mission focused on climate change.[136]

The Administration should create a new assistant Labor secretary position for Just Transition, or, if needed, hand those duties to a "special advisor" to avoid a potential Senate confirmation fight. Senate confirmation is only required for non-career service employees such as the Secretary of agencies and their direct deputy and assistant secretaries.

This paper now proposes seven key areas of focus for policy development and action under the auspices of a Just Transition Authority, or a similar scheme:

UNIONIZATION

The Biden Administration has already expressed support for the Protecting the Right To Organize Act (PRO Act).[137] The right to organize is integral to a successful "high bar" Just Transition. It is simply impossible to envision an economy that sustains high-wage jobs without a vigorous labor movement for three central reasons:

- Creating middle-class wage levels in new energy-friendly sectors requires unionization—and, at present, most of the growth sectors within climate change-oriented industries have extremely low rates of unionization;
- Unionization creates leverage for workers seeking to maintain high-wage standards and bargain a high bar Just Transition framework;
- At least on the critique of retraining options being hard to access or even pinpoint, unions are better equipped to employ staff members with the expertise to help workers navigate retraining systems.

However, with the certain failure of the PRO Act in the current Congress, the Biden Administration can look to take executive actions—a limited landscape—to ensure unionization and/or prevailing wage standards for projects specifically encompassing federal projects (for example, any decarbonization projects on federal lands or buildings).

RETRAINING

It will be essential to initiate a down-to-the-studs, no-nonsense analysis of the full scope of retraining efforts over the past fifty years, asking hard questions:

- Did the money invested in the program cover the full costs of living for eligible workers?
- How was eligibility for retraining defined?
- Were the jobs that workers were retrained for paying a comparable rate to a lost job?
- Were the job-training options matched to available jobs in the marketplace in numbers that would satisfy the numbers of all future applicants?
- Were the future jobs unionized, or were any basic criteria set for minimal workplace standards?
- What were the actual long-term experiences of workers who went through job retraining? In other words, did those workers ever attain a sustained livelihood matching a previous income and standard of living?

That analysis could result in a far different retraining regime—but, to emphasize, retraining cannot be seen as a solitary universe in the absence of revolutionary changes in the job market, wage levels and unionization.

OVERHAULING AND UPDATING THE FLAWED UNEMPLOYMENT SYSTEM

As demonstrated earlier, the COVID-19 pandemic exposed a UI system that, on a "good day" (meaning, not tasked with a massive climate-change reordering of the economy), is deeply dysfunctional.

There is a relatively straightforward way to harmonize the system nationally with a "carrot-and-stick" approach. The federal government enforces UI minimal standards using the Federal Unemployment Tax Act (FUTA). The tax on employers is set at 6% of the first $7,000 income of a worker—a formula that has not changed since 1983. If the state has a program that conforms with the current federal standards, 5.4% of the tax is returned. In other words, employers, in practice, typically will pay 0.6% of the first $7,000.

An updating of FUTA could nationalize a minimum set of benefits with a three-track approach. First, raise the tax so it applies to the first $56,000 of a worker's income but refund 5.9% of the amount. Second, at the same time, tie the refund to a requirement that a state adhere to an expanded minimal UI system that provides 26 weeks of benefits, 60-70 percent of income replacement, and covers all workers (including "gig" and part-time workers). Third, failure to set those minimum requirements would trigger a cut, on some sliding scale, in the FUTA refund—a cut employers are not likely to want to shoulder.

HEALTH CARE

As discussed earlier, losing a job in the U.S. is especially financially devastating because of the continued lack of a national, "Medicare For All" health care system. While the need for "Medicare For All" is immediate and the economics of moving to such a comprehensive system is unassailable, it faces stiff opposition from pro-insurance and pro-pharmaceutical industry lobbying.

This paper proposes that, as part of a "high bar" Just Transition, every worker displaced by carbonization will automatically be enrolled in a new category within the existing Medicare program called "Part JT" (Just Transition). This would be the most cost-effective health care option for displaced workers, since it would move significant numbers of people from private insurance plans that impose far-higher administrative costs than Medicare.[138] In other words, creating a "Part JT" within Medicare would have overall salutary effects on the economy. The Just Transition Authority would assemble the fiscal rationale and mechanics for implementing "Part JT".

NATIONAL PENSION SYSTEM

Bridging income payments to a secure pension will only be effective if retirement is financially sustainable. While the best-case scenario would hail a return to defined benefit plans, that is quite unlikely in the short-term horizon of the pace needed to plunge head-long into decarbonization. It would require, first and foremost, a return to high national unionization rates—in the private sector reaching at least 20 percent, from the current 6.3% level in 2020[139]—because, as demonstrated previously, defined benefit pension plans exist almost exclusively in companies whose workers are represented by a union. A more realistic near-term option would be to begin building a system of retirement "universal voluntary accounts" similar to a scheme proposed by prominent progressive economist Dean Baker. The accounts would provide every worker in a state with access to a fully-portable, low-cost defined-contribution pension at his or her workplace, allowing both workers and employers to contribute.[140] At a minimum, the Just Transition Authority should recommend abolishing income caps on Social Security and eliminating any proposed "donut holes", requiring every taxpayer to contribute on every dollar—which would support expansion of Social Security benefits, buttressing the income of older workers who are moving from a decarbonized industry directly into retirement.

OUTLINE FINANCING AND COMPENSATION MECHANISMS

This paper has suggested key sources for financing "high bar" Just Transition. The Just Transition initiative within the Biden Administration should construct a data infrastructure to allow easy calculations of financing that can, for example, compute an individual's specific circumstances to produce a personalized equation of needs (e.g. include inputs for previous income, future job/retraining options, and household budget). The mechanisms need to capture, and adjust for, long-standing racial inequities that created a persistent wealth gap between white and non-white families.

EMPOWER STATE AND LOCALITIES TO SET HIGH-BAR STANDARDS

States and localities are especially crucial when it comes to economic development because of the race-to-the-bottom in the competition for jobs.

The Administration can use its own power at the federal level to remake the process of economic development to better utilize limited funds in a Just Transition process. The fundamental principles outlined by Good Jobs First are a sound basis, anchored on a firm policy to hold back federal appropriations "until a state signs a pledge, affirming that: it will not actively pirate jobs from other states; it will not fund "interstate job fraud" (i.e. it will not fraudulently call existing jobs "new" for purposes of qualifying for incentives); it will adopt process reforms including advance disclosure; and it will provide robust online post-award disclosure of every deal's costs and benefits (including actual jobs created and actual wages and benefits paid over the life of the deal)."[141]

CREATE A PROCESS FOR COMMUNITY ENGAGEMENT ABOUT JUST TRANSITION

Within the Just Transition Authority, a Community Engagement division should be created that will bring together all sectors of a community facing job loss or economic decline due to decarbonization, including workers and their unions, community leaders, environmentalists and local business owners. The division should be funded to allow it to pay for community members to participate, and underwrite any technical research needed to generate the financial figures that will lay out in details the specific Just Transition needs of a community from workers' incomes to economic development.

APPENDIX ONE

From "The Biden Plan for a Clean Energy Revolution and Environmental Justice":

- "We can create new industries that reinvigorate our manufacturing and create *high-quality, middle-class jobs* in cities and towns across the United States."

- "*Fulfill our obligation to workers and communities who powered our industrial revolution and subsequent decades of economic growth.* This is support they've earned for fueling our country's industrial revolution and decades of economic growth. We're not going to leave any workers or communities behind"

- "But, there is a huge opportunity to revitalize the U.S. energy sector, boost growth economy-wide, and reclaim the mantle as the world's clean energy leader and top exporter. And, Joe Biden will ensure that clean economy jobs are *good jobs*."

- "But the impacts – on health, economics, and overall quality of life – are far more acute on communities of color, tribal lands, and low-income communities"

- Biden will commit our country to *fulfilling our obligation to all workers impacted by the energy transition, like coal miners and power plant workers and their communities.* Coal miners and power plant workers took on dangerous jobs to power our industrial revolution and the decades of subsequent economic growth. As economic trends continue to shift our country away from coal as an energy source, *we have an obligation to help these workers and their communities succeed.*

- *Secure the benefits coal miners and their families have earned.* As marketplace competition continues to shift the country away from coal-fired electricity, we have an obligation to these workers who've worked hard and sacrificed for the rest of us. Biden will make sure coal miners and their families receive not only the respect they deserve but also *the pensions and health benefits they have been promised.*

- Invest in coal and power plant communities and other communities impacted by the climate transformation. Each of these communities are necessary. We can't write them off or act like they don't matter. Each has assets that can be leveraged to diversify their economies, create good, middle class jobs, and help the country get stronger – assets like a rich culture, natural beauty, a proven workforce, and entrepreneurial spirit. The federal government should be a partner to help these communities capitalize on these strengths and build vibrant communities where good jobs are available and young people want to stay or return home. To support coal and power plant workers and their communities, Biden will make an unprecedented investment building upon the vision put forward in the Obama-Biden Administration's Power+ Plan. And, he'll establish a Task Force on Coal and Power Plant Communities, as the Obama-Biden Administration did for Detroit when the auto industry was in turmoil. For example, the Task Force will help these communities access federal investments and leverage private sector investments to help create high-paying union jobs based upon the unique assets of each community, partner with unions and community colleges to create training opportunities for these new jobs, repair infrastructure, keep public employees like firefighters and teachers on the payroll, and keep local hospitals open.

In the related document, "*The Biden Plan to Build a Modern, Sustainable Infrastructure and an Equitable Clean Energy Future*", then-candidate Joe Biden said:

- "We need millions of construction, skilled trades, and engineering workers to build a new American infrastructure and clean energy economy. These jobs will create pathways for young people and for older workers shifting to new professions, and for people from all backgrounds and all communities … And, Biden's plan *will empower workers to organize unions and bargain collectively with their employers as they rebuild the middle class and a more sustainable future*.

- Biden will include in the economic recovery legislation he sends to Congress a series of policies to build worker power to raise wages and secure stronger benefits. This legislation will make it easier for *workers to organize a union and collectively bargain* with their employers by including the Protecting the Right to Organize (PRO) Act, card check, union and bargaining rights for public service workers, and a broad definition of "employee" and tough enforcement to end the misclassification of workers as independent contractors. His bill will also go further than the PRO Act by holding company executives personally liable when they interfere with organizing efforts.

- American workers should build American infrastructure and manufacture the materials that go into it, and all of these workers must have the choice to join a union and collectively bargain.

- He will also ensure that all companies benefitting from his infrastructure and clean energy investments meet the labor protections in Senator Merkley's Good Jobs for 21st Century Energy Act, applying and strictly enforcing Davis-Bacon prevailing wage guidelines, and that those benefiting from transportation investments meet transit labor protections so that new jobs are good-paying jobs with family sustaining benefits. And, as called for in his plan to strengthen worker organizing, collective bargaining, and unions, Biden will require that companies receiving procurement contracts are using taxpayer dollars to support good American jobs, including a commitment to pay at least $15 per hour, provide paid leave, maintain fair overtime and scheduling practices, and guarantee a choice to join a union and bargain collectively.

– *Biden will ensure these jobs are filled by diverse, local, well-trained workers – including women and people of color* – by requiring federally funded projects to prioritize Project Labor and Community Workforce Agreements and employ workers trained in registered apprenticeship programs. Biden will make investments in pre-apprenticeship programs and in community-based and proven organizations that help women and people of color access high-quality training and job opportunities. Biden's proposal will make sure national infrastructure and clean energy investments create millions of middle-class jobs that develop a diverse and local workforce and strengthen communities as we rebuild our physical infrastructure.

– *Biden also reaffirms his commitment to fulfill our obligation to the workers and communities who powered our industrial revolution and decades of economic growth, as outlined in his original climate plan.* This includes securing the benefits coal miners and their families have earned, making an unprecedented investment in coal and power plant communities, and establishing a Task Force on Coal and Power Plant Communities, as the Obama-Biden Administration did for Detroit when the auto industry was in turmoil."

APPENDIX TWO

Below are more detailed excerpts from the American Jobs Plan.

– Create good-quality jobs that pay prevailing wages in safe and healthy workplaces *while ensuring workers have a free and fair choice to organize, join a union, and bargain collectively with their employers.* By ensuring that American taxpayers' dollars benefit working families and their communities, and not multinational corporations or foreign governments, the plan will require that goods and materials are made in America and shipped on U.S.-flag, U.S.-crewed vessels. *The plan also will ensure that Americans who have endured systemic discrimination and exclusion for generations finally have a fair shot at obtaining good paying jobs and being part of a union.*

BUILD WORLD-CLASS TRANSPORTATION INFRASTRUCTURE: FIX HIGHWAYS, REBUILD BRIDGES, AND UPGRADE PORTS, AIRPORTS AND TRANSIT SYSTEMS

– President Biden is calling on Congress to make a historic and overdue investment in our roads, bridges, rail, ports, airports, and transit systems. The President's plan will ensure that these investments produce good-quality jobs with strong labor standards, prevailing wages, and a free and fair choice to join a union and bargain collectively …

– The President's investments in improving water infrastructure and replacing lead service lines will create good jobs, including union and prevailing wage jobs.

> "Build high-speed broadband infrastructure to reach 100 percent coverage … *Along the way, it will create good-paying jobs with labor protections and the right to organize and bargain collectively.*"

> "Spur jobs modernizing power generation and delivering clean electricity … These credits will be paired with *strong labor standards to ensure the jobs created are good-quality jobs with a free and fair choice to join a union and bargain collectively.*"

> "Put the energy industry to work plugging orphan oil and gas wells and cleaning up abandoned mines … President Biden's plan includes an immediate up-front investment of $16 billion that *will put hundreds of thousands to work in union jobs* plugging oil and gas wells and restoring and reclaiming abandoned coal, hardrock, and uranium mines."

SOLIDIFY THE INFRASTRUCTURE OF OUR CARE ECONOMY BY CREATING JOBS AND RAISING WAGES AND BENEFITS FOR ESSENTIAL HOME CARE WORKERS

> "… These investments will help hundreds of thousands of Americans finally obtain the long-term services and support they need, *while creating new jobs and offering caregiving workers a long-overdue raise, stronger benefits, and an opportunity to organize or join a union and collectively bargain.*"

INVEST IN R&D, REVITALIZE MANUFACTURING AND SMALL BUSINESSES, AND TRAIN AMERICANS FOR THE JOBS OF THE FUTURE

> "… President Biden believes that, even in the face of automation and globalization, America can and *must retain well-paid union jobs and create more of them all across the country.*"

– *Build the capacity of the existing workforce development and worker protection systems.* The United States has underinvested in the workforce development system for decades … *The President's plan includes funding to strengthen the capacity of our labor enforcement agencies to protect against discrimination, protect wages and benefits, enforce health and safety safeguards, strengthen health care and pensions plans, and promote union organizing and collective bargaining.*

CREATE GOOD-QUALITY JOBS THAT PAY PREVAILING WAGES IN SAFE AND HEALTHY WORKPLACES WHILE ENSURING WORKERS HAVE A FREE AND FAIR CHOICE TO ORGANIZE, JOIN A UNION, AND BARGAIN COLLECTIVELY WITH THEIR EMPLOYERS

> "… To that end, the President is calling on Congress *to create new, good-quality union jobs for American workers by leveraging their grit and ingenuity to address the climate crisis and build a sustainable infrastructure. Increased unionization can also impact our economic growth overall by improving productivity.* President Biden's plan will:

– *Empower Workers. "… He is calling on Congress to ensure all workers have a free and fair choice to join a union by passing the Protecting the Right to Organize (PRO) Act, and guarantee union and bargaining rights for public service workers.* His plan also ensures domestic workers receive the legal benefits and protections they deserve and tackles pay inequities based on gender.

– *Create good jobs. The President's plan demands that employers benefitting from these investments follow strong labor standards and remain neutral when their employees seek to organize a union and bargain collectively. He is asking Congress to tie federal investments in clean energy and infrastructure to prevailing wages and require transportation investments to meet existing transit labor protections.*

– *Protect workers. President Biden is calling on Congress to provide the federal government with the tools it needs to ensure employers are providing workers with good jobs – including jobs with fair and equal pay, safe and healthy workplaces, and workplaces free from racial, gender, and other forms of discrimination and harassment. In addition to a $10 billion investment in enforcement as part of the plan's workforce proposals, the President is calling for increased penalties when employers violate workplace safety and health rules.*

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ABOUT THE AUTHOR

Jonathan Tasini is a veteran economic analyst, political organizer and communications strategist. He is working on a book on Just Transition. His work can be found at the Working Life site, and his weekly Substack Working Life newsletter.

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Friedrich-Ebert-Stiftung Washington, DC
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JUST TRANSITION IN THE U.S.

A Harsh Mirage Absent A Fundamental Revolution

"Just Transition" is a core principle of forward-looking climate change efforts to advance the decarbonization of the global economy. Just Transition demands that, hand-in-hand with the shuttering of the fossil fuel-based economy, a structured policy agenda ensures that workers who lose jobs or incomes because of the shift away from fossil fuels are economically supported, with expansive aid also flowing into the communities whose economic health was entirely or substantially dependent directly on fossil fuel industries or the industries supporting fossil fuel production.

This study advances the proposition that the U.S., and other countries, must embrace a "high bar" Just Transition as a matter of fairness to millions of workers and, as important, as a linchpin to future economic development. Currently, the overwhelming raft of Just Transition proposals fall woefully short of the financial investment needed.

The U.S. is especially poorly positioned to pursue a high bar effort because of three critical weaknesses. First, past Just Transition efforts have failed because of a lack of money to underpin rhetorical policy commitments. Second, Just Transition cannot succeed in the U.S. because of the country's unique fealty, compared to other advanced economies, to an ideological framework that assumes that when wrenching economic changes take place, it is natural that workers will suffer because that is the way the free market has always operated. Third, the embrace of a free market ideology has led to yawning holes in social safety network benefits that present significant income deficits for workers. A "high bar" Just Transition is not possible without remaking the economic foundations of the country and fixing those long-standing, significant economic structural deficits.

This study examines the challenge by juxtaposing the Biden Administration's proposals for climate change versus the reality of the needs of a "high bar" Just Transition. The paper ends with a set of recommendations for the Biden Administration that would leave a strong Just Transition legacy to build on.

Further information on the topic can be found here:
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