CLEAN ENERGY AND JUSTICE FOR ALL: THE FEDERAL GOVERNMENT'S INFLUENCE ON STATE ENERGY JUSTICE LEGISLATION

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INTRODUCTION

The United States needs a clean-energy transition and needs it now. As the world grapples with the escalating climate crisis, America must take decisive action to significantly reduce greenhouse gas (GHG) emissions; this involves embracing low-carbon technologies and diversifying energy resources.[2] While federal investments in clean energy are increasing, state governments bear the responsibility to implement equitable laws and policies.[3] Nevertheless, this transition is not without its challenges. If not managed with foresight and careful planning, the clean-energy transition could exacerbate existing inequities rooted in America's fossil fuel-based power system.[4] Therefore, a balanced approach is necessary—one that ensures energy security, affordability, and sustainability while upholding principles of equity and justice.[5] America's energy transition must be fast and just.[6]

Navigating the complex "trilemma" of energy security, affordability, and environmental sustainability, energy laws and policies are pivotal in shaping the nation's transition. Central to resolving this trilemma is the concept of a "just transition," which adopts a holistic approach that prioritizes worker protection, economic stability, and environmental justice.[7] This approach integrates the four tenets of energy justice: recognition justice, procedural

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2. *See generally* Bjarne Steffen et al., *State Ownership and Technology Adoption: The Case of Electric Utilities and Renewable Energy*, MIT CEEPR 2 (MIT Ctr. for Energy & Env't Pol'y Rsch., Working Paper No. 2020-016, 2020), https://ceepr.mit.edu/wp-content/uploads/2021/09/2020-016.pdf (acknowledging that the prevention of "dangerous levels of global warming require[] a rapid and deep decarbonization of many industries by means of socio-technical transitions" and that "the adoption of low-carbon technologies also needs to be accelerated to this end").

3. *Clean Energy*, U.S. DEP'T OF ENERGY, https://www.energy.gov/clean-energy (last visited Mar. 16, 2023).

4. *See generally* Bethel Tarekegne et al., *Energy Storage as an Equity Asset*, 8 CURRENT SUSTAINABLE RENEWABLE ENERGY REP. 149, 149–55 (2021) (discussing the importance of careful planning according to energy-justice principles for the clean-energy transition).

5. WORLD ENERGY COUNCIL, WORLD ENERGY TRILEMMA INDEX 2022, 4 (2022), https://www.worldenergy.org/assets/downloads/World_Energy_Trilemma_Index_2022.pdf?v=1669842216; *see, e.g.*, Raphael Heffron et al., *Balancing the Energy Trilemma Through the Energy Justice Metric*, 229 APPLIED ENERGY 1191, 1191 (2018) (identifying why there is a need for a modeling tool such as the Energy Justice Metric, "which focuses on the full energy life-cycle and also has a distributive (inequality-correcting) oriented approach").

6. *See* Shalanda H. Baker, *Anti-Resilience: A Roadmap for Transformational Justice Within the Energy System*, 54 HARV. C.R.-C.L. L. REV. 1, 16 (2019) (emphasizing the need for renewable resources and a just transition).

7. This progression reflects a growing understanding of the interconnectedness between environmental policies and social equity. *See, e.g.*, J. MIJIN CHA ET AL., LABOR NETWORK FOR SUSTAINABILITY, WORKERS AND COMMUNITIES IN TRANSITION: REPORT OF THE JUST TRANSITION LISTENING PROJECT 2 (2021), https://www.labor4sustainability.org/files/JTLP_report2021.pdf ("[The] 'just transition' has recently become more mainstream in climate discourse.").

justice, distributive justice, and restorative justice.[8] Implementing a just transition is crucial for redistributing resources fairly and addressing long-standing racial and economic disparities.[9]

Energy justice stands out as an essential framework to address inequalities within America's existing energy systems. This method emphasizes the welfare and interests of all stakeholders, ensuring no one is left behind in the pursuit of a sustainable future.[10] Notably, energy justice extends beyond environmental considerations and embraces the principles of fairness, inclusivity, and equity—each fundamental to a just transition.[11] Recognizing this approach, President Biden affirmed the nation's commitment to a just transition in January 2021 by signing Executive Order No. 14008, which established the Justice40 Initiative.[12] This Initiative serves as the cornerstone for integrating principles of equity and justice into recent federal expenditures aimed at tackling the climate crisis.[13]

Following the establishment of the Justice40 Initiative, the Biden Administration enacted two climate-focused bills, demonstrating a robust commitment to adopting low-carbon technologies. The bipartisan Infrastructure Investment and Jobs Act of 2021 (IIJA)[14] and the budget reconciliation Inflation Reduction Act of 2022 (IRA)[15] both recognize the imperative for a clean-energy transition. These Acts work in tandem, providing billions of dollars to advance America's shift towards sustainable energy through direct investments and tax credits. Moreover, the IIJA and the IRA stand out as the first major legislative actions applying the principles of the Justice40 Initiative. These legislative actions present a unique

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8. *See generally* Richard J. Wallsgrove, *Restorative Energy Justice*, 40 UCLA J. ENV'T L. & POL'Y 133, 134–42 (2022) (discussing the evolution of energy justice and its relationship to environmental justice).

9. Baker, *supra* note 6, at 12.

10. *Just Transition: A Framework for Change*, CLIMATE JUST. ALL., https://climatejusticealliance.org/just-transition/ (last visited Mar. 16, 2024); *see also* SHALANDA BAKER ET AL., INITIATIVE FOR ENERGY JUST., THE ENERGY JUSTICE WORKBOOK 5 (2019), https://iejusa.org/wp-content/uploads/2019/12/The-Energy-Justice-Workbook-2019-web.pdf ("[T]he goal of achieving equity in both the social and economic participation in the energy system, while also remediating the social, economic, and health burdens on marginalized communities.").

11. BAKER ET AL., *supra* note 10; *see, e.g.*, Ann M. Eisenberg, *Just Transitions*, 92 S. CAL. L. REV. 273, 280 (2019) (noting that the term "just transition" arises in the context of the energy transition as well as the nexus between labor and environmental reform).

12. *See* Exec. Order No. 14008, *Tackling the Climate Crisis at Home and Abroad*, 86 Fed. Reg. 7619, 7631 (Jan. 27, 2021) (introducing the Justice40 Initiative at Section 223); *see generally* INTERAGENCY WORKING GRP., INITIAL REPORT TO THE PRESIDENT ON EMPOWERING WORKERS THROUGH REVITALIZING ENERGY COMMUNITIES 1 (2021), https://netl.doe.gov/sites/default/files/2021-04/Initial%20Report%20on%20Energy%20Communities_Apr2021.pdf (discussing the establishment of the Interagency Working Group to promote "job-creating investments in communities already impacted" by coal-industry changes as a direct result of this Executive Order).

13. Exec. Order No. 14008, *supra* note 12, at 7632.

14. Infrastructure Investment and Jobs Act of 2021, Pub. L. No. 117-58, 135 Stat. 429 (2021).

15. Inflation Reduction Act of 2022, Pub. L. No. 117-169, 136 Stat. 1818 (2022).

opportunity to reshape America's energy landscape, fostering a unified drive towards equity and sustainability.

This Note advocates for strong, equitable energy laws and policies at the state level—building upon recent federal legislation—to effectively navigate the transition to low-carbon technologies. Part I explores the energy trilemma and the just transition framework and illustrates how energy justice tenets can harmonize the trilemma's competing demands. Part II examines the legislative impacts of the Justice40 Initiative, the IIJA, and the IRA. Part III outlines strategies for states to actively implement a just transition and emphasizes the role of energy justice principles throughout this process.[16]

I. BACKGROUND

Energy transitions have historically driven societal progress. The evolution and expansion of modern society is tied to its ability to find, capture, and utilize various energy resources. Since the Industrial Revolution, "society's proficiency at burning things" has generated wealth and maintained inequalities.[17] Unfortunately, the distribution of environmental, economic, and social costs and benefits has been unjust, with marginalized communities often bearing disproportionate burdens.[18]

The clean-energy transition is an opportunity to correct past injustices and unsustainable practices. Unlike energy revolutions of the past, the clean-energy transition is not driven by scarcity or the discovery of new energy resources—it is propelled by the urgent need to combat climate change.[19] By thoughtfully managing this shift, the United States can tackle inequality, promote social justice, and mitigate the effects of global warming. However,

16. The International Labor Organization defines Just Transition as "greening the economy in a way that is as fair and inclusive as possible to everyone concerned, creating decent work opportunities and leaving no one behind." *Frequently Asked Questions on Just Transition*, INT'L LAB. ORG., https://www.ilo.org/global/topics/green-jobs/WCMS_824102/lang--en/index.htm (last visited Mar. 16, 2024). This transition seeks to maximize economic and social opportunities from climate action while mitigating any challenges that arise. *Id.*

17. Namit Sharma et al., *The Decoupling of GDP & Energy Growth: A CEO Guide*, MCKINSEY & CO. (Apr. 24, 2019), https://www.mckinsey.com/industries/electric-power-and-natural-gas/our-insights/the-decoupling-of-gdp-and-energy-growth-a-ceo-guide.

18. *See generally* ARIEL DREHOBL ET AL., AM. COUNCIL FOR AN ENERGY-EFFICIENT ECON., HOW HIGH ARE HOUSEHOLD ENERGY BURDENS? AN ASSESSMENT OF NATIONAL AND METROPOLITAN ENERGY BURDEN ACROSS THE UNITED STATES ii (2020) (discussing how economic, environmental, and social costs are dispersed inequitably, adversely affecting marginalized groups).

19. *See* U.N. Secretariat of the High-Level Dialogue on Energy, *Theme Report on Energy Transition: Towards the Achievement of SDG 7 and Net-Zero Emissions*, 1 (Sept. 2021), https://www.un.org/sites/un2.un.org/files/2021-twg_2-062321.pdf (arguing for a rapid energy transition in response to climate change).

a poorly managed transition risks exacerbating energy insecurity, widening inequality, and accelerating the climate crisis.[20]

As the federal government disperses funds from the IIJA and IRA, state-level policies and programs become vital in accelerating the clean-energy transition. While the IIJA allocates funding across the states, the IRA primarily offers tax incentives to various entities, including organizations and state governments.[21] The success of these investments and incentives relies on state-level policies and decision-making processes, which are crucial for propelling a just transition. To effectively tackle the energy trilemma, these policies must incorporate tenets of energy justice. As such, this Part is divided into two Sections. Section I(A) explores the energy trilemma's three challenges: ensuring energy security, maintaining affordability, and promoting environmental sustainability. Section I(B) delves into the four pillars of energy justice—recognition, procedural, distributive, and restorative justice—underscoring the importance of an efficient, equitable, and inclusive energy transition.

A. The Energy Trilemma

The energy trilemma of energy security, affordability, and environmental sustainability presents a multifaceted challenge to the pursuit of clean energy. Balancing these competing demands is vital for a successful transition, one that ensures reliable, cost-effective, and ecologically sound energy.[22] Geopolitical tensions, such as Russia's invasion of Ukraine and unrest in the Middle East, underscore the fragility of energy security.[23] Fatal blackouts in Texas, Tennessee, and North Carolina further highlight this fragility, exposing system reliability concerns.[24] Simultaneously, rising inflation and

20. *See generally* WORLD ENERGY COUNCIL, *supra* note 5 (explaining the risks of a poorly managed clean-energy transition).

21. *See* discussion *infra* Sections III(A)–(B) (exploring the role of states and other entities in federal energy initiatives).

22. *Trilemma and Transition: Energy Industry Insights 2023*, ENERGY INDUS. REV. (Mar. 2, 2023), https://energyindustryreview.com/analysis/trilemma-and-transition-energy-industry-insights-2023/.

23. *See generally* Cosmo Sanderson, *Middle East Conflict Fuels Fresh Energy Security Concerns, Warns IEA*, ENERGY TRANSITION (Oct. 24, 2023), https://www.rechargenews.com/energy-transition/middle-east-conflict-fuels-fresh-energy-security-concerns-warns-iea/2-1-1540084 ("War between Israel and Hamas has the *potential* to deliver *another* shock to global oil markets.") (emphasis added).

24. *See* Naomi Albert, *Reliance on Fossil Fuels Was Last Year's Grinch that Stole Christmas—and the Real Cause of Winter Storm Elliot Blackouts*, APPALACHIAN VOICES (Dec. 21, 2023), https://appvoices.org/2023/12/21/winter-storm-elliot/ (noting the consequences of Winter Storm Elliot's impact on Southern utilities).

deepening energy poverty stress the importance of energy affordability.[25] While environmental degradation disproportionately impacts disadvantaged communities, rising GHG emissions intensify climate change.[26] Addressing these challenges demands immediate and comprehensive reforms in energy production, distribution, and consumption.[27] As America aims to lower emissions, the clean-energy transition presents an unparalleled opportunity to reform energy systems, harmonize the trilemma, and ensure secure, affordable, and clean energy for all.

1. Energy Security

Energy security is central for a stable transition away from fossil fuels, requiring reliable and resilient access to diverse energy sources. Adapting to short-term supply-and-demand changes and ensuring a sustainable energy supply for the long term are essential components of this strategy.[28] As GHG emissions rise, renewable sources like wind, solar, and hydropower, alongside low-carbon alternatives, such as nuclear power and carbon capture and sequestration, critically influence America's future energy security. However, this shift faces a multitude of challenges, such as power disruptions, dated distribution systems, climate change impacts, cyber-attacks, and geopolitical uncertainties.[29] These challenges not only affect the energy sector's capacity to meet current demand, but also the ability to transition to clean energy.

Integrating renewable energy into the grid is vital for sustainable progress yet introduces complex operational challenges. For example, the variability of wind and solar energy requires nuanced planning and

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25. Shuchen Cong et al., *Unveiling Hidden Energy Poverty Using the Energy Equity Gap*, 13 NATURE COMMC'NS 2456, 2461 (May 4, 2022), https://www.nature.com/articles/s41467-022-30146-5; *see, e.g.*, Dylan D. Furszyfer Del Rio et al., *A Cross-Country Analysis of Sustainability, Transport and Energy Poverty*, NPJ: URB. SUSTAINABILITY, June 30, 2023, at 1, https://www.nature.com/articles/s42949-023-00121-0 (investigating whether low-income households and minorities experience "double vulnerability," a heightened risk of both transport and energy poverty).

26. *Causes and Effects of Climate Change*, UNITED NATIONS, https://www.un.org/en/climatechange/science/causes-effects-climate-change (last visited Mar. 16, 2024).

27. *See The Energy Trilemma*, POWERSTAR, https://powerstar.com/energy-trilemma/ (last visited Mar. 16, 2024) ("[U]ltra-reliable energy is of no use if it's unaffordable for businesses and consumers. Likewise cheap energy is no good for businesses if it doesn't work 50% of the time or generating it destroys the planet as a consequence.").

28. *Energy Security: Reliable, Affordable Access to All Fuels and Energy Sources*, INT'L ENERGY AGENCY, https://www.iea.org/topics/energy-security (last visited Mar. 16, 2024); *see also* Gita Bhatt, *Energy Security and the Path to Green*, INT'L MONETARY FUND (Dec. 2022), https://www.imf.org/en/Publications/fandd/issues/2022/12/editor-letter-energy-security-and-the-path-to-green (presenting a mix of clean-energy technologies that will aid in long-term security, "from solar and wind power to nuclear, 'green' hydrogen, electric vehicles, and carbon capture").

29. *See generally* INT'L ENERGY AGENCY, POWER SYSTEMS IN TRANSITION: CHALLENGES AND OPPORTUNITIES AHEAD FOR ELECTRIC SECURITY 9–19 (2020) (reporting on the ongoing transitions and challenges facing the electricity sector).

management to maintain grid stability, particularly during periods of peak demand.[30] The growing demand for electricity further strains the nation's power grid, emphasizing the need for significant upgrades and new energy sources to maintain a reliable power supply. The 2023 Summer Reliability Assessment by the North American Electric Reliability Corporation highlights the risk of energy deficits, which are driven by fluctuating wind energy output and temperature variations.[31] Innovations in energy-resource management and grid development are fundamental to overcoming these obstacles.

Climate change amplifies threats to national energy security and underscores the need for robust and stable grid infrastructure. Alarmingly, about "70 percent of transmission lines are at least 30 years old and approaching the end of their lifecycle."[32] Similarly, "60 percent of the [nation's] circuit breakers are over 35 years old," surpassing their useful lives of 20 years.[33] These aging components contribute to vulnerabilities in the energy sector, as seen in events like the 2018 California Camp Fire,[34] Winter Storm Uri in 2021,[35] and the 2023 wildfire on the island of Maui, Hawaii.[36] Strengthening grid resilience is not only necessary to withstand extreme

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30. *See What is Peak Electricity Demand?*, HOLYOKE GAS & ELEC., https://www.hged.com/smart-energy/what-is-peak-electricity-demand.aspx (last visited Mar. 16, 2024) ("[T]he specific time when consumer demand for electricity is highest . . . usually occurs on a weekday evening, when people are returning home from work and turning on . . . appliances. . . .").

31. *Summer Reliability Assessment Announcement*, N. AM. ELEC. RELIABILITY CORP. 1 (May 17, 2023), https://www.nerc.com/news/Headlines%20DL/Summer%20Reliability%20Assessment%20Announcement%20May%202023.pdf.

32. Chuck Brooks, *3 Alarming Threats to the U.S. Energy Grid - Cyber, Physical, and Existential Events*, FORBES (Feb. 15, 2023), https://www.forbes.com/sites/chuckbrooks/2023/02/15/3-alarming-threats-to-the-us-energy-grid--cyber-physical-and-existential-events/?sh=3f27032d101a.

33. *Id.*

34. *See* Brandon Rittiman, *ABC10 Investigation: PG&E Knew Old Power Line Parts Had 'Severe Wear' Months Before Deadly Camp Fire*, ABC 10 (Feb. 17, 2021), https://www.abc10.com/article/news/local/wildfire/run-to-failure-what-pge-knew-and-when/103-e4654585-1036-47bb-9078-137893ac242d#:~:text=The%20Camp%20Fire%20was%20sparked,years%20old%20when%20it%20failed (discussing the 154,000 acres burned and 85 lives claimed due to a faulty powerline).

35. *See* Erin Douglas et al., *Texas Leaders Failed to Heed Warnings that Left the State's Power Grid Vulnerable to Winter Extremes, Experts Say*, TEX. TRIB. (Feb. 19, 2021), https://www.texastribune.org/2021/02/17/texas-power-grid-failures/ (detailing the events leading to millions of residents losing power due to record low temperatures and poor grid weatherization planning); *see also Frozen Out: Minorities Suffered Four Times More Power Outages in Texas Blackouts*, UNIV. OF MASS. AMHERST (Apr. 14, 2021), https://www.umass.edu/news/article/frozen-out-minorities-suffered-four-times ("[There is a] striking correlation between racial status where blocks with a higher proportion of minorities were more likely to experience a power outage: predominantly white areas had an 11% chance of suffering an outage compared to a 47% chance in high minority share areas.").

36. *Hawaiian Electric Says Power Lines Sparked Fire but Firefighters Fell Short*, GUARDIAN (Aug. 28, 2023), https://www.theguardian.com/us-news/2023/aug/28/maui-wildfires-hawaiian-electric-company.

weather events, but also to strengthen defenses against cyberattacks and geopolitical uncertainties.[37]

Geopolitical dynamics further influence national energy security. Conflicts in key areas, such as Russia's invasion of Ukraine, disrupt oil and gas supplies while showcasing global dependence on fossil fuels.[38] The COVID-19 pandemic intensified this reliance, exposing the vulnerability of energy systems to global crises.[39] Consequently, transitioning to clean energy becomes strategically imperative to mitigate geopolitical uncertainties and reduce dependence on foreign oil and gas. A well-implemented energy transition, despite its short- and long-term challenges, is essential to modernize energy systems for current and future resilience and reliability.

2. Energy Affordability

Energy affordability is vital for economic development and equitable access to energy. Nevertheless, the transition towards cleaner energy can increase disparities, benefitting some while burdening others, particularly through "energy insecurity."[40] Energy insecurity encompasses energy poverty—i.e., lack of energy access—and energy burden—i.e., the high cost of energy relative to household income.[41] Disadvantaged Americans commonly experience these challenges, which threaten limited access to clean-energy technologies, job losses, and environmental injustices.[42] Tackling affordability issues is essential to mitigate these disparities as the nation transitions away from fossil fuels.[43]

The inequitable distribution of benefits and burdens within the current energy system undermines a just transition. A lack of energy affordability,

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37. *Energy Independence and Security*, OFF. OF ENERGY EFFICIENCY & RENEWABLE ENERGY, U.S. DEP'T OF ENERGY, https://www.energy.gov/eere/energy-independence-and-security# (last visited Mar. 16, 2024).

38. *Russia's War on Ukraine*, INT'L ENERGY AGENCY, https://www.iea.org/topics/russias-war-on-ukraine (last visited Mar. 16, 2024); *see also* Shannon Osaka, *The Russian Invasion of Ukraine Has Left a Hole in the Global Energy Market*, GRIST (Feb. 28, 2022), https://grist.org/article/the-russian-invasion-of-ukraine-has-left-a-hole-in-the-global-energy-market/ (discussing Russia's role as a major energy exporter and the energy uncertainty created by the Russia-Ukraine war).

39. *See* Mahmudul Alam et al., *World Energy Economics and Geopolitics amid COVID-19 and Post-COVID-19 Policy Direction*, WORLD DEV. SUSTAINABILITY, June 2023, at 1, 2 (reporting the pandemic's immediate impacts on energy demand, especially oil markets, leading to fluctuations in energy prices and exposing weaknesses in the energy sector).

40. Sanya Carley & David M. Konisky, *The Justice and Equity Implications of the Clean Energy Transition*, 5 NATURE ENERGY 569, 571 (2020).

41. BAKER ET AL., *supra* note 10, at 10.

42. *See generally Low-and Moderate-Income Solar Policy Basics*, NAT'L RENEWABLE ENERGY LAB'Y, https://www.nrel.gov/state-local-tribal/lmi-solar.html (last visited Mar. 16, 2024) (describing the disadvantages some communities face from unequal distribution of clean energy, specifically solar energy).

43. *See* DREHOBL ET AL., *supra* note 18 (estimating that 15 million U.S. households experienced energy insecurity in 2020, forcing families to choose between paying for energy or other essential needs).

closely linked with social inequity and public health, frequently leaves disadvantaged households without the energy required for routine activities like refrigeration, cooking, lighting, heating, and cooling.[44] The issues of energy poverty and energy burden intensify these challenges. Disadvantaged Americans spend disproportionately on energy bills, limiting their access to clean-energy technologies, such as rooftop solar, electric vehicles (EVs), and home batteries.[45] These obstacles emphasize the complexity of achieving energy affordability.

Ensuring the proactive inclusion of disadvantaged communities is essential for an equitable clean-energy transition. Historically affected by the fossil fuel industry, these communities need a just transition that remedies environmental injustices and energy insecurities.[46] Strategic planning and equitable resource distribution are key to overcoming existing disparities.[47] State laws and federal programs present opportunities to ensure no community is left in the dark.

3. Environmental Sustainability

Environmental sustainability strives to balance economic growth with climate change mitigation and ecological preservation. This approach demands a departure from past regulatory choices, in which the focus on energy security and affordability often led to environmental neglect.[48] In

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44. *See* Sanya Carley, *Energy Insecurity During the Time of COVID*, KLEINMAN CTR. FOR ENERGY POL'Y (Apr. 5, 2023), https://kleinmanenergy.upenn.edu/research/publications/energy-insecurity-during-the-time-of-covid/ ("[E]nergy insecure individuals . . . face difficult and in some cases life threatening tradeoffs: live in thermal discomfort or sacrifice other essential needs that allow them enough money to pay their energy bills. When they cannot cover their bills, they face the threat of utility disconnection, whereby their electricity or gas is cut off.").

45. Marilyn A. Brown et al., *High Energy Burden and Low-Income Energy Affordability: Conclusions From a Literature Review*, PROGRESS ENERGY, Oct. 2020, at 1, 1, https://iopscience.iop.org/article/10.1088/2516-1083/abb954/pdf; *see also* Deborah A. Sunter et al., *Disparities in Rooftop Photovoltaics Deployment in the United States by Race & Ethnicity*, NATURE SUSTAINABILITY, Jan. 2019, at 71, 71 (2019) (discussing how rooftop solar panels are distributed unequally across different racial and ethnic groups in the U.S.).

46. *See* Fatima Abdul-Khabir*, Energy for Everyone: What Is Energy Equity and How Do We Achieve It?*, GREENLINING INST. (Nov. 15, 2022), https://greenlining.org/2022/energy-for-everyone-what-is-energy-equity-and-how-do-we-achieve-it/ (noting that the fossil fuel industry's impact on vulnerable communities reveals the need to prioritize equity in the shift to a clean-energy economy, with a focus on ensuring affordability, promoting equitable decarbonization, and broadening access to green job opportunities).

47. *See generally* Claire Wang et al., *Ensuring an Inclusive Clean Energy Transition: A Two-Part Series on Supporting Coal Workers & Communities*, ROCKY MOUNTAIN INST. (2022), https://rmi.org/insight/ensuring-an-inclusive-clean-energy-transition/ (discussing ways of supporting coal workers and communities transitioning away from fossil-fuel energy sources through vocational opportunities).

48. *See* Jeffery Pierre & Scott Neuman, *How Decades of Disinformation About Fossil Fuels Halted U.S. Climate Policy*, NPR (Oct. 27, 2021), https://www.npr.org/2021/10/27/1047583610/once-

recognizing the environmental costs of industrialization, regulators must embrace sustainable, clean, and reliable energy systems.[49] Focusing on the prudent use of energy resources, this aspect of the energy trilemma calls for enhanced energy efficiency, decarbonization efforts, and pollution control.[50]

Historically, a regulatory emphasis on energy security and affordability resulted in environmental degradation. This emphasis led to a legacy of GHG emissions and air and water pollution due to the pursuit of low-cost, reliable power sources.[51] Recent legislation, notably the IIJA and IRA, represent a paradigm shift. These laws encourage investments in low-carbon technologies while aiming to address previous regulatory shortcomings.[52] Such policy changes highlight the need for collaborative efforts in achieving environmental sustainability.[53]

The accelerating clean-energy transition merits a reevaluation of contemporary energy policies. At this crucial juncture, the United States's choices will determine its ability to meet environmental challenges and secure a sustainable future. Addressing the energy trilemma within this transition is complex. A balanced approach requires regulators to carefully weigh the costs and benefits of diverse energy policies and technologies and involve affected communities in decision-making processes. As the United States embraces low-carbon technologies, embedding tenets of energy justice into the transition becomes essential for ensuring security, affordability, and environmental quality for all.[54] This is an opportunity the nation cannot afford to miss.

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again-the-u-s-has-failed-to-take-sweeping-climate-action-heres-why ("It's the most recent [disaster] in a string of defeats to aggressive climate action that stretches back more than 25 years.").

49. *See* Luisa Marti & Rosa Puertas, *Sustainable Energy Development Analysis: Energy Trilemma*, SUSTAINABLE TECH. & ENTREPRENEURSHIP, Spring 2022, at 1, 1, https://doi.org/10.1016/j.stae.2022.100007 ("Sustainable development is perceived as a socioeconomic system focused on meeting human needs while making long-term progress, with the end goal of ensuring well-being and improving quality of life.").

50. *See generally* Masoud Shirazi et al., *Sustainable Economic Development and Geopolitics: The Role of Energy Trilemma Policies*, 31 SUSTAINABLE DEV. 2471, 2471–75 (2023), https://onlinelibrary.wiley.com/doi/epdf/10.1002/sd.2523 (noting that "[e]nvironmental preservation is essential to sustainable economic development" and analyzing related findings).

51. *The Sources and Solutions: Fossil Fuels*, EPA (Nov. 29, 2023), https://www.epa.gov/nutrientpollution/sources-and-solutions-fossil-fuels.

52. *See* Pierre & Neuman, *supra* note 48 ("[T]he U.S. has contributed more heat-trapping pollution than any other country over time and has been the prime driver of climate change. The national debate about how to address the problem has raged for decades, but progress toward a solution has been slow.").

53. *See generally Innovation, Investment & Inclusion: Accelerating the Energy Transition & Creating Good Jobs*, THE WHITE HOUSE (Apr. 23, 2021), https://www.whitehouse.gov/cea/written-materials/2021/04/23/innovation-investment-and-inclusion-accelerating-the-energy-transition-and-creating-good-jobs/ (identifying "the barriers that inhibit private actors alone from sufficiently investing in clean energy innovation," i.e., "why Federal policy and public-private partnerships are crucial").

54. *See* Haiyang Liu et al., *Roles of Trilemma in the World Energy Sector and Transition Towards Sustainable Energy: A Study of Economic Growth and the Environment*, 170 ENERGY POL'Y 113238 (2022).

B. The Just Transition

The just transition integrates tenets of energy justice and offers a comprehensive solution to harmonize the trilemma. Energy justice "seeks to identify when and where injustices occur and how best law and policy can respond."[55] This framework addresses existing inequities and facilitates the equitable adoption of low-carbon technologies.[56] The just transition should integrate the four tenets of energy justice: recognition, procedural, distributive, and restorative justice. Doing so reshapes social values towards racial and economic equality to ensure the fair distribution of benefits and burdens.[57]

1. Recognition Justice

Recognition justice emphasizes the importance of valuing diverse societal groups, especially those historically overlooked. This tenet acknowledges that injustices in the energy sector often disproportionately affect groups based on their social, cultural, ethnic, racial, and gender identities.[58] Recognition justice advocates for the inclusion of diverse perspectives into clean-energy discourse, aiming to prevent the perpetuation or emergence of disparities.

The role of recognition justice in the clean-energy transition is multifaceted. Recognition justice addresses not only the technical and economic facets of the transition but also its social aspects.[59] This approach demands attention to the rights and needs of all communities, especially those traditionally excluded from energy decision-making processes. For instance, site selection for energy infrastructure projects, like power plants or transmission lines, must assess such projects' effects on nearby

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55. Raphael Heffron et al., *Resolving Society's Energy Trilemma Through the Energy Justice Metric*, 87 ENERGY POL'Y 168, 169 (2015), https://www.sciencedirect.com/science/article/abs/pii/S030142151530077X.

56. *See* BAKER ET AL., *supra* note 10, at 63 ("[A]n energy just approach to energy policy would aim to remediate the financial burdens of energy by making clean energy affordable and accessible to those most burdened under the existing system.").

57. *Id.* at 61 (noting that the field of energy justice has seen substantial contributions, particularly from Benjamin Sovacool, Darren McCauley, Raphael Heffron, and Kirsten Jenkins, who have collectively authored more than 100 articles since 2014).

58. Kirsten Jenkins et al., *Energy Justice: A Conceptual Review*, 11 ENERGY RSCH & SOC. SCI. 174, 179 (2016), https://core.ac.uk/display/188257864?utm_source=pdf&utm_medium=banner&utm_campaign=pdf-decoration-v1.

59. *See id.* at 177 (describing recognition justice's desired perception shift, which aims to "counteract[] a long-standing tendency to stereotype the 'energy poor' and their 'inefficient' use of scarce energy and monetary resources").

communities.[60] Recognition justice seeks to elevate the voices of these communities, ensuring their concerns are heard and addressed in the planning and execution phases.

As the nation adopts greener energy solutions, recognition justice highlights the importance of fairly distributing the transition's benefits. By acknowledging existing inequalities, this tenet champions fair treatment and inclusive representation, which are necessary for overcoming obstacles related to energy insecurity.[61] Recognition justice demands the creation of policies that are responsive to the diverse needs of the population, ensuring everyone has a seat at the table during the energy transition.

2. Procedural Justice

Procedural justice underscores the importance of fairness and inclusivity in decision-making processes. Procedural justice values local knowledge, improves information disclosure, and enhances institutional representation.[62] Advancing a grassroots-oriented approach, this tenet reinforces the importance of local stakeholder engagement at every stage of energy policy. Simply put, "a fast and fair transition to renewable energy will not be achieved if U.S. policymakers and energy developers do not anticipate and respond . . . to the full array of sources of local opposition."[63]

The existing energy-policy landscape reveals procedural shortcomings, particularly in institutional accountability. These weaknesses intensify the challenges of the energy trilemma, highlighting the importance of transforming communities from passive or excluded participants into active, informed stakeholders. Procedural justice thus becomes essential in empowering local knowledge and perspectives, particularly in the context of the clean-energy transition.[64] Effective stakeholder engagement is vital for a just transition to ensure that policies reflect the diversity of societal needs and values.

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60. *See* BAKER ET AL., *supra* note 10, at 11 ("[T]he poor and people of color in this country will suffer the deepest impacts of climate change, given legacies of legalized segregation, redlining, and disinvestment that have left communities of color and the poor on land and in economic circumstances that make them most vulnerable. . . .").

61. *See* Aladdine Joroff, *Energy Justice: What it Means and How to Integrate it into State Regulation of Electricity Markets*, 47 ENV'T L. REP. 10927, 10928 (2017) ("[L]ow-income households devote up to three times as much income to energy-related utility costs as do higher income households; in more than one-third of the cities studied, one-quarter of low-income households had an energy burden greater than 14%.").

62. Jenkins et al., *supra* note 58, at 178.

63. Lawrence Susskind et al., *Sources of Opposition to Renewable Energy Projects in the United States*, ENERGY POL'Y, Apr. 2022, at 1, 2, https://doi.org/10.1016/j.enpol.2022.112922.

64. Jenkins et al., *supra* note 58, at 175–76 (emphasizing "three mechanisms of *inclusion*" to "achieving just outcomes through local knowledge mobilization, greater information disclosure, and better representation").

Procedural justice is fundamental in shaping modern energy policies. Efforts to increase the accessibility of EVs serve as practical examples of procedural justice in action.[65] For instance, an EV pilot program tailored to specific community needs in Dorchester, Massachusetts demonstrates the value of engaging with individuals belonging to diverse socioeconomic backgrounds.[66] Approaches to policy that center on community involvement are key to a fair transition. As the energy sector evolves, so must America's methods of policy formulation. Embracing procedural justice is not merely a policy choice; it is a commitment to equity and sustainability, crucial for navigating the complexities of the energy trilemma.

3. Distributive Justice

Distributive justice plays a central role in ensuring that the energy transition's burdens and benefits are apportioned equitably. Distributive justice focuses on a fair allocation of resources, capital, pollution, and poverty to address economic inequality and the costs of climate change.[67] This tenet particularly affects underserved communities bearing a disproportionate share of these burdens, building on the principles of recognition justice. Distributive justice draws attention to existing disparities, seeking to resolve and correct the burdens facing less powerful and disadvantaged social groups.[68]

Electric generation resources serve as a prime example of distributive justice's key elements. They offer benefits such as reliable, affordable energy; lower emissions; and a cleaner environment. However, electric generation resources also impose significant burdens—including air and water pollution, GHGs, and broader climate change impacts—that disproportionately affect vulnerable communities.[69] These disparate impacts reflect longstanding inequities in energy production and consumption.[70]

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65. Aaron Pressman, *Dorchester Program Aims to Make EVs Affordable*, BOS. GLOBE (Sept. 19, 2023), https://www.bostonglobe.com/2023/09/19/business/dorchester-program-aims-make-evs-affordable/.

66. *Id.*

67. BENJAMIN K. SOVACOOL & MICHAEL H. DWORKIN, GLOBAL ENERGY JUSTICE: PROBLEMS, PRINCIPLES, AND PRACTICES 10–11 (2014).

68. Darren McCauley et al., *Advancing Energy Justice: The Triumvirate of Tenets*, 32 INT'L ENERGY L. REV. 107, 108 (2013) ("[Objections] can contribute to rectifying injustices and should not always be considered as detrimental to a project in terms of contributing to delay. In some cases, they can restore a sense of equity within a project.").

69. *See generally* Andrzej Bielecki et al., *The Externalities of Energy Production in the Context of Development of Clean Energy Generation*, 27 ENV'T SCI. & POLLUTION RSCH. 11506, 11523 (2020) (assessing the externalities of electricity generation).

70. *See* LESLEY FLEISCHMAN & MARCUS FRANKLIN, FUMES ACROSS THE FENCE-LINE: THE HEALTH IMPACTS OF AIR POLLUTION FROM OIL & GAS FACILITIES ON AFRICAN AMERICAN

Energy efficiency programs, including those that provide special rates for EVs and net metering for rooftop solar, may inadvertently disadvantage low-income ratepayers who cannot access such benefits.[71] Furthermore, the historical siting of electric generation facilities in disadvantaged communities demands a more equitable distribution of environmental benefits and burdens.[72]

Distributive justice is also key to addressing past injustices and fostering an equitable future. This tenet illuminates the unequal distribution of costs and benefits among different social groups, which leads to various forms of injustice. Distributive justice emphasizes the significance of including community perspectives into policymaking for a more balanced and just energy future.

4. Restorative Justice

Restorative justice seeks to correct the deep-rooted inequities in energy systems. This principle recognizes and addresses the disproportionate health and environmental burdens faced by marginalized communities.[73] As such, the restorative approach transcends the mere elimination of fossil fuels, directly tackling systemic injustices.[74]

Restorative justice is essential for an equitable energy transition. One instance of a restorative approach entails targeted investments in energy efficiency and weatherization assistance programs within redlined communities.[75] Moving beyond energy-bill support and providing direct assistance to historically disenfranchised communities offers a sustainable and equitable remedy to affordability challenges.[76] By integrating restorative justice with procedural, distributive, and recognition justice, a comprehensive framework for energy justice emerges.[77]

COMMUNITIES 3 (2017) ("[T]he life-threatening burdens place on communities of color near oil and gas facilities are the result of systemic oppression perpetuated by the traditional energy industry, which exposes communities to health, economic, and social hazards.").

71. Brown et al., *supra* note 45, at 3.

72. FLEISCHMAN & FRANKLIN, *supra* note 70.

73. *See* BAKER ET AL., *supra* note 10, at 62.

74. *Id.*

75. Jenny Heeter & Tony Reames, *Incorporating Energy Justice into Utility-Scale Photovoltaic Deployment: A Policy Framework*, RENEWABLE ENERGY FOCUS, Sept. 2022, at 1, 2 (noting that structural racism—exemplified by residential segregation—has significantly hindered African Americans' access to socioeconomic opportunities).

76. *Id.*

77. *See* SOVACOOL & DWORKIN, *supra* note 67, at 11. In addressing the fundamental nature of justice, Michael Sandel notes that "to ask whether a society is just is to ask how it distributes the things [society] prize[s] . . . A just society distributes these goods in the right way; it gives each person his or her due." *Id.*

The clean-energy transition not only stands to revamp the energy landscape and harmonize the trilemma but also fosters healing and empowerment in communities bearing the brunt of historical injustices. Through integrating tenets of energy justice, policies evolve into tools for communal healing and empowerment. Restorative justice, by complementing and enriching recognition, procedural, and distributive justice, paves a comprehensive route toward an equitable energy transition.[78] This all-encompassing approach is vital for states aiming to harmonize the trilemma and provide clean energy and justice to all.

II. FEDERAL FOUNDATIONS FOR THE ENERGY TRANSITION

As energy systems evolve, the interplay of federal legislation and state action paves the path for a sustainable future. This Part, broken down into three Sections, examines the transformative impact of three recent federal directives: the Justice40 Initiative, the IIJA, and the IRA. These federal actions are fundamental to advancing the United States's commitment to a resilient, affordable, and sustainable energy future.

A. The Justice40 Initiative

The Justice40 Initiative, which is central to Executive Order 14008, exemplifies the Biden Administration's commitment to promoting a just transition. This marks a paradigm shift by channeling at least 40% of the overall benefits of federal investment—including investments in clean energy and energy efficiency—to disadvantaged communities.[79] This redirection of resources is a pivotal step towards rectifying historical disparities and fostering sustainable growth in these areas.

The Justice40 Initiative operates within the confines of federal jurisdiction. The Climate Policy Office (CPO), established in the Executive Office of the President and led by the National Climate Advisor (Climate Advisor), works to integrate climate considerations into federal governance.[80] Furthermore, Executive Order 14008 establishes the National Climate Task Force (Task Force), chaired by the Climate Advisor.[81] This

78. *See* BAKER ET AL., *supra* note 10, at 62 (explaining that applying the restorative justice tenet requires "decision-makers to engage with justice concerns and consider the full range of issues, as any injustice caused by an energy activity would have to be rectified").

79. *See* Exec. Order No. 14008, 86 Fed. Reg. 7619, 7632 (Jan. 27, 2021) (requiring "recommendations on how certain Federal investments might be made toward a goal that 40 percent of the overall benefits flow to disadvantaged communities").

80. *Id.* at 7622.

81. *Id.* at 7623.

Task Force unites representatives from 21 federal departments, advancing a coordinated "government-wide approach to combat the climate crisis."[82]

The cooperative efforts of the CPO and the Task Force are essential for achieving the Justice40 Initiative's ambitious goals. Together, they aim to reduce climate pollution, enhance resilience to climate change, protect public health, conserve natural resources, promote environmental justice, and generate sustainable development.[83] By engaging with state, local, and tribal governments, this effort seeks to ensure that community perspectives shape the outcome and success of the Justice40 Initiative.[84] Moreover, the Task Force's role extends to guiding investments in clean energy, efficient transit, sustainable housing, workforce development, pollution remediation, and critical water-infrastructure development.[85] By aligning federal resource procurement and resource management with these areas, it incentivizes private investments.[86] This approach fosters a resilient national supply chain, retains union jobs, and encourages energy-efficient government practices.[87]

The Justice40 Initiative requires that any federal investments made within a covered federal program comply with its policies. These investments—spanning grants, financing, and direct spending—present the challenge of equitable distribution to the communities that need them most.[88] Federal agencies must rigorously oversee these funds' distribution to ensure that they reach their intended destinations.[89] Though confined to federal jurisdiction, the Justice40 Initiative sets a benchmark for state and local governments as well as the private sector to follow in championing a just and equitable approach to the clean-energy transition.

B. The Infrastructure Investment and Jobs Act

The IIJA, enacted in November 2021, signifies a transformative moment in U.S. infrastructure development.[90] Allocating $1.2 trillion, with $550 billion reserved for new federal investments, the IIJA promises to transform

82. *Id.*

83. *Id.*

84. *Id.*; *see also* Mikyla Reta, *How States Can Help Implement the Justice40 Initiative*, NAT. RES. DEF. COUNCIL (Jan. 27, 2023), https://www.nrdc.org/experts/mikyla-reta/how-states-can-help-implement-justice40-initiative (noting challenges "from figuring out how to identify which communities should receive Justice40 funds to designing methodologies for calculating benefits").

85. Exec. Order No. 14008, 86 Fed. Reg. 7619, 7631–32 (Jan. 27, 2021).

86. *Id.* at 7623–24. The strategy aligns federal procurement and resource management with these sectors in hopes of reaching a carbon pollution-free electricity sector by 2035. *Id.* at 7624.

87. *Id.* at 7624.

88. *See, e.g.*, THE WHITE HOUSE, JUSTICE40 INITIATIVE COVERED PROGRAMS LIST 3–20 (Version 1.3, Aug. 18, 2022) (noting that more than 400 covered programs identified by federal agencies exist, each aimed at delivering investments to frontline communities).

89. *Id.* at 3.

90. Infrastructure Investment and Jobs Act, Pub. L. No. 117-58, 135 Stat. 429 (2021).

the nation's transportation, energy, water, and broadband infrastructure.[91] This Act enhances the nation's global competitiveness and commits to fostering a sustainable, resilient, and just economy.[92]

Central to the IIJA's transformative agenda is its dedication to fortifying the nation against climate change. As the largest environmental-justice investment in U.S. history, the IIJA concentrates on key areas like public transit, access to clean water, pollution remediation, and infrastructure modernization.[93] By channeling investments towards these areas, the IIJA demonstrates a strong commitment to environmental justice and a healthier future for all communities.[94]

Furthermore, the IIJA tackles the urgent need to modernize and reform the U.S. energy sector. With power outages costing the nation "up to $70 billion annually" and one in three households struggling with energy bills, the Act pioneers the largest clean-energy infrastructure investment to date.[95] The Act includes measures aimed at modernizing the power grid, enhancing energy efficiency, and promoting clean-energy technologies.[96] These measures are vital for transitioning to a low-carbon economy and fostering economic growth.[97]

Notably, the IIJA introduces the first substantial funding directive for federal agencies to integrate the Justice40 Initiative's principles. Through coordinated efforts among federal, state, and local governments, the IIJA transcends traditional infrastructure development, serving as a catalyst for equitable and environmentally just transformations. This comprehensive

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91. *Updated Fact Sheet: Bipartisan Infrastructure and Jobs Act*, THE WHITE HOUSE (Aug. 2, 2021), https://www.whitehouse.gov/briefing-room/statements-releases/2021/08/02/updated-fact-sheet-bipartisan-infrastructure-investment-and-jobs-act/; *see also Infrastructure Investment & Jobs Act (IIJA) Implementation Resources*, GOV'T FIN. OFFICERS ASS'N, https://www.gfoa.org/the-infrastructure-investment-and-jobs-act-iija-was (last visited Feb. 12, 2024) (containing up-to-date references to all ongoing IIJA implementation measures).

92. *Bipartisan Infrastructure and Jobs Act*, *supra* note 91.

93. *See id.* (noting that the IIJA represents the largest federal investment in public transit and passenger rail "since the creation of Amtrak," and the "largest investment in clean drinking water and wastewater infrastructure in American history").

94. *See The Bipartisan Infrastructure Law Advances Environmental Justice*, THE WHITE HOUSE (Nov. 16, 2021), https://www.whitehouse.gov/briefing-room/statements-releases/2021/11/16/the-bipartisan-infrastructure-law-advances-environmental-justice/ (discussing the IIJA's efforts to target communities historically affected by pollution and underinvestment by investing in the cleanup of "Superfund and brownfield sites, reclaiming abandoned mine land[s], and capping orphaned oil and gas wells").

95. THE WHITE HOUSE, BUILDING A BETTER AMERICA 150 (May 2022), https://www.whitehouse.gov/wp-content/uploads/2022/05/BUILDING-A-BETTER-AMERICA-V2.pdf.

96. *Id.* at 3; *see also* Abinaya Vijayaraghavan & Jarrett Renshaw, *White House Announces $13 Bln. in Funding to Modernize Power Grids*, REUTERS (Nov. 18, 2022) (noting that investments in the nation's grid infrastructure include $10.5 billion to strengthen power systems against climate related threats and $2.5 billion for developing new transmission lines).

97. THE WHITE HOUSE, *supra* note 94.

approach solidifies the IIJA as a vehicle for infrastructure renewal and a beacon for achieving broader societal and environmental justice goals.

C. The Inflation Reduction Act

The IRA, enacted in August 2022, revolutionizes America's approach to climate change. Initially projected at $370 billion in tax credits, the IRA's allocation for climate and clean-energy initiatives has increased, with 2023 estimates suggesting a potential doubling or tripling to meet its objectives.[98] The IRA employs tax incentives to stimulate the adoption of low-carbon technologies, favoring carrots over sticks.[99] This strategy, aimed at stimulating economic growth from the "bottom up and middle out," marks a significant step forward for communities historically overburdened by environmental injustices.[100] The Act's financing stems from tightening tax loopholes, enhancing tax code enforcement, and increasing fees on large corporations.[101]

At the heart of the IRA lies its commitment to aiding disadvantaged communities. The Act uses adders from Production Tax Credits (PTCs) and Investment Tax Credits (ITCs) to spur investments in "energy communities," creating valuable job opportunities.[102] Additional adders for specific types of

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98. *Inflation Reduction Act: One-Page Summary*, DEMOCRATIC SENATE, https://www.democrats.senate.gov/imo/media/doc/inflation_reduction_act_one_page_summary.pdf (last visited Feb. 28, 2024); *see also Fact Sheet: How the Inflation Reduction Act's Tax Incentives Are Ensuring All Americans Benefit from the Growth of the Clean Energy Economy*, U.S. DEP'T OF THE TREASURY (Oct. 20, 2023), https://home.treasury.gov/news/press-releases/jy1830 (explaining the implications of different tax credits made available under the IRA).

99. *See* Alex Muresianu, *The Sticks: Inflation Reduction Act's Energy Related Tax Increases*, TAX FOUND. (Sept. 22, 2022), https://taxfoundation.org/blog/inflation-reduction-act-energy-tax-increases/ (discussing three key sticks contained in the IRA: a methane fee targeting oil and gas emissions, a reinstated Superfund tax on petroleum, and a permanent increase in coal excise taxes to support the Black Lung Disability Fund).

100. *See Fact Sheet: Inflation Reduction Act Advances Environmental Justice*, THE WHITE HOUSE (Aug. 12, 2022) https://www.whitehouse.gov/briefing-room/statements-releases/2022/08/17/fact-sheet-inflation-reduction-act-advances-environmental-justice/ (noting that the IRA serves as the most significant climate legislation in U.S. history, delivering for "[o]verburdened [c]ommunities").

101. Jean Ross & Jessica Vela, *The Inflation Reduction Act Would only Raise Taxes from Wall Street and Big Corporations*, CTR. FOR AM. PROGRESS (Aug. 2, 2022), https://www.americanprogress.org/article/the-inflation-reduction-act-would-only-raise-taxes-from-wall-street-and-big-corporations/.

102. THE WHITE HOUSE, *supra* note 94, at 12; *see also* DANIEL RAIMI & SOPHIE PESEK, RES. FOR THE FUTURE, WHAT IS AN "ENERGY COMMUNITY?" ALTERNATIVE APPROACHES FOR GEOGRAPHICALLY TARGETED ENERGY POLICY iii (2022), https://www.rff.org/publications/reports/what-is-an-energy-community-alternative-approaches-for-geographically-targeted-energy-policy/ (describing energy communities defined in the IRA as "communities that will be most heavily affected by the transition away from fossil fuel energy"); *see also* Julie M. Lawhorn, *Interagency Working Group (IWG) on Coal and Power Plant Communities and Economic Revitalization*, CONG. RSCH. SERV. (Jan. 17, 2023), https://crsreports.congress.gov/product/pdf/IF/IF12238 (tracking IRA funding and tax credits aimed at revitalizing America's energy communities).

investments bolster these credits.[103] The IRA extends its impact by offering household credits for purchasing EVs, energy-efficient home improvements, and residential clean-energy solutions.[104] These credits aim to cut down legacy pollution, enhance clean-energy accessibility and affordability, and improve living standards, particularly in disadvantaged areas.[105] Thus, the IRA aligns with the Justice40 Initiative and IIJA by expanding investment programs across all communities to foster a just transition.[106]

The Justice40 Initiative, IIJA, and IRA exemplify the federal government's commitment to a resilient, affordable, and sustainable energy future. By focusing on equitable economic distribution, the Justice40 Initiative aims to uplift historically marginalized communities. Concurrently, the IIJA channels investments into low-income communities, modernizes the country's energy infrastructure, and bolsters America's climate resilience. Moreover, the IRA employs tax incentives to motivate states and other entities to embrace low-carbon technologies, complementing investment projects funded by the IIJA. Nevertheless, the federal government cannot implement this transition alone. To avoid worsening existing disparities and effectively implement the shift to clean energy, state action is crucial.

III. PATHWAYS TO AN EQUITABLE ENERGY TRANSITION

As America transitions to low-carbon energy sources, the emphasis on environmental sustainability and conscious energy use grows. This Part explores state governments' roles in adopting the just transition. Utilizing the framework of energy justice, states are poised to shape policies that address historical disparities and champion "fairness, equity, equality, and inclusiveness."[107] Section III(A) analyzes state initiatives aligning with federal directives. Section III(B) suggests state strategies for enacting tenets of energy justice to advance the just transition while harmonizing the competing demands of the energy trilemma.

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103. RMI & EVERGREEN COLLABORATIVE, IMPLEMENTATION GUIDANCE FOR STATES AND PUBLIC UTILITY COMMISSIONS: ELECTRICITY INCENTIVES IN THE INFLATION REDUCTION ACT 3 (2023), https://www.evergreenaction.com/state-guidance/ElectricityProvisions-Feb2023.pdf.

104. *See How the Inflation Reduction Act Will Save Households Money in 2023*, CTR. FOR AM. PROGRESS (Jan. 5, 2023), https://www.americanprogress.org/article/how-the-inflation-reduction-act-will-save-households-money-in-2023/ (explaining that the IRA includes credits for households to save money on energy expenses, such as driving and home heating and cooling).

105. *Environmental Justice in the Inflation Reduction Act*, DEMOCRATIC SENATE, https://www.democrats.senate.gov/imo/media/doc/environmental_justice_in_the_inflation_reduction_act.pdf (last visited Mar. 16, 2024).

106. Hannah Perls, *Breaking Down the Environmental Justice Provisions in the 2022 Inflation Reduction Act*, HARV. ENV'T & ENERGY L. PROGRAM (Aug. 12, 2022), https://eelp.law.harvard.edu/2022/08/ira-ej-provisions/.

107. RAPHAEL J. HEFFRON, THE CHALLENGE FOR ENERGY JUSTICE: CORRECTING HUMAN RIGHTS ABUSES 2 (2021).

A. The Role of States in Federal Energy Initiatives

State governments play a central role in the clean-energy transition, connecting federal investments to local application. With jurisdiction over project planning, siting, permitting, and rate-setting, states are uniquely positioned to customize federal incentives to meet specific community needs.[108] This positioning enables states to use investments from the IIJA and incentives from the IRA to combat climate change and rectify historical inequalities.

State public-utility commissions are poised to maximize the IIJA's investment programs. For example, the 2022 Climate Solutions Now Act (CSNA) in Maryland requires the state's Public Service Commission (PSC) to assist "electric companies [in] applying for and obtaining access to federal . . . funds" to achieve Maryland's climate objectives.[109] This mandate led to the creation of a PSC-managed docket system, requiring utilities to submit monthly reports on their efforts to obtain IIJA funding.[110] The PSC's diligent oversight ensures that utilities consistently and transparently seek federal grants, supporting Maryland's vision for an affordable and equitable energy transition. By extension, the utilities' success in securing federal funding has the potential to reduce ratepayers' energy costs.

The IRA offers states additional opportunities to foster savings and boost energy efficiency. With initiatives like Renewable Portfolio Standards and Clean Energy Standards, states have historically driven market growth and job creation in the power sector.[111] The IRA enhances states' momentum by providing long-term, improved renewable-energy tax credits and new financing options.[112] These tax credits aim to reduce the economic viability of fossil-fuel generation, with analyses showing clean-energy portfolios

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108. Chris Chyung et al., *How States and Cities Can Benefit from Climate Investments in the Inflation Reduction Act*, CTR. FOR AM. PROGRESS (Aug. 25, 2022), https://www.americanprogress.org/article/how-states-and-cities-can-benefit-from-climate-investments-in-the-inflation-reduction-act/.

109. MD. CODE ANN. PUB. UTILS. § 7-803(B).

110. *See* MD. PUB. SERV. COMM'N, Order No. 90272 at 6–10 (June 29, 2022) (establishing the docket system to serve as a platform for utilities to disclose their progress, challenges, and strategies in tapping into IIJA resources).

111. *See generally State Renewable Portfolio Standards and Goals*, NAT'L CONF. OF STATE LEGISLATURES (Aug. 13, 2021), https://www.ncsl.org/energy/state-renewable-portfolio-standards-and-goals.

112. *See* RMI & EVERGREEN COLLABORATIVE, *supra* note 103, at 2 ("[F]orward-thinking power sector policy . . . has driven affordable clean energy with Renewable Portfolio Standards (RPS), Clean Energy Standards (CES), net metering, and other programs spurring market growth and job creation."); *see, e.g.*, IRA, Pub. L. No. 117-169, H.R. 5376, 117th Cong. (2022), https://www.congress.gov/bill/117th-congress/house-bill/5376 (explaining that, in serving as the basis for electric sector incentives, the IRA's Section 45 includes the renewable-energy PTC while Section 48 includes the ITC).

outcompeting new gas plants in affordability.[113] Furthermore, the IRA introduces financing programs to spur transitions from uneconomic fossil-fuel assets to clean-energy technologies.[114]

For the Maryland PSC and other state public-utility commissions, the IRA's financing programs promise further reductions in electric bills. Notably, the IRA enables tax-exempt entities, including non-profits and state governments, to directly benefit from clean-energy tax credits.[115] In contrast, for-profit entities, such as investor-owned utilities, can use transferable credits to lower monetization costs and create additional savings for ratepayers.[116] Enhanced by bonuses for projects meeting specific criteria for low-income areas, domestic content, or energy communities, the IRA's tax credits become even more valuable.[117] Paired with tax credits for households, the states' active involvement with the IRA seeks to stimulate private investment, create jobs, propel clean-energy projects, and expand access to clean-energy technologies.[118] The strategic acquisition of federal investments and incentives is crucial for states to meet America's carbon emission reduction goals.

B. Implementing Energy Justice at the State Level

States play an instrumental role in the just transition. By embedding tenets of energy justice into their regulatory frameworks, states can ensure a fair distribution of the benefits of the clean-energy transition. This approach addresses inequities stemming from historical energy practices, becoming increasingly relevant as the adoption of low-carbon technologies evolves.[119]

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113. *See* Lauren Shwisberg, *The Business Case for New Gas Is Shrinking*, ROCKY MOUNTAIN INST. (Dec. 8, 2022), https://rmi.org/business-case-for-new-gas-is-shrinking/ ("[T]aking the full advantage of tax credits in the [IRA], clean, renewable sources will be cheaper than 99 percent of proposed gas plants.").

114. RMI & EVERGREEN COLLABORATIVE, *supra* note 103 (explaining that the Energy Infrastructure Reinvestment Financing Program enables investor-owned utilities to "refinanc[e] uneconomic fossil plants while reinvesting in cheap renewable energy with storage and repurposing the grid interconnection from the retired plant").

115. *Id.*

116. *Id.*; *see also Energy Asset Monetization*, AMERESCO, https://www.ameresco.com/asset-monetization/ (last visited Feb. 14, 2024) (explaining energy asset monetization as "an effective way to offset annual utility infrastructure expenses or develop new sources of revenue for government and industrial expenses").

117. THE WHITE HOUSE, *supra* note 94, at 9–12; *see also Energy Community Bonus Credit Amounts Under the Inflation Reduction Act of 2022*, https://www.irs.gov/pub/irs-drop/n-23-29.pdf (last visited Dec. 12, 2023) (acknowledging that these PTCs and ITCs are not solely restricted to state governmental investments and that anyone can utilize them).

118. THE WHITE HOUSE, *supra* note 94, at 12.

119. THE WHITE HOUSE, BUILDING A CLEAN ENERGY ECONOMY: A GUIDEBOOK TO THE INFLATION REDUCTION ACT'S INVESTMENTS IN CLEAN ENERGY AND CLIMATE ACTION 7 (2023), https://www.whitehouse.gov/wp-content/uploads/2022/12/Inflation-Reduction-Act-Guidebook.pdf

Accordingly, states face the complex task of fairly allocating energy benefits from the IRA and IIJA while crafting decision-making policies that tackle the competing demands of the energy trilemma.

Recognition justice compels states to identify and acknowledge communities historically disadvantaged by existing energy systems. A key strategy advancing this tenet could involve expanding grid access, particularly for those unable to afford self-generation of electricity.[120] States might require energy utilities to offer community solar projects to low-income households, thereby bypassing the cost barriers of private solar installations.[121] Such measures ensure broader energy security and stimulate the adoption of low-carbon solutions in the most marginalized areas while taking advantage of IIJA investment opportunities and IRA tax incentives.

Procedural justice motivates states to develop transparent and inclusive energy policies. Collaborative efforts with stakeholders, such as co-designing energy assistance programs with low-income communities, ensures the integration of disadvantaged groups' voices into energy policymaking.[122] This inclusive approach mitigates risks related to energy affordability, such as energy insecurity and poverty. Thus, procedural justice supports the development of energy systems that bolster economic growth and social well-being while aligning with the Justice40 Initiative.

Distributive justice requires states to proactively address disparities in the allocation of energy resources and environmental pollution. Building on recognition justice, this approach should actively involve impacted communities in policy development to ensure equitable distribution of burdens and benefits. States can implement policies that direct renewable energy projects to underserved communities, integrating IRA tax incentives or subsidies to boost local employment and fair distribution of public benefits.[123] Additionally, states must tackle inequalities in energy-efficiency programs. Despite increased funding and savings from 2015 to 2019, energy-efficiency programs offered to low-income households by utilities have reached only about 5% of eligible households.[124] This is disproportionate, as low-income households constitute approximately 27.5% of the United

("[T]argeted investments to cut localized pollution from port operations, heavy duty trucks, and transportation infrastructure . . . directly support communities working to address local pollution concerns by creating a new $3 billion environmental justice grant program for community-based organizations and their partners.").

120. BAKER ET AL., *supra* note 10, at 63.

121. *See id.* at 34 (noting that the provision of financial access and benefits is a key step to increase access to community solar for marginalized communities).

122. *Id.* at 49.

123. *Id.*

124. DIANA MORALES & STEVEN NADEL, AM. COUNCIL FOR AN ENERGY-EFFICIENT ECON., MEETING THE CHALLENGE: A REVIEW OF ENERGY EFFICIENCY PROGRAM OFFERINGS FOR LOW-INCOME HOUSEHOLDS vi (2022), www.aceee.org/research-report/u2205.

States's population but receive only about 13% of the median energy-efficiency program budget.[125] States must urgently increase funding and restructure these programs to achieve a more equitable distribution of energy resources and foster sustainable, resilient energy systems.

Restorative justice addresses deep-rooted imbalances in existing energy systems. To achieve this, states could launch initiatives to empower communities most affected by climate change and employ infrastructure improvements and investments within historically disinvested areas.[126] Additionally, upholding Indigenous communities' decision-making rights on relevant energy projects further exemplifies restorative justice; this approach promotes inclusive community engagement and informed consent in energy projects that impact them.[127] Implementing restorative justice effectively demands the active integration of recognition, procedural, and distributive justice tenets, culminating in a comprehensive strategy for energy justice.

Recognizing that these burdens are often a result of systemic issues requires states to address disparities originating from the energy trilemma. Policies and programs that integrate tenets of energy justice enable states to ensure that no community is left in the dark. By embedding energy justice at the core of their strategies, states can effectively harmonize the energy trilemma, thereby paving the way for a just transition.

CONCLUSION

Achieving a just transition is critical to addressing the energy trilemma's competing challenges. While the federal government has made historic investments in clean energy, states are responsible for developing and implementing equitable energy laws and policies. Embracing tenets of energy justice enables state governments to ensure that the clean-energy transition is characterized by fairness, inclusivity, and equity. This approach prioritizes all stakeholders. Failure to incorporate energy justice as a guiding principle risks further isolation and exploitation of marginalized communities. Incorporating tenets of energy justice within state laws and policies is essential to achieving clean energy and justice for all.

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125. *Id.*

126. *See* BAKER ET AL., *supra* note 10, at 66 ("[E]quitably distributing both the benefits and harms of energy infrastructure across all communities and stakeholders . . . will remedy the current disproportionate harm being done to low-income and minority groups.").

127. *Id.*