

Symposium in Review

Make or Break: Transforming U.S. Infrastructure to Meet Climate Goals

UCLA Emmett Institute's 2023 Symposium

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Introduction

The transition to clean energy is speeding up and a pair of recent climate laws promises to put America's foot on the accelerator. How these laws are implemented at the local, state, and national level will determine whether the U.S. can meet increasingly urgent climate goals and also benefit communities that have historically been left behind.

In April, UCLA's Emmett Institute on Climate Change & the Environment hosted its 2023 symposium to explore the laws that are driving the clean energy transition. The symposium featured several panels, each focused on implementation of the Inflation Reduction Act (IRA) and the Infrastructure Investment and Jobs Act (IIJA). Leading lawyers, energy experts, environmental advocates and architects of climate legislation shared their visions for how to build up our infrastructure using both laws.

Editor's Note

Thank you for your interest in the Emmett Institute's 2023 symposium. The Journal of Environmental Law and Policy (JELP) was proud to cosponsor the event and looks forward to sharing this Symposium in Review. The Review outlines key takeaways from each session and includes insights from UCLA Law students. Also featured are reflections from law fellows who currently serve as faculty at UCLA's Emmett Institute on Climate Change & the Environment. Finally, if you are interested in learning more about the energy transition, the Review provides a quick look at what our panelists are reading and writing. We hope you enjoy.

Sammie Yeager, JELP Symposium Director, UCLA Law Class of 2024



Photos by Maiz Connolly

Keynote Address

Speaker

David J. Hayes is Lecturer in Law at Stanford Law School and a Senior Fellow at NRDC. Hayes is the former Deputy Secretary of the Interior, and recently served in the Biden Administration as Special Assistant to the President for Climate Policy. He played a critical role in developing and implementing climate-related provisions of the Inflation Reduction Act (IRA) and Infrastructure Investment and Jobs Act (IIJA). Hayes is an expert in navigating the process of permitting energy projects on public lands and waters.

Key Takeaways

To start the symposium, David Hayes offered an overview of both the IRA and the IIJA. According to Hayes, both bills are well-positioned to transform American infrastructure to meet climate goals. How? A comprehensive, sector-by-sector approach to decarbonization.

In the **power sector**, federal incentives are driving-and will continue to driveprivate investment in clean energy, including offshore wind. The Department of Energy projects that clean energy will double by 2030, providing over 80% of total generation in the U.S.

In the **transportation sector**, President Biden has brought together automakers and union leaders to put more electric vehicles on the road. Moreover, state regulatory muscle is reinforcing electrification.

Innovation is transforming the **industrial sector** as we find new ways to decarbonize steel, concrete and aluminum. With funds from the IRA, the federal government can use its procurement power to incentivize suppliers to produce lower carbon materials.

Finally, the IRA is putting federal dollars into **climate-smart agriculture** and **modern building codes** to aid the clean energy transition in sectors that are historically trickier to decarbonize.

As Hayes noted, obstacles are inevitable. But strong planning on the front end that brings together communities, federal and state government, and the private sector will streamline progress and ensure that challenges do not slow down our buildout towards a clean energy future.



Fellow Reflection

The Inflation Reduction Act (IRA) and the bipartisan Infrastructure Investment and Jobs Act (IIJA) are historic investments in overburdened communities on the frontlines of climate change. Oversight and enforcement of these laws' programs will be necessary to ensure the benefits reach the communities that need them the most. For the purpose of this reflection piece, I will focus on the IRA.

In his symposium address, David Hayes referred to equity, environmental justice, and community participation as the "connective tissue" of the IRA's comprehensive sector-by-sector strategy. The IRA devotes approximately \$47 billion to environmental justice priorities, including climate and air pollution project grants for communities, tax credits for wind and solar that benefit low-income areas, and project funding to improve access to drinking water, to name a few. Hayes emphasized the legislation's expansion of employment opportunities and enormous tax credits for clean energy projects in communities "that have suffered some of the worst impacts from fossil fuel infrastructure and development."

While many advocates have similarly lauded the IRA's investments as crucial to addressing historic inequities and unequal environmental risks, others have expressed concern over some of its provisions' implications on the role of fossil fuels in the climate transition as well as over its rollout. For example, the legislation requires additional oil and gas leasing for new wind and solar project approval; directs the federal government to reinstate previously canceled offshore oil and gas leases; and offers funding for carbon capture and sequestration. While these concessions enabled the IRA to be enacted in the first place, some groups and activists worry that continued support for fossil fuels may cause undue harm to already overburdened communities.

With respect to implementation, some have raised concerns about the allocation process for distributing the grants as well as the absence of a reporting mechanism for the allocation of funds and benefits. Although the IRA provides some guidance on how environmental justice funds should be spent, federal agencies and states have significant discretion in deciding how these programs and their application processes are designed and how benefits from the legislation will reach intended communities. Moreover, there is a lack of systemic tracking of where funding is being spent and how the law's policy interventions are benefitting disadvantaged communities. This makes it challenging to assess whether this funding addresses historic inequities through transformative change or simply reinforces the existing economic system by investing in false solutions, like "clean coal" and natural gas. The latter further cements existing inequality in the U.S. by amassing federal funding and benefits in the hands of private companies, the wealthy, and White households.

The IRA is an ambitious and important step towards environmental justice, but advocates and public servants at the federal and state level must be vigilant throughout the law's rollout to ensure that its investments go to true climate solutions and the communities that need them. The public sector can also take steps to offset the impact of further investments in fossil fuels in order to better protect overburdened communities.

Heather Dadashi is an Emmett/Frankel Fellow in Environmental Law and Policy at UCLA School of Law for 2021-2023.

PANEL 1

Dreaming Big: How IRA and IIJA Can Help Build an Infrastructure for the Future

Panel

Moderated by **Cara Horowitz,** Andrew Sabin Family Foundation Executive Director on Climate Change and the Environment

- Sylvia Chi, Senior Policy Analyst, Just Solutions Collective
- Kimberly Clausing, Eric M. Zolt Chair in Tax Law and Policy, UCLA School of Law
- Dustin Maghamfar, Federal Program Director, Energy Foundation
- Jim Salzman, Donald Bren Distinguished Professor of Environmental Law with joint appointments at the UCLA School of Law and at the Bren School of Environmental Science & Management at UC Santa Barbara

Key Takeaways

Honing in on the IRA and IIJA, our first panel discussed implementation of both bills, including progress and challenges encountered thus far.

First, Dustin Maghamfar provided an inside look at the legislation, explaining how Congress adapted existing infrastructure and climate proposals to the budget reconciliation process. State and local governments will play an absolutely vital role when it comes to implementing both bills.

Next, Kimberly Clausing dove into the tax incentives that will not just fuel private investment, but will build a political constituency for continued investment in the energy transition. Implementation of the IRA, however, will not be without its challenges. Potential roadblocks include supply chain issues when it comes to critical mineral manufacturing; fiscal pressure created by a high deficit, high debt scenario; permitting worries; and distributional impacts. Another key concern is inequality: the vast majority of the benefits from these historic federal investments will be funneled to the top of the income distribution. We must pay attention to communities left behind to ensure they share in the progress catalyzed by the IRA and IIJA. Expanding on these equity concerns, Sylvia Chi noted the generally regressive nature of tax credits for homeowners, but pointed to a few promising provisions, including the Low Income Communities Bonus Credit. While the credit will encourage renewable investment in these communities, there are open questions as to how we allocate benefits from these projects to ensure they are flowing to those the credit aims to support. Chi provided some specific recommendations for implementing IIJA and IRA programs, including partnering with local community-based organizations (and paying them for their work), using accessible community-engagement strategies to match project benefits to local need, and providing safeguards against unintended harms from subsidy programs–such as protecting tenants from rent increases and evictions which might result from building retrofits.

Finally, Jim Salzman touched on the competing tensions in climate policy, dubbing it the Greens' Dilemma. Given the urgency of the climate crisis, we want to build out renewables and we want to do so quickly. Acting on that urgency, however, might be at the expense of community involvement and environmental protections. We face some hard questions around environmental litigation that can lead to expensive delays in important climate projects. To streamline development, Salzman suggests increasing the use of preemption for highpriority projects and adopting a standards system akin to the military's Base Realignment and Closure Commission.



Student Reflection

"Professor Salzman discussed what he referred to as the Greens' Dilemma. The 1970s environmental movement made citizen suits the key to better environmental quality. Under that structure, what we gained in community involvement, we lost in fast-paced infrastructure development. Like Professor Salzman pointed out, we need to start having candid conversations about this balancing of interests. When it comes to building out renewables, maintaining environmental protections and encouraging community involvement, there's no right answer; there's no perfect balance. That makes this discussion all the more necessary if we're to make progress towards our climate goals. I'm looking forward to diving deeper into Professor Salzman's scholarship on this topic."

Phil Goldberg, JELP Executive Editor, UCLA Law Class of 2023

Fellow Reflection

For the four years of the Trump administration, environmental advocates, groups, and communities were on the backfoot. The Trump administration sought to incapacitate over a hundred environmental regulations, spawning countless lawsuits to stop a dismantling of the nation's fundamental environmental protections. Naturally, dreaming big on climate ambitions was not the focus of these efforts so much as shielding existing environmental protections. But the passage of the Inflation Reduction Act (IRA) and the subsequent Investment Infrastructure and Jobs Act (IIJA) under the Biden administration has drastically changed the landscape. Now, environmental advocates have the room to dream big—though subject still to the constraints of politics.

Dustin Maghamfar and Kimberly Clausing have clarified just how these political constraints have shaped the design of both the IRA and IIJA—namely, that in an evenly split Senate, legislation through budget reconciliation avoids a filibuster. As a result, the two laws are mostly filled with "carrots" through the tax code—financial incentives for the states, local governments, and private actors to invest in clean energy and transportation. But there are very few "sticks" to prevent continuing and expanding fossil fuel extraction and infrastructure. Whether or not that is an effective approach remains to be seen, especially since the actual amount of investment is variable, dependent on who meets the requirements for funding. But at first blush, the two laws are a hugely successful breakthrough towards decarbonization, enabling environmental advocates to once again "dream big" on climate goals.

The next question, as Jim Salzman posed it, is, "We've proven we can fund it. Can we build it?" As every speaker on our first panel agreed, and as noted in Phil Goldberg's student reflection above, the balance between environmental protection and faster infrastructure development raises complex issues, particularly of equity. Sylvia Chi pointed out that public participation is already limited for environmental justice communities—how do we ensure adequate engagement while still achieving the big infrastructure goals that addressing climate change requires? The question is a hard one that is already playing out in the public sphere here in California.

Now, just one month after our symposium, the Newsom administration has thrown down the gauntlet with a forceful push to speed up clean energy and transportation infrastructure in California, focusing on California's Environmental Quality Act (CEQA) and the litigation arising from it. Reactions so far have, to put it mildly, been mixed. At the very least, this development serves as a demonstration that many of the opportunities from the IRA and IIJA will be allocated at the state level. Much of the funding for Newsom's proposal relies on these federal investments, after all. And it also serves as a "laboratory" for what reform might look like at the federal level, given the similarities between CEQA and the federal National Environmental Policy Act it was originally modeled after. What passes, and what works and does not, will likely serve as a useful example in reexamining our old environmental laws.

Andria So is an Emmett/Frankel Fellow in Environmental Law and Policy at UCLA School of Law for 2021-2023.

Learn More

What the Panelists are Reading and Writing

- Comment on "Economic Implications of the Climate Provisions of the Inflation Reduction Act" by Jason Furman, Harvard University
- <u>Economic Implications of the Climate Provisions of the Inflation Reduction</u> <u>Act</u> by John Bistline (Electric Power Research Institute); Neil Mehrotra (Federal Reserve Bank of Minneapolis); and Catherine Wolfram (Harvard University)
- What Happens When the Green New Deal Meets the Old Green Laws? By J.B Ruhl & James Salzman

- What America Needs Is a Liberalism That Builds by Ezra Klein
- Energy Tax Credits And The Ira: <u>Recommendations For Equitable Outcomes</u> by Sylvia Chi



- Home Energy Rebates And The Ira: <u>Recommendations For Equity And</u> <u>Environmental Justice</u> by Sylvia Chi
- <u>The Clean Air Act Amendments Of 2022:</u> <u>Clean Air, Climate Change, And The Inflation</u> <u>Reduction Act</u> by Greg Dotson and Dustin J. Maghamfar

PANEL 2

Transmission Case Study: Remaking our Power Grid for Renewable Energy

Panel

Moderated by **William Boyd**, *Michael J. Klein Chair in Law at the UCLA School of Law; Faculty Co-Director of the Emmett Institute; Professor at UCLA's Institute of the Environment and Sustainability*

- Jennifer Chen, Senior Manager of Clean Energy, World Resources Institute
- Karen Douglas, Commissioner, California Public Utilities Commission
- Jeremy Hargreaves, Principal, Evolved Energy Research

Key Takeaways

In the second panel, Professor William Boyd spoke with energy experts about the future of the power sector. The backbone of that sector and the key to unlocking future progress? Transmission.

Jennifer Chen took us on a deep dive into the world of transmission. Notably, she went over a key component of the Infrastructure Investment and Jobs Act, which gives the federal government backstop siting authority over important interstate transmission lines. This authority is critical, as transmission siting has traditionally been left to the states which then have the power to slow or stop development. It also provides an example of where change is happening when it comes to transmission – on the administrative level at the Federal Energy Regulatory Commission.

Jeremy Hargreaves gave the audience an overview of the "New Energy Map." While the West has abundant wind and solar resources, production is typically far removed from consumption. In the march towards a net-zero economy, the focus needs to be on coordination at the state and regional level as we site power plants and expand transmission. As Hargreaves said, we know where the country's energy portfolio is heading, so it's time to plan proactively.

Commissioner Karen Douglas highlighted the unique challenges California faces in the energy transition. Los Angeles is a load center, and demand for electricity will only go up as the energy transition progresses. As we work to fill that demand with cleaner energy, we need to ensure that power remains both affordable and reliable.

The transmission buildout needed to support a net zero economy will continue to present significant challenges, but our speakers agree that we can tackle these challenges through ingenuity, coordination and careful planning.

66 THE POWER SECTOR IS THE **KEY INSTRUMENT** FOR DECARBONIZATION **99**



- William Boyd

Student Reflection

"One key takeaway for me was how far we've actually come in making progress towards a clean energy future. Still, we have a long way to go, especially when it comes to modernizing the grid. Commissioner Douglas succinctly pointed to the balancing act that California in particular faces – we need to maintain affordability and reliability while moving towards lofty climate goals. One key? The portfolio effect. With more intermittent resources, we need to take advantage of the diversity of resource types.

I also liked what Jeremy had to say about project level and system level feasibility. Siting and permitting individual transmission projects becomes incredibly important as we add a ton of new renewables to the grid. Streamlining these projects will prepare us for the system we'll have tomorrow – which is being fueled in large part by the incentives provided by the Inflation Reduction Act. "

Maria Trubetskaya, JELP Staff Editor, UCLA Law Class of 2025

Fellow Reflection

It seems to me that the big question for transmission buildout will be addressing local opposition in a fair manner. As the panelists for our second panel made clear, our country will need to build a lot of new transmission infrastructure to meet the needs of the energy transition. This is particularly true if we want to fully electrify our end energy uses—rather than relying on fuels that have lower GHG emissions but are still harmful, like biofuels or blue hydrogen—since that will require our electric grid to take on much of the energy that is now transported in pipelines.

All that new infrastructure—spread out over hundreds of miles, many plots of land, and often multiple state borders—requires a lot of land or right-of-way acquisition, not to mention permitting. It also often generates local resistance, often from the people who are most interested in protecting public land: conservationists, for example, don't want to have a swathe of forest cleared for a large and intrusive transmission project. Beyond that, the benefit of a transmission project to its neighbors is often unclear. While large interstate transmission projects can be valuable to the energy market as a whole, that value is several steps removed from the specific people who live, work, and play nearby—whereas the negative impacts of large transmission projects are all too obvious. Finally, the fact is, as Jennifer Chen noted, that the people who are skeptical of new transmission aren't heard or taken into account, which ultimately only increases opposition.

The IIJA takes a forceful approach to resolving this issue, allowing the federal government to effectively override state permitting decisions when they refuse to permit badly needed transmission projects. (This authority existed previously, but had been tightly curtailed by circuit-court cases, which the IIJA effectively overturns.) This raises a dilemma for the federal government: now that it can take a more heavy-handed approach to siting new transmission infrastructure, when should it use that power? And how should states, aware now that they could be overruled if they deny a project, approach project review while taking into account all of its impacts?

There are many ways in which local opposition to transmission projects could be addressed effectively and considerately, some of which were discussed by the panelists. As with any major project, inviting the entire impacted community into the decision-making process at an early stage is important. Identifying "least conflict" areas for the project, where projects will have a minimal impact on all current land uses, is likewise key. And in some cases, it might be necessary to take difficult measures in order to prevent local harms, for example, by burying cables underground instead of carrying them through the air. All of these things will make transmission more expensive, more difficult, and potentially slower. But they are well worth it, because the alternative—overuse of federal or state authorities to force projects through where they're not wanted—will generate ill will toward the whole endeavor; and more importantly, be unfair and inequitable.

Daniel Carpenter-Gold is a Shapiro Fellow in Environmental Law and Policy at UCLA School of Law for 2021-2023.

Learn More

What the Panelists are Reading and Writing

- <u>Cross-border power trade can help leaders at COP27 facilitate emissions</u> <u>reductions</u> by Jennifer Chen, Edmund Downie and Noah Kittner
- Transmission Reform Strategy From A Customer Perspective: Optimizing Net
 Benefits And Procedural Vehicles by Jennifer Chen and Devin Hartman
- <u>Transmission Planning Reforms To Support Large Customer Clean Energy</u>
 <u>Demand And Investment</u> by Jennie Chen and Heidi Ratz
- California's race against time to build power lines by Sammy Roth
- <u>Electricity Transmission is Key to Unlock the Full Potential of the Inflation</u> <u>Reduction Act</u> by Jesse D. Jenkins, Jamil Farbes, Ryan Jones, Neha Patankar, and Greg Schivley
- <u>California Independent System Operator (CAISO) Draft 2022-2023</u>
 <u>Transmission Plan</u>
- <u>CAISO 2022-2023 Transmission Planning Process</u>

PANEL 3

Dreaming Big: How IRA and IIJA Can Help Build an Infrastructure for the Future

Panel

Moderated. by Jonathan Zasloff, Professor, UCLA School of Law

- Hilary Norton, Commissioner, California Transportation Commission
- Beth Osborne, Director, Transportation for America
- Regan Patterson, Assistant Professor, UCLA Samueli School of Engineering

Key Takeaways

In the third panel, Professor Jonathan Zasloff spoke with transportation experts on how cities and states can best use federal funds to reduce carbon emissions across the sector.

Beth Osborne started off the conversation. Osborne noted that while federal funding from the Infrastructure Investment and Jobs Act is significant, it constitutes just a small portion of what states are already spending on transportation. What it does provide is a great opportunity for different states to experiment with best practices in measuring and reducing emissions while improving public transit. One way we can improve transit beyond reducing emissions is by restructuring our systems to meet the needs of the non-work trip, including school drop-off, day care, grocery shopping and more.

In a similar vein, Dr. Regan Patterson focused on the great opportunity that discretionary grants provide to pilot transformative programs and spur emissions reductions. As we design these programs, however, we must be cognizant of who bears the burden and who receives the benefits. She honed in on a project in Haywood County, Tennessee where an electric vehicle facility would displace Black farmers. While we want to invest in EV infrastructure, we need to build it out in a way that does not take land from historically burdened communities.

Hilary Norton highlighted the importance of initiatives that prioritize zero-emission transportation, including express lanes with preferences for zero-emission buses and cars. According to Norton, we need to focus on creating a smart regulatory environment and holistic systems that reduce greenhouse gas emissions while supporting local job creation.

What all of our panelists focused on was opening up the discourse around transportation so that projects are meeting the unique needs of specific communities and helping the largest number of people possible.

Student Reflection

"I appreciated that Hilary and Regan talked about improving and increasing bike infrastructure as a method of active transportation that creates zero emissions. I bike commute to school each day. A lot of the time, that trek can feel pretty dangerous. Regan mentioned that building bicycle and walking paths close to or on existing roads subjects bikers and walkers to increased pollution. Oftentimes, the folks who rely on biking and walking are lower income, resulting in an inequitable distribution of pollution exposure. I would love to learn more about what solutions are currently on the table to address health and safety concerns around biking.

I was also glad to hear about funding recommendations for other transportation methods, such as rail, electric street-cars, and buses. The more options for caralternative transit that are available, affordable, and functional, the fewer cars there should be on the road to flatten me, the biker!"

Julia Larkin, JELP Staff Editor, UCLA Law Class of 2025

Fellow Reflection

It was a treat to watch panelists Beth Osborne (Transportation for America), Hilary Norton (California Transportation Commission), and Regan Patterson (UCLA Samueli School of Engineering) discuss the future of transportation planning throughout the United States, particularly as states race to adopt transportation programs taking advantage of federal grants and incentives.

The key question posed by this panel, perhaps more than any of the others, was: How do we--particularly in California--build harm-reduction measures into transit initiatives that now have historic amounts of funding and political momentum? If we build transit hubs near existing and planned housing, what are we doing to ensure that transit serves environmental justice communities while also





combatting transit-induced gentrification? As we continue to deploy new infrastructure and technologies, what are we doing to ensure that the exercise of eminent domain does not displace vulnerable communities that are the least likely to benefit from these projects? And if we aim to reduce carbon emissions through adoption of new technologies and infrastructure, what are we doing to avoid locking ourselves into these investments as new and more effective strategies emerge? As states scramble to invest in new transportation capital, it is critical that equity and procedural safeguards can keep pace.

Moderator and UCLA Law Professor Jonathan Zasloff took note of these potential tensions in response to Dr. Patterson's acknowledgement of Tennessee's use of eminent domain to displace Black farmers, making way for a Ford electric vehicle ("EV") factory: "What you seem to be suggesting is we're almost repeating what we did in the 1950s with a 'green' frame on it. If we destroyed low-income communities of color to build freeways in the 50s, now we're going to do EVs and ... we may be destroying low-income communities of color to build electric vehicle plants." Dr. Patterson later drew more comparisons between freeway expansion projects and production facility construction, arguing that disparate enforcement of environmental regulations, racially discriminatory siting decisions, and lack of consideration for cumulative impacts will continue to unequally distribute harm along race and class lines.

In contrast, Hilary Norton used this opportunity to take stock of some of the equity programs underway in California and at the federal level. These range from paying CTC Equity Roundtable members for their time, expertise, and engagement, to implementation of the federal Justice 40 Program, which mandates that California spend 40 percent of federal transportation infrastructure

dollars in 'communities of need.' Other measures underway at CTC include programs to ensure that we pair highway expansion and construction with commensurate amounts of bike and pedestrian paths. (Although this measure, itself, must balance improved mobility for households without cars and increased exposure to pollutants from neighboring highways).

Critically, the efficacy and viability of many public transportation projects depends both on how many people are served by the project, and how many different destinations the project can transport those people to. The 'access model' intends to support informed decision-making on this basis, while ultimately reducing emissions of NOx from tires and roads, discouraging continued freeway expansion, and allowing more granularity in analyzing impacts to low-income or no-car households. While these information-gathering tools are critical to assessing who is benefitting from a project and who is potentially harmed, states and localities must still use these policies in tandem with housing assistance, tenant protections, and other measures to ensure that transit continues to serve vulnerable populations.

Gabriel Greif is an Emmett/Frankel Fellow in Environmental Law and Policy at UCLA School of Law for 2022-2024.

Learn More

What the Panelists are Reading and Writing

- New Routes to Equity: The Future of Transportation in the Black Community by Regan F. Patterson, Ph.D.
- The Greenlining Institute
- Driving Down Emissions by Transportation for America
- Issue Brief: States Are in the Driver's Seat on Transportation Carbon
 Pollution by James Bradbury, Zack Subin, Ben Holland, and Ryan Levandowski
- <u>Colorado DOT GHG Standard</u>
- Virginia DOT Smart Scale
- Multimodal Accessibility by the State Smart Transportation Initiative

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