



REAL ESTATE

Carbon Neutrality in Real Estate:

The Legislative Landscape

October 4, 2022

In our [first report](#) in this series, we provided a detailed overview of carbon neutrality in real estate investment. In the [second report](#), we examined how companies are seeking to achieve carbon neutrality and the challenges of achieving carbon neutrality in the real estate industry. This report will review the current regulatory landscape regarding carbon neutrality and the likelihood of future legislation and regulations as the topic continues to gain traction globally and in the real estate industry.

While we are not lawyers and this paper does not constitute legal advice, we intend to share what we've learned from our own experience, research, and perspective regarding legislative risks and opportunities in carbon neutrality. There is rapid growth in policies, legislation, ordinances, and laws related to carbon emissions, carbon neutrality claims, and net-zero carbon commitments, that can significantly affect real estate investors. There is also confusion in definitions and terms, both within the U.S. and internationally, and regulations may refer to net zero and carbon neutrality interchangeably without defining either term. Within real estate investments, we think of net zero as a property that produces as much energy as it uses. We think of carbon neutrality as a focus on reducing net emissions and then purchasing renewable energy certificates (RECs) and carbon offsets to reach "zero." In this report, we will provide an overview of laws affecting the real estate industry and attempt to clarify their meaning and impact.

Setting the Scene

In 1856, a scientist named Eunice Newton Foote proved that CO₂ in the atmosphere would trap heat and cause warming.¹ But it wasn't until the 1970s that scientists documented the increasing CO₂ in our atmosphere and warned of global warming,² and not until 2011 that the U.S. Environmental Protection Agency (EPA) began regulating greenhouse gases (GHGs) for stationary sources (such as factories, power plants, or landfills) under the Clean Air Act.³ Now, as we continue to deal with climate events including drought, wildfires, and floods, the urgency to take action on climate change is tangible, and government regulations regarding GHG emissions are expanding.

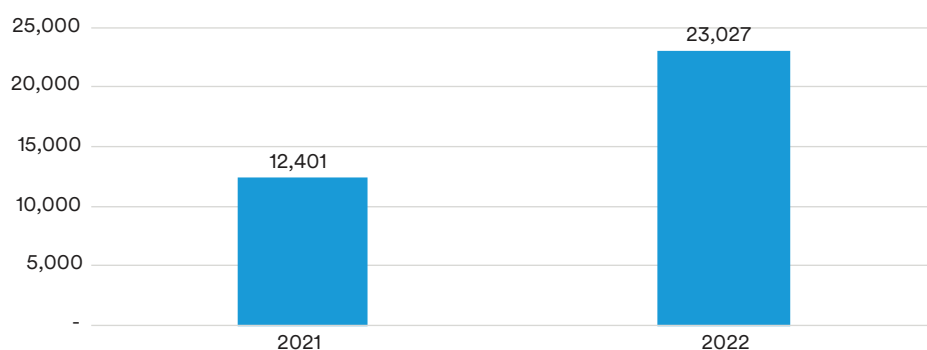
Several international entities, national governments, regulatory agencies, and local municipalities have been responding to the existential threat of climate change by passing laws and regulations to reduce GHG emissions from the built environment. The number of regulations regarding environmental, social, and governance (ESG) topics has more than doubled from 2018 to 2020.⁴ We expect this trend to continue.



In the United States, most of the GHG regulations passed thus far by various cities and states require building owners to benchmark their energy data or emissions and report them to the local authorities.

Within the last two years, we have seen municipalities begin transitioning from energy disclosures to specific emissions caps for real estate assets. In several cases, fines or carbon taxes were established, taking effect within the next few years. During the last year, incentives for energy efficiency and emissions reductions have multiplied, as shown in Figure 1. More tax credits and rebates have become available to real estate investors, enabling greater resources to meet regulatory thresholds.

We will examine the regulatory environment in the United States and in Europe, identifying some of the primary risks and opportunities in each market.

Figure 1 | US-based Incentives for Energy Efficiency

Data as of March 25, 2021 and 2022, respectively. Number of individual incentives for energy efficiency, each of which may be utilized by multiple properties (up to 1000+). Source [Incentifind](#)

The U.S. Landscape

Risks – Building Codes, Regulations, and Reporting

At the U.S. national level, President Biden has issued executive orders concerning carbon reductions and climate-related financial risk. He established a White House Office of Domestic Climate Policy and a National Climate Task Force, bringing 21 different federal agencies and departments together to address the climate crisis.⁵ They are tasked with achieving the targets set by the Biden administration: at least 50% reduction in nationwide net GHG emissions by 2030 and net-zero emissions by 2050.⁶ For real estate investors, it's important to note that **buildings are one of the five top sectors targeted** for new policies and regulations to support reduced emissions in the U.S.

At the federal level, the primary regulatory risk to real estate investors is in reporting. Biden's Executive Order on Climate-Related Financial Risk in May 2021 asks the Federal Acquisition Regulatory Council to require all major Federal suppliers—including real estate owners—to “publicly disclose greenhouse gas emissions and climate-related financial risk.”⁷ In addition, the U.S. Securities and Exchange Commission (SEC) launched an ESG Enforcement Task Force in March 2021 to identify material omissions or inaccuracies in issuers' disclosure of climate risks⁸ and issued a risk alert in April 2021 saying that “the variability and imprecision of industry ESG definitions and terms can create confusion among investors.”⁹

In March 2022, the SEC announced its proposal for adding mandatory climate-risk disclosures in registration statements and periodic reports—such as Form 10-K filings—to improve consistency and comparability. The proposed rules would require, among other items:

- Qualitative descriptions of any climate-related risks that have had or are likely to have a material impact on the filer's business.
- Disclosure of Scope 1 direct GHG emissions and Scope 2 emissions from purchased electricity, and large companies would also be required to disclose material Scope 3 emissions from their upstream and downstream value chain (including suppliers through to end users).¹⁰

The commercial real estate industry has expressed concerns over these rules, especially relating to Scope 3 emissions and how they will be defined, such as including tenant data, embodied emissions, and debt investment impacts. However difficult to obtain, these requirements are intended to meet investor demands for increased transparency regarding carbon and climate risks. U.S. investors who make carbon neutrality claims without sufficient precision and evidence, or who fail to disclose their emissions and material climate-related risks, may face increased scrutiny—and potential fines—from the SEC by 2024.¹¹

Beyond the national level, local regulations and building-code changes related to energy efficiency and GHG emissions have already begun to impact real estate owners and investors in several major U.S. markets, including:

New York:

- Local Law 97 (LL97) requires most buildings over 25,000 square feet to reduce their GHG emissions 40% by 2030 and 80% by 2050, with enforcement and fines beginning in 2025.¹²

Boston:

- City Council recently changed its Building Energy Reporting and Disclosure Ordinance (BERDO) to the Building Emissions Reduction and Disclosure Ordinance, requiring buildings with 20,000 square feet or more to essentially reduce emissions 50% by 2030 and 100% by 2050 or face fines of up to \$1000 per day.¹³

Los Angeles (L.A.):

- L.A.'s Green New Deal has established targets that all new buildings be net-zero carbon by 2030; all buildings—including existing buildings—achieve net-zero carbon by 2050; and that all buildings reduce energy use per square foot 22% by 2025, 34% by 2035, and 44% by 2050.¹⁴

Denver:

- Buildings larger than 25,000 square feet must reduce their energy usage 30% by 2030 and nearly 80% by 2040.¹⁵

There have been similar laws passed in St. Louis and Washington D.C., and many more are in development. Over 470 U.S. mayors from 48 states have joined the [Climate Mayors coalition](#). We expect this type of regulation limiting emissions from real estate assets to become the dominant trend in building ordinances affecting real estate investors for the next 10 years or more.

Other local regulations and ordinances are introducing energy benchmarking laws, which presumably could set the stage for future mandates. For example:

Columbus:

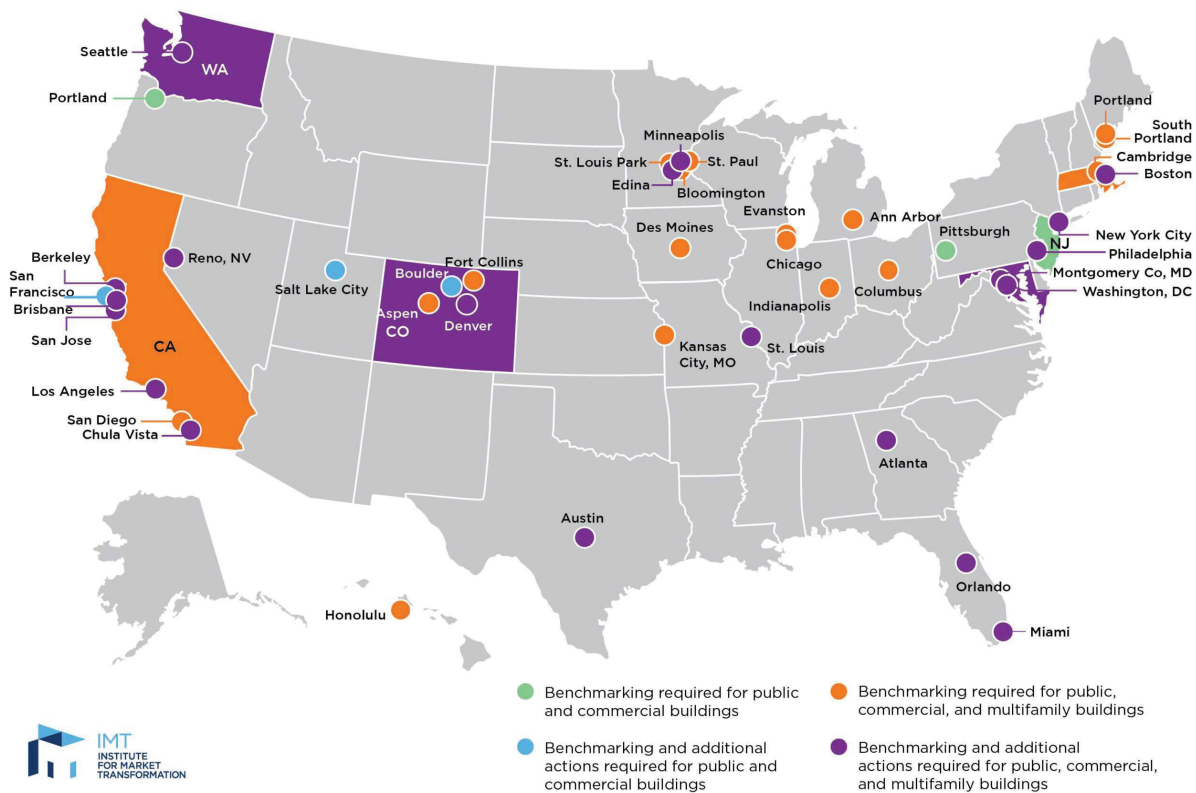
- Columbus City Council unanimously passed the Energy and Water Benchmarking and Transparency Ordinance in 2020 requiring buildings 50,000 square feet and over to track their whole-building energy and water use with the ENERGY STAR® Portfolio Manager® tool and share this data with the City by December 15, 2021.¹⁶

Colorado:

- The Colorado General Assembly passed bill HB21-1286 in June 2021 to improve energy efficiency and collect data on large buildings, imposing penalties of up to \$5,000 for violations.¹⁷

The breadth of the initiatives is illustrated in Figure 2, which provides a current view of the initiatives we could identify within primary real estate investment markets across the U.S. We expect that as more cities implement benchmarking ordinances, they will begin to impose fines for violation of these ordinances, and then quickly transition to requiring reductions, complete with fines and penalties for buildings that fail to reduce their energy use and emissions. In recognition of this trend, ENERGY STAR Portfolio Manager began piloting a Building Emissions Calculator in February 2022, citing New York City's Local Law 97 as a potential use case.

Figure 2. | U.S. City, County, and State Policies for Existing Buildings: Benchmarking, Transparency, and Beyond



Building Energy Use Benchmarking is the practice of comparing the measured energy performance of a facility to itself, its peers, or established norms, with the goal of informing and motivating performance improvement.

Chart source: [The Institute for Market Transformation](#)

To address the myriad of local regulations and ordinances, and to simplify compliance for real estate owners and investors, the [Real Estate Roundtable](#) has been advocating for the federal government to “help establish consistent standards, methods, and data that reflect best available government and industry practices...to avoid a divergent ‘patchwork’ of varying climate laws that unduly complicate building owners’ compliance and regulators’ enforcement.”¹⁸ The Roundtable also advocated for a provision of the Clean Energy for America Act that increases the enhanced tax deduction for commercial buildings as greater energy efficiency is achieved above the most recent ASHRAE 90.1 standard,¹⁹ as well as incentives to property owners to install heat pumps and electric water heaters to electrify major building systems.²⁰ These possibilities represent both opportunities and risks, depending upon whether the federal government chooses to impose them in a burdensome way or take the approach of offering greater incentives.

Opportunities – Tax Credits and Discounts

At the national level, many opportunities for incentives—such as tax credits, rebates, and discounts—have been passed or are on the horizon. On August 16, 2022, President Biden signed into law the Inflation Reduction Act (IRA), which contains numerous climate and energy provisions including new, extended, and expanded tax credits.²¹ More details on passed and proposed incentives are included in the Appendix of this document.

Meanwhile, DOE's Better Buildings program shares free resources for building owners to address energy efficiency and recently launched the Better Climate Challenge, offering real estate investors the opportunity to be recognized as an industry leader and access technical expertise and assistance from DOE and other building owners. To join the Better Climate Challenge, building owners must commit to 50% operational emissions reduction within 10 years, including all Scope 1 and Scope 2 emissions, and achieve these reductions without the use of offsets, though Renewable Energy Credits (RECs)²² are allowed.²³ MetLife Investment Management (MIM) is an Inaugural Partner of the Better Climate Challenge and looks forward to collaborating with DOE and the industry. MIM has also joined the ULI Greenprint Center's Net Zero Framework²⁴ with a comparable emissions reduction goal.

There are several ways for investors and building owners to take advantage of these opportunities, including through upgrades of older infrastructure to new energy-efficient and smart equipment. These types of upgrades can save operational capital expenditures as well as reduce potential for fines related to regulations such as New York's LL97 or the others mentioned above. There are also many incentives available to real estate investors to reduce carbon emissions and advance carbon neutrality goals, but they can be challenging to identify. We expect this difficulty to increase as incentives proliferate at both the national and local level. Early adopters of carbon reduction technology will have a better opportunity to take advantage of these incentives as they generally have limited timeframes or funding pools. The U.S. Office of Energy Efficiency & Renewable Energy provides links to some opportunities on their website at <https://www.energy.gov/eere/buildings/state-and-local-incentives> to help real estate owners and investors begin to find and take advantage of these incentive opportunities.

The European Picture

Ahead of the U.S., the European Parliament backed climate neutrality by 2050 for the EU and its 27 member-states in October 2020. The European Commission has set a 2030 target of reducing GHG emissions by at least 55% compared to 1990 levels.²⁵ Since buildings represent 36% of EU emissions,²⁶ the European target includes an ambition to renovate up to 35 million buildings within the EU by 2030.²⁷

Most recently, the Sustainable Finance Disclosure Regulation (SFDR), which was published in March 2021, requires reporting on carbon impacts for any fund marketed in the EU starting in January 2023, including real estate funds.²⁸

- In addition, the EU Taxonomy regulation primarily defines the economic activities that may be considered environmentally sustainable,²⁹ but it also requires portfolios in scope for the SFDR to disclose how and to what extent the investments include environmentally sustainable activities.³⁰

Real estate investors with funds or holdings in Europe must comply with these reporting requirements or face sanctions from EU regulators. U.S.-based funds with European investors must also comply with SFDR.

The European Commission is considering a proposal to extend the current [EU Emissions Trading System](#) to buildings, with emissions caps and a new emissions trading system for buildings starting in 2026.³¹ This could allow buildings with significantly lower emissions to sell their own carbon credits to other buildings or entities within the carbon trading system. With EU carbon prices hitting a record high of nearly €100 per metric ton of CO₂e in February 2022³², carbon trading could offer an additional revenue stream for real estate assets with reduced carbon or that achieve carbon-neutral operations sooner than required.

At the country level, many European nations are offering their own incentives to reduce emissions. Investors with European real estate should investigate the incentives available in the countries where their properties are located.

The Future View

For real estate investors with funds listed in the U.S. and Europe, reporting on climate-neutrality goals and progress in reducing carbon emissions is a legislative reality in 2022 and for the foreseeable future. In municipalities around the world, we expect that more building ordinances will cap emissions from real estate assets and impose fines and penalties for excessive emissions similar to what New York, Boston, Washington D.C., Denver, and other cities have already enacted. At the same time, incentives will proliferate, and smart real estate investors will take advantage of these rebates and credits to improve building systems, reduce emissions, and increase their bottom line.

Real estate investors should also consider the impact of emissions regulations on asset value. To comply with emission-reduction requirements, cash flow during a 10-year holding period or loan term may be impacted.

Failure to comply with these laws may affect the property's reversion or leave the asset stranded and unsellable because its emissions are higher than legislative or regulatory standards.³³ MIM is quantifying this impact on asset values by using ENERGY STAR® scores as a proxy for the level of risk that a building's emissions may have on reversion cap rates.

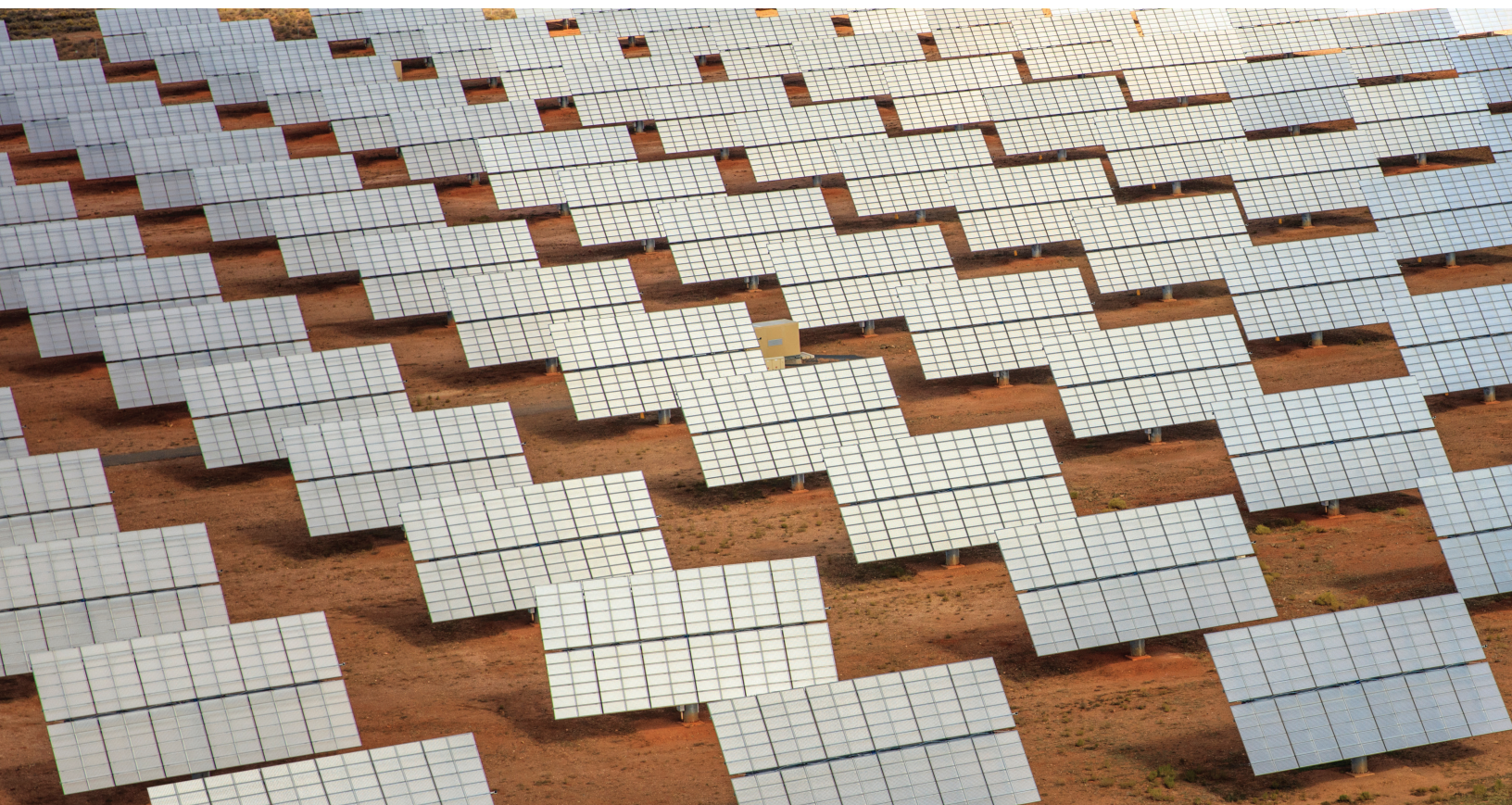
As more cities and utilities work toward 100% renewable energy production to comply with energy production regulations in the U.S. and Europe, it will become easier for real estate assets to achieve carbon neutrality for operational emissions, since the purchased electricity coming from the local utility will eventually be from renewable sources by default. And as regulations force heating and cooling equipment and other appliances to

become more efficient,³⁴ buildings will benefit from reduced energy load. The question is whether that transition will be fast enough to prevent the worst effects of climate change on both our real estate assets and the planet. As real estate investors, we cannot simply wait for governments and utilities to act. We must share the responsibility of accelerating the transition to a carbon-free future by committing to carbon reduction and taking action now with strategies such as working with our tenants and residents to reduce energy consumption and embrace renewable energy.

Investors who follow this approach over the next several years can benefit from burgeoning incentives and energy savings, while establishing a leadership position for carbon reduction in our industry.

Investors who lag behind may not only miss out on these incentives and savings, but they may also face fines and other penalties from the growing legislative and regulatory framework supporting carbon neutrality.

In our next and final paper in this series, we will provide an overview of results and updates on what has happened since the COP 26 Summit in Glasgow. The report will take a critical look at current carbon neutrality pledges and evaluate whether those efforts are sufficient for the defining decade ahead.



Appendix

At the national level, many opportunities for incentives—such as tax credits, rebates, and discounts—have been passed or are on the horizon. The following section details various incentives that have been passed or proposed to help accelerate the transition to a carbon neutral future. A snapshot of the incentives is provided in Figure 3.

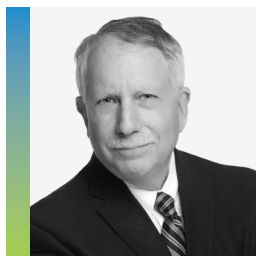
Figure 3 | Government Incentives: Proposed and Passed

Proposed Incentive	
INSULATE Buildings Act of 2021	Introduced in the Senate, promising to establish state funds for grants and loans to refurbish older buildings for energy efficiency. ³⁵
Zero-Emission Homes Act of 2021	Introduced to the U.S. Congress, which, if passed, would provide up to \$10,000 rebates for the purchase and installation of electric appliances and zero-emission equipment in single family homes and greater rebates for multifamily buildings. ³⁶
SMART Electric Act	Introduced in April 2021, and, if passed, directs the Department of Energy (DOE) to provide rebates to commercial buildings and other entities for energy-efficient electrotechnology that is used to replace a fossil fuel-fired technology, such as heat pumps to replace gas-powered furnaces. ³⁷
Passed Incentives	
California 2022 Building Energy Efficiency Standards	California Energy Commission approved the 2022 Building Energy Efficiency Standards in August 2021, which was adopted by the California Building Standards Commission in December and takes effect in January 2023 for all new construction and renovation building permits. ³⁸ This regulation “incentivizes builders to go all-electric and prioritizes heat-pump technology,” and several other states, including Colorado, Massachusetts, Nevada, New Jersey, New York, Washington, and Wisconsin are considering similar building codes as part of their carbon-reduction efforts. ³⁹
Virginia Clean Economy Act	In Virginia, the Virginia Clean Economy Act was signed into law, expanding net metering to facilitate investment in rooftop solar on buildings in that state. ⁴⁰
Infrastructure Investment and Jobs Act	The Infrastructure Investment and Jobs Act⁴¹ , signed by President Biden on November 15, 2021, includes major funding opportunities for clean-energy infrastructure and energy-efficient buildings: • \$550 million for local energy efficiency • \$250 million for capitalization grants to states to offer energy audits and retrofits on commercial and residential properties • \$225 million for grants to states and others for implementation of building energy codes • \$7.5 billion to install more electric vehicle chargers, including at commercial and multifamily assets⁴²
Inflation Reduction Act	• Signed into law on August 16, 2022. Includes:⁴³ • <i>Clean-energy tax credits</i>: extension of production tax credit for electricity from renewable resources; extension of biodiesel and alternative fuels credits extended through 2024; then transition to technology-neutral credits. – Extensions of 45Q carbon oxide sequestration credit, 48C advanced energy property credit, credits for energy efficient homes – New credits for nuclear power, hydrogen, sustainable aviation fuel – EV credits for new, used, and commercial vehicles with income and MSRP limitations – More than \$20b to support climate-smart agriculture practices – \$27b clean-energy technology accelerator – \$6b for a new Advanced Industrial Facilities Deployment Program to reduce emissions – The bill also makes certain tax credits sellable for cash, which could significantly change the marketplace for these credits. • \$4 billion for drought mitigation (grants, contracts, financial assistance) in “reclamation states,” which are primarily in the western region of the U.S.

Endnotes

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