An Analysis of the Job Creation and Community Benefits of the *Green Future Act*

An analysis of Massachusetts Bill H.3292, *An Act achieving a green future with infrastructure and workforce investments*, filed by Representative William Driscoll Jr., 2021

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Summary Of Findings

Through 2030, the *Green Future Act*:

- Raises $8.8 billion for green investments in state infrastructure, local aid, and workforce development.
- Invests a minimum of $5.3 billion in projects that take place in and directly benefit environmental justice populations.
- Generates 83,700 net new jobs in Massachusetts.
- Creates at least $17.7 billion in additional community benefits for Massachusetts due to reduced air pollution, traffic congestion, fuel costs, and public safety.

Design Of H.3292

Known as the *Green Future Act*, Massachusetts House Bill 3292 establishes a series of programs that invest in climate-friendly, green infrastructure in municipalities and environmental justice communities throughout the state. The bill intends to complement the *Next-Generation Roadmap Act* (S.9), signed into law in March 2021, by providing funding for Massachusetts to meet increased emissions reduction goals for 2050.

The majority of investments in the *Green Future Act* are allocated to projects that reduce greenhouse gas emissions by electrifying the heating and transportation sectors, while continuing to decarbonize the electricity sector. Money flows through a Green Infrastructure Fund overseen jointly by administration officials, legislative representatives, and other stakeholders.

Funding for the *Green Future Act* comes from two sources, both explicitly outlined in the legislation.

The first source of revenue is the expansion of carbon pollution pricing in Massachusetts. The state currently has a carbon pollution price on fossil fuels for the electricity sector through the Regional Greenhouse Gas Initiative (RGGI). H.3292 requires the Governor to expand the Commonwealth's use of carbon pollution pricing to cover the transportation and building heating sectors by 2023, and the industrial sector by 2025.

The administration is allowed to fulfill the transportation pollution pricing requirements of H.3292 with the Transportation and Climate Initiative Program (TCI-P), should that program launch in 2023 as expected. The *Green Future Act* requires that the price of pollution, across all sectors, is set to meet the Commonwealth's greenhouse gas emissions reduction goals.

The second source of revenue is an optional green bonding program, which fast-tracks funding for green investments approved by the legislature and governor. Together, both branches can jointly authorize up to $500 million annually in capital for climate-friendly infrastructure projects. These bonds are designed to be exempt from the state's annual bonding cap, preventing the governor from blocking distribution of authorized funds, as is the case with most bond funding approved by the Massachusetts legislature.

Among the key features of the bill is a requirement that no less than 60 percent of infrastructure funding benefit environmental justice (EJ) populations, as defined in the 2021 climate law (S.9).[1] The bill also dedicates a significant proportion of aid to cities and towns in Massachusetts, which is distributed to all municipalities through an annual funding formula. Local aid distributed to municipalities must be spent on 'green infrastructure,' which includes mitigation and adaptation projects, but otherwise communities are largely free to choose how the money is spent.

Another *Green Future Act* program provides regular payments, known as household green dividends, to low- and moderate-income households. As the global economy moves away from fossil fuels, this type of assistance is intended to help those with low, moderate, and fixed incomes offset any potential increase to the cost of heating or cooling their homes. The bill also includes dedicated annual funding to green workforce development and funds a new rapid response program, which provides salary-replacement to displaced fossil fuel workers.

Similar legislation, Senate Bill 2133 filed by Senator Michael Barrett, expands the use of pollution pricing and creates administrative structures for spending revenue on similar green investments and a households dividend program.

1 | "Environmental Justice Populations in Massachusetts," https://www.mass.gov/info-details/environmental-justice-populations-in-massachusetts

Revenues For Investment

The primary revenue sources and investment expenditures for H.3292 would remain in effect through at least 2050. This paper examines the initial seven years of the *Green Future Act* from 2023 to 2030, to best align with the Commonwealth's current goal of a 50 percent reduction in greenhouse gas emissions by 2030. The specific price set for carbon pollution and additional policies required to hit emissions reduction targets beyond 2030 will require further analysis.

TABLE 1: *Green Future Act* Revenue and Expenditures

Description	Average Annual	2023–2030
Revenue Raised	**$1.2 billion**	**$9.6 billion**
Pollution Pricing Revenue	$700 million	$5.6 billion
Green Bonding Revenue	$500 million	$4 billion
Expenditures	**$1.2 billion**	**$9.6 billion**
Household Dividends	$90 million	$730 million
Green Investments (statewide and local)	$1.1 billion	$8.8 billion
Workforce Development	$5 million	$40 million

HOUSEHOLD DIVIDENDS

$90 MILLION ANNUALLY, $730 MILLION THROUGH 2030

The bill dictates that low- and moderate-income households, which are defined as the 40 percent lowest-income households in the state, must be held financially harmless from H.3292. Up to 50 percent of revenue from the bill may be used towards this purpose with more available following legislative approval.

Despite the availability of funds, we find that protecting low- and moderate-income households requires as little as $90 million per year to entirely counteract the financial impacts of H.3292. This is because if pollution prices are passed on to consumers, the majority are passed out-of-state and the highest income individuals in quintiles four and five, who can withstand the minor financial impacts of an expanded pollution pricing program in Massachusetts.

This leaves as much as $8.8 billion for investments in green infrastructure, local aid, and workforce development.

STATE AND LOCAL INVESTMENTS

$1.2 BILLION ANNUALLY, $8.8 BILLION THROUGH 2030

H.3292 distributes a majority of investment revenue between two areas. Through 2030, approximately $6.4 billion is directed to statewide green investments, and $2.2 billion is distributed to municipalities for local green investments. An additional portion ($5 million annually) is dedicated to workforce development.

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The bill requires that at least 60 percent of revenue dedicated to statewide green investment dollars must fund projects that directly take place in, and meaningfully benefit, EJ communities in Massachusetts.[2] This amounts to $3.9 billion in new green investments in EJ communities through 2030.

For local green investments, the bill uses a population-weighted algorithm to allocate local aid to municipalities, with increased funding for jurisdictions that contain EJ populations. Out of $2.2 billion in local green investments, we find that H.3292 directs a minimum of $1.4 billion to meaningfully benefit EJ populations.

H.3292 requires $5.3 billion out of $8.8 billion (60 percent) in total green investment to take place within and directly benefit EJ populations

In total, H.3292 requires $5.3 billion out of $8.8 billion (60 percent) in total green investment to take place within and directly benefit EJ populations, contingent on the inclusiveness and meaningful representation of EJ populations in the bill's implementation.

An additional $5 million per year is dedicated to clean workforce development, amounting to $40 million in new funding through 2030.

2 | Environmental justice communities are legally defined under Massachusetts law, as recently updated by S.9: An Act Creating a Next-Generation Roadmap for Massachusetts Climate Policy.

Impacts On Job Creation

A 2021 Climate XChange report, Investing in a Better Massachusetts: An Analysis of Job Creation and Community Benefits, models the job creation potential of a 2030-aligned portfolio of 18 public investment programs in Massachusetts using IMPLAN economic software.[3] These investments span the following programs:

- Light and Commuter Rail
- Clean Vehicles
- Low Carbon Buses
- Transit-Oriented Development
- Active Mobility
- Ferry Expansion and Electrification
- East-West Rail

- Energy Efficiency and Building Retrofits
- Residential Solar
- Offshore Wind
- Battery Storage
- Transmission Infrastructure Upgrades
- Community Microgrids
- Broadband Connectivity

- Clean Water Infrastructure
- Urban Greening
- Aquatic Ecosystem Restoration
- Sustainable Agriculture

This paper assumes that investments made with revenue allocated to the statewide and local green investments funds align with programs in the Green Investment Portfolio.[4] Assuming that green investments from H.3292 align with the Green Investment Portfolio, we find that **the bill will create 83,700 new jobs in Massachusetts from investments made with revenue raised through 2030**.

This job creation is driven by labor-intensive green investments, generally supporting businesses that spend a greater share of revenue on compensating employees. These same labor-intensive businesses are also more likely to spend capital locally, rather than sending money out of state. As a result, *Green Future Act* investments support more local economic activity, spending power, and employment per dollar than the state average.

JOB CREATION FROM INVESTMENTS

Two thirds of new jobs created by H. 3292 are created in the near-term from direct investments into climate-related infrastructure through 2030. New labor opportunities span many different industries, with particularly strong job creation in construction, architecture and engineering services, real estate, and other technical fields.

Another third of jobs created by H.3292 are due to the increased spending power of households, businesses, and institutions in the Commonwealth. Both statewide and local green investments create long-term energy savings, which reduces state reliance on imported fossil fuel energy. This avoids sending money to out-of-state energy producers in favor of local spending. The spending power of low- and moderate-income households additionally rises due to payments received through the Household Dividend Fund.

Despite overwhelming gains in job creation, H.3292 will result in some job displacement and losses through 2030, primarily in the fossil fuel industry. However, we find that Massachusetts will lose significantly fewer jobs due to financial impacts of the *Green Future Act* than the state will gain from climate investments and reduced reliance on fossil fuels. The investments funded by *Green Future Act* revenue will have positive impacts on the Commonwealth's job market, creating nearly 84,000 jobs in well-paying, cleaner industries.

3 | Wincele, Ruby and Jonah Kurman-Faber, "Investing in a Better Massachusetts: An Analysis of Job Creation and Community Benefits" May 2021, https://climate-xchange.org/2021/05/24/new-climate-xchange-report-investing-in-a-better-massachusetts/

4 | For more information on the Green Investment Portfolio, see the Technical Appendix to Investing in a Better Massachusetts. https://climate-xchange.org/wp-content/uploads/2018/08/Technical-Appendix-Investing-in-a-Better-Massachusetts.pdf

Health & Community Benefits

In addition to job creation, Investing in a Better Massachusetts: An Analysis of Job Creation and Community Benefits measures the social, economic, and climate benefits of the Green Investment Portfolio. Following the assumption that state and local green investments align with the Green Investment Portfolio,[5] this paper measures benefits from H.3292 using the investment portfolio's estimated benefits.

H.3292 would unlock at least $17.7 billion in community benefits from state and local climate investments funded by revenue raised through 2030. These benefits include consumer and business savings on utilities, reduced traffic congestion, public health benefits from cleaner air, increased physical activity, and safer transportation systems.

TABLE 2: Community Benefits from *Green Future Act* Investments

Measured Benefits	Description	Annual Average	2023-2030
Energy Cost Savings	The gasoline, diesel, and natural gas costs avoided by reducing energy use or switching away from fossil fuel sources	$830 million	$6.6 billion
Congestion time savings	The travel time savings from lower traffic congestion and/or switching to other modes of transportation	$220 million	$1.7 billion
Air Pollution Health Benefits	The saved lives and avoided illnesses from reducing air pollution	$140 million	$1.1 billion
Physical Activity Health Benefits	The saved lives and avoided illnesses from increased walking, cycling, and other forms of active mobility	$980 million	$7.8 billion
Traffic Accidents Avoided	Avoided traffic accident fatalities or injuries from reduced personal vehicle use	$59 million	$470 million
Total Benefits		**$2.2 billion**	**$17.7 billion**

5 | The projected benefits using revenue generated from the *Green Future Act* through 2030 include assumptions that investments are consistent with the "Green Investment Portfolio."

TIME AND ENERGY COST SAVINGS

Massachusetts' existing infrastructure relies on dirty, expensive fossil fuels, resulting in high energy costs and lost productivity for its residents and businesses. Investments funded by the *Green Future Act* decrease fossil fuel consumption, either by reducing energy use or by switching to less expensive renewable energy sources, and can help build more efficient energy and transportation systems. This leads to significant savings on transportation and utility costs for families, businesses, and institutions. *Green Future Act* investments deployed through 2030 avoid $6.6 billion in energy costs for residents and businesses in Massachusetts.

In addition, investments reduce congestion by expanding alternative modes of transportation. This leads to significant time savings, both for drivers who remain on the road as well as the direct users of cleaner, faster, more affordable public transportation systems. Reductions in congestion as a result of *Green Future Act* investments deployed through 2030 can avoid $1.7 billion in lost productivity and travel time.

PUBLIC HEALTH BENEFITS

Current fossil fuel use and personal vehicle infrastructure result in negative health outcomes through air pollution, physical inactivity, and traffic accidents for the state's residents. Air pollution alone kills 7,600 residents every year in Massachusetts.[6] H.3292 can deliver measurable health benefits by reducing local pollution from fossil fuels, as well as providing residents with alternative, efficient modes of transportation that are healthier and safer than those with internal combustion engines. *Green Future Act* investments through 2030 creates $9.4 billion in public health benefits, of which $1.1 billion are benefits from reduced air pollution, $7.8 billion are physical activity benefits, and $470 million are from avoided traffic fatality and injuries.

These results only capture benefits from state and local public investments through the Green Infrastructure and Local Green Investments Funds. Leveraging additional federal and private capital is expected to significantly increase total benefits. For example, every public dollar spent on green investments in the U.S. attracts an average of $2.50 additional from private sources.[7] Assuming this leveraging rate in Massachusetts, total investments could see up to $44.3 billion in benefits.

6 | Karn Vohra et al., "Global mortality from outdoor fine particle pollution generated by fossil fuel combustion: Results from GEOS-Chem." Environmental Research (2021). https://doi.org/10.1016/j.envres.2021.110754
7 | Rocky Mountain Institute, Green Banks, https://rmi.org/green-banks-101/

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Climate XChange is a 501(c)3 non-profit, non-partisan organization with a mission to achieve a durable, just transition away from polluting fossil fuels in the United States. With a three-pronged strategy of direct advocacy, research, and communications, we work to advance climate policy at the state level. We also host the State Climate Policy Network, which brings together changemakers, to learn from each other and increase the ambition, equity and durability of state and local climate policy. Learn more at Climate-XChange.org.