

CITY AND COUNTY OF SAN FRANCISCO
BOARD OF SUPERVISORS

BUDGET AND LEGISLATIVE ANALYST
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Policy Analysis Report

To: Supervisor Rafael Mandelman
From: Budget and Legislative Analyst's Office
Re: Analysis of Inflation Reduction Act Funding
Opportunities to Support San Francisco's Climate Action Plan
Date: February 20, 2024



Summary of Requested Action

Your office requested that the Budget and Legislative Analyst conduct an analysis of funding opportunities in the federal Inflation Reduction Act (IRA) that could help fund City and County of San Francisco priority goals outlined in San Francisco's Climate Action Plan.

For further information about this report, contact Fred Brousseau, Director of Policy Analysis, at the Budget and Legislative Analyst's Office.

Executive Summary

- Signed into law in 2022, the federal Inflation Reduction Act's goals are to reduce inflation by lowering healthcare and prescription drug costs and investing significantly in climate and clean energy production, technology, manufacturing and innovation. The Inflation Reduction Act (IRA) provides funding toward these ends through 102 grant and loan funding opportunities, 20 new or modified tax incentives and numerous rebate programs for businesses, households, and state and local governments.
- Of the approximately \$499 billion in authorized spending, approximately \$370 billion is directed to clean energy and climate solutions. The Act also allows for expansion of Affordable Care Act subsidies, among other programs.
- Of all the Inflation Reduction Act (IRA) programs and funding, we identified 17 programs with a funding value of \$55.7 billion whose eligible recipients include local governments. We conclude these programs represent relevant grant opportunities for the City and County of San Francisco since they support San Francisco's Climate Action Plan.
- We also identified IRA programs targeted to businesses and residents that the City could educate those groups in San Francisco about and encourage them to apply. These programs have a funding value of \$33.1 billion and are appropriate for San Francisco businesses and residents/homeowners.
- Exhibit A provides a summary of the IRA programs we identified relevant to San Francisco.

Budget and Legislative Analyst

Exhibit A: Summary of Inflation Reduction Act Funding Opportunities Applicable to San Francisco

Eligible Recipients	Number of Programs	Total Amount
Local/Municipal Government	17	\$55.7 billion
Businesses	16	\$24.3 billion
Residents/Homeowners	2	\$8.8 billion

- In spite of the significant amount of funding available and the fact that City departments have already applied or are considering applying for certain IRA grants, there is no centralized Citywide compilation of opportunities being considered and pursued by departments. Collecting and disseminating such information would help the Board of Supervisors, other City stakeholders, and the public track City actions supporting the City's 2021 Climate Action Plan since its goals align with much of the Inflation Reduction Act.
- Both the Department of the Environment and the Office of Resilience and Capital Planning within the City Administrator's Office could serve the role of compiling IRA opportunities and department activity related to IRA funding opportunities and should be considered for this role. Both departments currently convene inter-departmental forums to address the City's Climate Action Plan and resiliency planning.
- The City's 2021 Climate Action Plan's goals include net-zero emissions Citywide by 2040. We found alignment between some IRA funding opportunities and the City's 2021 Climate Action Framework which outlines climate and equity goals across the following six sectors:
 - 1) Responsible Production and Consumption,
 - 2) Transportation and Land Use,
 - 3) Energy Supply,
 - 4) Building Operations,
 - 5) Healthy Ecosystems, and
 - 6) Housing.

We identified funding opportunities aligned with five of the six Climate Action Plan sectors. Details about the IRA programs we believe are relevant to the City's Climate Action Plan are provided in this report.

- The distribution of potential IRA funding opportunities for the City by Climate Action Framework sector is presented in Exhibit B. As shown, the largest funding block is related to the City's Energy Supply sector, for which we identified five IRA funding programs and \$43.6 billion, or 78 percent, of available IRA funding relevant to the City.

**Exhibit B: Potential IRA Funding Opportunities for the City
by Climate Action Framework Sector**

Climate Action Framework Sector	# IRA Programs with Funding Opportunities	Total Funding Available (millions)	Potential City Departments to Pursue Funding
Building Operations	3	\$1,065	Planning, SFE, DPH, SFUSD
Energy Supply	5	\$43,600	SFE, SFPUC, DPH, AIR
Healthy Ecosystem	1	\$1,500	DPW
Responsible Production and Consumption	3	\$311.1	DPH, AIR
Transportation and Land Use	5	\$9,265	SFMTA, ADM, PORT, DPW, AIR
Total	17	\$55,741	

Note: Department codes are: ADM= City Administrator's Office, AIR= Airport, DPH= Department of Public Health, DPW= Department of Public Works, SFE= Department of the Environment, SFMTA= Municipal Transportation Agency, SFPUC= Public Utilities Commission, SFUSD= San Francisco Unified School District

- City departments surveyed in preparing this report informed us that they are currently pursuing, have pursued, or are considering IRA funding opportunities. Exhibit C summarizes IRA-related activities to date for eight of the largest City departments. As can be seen, all of the eight departments have applied for IRA funding, are working on applications, and/or are assessing potential opportunities. As of the writing of this report, two grants had been awarded to City departments with a total value of \$13.4 million: one to Public Works to plant and maintain trees and fight climate change and two to the Department of the Environment for an environmental justice project and to develop a plan for the installation of hot water heat pumps.

Exhibit C: City Department Inflation Reduction Act Activities to Date

Dept.	Applied	Application in Process or Planned	Assessing Potential Applications	Qualified for Forthcoming Award	Awarded
AIR	✓				
SFE	✓	✓	✓	✓	✓✓ ¹
MOHCD	✓				
SFMTA	✓				
PORT	✓	✓			
SFPUC	✓	✓	✓		
DPH	✓		✓		
DPW	✓				✓ ²

¹ Department awarded grants for an environmental justice project to inform execution of the City's Climate Action Plan and to develop a plan to install 200 hot water heat pumps.

² Department awarded a \$12 million grant to expand urban tree canopies, specifically in low-income communities.

- In interviews, departments reported to us that the availability of grant funds does not always mean that the City should apply for them. Points that departments consider in making the decision to apply include the following:
 - Alignment with the City's or the department's goals and priorities and/or the Capital Improvement Plan;
 - Timeline of the grant funding application process and project period to assess feasibility of grant submission, as well as project implementation if awarded;
 - Staffing capacity, qualifications and expertise if a new project is being proposed to assess the feasibility of implementation;
 - Amount of available grant funding and impact on current services provided if awarded;
 - Eligibility and feasibility of the project and grant program; and
 - Level of competitiveness of the department's grant application in relation to the field of potential competitor projects.
- These considerations and others would be useful to document in a Citywide compilation of funding opportunities and department decisions about whether to pursue them or not. Such information would assure department managers, the Board of Supervisors and the public that reasoned decisions have been made to maximize the City's grant funding consistent with resources available for applying and executing the programs to be funded.

Policy Options

The Board of Supervisors should:

1. Request that the Department of the Environment and Office of Resilience and Capital Planning within the City Administrator's Office develop proposals within two months on options for their establishing an interdepartmental structure to compile standardized information from all relevant departments to track and report to the Board of Supervisors: (1) Inflation Reduction Act funding opportunities Citywide, (2) factors and considerations used to evaluate the opportunities (e.g., eligibility, qualifications, capacity, timeline, and linkage to the City's Climate Action Plan), and (3) departments' decisions on pursuing the opportunities including the dollar amount requested and awarded. The proposals should include potential staffing, roles and responsibilities, and any needed resources.
2. Request that the Department of the Environment report on the progress of IRA funding opportunities by City departments at bi-annual Climate Action Plan update meetings (which are facilitated by the Department), with these updates subsequently provided to the Board of Supervisors.
3. Request that the Department of the Environment work with City departments to enhance existing outreach and education to residents/homeowners and local businesses about IRA-specific clean energy rebate and tax credit programs.

<i>Project Staff: Fred Brousseau and Karrie Tam</i>
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Inflation Reduction Act (IRA)

Signed into law in August 2022, the Inflation Reduction Act of 2022 (IRA) is landmark federal legislation that aims to reduce inflation by lowering healthcare and prescription drug costs and investing significantly in climate and clean energy production, technology, manufacturing and innovation. The Congressional Budget Office estimates that the legislation will reduce budget deficits by approximately \$238 billion over the next decade.¹ Over a 10-year period, the legislation is estimated to raise approximately \$738 billion from prescription drug price reform², increased IRS tax enforcement, and various taxes³ to fund approximately \$499 billion in domestic energy and climate change programs and a three-year expansion of the Affordable Care Act subsidies, among other programs.⁴ Of the approximately \$499 billion in spending, the IRA includes approximately \$370 billion⁵ in investments towards clean energy and climate solutions.

The IRA builds on the clean energy and climate actions and programs enacted as part of the federal Bipartisan Infrastructure Law (or Infrastructure Investment and Jobs Act), which was signed into law in November of 2021. The Bipartisan Infrastructure Law provided approximately 1.2 trillion⁶ in funding for roadways, bridges, rail and transit expansion, clean energy and power, broadband infrastructure deployment and other programs such as supporting a network of electric vehicle chargers and the transition to electrification across different types of vehicles. Both laws aim to achieve the goal of reducing U.S. greenhouse gas emissions by 40 percent by 2030.⁷

The IRA includes 102 grant and loan funding opportunities and 20 new or modified tax incentives to reduce renewable energy costs and support clean energy and climate technologies and solutions for a wide range of recipients, including state and local/municipal government, tribal

¹ "CBO Scores IRA with \$238 Billion of Deficit Reduction," Committee for a Responsible Federal Budget, September 7, 2022, [Link](#)

² This includes allowing Medicare to negotiate drug prices and caps out-of-pocket costs for Medicare beneficiaries to \$2,000 per year.

³ This includes requiring a 15 percent corporate minimum tax rate for companies with over \$1 billion of annual financial statement income and closing a carried interest tax loophole that allow private equity and investment fund managers to pay a lower rate on their taxes.

⁴ Ibid

⁵ "Building a Clean Energy Economy: A Guidebook to the Inflation Reduction Act's Investments in Clean Energy and Climate Action" The White House, January 2023, p. 5, [Link](#)

⁶ "The US Bipartisan Infrastructure Law: Breaking it down," McKinsey & Company, November 12, 2021, [Link](#)

⁷ "The Inflation Reduction Act Drives Significant Emissions Reductions and Positions America to Reach Our Climate Goals", U.S. Department of Energy Office of Policy, August 2022, p. 1, [Link](#)

organizations, rural communities, businesses, nonprofits, educational institutions and residents/homeowners. The legislation also aims to advance the Justice40 Initiative, which commits to delivering 40 percent of the overall benefits of clean energy, climate and related federal investments to disadvantaged communities that are marginalized, overburdened by pollution and underserved.⁸ Most provisions of the IRA became effective on January 1, 2023⁹; however, many of the funding programs are evolving and currently under development and will be rolled out over the ten year period that started in 2023.

Climate Action Plan and ClimateSF

Funding from the IRA could support San Francisco’s goal to achieve net-zero emissions Citywide by 2040 and other priority goals in the City’s 2021 Climate Action Plan. The plan’s 2021 Climate Action Framework outlined climate and equity goals across the following six sectors:

1. Responsible Production and Consumption,
2. Transportation and Land Use,
3. Energy Supply,
4. Building Operations,
5. Healthy Ecosystems, and
6. Housing.

In 2023, an addendum to the City’s Climate Action Plan was written to add a new and seventh sector, Water Supply, which focuses on water consumption reduction projects, water supply demand management and supply augmentation programs. Exhibit 1 below illustrates the 2021 Climate Action Framework and specific goals for each sector.

⁸ “Building a Clean Energy Economy: A Guidebook to the Inflation Reduction Act’s Investments in Clean Energy and Climate Action” The White House, January 2023, p. 5, [Link](#)

⁹ “Summary of Inflation Reduction Act Provisions Related to Renewable Energy,” United States Environmental Protection Agency, last updated October 25, 2023, [Link](#)

Exhibit 1: San Francisco's 2021 Climate Action Framework¹⁰



Source: San Francisco's 2021 Climate Action Plan

The Department of the Environment leads the development of the Climate Action Plan and oversees its implementation, including monitoring and reporting. The Department is responsible for executing various aspects of the plan, including strategies related to four of the Plan's sectors: building operations, responsible production and consumption, healthy ecosystems, and transportation (specifically electric vehicles.) Other City departments are responsible for implementing different aspects of the Climate Action Plan and will collaborate with the Department of the Environment throughout implementation of the Plan. The Department of the Environment facilitates bi-annual Climate Action Plan update meetings and tracks departments' progress on implementation. The Department also hosts or disseminates various webinars on specific topic areas.

The Climate Action Plan is part of ClimateSF, an initiative led by the City's Office of Resilience and Capital Planning (ORCP). One of the goals of ClimateSF is to coordinate and support the City's Climate Action Plan by bringing together City departments whose services could be impacted by climate change. According to ORCP, ClimateSF is funded by the following departments: ORCP, Planning, Port, Municipal Transportation Agency, the Department of the Environment, San Francisco Public Utilities Commission (SFPUC), and the Airport. Other core agencies include the

¹⁰ The diagram does not include the "Water Supply" sector, which was added in a 2023 addendum.

Mayor's Office, Department of Environment, and Public Works; the Department of Public Health (DPH) and other departments also may participate sporadically. According to ORCP, biweekly staff-level working group meetings, monthly deputy director meetings, and quarterly director meetings are held as part of ClimateSF.

Review of Potential IRA Funding Opportunities

To help identify potential IRA funding opportunities to support the City's Climate Action Plan, we reviewed all 102 IRA programs and funding levels to identify those with purposes aligned with City and County of San Francisco functions and for which municipalities and states are eligible for funding. We conducted a similar review to identify IRA programs with funding available for and program purposes relevant to San Francisco businesses and residents. As previously mentioned, it is important to note that many IRA funding programs are evolving and currently under development; consequently, the information below such as funding values and timelines are subject to change. Prospective applicants for funding opportunities should refer to the official agency or program for specific guidance on application deadlines and additional information.

Exhibit 2 below summarizes the number and total amount of IRA programs we identified to be eligible for potential funding for each of these recipients: local/municipal government, businesses, and residents/homeowners. Other IRA programs may be relevant to the City's Climate Action Plan goals but are intended for state government agencies only or private sector entities and thus are not included in our detailed review.

Exhibit 2: Summary of IRA Eligible Funding Opportunities Applicable to San Francisco

Eligible Recipient	Number of Programs	Total Amount
Local/Municipal Government	17	\$55.7 billion
Businesses	16	\$24.3 billion
Residents/Homeowners	2	\$8.8 billion

Local/Municipal Government Eligibility

You requested that we review the following three IRA programs for which local/municipal governments are eligible for funding:

- (1) Greenhouse Gas Reduction Fund,
- (2) Climate Pollution Reduction Grants, and
- (3) Environmental and Climate Justice Block Grants.

Each program is summarized below. These three programs are typical of IRA, with multiple subprograms and grant competitions within each. We present details about these three programs below and summaries of them and the other 15 programs we have identified as potential funding sources for the City in Exhibit 3.

1. **Greenhouse Gas Reduction Fund:** This fund is providing a total of \$27 billion via the following three grant competitions:
 - (i) **\$14 billion National Clean Investment Fund.** This competition will provide grants to two to three national nonprofit clean financing entities¹¹ that can partner with the private sector to provide affordable financing, including to municipalities, for clean technology projects nationwide. At least 40 percent of these grant funds must be used to support disadvantaged and low-income communities. San Francisco would be able to apply for funds through a green bank¹² or a department that has lending capacity. In July 2023, the U.S. Environmental Protection Agency (EPA) issued a Notice of Funding Opportunity (NOFO) for the full \$14 billion for this competition with applications due in October 2023.
 - (ii) **\$6 billion Clean Communities Investment Accelerator.** This competition will provide grants to two to seven nonprofits that will provide technical assistance and funding to develop the clean financing capacity of local community lenders (such as community development financial institutions, housing finance agencies,

¹¹ According to the EPA, an applicant that is eligible to receive a grant under this competition must be an “eligible recipient,” which is defined in Section 134(c) of the Clean Air Act as an organization that: (a) is a non-profit; (b) is designed to provide capital, leverage private capital, and provide other forms of financial assistance for the rapid deployment of low- and zero-emission products, technologies, and services; (c) does not take deposits other than deposits from repayments and other revenue received from financial assistance provided using grant funds under this program; (d) is funded by public or charitable contributions; and (e) invests in or finances projects alone or in conjunction with other investors.

¹² According to the EPA, green banks are public, quasi-public, or nonprofit financing entities that leverage public and private capital to pursue goals for clean energy projects that reduce emissions. A San Francisco public bank, now in the planning stages, could qualify as such an institution.

credit unions, green banks, etc.) working in disadvantaged and low-income communities. The goal of the program is to ensure underinvested communities have the necessary capital to launch and implement clean technology projects. San Francisco would be able to apply for funds through a green bank or other city lending institution. In July 2023, the EPA issued a Notice of Funding Opportunity (NOFO) for the full \$6 billion for this competition with applications due in October 2023.

- (iii) **\$7 billion Solar for All.** This competition will provide up to 60 grants to municipalities, states, Tribal governments, nonprofits and territories to increase access to solar energy for low-income and disadvantaged households and communities, such as installing solar panels on the homes of low-income families. In June 2023, the U.S. Environmental Protection Agency (EPA) issued the Notice of Funding Opportunity (NOFO) for the full \$7 billion for this program with applications due in October 2023.
2. **Climate Pollution Reduction Grants:** This fund will invest a total of \$5 billion in grants to municipalities, states, Tribal governments, and territories to implement and develop plans for greenhouse gas emissions and air pollution reduction. The program consists of two phases; the first phase provides \$250 million in noncompetitive planning grants and the second phase provides approximately \$4.6 billion in competitive implementation grants. In the first phase of the program, planning grant recipients design climate action plans that encompass measures for greenhouse gas emissions reduction in one or more of six sectors: buildings, industry, transportation, electricity generation, agriculture/natural and working lands and waste management. According to the EPA website, all planning grantees received awards in summer/fall 2023.
- The second phase of the program is open to entities that received planning grants to develop Priority Climate Action Plans and entities that did not receive a planning grant but are using funds to implement measures in an applicable Priority Climate Action Plan. The EPA reports that, for the second phase of the program, it plans to award individual grants between two and 500 million dollars. As of December 2023, the EPA is accepting applications for funding under the phase two competitive implementation grant program until April 1, 2024.
3. **Environmental and Climate Justice Block Grants:** This fund will invest a total of \$3 billion in grants to municipalities, states, Tribal governments, and nonprofits for technical and financial assistance to deliver environmental and climate justice activities in disadvantaged and low-income communities. Of the \$3 billion in grants, \$2.8 billion will be allocated for financial assistance and \$200 million for technical assistance.

Several programs under this fund have already awarded grants. The EPA selected 98 awardees to receive a total of \$43.8 million as part of the Environmental Justice Collaborative Problem-Solving Cooperating Agreement Program.¹³ In addition, the EPA selected 88 awardees to receive a total of \$84.1 million as part of the Environmental Justice Government-to-Government Program.¹⁴ In November 2023, the EPA issued a NOFO for \$2 billion in funding for the Environmental and Climate Justice Community Change Grants Program, which funds community-driven climate justice and environmental projects and initiatives to disadvantaged and low-income populations. As of December 2023, the EPA is accepting applications on a rolling basis until November 21, 2024. According to the EPA, all grants and technical assistance for this fund must be awarded by September 30, 2026.

Of a total of 102 currently established IRA funding programs, we identified 17 programs (including the three programs mentioned above) for which local/municipal governments are eligible and that have purposes relevant to City department missions and functions, as summarized in Exhibit 3 below.

The City departments identified in Exhibit 3 include the Department of the Environment, Department of Public Health, and SFPUC and address the Climate Action Plan sectors of: Building Operations, Energy Supply, Transportation and Land Use, Healthy Ecosystems, Responsible Production and Consumption, and Water Supply. The total nationwide funding value of the identified programs in the table below is approximately \$55.7 billion. The period of availability for funding of the identified programs ranges from September 30, 2026 to September 30, 2031. See Appendix I for descriptions of each program.

¹³ According to the EPA, the Environmental Justice Collaborative Problem-Solving (EJCPS) Cooperative Agreement Program provides financial assistance to eligible organizations working to address local environmental or public health issues in their communities. The program assists recipients in building collaborative partnerships with other stakeholders (e.g., local businesses and industry, local government, medical service providers, academia, etc.) to develop solutions to environmental or public health issue(s) at the community level.

¹⁴ According to the EPA, this program provides funding at the state, local, territorial, and tribal level to support government activities that lead to measurable environmental or public health impacts in communities disproportionately burdened by environmental harms.

Exhibit 3: 17 IRA Funding Opportunities with Local/Municipal Governments Eligibility

Program	Total Program Value	Period of Availability ¹⁵	Federal Agency	Possible City Dept.
Relevant SF Climate Action Plan Sector: Building Operations				
Assistance for Latest and Zero Building Energy Code Adoption	\$1,000,000,000	To remain available through September 30, 2029. Initial deadline is April 2024 with additional deadlines in 2025 and 2026.	Department of Energy	Planning, SFE
Funding to Address Air Pollution at Schools	\$50,000,000	To remain available until September 30, 2031	Environmental Protection Agency	DPH, SFUSD
Funding to Address Air Pollution: Emissions from Wood Heaters	\$15,000,000	To remain available until September 30, 2031	Environmental Protection Agency	DPH
Relevant SF Climate Action Plan Sector: Energy Supply				
Greenhouse Gas Reduction Fund	\$27,000,000,000	Solar for All applications closed September 2023. Awards will be granted by September 2024 at the latest. National Clean Investment Fund and Clean Communities Investment Accelerator closed October 2023.	Environmental Protection Agency	SFPUC, SFE
Environmental and Climate Justice Block Grants	\$3,000,000,000	To remain available through September 30, 2026.	Environmental Protection Agency	SFE, DPH, PUC

¹⁵ “Period of availability” does not necessarily indicate grant application deadlines, as some IRA programs are under development, currently evolving and subject to change. Prospective applicants for funding opportunities should refer to the official agency or program for specific guidance on application deadlines and additional information.

Climate Pollution Reduction Grants	\$5,000,000,000	Planning grant funds have been distributed. The Implementation Grant funding will be split into two buckets: one for general applicants, and one for tribes and territories. The funding amounts for the two categories are to be determined. For the general Implementation Grants category, EPA will make competitive awards of \$2 million to \$500 million. Applications will be due on or around April 1, 2024.	Environmental Protection Agency	SFE, SFPUC, AIR
Funding for Department of Energy Loan Programs Office	\$3,600,000,000 <i>(note: these are loan guarantees, not grants)</i>	To remain available through September 30, 2026.	Department of Energy	SFPUC, SFE
Energy Infrastructure Reinvestment Financing	\$5,000,000,000 <i>(note: these are loan guarantees, not grants)</i>	To remain available through September 30, 2026.	Department of Energy	SFPUC, SFE
Relevant SF Climate Action Plan Sector: Healthy Ecosystems				
Urban and Community Forestry Assistance Program	\$1,500,000,000	To remain available until September 30, 2031.	Department of Agriculture	DPW (awarded)
Relevant SF Climate Action Plan Sector: Responsible Production & Consumption				
Funding to Address Air Pollution: Methane Monitoring	\$20,000,000	To remain available until September 30, 2031	Environmental Protection Agency	DPH, AIR

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Fueling Aviation's Sustainable Transition through Sustainable Aviation Fuels (FAST-SAF)	\$244,530,000	Available until September 30, 2026.	Department of Transportation	AIR
Fueling Aviation's Sustainable Transition-Technology (FAST-Tech)	\$46,530,000	Available until September 30, 2026.	Department of Transportation	AIR
Relevant SF Climate Action Plan Sector: Transportation & Land Use				
Diesel Emissions Reductions	\$60,000,000	To remain available until September 30, 2031	Environmental Protection Agency	SFMTA, ADM, Port, DPW, AIR
Low-Carbon Transportation Materials Program	\$2,000,000,000	Available until September 30, 2026.	Department of Transportation	DPW, AIR
Grants to Reduce Air Pollution at Ports	\$3,000,000,000	To remain available through September 30, 2027.	Environmental Protection Agency	PORT
Neighborhood Access and Equity Grant Program	\$3,205,000,000	Available until September 30, 2026.	Department of Transportation	SFMTA
Clean Heavy-Duty Vehicles	\$1,000,000,000	To remain available until September 30, 2031.	Environmental Protection Agency	SFE, DPW, City Administrator, AIR
Total	\$55,741,060,000*			

Source: Rocky Mountain Institute and BLA Analysis

*Notes: This total includes two programs that are loan guarantees, not grants. They are Funding for Department of Energy Loan Programs Office (value = \$3.6 billion) and Energy Infrastructure Reinvestment Financing (value- \$5.0 billion). Without these loan guarantee program, the total value of all grant programs is \$47,141,060,000.

Department codes: ADM= City Administrator's Office, AIR= Airport, DPH= Department of Public Health, DPW= Department of Public Works, SFE= Department of the Environment, SFMTA= Municipal Transportation Agency, SFPUC= Public Utilities Commission, SFUSD= San Francisco Unified School District

IRA Opportunities for San Francisco Residents and Homeowners/Building Owners

As you requested for this policy analysis report, we reviewed two IRA programs for residents and homeowners/building owners: (1) **Home Efficiency Rebates**, and (2) **Home Electrification and Appliance Rebates**. These programs have a total funding value of approximately \$8.8 billion. Approximately \$4.3 billion has been appropriated under Section 50121 of the IRA for the Home Efficiency Rebates program, which provides rebates to households and residential building owners to offset costs of energy efficiency upgrades and retrofits in single-family and multi-family buildings. Under the Home Electrification Appliance Rebates program, approximately \$4.5 billion has been appropriated under Section 50122 of the IRA for households, individuals, and other eligible entities for qualifying electrification projects, such as installing and purchasing electric heat pumps and electric stoves certified by the federal ENERGY STAR program. IRA grant funds will be awarded to State energy offices that will administer these two rebate programs for residents and homeowners/building owners.

According to the Department of the Environment, Building Decarbonization and Clean Transportation staff teams help conduct general outreach on federal tax credits for energy efficiency and new, all-electric appliances, as well as new and used electric vehicle purchases. However, the City could help maximize participation in these rebate programs for residents and homeowners/building owners through enhancing existing education and outreach about the IRA-specific benefits available. Funding for the two programs is currently projected to remain available through September 30, 2031.

IRA Opportunities for San Francisco Businesses

We identified **16 IRA programs** that may be relevant for San Francisco businesses with a total funding value of \$24.3 billion, as summarized in Exhibit 4 below. These programs primarily address the following Climate Action Plan sectors: Building Operations, Responsible Production and Consumption, Energy Supply, and Transportation and Land Use. The period of availability for funding of the identified programs ranges from September 30, 2026 to September 30, 2031.

The City could help maximize participation in these programs by San Francisco businesses through local education and outreach about the benefits available. See Appendix II for summary descriptions of each program.

Exhibit 4: IRA Funding Opportunities for which San Francisco Businesses are Eligible

Program	Total Program Value	Period of Availability	Federal Agency
Relevant SF Climate Action Plan Sector: Building Operations			
Green and Resilient Retrofit Program - Contracts and Cooperative Agreements	\$60,000,000	Until September 30, 2029	Department of Housing and Urban Development
Green and Resilient Retrofit Program - Grants and Loans	\$837,500,000	Funds for grants and direct loans available until September 30, 2028.	Department of Housing and Urban Development
Green and Resilient Retrofit Program - Benchmarking	\$42,500,000	Until September 30, 2028	Department of Housing and Urban Development
Relevant SF Climate Action Plan Sector: Energy Supply			
Enhanced Use of Defense Production Act of 1950	\$250,000,000	To remain available through September 30, 2024.	Department of Energy
Advanced Industrial Facilities Deployment Program	\$5,812,000,000	To remain available through September 30, 2026.	Department of Energy
Funding for Department of Energy Loan Programs Office	\$3,600,000,000 <i>note: these are loan guarantees, not grants</i>	To remain available through September 30, 2026.	Department of Energy
Energy Infrastructure Reinvestment Financing	\$5,000,000,000 <i>note: these are loan guarantees, not grants</i>	To remain available through September 30, 2026.	Department of Energy
Relevant SF Climate Action Plan Sector Responsible Production & Consumption			
Fueling Aviation's Sustainable Transition-Technology (FAST-Tech)	\$46,530,000	Available until September 30, 2026.	Department of Transportation
Implementation of the American Innovation and Manufacturing Act	\$38,500,000	To remain available until September 30, 2026	Environmental Protection Agency
Fueling Aviation's Sustainable Transition through Sustainable Aviation Fuels (FAST-SAF)	\$244,530,000	Available until September 30, 2026.	Department of Transportation
Funding for Section 211(o) of the Clean Air Act	\$15,000,000	To remain available until September 30, 2031	Environmental Protection Agency
Environmental Product Declaration Assistance	\$250,000,000	To remain available until September 30, 2031	Environmental Protection Agency
Relevant SF Climate Action Plan Sector Transportation & Land Use			
Diesel Emissions Reductions	\$60,000,000	To remain available until September 30, 2031	Environmental Protection Agency

Grants to Reduce Air Pollution at Ports	\$3,000,000,000	To remain available through September 30, 2027.	Environmental Protection Agency
Domestic Manufacturing Conversion Grants	\$2,000,000,000	To remain available through September 30, 2031.	Department of Energy
Advanced Technology Vehicle Manufacturing Loan Program	\$3,000,000,000	To remain available through September 30, 2028.	Department of Energy
Total	\$24,256,560,000		

Source: Rocky Mountain Institute and BLA Analysis

Tax Incentives

As previously mentioned, the IRA includes over 20 new or modified clean energy tax incentives. Section 13801 of the IRA adds Section 6417 to the Internal Revenue Code, which extends several of the legislation's tax incentives to entities that generally do not qualify for income tax credits, such as local, state, and Tribal governments and other tax-exempt entities.¹⁶ Under the IRA, these entities can now elect to receive some of the available tax credits in the form of direct payments. Consequently, of a total of 25 currently established IRA tax credit programs, we identified four programs that could potentially be applicable for local/municipal governments, as summarized in Exhibit 5 below. Each of these tax credits is eligible for direct pay.¹⁷ However, it should be noted that to benefit from these tax incentives through the direct pay provision, City departments would need to have project ownership of generating assets (e.g., facilities) such as those owned and operated by the San Francisco Public Utilities Commission. As can be seen, some of these tax credits apply only to future facilities placed in service in the coming years. According to the Department of the Environment, the Mayor's Office has convened relevant departments to understand what projects from the previous year, and going forward, will qualify for direct pay tax incentives and how these payments might incentivize further environmental projects.

¹⁶ "Building a Clean Energy Economy: A Guidebook to the Inflation Reduction Act's Investments in Clean Energy and Climate Action" The White House, January 2023, p. 11, [Link](#)

¹⁷ Ibid.

Exhibit 5: Tax Incentives for which Local/Municipal Governments are Eligible

Program	Summary Description	Period of Availability
Relevant SF Climate Action Plan Sector: Energy Supply		
Production Tax Credit for Electricity from Renewables (placed in service before 2025)	Provides a tax credit for production of electricity from renewable sources.	Projects beginning construction before 1/1/25.
Clean Electricity Production Tax Credit (projects placed in service in 2025 or thereafter)	Provides a technology-neutral tax credit for production of clean electricity. Replaces the production tax credit for electricity generated from renewable sources (§45) for facilities placed in service in 2025 and later.	Facilities placed in service after 12/31/24. Phase-out starts the later of (a) 2032 or (b) when U.S. greenhouse gas emissions from electricity are 25% of 2022 emissions or lower.
Investment Tax Credit for Energy Property	Provides a tax credit for investment in renewable energy projects.	Facilities beginning construction before 1/1/25. For geothermal heat property, the base investment tax credit is 6% for the first 10 years, scaling down to 5.2% in 2033 and 4.4% in 2034.
Clean Electricity Investment Tax Credit	Provides a technology-neutral tax credit for investment in facilities that generate clean electricity. Replaces the investment tax credit for energy property (§48) for property placed in service in 2025 and later.	Facilities placed in service after 12/31/24. Phase-out starts the later of (a) 2032 or (b) when U.S. greenhouse gas emissions from electricity are 25% of 2022 emissions or lower.

Source: Rocky Mountain Institute and BLA Analysis

The IRA also includes four direct-to-consumer clean vehicle and home energy tax credits, as summarized in Exhibit 6 below. The period of availability for the identified programs ranges from 2023 to 2032 for the clean vehicle tax credits and 2022 to 2032 for the home energy tax credits.

In coordination with the residential energy rebate programs, the City could help maximize participation in these tax credit programs by San Francisco residents and homeowners through local education and outreach about the benefits available.

Exhibit 6: Tax Incentives for which San Francisco Residents are Eligible

Program	Summary Description	Period of Availability
Relevant SF Climate Action Plan Sector: Building Operations		
Energy Efficient Home Improvement Credit	Provides a tax credit for energy-efficiency improvements of residential homes.	2022-2032
Residential Clean Energy Credit	Provides a tax credit for the purchase of residential clean energy equipment, including battery storage with capacity of at least 3 kWh.	2022-2032, with phasedown over 2033-2034
Relevant SF Climate Action Plan Sector: Transportation & Land Use		
Clean Vehicle Credit	Provides a tax credit for purchasers of clean vehicles.	Generally, vehicles placed in service in 2023-2032. Some of the subprogram have differing timeframes.
Credit for Previously-Owned Clean Vehicles	To provide a tax credit for purchasers of pre-owned clean vehicles	Generally, vehicles placed in service in 2023-2032.

Source: Rocky Mountain Institute and BLA Analysis

Current City Department Efforts on IRA Funding Opportunities

Multiple City departments are currently pursuing or have pursued a considerable number of IRA funding opportunities, which include programs identified in Exhibit 3 above. Efforts by key City departments are summarized below:

- Department of the Environment:** The Department was awarded a \$1 million **Environmental Justice Government-to-Government**¹⁸ grant (a component of the **Environmental and Climate Justice program** of the IRA, as described above) in April 2023 from the United States Environmental Protection Agency's Office of Environmental Justice and External Civil Rights. This grant will fund a project to engage San Francisco's environmental justice communities to implement and recommend community-led climate actions to inform ongoing execution of the City's Climate Action Plan. A grant contract has not been executed yet and is currently in development.

¹⁸ The Environmental Justice Government-to-Government (EJG2G) program provides IRA and annual appropriation act funding at the state, local, territorial, and tribal level to support government activities that lead to measurable environmental or public health impacts in communities disproportionately burdened by environmental harms.

The Department has also qualified for the IRA **Climate Pollution Reduction Grants Program Phase One** requirement for IRA funds to be distributed in Phase Two. This initiative is being spearheaded by the Bay Area Air Quality Management District (BAAQMD) and focuses on developing a BAAQMD Priority Climate Action Plan and regional actions to advance building and transportation decarbonization. A proposal for the Phase Two requirement is in process and will be submitted by the Department in April 2024.

The Department also plans to apply for the **Environmental and Climate Justice Community Change Grants Program** (as previously mentioned, the NOFO for this program was issued in November 2023). In addition, the Department is tracking potential funding for municipalities available through the IRA-funded Department of Energy **State and Community Energy Programs' Assistance for Latest and Zero Building Energy Code Adoption** program.

The Department has been reviewing how the City could access funding from the **Greenhouse Gas Reduction Fund**, described above, which is administered by the Environmental Protection Agency (EPA). Two of the Greenhouse Gas Reduction Fund program's three funds (**National Clean Investment Fund** and **Clean Communities Investment Accelerator**) are designed for financing entities like green banks or municipal departments that have underwriting capacity. The Department is working with the San Francisco Local Agency Formation Commission (LAFCo), SFPUC, and Treasurer-Tax Collector's Office and green bank experts to assess San Francisco's potential opportunities to access these funds.

Finally, the Department has been awarded a \$400,000 grant from the U.S. Department of Energy to develop a plan to install 200 hot water heat pumps as part of the U.S. Department of Energy Building Technologies Office's Buildings UP program, which aims to support existing buildings and spaces to be more energy efficient.

- **SFPUC:** CleanPowerSF¹⁹ joined a group of Community Choice Aggregators (CCAs)²⁰ to submit a proposal for inclusion in the California Infrastructure and Economic Development Bank (IBank)²¹ application to the Environmental Protection Agency (EPA) for the **Greenhouse Gas Reduction Fund's Solar for All** funding opportunity, described above. According to the department, the CCAs, including CleanPowerSF, requested \$253 million to expand their share of the California Public Utilities Commission's (CPUC) Disadvantaged Communities Green Tariff (DAC-GT) program by 48.5 MW of power. CleanPowerSF's version of the DAC-GT program, named the "SuperGreen Saver", provides 100 percent solar energy to low-income ratepayers residing in disadvantaged communities while providing a 20 percent electric bill discount. In October 2023, the California IBank submitted an application to the EPA including a request for \$200 million for community solar programs under CPUC's jurisdiction such as DAC-GT. If the IBank is awarded funding from the EPA, California CCAs including CleanPowerSF may be eligible to receive some of this funding to benefit low-income customers in disadvantaged communities, subject to the CPUC's administration of the funding.

SFPUC is also collaborating with the Department of the Environment, BAAQMD and other government agencies on a proposal for the IRA's **Climate Pollution Reduction Grants Program Phase Two** requirement and to help shape BAAQMD's Priority Climate Action Plan, described in the preceding section's discussion of the Department of the Environment's pursuit of IRA funding opportunities.

SFPUC also reports that it is in the early stages of understanding the benefits and risks involved in pursuing the IRA's clean energy tax incentives that are now applicable for local/municipal government via a direct pay provision. Since SFPUC owns and operates the hydroelectric generation assets at Hetch Hetchy and could possibly construct solar assets in the future (both of which may benefit from the direct pay provision), SFPUC has contracted

¹⁹ CleanPowerSF is a not-for-profit program operated by the SFPUC that works in partnership with PG&E to deliver cleaner energy to residents and businesses.

²⁰ Community Choice Aggregation (CCA) is a program that allows cities, counties and other qualifying governmental entities available within the service areas of investor-owned utilities (IOUs), to purchase and/or generate electricity for their residents and businesses.

²¹ The California Infrastructure and Economic Development Bank (IBank) finances public infrastructure and private development. IBank has authority to issue tax-exempt and taxable revenue bonds, provide financing to public agencies, provide credit enhancements, acquire or lease facilities, and leverage State and Federal funds. IBank's current programs include the Infrastructure State Revolving Fund (ISRF) Loan Program, California Lending for Energy and Environmental Needs (CLEEN) Center, the Climate Catalyst Revolving Loan fund, Small Business Finance Center, and the Bond Financing Program.

with a consultant to conduct a study and analysis to better understand the IRA provisions, how it could work in practice, and how SFPUC could benefit from the provision.

- **Municipal Transportation Agency:** The Agency has applied for IRA funding from the **Neighborhood Access and Equity Grant Program**, described in Exhibit 3 in combination with funding available from the Bipartisan Infrastructure Law (BIL) to fund the City's Reconnecting Communities program. Award of this funding had not been decided as of the writing of this report.

MTA supported efforts by the Planning Department and San Francisco County Transportation Authority (SFCTA) to submit an application earlier this year for a planning grant (though there are no associated funds for MTA). Under the BIL, the Federal Highway Administration's (FHWA) Promoting Resilient Operations for Transformative, Efficient, and Cost-saving Transportation Program (PROTECT) provides funding to local agencies for climate resilience planning and construction. MTA will be applying for a PROTECT grant in the next cycle.

- **Port of San Francisco:** The primary IRA funding opportunity the Port will be focusing on is the EPA's **Clean Ports Program**, a \$3 billion program to fund zero-emission port equipment and technology and support U.S. ports in developing climate action plans to reduce air pollutants. The Port has formed an interdivisional working group to prepare an application for an anticipated notice of funding opportunity (NOFO) release timeline in early Spring 2024. The Port states that a current constraint in the grant application process is the department's limited ability to access grant writing services due to a lack of an in-house grant writer. Consequently, the department must rely on contracted grant writing services.
- **Airport:** The Airport submitted a grant application in December 2023 under the IRA **Fueling Aviation's Sustainable Transition through Sustainable Aviation Fuels program (FAST-SAF)** administered by the U.S. Department of Transportation Federal Aviation Administration's (FAA) Office of Environment and Energy. The grant application centers on FAA approval/funding a "proof of concept" model for airports and the FAA to financially invest in sustainable aviation fuels. This will enable the San Francisco International Airport (SFO) to serve as a model for airports to use non-aviation revenue streams to finance the price difference between conventional Jet-A fuel and sustainable aviation fuels.²² The grant would support establishing guidelines, standards, and best practices to engage in sustainable aviation fuel transactions, purchase, and use of the fuel by airlines. The estimated total cost of the project is \$1,250,000. In addition, SFO will consider other IRA grants that can help activate building and transportation decarbonization projects on campus that can also help improve local air quality.

²² According to the Airport, sustainable aviation fuel costs at minimum \$0.53/gallon more than Jet-A fuel

- **Department of Public Health (DPH):** The Population Health Division of DPH is currently researching IRA opportunities under the Air Pollution Monitoring Grant as it may support the implementation of Article 38 and an update to the Citywide Air Pollution Exposure Zone Map. In addition, some funding opportunities are targeted to state and/or federal entities, and at this time the Department is waiting to see if the program will be structured so the state will be distributing funding to local government entities or if the City can apply directly to the federal agencies.
- **Public Works:** The Department was awarded a \$12 million grant through the IRA **Urban and Community Forestry Assistance Program** in September 2023 to expand urban tree canopies, particularly in low-income communities. Public Works also collaborated with the Office of Economic and Workforce Development (OEWD) to submit a capital grant Reconnecting Communities application to improve access to the San Francisco Produce Market and minimize the impacts of industrial freight movement in surrounding areas.
- **Mayor's Office of Housing and Community Development (MOHCD):** The department collaborated with several coalitions' applications (with a goal to become a subgrantee) for funding from two **Greenhouse Gas Reduction Fund** programs: **National Clean Investment Fund** and **Clean Communities Investment Accelerator**. According to the department, if granted a sub-award from the master grantees as part of the National Clean Investment Fund, capital would be provided through warehouse credit facilities²³ and loan purchasing programs to finance projects. Eligible uses include rooftop solar and battery storage and building retrofits that support net-zero emissions. For the Clean Communities Investment Accelerator, the department states that funding from a potential subgrant would be added to a revolving loan fund for green retrofit projects that reduce carbon emissions. In addition, as part of the Department of Housing and Urban Development's (HUD) Green and Resilient Retrofit Program (which provides grants and loans to HUD-assisted properties to improve energy or water efficiency), the department has been reaching out to eligible property owners and encouraging them to apply as part of any eligible proposed rehabilitation projects. The department states that they have identified eligible projects but many are outside the agency's portfolio.

²³ According to MOHCD, a warehouse credit facility is a loan fund that provides funds at specific terms to be lent out and paid back. MOHCD would be able to borrow from the credit facility and then use that money to make loans to projects, which MOHCD could then do at no additional cost or add more interest or origination fees to recover the costs.

City Department Considerations When Pursuing Funding Opportunities

In our review, we found that City departments have their own individual processes when identifying and pursuing potential funding opportunities. Efforts are not centralized or coordinated across departments though interdepartmental collaboration can occur for specific, ad-hoc funding opportunities. In addition, some departments, such as the Department of the Environment, MTA, and the Airport have dedicated grants staff, while other departments do not (such as the Port which does not have a grant writer and relies on contracted grant writing services).

In terms of considerations and criteria for determining whether to apply for funding opportunities, several common themes emerged. Multiple City departments reported that the following criteria and factors are considered during the funding opportunity discernment and evaluation process:

- The opportunity's alignment with the division and/or department's goals and/or Capital Improvement Plan, as well as priorities;
- Timeline of the grant funding application process and project period to assess feasibility of grant submission, as well as project implementation if awarded;
- Staffing capacity, qualifications and expertise if a new project is being proposed to assess feasibility of implementation;
- Amount of available grant funding and impact on current services provided if awarded;
- Eligibility and feasibility of the project and grant program; and
- Level of competitiveness of the department's grant application in relation to the field of potential competitor projects.

The Absence of Centralized Information on Funding Opportunities and City Department Decisions

While many departments track funding opportunities and deliberate internally or in conjunction with other departments regarding specific funding opportunities, a centralized information compilation of such information is not maintained by any one department or on a Citywide basis. Given that there are funding opportunities amounting to \$499 billion through the Inflation Reduction Act as of the time this report was prepared and whose objectives are aligned with those of the City's Climate Action Plan, it would behoove the City and its policymakers to create a process for tracking the opportunities such as those detailed in this report and maintain summary information on departmental decisions whether or not to pursue specific grants from the various IRA programs. Such information could be provided to the Board of Supervisors, other stakeholders, and the public to provide assurance that deliberations took place regarding the many opportunities available through the IRA and reasoned decisions were made as to whether to pursue the opportunities. Reasons for not pursuing opportunities such as lack of capacity to

prepare the grant application or execute the grant program could be recorded in such a compilation.

Interdepartmental committees established to implement the City's Climate Action Plan and convened by the Department of the Environment would be a logical place for such information to be compiled and housed. Another option would be the Office of Resilience and Capital Planning (ORCP) within the City Administrator's Office which convenes regular interdepartmental ClimateSF meetings and facilitates planning and capital funding for projects that enhance the City's climate resilience. Maintaining an inventory of IRA funding opportunities and actions taken on them through either the Department of the Environment or ORCP could require resources such as a part-time staff person or contractor if it cannot be incorporated into current work efforts by these agencies.

Policy Options

The Board of Supervisors should:

1. Request that the Department of the Environment and Office of Resilience and Capital Planning within the City Administrator's Office develop proposals within two months on options for their establishing an interdepartmental structure to compile standardized information from all relevant departments to track and report to the Board of Supervisors: (1) Inflation Reduction Act funding opportunities Citywide, (2) factors and considerations used to evaluate the opportunities (e.g., eligibility, qualifications, capacity, timeline, and linkage to the City's Climate Action Plan), and (3) departments' decisions on pursuing the opportunities including the dollar amount requested and awarded. The proposals should include potential staffing, roles and responsibilities, and any needed resources.
2. Request that the Department of the Environment report on the progress of IRA funding opportunities by City departments at bi-annual Climate Action Plan update meetings (which are facilitated by the Department), with these updates subsequently provided to the Board of Supervisors.
3. Request that the Department of the Environment work with City departments to enhance existing outreach and education to residents/homeowners and local businesses about IRA-specific clean energy rebate and tax credit programs.

Appendix I: Summary Descriptions of IRA Funding Opportunities for Local/Municipal Government

Program	Summary Description	Total Program Value
Climate Action Plan Sector: Building Operations		
Assistance for Latest and Zero Building Energy Code Adoption	To provide grants to states or units of local government to adopt updated building energy codes, including the zero energy code.	\$1,000,000,000
Funding to Address Air Pollution at Schools	To provide funding for grants and other activities to monitor and reduce pollution and greenhouse gas emissions at schools in low-income and disadvantaged communities. To provide technical assistance to schools in low-income and disadvantaged communities to develop school air and environmental quality plans and to identify and mitigate ongoing air pollution hazards.	\$50,000,000
Funding to Address Air Pollution: Emissions from Wood Heaters	To fund testing and other agency activities to address particulate emissions from residential wood heaters, which can cause significant localized concentrations of fine particle pollution.	\$15,000,000
Climate Action Plan Sector: Energy Supply		
Greenhouse Gas Reduction Fund	To provide competitive grants to mobilize financing and leverage private capital for clean energy and climate projects that reduce greenhouse gas emissions, with an emphasis on projects that benefit low-income and disadvantaged communities. Program includes: (1) \$7 billion Solar For All competitive grants, (2) \$14 billion National Investment Fund, and (3) \$6 billion Clean Communities Investment Accelerator.	\$27,000,000,000
Environmental and Climate Justice Block Grants	To provide grants and technical assistance to community-based organizations, alone or in partnerships, to reduce indoor and outdoor air pollution, including greenhouse gases; monitor for pollution; improve community resilience to the impacts of climate change, including extreme heat and wildfire; and build the capacity of these organizations to engage with state and federal decision-making processes.	\$3,000,000,000
Climate Pollution Reduction Grants	To provide grants to Tribes, states, air pollution control agencies, and local governments to develop and implement plans for reducing greenhouse gas emissions. The statute allocates \$250 million for planning grants and \$4.75 billion for implementation grants.	\$5,000,000,000

Funding for Department of Energy Loan Programs Office	To support the cost of loans for innovative clean energy technologies. IRA provides \$40 billion of loan authority supported by \$3.6 billion in credit subsidy for projects eligible for loan guarantees under section 1703 of the Energy Policy Act of 2005. This loan authority is open to all currently eligible Title 17 Innovative Clean Energy technology categories, including fossil energy and nuclear energy, and new categories of activities, including critical minerals processing, manufacturing, and recycling.	\$3,600,000,000
Energy Infrastructure Reinvestment Financing	To guarantee loans to projects that retool, repower, repurpose, or replace energy infrastructure that has ceased operations or that enable operating energy infrastructure to avoid, reduce, utilize, or sequester air pollutants or anthropogenic emissions of greenhouse gases. IRA places a total cap on loan guarantees of up to \$250 billion and includes \$5 billion in credit subsidy to support these loans under section 1706 of the Energy Policy Act of 2005.	\$5,000,000,000
Climate Action Plan Sector: Healthy Ecosystems		
Urban and Community Forestry Assistance Program	To provide grants through the Urban and Community Forestry Assistance Program for tree planting and related activities.	\$1,500,000,000
Climate Action Plan Sector: Responsible Production & Consumption		
Funding to Address Air Pollution: Methane Monitoring	To provide funding to monitor methane emissions from significant sources not covered by other parts of the Inflation Reduction Act: flaring and fugitive sources.	\$20,000,000
Fueling Aviation's Sustainable Transition through Sustainable Aviation Fuels (FAST-SAF)	To provide grant funding for eligible entities to carry out projects relating to the production, transportation, blending, or storage of sustainable aviation fuel (SAF), with the goal of accelerating the production and use of sustainable aviation fuel and reducing greenhouse gas emissions from the aviation sector.	\$244,530,000
Fueling Aviation's Sustainable Transition-Technology (FAST-Tech)	To provide grant funding for eligible entities to carry out projects that develop, demonstrate, or apply low-emission aviation technologies, which are technologies that significantly improve aircraft fuel efficiency or reduce greenhouse gas emissions during the operation of civil aircraft.	\$46,530,000
Climate Action Plan Sector: Transportation & Land Use		
Diesel Emissions Reductions	To identify and reduce diesel emissions resulting from goods movement facilities and vehicles servicing goods movement facilities in low-income and disadvantaged communities to address the health impacts of such emissions on these communities.	\$60,000,000

Low-Carbon Transportation Materials Program	To reimburse or provide incentives to eligible recipients for the use of low-embodied carbon construction materials and products in federally-funded highway projects.	\$2,000,000,000
Grants to Reduce Air Pollution at Ports	To purchase and install zero-emission port equipment and technology, conduct associated planning or permitting activities for this equipment and technology, and develop climate action plans to further address air pollution at ports.	\$3,000,000,000
Neighborhood Access and Equity Grant Program	To award competitive grants for context-sensitive projects that improve walkability and safety and provide affordable transportation access; to mitigate or remediate negative impacts on the human or natural environment in disadvantaged communities from a surface transportation facility; and for planning and capacity building activities in disadvantaged or underserved communities.	\$3,205,000,000
Clean Heavy-Duty Vehicles	To provide funding to offset the costs of replacing heavy-duty Class 6 and 7 commercial vehicles with zero-emission vehicles; deploying infrastructure needed to charge, fuel, or maintain these zero-emission vehicles; and developing and training the necessary workforce.	\$1,000,000,000
TOTAL		\$55,741,060,000

Source: Rocky Mountain Institute

Appendix II: Summary Descriptions of IRA Funding Opportunities for Businesses

Program	Summary Description	Eligible Recipients	Total Program Value
Climate Action Plan Sector: Building Operations			
Green and Resilient Retrofit Program - Contracts and Cooperative Agreements	To cover expenses of contracts or cooperative agreements administered by the Secretary for the purpose of implementing the Green and Resilient Retrofit Program.	Owner or sponsor of properties assisted pursuant to section 202 of the Housing Act of 1959, section 202 of the Housing Act of 1959 as such section existed before the enactment of the Cranston-Gonzalez National Affordable Housing Act, section 811 of the Cranston-Gonzalez National Affordable Housing Act, section 8(b) of the United States Housing Act of 1937, section 236 of the National Housing Act, or a Housing Assistance Payments contract for Project-Based Rental Assistance in fiscal year 2021.	\$60,000,000
Green and Resilient Retrofit Program - Grants and Loans	To provide grants and loans to HUD-assisted properties to improve energy or water efficiency; enhance indoor air quality or sustainability; implement the use of zero-emission electricity generation, low-emission building materials or processes, energy storage, or building electrification strategies; or make the properties more resilient to climate impacts. The law provides up to \$4,000,000,000 in loan authority.	Owner or sponsor of properties assisted pursuant to section 202 of the Housing Act of 1959, section 202 of the Housing Act of 1959 as such section existed before the enactment of the Cranston-Gonzalez National Affordable Housing Act, section 811 of the Cranston-Gonzalez National Affordable Housing Act, section 8(b) of the United States Housing Act of 1937, section 236 of the National Housing Act, or a Housing Assistance Payments contract for Project-Based Rental Assistance in fiscal year 2021.	\$837,500,000
Green and Resilient Retrofit Program - Benchmarking	To conduct energy and water benchmarking of HUD-assisted properties, provide associated data analysis and evaluation at the property and portfolio level, and develop information technology systems necessary for the collection, evaluation, and analysis of such data.	Owner or sponsor of properties assisted pursuant to section 202 of the Housing Act of 1959, section 202 of the Housing Act of 1959 as such section existed before the enactment of the Cranston-Gonzalez National Affordable Housing Act, section 811 of the Cranston-Gonzalez National Affordable Housing Act, section 8(b) of the United States Housing Act of 1937, section 236 of the National Housing Act, or a Housing Assistance Payments contract for Project-Based Rental Assistance in fiscal year 2021.	\$42,500,000

Climate Action Plan Sector: Energy Supply			
Enhanced Use of Defense Production Act of 1950	Section 30001 appropriates \$500 million to carry out the Defense Production Act (DPA). President Biden issued presidential determinations providing DOE with the authority to use \$250,000,000 of the DPA funding to accelerate domestic production of key energy technologies. In November 2022, the Biden-Harris Administration and DOE announced a notice of intent and request for information on a proposed \$250 million DPA investment to accelerate domestic electric heat pump manufacturing.	Entities capable of establishing or expanding manufacturing capacity.	\$250,000,000
Advanced Industrial Facilities Deployment Program	To provide competitive financial support to owners and operators of facilities engaged in energy intensive industrial processes to complete demonstration and deployment projects that reduce a facility's greenhouse gas emissions through installation or implementation of advanced industrial technologies and early-stage engineering studies to prepare a facility to install or implement advanced industrial technologies.	Owners or operators of domestic, nonfederal, nonpower industrial or manufacturing facilities engaged in energy-intensive industrial processes.	\$5,812,000,000
Funding for Department of Energy Loan Programs Office	To support the cost of loans for developing innovative clean energy technologies. IRA provides \$40 billion of loan authority supported by \$3.6 billion in credit subsidy for projects eligible for loan guarantees under section 1703 of the Energy Policy Act of 2005. This loan authority is open to all currently eligible Title 17 Innovative Clean Energy technology categories, including fossil energy and nuclear energy, and new categories of activities, including critical minerals processing, manufacturing, and recycling.	States, Counties, Cities / Townships, Special Districts, Tribal Governments (federally recognized), Tribal Governments (other than federally recognized), Independent School Districts, Public Higher-Ed Institutions, Private Higher-Ed Institutions, Public Housing Authorities, Indian Housing Authorities, Nonprofits with 501(c)(3) status, Nonprofits without 501(c)(3) status, Small Businesses, Businesses (other than small businesses)	\$3,600,000,000

Energy Infrastructure Reinvestment Financing	To guarantee loans to projects that retool, repower, repurpose, or replace energy infrastructure that has ceased operations or that enable operating energy infrastructure to avoid, reduce, utilize, or sequester air pollutants or anthropogenic emissions of greenhouse gases. IRA places a total cap on loan guarantees of up to \$250 billion and appropriates \$5 billion in credit subsidy to support these loans under section 1706 of the Energy Policy Act of 2005.	Program design and rulemaking is underway to refine definition of eligible recipients. Anticipated: States, Counties, Cities / Townships, Special Districts, Tribal Governments (federally recognized), Tribal Governments (other than federally recognized), Independent School Districts, Public Higher-Ed Institutions, Private Higher-Ed Institutions, Public Housing Authorities, Indian Housing Authorities, Nonprofits with 501(c)(3) status, Nonprofits without 501(c)(3) status, Small Businesses, Businesses (other than small businesses)	\$5,000,000,000
Climate Action Plan Sector: Responsible Production & Consumption			
Fueling Aviation's Sustainable Transition-Technology (FAST-Tech)	To provide grant funding for eligible entities to carry out projects that develop, demonstrate, or apply low-emission aviation technologies, which are technologies that significantly improve aircraft fuel efficiency or reduce greenhouse gas emissions during the operation of civil aircraft.	(1) a state or local government, including the District of Columbia, other than an airport sponsor; (2) an air carrier; (3) an airport sponsor; (4) an accredited institution of higher education; (5) a research institution; (6) a person or entity engaged in the production, transportation, blending, or storage of sustainable aviation fuel in the United States or feedstocks in the United States that could be used to produce sustainable aviation fuel; (7) a person or entity engaged in the development, demonstration, or application of low-emission aviation technologies; or (8) nonprofit entities or nonprofit consortia with experience in sustainable aviation fuels, low-emission aviation technologies, or other clean transportation research programs.	\$46,530,000
Implementation of the American Innovation and Manufacturing Act	To fund EPA's implementation of the American Innovation and Manufacturing Act, a bipartisan law to phase down the production and consumption of listed hydrofluorocarbons (HFCs), maximize reclamation and minimize releases from equipment, and facilitate the transition to next-generation technologies through sector-based restrictions.	For the grant program only: States, Counties, Cities/Townships, Public Higher Education Institutions, Private Higher Education Institutions, Nonprofits with 501(c)(3) status, Nonprofits without 501(c)(3) status, Small Businesses, Businesses (other than small businesses), and Individuals	\$38,500,000

Fueling Aviation's Sustainable Transition through Sustainable Aviation Fuels (FAST-SAF)	To provide grant funding for eligible entities to carry out projects relating to the production, transportation, blending, or storage of sustainable aviation fuel (SAF), with the goal of accelerating the production and use of sustainable aviation fuel and reducing greenhouse gas emissions from the aviation sector.	(1) a state or local government, including the District of Columbia, other than an airport sponsor; (2) an air carrier; (3) an airport sponsor; (4) an accredited institution of higher education; (5) a research institution; (6) a person or entity engaged in the production, transportation, blending, or storage of sustainable aviation fuel in the United States or feedstocks in the United States that could be used to produce sustainable aviation fuel; (7) a person or entity engaged in the development, demonstration, or application of low-emission aviation technologies; or (8) nonprofit entities or nonprofit consortia with experience in sustainable aviation fuels, low-emission aviation technologies, or other clean transportation research programs.	\$244,530,000
Funding for Section 211(o) of the Clean Air Act	To support investments in advanced biofuels and to implement the Renewable Fuel Standard, including developing tests and protocols, collecting data, and conducting analysis related to the environmental and public health effects of fuels.	Advanced biofuel industry; direct federal spending	\$15,000,000
Environmental Product Declaration Assistance	To support the development and standardization of environmental product declarations, including measurements of the embodied greenhouse gas emissions of construction materials and products.	Businesses that manufacture construction materials/products, and states, Tribes, and nonprofit organizations that will support such businesses.	\$250,000,000

Climate Action Plan Sector: Transportation & Land Use			
Diesel Emissions Reductions	To identify and reduce diesel emissions resulting from goods movement facilities and vehicles servicing goods movement facilities in low-income and disadvantaged communities to address the health impacts of such emissions on such communities.	(A) a regional, state, local, or Tribal agency or port authority with jurisdiction over transportation or air quality; (B) a nonprofit organization or institution that (i) represents or provides pollution reduction or educational services to persons or organizations that own or operate diesel fleets; or (ii) has, as its principal purpose, the promotion of transportation or air quality; and (C) any private individual or entity that (i) is the owner of record of a diesel vehicle or fleet operated pursuant to a contract, license, or lease with a Federal department or agency or an entity described in (A); and (ii) meets such timely and appropriate requirements as the Administrator may establish for vehicle use and for notice to and approval by the Federal department or agency or entity described in (A) with respect to which the owner has entered into a contract, license, or lease as described in (C)(i). The Clean Air Act defines "state" to mean a state, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, and American Samoa and includes the Commonwealth of the Northern Mariana Islands.	\$60,000,000
Grants to Reduce Air Pollution at Ports	To purchase and install zero-emission port equipment and technology, conduct associated planning or permitting activities for this equipment and technology, and develop climate action plans to further address air pollution at ports.	(1) A port authority; (2) A state, regional, local, or Tribal agency that has jurisdiction over a port authority or a port; (3) An air pollution control agency; or (4) A private entity (including a nonprofit organization) that applies for a grant in partnership with an entity described in (1)-(3) and owns, operates, or uses the facilities, cargo-handling equipment, transportation equipment, or related technology of a port. The Clean Air Act defines "state" to mean a state, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, and American Samoa and includes the Commonwealth of the Northern Mariana Islands.	\$3,000,000,000

Domestic Manufacturing Conversion Grants	To provide cost-shared grants for domestic production of efficient hybrid, plug-in electric hybrid, plug-in electric drive, and hydrogen fuel cell electric vehicles.	Recipients should be manufacturing for eligible vehicle types. Includes small businesses, businesses (other than small businesses), and/or individuals.	\$2,000,000,000
Advanced Technology Vehicle Manufacturing Loan Program	To provide loans to support the manufacture of eligible advanced technology vehicles and components under the Advanced Technology Vehicles Manufacturing Loan Program (ATVM), including newly authorized uses from the Bipartisan Infrastructure Law. Expanded uses include medium- and heavy-duty vehicles, locomotives, maritime vessels including offshore wind vessels, aviation, and hyperloop. IRA removed the \$25 billion cap on ATVM loans and appropriates \$3 billion in credit subsidy to support these loans.	A manufacturer of eligible vehicles or of components or materials that support eligible vehicles' fuel economy performance.	\$3,000,000,000
TOTAL			\$24,256,560,000

Source: Rocky Mountain Institute