

<p><b>Location: Boston</b>  <b>Population: 673,184 (2016)</b>  <b>Goal: 25% by 2020, and 80% by 2050 GHG reduction (80x50)</b>  <b>Year: 2014</b></p>	
<p><b>TRANSPORTATION</b></p>	<p><b>ENERGY</b></p>
<p><b>Goals:</b></p> <ul style="list-style-type: none"> <li>- Reducing VMTs by 5.5% below 2005 levels by 2020</li> <li>- Residency Rate of 45%</li> </ul>	<p><b>Goals:</b></p> <ul style="list-style-type: none"> <li>- 72,000 Completed Home Energy Audits by 2020</li> <li>- 36,000 Weatherization, Heating System Replacements, or Other Significant Upgrades</li> <li>- 15% energy use from co-generation</li> <li>- 10 MW of commercial solar</li> <li>- Reduce energy consumption across all buildings by 7%</li> </ul>
<p><b>Implementing Agencies:</b> Boston Bikes, Boston Transportation Department, Department of Public Works, MBTA, MAPC</p>	<p><b>Implementing Agencies:</b> Department of Neighborhood Development, the Boston Redevelopment Authority, the Department of Public Works, Commonwealth</p>
<p><b>City Initiatives:</b></p> <ul style="list-style-type: none"> <li>- parking freezes</li> <li>- transportation access plan agreements (TAPAs) for development projects greater than 50,000 square feet</li> <li>- calculate and reflect the complete social costs of driving a car</li> <li>- bike sharing</li> <li>- complete streets design guidelines for bike lanes and safety</li> <li>- provide more housing near jobs and public transportation</li> <li>- encourage mixed-use zoning and transit-oriented development</li> </ul>	<p><b>City Initiatives:</b></p> <ul style="list-style-type: none"> <li>- introduce a matchmaking service for small businesses that allows them to be paired with sustainability services</li> <li>- introduce an energy audit at the home point-of-sale or through the building permitting process</li> <li>- examine innovative green leasing strategies</li> <li>- explore incentives for cool roofs and green roofs on new and existing buildings in order to mitigate urban heat islands</li> <li>- improve enforcement of current codes through training of inspectors</li> </ul>

<ul style="list-style-type: none"> <li>- expand public transportation services to accommodate future ridership projections</li> </ul>	<ul style="list-style-type: none"> <li>- develop specific standards requiring that new buildings be able to accommodate solar installation, with flexibility for site suitability</li> <li>- explore requiring new municipal buildings to achieve LEED Gold</li> <li>- develop requirements for new buildings to foster biking, transit, walking, and car-sharing options for workers</li> </ul> <p><b>Private Initiatives:</b></p> <ul style="list-style-type: none"> <li>- create energy efficiency programs that enhance renter, low-income, and multi-family experiences and increase participation in energy efficiency programs</li> <li>- continue to accelerate solar deployment by continuing Solarize program and tackling existing barriers in the multi-family and renter market</li> <li>- deploy new technology such as Wi-Fi-enabled “smart” thermostats</li> <li>- encourage higher incentives for weatherization that occur over the entire building, as well as better coordination among the landlord and building tenants</li> <li>- enhance translation abilities of home performance contractors so that energy efficiency is accessible by all populations</li> </ul>
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<p><b>Location: Seattle, WA</b>  <b>Population: 704,352 (2016)</b>  <b>Goal: Reach Zero Net GHG Emissions by 2050</b>  <b>Year: 2018</b></p>	
<p><b>TRANSPORTATION</b></p>	<p><b>ENERGY</b></p>

<p><b>Goals:</b></p> <ul style="list-style-type: none"> <li>- reducing passenger transportation emissions 82% by 2030</li> <li>- reduce municipal fleet emissions by 50% by 2025</li> </ul>	<p><b>Goals:</b></p> <ul style="list-style-type: none"> <li>- reducing building emissions 39% by 2030</li> <li>- 20% reduction in energy use across City-owned buildings by 2020</li> </ul>
<p><b>Implementing Agencies:</b> Seattle City Light, Office of Sustainability &amp; Environment</p>	<p><b>Implementing Agencies:</b> Seattle Department of Construction, Office of Sustainability &amp; Environment</p>
<p><b>Private Initiatives:</b></p> <ul style="list-style-type: none"> <li>- neighborhood greenways that prioritize walking and bicycling on residential streets</li> <li>- use green stormwater infrastructure and low carbon materials, when designing and building infrastructure</li> </ul> <p><b>City Initiatives:</b></p> <ul style="list-style-type: none"> <li>- motor vehicle excise tax;</li> <li>- forming PPPs for efficient district-based funding use;</li> <li>- tax on unpaid off-street parking in commercial areas</li> <li>- congestion pricing on all limited access highways</li> <li>- separated bicycle lanes</li> <li>- off-street bicycle parking and bike sharing</li> <li>- electronic real-time bus schedule information and off-board payment options</li> <li>- promote bike sharing, vehicle sharing, and ride sharing</li> <li>- simplify permit system for the private adoption of electric vehicles (EVs)</li> <li>- pursue grant funding and partners to develop a network of fast charging stations that will allow vehicles to charge in under 30-minutes</li> </ul>	<p><b>Private Initiatives:</b></p> <ul style="list-style-type: none"> <li>- deploy smart meters that provide real-time energy use information</li> <li>- capture and utilize waste heat (e.g. from industrial operations, data centers, or sewage lines)</li> <li>- integrate land use and infrastructure planning to optimize opportunities for heat exchange (e.g. data centers or sewer lines) and buildings that require additional heat (e.g. office buildings or apartments)</li> </ul> <p><b>City Initiatives:</b></p> <ul style="list-style-type: none"> <li>- develop program for rating home energy performance when a house is listed for sale</li> <li>- require disclosing home energy use or a home energy rating at the point of sale for single-family homes</li> <li>- energy benchmarking scores of the City's municipal buildings publicly available</li> <li>- require periodic retro-commissioning (building "tune-ups") for the largest and least efficient commercial and multifamily buildings</li> <li>- require building energy audits for large energy users</li> </ul>

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<ul style="list-style-type: none"> <li>- explore using waste to produce alternative fuels</li> <li>- joint development projects, inclusionary zoning</li> <li>- develop e-park program/app to reduce need to drive around to find parking</li> </ul>	<ul style="list-style-type: none"> <li>- property tax exemption for rental housing owners who undertake significant upgrades to increase energy efficiency</li> <li>- improving permitting processes to promote the most sustainable buildings</li> <li>- meter-based financing for reduces energy use</li> <li>- density bonuses for deep energy efficiency in new construction</li> <li>- use public space, including the public right-of-way, for alternative energy infrastructure such as solar panels</li> <li>- create a minimum energy performance standard to ensure widespread improvement of entire building stock</li> </ul>
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<p><b>Location: Washington D.C.</b>  <b>Population: 693,972 (2017)</b>  <b>Goal: Reducing GHG emissions</b> 20% below 2006 levels by 2012, 30% below 2006 levels by 2020, and 80% below 2006 levels by 2050  <b>Year: 2010</b></p>	
<p><b>TRANSPORTATION</b></p>	<p><b>ENERGY</b></p>
<p><b>Goals:</b></p> <ul style="list-style-type: none"> <li>- savings of 29,000 metric tons of CO<sub>2</sub>e in 2012, 36,000 in 2020, and 44,000 in 2050 from municipal fleet changes</li> <li>- savings of 861 and 1,962 metric tons CO<sub>2</sub>e in 2020 and 2050 from municipal carshare</li> </ul>	<p><b>Goals:</b></p> <ul style="list-style-type: none"> <li>- 13% reduction in electricity usage, a 30% reduction in water usage, and a 26% reduction in gas usage</li> </ul>
<p><b>Implementing Agencies:</b> District of Columbia Human Resources (commuter benefits), Capital Bikeshare, Zipcar Fleetshare, Metropolitan Police Department, Washington Area Metropolitan Transit Authority (WMATA), the District Department of Transportation, National Highway Traffic Safety Administration,</p>	<p><b>Implementing Agencies:</b> Department of Real Estate Services, The Department of Public Works, District Department of the Environment</p>

<p>Environmental Protection Agency, District Department of the Environment</p>	
<p><b>City Initiatives:</b></p> <ul style="list-style-type: none"> <li>- increase car sharing through collaboration with car sharing organizations like Zipcar to make car sharing more visible, convenient, and available</li> <li>- pilot and expand use of electric vehicles and development of electric charging infrastructure</li> <li>- replacing Metropolitan Police Department's V8- powered Ford Crown Victoria cruisers with more fuel efficient V6-powered Chevrolet Impalas, and with more fuel-efficient models in future years</li> <li>- expand Bus Rapid Transit routes such as express buses and the Circulator system throughout the city and provide a higher level of transit service to an increased number of residents</li> <li>- introduction and expansion of bike sharing</li> <li>- create better routes, facilities and more options for parking bikes in safe and convenient locations</li> <li>- implement "performance-based parking" with increased rates during high demand periods and areas</li> <li>- encourage hybrid vehicle purchases including the elimination of sales tax on hybrids and a 50% discount in registration fees</li> <li>- expansion of public and private infrastructure to support electric vehicle charging in various stations around the city</li> <li>- providing car share parking spaces at key locations across the city</li> <li>- increase in the Corporate Average Fuel Economy standards for all passenger and light truck models</li> </ul>	<p><b>Private Initiatives:</b></p> <ul style="list-style-type: none"> <li>- occupant behavior modification and education</li> <li>- efficient buildings systems, building envelope, plug load, maintenance, codes, and green procurement (need more details)</li> </ul> <p><b>City Initiatives:</b></p> <ul style="list-style-type: none"> <li>- Public Schools modernization program (LEED)</li> <li>- DC agencies and DC water purchase electricity jointly, current power contract boosts purchase of renewable electricity from the previous rate of 10% to 50%</li> <li>- DC Staff Training &amp; Education to Reduce Plug Load from plugged electronics and desk lamps</li> <li>- Energy Conservation Campaign set to reduce the number of personal items being used in workspaces</li> <li>- offer long-term loans to property owners, to be repaid on their property tax bills, to finance energy efficiency retrofits of residential, multi-family, and commercial properties citywide</li> <li>- require all federal agencies to reach a minimum 30% reduction in energy intensity by 2015</li> <li>- Increasing the efficiency of district-wide large heating and cooling systems</li> <li>- create effective and replicable financing plan and streamlined administrative processing for solar Co-ops and Other Micro-utilities</li> <li>- easing the adoption of PPAs within the commercial and</li> </ul>

	residential sectors - provide choice to purchase up to 100% renewable source electric power through several vendors - promote use of green and reflective “cool” roofs to greatly reduce the energy needed to cool buildings
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<b>Location: New York City</b> <b>Population: 8.538 million (2016)</b> <b>Goal: reduce emissions 80 percent by 2050</b> <b>Year: 2017</b>	
<b>TRANSPORTATION</b>	<b>ENERGY</b>
<b>Goals:</b> <ul style="list-style-type: none"> <li>- 80% sustainable mode share by 2050</li> <li>- achieve a 50% reduction in fossil fuel consumption in the City's vehicle fleet by 2025</li> </ul>	<b>Goals:</b> <ul style="list-style-type: none"> <li>- 20% energy reduction across city-owned buildings by 2025</li> <li>- procure 100% renewable electricity for City operations</li> <li>- 20% reduction of energy use per square foot by 2025</li> <li>- installing 25 Megawatts (MW) of solar capacity by 2026</li> <li>- 30% reduction of GHG emissions by 2027 in residential buildings</li> </ul>
<b>Implementing Agencies:</b> Mayor's Office of Sustainability, Department of Transportation	<b>Implementing Agencies:</b> Mayor's Office of Sustainability, Department of Buildings, Department of Citywide Administrative Services, Economic Development Corporation, Mayor's Office of Recovery and Resiliency, The City University of New York, Department of City Planning
<b>City Initiatives:</b>	<b>City Initiatives:</b>

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<ul style="list-style-type: none"> <li>- supporting improvements to the subway and bus systems</li> <li>- developing new miles of protected bike lanes and expanded bike share</li> <li>- expanding smart parking policy</li> <li>- implementation of low emission zones</li> <li>- encouraging accelerated adoption of cleaner and more efficient vehicle technologies</li> <li>- investing in new electric vehicle charging infrastructure throughout the city</li> <li>- improving bus speeds</li> <li>- expanding the bike lane network</li> <li>- implementing data-driven parking and traffic-optimization technology for more efficient traffic</li> <li>- expanding the Off-Hour Delivery program to reduce peak period congestion</li> <li>- facilitating the adoption of low-emission private freight vehicles</li> </ul>	<ul style="list-style-type: none"> <li>- provide energy use information to more building owners, managers, staff, tenants, and residents, including by requiring energy disclosure at point-of-sale and energy grades for large buildings</li> <li>- leverage City-owned property and land to foster innovation in renewable energy development</li> <li>- promote the development of community energy projects, including microgrids and district systems</li> <li>- pool purchasing power of NYC residents and businesses to procure renewable electricity</li> <li>- advocate for investments that improve the flexibility of in-city transmission and distribution systems</li> <li>- maximize on-site renewable energy installations across public and private properties</li> <li>- required installation of LED lights</li> </ul>
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<p><b>Location: Eugene, Oregon</b>  <b>Population: 166,575</b>  <b>Goals:</b></p> <ul style="list-style-type: none"> <li>- <b>Reduce community-wide greenhouse gas emissions 10 percent below 1990 levels by 2020</b></li> <li>- <b>Reduce community-wide fossil fuel use 50 percent by 2030</b></li> </ul> <p><b>Year: 2010</b></p>	
<p><b>TRANSPORTATION</b></p>	<p><b>ENERGY</b></p>
<p><b>Goals: n/a</b></p>	<p><b>Goals: n/a</b></p>

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<p><b>Implementing Agencies:</b> Lane Transit District, City of Eugene Sustainability Commission, Neighborhood Leaders Council</p>	<p><b>Implementing Agencies:</b> Resource Innovation Group and The UO Climate Leadership Initiative, Eugene Area Chamber of Commerce, Eugene Water and Electric Board, City of Eugene Planning Commission, City of Eugene Sustainability Commission</p>
<p><b>City Initiatives:</b></p> <ul style="list-style-type: none"> <li>- Maximize electrification of the regional mass transit systems</li> <li>- Increase use of hybrid vehicles including buses and other heavy vehicles</li> <li>- 20-minute neighborhoods planning for Bicycle and Pedestrian Master Plan</li> <li>- Zone future commercial and high-density residential uses in and around the urban core</li> <li>- Set population thresholds that will trigger review of community growth plans</li> <li>- Identify mobility gaps in the bicycle and pedestrian transportation system</li> <li>- Increase the mileage and connectivity of bicycle boulevards and shared-use paths to encourage biking</li> <li>- Create a “Complete Streets” policy that requires all subsequent transportation and rehabilitation projects to incorporate infrastructure for bicycles, pedestrians, and mass transit service</li> <li>- Increase promotion of bicycling, walking, mass transit, carpooling, telecommuting, high-occupancy vehicles, and emergency ride home programs as attractive alternatives to driving</li> <li>- Transition to plug-in hybrids and electric vehicles</li> <li>- Require installation of electric car charging stations in new multifamily housing</li> </ul>	<p><b>City Initiatives:</b></p> <ul style="list-style-type: none"> <li>- assistance for energy-efficiency through housing rehabilitation loans, business loans, and the Green Building Incentive Program</li> <li>- Climate Masters at Home™ program to educate and support individuals in reducing their personal and household carbon footprints</li> <li>- Target incentive programs to sectors with high-efficiency potential including rental buildings, multifamily housing, remodels, and commercial tenant infill</li> <li>- Adopt an energy performance score program or similar tool to disclose total energy use in existing and new buildings for use by builders, realtors, owners, and renters</li> <li>- Lobby for adoption and actively participate in development of building code amendments that meet standards for energy efficiency</li> <li>- Increase incentives for highly energy-efficient new buildings aiming toward zero net energy and carbon neutral buildings</li> <li>- Revise or expand incentives to encourage smaller homes that require less energy to operate and fewer building materials to construct</li> <li>- Remove financial, infrastructural, regulatory, and perceptual barriers to increase the use of on-site renewable energy systems, such as solar hot water, photovoltaic, and ground-source heat pumps</li> </ul>



	<ul style="list-style-type: none"> <li>- Invest in utility company's network to allow surplus energy from photovoltaics on downtown buildings to be integrated into the electricity grid</li> <li>- Develop at least one community scale renewable energy pilot project</li> <li>- Develop at least one clean district energy, or shared energy, system pilot project by working with property owners and local utilities</li> <li>- Develop incentives to encourage the use of passive heating and cooling systems, lighting, ventilation, and other strategies that reduce energy demand</li> <li>- Provide education, assistance and incentives to reduce potable water use in new and existing buildings and landscaping, such as low-flow fixtures, appropriate (xeriscape) landscaping, use of greywater and onsite rainwater catchment systems</li> </ul>
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<p><b>Location: Vancouver, Canada</b>  <b>Population: 647,540</b>  <b>Goal:</b></p> <ul style="list-style-type: none"> <li>- 100% of energy being derived from renewable sources</li> <li>- Reduce GHG emissions by 80% below 2007 levels</li> </ul> <p><b>Year: 2011</b></p>	
<b>TRANSPORTATION</b>	<b>ENERGY</b>
<p><b>Goals:</b></p> <ul style="list-style-type: none"> <li>- Over 50% trips are made by foot, bike, or public transit</li> </ul>	<p><b>Goals:</b></p> <ul style="list-style-type: none"> <li>- Reduce energy use and GHG emissions in existing buildings by</li> </ul>

<ul style="list-style-type: none"> <li>- Reduce distance driven per resident by 20% from 2007 levels</li> </ul>	<p>20% over 2007 levels</p>
<p><b>Implementation Agencies:</b> n/a</p>	<p><b>Implementation Agencies:</b> BC Hydro, Fortis BC, Landlord BC, the Building Owners and Managers Associations,</p>
<p><b>Private Initiatives:</b></p> <ul style="list-style-type: none"> <li>- Better manage commercial vehicle journeys and transition heavy-duty (commercial) vehicles to sustainable biofuels, biomethane, hydrogen and electricity</li> </ul> <p><b>City Initiatives:</b></p> <ul style="list-style-type: none"> <li>- implement spot improvements for sidewalks and bicycle lanes</li> <li>- Implement a Bike Sharing Program</li> <li>- use land-use and zoning policies to develop complete compact communities</li> <li>- advocate the provincial and federal government for funding to improve transit.</li> </ul>	<p><b>City Initiatives:</b></p> <ul style="list-style-type: none"> <li>- convert two existing steam heat networks to renewable energy</li> <li>- develop four new neighborhood energy systems</li> <li>- require all new construction buildings to be carbon-neutral in operations</li> <li>- update the retrofit requirement options in Vancouver's Building By-Law to further reduce energy use and greenhouse gas emissions\</li> <li>- Green Condominium Program</li> <li>- Green Landlord Program</li> <li>- Home Energy Efficiency Empowerment Program</li> <li>- Home Energy Technology Program</li> <li>- Require annual energy benchmarking and reporting for large residential and commercial buildings</li> <li>- Expand existing and develop new Neighborhood Renewable Energy Systems with on-site renewable energy</li> </ul>

<p><b>Location:</b> Paris, France  <b>Population:</b> 2.244 million  <b>Goal:</b> 25 % reduction in greenhouse gas emissions  <b>Year:</b> 2013</p>	
<p><b>TRANSPORTATION</b></p>	<p><b>ENERGY</b></p>

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<p><b>Goals:</b> n/a</p>	<p><b>Goals:</b></p> <ul style="list-style-type: none"> <li>- 25 % reduction in energy consumption;</li> <li>- 25 % of renewable energies in its energy mix consumption.</li> </ul>
<p><b>Implementing Agencies:</b> City of Paris</p>	<p><b>Implementing Agencies:</b> City of Paris</p>
<p><b>City Initiatives:</b></p> <ul style="list-style-type: none"> <li>- Workplace Travel Plan (WTP)</li> <li>- By refunding part of the subscription cost, advocate the use of Velib' - the Paris self-service bike scheme</li> </ul> <p><b>Private Initiatives:</b></p> <ul style="list-style-type: none"> <li>- Call on eco-friendly courier/delivery companies</li> <li>- Encourage audio and video-conferencing</li> </ul>	<p><b>City Initiatives:</b></p> <ul style="list-style-type: none"> <li>- Factor in Climate Plan standards for any building retrofit / construction</li> <li>- Organize building revegetation</li> <li>- Adopt a lighting consumption reduction plan by fitting in LED bulbs and introducing a sparing use of lighting</li> </ul> <p><b>Private Initiatives:</b></p> <ul style="list-style-type: none"> <li>- Implement instructions to heat at 19°C max in winter and to set the air-conditioning threshold to kick in at 26°C min in summer</li> </ul>

<p><b>Location:</b> London, UK  <b>Population:</b> 8.136 million  <b>Goal:</b> Zero Carbon City by 2050  <b>Year:</b> 2017</p>	
<p><b>TRANSPORTATION</b></p>	<p><b>ENERGY</b></p>
<p><b>Goals:</b></p> <ul style="list-style-type: none"> <li>- all taxis and private hire vehicles to be zero emission capable by 2033</li> <li>- all public transit buses to be zero emission by 2037</li> </ul>	<p><b>Goals:</b></p> <ul style="list-style-type: none"> <li>- n/a</li> </ul>

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<ul style="list-style-type: none"> <li>- all newly registered road vehicles driven in London to be zero emission by 2040</li> <li>- London's entire transport system to be zero emission by 2050</li> </ul>	
<p><b>Implementation Agencies:</b> Transport for London, Julie's Bicycle, Department for Transport,</p>	<p><b>Implementation Agencies:</b> Department for Business, Energy &amp; Industrial Strategy, Chartered Institution of Building Services Engineers, Homes and Communities Agency,</p>
<p><b>City Initiatives:</b></p> <ul style="list-style-type: none"> <li>- phasing out fossil fueled vehicles</li> <li>- promote and prioritize more sustainable travel in London including walking, cycling and public transport, as part of the Healthy Streets Approach</li> <li>- clean up the bus fleet by phasing out fossil fuels, prioritizing action on diesel, and switching to zero emission technologies</li> <li>- tax treatment of 'red diesel', so that a switch to ultra-low emission technologies can be financially incentivized</li> <li>- more electric vehicles and charging infrastructure</li> <li>- commitment to providing the necessary funding to convert all UK black taxis to zero emission capable models by 2025 at the latest</li> </ul>	<p><b>City Initiatives:</b></p> <ul style="list-style-type: none"> <li>- Energy for Londoners program will support the transition from old inefficient gas boilers to efficient ones via London Boiler Cashback Scheme</li> <li>- RE:NEW and RE:FIT programs to retrofit houses</li> <li>- Defra proposal introduces emissions limits for generators over one megawatt in capacity</li> <li>- establish and review developer guidelines</li> <li>- develop and deliver decentralized energy, renewable generation, especially solar, community energy program</li> <li>- protect the most vulnerable and tackle fuel poverty</li> <li>- attract finance for energy efficiency and renewable energy</li> <li>- develop smarter grid with demand-side management</li> </ul>

<p><b>Location: Copenhagen, Denmark</b>  <b>Population: 583,525</b>  <b>Goal: Reduce CO2 emissions by 20% between 2005 and 2015</b>  <b>Year: 2009</b></p>	
<p><b>TRANSPORTATION</b></p>	<p><b>ENERGY</b></p>

<p><b>Goals:</b></p> <ul style="list-style-type: none"> <li>- 10% of CO2 reduction via transport sector</li> </ul>	<p><b>Goals:</b></p> <ul style="list-style-type: none"> <li>- 75% of the combines CO2 reduction through upgrading energy supply</li> <li>- 10% of CO2 reduction by 2015 thought construction and renovation projects</li> </ul>
<p><b>Implementing Agencies:</b> n/a</p>	<p><b>Implementing Agencies:</b> n/a</p>
<p><b>City Initiatives:</b></p> <ul style="list-style-type: none"> <li>- add new and improved bike paths, green bike routes, bicycle and pedestrian bridges, and better bicycle parking notably near public transport stations</li> <li>- bus companies are required to reduce bus CO2 emissions by 25%</li> <li>- introduce congestion charges</li> <li>- establish environment zones in dense downtown areas where only environmentally friendly cars and trucks are allowed</li> <li>- rerouting traffic away from shopping streets will improve conditions for bicyclists and busses, while reducing automobile traffic</li> <li>- parking restrictions create the incentive to choose alternatives to automobile transport</li> <li>- introduce car sharing, car-pooling and climate friendly driving techniques</li> <li>- offer incentives for climate-friendly taxis</li> <li>- GPS transmitted parking opportunities reduce congestion from drivers on the hunt for a parking space</li> <li>- City of Copenhagen provides refueling stations and free parking for electrical and hydrogen powered vehicles</li> </ul>	<p><b>City Initiatives:</b></p> <ul style="list-style-type: none"> <li>- municipality's buildings are managed and maintained in an environmentally correct manner</li> <li>- all the municipality's new construction and municipally financed construction is based on low energy principles</li> <li>- all buildings the municipality rents must meet energy conservation criteria</li> <li>- inhabitants and businesses gain perspective on their building's heat losses via the "hot-mapping" function on the municipality's homepage</li> <li>- the municipality will contribute towards establishing and developing solar cell solutions through partnerships and a heightened information campaign</li> <li>- All new city development areas are designated low energy areas with the toughest low-energy standards</li> <li>- The municipality will enforce compliance with low energy requirements</li> </ul>

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<ul style="list-style-type: none"> <li>- municipality's administrations develop implementation plans for environmentally friendly transport, both during work hours and for their employee's commute to and from work</li> <li>- municipality's vehicle fleet is converted to hydrogen-powered and electric cars</li> <li>- street lighting is made less CO2 intensive by switching to more energy efficient lighting and by collaborating in the development of LED technologies which could cut energy use for lighting in half</li> </ul>	
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<p><b>Location: Portland, ME</b>  <b>Population: 66,937</b>  <b>Goal: reduce eCO2 emissions to 10% below 1990 levels by 2020</b>  <b>Year: 2008</b></p>	
<p><b>TRANSPORTATION</b></p>	<p><b>ENERGY</b></p>
<p><b>Goals:</b> n/a</p>	<p><b>Goals:</b> n/a</p>
<p><b>Implementing Agencies:</b> Transportation Policy and Regulatory Compliance, Clean Air Cool Planet</p>	<p><b>Implementing Agencies:</b> Housing and Community Development, Clean Air Cool Planet</p>
<p><b>City Initiatives:</b></p> <ul style="list-style-type: none"> <li>- city employees should be given equal or greater incentives to choose non-automotive commuting options over employer-paid parking</li> <li>- The City Manager should set a reduction target for gasoline and diesel fuel consumption by vehicles in the City fleet</li> <li>- City operations that regularly use vehicles should develop plans</li> </ul>	<p><b>City Initiatives:</b></p> <ul style="list-style-type: none"> <li>- city should include a certain percentage of green power in its energy portfolio</li> <li>- explore Small-Scale Energy Generation Project through PPPs</li> <li>- Portland Public Schools adopted a comprehensive energy policy which describes the responsibility all school employees, students, volunteers and building users have to conserve energy</li> </ul>

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<p>and policies for shared trips, car-pooling and trip avoidance</p> <ul style="list-style-type: none"> <li>- the City should purchase route optimization software to create the most efficient possible routes for operations such as trash and recycling collection, snow plowing, street sweeping and any other operation that requires route driving</li> <li>- installing showering facilities in City Hall to promote more active lifestyles and reduce emissions created by vehicular commuting</li> <li>- bike racks should be a priority and installed in convenient and secure areas to promote the use of bicycles by employees and the public</li> </ul>	<ul style="list-style-type: none"> <li>- convert the existing streetlights to LED</li> <li>- create energy performance benchmarks for all City of Portland buildings</li> </ul>
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<p><b>Location: City of Alameda, CA</b>  <b>Population: 66,937</b>  <b>Goal: reduce eCO2 emissions to 25% below 2005 levels by 2020</b>  <b>Year: 2008</b></p>	
<p><a href="http://www.ca-ilg.org/sites/main/files/file-attachments/local_action_plan_for_climate_protection.pdf">http://www.ca-ilg.org/sites/main/files/file-attachments/local_action_plan_for_climate_protection.pdf</a></p>	
<p><b>TRANSPORTATION</b></p>	<p><b>ENERGY</b></p>
<p><b>Goals:</b> reduce 750 eCO2 via transit-oriented development</p>	<p><b>Goals:</b></p> <ul style="list-style-type: none"> <li>- Encourage increase use of renewables</li> <li>- Reduce energy consumption from existing residential, commercial, industrial, and institutional buildings</li> <li>- Ensure all new residential, commercial, industrial, and institutional buildings are designed and constructed to</li> </ul>

	<p>minimize energy consumption and GHG</p>
<p><b>Implementing Agencies:</b> Development Services Department, East Bay Municipal Utility District</p>	<p><b>Implementing Agencies:</b> Public Utilities Board</p>
<p><b>City Initiatives:</b></p> <ul style="list-style-type: none"> <li>- city provides annual operating capital and maintenance funds to support additional busses, shuttles, to support transportation system</li> <li>- hire transportation system management manager</li> <li>- develop bike plan using ordinance amendments to facilitate bicycle parking and shower facilities in commercial developments by requiring new developments to include bike lockers and showers.</li> <li>- fund studies of parking supply and alternative transportation strategies</li> <li>- revise street design standards to promote pedestrian and bicycle use</li> <li>- create public transit priority signal lanes</li> <li>- implement transportation mitigation fee</li> <li>- convert city fleet to alternative fuel fleet</li> <li>- provide city staff “flex hours”, compressed work week, and telecommuting</li> <li>- encourage alternative “car share” program</li> <li>- develop “park-and-ride” lots</li> </ul>	<p><b>City Initiatives:</b></p> <ul style="list-style-type: none"> <li>- encourage public utilities to expand its source mix of 100% carbon-free energy</li> <li>- require all CAP actions include an analysis of evaluation</li> <li>- provide technical assistance for energy efficiency and tracking progress</li> <li>- develop financial incentives to educate and encourage residents and businesses to be energy efficient</li> <li>- amend city code to include sustainable design and green building standards</li> <li>- develop trade-in program to reduce use of 2-cycle combustion engines</li> <li>- develop wood-burning prohibition ordinance</li> <li>- encourage development of biodiesel industry</li> </ul>



### Annotated Bibliography

A Community Climate and Energy Action Plan for Eugene. (2010).

<https://www.eugene-or.gov/Archive/ViewFile/Item/80>

Despite relatively outdated and short CAP, Eugene had the most interesting policies such as 20-minute neighborhoods plan that was developed where 90 percent of Eugene residents can safely walk or bicycle to meet most basic, daily, non-work needs, and have safe pedestrian and bicycle routes that connect to mass transit. Another relevant and interesting suggestion that stood out during the time of research as an initiative to evaluate and remove financial, infrastructural, regulatory, and perceptual barriers to increase the use of on-site renewable energy systems.

Bjerregaard, R. (2009). Copenhagen Climate Plan.

<https://www.energycommunity.org/documents/copenhagen.pdf>

Copenhagen's 2009 CAP had many initiatives, but not many clearly outline measurement indicators to evaluate initiatives. More recent CAP update document was found to research more recent initiatives and lessons learned.

CPH 2025 Climate Plan. Roadmap 2017–2020. (2016).

[kk.sites.itera.dk/apps/kk\\_pub2/pdf/1586\\_0kE7bzR28V.pdf](http://kk.sites.itera.dk/apps/kk_pub2/pdf/1586_0kE7bzR28V.pdf)

While implementing the CAP, some of the challenges that arose when tackling traffic congestion, converting vehicles to new types of fuel, reducing energy consumption in the city and achieving the targets for sorting plastic and organic waste. The city of Copenhagen CAP mentions that the transition has been slower than expected, with national measures such as the congestion zone and changes to energy taxes failing to materialize, which hindered some of the local initiatives. Most of the updated plan focuses on incentives for individual and businesses to engage more actively with the CAP initiatives.

Blasio, B. (2017). 1.5C. Aligning New York City with the Paris Climate Agreement.

[https://www1.nyc.gov/assets/sustainability/downloads/pdf/publications/1point5-AligningNYCwithParisAgrmt-02282018\\_web.pdf](https://www1.nyc.gov/assets/sustainability/downloads/pdf/publications/1point5-AligningNYCwithParisAgrmt-02282018_web.pdf)

City of New York's CAP had other metrics besides reduction of GHGs. CAP included other benefits, such as workforce development, health and wellbeing impacts, natural capital preservation, affordability, etc. Design and presentation of initiatives in this CAP are exceptionally well-done, making navigation of the document available for research and quick references. CAP also outlines the progress of CAP initiatives and responsible agencies for each initiative, promoting accountability and transparency of the CAP.

Climate Protection Task Force, Planning and Building Department. (2008). Local Action Plan for Climate Protection.

[http://www.ca-ilg.org/sites/main/files/file-attachments/local\\_action\\_plan\\_for\\_climate\\_protection.pdf](http://www.ca-ilg.org/sites/main/files/file-attachments/local_action_plan_for_climate_protection.pdf)

City of Alameda's CAP highlighted various initiatives for transportation, energy, and others, but what particularly stood out is a dedicated chapter for implementation and monitoring strategies. This section discusses the need to distinguish between quantifiable and non-quantifiable initiatives and prioritize both in evaluating initiatives. Allocating dedicated staff to guide initiatives in public and private sectors was highlighted similarly to Chicago's CAP. Stakeholder engagement strategies and participatory methods of engaging private and public sectors have been identified as a means of successful implementation of CAP.

Durkan, J. (2018). Seattle Climate Action.

[http://durkan.seattle.gov/wp-content/uploads/2018/04/SeaClimateAction\\_April2018.pdf](http://durkan.seattle.gov/wp-content/uploads/2018/04/SeaClimateAction_April2018.pdf)

Seattle's CAP was the most recent CAP that was researched and includes commentary on the withdrawal from the Paris Agreement as well as a message of encouragement for other cities to take initiatives on the CAPs. City of Seattle's CAP is an exception amongst researched CAPs as it is highlighting goals as a specific percentage change in each sector. Seattle CAP heavily referred to pilot programs for initiatives in every sector. Piloting was viewed as a reliable way to collect data on the effectiveness of the CAP's initiative without heavy financial commitment. CAP listed actionable items for the private sector to engage in GHG reduction initiatives.

Fenty, A. (2010). Climate of Opportunity. A Climate Action Plan for the District of Columbia.

[https://doee.dc.gov/sites/default/files/dc/sites/ddoe/publication/attachments/ClimateOfOpportunity\\_web.pdf](https://doee.dc.gov/sites/default/files/dc/sites/ddoe/publication/attachments/ClimateOfOpportunity_web.pdf)

CAP suggested using a separate entity just for community engagement strategies (monthly workshops, educational and outreach programs). Additionally, CAP discussed the importance of the funding to update infrastructure and perform retrofitting initiatives around the city. CAP cleverly suggested intertwining city's development priorities with climate action plan action items, bundling CAP initiatives with general District initiatives. Frequent GHG inventory adjustments were highlighted as meaningful factors in measuring the impacts of CAP and suggested as a good practice along the way of measuring impacts.

Parzen, J. (2009). Lessons Learned: Creating the Chicago Climate Action Plan. City of Chicago Department of Environment.

<http://www.chicagoclimateaction.org/filebin/pdf/LessonsLearned.pdf>

Chicago's Lessons Learned document successes and failures while implementing the CAP. Particularly, commitment to staffing (at least 2 people and project manager per initiative) has been suggested as a measure to ensure initiatives of the CAP are implemented to the best of their abilities. Additionally, Lessons Learned document highlights that it was helpful to have an outside person facilitating the community engagement processes. As a result, CAP initiatives have been accompanied by a strong presence and participation of non-profits and community leaders which ensures rant support and quick turn-around of initiated projects.

## Local Climate Action Plan Analysis

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## Appendix A: Research & Overview

Robertson, G. (2011). Greenest City. 2020 Action Plan.

<https://vancouver.ca/files/cov/greenest-city-2020-action-plan-2015-2020.pdf>

Vancouver CAP included plans for initiatives around the specific locations and already established programs. With ambitious goals (100% of energy from renewable sources by 2020), Vancouver's CAP heavily focuses on restructuring and changing composition of the public transit system and municipal fleet that requires heavy GHG fuel. Vancouver's CAP, similarly to NYC CAP, includes status updates on the ongoing initiatives and highlights responsible parties and departments as a means to promote transparency to stakeholders and the general public.

Walsh, M. (2014). Greenovate Boston. 2014 Climate Action Plan Update. Summary Report.

[https://www.cityofboston.gov/images\\_documents/Greenovate%20Boston%202014%20CAP%20Update\\_Summary\\_tcm3-49733.pdf](https://www.cityofboston.gov/images_documents/Greenovate%20Boston%202014%20CAP%20Update_Summary_tcm3-49733.pdf)

Update builds on seven years of GHG reduction initiatives. Citywide, GHG emissions are down 17% than they were in 2005. Emissions from City government operations have been reduced by almost 25 % since 2005. Update highlights the urgency to prioritize comprehensive climate preparedness strategies, cross-cutting means of measuring effects of CAP (social equity, economic development, and public health and safety), extensive and inclusive community engagement, more rigorous greenhouse gas inventory and emission projections. The update focuses on a public as well as private initiatives, offering suggestions and initiatives for both sectors to engage in order to reduce GHG.

Paris Climate Agreement. Climate action partnership agreement. (2013).

<http://parisactionclimat.paris.fr/en/p/charte>

The city of Paris engages stakeholders in a creative way by providing an opportunity to become "Partners" in the Paris Climate and Energy Action Plan by signing dedicated partnership agreement which gave stakeholders status of "Sustainable Paris Doers". This created network, led by the City of Paris Municipality, acts as a social network and lists all eco-actions and showcases Doers; encourages an exchange of sustainable ideas, offers practical tools, and hosts monthly free events that are open to the public.

Portland Municipal Climate Change Working Group. (2008). The City of Portland Municipal Climate Action Plan

<https://www.portlandmaine.gov/DocumentCenter/View/6274/Municipal-Climate-Action-Plan>

Portland's CAP was interesting due to its; emphasis on all municipal-only internal action plan. Policies like changing behavior of municipal staff to conserve energy were prioritized over ordinances or private sector engagement.

The Portland Plan Progress Report. (2017). The Bureau of Planning and Sustainability

<https://www.portlandonline.com/portlandplan/index.cfm?a=632343&c=45722>

Progress report discussed accomplishment of Portland to pass 10-cents per gallon gas tax that helped the city to secure funds for expansion of preventive maintenance that saved the city money, prevented future development of potholes,

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improved sidewalks, street crossings, and bike routes. Moreover, Portland's bike share system installed in 2016 demonstrated 26 percent auto trip replacement rate. Therefore, biking infrastructure has many action items and goals in the progress report.

Khan, S. (2017) London Environment Strategy.

[https://www.london.gov.uk/sites/default/files/london\\_environment\\_strategy- draft\\_for\\_public\\_consultation.pdf](https://www.london.gov.uk/sites/default/files/london_environment_strategy- draft_for_public_consultation.pdf)

London's CAP highlighted Economic Development Strategy as a means to influence carbon economy and move the needle in the direction of a global transition to a low carbon circular economy. Other initiatives - RE:NEW and RE:FIT – were highlighted by many other sources as the cornerstone of London's public building retrofit activities. These programs are some of the most effective initiatives in helping public buildings to get an energy makeover and save energy costs. The initiative incorporates energy service company (ESCO) to undertake energy efficiency works in buildings. In the US, a similar arrangement was only found on a federal level.

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