

City of Edmonds Climate Change Action Plan

February 4, 2010

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Our Vision for Edmonds: 2050

In the year 2050 we see...

Edmonds is one of many flourishing communities in the Puget Sound region of Western Washington with our energy coming from nearly 100% renewable sources, our waste streams approaching zero, and nearly all our products and services obtained from sustainable sources.

Our community continues to serve as our foundation; we are engaged citizens with strong neighborhood connections.

We value our natural setting along the shores of Puget Sound and among wooded hills and ravines that are protected open spaces with shoreline vistas and wetlands rich with wildlife and vegetation.

Our neighborhoods are diverse, complete with mixed-use development and neighborhood markets and gardens. We have walkable neighborhoods and are invigorated by our renewed contact with our neighbors.

Many of us work close to home, in jobs that are good for us and good for the environment. We have created and encouraged local services, technologies, and solutions that support and enhance our thriving neighborhoods. We continue to consume more local products and use our purchasing power more consciously.

We have promoted the creation of a transportation network that offers efficient, clean, and affordable mobility for all residents and workers in Edmonds. We are healthy and so is our environment—our children play outside and our creeks and waterways are very clean. We have continued to support our spectacular open space and derive great joy from its presence.

We have learned how to create a green and healthy future but are prepared for any potential negative climate changes.

How was this plan created?

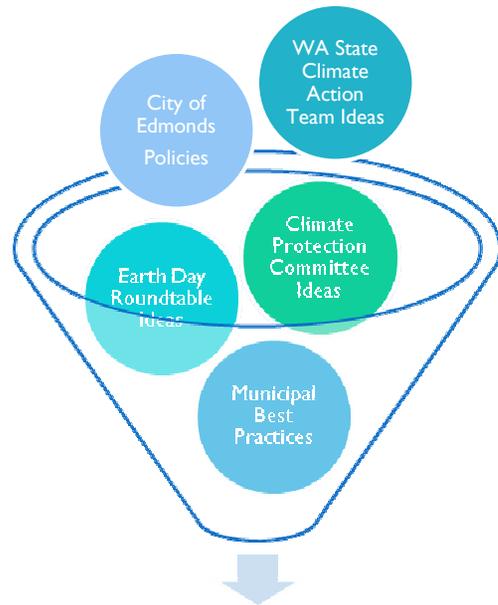
A subcommittee of the City of Edmonds' Citizens Committee on U.S. Mayors Climate Protection Agreement met during the summer of 2009 to draft a comprehensive action plan.

The plan is based on input from the larger community as gathered on Earth Day, April 21, 2009, and from best practices in other cities around the country.

Additional resources include the City of Edmonds' draft Comprehensive Plan - Community Sustainability Element and the Governor's Climate Action Plan drafted in November 2008.

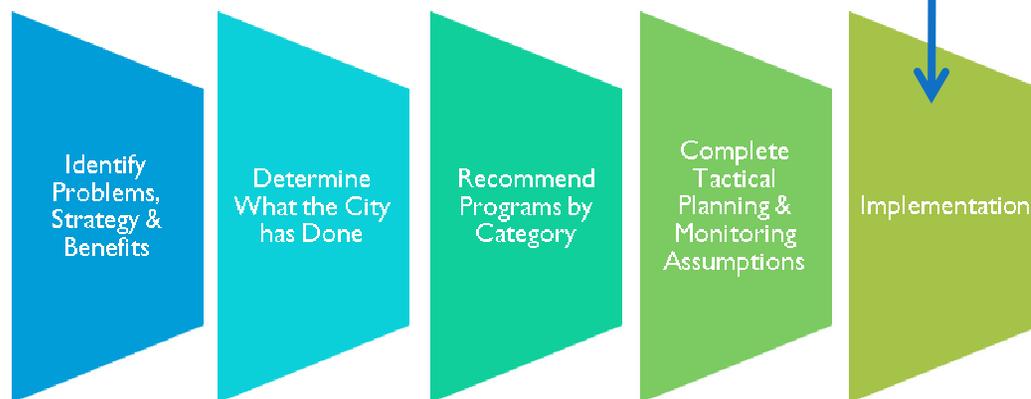
Volunteers provided technical input on the various components and leveraged work by the Climate Protection Committee over the last several years. The subcommittee reviewed scores of ideas and potential programs culminating into this action plan.

Our Process



“If there’s no action before 2012, that’s too late. What we do in the next two to three years will determine our future. This is the defining moment.”
- U.N.’s Intergovernmental Panel on Climate Change, renowned engineer and economist Rajendra Pachauri

- Our Transportation
- Our Lifestyles
- Our Buildings
- Our Environment
- Our Economy



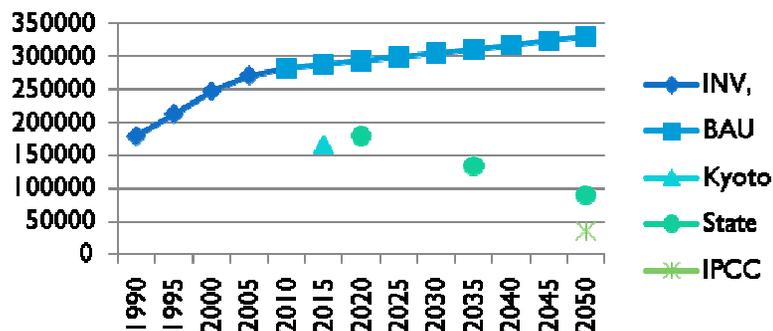
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Summary

Our goals for reducing greenhouse gas emissions

The Mayor of Edmonds' adoption of the U.S. Mayors Climate Protection Agreement requires the City to reduce its greenhouse gas (GHG) emissions to 7% below 1990 levels by 2012 per the Kyoto Agreement.⁽¹⁾ Washington State has mandated that State GHG emissions be reduced to 1990 levels by 2020; 25% below 1990 levels by 2035; and 50% below 1990 levels by 2050.⁽²⁾ The United Nations' International Panel for Climate Change (IPCC) has determined that GHG emissions must be reduced to 80% below 1990 levels to arrest the effects of climate change.⁽³⁾ The reduction targets are obviously inconsistent.

Edmonds GHG Emissions in Tons of CO₂e



Edmonds' communitywide GHG emissions in 1990 were calculated to have been 179,557 tons of CO₂e (equivalent carbon dioxide units).⁽⁴⁾ The estimated 2009 GHG emissions are 282,000 tons⁽⁵⁾; therefore, by 2012, Edmonds' GHG emissions must be reduced by at least 41% to meet Kyoto Protocol. To meet the State-mandated reductions, GHG emissions must be reduced 36% by 2020, 52% by 2035, and 68% by 2050. (Note: These goals may need to be adjusted to account for City annexations.)

The big picture

The average United States citizen has an annual carbon footprint of 24.5 tons of GHG emissions, while in the Pacific Northwest, we average only 19 tons per capita mainly due to our large percentage of hydroelectric power. The GHG emissions inventory calculated for the Edmonds community is only 6.8 tons per capita⁽⁴⁾. This corresponds only to the direct activities within our community. Similarly, this action plan only addresses the activities specific to Edmonds and not those associated with the total per capita carbon footprint for which we are all responsible.

Our action plan

This action plan seeks to reduce GHG emissions within the larger framework of achieving a more sustainable community with respect to environmental, social, and economic issues. The required reductions can only be achieved through major programs supported at all levels of government and businesses, significant technological improvements, and massive local educational efforts to spur residents and businesses to significantly reduce their carbon footprints. This plan will periodically be updated to reflect progress and any changes in priorities or goals.

Transportation and Land Use

The problem, strategy, benefits:

Transportation accounts for 53% of GHG emissions in Edmonds—our largest source of emissions⁽¹⁾. This is a very difficult area to address because in Edmonds we have little control over traffic on our highways, fuel-efficiency standards, fuel taxes, or technological breakthroughs. Among the communities in Puget Sound, Edmonds rates high in traffic starting and ending within city limits but low in total traffic within the city, which means most residents travel outside the city. This indicates that most jobs and services for our residents are outside the city. The miles we travel are directly related to how we use our land; that is, how convenient are the services and goods that we need every day?

Strategy 1: Reduce miles traveled for goods, services, and employment

The best way for the City of Edmonds to address emissions from transportation is to regulate how our city is developed, including the promotion of creating many small businesses. Business hubs provide readily available and nearby goods, services, and employment for surrounding neighborhoods. This makes walking, biking, and, maybe someday, golf-cart-like vehicles more attractive.

For services and goods outside the neighborhood, studies have shown that people who live near transit centers or mobility hubs drive between 20 and 40% less. (Other studies have found that low-density suburban development generates over twice as much GHG emissions per capita than a more urban development.) Consequently, business and mobility hubs should coincide as much as possible.

As urban centers such as downtown Edmonds, Westgate, Five Corners, etc. expand in the amount of goods and services they provide, less travel will occur in obtaining our daily needs. A corollary to reducing miles traveled for goods and services is in reducing consumption.

Strategy 2: Reduce gallons of fuel consumed when we travel

The greenest way of traveling is, of course, walking and biking, followed by all-electric vehicles, public transportation, hybrid vehicles, shared vehicles, and finally, gasoline-powered vehicles. Once our electricity comes from 100% renewable sources, electric vehicles will be almost as green as walking. The City must provide better infrastructure to make alternate (non-single-rider, gasoline-powered vehicles) and mass-transit modes of mobility more convenient, such as additional bike lanes, more bicycle parking, and better sidewalks, bus services, and commuter rail. Every 1% shift of mileage from gasoline-powered automobiles to non-motorized modes reduces energy consumptions and GHG emissions by 2 to 4% due in part to less congestion and vehicle idling. The mere idling of today's gasoline-powered vehicles accounts for nearly 1% of transportation's portion of GHG emissions.

Of note, Edmonds' traffic emissions take into account vehicle travel to and from the ferries, but not emissions of the ferries themselves due to unavailability of complete data. Nor is there data available for the trains traveling through Edmonds. Fuel sales for boaters at the marina were included in the transportation emissions.

Lastly, combine errands as much as possible. When going shopping, go to the grocery store, the drug store, the bookstore, etc. in one trip and not separate trips. Combine or share trips with friends to lessen fuel use.

Strategy 3: Encourage a mix of land uses designed to increase accessibility to services, recreation, jobs, and housing

Planning and zoning rules can largely drive and support communities that promote walkability and sustainable population growth and enable public transportation.

Transportation and Land Use (Continued)

What the City has already done:

- ▶ Adopted a transportation plan that will add new sidewalks and bicycle routes.
- ▶ Purchased one hybrid vehicle, with the intent to purchase a second.
- ▶ Converted all diesel trucks to biodiesel fuel.
- ▶ Provided transit and carpool incentives to City employees, including alternate work schedules and telecommuting opportunities.
- ▶ Supported the Swift Bus Rapid Transit plan.
- ▶ Reduced minimum parking standards in many commercial and residential zones.
- ▶ Created more flexible zoning standards encouraging mixed-use development.

Action programs:

Reduce miles traveled for goods, services, and employment

- ▶ TR 1: Promote the continued improvement of local commercial and transportation hubs.
- ▶ TR 2: Continue to encourage businesses to locate in Edmonds.
- ▶ TR 3: Encourage local purchasing of goods and services.

Reduce gallons of fuel consumed when we travel

- ▶ TR 4: Increase bicycle parking and lanes/trails that connect commercial and mobility hubs in concert with the City's transportation plan.
- ▶ TR 5: Continue to implement sidewalk and street improvements throughout the City and especially for the Safe Routes to School program. Encourage schools to increase funding for busing programs and to support bicycle-safety training for children.

- ▶ TR 6: Promote the addition of a shuttle service connecting commercial and mobility hubs.
- ▶ TR 7: Coordinate with Community Transit, Sound Transit, and WSDOT to pursue funding opportunities to increase transit service and improve convenience to encourage greater ridership.
- ▶ TR 8: Work with local vehicle dealers to further promote hybrid/electric vehicles within the community.
- ▶ TR 9: Promote and facilitate, where necessary, shared vehicles used, such as school carpooling and vehicle-on-demand parking spaces.
- ▶ TR 10: Adopt a policy to limit vehicle idling, including the posting of appropriate signs at businesses and holding areas, such as school and ferry areas. This action would include evaluating how to equip City trucks with auxiliary electrical systems for illumination and warning signs.

Encourage a mix of land uses designed to increase accessibility to services, recreation, jobs, and housing

- ▶ TR 11: Support mixed-use development in neighborhood commercial centers to encourage close-to-home local shopping and employment opportunities.
- ▶ TR 12: Encourage transit-oriented development standards and projects in the City's activity centers (Highway 99 and downtown).
- ▶ TR 13: Review and update City land-use rules to encourage home-based business opportunities.
- ▶ TR 14: Encourage integration of sustainable techniques (such as low-impact development (LID) or complete-streets standards) into land-use and development codes.

Lifestyles

The problem, strategy, benefits:

Energy production for the Pacific Northwest comes from mostly renewable sources, thus providing a relatively low per capita carbon footprint. However, despite our environmental consciousness, we own more vehicles, live in larger homes, and purchase more products than previous generations, which drives up our carbon footprint. For electrical energy generation, the national average GHG emissions coefficient is 1.32 lbs per kwh⁽¹⁾, for the PNW it is 0.67 lbs per kwh, and for Edmonds it is even lower⁽²⁾.

We want to redefine the acceptable view of our neighborhoods, encouraging one another to hang their laundry out to dry and to develop gardens and lawns that don't require watering.

Strategy 1: Reduce material consumption, waste generation, and resource depletion

Municipal solid waste within Edmonds has its final disposal occur at Roosevelt Regional Landfill in south-central Washington. Since 2000, methane generated from the landfill has been captured and used for energy production. Since this method recovers methane at a high level, it leads to negative GHG emissions. Of course, this does not mean that adding more garbage is a strategy that helps reduce GHG emissions. When upstream impacts are included, every ton of waste prevented directly avoids approximately one ton of GHG emissions.

Solid-waste management uses a hierarchy of approaches:

Reduce the amount of waste created through efficient use of resources, more durable products, less packaging, and less overall purchasing.

Reuse products and packaging as much as possible.

Recycle discarded products and packaging, and turn organic materials into compost or feedstock for energy production.

Institute restrictions on types of materials used (plastic bags, Styrofoam, etc.).

Waste disposal determinations for the commercial waste firms serving the city of Edmonds were difficult to establish, with three firms providing the service. However, it was possible to establish an approximate waste disposal rate of 1.54 tons per customer in 2000, and 2.0 tons in 2005⁽³⁾. This suggests that more and more garbage per person is being created; additionally, the percentage of the total waste recycled is declining.

Strategy 2: Increase local food production

The Post Carbon Institute, an environmental organization established to focus on peak oil and climate-change-related issues, has said that one of the most important things we as individuals can do to reduce dependence on fossil fuels, and thus to save energy, is to grow our own food. Vegetables and fruit trees need about eight hours of sunshine. We are all stewards of the land, and in digging in the dirt, we come to appreciate that oneness with nature and the interdependence on the many elements that we must protect to ensure a stable food supply.

An additional positive impact of supporting local food producers in an improved local economy.

Lifestyles (Continued)

What the City has already done:

- ▶ Created an ordinance to reduce plastic bags while promoting use of recyclable paper and/or reusable checkout bags by retail stores.
- ▶ Followed Snohomish County's lead in encouraging solid-waste collectors to enhance their organic collection programs from residences and businesses.
- ▶ Created a recycling ordinance establishing a base-level recycling service for commercial and residential customers.

Action programs:

Reduce material consumption, waste generation, and resource depletion

- ▶ LF 1: Create a campaign to offer more publicly available recycling facilities in partnership with local businesses and inform customers about using them, thus increasing the percentage of recycled goods at the community level.
- ▶ LF 2: Research a zero-waste goal and develop a zero-waste strategic plan for Edmonds.
- ▶ LF 3: Encourage and expand use of recycled products for City-produced printed materials.
- ▶ LF 4: Encourage programs to educate and assist homeowners in composting.
- ▶ LF 5: Research the creation of facilities to convert organic waste to energy.

Increase local food production

- ▶ LF 6: Encourage home and community gardens.
- ▶ LF 7: Involve community in identifying City parks and other property, both City-owned and private, as potential sites for neighborhood public "P-Patches."
- ▶ LF 8: Encourage gardens on the verges of public spaces and streets where gardens will not impinge on pedestrian or cyclist safety and right-of-way.
- ▶ LF 9: Continue to promote local farmers' markets and co-ops.
- ▶ LF 10: Support legislation to promote solar access to home and community food gardens.
- ▶ LF 11: Consider establishing a local carbon-offset program to purchase land for public community gardens and to defray the cost of development and administering them.
- ▶ LF 12: Encourage harvesting of fruits and vegetables from private fruit trees and gardens for distribution to local food banks.

Buildings

The problem, strategy, benefits:

The construction and occupancy of buildings consume much of our natural resources and are a major source of GHG emissions. According to the U.S. Department of Energy, construction and occupancy of buildings account for 39% of total annual energy use, 68% of total electricity consumption, and 12% of total water consumption.⁽¹⁾

In Edmonds, buildings account for about one-third of our GHG emissions for lighting, heating, cooling, and cooking, split almost evenly between our residential and commercial sectors. Significant reductions in our building GHG emissions can be obtained by pursuing a number of practical strategies that fall into three basic areas:

Strategy 1: Reduce fossil fuels with renewable energy resources for energy supplied to buildings

While largely out of the City of Edmonds' control, efforts can be made to promote buying green power, changing zoning laws, supporting state legislation, and partnering with utilities.

Strategy 2: Improve energy efficiency of and within buildings

A report on energy efficiency published in 2009 concluded that the nation's consumption of energy in 2020 could be cut by about 23% through investment in energy efficiency.⁽²⁾ Homes account for 35% of the possible gains and the commercial sector for 25%. These figures do not include the possible savings expected when carbon emissions pricing takes effect. The City will also promote all energy-efficient programs sponsored by the utilities and energy companies, including water conservation.

Strategy 3: Require the design and construction of new and remodeled commercial buildings to meet green building standards

Some new commercial, mixed-use, and residential buildings can be expected to be built as redevelopment takes place within the mostly

built-out community of Edmonds. Utilizing new construction designs and techniques, plus new building materials, can, according to the Leadership in Energy and Environmental Design (LEED) standards, significantly reduce resource consumption and the creation of waste in our dwellings and commercial buildings.

What the City has already done:

- ▶ In 2007, the City became an ENERGY STAR partner with the EPA, employing the ENERGY STAR Portfolio Manager to track monthly consumption of energy use in 16 City-owned buildings.
- ▶ In April 2008, by Council Resolution 1168, the City of Edmonds' Sustainable Building Policy was adopted. It established the LEED Silver standard, developed by the U.S. Green Building Council, for new commercial or civic buildings of greater than 5,000 square feet and for renovation of existing structures when the increase in value amounts to more than 50% of assessed value. It also emphasized Life Cycle Cost Analysis.
- ▶ In 2009, the City Council adopted a "Sustainability Element" in the City's Comprehensive Plan that included a commitment to review building codes as they pertain to heat, insulation, and energy efficiency.
- ▶ Joined the Cascade Agenda as a member city and endorsed the Cascade Agenda principles of making the city "complete, compact, and connected."⁽³⁾
- ▶ Completed an energy audit of major City buildings and facilities to identify opportunities for improved efficiency.
- ▶ Reduced electrical usage at the library by approximately 45% after completing a capital improvement project. Additional Energy Efficiency Conservation Block Grant funds will be used to determine feasibility of additional projects.

Buildings (Continued)

Action programs:

Replace fossil fuels with renewable energy resources for energy that is supplied to buildings

- ▶ BU 1: Support efforts of Snohomish County PUD to increase the proportion of renewable power in the energy mix by promoting buying green power.
- ▶ BU 2: Promote the installation of renewable energy projects with the City via a) adopting appropriate zoning allowances; b) encouraging and supporting state legislators to sponsor appropriate bills; and c) creating financial assistance programs.

Improve energy efficiency of and within buildings

- ▶ BU 3: For the short term, the City will promote efficiency by a) managing the Energy Efficiency Conservation Block Grant; b) encouraging residents and businesses to take advantage of the federal tax credit program for 2009 and 2010; c) promoting the PUD's 10% Energy Challenge through 2011; and d) promoting other programs that address energy efficiency for buildings.
- ▶ BU 4: Promote a building retrofit program for improving energy efficiency to reach a long-term goal of 55% per capita reduction in energy consumption by a) creating a financial-assistance program operated by the City alone or jointly with utilities and energy companies to provide the incentive for overcoming upfront installation costs; b) developing a program for contractor certification; and c) updating the permitting procedures and methodology to streamline the process.
- ▶ BU 5: Develop a program to achieve water conservation in existing buildings and landscaping, with a goal of reducing per capita water use by 30% by the year 2020.

- ▶ BU 6: Encourage meeting Silver-level LEED standards or higher for all new residential and commercial buildings, including landscaping, as well as any major commercial remodeling projects. Increase the LEED-level requirement as technology and economy dictates.
- ▶ BU 7: Support energy audits at the time of commercial and residential sales.

Environment

The problem, strategy, benefits:

Our natural systems, as well as the built environment, are being affected by climate change in ways we are only beginning to understand. The University of Washington Climate Impacts Group's report of February 2009⁽¹⁾ predicts that the impacts of climate change will be primarily:

- 1) Medium sea level rise for 2100 of two to 13 inches (depending on location), or the small possibility of up to 35 to 50 inches from the melting of the Greenland ice cap (depending on location).
- 2) Increasing intensity of winter storms, bringing storm surges over Puget Sound.
- 3) More rainfall instead of snow in winter, causing winter flooding and less snowpack, leading to decreasing summer water supplies.

Concerns about rising sea levels are well founded. A three-foot rise would inundate much of Edmonds' Puget Sound coastline. More frequent winter storm surges, bluff erosion, and landslides can be expected. Decreasing and unreliable water supply in the Cascade catchment area owing to less mountain snowpack will force water conservation upon us.

Strategy 1: Enhance our urban forests and landscapes

Forests, plants, and garden landscapes have the capacity to remove carbon dioxide from the atmosphere and store it as carbon in wood, leaves, and roots. Plants also reduce runoff and erosion and help to remove toxic substances from water.

Strategy 2: Adopt solar access and tree policies

Attempting to develop a code to govern site and height of trees would be highly controversial and unduly time-consuming. Edmonds should not attempt to do this; however, adopting and encouraging the principle of "the right tree in the right place" would go a long way to finding the balance between tree planting and solar use for gardening and direct power generation.

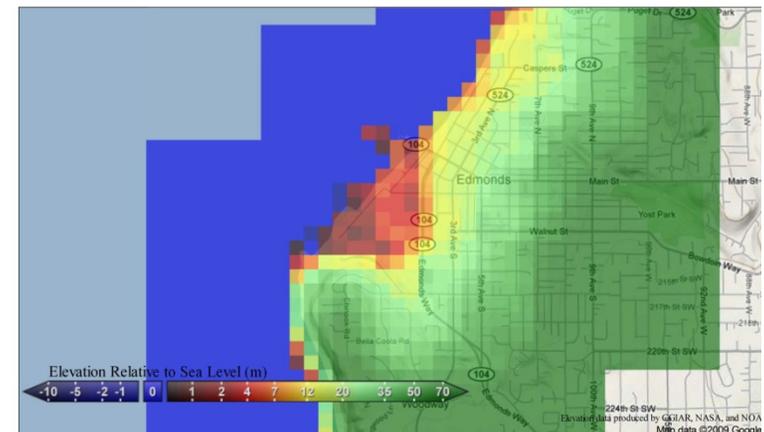
Strategy 3: Mitigate the impacts of climate change

Lower the risks of damage and devastation by rezoning land use in susceptible areas, by strengthening sea walls and armoring embankments, and by designing our buildings to allow storm-surge waves to pass through the lower levels of the structures.

Effective planning for the droughts can have a multifaceted benefit of reducing water pump energy, while ensuring that there is sufficient water available for local food production and basic services.

Capturing water from our roofs during the rainy season (such as in rain barrels) can be released slowly as needed to our thirsty plants.

Sea Level Rise Explorer



Downtown Edmonds (2)

Environment (Continued)

What the City has already done:

- ▶ Adopted stringent policies to preserve our wetlands in the late 1980s and to limit the impacts of hillside development in the 1990s.
- ▶ Committed to a set of environmental principles, policies, and goals for future action with Resolution 1700 (April 2008).
- ▶ Recognized the interrelated nature of environmental, economic, and social sustainability through the Sustainability Element of the City's Comprehensive Plan.

Action programs:

Increase carbon sequestration

- ▶ EN 1: Maintain and, whenever possible, expand our urban forests.
- ▶ EN 2: Identify pockets of woodlands and marsh land that the City could purchase to add to our parks system.
- ▶ EN 3: Require shade trees, drought-resistant plants, and rain gardens in public and private commercial parking lots.
- ▶ EN 4: Encourage low-impact landscaping and gardening practices in multi-family and single-family residences.
- ▶ EN 5: Identify City parks where carbon sequestration could be increased.
- ▶ EN 6: Consider establishing a local carbon offset program to purchase woodlands and maintain our urban forests, wetlands, and City parks.

Adopt solar access and tree policies

- ▶ EN 7: Press state legislators to enact solar-access legislation, ultimately increasing the percentage of households with solar and/or ability to harvest their own gardens.
- ▶ EN 8: Adopt the educational principle of “the right tree in the right place.”

Adopt solar access and tree policies

- ▶ EN 9: Consult with experts, such as the University of Washington Climate Impacts Group and the Puget Sound Regional Council, to keep current on climate-change trends and recommended practices to prepare for them.
- ▶ EN 10: Educate the public in the need for water conservation.
- ▶ EN 11: Provide emergency planning and the need for community preparedness to ensure food security and energy availability in the event of power outages or disruption of transportation.

Economy

The problem, strategy, benefits:

Addressing climate change will not be successful unless proposed solutions are economically viable and the business community is engaged.

Strategy 1: Support environmentally beneficial businesses and job creation

New environmentally friendly businesses, retrofitted-green businesses, and job creation to support green products and services provide long-term economic prosperity. At the same time, these businesses offer savings from reduced energy expenses and avoidance of climate-change mitigation costs.

What the City has already done:

- ▶ Edmonds has created an economic development commission that is able to support local business-related initiatives.

Action programs:

Support environmentally beneficial businesses and job creation

- ▶ EC 1: Continue to promote new green business development opportunities through support of green building certification and tax incentives for businesses that show green leadership, proven effectiveness in reduction of GHG, creative environmentally friendly product packaging, etc.
- ▶ EC 2: Support and encourage a local green business recognition program.
- ▶ EC 3: Encourage local purchasing of goods and services.
- ▶ EC 4: Encourage recycling programs in the workplace.
- ▶ EC 5: Encourage businesses of all sizes to promote sustainable operational practices.

Community Outreach and Empowerment

The problem, strategy, benefits:

Addressing climate change will require innovation, commitment, and collaboration among all members of the community. It will necessitate, in many ways, learning new ways of conducting our daily lives. We will need to investigate best practices, share information, monitor our progress, and celebrate successes.

What the City has already done:

- ▶ The City maintains close relationships with community organizations, including homeowners' groups, businesses, and nonprofit organizations.
- ▶ The City partners with other agencies and organizations to hold an annual "Green Festival" to promote sustainability efforts.

Action programs:

Increase community education and commitment toward sustainability efforts

- ▶ CO 1: Increase City employees' awareness of climate-protection issues and develop internal committees, such as green purchasing initiative or energy efficiency, to implement plans.
- ▶ CO 2: Use the City's website and City publications and work with community organizations to promote sustainability efforts to both residents and businesses.
- ▶ CO 3: Continually and visually educate the residential and business community on the progress the City is making in order to set a positive example for their efforts.
- ▶ CO 4: Encourage community educational campaigns to turn off computers at night, turn off lights, and promote programmable thermostats.

Encourage other levels of government to work toward sustainability

- ▶ CO 5: Advocate for state and federal legislation that advances GHG reductions and other sustainability efforts.
- ▶ CO 6: Continue to provide a leadership role with other local governmental agencies to share best practices and successes.

Implementation

The true test of our commitment and success toward addressing climate change will be in implementing this plan. While great community effort went into preparation of the plan, implementing it will require a significantly greater level of involvement. Given the number of new programs proposed, City funding will be difficult in a down economy and given other demands for City services.

To evaluate the success of our efforts over time, an Implementation Matrix has been developed to clarify which City departments and community organizations will be responsible for implementing each of the proposed programs listed in this document, the anticipated timeframe and priority for implementation, the GHG emission reductions anticipated, and indicators that will allow us to monitor progress in achieving our objectives.

Action programs:

Monitor success in achieving plan objectives and update periodically

- ▶ IM 1: Evaluate and align future development applications and the City's Capital Improvement Program with the Climate Change Action Plan.
- ▶ IM 2: Prepare an annual report to the Planning Board and City Council assessing the implementation of this plan.
- ▶ IM 3: Hire an action plan coordinator to advance efforts and to provide accountability and coordination between community and City efforts.
- ▶ IM 4: Appoint an action plan commission to continue to advance efforts to be responsible for prioritizing efforts that impact the Climate Change Action Plan.
- ▶ IM 5: Review and revise this plan as appropriate on an annual basis.

What more can be done?

The scale of global climate change requires integrated action at all levels of government and society. Systematic changes can greatly expand the range of choices available to people as they seek to act responsibly. Local government and individual residents and businesses need to demand such changes, both to enable and empower their own actions and to see those actions replicated at larger scales.

Green the grid. Freeing the electrical grid of fossil fuels and integrating power delivery with “smart” technologies provides the core infrastructure for climate-responsible clean energy.

Invest in transit and alternative transportation. Traditional transit, safe routes for bicycles, and walkable communities all need sustained funding to underwrite a sustainable future.

Renovate communities with energy efficiency and renewables. Continue incentives for basic building improvements that reduce demand and increase the proportion of supply from renewable sources.

Revitalize the countryside with sun-based agriculture and sequestration forestry. Adjust subsidies to wean farming from oil dependency and to manage forests and other lands for long-term carbon content.

Stimulate green ingenuity and manufacturing. Develop incentives to tap the entrepreneurial spirit.

Educate and train a green workforce. Empower people to move into the green-collar jobs of the future.

Regulate carbon emissions and markets. Establish a fair and coordinated framework for carbon trading, sparking market-driven efficiency and innovation.

Support science and act on it. Fund basic research; monitor environmental change; base policies on science.

Launch a ten-year “Mission for Planet Earth.” Set a clear vision of global climate and energy responsibility at the scale needed to both address the problem and inspire solutions. Provide national and global leadership based on that vision.

Re-tool and plug in the automotive industry. As plug-in electric vehicles become available, their inherent energy efficiency is amplified by a greening grid. Alternative fuels and greater fuel efficiency, coupled with simply driving less, can help.

Promote statewide legislation. Many of the tactics listed throughout this document can be supported by statewide legislation, such as:

- BU 2 – Renewable energy projects
- EN 7 – Solar legislation
- CO 3 – Statewide education programs

Climate Change Action Plan Participants

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Carolyn Chapel

Community partners

Edmonds Chamber of Commerce
Snohomish County PUD
Puget Sound Energy
Allied Waste
Sound Disposal
Edmonds Water Department
Olympic View Water District
Community Transit
Edmonds School District
Stevens Hospital
Edmonds Community College

Partner Agencies

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This plan was approved by the Climate Protection Committee on February 2, 2010.

Appendix A: References

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Rajendra Pachauri, "Nobel Lecture", Oslo, Norway, December 2007.

Page 5:

- (1) http://www.ci.edmonds.wa.us/CityDepartments/Climate_Prov/ResolutionNo1129.pdf
- (2) Revised Code of Washington (RCW) 70.235.020 Greenhouse gas emissions reductions—reporting requirements, 2007.
http://www.governor.wa.gov/execorders/eo_07-02.pdf
- (3) http://www.ipcc.ch/publications_and_data/publications_and_data_reports.htm
- (4) http://www.ci.edmonds.wa.us/climate_prot_ggi.stm
- (5) http://www.ci.edmonds.wa.us/climate_prot_ggi.stm Note: the 282,000 tons includes contributions from areas annexed increasing the population by ~6,000.

Page 6:

John Holtzclaw, "Using Residential Patterns and Transit to Decrease Auto Dependence and Costs," San Francisco, CA June 1994.
<http://www.smargrowth.org/library/articles.asp?art=190&res=1024>

Peter Newman & Jeffrey Kenworthy, "Cities and Automobile Dependence," Island Press February 1999.
http://www.islandpress.com/bookstore/details.php?prod_id=719

Page 8:

- (1) EPA, eGRID2007 Version 1.1, Year 2005 Summary Tables, created December 2008.
http://www.epa.gov/cleanergy/documents/egridzips/eGRID2007V1_1/year05_SummaryTables.pdf
- (2) City of Edmonds, Washington "Greenhouse Gas Inventory, August 2008."
http://www.ci.edmonds.wa.us/climate_prot_ggi.stm
- (3) City of Edmonds

Page 10:

- (1) U.S. Energy Information Administration, "Annual Energy Review 2007," Washington D.C., June 2008.
<http://www.eia.doe.gov/emeu/aer/consum.html>
- (2) Chrsi Scheuer and Gregory Keoleian, "Evaluation of LEED Using Life Cycle Assessment Methods," Ann Arbor, Michigan, September 2002.
- (3) <http://www.cascadeagenda.com>

Page 12:

- (1) <http://cses.washington.edu/cig/>
- (2) <http://www.globalwarmingart.com/sealevel?lat=30&lng=-90&zoom=9>