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**Title:** AN ORDINANCE relating to reducing the greenhouse gas emissions from project and non-project actions subject to the state Environmental Policy Act; and adding new sections to K.C.C. chapter 20.44.

**Sponsors:** Dow Constantine

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**Attachments:** 1. 2009-0116 AD.DOC, 2. 2009-0116 Checklist.doc, 3. 2009-0116 fiscal note.xls, 4. 2009-0116 Notification for 60-Day Review of Development Regulation Amendment.doc, 5. 2009-0116 Public Comment Notice.pdf, 6. 2009-0116 Regulatory Note.doc, 7. 2009-0116 SEPA GHG Ordinance Summary.doc, 8. 2009-0116 transmittal letter.doc, 9. A. Residential Transportation CO2 Emissions King County, Washington Map

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3/16/2009	1	Metropolitan King County Council	Introduced and Referred	

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AN ORDINANCE relating to reducing the greenhouse gas emissions from project and non-project actions subject to the state Environmental Policy Act; and adding new sections to K.C.C. chapter 20.44.

**SECTION 1. Findings:**

A. Climate change in the Pacific Northwest is resulting in increased average annual temperatures, significantly increased summer temperatures, increased winter precipitation falling as rain, significant decreases in mountain snowpack, more intense precipitation events, sea-level rise and changes in the timing and magnitude of stream flows.

B. Climate change impacts are expected to increase flood and erosion hazards, affect water supplies for drinking water, salmon, hydropower and irrigation, increase wildfire risks, exacerbate public health risks from respiratory problems due to increased smog and temperatures and negatively affect the diversity and abundance

of wildlife and their habitats.

C. In 2007 the United Nations's Intergovernmental Panel on Climate Change found that "warming of the climate system is unequivocal... and most of the observed increase in global average temperatures since the mid-20th century is very likely due to the observed increase in anthropogenic (*human-caused*) greenhouse gas concentrations (*primarily carbon dioxide*)."

D. There is a growing scientific consensus that global temperature increases of more than two degrees celsius above pre-industrial levels would lead to devastating impacts.

E. Findings from the United Nations's Intergovernmental Panel on Climate Change indicate that limiting global temperature increase to two degrees celsius will require the stabilization of total atmospheric carbon dioxide concentrations to between four hundred fifty and four hundred seventy-five parts per million.

F. Leading scientists have projected that stabilization of atmospheric carbon dioxide emissions to avoid temperature increases greater than two degrees celsius will require a reduction of greenhouse gas emissions by approximately eighty percent by the year 2050.

G. In October 2006, the county council passed Motion 12362 relating to county efforts to reduce greenhouse gas emissions and prepare for climate change impacts. Motion 12362 and Executive Orders PUT 7-5 through 7-8 called for development of a King County Climate Change Mitigation and Preparedness Plan. The executive released the 2007 King County Climate Plan in February of 2007 and the 2007 King County Climate Report in February 2008.

H. Motion 12362 and Executive Order PUT 7-8 direct the county to review and update policies related to air quality, climate and land use to reduce greenhouse gas emissions and to address the impacts of climate change.

I. The King County Climate Plan and Climate Report and the 2008 King County Comprehensive Plan include goals to reduce King County's greenhouse gas emissions and to collaborate with local governments in the region to reduce overall emissions to eighty percent below 2007 levels by the year 2050. Specific actions

include:

1. Continued implementation of "Smart Growth" policies to focus new urban development within urban growth areas and along transit corridors;
2. Transportation policies and regulations to support walkable communities;
3. Continued development of energy co-generation projects at the Cedar Hills landfill and wastewater treatment plants;
4. Increasing use of hybrid vehicles;
5. Increasing waste prevention and recycling;
6. Adoption of the King County Green Building and Sustainable Development Ordinance (Ordinance 16147) on June 23, 2008; and
7. Public outreach and education.

J. The United States Supreme Court in Massachusetts v. EPA determined that the federal clean air act applies to greenhouse gas emissions and that the federal environmental protection agency has the authority to regulate greenhouse gas emissions as a pollutant under the federal clean air act.

K. The Washington state Environmental Policy Act ("SEPA"), chapter 43.21C RCW, includes the prevention or elimination of damage to the environment and the biosphere as one of its purposes. SEPA requires proponents of major actions that will have a probable, significant adverse environmental impact to prepare an environmental impact statement.

L. Washington state Department of Ecology rules, WAC 197-11-315, require proponents of actions subject to SEPA to complete a checklist that address the impact of the proposal on the environment. The SEPA checklist, WAC 197-11-443, specifically includes a requirement to analyze the impact of the proposal's emissions on air quality, which includes climate as a subcategory.

M. Executive Order PUT 7-10, promulgated by King County Executive Ron Sims, effective October 15, 2007, requires the proponent of a project subject to SEPA to identify and evaluate the greenhouse gas

emissions resulting from the proposal. Greenhouse gas emissions associated with development come from multiple sources and fall into three major categories:

1. Embodied emissions, which include the extraction, processing, transportation, construction and disposal of building materials, and landscape disturbance;
2. Energy related emissions, from heating, lighting and other uses after the project is completed; and
3. Transportation related emissions, which result from transportation people and goods to and from the development after it is completed.

N. Policy E-206 in the 2008 King County Comprehensive Plan authorizes King County to exercise its substantive authority under SEPA to condition or deny actions based on their greenhouse gas emissions. The policy requires that standards related to the consideration of greenhouse gas emissions through the SEPA process are subject to council review and adoption by ordinance. This ordinance establishes the standards that relate to the consideration of greenhouse gas emissions through the SEPA process.

O. In December 2007, Washington's departments of Ecology and Community, Trade and Economic Development, in conjunction with the Center for Climate Strategies, released official greenhouse gas emissions estimates and projections for 1990 through 2020. The forecast for statewide emissions through 2020 is based on an assumption that there are no changes in public policies or citizen behavior. The forecast includes expected growth in population, employment, business activity and the built environment.

P. The 2008 Washington state Legislature passed Engrossed Second Substitute House Bill 2815, which establishes statewide requirements for greenhouse gas reductions. These requirements call for the reduction of annual statewide greenhouse emissions to 1990 levels by 2020, to twenty-five percent below 1990 levels by 2035, and to do its part to reach global climate stabilization by reducing statewide emissions to fifty percent below 1990 levels by 2050. King County's goal is consistent with the state goal: to do its part to help achieve global climate stabilization by 2050.

Q. Washington's forecasted average greenhouse gas emissions for 2010 and 2011 are one hundred and

four million metric tons of carbon dioxide equivalents. Washington's estimated greenhouse gas emissions for 1990 are estimated to have been fifteen percent below the forecasted average emissions for 2010 and 2011.

R. Most structures and developments constructed in 2010 and 2011 will still be in use in 2020 and will be contributing to greenhouse gas emissions through energy and transportation related emissions. Requiring new development to reduce greenhouse gas emissions by fifteen percent below the estimated average emissions in 2010 and 2011 for development that only meets minimum regulatory requirements will ensure that new development is equitably contributing towards achieving King County's and Washington state's climate stabilization goals.

S. Measures that reduce greenhouse gas emissions are consistent with and implement King County Comprehensive Plan policies, including FW-101, that seeks to reduce health disparities and address issues of equity, social and environmental justice, and FW-102, intended to make King County a leader in prevention and mitigation of, and adaptation to, climate change effects. Measures to reduce greenhouse gas emissions encourage dense urban development, the use of mass transit, incorporation of green building and sustainable practices and materials into the design, construction and operation of development projects which reduces pollution, the use of natural resources and energy and other operating costs. These measures also enhance asset value, optimize performance and create healthier and more appealing environments for building occupants. In general, strategies that reduce transportation related greenhouse gas emissions also encourage healthier lifestyles by making the communities more walkable and reduce transportation related expenses for residents and tenants of those communities.

T. The burden of reducing greenhouse gas emissions cannot be placed solely on new development. All sectors of the economy and all types of development activity will need to take action to reduce emissions in accordance with King County goals and state requirements while at the same time accommodating projected population and employment growth.

U. In developing requirements and procedures for SEPA review and mitigation of greenhouse gas

emissions, King County should strive to minimize the burden on applicants by providing technical assistance as available and relying on existing programs that have demonstrated greenhouse gas mitigation benefits.

V. King County should apply the principles of impact avoidance applied to critical area impact mitigation, sometimes referred to as mitigation sequencing, to measures intended to reduce greenhouse gas emissions. Impact avoidance gives preference to measures that will avoid emissions, then to measures that will reduce emissions, and lastly to measures that compensate for emissions through off-sets or similar provisions.

W. The greenhouse gas emissions reduction benefit of many mitigation strategies that reduce embodied, energy and transportation related emissions will be defined through the public rules adopted by the department of development and environmental services, with assistance from an advisory committee.

X. King County herein establishes the emission reduction values for certain measures designed to reduce embodied, energy, or transportation emissions. Reduction values for other measures will be subsequently adopted by public rule by the department of development and environmental services.

NEW SECTION. SECTION 2. A new section is hereby added to K.C.C. chapter 20.44 to read as follows:

A.1. The applicant for a project action subject to SEPA shall submit to King County with the SEPA checklist required by WAC 197-11-315 and set forth in WAC 197-11-960 estimates of the greenhouse gas emissions that would result from the project action before and after taking into account measures that will reduce greenhouse gas emissions.

2.a. The estimate of greenhouse gas emissions that would result from the project action before taking into account measures that will reduce greenhouse gas emissions shall assume that the project action is designed to comply with minimum county, state and federal regulations.

b. In making the estimate required by subsection A.2.a. of this section, the project applicant may exclude from the estimate a mandatory local, state, or federal regulation that the project action meet requirements for green building, including but not limited to, K.C.C. chapter 2.95. For purposes of this

subsection, green building regulations are those designed to increase the efficiency with which buildings use resources, such as energy, water and materials, while reducing building impacts on human health and the environment during the building's lifecycle, through better siting, design, construction, operation, maintenance and removal. Examples of green building regulations include the LEED Certification program of the United States Green Building Council, the BuiltGreen™ program of the Master Builders Association of King and Snohomish County and the National Energy Star program.

3. The estimate of greenhouse gas emissions that would result from the project action after taking into account measures that will reduce greenhouse gas emissions may include measures identified in Sections 3 and 4 of this ordinance as well as other measures implemented by the project proponent that will result in a reduction in greenhouse gas emissions.

4. The estimates shall account for embodied, ongoing energy use, and transportation related greenhouse gas emissions. King County shall provide a list of pre-approved tools and methodologies for making the estimates, but may accept other estimate methodologies on a case by case basis. Transportation related emissions shall be the emissions for the census block group where the site is located as set forth in Attachment A to this ordinance.

B.1. Embodied greenhouse gas emissions include emissions resulting from construction and development related activities, including emissions related to materials used in the project action, loss of natural carbon sinks such as forests and soils during site preparation, transportation of people, goods and materials to the project site, operation of equipment in the construction or development of the project, and energy use in construction and development.

2. Energy related greenhouse gas emissions include emissions over the life of the project after the project action is complete that result from heating, cooling, lighting, operating equipment and similar activities.

3. Transportation related greenhouse gas emissions include emissions over the life of the project after the project action is complete that result from transporting people and goods to and from the project site.

C. A project action, as defined under the state environmental policy act, shall be deemed by King County to not have a significant, adverse impact on the environment with respect to greenhouse gas emissions and climate if the project proponent demonstrates that the project action will result in greenhouse gas emissions that are at least fifteen percent below the total aggregate emissions estimated under subsection A.2. of this section. For a project action that is located within the urban growth area and that is on a site with average transportation emissions that exceed the county average for transportation emissions, mitigation measures may be given a bonus in calculating the amount of greenhouse gas emission reductions that result from implementation of those mitigation measures if they are designed to reduce transportation emissions and will reduce emissions for the area in which the project action is located.

D. The County may determine that a project action will not have a significant adverse impact on the environment with respect to greenhouse gas emissions and climate if the proponent of the project action demonstrates it has reduced greenhouse gas emissions to the maximum extent practical and that further measures to reduce greenhouse gas emissions are not economically feasible over the life of the project action.

E. A non-project action, as defined under the state Environmental Policy Act, shall be deemed by the county to not have a significant, adverse impact on the environment with respect to greenhouse gas emissions and climate if the non-project action is consistent with the goal established in the King County Comprehensive Plan to reduce greenhouse gas emissions to 1990 levels by 2020 and to reduce greenhouse gas emissions to eighty percent below 2007 levels by 2050.

F. A project may not claim emissions reduction credit more than once for the same action.

G. In establishing emission reduction values:

1. All minimum energy related reduction values should be compared to the Washington state Energy Code;
2. When compared to lifespan energy emissions, embodied emissions constitute roughly thirteen to eighteen percent of the total greenhouse gas emissions for buildings;



3. The emissions related benefits of transportation mitigation strategies depend on the specifics of the project, its location and the action;

4. Transportation mitigation strategies must be assessed based on their overall reduction benefits and must take into consideration the interrelationships with other land use and transportation strategies and options; and

5. In areas of average transportation related greenhouse gas emissions, between forty and sixty percent of total residential project emissions are related to occupant transportation and between ten and thirty percent of total commercial project emissions are related to employee transportation.

NEW SECTION. SECTION 3. A new section is hereby added to K.C.C. chapter 20.44 to read as follows:

The proponent of a project action may demonstrate that the project action will achieve reductions in greenhouse gas emissions as follows:

A. For all single detached dwelling units, an eight percent reduction in energy related greenhouse gas emissions may be claimed for implementing sufficient strategies equivalent to achieving National Energy Star certification;

B. For all residential building types, a twelve percent reduction in energy related greenhouse gas emissions may be claimed for implementing sufficient strategies equivalent to achieving Single Family Builder Option Package 1 or 2 or Multi Family Builder Option Package MF1 certification established by the Northwest Energy Star Homes program;

C. For all single detached dwelling units, a twenty eight percent reduction in energy related greenhouse gas emissions may be claimed for implementing sufficient strategies equivalent to achieving the Northwest Federal Tax Credit Builder Option Package;

D. For single detached dwelling units, a fourteen percent reduction in energy related greenhouse gas emissions may be claimed for implementing sufficient strategies equivalent to achieving 4 Star certification

under the BuiltGreen™ program of the Master Builders Association of King and Snohomish Counties and a twenty seven percent reduction may be claimed for implementing sufficient strategies equivalent to achieving BuiltGreen™ 5 Star certification;

E. For residential buildings with townhouse or apartment dwelling units, a fifteen percent reduction in energy related greenhouse gas emissions may be claimed for implementing sufficient strategies equivalent to achieving 4 Star certification under the BuiltGreen™ program of the Master Builders Association of King and Snohomish Counties and a thirty percent reduction may be claimed for implementing sufficient strategies to achieving BuiltGreen™ 5 Star certification;

F. For single detached dwelling units, a nineteen percent reduction in energy related greenhouse gas emissions may be claimed for implementing sufficient strategies equivalent to achieving silver certification under the LEED for Homes program of the U.S. Green Building Council and a twenty seven percent reduction may be claimed for implementing sufficient strategies to achieving LEED for Homes Gold certification;

G. For residential buildings with townhouse or apartment dwelling units, a five percent reduction in energy related greenhouse gas emissions may be claimed for implementing sufficient strategies equivalent to achieving Silver or Gold certification under the LEED New Construction program;

H. For all residential building types, a proportionate reduction in energy and embodied related greenhouse gas emissions may be claimed for each dwelling unit that is smaller than average size. A reduction of energy and embodied related emissions of thirty percent may be claimed for dwelling units that are fifty percent of the average size. A reduction of energy and embodied related emissions of fifteen percent may be claimed for dwelling units that are seventy-five percent of the average size;

I. For all nonresidential building types covered by the LEED Green Building Rating System, reductions of overall greenhouse gas emissions, including embodied, energy and transportation related sources, may be claimed for implementing sufficient strategies equivalent to achieving the following certifications:

1. For LEED certified projects, eleven percent;

2. For LEED silver projects, seventeen percent;

3. For LEED gold or platinum projects, twenty-nine percent;

J. For building types where American Society of Heating, Refrigerating and Air-Conditioning Engineers Advanced Energy Design Guides are available, a fifteen percent reduction in energy related emissions may be claimed for complying with the applicable guide's prescriptive measures;

K. For non-residential buildings smaller than one hundred thousand square feet floor area, a reduction in energy related emissions may be claimed for implementing the basic requirements of the American Society of Heating, Refrigerating and Air-Conditioning Engineers Advanced Buildings Core Performance Guide as follows:

1. Twelve percent for office, school, retail and public assembly project types; and

2. Eight and one-half percent for all other project types, except health care, labs and warehouses; and

L. For non-residential buildings, a ten percent reduction in energy related greenhouse gas emissions may be claimed for compliance with the 2006 Seattle Energy Code.

NEW SECTION. SECTION 4. A new section is hereby added to K.C.C. chapter 20.44 to read as follows:

The proponent of a project action may demonstrate that the project action will achieve reductions in greenhouse gas emissions as follows:

A. The following strategies may result in up to a ten percent reduction in transportation related emissions:

1. Measures to increase the walkability of a community, such as:

a. providing an efficient pedestrian network;

b. providing gridded, connected street layouts;

c. implementing traffic calming mechanisms; and

d. addressing potential personal security concerns for residents and employees;

2. Measures that increase the bikeability of a community, such as providing bike parking, bike lanes or paths, public bikes or end of trip facilities;

3. Measures that provide for cleaner transportation choices, such as plug-in stations for electric vehicles, access to short term vehicle rentals, preferential or reduced cost parking for clean or small vehicles or providing local light vehicle networks; and

4. Measures that increase transit accessibility or service, such as providing transit shelters or transit stops, creating rideshare or vanshare programs or increasing transit service or transit service efficiency;

B. Strategies that provide significant incentives for transit use or for use of alternatives to single occupancy vehicles, such as providing transit passes or parking cash out programs, passing parking costs on to tenants or providing the minimum number of parking spots allowed by law may result in a reduction in transportation related emissions of up to thirty percent;

C. Strategies that decrease the need for transportation, such as high density development, mixed use development or developments that create mixed use neighborhoods may result in a reduction of transportation emissions of up to thirty percent;

D. Measures that result in reduced energy consumption through the use of efficient lighting and lighting control systems, use of efficient heating and cooling systems and implementation of other energy efficiency measures not required by law or taken into consideration as part of other greenhouse gas reduction measures;

E. Measures implemented in the construction process that result in lower greenhouse gas emissions may result in reduced embodied related emissions and include measures such as:

1. The use of low-emission construction vehicles;
2. The use of low embodied emissions materials; and
3. The reuse and recycling of building materials and demolition waste;

F. Measures that make use of renewable energy may result in reduced energy related emissions and include measures such as building location and design and the use of solar and wind power systems;

G. Measures that permanently protect open space, agricultural or forest lands may result in overall reduction of greenhouse gas emissions;

H. The purchase of development rights from rural properties that are transferred to urban properties in accordance with K.C.C. chapter 21A.37 and that result in a reduction of vehicle miles traveled may result in a reduction of transportation related emissions; and

I. The acquisition of greenhouse gas offsets that are real, verifiable, additional and that are not involved in multiple transactions.

NEW SECTION. SECTION 5. A new section is hereby added to K.C.C. chapter 20.44 to read as follows:

The department of development and environmental services may adopt and amend public rules that:

A. Establish standards for evaluating and quantifying greenhouse gas emissions for project actions governed by section 2 of this ordinance and identifying and quantifying the emission reductions that result from measures implemented to reduce greenhouse gas emissions;

B. Identify measures to be included on a green list that when implemented under specified conditions will result in emissions reductions of at least fifteen percent as provided in section 2.C. of this ordinance; and

C. Establish standards for when carbon offsets may be included as a measure to reduce greenhouse gas emissions from a project action. At a minimum, the standards shall require the consideration of opportunities to avoid or reduce greenhouse emissions before the consideration of offsets and allow the proponent of an action to demonstrate further reductions in avoiding or reducing emissions are not as cost effective as reducing overall emissions through offsets or are not practical because the proponent has previously implemented measures that resulted in greenhouse gas emissions reductions.

D. The public rules adopted by the department under this section shall not take effect until approved by the county council as provided in K.C.C. 20.44.135.

NEW SECTION. SECTION 6. A new section is hereby added to K.C.C. chapter 20.44 to read as

follows:

A. The department shall convene an advisory committee to assist in the development of the public rules provided for in Section 5 of this ordinance and preparation of the report required by section 8 of this ordinance.

B. The advisory committee shall consist of nine members as follows:

1. Two members representing the home construction industry, one of whom constructs an average of fifty or fewer homes each year;

2. Two members representing commercial and industrial construction industry;

3. Two members representing environmental and public interest groups;

4. One member representing the architectural and design profession;

5. One member representing the planning community; and

6. One member representing King County agencies involved in capital construction.

C. Members of the advisory committee shall have technical expertise in estimating greenhouse gas emissions.

D. Meetings of the advisory committee shall be open to the public. The department shall publish notice of meeting times and locations on the department's website.

E. This section expires June 30, 2011.

NEW SECTION. SECTION 7. A new section is hereby added to K.C.C. chapter 20.44 to read as follows:

A. The department shall assist proponents of actions governed by section 2 of this ordinance. The assistance should include forms and software that enable project proponents to estimate the greenhouse gas emissions of their projects and the estimated greenhouse gas emission reductions that may result from implementing mitigation measures, including those identified by the department under section 5 of this ordinance.

B. King County shall provide incentives for applicants who propose projects that are estimated to

significantly exceed the reduction targets in section 2 of this ordinance. The incentives shall include priority processing for development proposals that are estimated to achieve at least a thirty percent reduction in greenhouse gas emissions. The incentives may also include, but are not limited to, free technical assistance, cost sharing and fee discounts and permit processing assistance.

NEW SECTION. SECTION 8. The department of development and environmental services in consultation with the department of natural resources and parks shall report to the county council not later than March 31, 2011, on the implementation of this ordinance. The report shall include:

A. By project type, the number, number of dwellings units, square footage, disturbance area, and other relevant factors, estimated average greenhouse gas emissions, measures selected to reduce greenhouse gas emissions, and estimated reductions in greenhouse gas emissions that resulted from the measures selected; and

B. A comparison of the greenhouse gas reductions achieved by activities subject to section 2 of this ordinance with greenhouse gas reductions achieved by other segments of the economy in the county, the success of the county in achieving the goal of reducing greenhouse gas emissions in the region to 1990 levels by 2020, and any recommendations for changes in the target established in section 2 of this ordinance.

SECTION 9. If any provision of this ordinance or its application to any person or circumstance is held invalid the remainder of the ordinance or the application of the provision to other persons or circumstances is not affected.

Official paper, 30 days prior