

EUGENE CITY COUNCIL

AGENDA ITEM SUMMARY



Work Session: Introduction to a 350ppm Greenhouse Gas Target

Meeting Date: December 16, 2015
Department: Central Services
www.eugene-or.gov

Agenda Item Number: B
Staff Contact: Matt McRae
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ISSUE STATEMENT

This is a work session to present background on a science-based community greenhouse gas reduction goal proposed through the Climate Recovery Ordinance adopted in July 2014. The purpose of this work session is to provide the council with an overview and scientific basis of 350 parts per million. Subsequent work sessions will address actions outlined in the Climate Recovery Ordinance.

BACKGROUND

Climate Recovery Ordinance

Adopted by the council in July 2014, the Climate Recovery Ordinance calls for the City to “propose for adoption by the city council, a numerical community-wide goal or ‘carbon budget’ for greenhouse gas emission reductions consistent with achieving 350 parts per million of CO₂ in the atmosphere by the year 2100.”

Key Findings from Climate Science

350 parts per million, or ppm, is a measurement of the concentration of carbon dioxide in the atmosphere.

Scientific research indicates that increased concentrations of atmospheric carbon dioxide result in warmer average global temperatures. The average global concentration of carbon dioxide is currently 400ppm and rising - up from 280ppm during pre-industrial times. Global temperatures have increased since the industrial revolution due to this increased concentration of carbon dioxide.

The increase in carbon dioxide does not result in immediate warming, however. There is a delay of several decades between the time carbon dioxide is emitted and when the associated warming occurs. Today the globe is experiencing warming from the carbon dioxide emitted some 40 years ago.

Atmospheric concentrations of carbon dioxide *increase* when fossil fuels are burned. Driving gas-powered cars and trucks, heating homes with natural gas, and burning coal for electricity all add

carbon dioxide to the atmosphere.

Greenhouse gas emissions stay in the atmosphere for decades to centuries. Therefore, reducing the emissions in any one year is not the goal, rather, reducing total cumulative emissions is effective. This was the focus of recent global negotiations at COP21 in Paris.

In 2009, world leaders came to an agreement that nations would aim to increase temperatures no more than 2°C in order to avoid the worst effects of climate change. The concern is that somewhere at or near 2°C of warming (above pre-industrial temperatures), natural processes called feedbacks begin to magnify the warming and the ability to avoid runaway climate change is lost.

Based on the climate impacts already occurring, a growing number of scientists suggest that there is great risk of unstoppable warming as 2°C is approached. They suggest keeping CO₂ to 350 ppm to limit temperature rise to about 1.0°C. While first proposed in a 1990 federal climate action plan, this 350ppm target is also the basis for recent analysis by James Hansen and colleagues.

RELATED CITY POLICIES

The City maintains a number of policies directly related to community-wide energy consumption including, but not limited to:

- Growth Management Policies
- Green Building Policy (2006)
- Sustainability Resolution (2000)
- Environmental Policy
- Sustainable Practices Resolution (2006)
- Sustainable Procurement Policy (2008)
- Community Climate and Energy Action Plan (2010)
- Internal Climate Action Plan (2009)

COUNCIL OPTIONS

This is an information item only.

CITY MANAGER'S RECOMMENDATION

The City Manager does not have a recommendation at this time.

SUGGESTED MOTION

No motions provided.

ATTACHMENTS

- A. Climate Recovery Ordinance

FOR MORE INFORMATION

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