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EUGENE CITY COUNCIL AGENDA

January 30, 2019

12:00 p.m. CITY COUNCIL WORK SESSION
Harris Hall, 125 East 8th Avenue
Eugene, Oregon 97401

Meeting of January 30, 2019;
Her Honor Mayor Lucy Vinis Presiding

Councilors

Betty Taylor, President	Emily Semple, Vice President
Mike Clark	Greg Evans
Chris Pryor	Claire Syrett
Jennifer Yeh	Alan Zelenka

12:00 p.m. EUGENE CITY COUNCIL WORK SESSION
Harris Hall, 125 East 8th Avenue
Eugene, Oregon 97401

Mayor: *I call the January 30, 2019, work session of the Eugene City Council to order.*

1. **WORK SESSION: Regulation of Natural Gas**

2. **WORK SESSION: Climate Action Plan 2.0 Update and Gap Strategy**

Adjourn.

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EUGENE CITY COUNCIL
AGENDA ITEM SUMMARY

Work Session: Regulation of Natural Gas

Meeting Date: January 30, 2019
Department: Central Services
www.eugene-or.gov

Agenda Item Number: 1
Staff Contact: Ethan Nelson
Contact Telephone Number: 541-682-5245

ISSUE STATEMENT
This work session will review the questions submitted by the Eugene Sustainability Commission to the City Council regarding the regulation of natural gas in Eugene.

BACKGROUND
As a reminder, the City Council has most recently held the following work sessions related to natural gas and climate recovery over the past 14 months.

- 11/22/17: Climate Recovery Ordinance – Climate Action Plan work session. Presented updates on the Internal Climate Action Plan (ICAP) and the proposal for the Community Climate Action Plan update (CAP2.0), endorsed by the Mayor's CRO Ad Hoc Work Group.
- As part of the FY18 Supplemental Budget, City Council allocated funding to begin work on the CAP2.0 and continue with other CRO implementation efforts outlined in the CAP2.0 plan.
- 4/25/18: CAP2.0 Update work session and Electric Vehicle Ready Homes discussion. No Action.
- 10/08/18: CAP2.0 Update. No Action.
- 11/14/18: Northwest Natural Gas Franchise work session and CAP discussion. Council requested that staff develop a 'gaps' plan to address the projected shortfall between the CAP2.0 process and the goals identified in the CRO.
- As part of the FY19 Supplemental Budget, City Council allocated remaining CAP2.0 funding.
- 1/16/19: Home Energy Score Program work session. Council agreed to include the HES program as an option in a more comprehensive CAP2.0 package for review later in the year.
- 1/30/19: Regulation of natural gas work session and CAP2.0 and 'gaps' update.

This fall, council approved a poll requesting a work session (Attachment A) on potential ways to regulate natural gas use in Eugene. The work session poll referenced a June 13, 2018, memo from the "Sustainability Commission Committee on Northwest Natural Gas Franchise Agreement Review." This Memo included a list of questions related to the City's authority to regulate NWNG within the franchise or by other Council action. Subsequent to the June 13 memo, council received a memo from the Sustainability Commission that included specific policy recommendations regarding renewal of NWNG's franchise (Attachment B). At the November 14, 2018, work session,

staff provided council with some preliminary information regarding authority to local regulate natural gas. Additionally, the night before the November 14 work session, council received a tiered franchise system recommendation (Attachment C). City staff has developed a chart to summarize the responses to both of the submittals. (Attachment D). The chart attached to this AIS is incomplete because City staff are waiting to receive information from third parties. Once City staff receive that information an updated chart will be sent to council.

Staff from the City Attorney's and City Manager's Offices will walk through the table and identify the action items, legal conclusions, carbon impact estimates (with assumptions), and assumed equity impacts (based on a triple bottom line analysis). Council can provide direction regarding what, if any, of the proposed actions should be included within the CAP2.0 project or within the Northwest Natural Gas Franchise Agreement negotiations.

Northwest Natural Gas Franchise – Timeline

For continued reference to the renewal of the NW Natural Gas Franchise Agreement, the timeline for the franchise renewal is:

- Fall 2018 - Spring 2019
  Climate Action Plan 2.0 – During the public input phase of the CAP2.0 process, staff can include questions related to the NWNG franchise, if appropriate.

- February 2019
  Staff returns to the City Council with information from the CAP work as well as policy considerations for franchise negotiations. Actions include a public work session as well as an executive session to discuss policy-level franchise negotiation points.

- May 2019 to October 2019
  Staff receives information from the CAP 2.0 engagement work which informs council's franchise negotiations over the summer of 2019. City staff bring an ordinance back to City Council in the fall of 2019 for review and public hearings.

- By November 2019
  New ordinance is adopted by City Council

RELATED CITY POLICIES

Internal Climate Action Plan; Climate Recovery Ordinance

COUNCIL OPTIONS

City Council can provide direction to the City Manager on additional actions, if any, they would like completed to inform discussions related to the Northwest Natural Gas Franchise Agreement negotiations, the Climate Action Plan 2.0, or as a separate item.

CITY MANAGER'S RECOMMENDATION
No council action or motions are suggested.

SUGGESTED MOTION
No motion is provided.

ATTACHMENTS
A. Work Session Request, including the June 13, 2018, Memo from the Sustainability Commission Committee on NWNG Franchise Agreement Review to the Sustainability Commission
B. Memo from the Sustainability Commission to the City Council regarding NWNG Franchise Agreement
C. Skov/McRae Memo on NW Natural Franchise Renewal
D. Staff Summary Chart

FOR MORE INFORMATION
Staff Contact: Ethan Nelson
Telephone: 541-682-5245
Staff E-Mail: enelson@eugene-or.gov

Work Session Request Form

Councilor: Emily Semple (from the Sustainability Commission) Date: 9/27/2018

WORK SESSION TOPIC

Research potential ways to regulate natural gas use in Eugene

ISSUES AND QUESTIONS TO BE ADDRESSED

Evaluate the authority of the City to include greenhouse gas reduction requirements consistent with the CRO in its renewal of the franchise agreement with Northwest Natural.

Include a review of Oregon Revised Section Section 221.420 (Municipal Regulation of Public Utilities) to explore the City's ability to regulate natural gas both inside and outside of a franchise agreement.

No New Fossil Fuel Infrastructure Ordinance – Can the City limit new infrastructure as part of an updated franchise agreement.

Answer additional questions from the Sustainability Commission (see pdf).

OUTCOMES

What authorities/abilities does the City have to regulate natural gas use and to inform Council in their franchise agreement negotiations and Climate Action Plan update?

POLL

I want to hold a work session to discuss the issue outlined above.

Yes	No		Yes	No	
		Ward 1: Emily Semple			Ward 5: Mike Clark
		Ward 2: Betty Taylor			Ward 6: Greg Evans
		Ward 3: Alan Zelenka			Ward 7: Claire Syrett
		Ward 4: Jennifer Yeh			Ward 8: Chris Pryor

RESPONSE DUE BY: October 11, 2018

Please indicate your preference for timing of work session

☐ Prioritize over other items.

☐ Time-sensitive; schedule as soon as possible.

☐ Not time-sensitive; schedule when time permits.

To: Eugene Sustainability Commission
From: Sustainability Commission Committee on Northwest Natural Franchise Agreement Review
Subject: Committee Report and Recommendations
Date: June 13, 2018

Introduction

The Sustainability Commission, at its January 17, 2018 meeting, formed the Northwest Natural Franchise Agreement Review Committee. The Committee's charge is to *"evaluate the current franchise agreement in the context of environmental protection and greenhouse gas (GHG) emissions to determine if it is legally appropriate and feasible to require GHG emission reductions in the City's franchise agreement renewal with Northwest Natural."* The committee's membership includes Commissioners Furgerson, Edwards, Mulholland, Kloor, and Saxion. Commissioner Saxion was elected chair of the committee at its January 29, 2018 meeting.

Committee Progress and Results

The Committee met four times: January, February, March, and June. At the January 29 meeting, the Committee refined its scope of work and identified several key questions to be evaluated. The key questions focused on Oregon statutes and City of Eugene's authority on what may be included in franchise agreements with privately-owned utility companies.

During the January though June period, Committee members conducted research on franchise agreements that have been adopted in Oregon and in other states, reviewed relevant City ordinances, reviewed Oregon Public Utility Commission regulations, and reached out to the League of Oregon Cities. City staff (Chelsea Clinton) also assisted in this effort and provided information on relevant sections of Oregon Revised Statutes (ORS), relevant City of Eugene ordinances, and the current franchise agreement between the City of Portland, Oregon and Northwest Natural.

Results from the Committee's research yielded little insight to the central question on the City of Eugene's authority to require GHG reductions in a franchise agreement. No city in Oregon has stipulated GHG reduction requirements in a franchise agreement. The Oregon Public Utility Commission would not provide a regulatory opinion on this question to the Committee. The Oregon League of Cities provided suggestions for subject matter experts, but efforts to obtain guidance from these experts were not successful. The Committee's research did not identify any US city that has imposed GHG reduction requirements on a privately-owned natural gas utility company.

The City of Portland's franchise agreement with Northwest Natural, dated March 25, 2001, addresses the city's April 2001 "Local Action Plan on Global Warming" but does not impose enforceable requirements or specific GHG reduction targets. The member of the City of Portland staff who responded did not know the basis for including language in the franchise agreement. Portland's franchise agreement with Northwest Natural includes the following provision:

> *Portland's franchise agreement with Northwest Natural includes the following paragraph:*
> *Section 12. COOPERATION REGARDING LOCAL ACTION PLAN ON GLOBAL WARMING.*
> *NW Natural's services shall include assistance to its customers in increasing the efficiency of their energy consumption. The level of expenditure on efficiency programs is established by the OPUC.*

NW Natural shall support efficiency programs for its customers consistent with OPUC requirements. Within the regulatory framework established by state law and the OPUC, NW Natural agrees to work with the City to identify mutually acceptable ways for Grantee to support the City's efforts to meet the goals contained in the April 2001 Local Action Plan on Global Warming, or successor climate-protection action plans adopted by the Council during the Franchise term.

Recommendations

At the Committee's June 4, 2018, meeting, discussions focused on the Committee's next steps and possible recommendations for further action by the Sustainability Commission. After extensive discussion, the Committee approved the following recommendation for consideration by the Sustainability Commission:

The Sustainability Commission requests that the Eugene City Council direct the City Manager to evaluate the authority of the City to include greenhouse gas reduction requirements consistent with the Climate Recovery Ordinance in its renewal of the franchise agreement with Northwest Natural. Included in this evaluation is review of Oregon Revised Statute Section 221.420 (Municipal Regulation of Public Utilities.

The Committee's recommendation did not identify when the City Manager would complete this evaluation. However, it is implied that this evaluation would be completed in advance of when city staff will begin work on development of the franchise renewal agreement with Northwest Natural. The current 20-year franchise agreement with Northwest Natural expires on October 11, 2019. Commissioners Furgerson, Mulholland, Edwards, and Saxion approved this recommendation. Commissioner Kloor abstained.

The Committee approved an additional recommendation for consideration by the Sustainability Commission.

The Sustainability Commission requests that the Eugene City Council direct the City Manager to evaluate the legal and/or regulatory authority on the following:

1. *Can the City of Eugene require Northwest Natural customers to purchase greenhouse gas offsets?*
2. *Can the City regulate the purchase and installation of natural gas fueled appliances, water heaters, and heating systems?*
3. *Can the City prohibit financial incentives for installing natural gas service and purchases of natural gas appliances, water heaters, and heating systems?*
4. *Can the City prohibit installation of natural gas service for new residential, commercial, and/or industrial buildings?*
5. *If state law does not allow the use of franchise agreements to reduce greenhouse gas emissions (both direct and indirect through combustion of natural gas), are there other available statutory or regulatory mechanisms?*
6. *Can the City of Eugene regulate the use of natural gas?*

Commissioners Furgerson, Mulholland, Edwards, and Saxion approved this recommendation. Commissioner Kloor abstained.

Eugene Sustainability Commission

Memorandum

Date: November 14, 2018

To: Eugene City Council

From: Eugene Sustainability Commission

Subject: Sustainability Commission Northwest Natural Franchise Agreement Recommendations

This memo outlines what the Sustainability Commission hopes to see in the Northwest Natural Franchise Agreement. The Commission is providing this memo in response to advice from the Mayor and City Manager to provide specific recommendations.

NW Natural Franchise Agreement

The primary requirement in the renegotiated franchise agreement should be that NW Natural meet the goals of the City of Eugene's Climate Recovery Ordinance. These goals include reducing fossil fuel use 50% from 2010 levels by 2030 and reducing emissions enough to restore CO2 to 350 ppm in the atmosphere by 2100, estimated in 2016 to require a 7.6% annual reduction beginning that year.

Specific policy recommendations to be included in the franchise agreement include the following:

1. Customers will be incentivized to reduce natural gas use and purchase greenhouse gas emission offsets provided by NW Natural's Smart Energy Program. (Note: this is somewhat inconsistent with the preference to reduce fossil fuel use)
2. Prohibition of NW Natural offering financial incentives for residences and business to switch to natural gas.
3. Limit new natural gas infrastructure expansion (this does not include maintenance of existing infrastructure).
4. NW Natural will reduce the carbon intensity of natural gas they supply by including biofuels, renewably sourced hydrogen, and other non-fossil fuels.
5. Increase the franchise fee and dedicate franchise fee funds to implementing a program that provides incentives to switch from natural gas to renewable energy (electricity). This program would be similar in concept to the EnergyTrust of Oregon. The Eugene Electric and Water Board should be approached about administering this program through an intergovernmental agreement.
6. The term of the franchise agreement should be reduced from 20 years to, at most, 10 years. If the franchise agreement includes CRO and related provisions, a 5 or 10-year period would allow for more timely check-ins and changes.

Options that result in direct reductions in fossil fuel usage are preferred over offset purchases.
In regulating natural gas, accountability and progress are critical. The agreement should include third-party verification of fossil fuel reductions and agreed to progress on meeting established goals. Failure to meet these goals should be subject to penalties (to be determined).

Triple Bottom Line Analysis

Environment
The primary goal of this set of policy recommendations is to require reductions of GHG emissions in line with Eugene's already adopted Climate Recovery Goals. The necessity to reduce GHG emissions is well known and these policy recommendations offer ways to reach these goals.

Social Equity
In drafting these policies, the City should seek to limit harm to households that could be negatively impacted by increases in natural gas prices and target any new incentives towards low income households first.

Economics
In drafting these policies, the City should seek to limit impacts on business from potential increases in costs while still reaching the Climate Recovery Ordinance goals.

Climate Protection and NW Natural Franchise Fee
Memo to Eugene Mayor and City Council
Joshua Skov and Matt McRae
November 13, 2018

This memo describes a simple mechanism and rationale for amending the City of Eugene's franchise agreement with NW Natural to make that agreement more consistent with the Council's goals for climate protection. Before getting into the details, it's important to state the basic components:

1. Maintain a fixed fee portion of the franchise fee (currently 2% of sales).
2. Introduce a variable fee. This portion of the franchise fee will be scaled to reflect the carbon footprint of the natural gas delivered to the community, based on the life-cycle greenhouse gas intensity (or "carbon intensity") of the gas delivered by NWN. In simple terms, lower carbon gas results in a lower fee to NWN.
3. Prevent any expansion of gas service unless NW Natural can demonstrate a plan to decarbonize its product.

Each of these requires some explanation.

1. Maintain a fixed fee portion of the franchise fee.

One role of the franchise fee is to compensate the City of Eugene for the infrastructure and land that it owns and maintains on behalf of residents. This portion of the franchise fee, currently 2% of sales, should continue, regardless of the inclusion of an additional portion that is scaled.

From a climate policy perspective, we are agnostic about the magnitude of this fee. There may be compelling fiscal reasons to consider a higher fixed portion, but our focus here is alignment of the franchise fee with our climate action goals.

2. Introduce a variable fee; a portion of the franchise fee will be scaled to reflect the life-cycle greenhouse gas intensity (or "carbon intensity") of the gas delivered to the community.

Assessing this fee requires two components: the carbon intensity (emissions per unit of fuel) of the gas delivered; and a carbon price, i.e., a price per unit of carbon dioxide-equivalent emissions.

The life-cycle greenhouse gas intensity – or "carbon intensity" or "carbon footprint" – of natural gas is known with a high degree of precision. Similarly, substitutes with lower carbon intensity – alternately called renewable natural gas (RNG) or biogas – have known and documented carbon intensities. There are a few open questions of methodology and other details, such as fugitive emissions of natural gas throughout the extraction and distribution phases, but the

answers to these questions do not stand in the way of making defensible assumptions that are sufficient for determining a fee structure.

Similarly, there are straightforward and defensible ways to determine a price per unit of greenhouse gas emissions. Ideally, we would use the extensive work done by US EPA under the rubric of a Social Cost of Carbon (SCC); for 2018, the average SCC value is around $49 per metric ton of carbon dioxide. This work attempts to measure the damage to current and future generations of additional emissions of CO_2 and other greenhouse gases released to the atmosphere.

As a safe harbor assumption, we suggest the price floor of California's cap-and-trade system, currently around $15 per metric ton of carbon dioxide. This price floor rises annually by 5% plus inflation. That said, such a price should be viewed as a compromise and a bare minimum, rather than a price signal (to customers and to NW Natural) that is sufficiently transformative.

For scale, we can estimate the cost to residential customers. In 2015, NW Natural sold 12,344,252 therms to 24,728 residential customers, for an average of 499 therms per customer. This natural gas usage (from fossil gas, rather than from renewable sources) translates into approximately 2.91 metric tons CO_2-equivalent, and would result in approximately $44 to $143 per residential customer annually, using the California price floor and the federal SCC, respectively.

These costs are by no means inevitable. Indeed, *the opportunity here is for NW Natural to offer a low-carbon alternative that avoids much of the carbon intensity-scaled portion of the fee.*

Ideally, this carbon intensity-scaled portion of the franchise fee should be borne by both consumers and NW Natural. We acknowledge there may be legal and equity implications of such a change, as franchise fees are currently passed along entirely to the customer. There are many options to address equity concerns, however. For example, the City could direct some portion of increased revenues to help low-income NW Natural customers insulate their homes, switch to high-efficiency electric heat, or pay their gas bills.

For our purposes, we are again agnostic about how this revenue will be spent. Currently, all franchise fee revenues go into the General Fund, and we think that designation is sufficient for this fee at this time. It is vitally important to stress that, while the use of such funds for climate protection would be appropriate, the fee itself *as a price signal to NW Natural and gas customers* is its main purpose. However, just as with marijuana tax revenue, Mayor and Council may wish to target expenditures that are related in some way to the source of the revenue (such as the equity-related measures above).

3. Prevent any expansion of gas service unless NW Natural can demonstrate a plan to decarbonize its product.

The expansion of natural gas use, like all natural gas use, is potentially at odds with the community's climate action goals. Currently, the best available science suggests only two viable outcomes for our natural gas system: either our natural gas supply is decarbonized through the development of low-carbon substitutes (something the variable fee encourages), or we phase out the use of natural gas, substantially (~90%) or entirely.

It is the burden of NW Natural to establish that it is pursuing a credible strategy that addresses this basic imperative. In the absence of such a strategy, the City should not risk expanding the use of a fossil fuel that is inconsistent with its climate goals.

Thus, the franchise agreement should allow only maintenance of the current system, while explicitly preventing the expansion of gas service, unless NW Natural can demonstrate a plan to decarbonize its product, specifically one that is consistent with the scientific and policy imperative, as adopted by Eugene City Council within its Climate Recovery Ordinance, to hold warming to no more than 1.5˚ C and return to 1.0º C by 2100.

Appendix – accompanying e-mail
(The following is the e-mail that we sent to introduce this memo. We provide it here for reference.)

Dear Mayor and Council,

We ask you to refine the fee structure when you renew the franchise agreement with NW Natural to ensure that it is consistent with the City's climate action goals and the community's values. This e-mail provides a brief summary, and the accompanying memo provides additional detail. We are also available to assist in further refining of such an agreement.

We propose the following elements:

- Maintain a fixed fee portion of the franchise fee (currently 2% of sales).
- Introduce a variable fee. This portion of the franchise fee will be scaled to reflect the carbon footprint of the gas delivered to the community. In simple terms, low carbon gas results in a lower fee to NWN.
- Prevent any expansion of gas service unless NW Natural can demonstrate a plan to decarbonize its product.

Please see our work as a more pointed and specific request that complements the broader menu that the Sustainability Commission has diligently assembled.

There are some details – but not too many – to work out in order to provide a new franchise agreement that follows this proposal. The attached memo provides a path forward on most of these points. Fortunately, the basic ideas are simple: we can draw on a credible source for a carbon price; and there is substantial research on the carbon intensities of natural gas and its substitutes. Again, we are ready and willing to work with staff to hammer out any remaining details.

As always, thank you for your service, and for your work on behalf of current and future generations confronting the climate crisis.

Sincerely,

Matt McRae
Joshua Skov

	Idea/Proposal	PUC Notice[1]	Permissible Franchise Term or Limited to Regulation[2]	Impact on achieving CRO Goals[3] (310,000 MtCO2e by 2030) Figures are annual reductions at 2030.	Triple Bottom Line
1	Limit or prohibit new natural gas infrastructure.	No	Franchise	50% reduced investment= 20,000 MtCO2e 100% reduced investment= 40,000 MtCO2e	Moderate impact on new construction. Depends on if this is applied to new accounts or to extension of new pipeline.
2	Require NWNG to incentivize customers' reduced use of natural gas or customers' purchase of emission offsets provided by NWNG's Smart Energy Program.	Yes	Franchise	50% offset=160,000 MtCO2e 100% offset=310,000 MtCO2e	Effect will increase cost of product. Generally, utility rate increases disproportionately impact low income populations.

[1] City staff's analysis of ORS 221.420 regarding whether the City will need to file the proposed regulation or franchise agreement with the PUC before the regulation/agreement goes into effect, thereby giving the PUC 90 days to examine the regulation/agreement and decide whether the regulation/agreement is in the public interest. If the PUC files objections with the City within the 90-day period the regulation or agreement cannot go into effect unless it is ratified by the City's electors. We have sought input from the PUC regarding this column and are waiting to hear back.

[2] City staff's analysis regarding whether the particular proposal/idea *could* be a term of the franchise agreement, if Council so desired.

[3] Provided estimates are preliminary and are subject to change. The estimates provided were performed as a unique look at suggested approaches to reduce fossil fuel natural gas consumption and its related greenhouse gas impacts. These results should be considered as sense-of-scale estimates to support discussion and decision making. There are a variety of interactive effects between the proposed actions, which are not thoroughly accounted for in these preliminary results. Please see the attached Assumptions Chart at the end of this document.

3	Regulate the purchase and installation of natural gas fueled appliances.	No	Regulation	130,000 MtCO2e	Moderate to low impact on low income populations, until time of equipment replacement.
4	Prohibit financial incentives for installing natural gas service.	No	Franchise	Not modeled due to lack of data and complexity.	Low impact on low income populations.
5	Prohibit financial incentives for purchasing natural gas appliances.	No	Regulation	Not modeled due to lack of data and complexity.	Low impact on low income populations.
6	Prohibit installation of natural gas service for new residential, commercial and/or industrial buildings.	Yes	Franchise	50% reduction in new accounts= 20,000 MtCO2e 100% reduction in new accounts= 40,000 MtCO2e	Without increased incentives on electricity side, it will increase cost of construction. Also, cost of energy (without a price on carbon) will be greater than current rates.
7	Require NWNG to fuel switch to biogas and renewable hydrogen.	Yes	Franchise	Assume 25% biomethane by 2030 = 80,000 MtCO2e	Low to Moderate impact on low income populations. Increase in customer rates to accommodate the new infrastructure and potential increase in energy source costs
8	Increase franchise fee and dedicate franchise fee funds to implementing a program that provides incentives to switch from natural gas to renewable.	No	Franchise	Not modeled due to lack of data on incentive program and anticipated market adoption.	Low to Moderate impact to low income populations. Likely the increased fee will be passed on 100% to consumers, impact is based on size of fee increase.

9	Reduce the term of the franchise from 20 years to, at most, 10 years.	No	Franchise	No ghg impact.	No discernable impact.
10	[Skov/McRae] Create a hybrid franchise fee structure: 1) fixed portion; and 2) variable fee based on carbon footprint of the natural gas delivered to the community, i.e., lower carbon gas = lower variable.	No	Franchise	Assumed reduced carbon footprint is from biomethane. Assume 25% biomethane by 2030 = 80,000 MtCO2e	Low to Moderate impact to low income populations. Likely the increased fee will be passed on 100% to consumers, impact would be from increase in customer rates to accommodate the new infrastructure and potential increase in energy source costs
11	[Skov/McRae] Prohibit the expansion of natural gas services unless NWNG can demonstrate plan to decarbonize its product.	No	Franchise	Not Modeled, but similar to #1	Moderate impact on new construction. Depends on if this is applied to new accounts or to extension of new pipeline.

Assumptions Chart for modeling natural gas questions				
	Idea/Proposal	City Guidance to run assessment on impact to CRO Goals	GC Methodology Description	Assumptions / Sources
1	Limit or prohibit new natural gas infrastructure.	Run analysis on no new infrastructure and only 50% of planned investment. Infrastructure means new conveyance lines, not new accounts.	Data is not readily available on the scale of future natural gas (NG) infrastructure investments or the relationship between investments made and additional community NG consumption. Therefore, as a proxy, future mitigation potential is calculated based on a PSU population forecast Eugene population growth to 2030 (1% annually) with 2017 rates of Eugene per capita NG use. The estimated potential is equal to the difference between Eugene's actual 2017 NG use and the 2030 forecast. The natural gas mitigation estimate is adjusted to account for substitution of electricity.	• Action takes effect in 2020 • 1% annual average population growth rate, 2020 - 2030[4] • Population growth applied to 2017 emissions rates to forecast 2030 NG emissions and use[5] • Ratio of natural gas to electricity use in 2017 is the same in 2030 • 100% EWEB electricity is substituted for natural gas • EWEB's utility-specific (market-based) GHG emission factor and fossil fuel use per kilowatt hour remains very low-GHG and fossil fuel use[6]
2	Require NWNG to incentivize customers' reduced use of natural gas or customers' purchase of emission offsets provided by	Run analysis based on NWNG current incentive program and then what it would look like for a 25, 50, and 100% offset requirement for each customer.	Eugene's 2030 BAU forecast for community natural gas use is used to assess the effects NWNG's SmartEnergy Program for 3 community participation tiers (25%, 50%, and 100%). The estimated potential is equal to the percentages applied to the 2030 NG use forecast.	• Action takes effect in 2020 • 1% annual average population growth rate, 2020 - 2030 • Ratio of natural gas to electricity use in 2017 is the same in 2030

[4] Population growth rates are provided by Portland State University's Coordinated Population Forecast, 2015 through 2065. Downloaded 1/19 from https://www.pdx.edu/prc/sites/www.pdx.edu.prc/files/Lane_Forecast_Report_201506.pdf.

[5] Eugene's 2017 greenhouse gas emissions (GHG) and fossil fuel use provided by Eugen's 2019 Community Greenhouse Gas Inventory Report

[6] EWEB utility-specific GHG emissions factors are provided by Oregon Department of Environmental Quality for calendar years 2010 – 2016.

	NWNG's Smart Energy Program.			• Carbon offsets are purchased in 1:1 ratio equal to community GHGs from NG
3	Regulate the purchase and installation of natural gas fueled appliances.	Run assessment that requires a 'Cost of carbon' fee for all new NG appliances, based on average CO2 emissions per year and an average offset (as the cost of carbon proxy).	Average NG appliance life is assumed to be 25years in the residential and commercial sectors; therefore appliances equal to 1/25th of Eugene's NG GHGS and fossil fuel use are assumed to be replaced every year. That fraction of emissions is multiplied by 11 years (2020 – 2030) to determine mitigation potential. The natural gas mitigation protection is adjusted to account for substitution of electricity.	• Action takes effect in 2020 • 1% annual average population growth rate, 2020 - 2030 • Average lifespan of residential and commercial NG appliances is 25 years. This is a rough estimate for all equipment across the residential and commercial sectors. It assumes boilers 20 – 35 years, furnaces 15 – 25 years, water heaters 10 – 15 years, other appliances 5 – 15 years. • 100% EWEB electricity is substituted for natural gas • EWEB's utility-specific GHG emission factor and fossil fuel use per kilowatt hour remains very low-GHG and fossil fuel use
4	Prohibit financial incentives for installing natural gas service.	Model if there are no incentives for installing new service, what would that do for increase in customers.	Not modeled due to lack of data and complexity. See Action 1 for a sense of scale proxy.	

5	Prohibit financial incentives for purchasing natural gas appliances.	Same as above.	Not modeled due to lack of data and complexity. See Action 3 for a sense of scale proxy.	
6	Prohibit installation of natural gas service for new residential, commercial and/or industrial buildings.	I think this is similar to Question 1, except it is the new account, not the infrastructure.	See Action 1 for mitigation potential proxy and analytical assumptions.	
7	Require NWNG to fuel switch to biogas and renewable hydrogen.	Run analysis based to show what the ghg impact would be for NWNG to increase biogas portion of pipeline to 50% by 2030. Don't worry about the renewable hydrogen, unless you have an easy sense of what that would be.	California Air Resource Board carbon intensity values for conventional natural gas and wastewater / landfill biomethane are used to scale the mitigation potential combined with information from on Eugene's 2030 BAU forecast for natural gas use. Two biomethane substitution rates for conventional gas are considered – 25% and 50%.	• Action takes effect in 2020 • 1% annual average population growth rate, 2020 - 2030 • Conventional gas carbon intensity = 80 g CO2e / MJ; and landfill / wastewater biomethane = 35 g CO2e / MJ[7]
8	Increase franchise fee and dedicate franchise fee funds to implementing a program that provides incentives to switch from natural gas to renewable.	Assume that the 'switch' is electrification to EWEB mix. Estimate what an increase in current incentives for electrification would be if it were increased	Not modeled due to lack of data on incentive program and anticipated market adoption.	

[7] Fuel specific carbon intensity values provided by California Air Resource Board's Low Carbon Fuel Standard. Looked up 1/19 at https://www.arb.ca.gov/fuels/lcfs/fuelpathways/pathwaytable.htm

		by $500k per year and $1m per year.		
9	Reduce the term of the franchise from 20 years to, at most, 10 years.	No need for assessment.	No need for assessment, per Eugene staff.	
10	[Skov/McRae] Create a hybrid franchise fee structure: 1) fixed portion; and 2) variable fee based on carbon footprint of the natural gas delivered to the community, i.e., lower carbon gas = lower variable.	Similar to Question #7. You can show tiers if you like. Maybe what 10%, 25% or 50% would look like by 2030.	See Action 7 for mitigation potential proxy and analytical assumptions.	
11	[Skov/McRae] Prohibit the expansion of natural gas services unless NWNG can demonstrate plan to decarbonize its product.	I think this is the same as Question 1 and Question 6	See Action 1 and Action 6 for mitigation potential proxy and analytical assumptions.	

EUGENE CITY COUNCIL
AGENDA ITEM SUMMARY

Work Session: Climate Action Plan 2.0 Update and Gap Strategy

Meeting Date: January 30, 2019
Department: Central Services
www.eugene-or.gov

Agenda Item Number: 2
Staff Contact: Ethan Nelson
Contact Telephone Number: 541-682-5245

ISSUE STATEMENT

This work session will provide a status report on (1) the Climate Action Plan 2.0 project and Equity Panel, and (2) an overview of a CAP2.0 Gap Strategy related to meeting the Climate Recovery Ordinance goals.

BACKGROUND

As a reminder, the City Council has most recently held the following work sessions related to the Climate Recovery Ordinance over the past 14 months:

- 11/22/17: CRO-CAP work session. Presented updates on the Internal Climate Action Plan and the proposal for the Community Climate Action Plan update, endorsed by the Mayor's CRO Ad Hoc Work Group.
- As part of the FY18 Supplemental Budget, City Council allocated funding to begin work on the CAP2.0 and continue with other CRO implementation efforts outlined in the CAP2.0 plan.
- 4/25/18: CAP2.0 update work session and Electric Vehicle Ready Homes discussion. No action.
- 10/08/18: CAP2.0 update. No action.
- 11/14/18: Northwest Natural Gas Franchise Work Session and CAP Discussion. Council requested that staff develop a 'gaps' plan to address the projected shortfall between the CAP2.0 process and the goals identified in the CRO.
- As part of the FY19 Supplemental Budget, City Council allocated remaining CAP2.0 funding.
- 1/16/19: Home Energy Score Program work session. Council agreed to include the HES program as an option in a more comprehensive CAP2.0 package for review later in the year.
- 1/30/19: Work sessions on regulation of natural gas, CAP2.0 and a gap strategy.

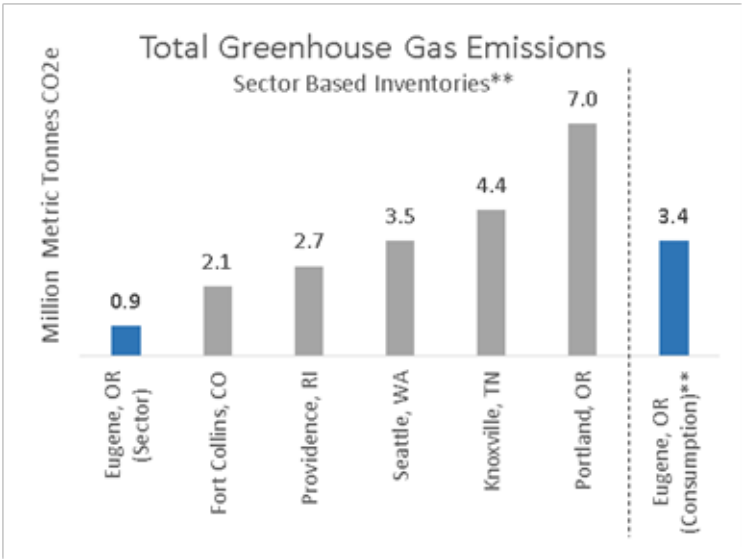
Item 1: CAP2.0 Update and Equity Panel

In addition to the regular CAP2.0 project updates that the City Council has been provided over the course of the past four months, we will also seek to clarify Eugene's current emissions related to other US communities and how that relates to CRO goals. While we know there is still work to be done to achieve our goals, it is encouraging to remember that Eugene continues to be a national

leader when it comes to addressing climate change. When compared to similar cities across the nation:

- Eugene emits fewer greenhouse gases per person than similar communities in the United States.
- Eugene has more aggressive emission goals than similar communities in the United States.

The following chart illustrates how Eugene compares to several similar cities on both our goals and progress:



City	Community GHG Reduction Goals
Seattle, WA	58% by 2030 100% by 2050
Eugene*	***350 ppm by 2100**** ***67% by 2030**** ***93% by 2050*** ***99.9% by 2100***
Portland, OR	40% by 2030 80% by 2050
Fort Collins, CO	80% by 2030 100% by 2050
Providence, RI	100% by 2050
Knoxville, TN	20% by 2020
*Eugene is the only City represented to base goals on a consumption-based accounting methodology.	

Our lower emissions can largely be attributed to Eugene's long-standing commitments to climate-friendly action. Additionally, Eugene Water & Electric Board has contributed greatly by supporting conservation strategies and investing in low-carbon electricity. As we continue to work on the CAP2.0, we are working with partners across the country to understand what strategies may be the most effective in Eugene to continue to make progress.

The CAP2.0 Equity Panel kicked off their first meeting on January 29; there will be updated information on this effort at City Council's January 30 meeting. In addition the manager of the Office of Human Rights and Neighborhood Involvement, Jen Van Der Haeghen, the group is facilitated by Dr. Alaí Reyes-Santos who teaches Ethnic Studies and Conflict Resolution at University of Oregon. She leads Alaí Community Consulting, LLC, which facilitates workshops, strategic/equity engagement planning, research, and consulting services to help organizations address issues of equity, inclusion and justice.

Item 2: CAP2.0 Gap Strategy

During the November 14, 2018, Northwest Natural Gas work session, staff updated City Council on the effort to produce a 'gap strategy.' This Strategy identifies potential actions that could move the community closer to meeting the CRO greenhouse gas and fossil fuel reduction goals beyond what

is forecasted within the CAP2.0 partner commitments. Attachment A is a Draft CAP2.0 'gap strategy' and is incomplete because City staff are waiting to receive information from third parties. Once City staff receive that information, an updated document will be sent to the council before the Wednesday, January 30, work session.

RELATED CITY POLICIES
Internal Climate Action Plan; Climate Recovery Ordinance

COUNCIL OPTIONS
City Council can provide direction to the City Manager on additional actions, if any, they would like completed to inform discussions related to the Climate Action Plan 2.0, including more in-depth consultant analysis, community engagement, or community survey.

CITY MANAGER'S RECOMMENDATION
No council action or motions are suggested.

SUGGESTED MOTION
No motion is provided.

ATTACHMENTS
A. Draft CAP2.0 Gaps Strategy

FOR MORE INFORMATION
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Telephone: 541-682-5245
Staff E-Mail: enelson@eugene-or.gov

Eugene City Manager's Office

Climate Action Plan 2.0 Gap Closing Strategy –Update Jan 29, 2019

As part of the Climate Action Plan 2.0 (CAP2.0), the project team completed a draft *Eugene Climate Action Plan 2.0 Reduction Forecast for 2030* (Forecast). The Forecast measures the impact of planned actions by the community's large lever shareholders (LLS) and compares that impact to Eugene's Climate Recovery Ordinance (CRO) goals. The Forecast shows a significant gap between planned community actions and the CRO goals. This 'Gap Strategy' summarizes the gap and offers potential strategies to help close it.

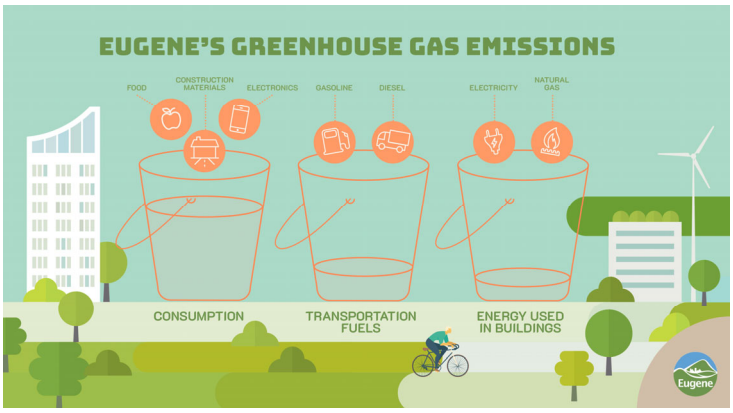
Fossil Fuels Gap

The CRO's fossil fuel target is a 50% reduction in community fossil fuel use in 2030 compared to a 2010 baseline. The Forecast shows that existing plans reduce fossil fuel use by 30% (7.1 MMBTU). That leaves a gap of about 20% (2.1 MMBTU) that will need to be addressed with additional actions to reach the CRO targets.

Greenhouse Gas Emissions Gap

The CRO calls for community greenhouse gas (ghg) emissions to be Eugene's average share of a global atmospheric GHG level of 350ppm by 2100, which is estimated in 2016 to require an annual average emission reduction level of 7.6%. GHGs are expected to grow slightly by 2030, increasing from 2.75 million MT CO_2e to 3.13 million MT CO_2e.

Eugene's Greenhouse Gas Emissions Buckets



Eugene's emissions can be divided into three buckets – Consumption, Transportation Fuels, and Energy Used in Buildings. Consumption is Eugene's largest bucket and includes the emissions created throughout the lifecycle of the goods we consume. Transportation Fuels is Eugene's second largest bucket and includes emissions from the fuel we use to power vehicles within Eugene – mostly gasoline and diesel. Energy Used in Buildings is the smallest bucket and includes the resources we use for heating, cooling, and electricity in our buildings in Eugene like electricity and natural gas.

Eugene is a leader when it comes to addressing ghg emissions. The City is one of only a handful of communities that has fully measured its consumption bucket in the US and the only community in the US, that staff found, that counts this bucket in their goals. Most communities focus their ghg emissions reduction goals around transportation and energy emissions. These two buckets represent the opportunities that cities have the most leverage to control.

Gap Closing Strategy Proposal

The project team's technical consultant, Good Company, provided the following list of actions that will could potentially fill the gap between planned community actions and the CRO goals. The actions are based on review of community plans nationwide and Good Company's direct experience working with other Oregon cities. We divided the actions into two tables: Table 1 summarizes actions in the Buildings and Transportation buckets, while Table 2 summarized actions within the Consumption bucket.

Table 1: Fossil-Fuel Use, Transportation Fuels, and Energy Used in Buildings Actions

DESCRIPTION	SCALE (MTCO2E-ANNUALLY)	COST
Transportation Fuels		
1. More aggressive TSP goals	**30,000-70,000**	
2. Electrify passenger vehicles/light trucks/commercial fleets rapidly.		**Save $9,000 over life of car**
a. 25,000 beyond TSP	**110,000**	
b. 50,000 beyond TSP	**220,000**	
c. 75,000 beyond TSP	**330,000**	
3. Increase use of low-carbon fuels	**Included in TSP**	
4. Advocate for more aggressive Federal vehicle fuel economy standards	**Included in TSP**	
Energy Used in Buildings		
5. Electrify heating systems through regulation of natural gas	**130,000**	
6. Additional natural gas actions		
a. Reduce carbon intensity of gas	**80,000**	
b. Offset gas emissions (50-100%)	**160,000-310,000**	**Increase of $50-$20,000 yr**
c. Regulate Infrastructure	**20,000-40,000**	
7. Home Energy Score Policy	**20,000**	
Other		
8. Oregon Cap and Trade Legislation	**430,000**	
9. Reduce or offset refrigerant loss	**80,000**	**$18/yr per household**
10. Improve landfill gas capture	**10,000-20,000**	

***** Many of the actions listed in Table 1 are the same actions included in Eugene's Transportation System Plan, but will need to be implemented at a faster rate than is currently planned.*

*****All actions listed in Table 1 address fossil fuel use.*

Table 2: Consumption Actions

DESCRIPTION	SCALE	COST
1. International action to implement Paris Accord at 25% by 2030	**270,000**	
2. Reduce average square footage of new single-family detached homes.	**20,000**	
3. Move to plant based diets	**10,000-170,000**	
4. Reduce all possible food waste.	**50,000**	
5. Eugene optimizes the waste system toward zero waste.	**90,000**	
6. Reduce carbon intensity of concrete products.		

Importance of Household (or Private Organization)-Led Actions:

Each and every person has a role to play in meeting the CRO goals. No one should stand idle and wait for government or anyone else to address the threat of climate change on your behalf. We are faced with an urgent problem. The following list of personal actions are provided as part of the Gaps Strategy to engage the community. These will also be core to the work that is scheduled in Phase Two of the CAP2.0, the evaluation and potential development of a community wide campaign. They include:

1. Live in a small living space that fits your needs, close to your daily activities.
2. Walk, ride your bike, or take transit for your daily commute.
3. If active transportation isn't for you – buy an Electric Vehicle as soon as possible.
4. Substitute plant-based foods for meat and dairy.
5. Avoid wasting edible food, and compost organic materials instead of throwing it away.
6. Donate to and shop at second-hand stores for clothes, furniture, books, housewares and other items. This action dramatically reduces GHGs from the stuff we buy new and supports amazing social organizations doing incredible things for our community.
7. When buying new, shop for durability and maintain to maximize longevity.
8. Reduce and offset air travel emissions by purchasing carbon offsets.
9. Shift spending from high impact goods to lower impact services (e.g., treat yourself to a class, concert, or massage instead of a new product).