

To: PUC staff hosting and those others participating in the Docket UM 2165

Re: “Investigation of Transportation Electrification Investment Framework”

June 9, 2021

The Market Going Cost/Price of Carbon Emissions Reduction/Offset is most aligned with the PUC’s stated Mission

In the discussions at the PUC’s UM 2165 workshop on May 26, 2021; reference is made to what is thought to be the ‘price of carbon.’

The price carbon I would argue is not the social cost of carbon emissions as promulgated by the Biden White House, and as documented in the White House paper “Technical Support Document: Social Cost of Carbon, Methane, and Nitrous Oxide;” Executive Order 13990, February 2021.

Rather the price of carbon is the going cost of reducing/offsetting carbon dioxide and its equivalent emissions among competing methods.

For example, yesterday, I receive a flyer from Northwest Natural Company my local gas utility. In this flyer, Northwest Natural offers to offset all my carbon emissions from the use of natural gas in my home at an additional cost of \$3.46 per month – and my monthly consumption of natural gas for home heating is said to be 33 therms (on average). This equates to roughly \$20 per metric ton of carbon emissions offsets (reductions elsewhere in other energy use venues). (U.S Energy Information Administration ascribes about 117 pounds of carbon dioxide equivalent emissions per thousand cubic feet of natural gas use, and the heat content of a thousand cubic feet of natural gas is said to be 1.07 million BTU.) (Flyer attached.)

In yet another study many of us are familiar is the Berkley Economic Advising and Research Report conducted in support of former Oregon House Bill 2020. On page 27 of this Report, it is projected by the authors that the price of Carbon emission permits in California’s Cap and Trade program will remain below \$30 per metric ton, without social discounting, over the next decade. (Page 27 attached.)

These two examples compare against the Biden Administration’s Social cost of carbon emissions of \$51 to \$76 per metric ton, depending on social discount rate. In essence, the Social Cost of Carbon emissions is analogous to the demand curve in economics and excludes the supply curve of Carbon emission reductions/offsets against which Transportation electrification should compete as it is but one of many means of reducing or offsetting carbon emissions.

It is most in keeping with the Oregon PUC's stated mission to incorporate the cost of the competing means of reducing or offsetting carbon emissions in its Transportation Electrification policies and administrative rule making.

For what is the PUC's stated Mission but as on its website:

"To ensure Oregon utility customers have access to safe, reliable, and high quality utility services at just and **reasonable rates.**"

Sincerely,

Bob Clark

Milwaukie, Oregon

PGE customer



NW Natural®

250 SW Taylor St, Portland, Oregon 97204 • nwnatural.com

Robert, you may be able to enroll in Smart Energy for less than the average residential customer!

Robert N Clark
3536 SE Sherry Ln
Milwaukie, OR 97222-5764

9951



Congratulations, Robert! You're doing an incredible job using less natural gas and keeping your carbon footprint low! At NW Natural, we encourage customers to "use less and offset the rest." You're already using less than the average NW Natural customer. So, today, I'm writing to invite you to offset the rest by going "Climate Neutral" with Smart Energy.

When you enroll in Smart Energy, the carbon emissions from your natural gas use will be offset through projects in the Pacific Northwest, California, and Utah that reduce, or prevent the release of, greenhouse gases. **When you sign up to be "Climate Neutral," you offset 100% of your home's natural gas use.**

Robert, because your natural gas use is so low, you can enroll for less! Based on 12 months of your natural gas use, your Smart Energy participation would look something like this:

Your natural gas use,
on average¹:

33.0
therms per month



← **Your Home** →

Your estimated average
cost to participate would be²:

\$3.46
per month

The average NW Natural customer uses³: **52.5 therms/month**

The "Average Home" option cost to participate: **\$5.50/month**

Your participation could come to \$2.04 less than the Average NW Natural Home!

Will you join me and over 64,000 Smart Energy participants by going "Climate Neutral"?

Mary Moerlins

Mary Moerlins, Director of Environmental Policy & Corporate Responsibility

PS: Robert, you're doing a great job using less natural gas. Take the next step to offset the rest. Enroll in Smart Energy today!

It's easy to enroll online at nwnatural.com/smart using code DM521RM1

*Enroll by June 25, 2021,
and we'll make
a \$10 donation to
Oregon Parks Forever!*



**OREGON PARKS
FOREVER**

YES! I'm ready to be Climate Neutral. Please enroll me in Smart Energy.⁵

I want to offset 100% of my CO₂ emissions from my natural gas use at \$0.10486 per therm used each month.

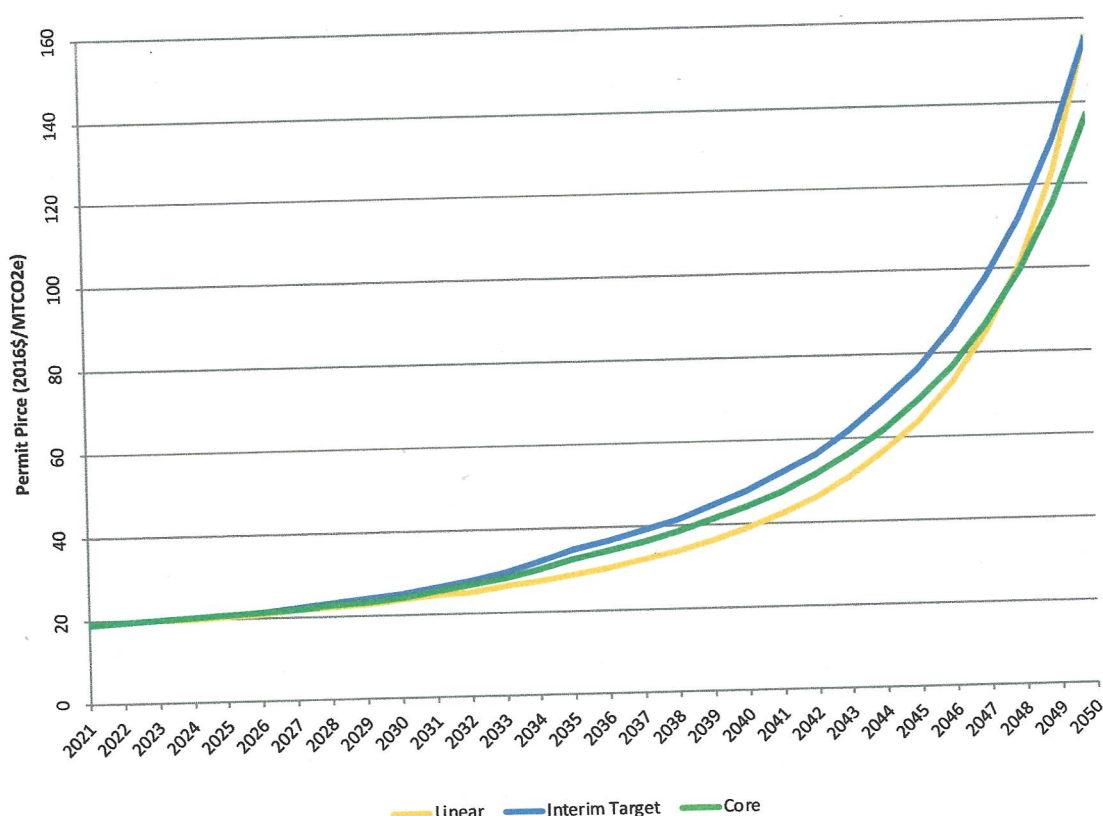
Signature

Date

4.2 Permit Prices

Another important feature of our results is explicit projection of permit prices that would result from cap-and-trade operating under the scenarios considered. Figure 4.8 illustrates these estimates in 2016 dollars per MTCO_{2e}, and several salient features are immediately apparent. Firstly, permit prices are generally relatively low, reflecting experience in other markets and suggesting that direct (permit) and indirect (investment) compliance costs are manageable, even under the more ambitious Interim Target mitigation pathway. In all scenarios reported in Figure 4.8, the Oregon market is not linked with the WCI.

Figure 4.8: Estimated Permit Prices Rise Slowly Until Nearly 2040



There is understandable concern among stakeholders about the effect of cap-and-trade on end user energy prices. Our permit price estimates reflect the fact that decarbonization will be driven by adoption of cost saving technologies, not higher fuel prices, in the electric power and transportation sectors. As we explain below,