Carbon Footprint:

Regional (eGRID) or Utility Specific (ODOE)

Background

- The EPS is a performance metric for single family homes in the same way a miles-per-gallon rating is a performance metric for cars, consisting of modeled energy consumption and carbon emissions.
- The EPS shows the expected average energy consumption for a home, based on the home's condition in terms of a home's envelope, DHW, and HVAC characteristics.

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Energy Trust, EPS, and Carbon

- Energy Trust currently offers an EPS through its New Homes program.

- Energy Trust is currently piloting an EPS into the existing homes market.

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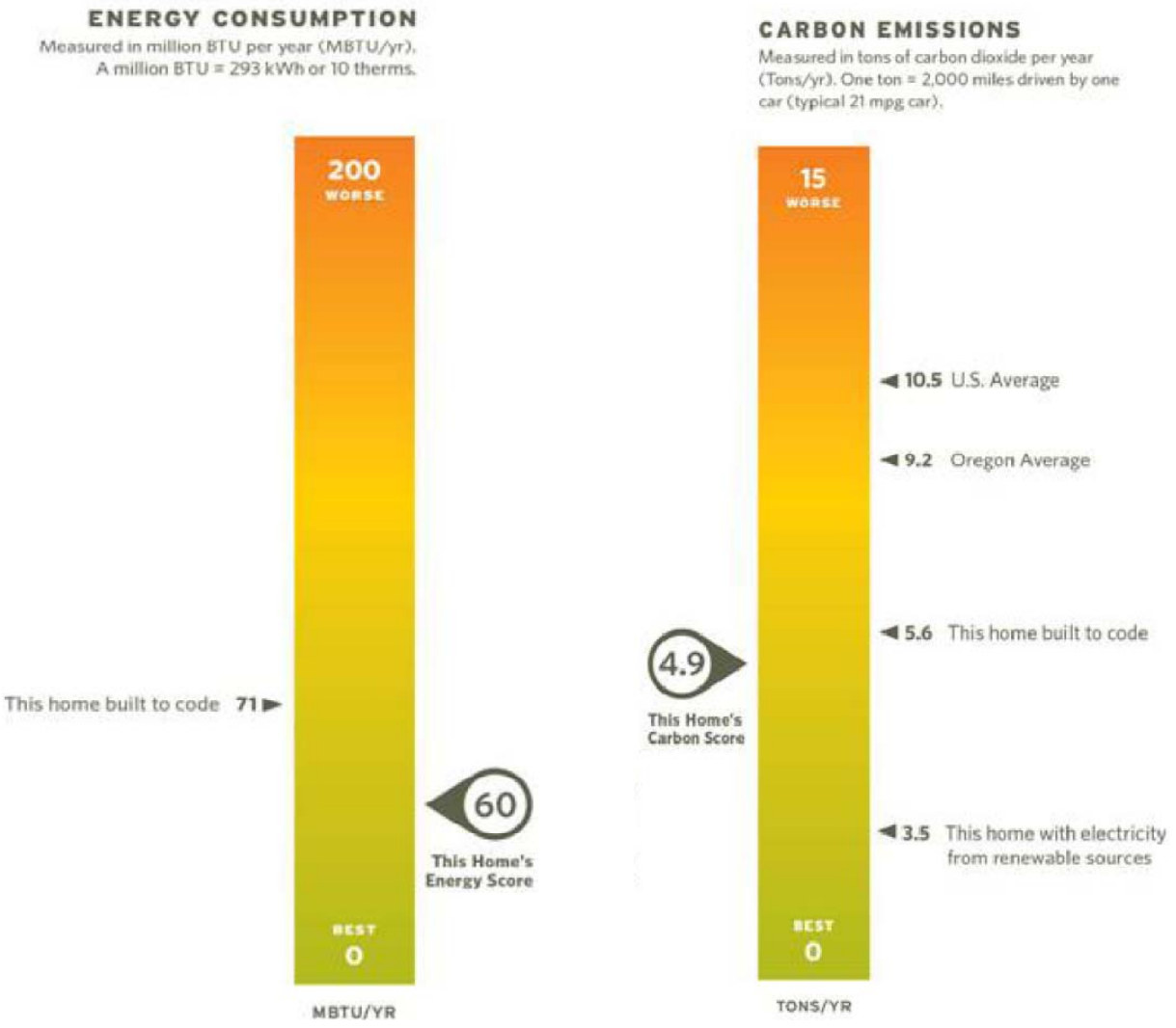
Energy Performance Score sheet



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Calculating a Carbon Footprint

Example:

1,000 therms @ 11.7 lbs CO2/therm = 11,700

10,000 kWh @ **1.0 lbs CO2/kWh** = 10,000

Footprint = 21,700 lbs CO2

or ~11 tons CO2

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The Issue

The question with providing a carbon score is what basis is most relevant for calculating the the electric portion of the score?

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Sources of data on carbon impact

eGRID - a comprehensive source of data on the environmental characteristics of almost all electric power generated in the United States. Complied by the EPA.

ODOE - Utilizing reports from utilities on power generation, sales and purchases, **ODOE** collaborates with the Washington Department of Commerce and Washington State University (WSU) Energy Extension to produce a net system power mix report.

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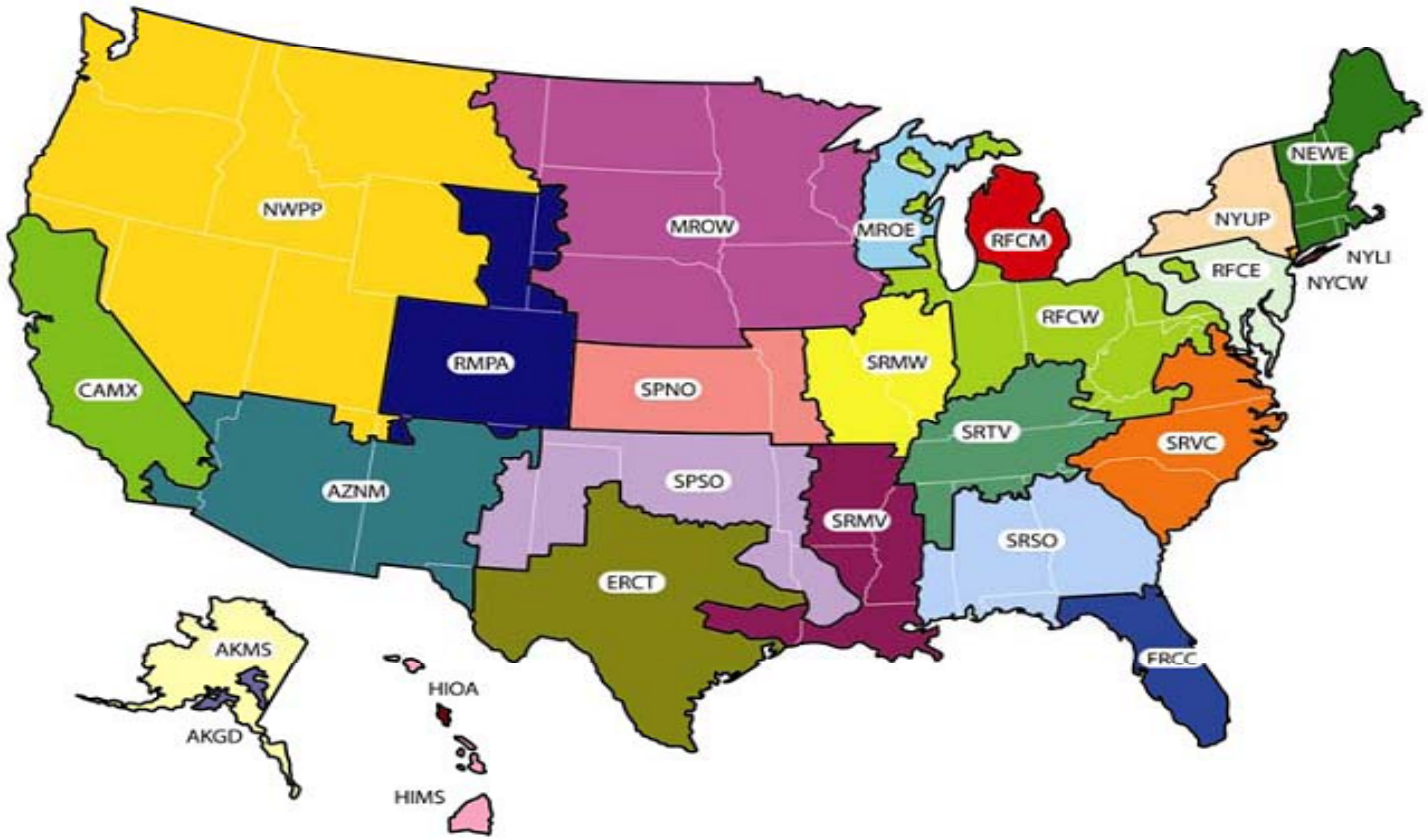
eGRID Subregions



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Caught in the Middle

SB79 Task Force Voluntary Rules – state that carbon emissions “should” be calculated by using eGRID sub-region NWPP data

Oregon (OAR 860-038-0300) - require electric utilities to report to customers the “price, power source, and environmental impact” for each product the company offers

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Lbs of CO2/MWh from Various Sources

Region	Source	Average lbs CO2/MWh
WECC	eGRID	1,019
Sub region NWPP	**eGRID**	**859**
Oregon (no imports)	eGRID	401
PGE	**ODOE**	**953**
PAC	**ODOE**	**1,884**
Oregon mix	ODOE	1,149
BPA mix	ODOE	122

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Reasons to use eGRID data

- **Consistent with voluntary rules developed by SB 79 task force**
- **Provides a common value for the entire Northwest**
- Currently the adopted norm by the World Resources Institute in their GHG Protocol and other organizations reporting on carbon emissions.
- Easy to implement and potentially avoids confusion across service territories

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Reasons to use ODOE data

- **Consistent with reports on utility bills and green power products**
- Utility Specific
- Regularly updated with current fuel mixes
- Better accounts for all market purchases
- Consistent with Energy Trust New Homes program

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Recommendation

- Staff proposes to use the utility specific data from ODOE, even though the task force recommendation coming out of SB79 was to use eGRID sub region NWPP data.
- From a homeowner's perspective, consistency with reports on utility bills and green power products appears the key factor
- In addition the information provided by ODOE is readily available, up to date, more accurately accounts for market purchases, and is consistent with other legislative and regulatory requirements

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Discussion

Utility Specific data provided by ODOE

OR

Regional eGRID (NWPP) data

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