

BASIS OF EMISSIONS REDUCTIONS CALLED FOR IN HB 2020

Oregon Carbon Policy Office

The long-term statewide GHG reduction goal included in HB 2020 - for Oregon to reduce emissions to at least 80% lower than the state's emissions in 1990 by 2050 - aligns with the global reductions the international scientific community have indicated are necessary to avoid the more dire effects of climate change.

This target is included in the [4th Assessment Report](#) completed in 2007 by the International Panel on Climate Change. The Intergovernmental Panel on Climate Change (IPCC) is the United Nations body for assessing the science related to climate change. Specifically, refer to Box 13.7 on page 776 of the report. That table shows the assessment that 2050 GHG reduction targets by Annex I countries* need to be 80% to 95% below a 1990 baseline in order for atmospheric concentrations of GHGs to stabilize at a level likely to avert the most catastrophic effects of climate change (450 ppm CO₂ equivalent). The [Paris Agreement](#) aims to hold “the increase in the global average temperature to well below 2°C above pre-industrial levels and [pursue] efforts to limit the temperature increase to 1.5°C above pre-industrial levels, recognizing that this would significantly reduce the risks and impacts of climate change”(Article 2(1)(a)). These temperature levels are generally considered consistent with the atmospheric concentrations above. Oregon is a member of the U.S. Climate Alliance, a coalition of state governments committed to meeting emissions reduction goals consistent with the Paris Agreement.

More recent international climate assessments and negotiations, such as the [5th Assessment Report](#) by the IPCC and the [Paris Agreement](#), have focused on the importance of nearer term targets to maximize near-term emissions reductions. This is consistent with the inclusion of the 2035 interim target in HB 2020. In fact, under the Paris Agreement the US pledged to reach even nearer term targets of 26% - 28% below 2005 levels by 2025. According to the US National Climate Assessment released in 2018, “Evidence exists that early mitigation can reduce climate impacts in the nearer term (such as reducing the loss of perennial sea ice and effects on ice-dwelling species) and, in the longer term, prevent critical thresholds from being crossed (such as marine ice sheet instability and the resulting consequences for global sea level change)” ([Timing and Magnitude of Action](#)).

The Paris Agreement calls for *both* “reaching global peaking of greenhouse gas emissions as soon as possible,” followed by “rapid reductions thereafter” and for reaching “a balance between anthropogenic emissions by sources and removals by sinks of greenhouse gases in the second half of this century” (Article 4 (1)). The need to reduce emissions comes first, paired with maximizing greenhouse gas sinks. In the near term, “developed [countries] should continue taking the lead by undertaking economy-wide absolute emission reduction targets” (Article 4(4)). According to the US National Climate Assessment released in 2018, “Achieving the Paris Agreement target of limiting global mean temperature to less than 2°C (3.6°F) above preindustrial levels requires substantial reductions in net global CO₂ emissions prior to 2040 relative to present-day values and likely requires net CO₂ emissions to become zero or possibly negative later in the century” ([State of Emissions Mitigation Efforts](#)).

*Annex I countries are those that are more economically developed, and thus have contributed to global GHG emissions more, and have greater reduction opportunities. Annex I countries comprise about 20% of the world's population, but contribute about 50% of global GHG emissions.