Citations for the "Whereas" Foundations of the Resolution

WHEREAS, the United Nations, climate scientists from around the world, and world leaders of 175 countries, all recognize and agree that to avoid catastrophic climate change, drastic reductions in global greenhouse emissions must be achieved by 2030.

IPCC, or Intergovernmental Panel on Climate Change, is a scientific body under the auspices of the United Nations.

https://www.ipcc.ch/site/assets/uploads/2018/02/ar5_syr_headlines_en.pdf

> "Human influence on the climate system is clear, and recent anthropogenic emissions of greenhouse gases are the highest in history. Recent climate changes have had widespread impacts on human and natural systems."
>
> "Continued emission of greenhouse gases will cause further warming and long-lasting changes in all components of the climate system, increasing the likelihood of severe, pervasive and irreversible impacts for people and ecosystems. Limiting climate change would require substantial and sustained reductions in greenhouse gas emissions which, together with adaptation, can limit climate change risks."

https://www.ipcc.ch/sr15/

> "An IPCC special report on the impacts of global warming of 1.5 °C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty."

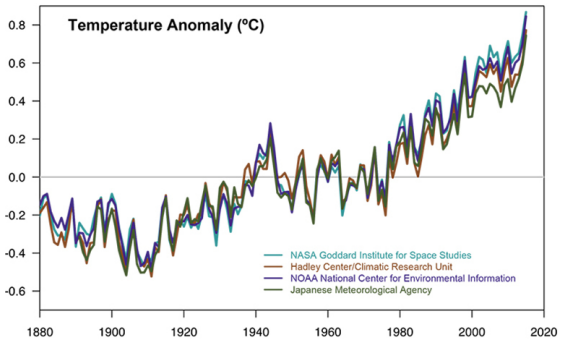
https://thehill.com/policy/energy-environment/410343-world-needs-unprecedented-efforts-to-avoid-key-global-warming-level

> "The report, released late Sunday by the U.N.'s Intergovernmental Panel on Climate Change (IPCC), says the world needs to decrease emissions by 45 percent by 2030, or else the atmosphere could hit 1.5 degrees of warming by then.
>
> "At that level of warming — as measured as the Earth's average temperature compared with pre-industrial levels — up to 90 percent of tropical coral reefs could die, Arctic warming could cause multiple feet of sea level rise and yields of key crops would drop.
>
> "World leaders would need to take "unprecedented" actions in order to keep global warming below 1.5 degrees Celsius, a level that scientists believe would avoid many of the worst effects of climate change."

For more information: https://oehha.ca.gov/media/downloads/climate-change/document-climate-change/climatechangecaliforniabibliography2016.pdf

https://web.archive.org/web/20180628042920/https:/climate.nasa.gov/scientific-consensus/

Scientific consensus: Earth's climate is warming



> "Temperature data from four international science institutions. All show rapid warming in the past few decades and that the last decade has been the warmest on record. Data sources: NASA's Goddard Institute for Space Studies, NOAA National Climatic Data Center, Met Office Hadley Centre/Climatic Research Unit and the Japanese Meteorological Agency."

> "Multiple studies published in peer-reviewed scientific journals[1] show that **97 percent or more of actively publishing climate scientists agree***: Climate-warming trends over the past century are extremely likely due to human activities. In addition, most of the leading scientific organizations worldwide have issued public statements endorsing this position. The following is a partial list of these organizations, along with links to their published statements and a selection of related resources."

All about the Paris Climate Agreement:
https://www.nrdc.org/stories/paris-climate-agreement-everything-you-need-know

> "The Paris Agreement is a landmark environmental accord that was adopted by nearly every nation in 2015 to address climate change and its negative impacts."

> "At present, 197 countries—every nation on earth, with the last signatory being war-torn Syria—have adopted the Paris Agreement. Of those, **179 have solidified their climate proposals** with formal approval—including the United States, for now. The only major emitting countries that have yet to formally join the agreement are Russia, Turkey, and Iran."

WHEREAS, carbon emissions in Vermont are up 16% from 1990 levels, dramatically failing to meet our state goal of 25% reduction in greenhouse gas emissions from 1990 levels by 2012;
https://vtdigger.org/2019/10/02/climate-change-vermont-will-not-meet-its-2028-emissions-goals-now-what/

> "Emissions have increased in recent years, with the most recent data from 2015 showing emissions 16% higher than 1990 levels. And there are indications that emissions have only continued to rise since then."

https://dec.vermont.gov/sites/dec/files/aqc/climate-change/documents/_Vermont_Greenhouse_Gas_Emissions_Inventory_Update_1990-2015.pdf

> Vermont Greenhouse Gas Emissions Inventory Update 1990 -2015
> Introduction -Emissions Summary
> **"Greenhouse gas(GHG)emissions estimates in Vermont continued to rise for calendar year 2015,** increasing from 9.45million metric tons CO2equivalent(MMTCO2e)in 2014to 9.99MMTCO2ein 2015. This increase puts Vermont **approximately 16% above the1990 baseline** value of 8.59 MMTCO2e and adds to the difficulty of reaching the statewide goal of 50% below 1990 emissions levels by 20281(Figure 1).The global warming potential values in this report are from the IPCC AR4 report and are consistent with those in the previous report (1990-2014). Data sources and methodologies are consistent between the 2014 and 2015 reports, and emissions estimates in this report supersede all previous Vermont Greenhouse Gas Emissions Inventory Update report values." [emphasis added; see link for graph]

https://dec.vermont.gov/sites/dec/files/aqc/climate-change/documents/_Vermont_Greenhouse_Gas_Emissions_Inventory_and_Forecast_1990-2016.pdf

> "The annual gross greenhouse gas emissions generated in Vermont declined slightly from 2015 in calendar year 2016, decreasing from 10.19 million metric tons CO2 equivalent (MMTCO2e) to 9.76 MMTCO2e. This decrease puts the state **approximately 13% above the 8.65 MMTCO2e 1990 baseline value in 2016.** Although emissions totals do show a reduction in 2016 compared to 2015 and interrupt the upward emissions trajectory seen from 2011 - 2015, steep reductions are needed in the coming years if the state is going to make progress toward meeting its GHG reduction goals2 (Figure 1)." [emphasis added]

https://climatechange.vermont.gov/vermonts-goals

> "The goals legislators adopted in 2006 call for a 50% reduction of the state's greenhouse gas emissions below their 1990 levels by 2028, and a 75% reduction by 2050."
>
> "Vermont's 2016 Comprehensive Energy Plan established new planning goals for reducing the emissions from our energy use."

https://publicservice.vermont.gov/sites/dps/files/documents/Pubs_Plans_Reports/State_Plans/Comp_Energy_Plan/2015/2016CEP_ES_Final.pdf

> "Expanding upon the statutory goal of 25% renewable by 2025 (10 V.S.A. § 580(a)), this CEP [2016] establishes the following set of goals:
> - Reduce total energy consumption per capita by 15% by 2025, and by more than one third by 2050.
> - Meet 25% of the remaining energy need from renewable sources by 2025, 40% by 2035, and 90% by 2050.
> - Three end-use sector goals for 2025: 10% renewable transportation, 30% renewable buildings, and 67% renewable electric power.