

Climate Action Simulation: Developed Nations



To: Chief Negotiators for Developed Nations
(USA, Canada, European Union, Japan, Russia and other former Soviet Republics, South Korea, Australia, New Zealand)

Subject: Preparation for the Climate Action Summit

Welcome to the Climate Action Summit. You and leaders from all relevant stakeholders have been invited by the UN Secretary-General to work together to successfully address climate change. In the invitation, the Secretary-General [noted](#) that: “The climate emergency is a race we are losing, but it is a race we can win...The best science...tells us that any temperature rise above 1.5°C will lead to major and irreversible damage to the ecosystems that support us...But science also tells us it is not too late. We can do it...But it will require fundamental transformations in all aspects of society—how we grow food, use land, fuel our transport and power our economies...By acting together, we will leave no one behind.”

The goal of the summit is to create a plan to limit global warming to less than 2°C [3.6°F] above pre-industrial levels and to strive for 1.5°C [2.7°F], the international targets formally recognized in the Paris Climate Agreement. The [scientific evidence](#) is clear: warming above this limit will yield catastrophic and irreversible impacts threatening the health, prosperity, and lives of people in all nations.

You represent the world’s developed nations (listed above). The population of your nations combined is 1.3 billion, about 17% of the 7.7 billion people in the world. However, collectively, your nations generate 60% of world economic output and have the highest GDP (Gross Domestic Product) per capita.

Your policy priorities are listed below. You can, however, propose, or block, any available policy.

- 1. Subsidize renewable energy (e.g., solar, wind, geothermal, hydropower, and storage).**
The renewable energy industry is growing rapidly, but still makes up less than 5% of the world’s energy supply. Subsidies will help these industries grow, generating jobs in your nations (if you can outpace wind, solar, and battery technology developing in China and other developing nations). Storage (e.g., batteries, thermal storage, pumped hydro) and “smart grid” technology allow variable renewables like wind and solar to be integrated into the energy system while providing round-the-clock electric power.
- 2. Reduce deforestation.** Deforestation is currently responsible for about 15% of global GHG emissions. Much of that deforestation arises in the tropical forests of the developing nations, including the Amazon basin, Africa, and South/Southeast Asia. Protecting forests can reduce those emissions while also preserving biodiversity and protecting water supplies.
- 3. Consider afforestation.** Afforestation is the growth of new forests on land that doesn’t have trees, sometimes this is land that was previously deforested or degraded. As trees grow, CO₂ is sequestered from the atmosphere and stored in biomass and soils. If implemented on a large scale, afforestation could use land that is needed for crops or livestock, thereby increasing food prices. Consider how much land the afforestation policies you and other groups propose would require.
- 4. Reduce emissions of methane, nitrous oxide, and other greenhouse gases.** CO₂ is the most prominent GHG, but other gases cause about a quarter of global warming. These include

methane (CH₄), nitrous oxide (N₂O), and a wide range of chlorofluorocarbons and other fluorinated compounds (so-called F-gases). Molecule for molecule, many of the non-CO₂ gases contribute tens, hundreds or even thousands of times more to global warming over the next century than CO₂. Although their concentrations are low, they are growing rapidly.

5. **Decide whether to invest in research and development (R&D) for a new low-cost zero-carbon energy source.** Some scientists believe a new type of nuclear energy, such as thorium fission or nuclear fusion, would offer the best energy source for replacing fossil fuels, arguing that such technologies could provide low-cost, zero-carbon electricity at scale. Several prominent universities and companies are exploring promising new nuclear energy solutions. However, these new technologies are currently unavailable and would require substantial investment to become commercially viable.
6. **Decide whether significant developments can be made in carbon removal technology.** The emerging field of carbon dioxide removal (CDR) technology seeks methods to remove CO₂ already in the atmosphere. These technologies range from changes in agricultural practices that might be implemented today to speculative and unproven technologies like Direct Air Capture (DAC). Your group may decide to invest in these technologies.
7. **Consider putting a price on CO₂ emissions.** Fossil fuels still dominate the world energy system, and the CO₂ they emit is by far the biggest source of GHG emissions. Economists agree that a carbon price is the best way to reduce global greenhouse gas (GHG) emissions. Consider putting a price on carbon, perhaps phased in over time to give industry and consumers time to adjust. The revenues can be rebated to the public, help offset the costs of other policies, cut your fiscal deficits, or provide aid to help developing nations cut their emissions. Although carbon prices have been implemented in some of your countries, states, and provinces, most are far lower than the \$30-50 per ton of CO₂, or more, many economists recommend. The fossil fuel industry opposes carbon prices, as do companies heavily reliant on fossil fuels.

Additional Considerations

You recognize that climate change is real, caused primarily by the burning of fossil fuels, and that it poses grave risks to people around the world—including your own. Climate change is a serious threat multiplier undermining your national security, as the damage from climate change increasingly drives conflict and migration, which is already causing backlash among some and the imposition of anti-immigrant policies.

At the same time, your nations depend on fossil fuels—your nations are responsible for 36% of global greenhouse gas (GHG) emissions today, and a much higher fraction of cumulative emissions since the industrial revolution. The economies of some nations in your group rely on exports of fossil fuels, especially Russia (oil and gas), Australia (coal), and Canada (oil from tar sands). The United States has announced its intention to withdraw from the 2015 Paris Climate Agreement, and the US federal government is rolling back many climate-friendly policies. At the same time, [dozens of states](#) and hundreds of cities, counties, and businesses in the US have declared “[we are still in](#)” and pledged to meet or exceed their share of the US commitment. Many governments and businesses are finding climate-friendly policies are good for the economy. Energy efficiency, and renewables like wind and solar, are often profitable, create jobs, and improve public health.

While your nations are striving to reduce your own GHG emissions, you note that China is the world’s largest emitter (28% of global emissions), and the developing and rapidly emerging nations collectively emit about 65% of global emissions, even though emissions per person in those nations are low.