



Appendix E

Intergovernmental Panel on Climate Change Global Emissions Scenarios for Greenhouse Gases



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Scenario	Description	Estimated Increase in Temperature ¹
A1	The A1 storyline and scenario family describes a future world of very rapid economic growth, global population that peaks in mid-century and declines thereafter, and the rapid introduction of new and more efficient technologies. Major underlying themes are convergence among regions, capacity building, and increased cultural and social interactions, with a substantial reduction in regional differences in per capita income. The A1 scenario family develops into three groups that describe alternative directions of technological change in the energy system. The three A1 groups are distinguished by their technological emphasis: fossil intensive (A1FI), non-fossil energy sources (A1T), or a balance across all sources (A1B).	
A1FI	Intensive dependence on fossil fuels.	7.2°F (4.0°C)
A1B	Balanced energy supply between fossil fuels and alternatives.	5.04°F (2.8°C)
A1T	Alternative technologies largely replace fossil fuels.	4.3°F (2.4°C)
A2	The A2 storyline and scenario family describes a very heterogeneous world. The underlying theme is self-reliance and preservation of local identities. Fertility patterns across regions converge very slowly, which results in continuously increasing global population. Economic development is primarily regionally oriented and per capita economic growth and technological change is more fragmented and slower than in other storylines.	6.1°F (3.4°C)
B1	The B1 storyline and scenario family describes a convergent world with the same global population that peaks in midcentury and declines thereafter, as in the A1 storyline, but with rapid changes in economic structures toward a service and information economy, with reductions in material intensity, and the introduction of clean and resource-efficient technologies. The emphasis is on global solutions to economic, social and environmental sustainability, including improved equity, but without additional climate initiatives.	3.2°F (1.8°C)
B2	The B2 storyline and scenario family describes a world in which the emphasis is on local solutions to economic, social, and environmental sustainability. It is a world with continuously increasing global population at a rate lower than A2, intermediate levels of economic development, and less rapid and more diverse technological change than in the B1 and A1 storylines. While the scenario is also oriented towards environmental protection and social equity, it focuses on local and regional levels.	4.3°F (2.4°C)

Source: Intergovernmental Panel on Climate Change, 2007 and IPCC 2000.

Note: (1) Temperature at 2090-2099 relative to 1980-1999.



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