

## **Plan B 4.0 - Supporting Data for Chapter 10**

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A full listing of data for the entire book is on-line at:

[http://www.earthpolicy.org/index.php?/books/pb4/pb4\\_data](http://www.earthpolicy.org/index.php?/books/pb4/pb4_data)

This is part of a supporting dataset for Lester R. Brown, **Plan B 4.0: Mobilizing to Save Civilization** (New York: W.W. Norton & Company, 2009). For more information and a free download of the book, see Earth Policy Institute on-line at [www.earthpolicy.org](http://www.earthpolicy.org).

## Plan B Carbon Dioxide Emissions Reductions and Sequestration in 2020

Action	Amount
	Million Tons of Carbon
<b>Energy Restructuring</b>	
Replacing fossil fuels with renewables for electricity and heat	3,210
Restructuring the transport system	1,400
Reducing coal and oil use in industry	100
<b>Biological Carbon Sequestration</b>	
Ending net deforestation	1,500
Planting trees to sequester carbon	860
Managing soils to sequester carbon	600
<b>Total Carbon Dioxide Reductions in 2020</b>	<b>7,670</b>
Carbon Dioxide Emissions in 2006	9,350
<b>Percent Reduction from 2006 Baseline</b>	<b>82.0</b>

Source: Calculated by Earth Policy Institute using International Energy Agency (IEA), *World Energy Outlook 2008* (Paris: 2008), p. 507; IEA, *Tracking Industrial Energy Efficiency and CO<sub>2</sub> Emissions* (Paris: 2007); Intergovernmental Panel on Climate Change (IPCC), *Climate Change 2007: Mitigation of Climate Change. Contribution of Working Group III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change* (Cambridge, U.K.: Cambridge University Press, 2007), pp. 543, 559; and Rattan Lal, "Soil Carbon Sequestration Impacts on Global Climate Change and Food Security," *Science*, vol. 304 (11 June 2004), pp. 1,623–27.

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## Plan B Budget: Additional Annual Expenditures Needed to Meet Social Goals and to Restore the Earth

Goal	Funding
	Billion Dollars
<b>Basic Social Goals</b>	
Universal primary education	10
Eradication of adult illiteracy	4
School lunch programs for 44 poorest countries	6
Assistance to preschool children and pregnant women in 44 poorest countries	4
Reproductive health and family planning	17
Universal basic health care	33
Closing the condom gap	3
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Total	77
<b>Earth Restoration Goals</b>	
Planting trees to reduce flooding and conserve soil	6
Planting trees to sequester carbon	17
Protecting topsoil on cropland	24
Restoring rangelands	9
Restoring fisheries	13
Protecting biological diversity	31
Stabilizing water tables	10
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Total	110
<b>Grand Total</b>	<b>187</b>

Source: Compiled by Earth Policy Institute.

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## Military Budgets by Country and for the World in 2008 and Plan B Budget

Country	Budget
	Billion Dollars
United States	607
China	85
France	66
United Kingdom	65
Russia	59
Germany	47
Japan	46
Italy	41
Saudi Arabia	38
India	30
All Other	380
<b>World Military Expenditure</b>	<b>1,464</b>
<b>Plan B Budget</b>	<b>187</b>

Source: Compiled by Earth Policy Institute with military spending from Stockholm International Peace Research Institute, *Military Expenditure Database*, electronic database, at [www.sipri.org](http://www.sipri.org), updated 2009.

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## The Real Price of Gasoline, 2007 Update

Cost	Lower Bound	Upper Bound	Lower Bound	Upper Bound
	Billion Nominal Dollars		Billion 2000 Dollars	
Climate Change	3.4	30.9	3.2	29.0
Supply and Protection Costs	78.2	158.4	73.5	148.9
2005 Energy Policy Act Subsidies	6.0	6.0	5.3	5.3
Depletion Allowance	0.8	1.0	0.8	1.0
Fuel Production Tax Credit	0.8	0.9	0.8	0.9
Expensing E&D Costs	0.2	0.3	0.2	0.3
Enhanced Oil Recovery Tax Credit	0.0	0.1	0.0	0.1
Foreign Tax Credit	1.1	3.4	1.2	3.6
Deferral of Foreign Income	0.2	0.3	0.2	0.3
Accelerated Depletion Allowance	1.0	4.5	1.0	4.7
Other Tax Credit	0.1	0.1	0.1	0.1
State and Local Taxes	4.9	5.1	5.2	5.4
Government Spending Subsidies	38.0	114.6	39.8	120.1
Air Pollution	29.3	542.4	30.7	568.5
Agricultural Crop Losses	2.1	4.2	2.2	4.4
Loss of Visibility	6.1	44.5	6.4	46.6
Damage to Buildings	1.2	9.6	1.3	10.1
Oil Spills	2.2	2.2	2.3	2.3
De-Icing and Runoff	2.0	5.2	2.1	5.4
Impervious Area Effect	4.2	29.4	4.4	30.8
Noise Pollution	6.0	12.0	6.3	12.6
Disposal of Cars	4.4	4.4	4.6	4.6
Social Cost of Sprawl	163.7	245.5	171.6	257.3
Barrier Effect of Motor Vehicles	11.7	23.4	12.3	24.5
Other Costs	191.4	474.1	200.6	496.9
Oil Costs (incl. supply protection, subsidies, government spending)	131.3	294.7	128.2	290.7
Gasoline Costs (climate change, health/environmental effects, social costs)	427.7	1,427.8	447.9	1,493.0
2006 Oil Consumption:	233 billion gallons			
2006 Gasoline Consumption:	104 billion gallons			
Total Costs per Gallon:	4.68	14.99	4.86	15.60
<b>Average Indirect Costs per Gallon:</b>	<b>\$10.23 in 2000 dollars = \$11.92 in 2006 dollars</b>			

Source: Compiled by Earth Policy Institute using International Center for Technology Assessment (ICTA), *The Real Price of Gasoline*, Report No. 3 (Washington, DC: 1998), p. 34; ICTA, *Gasoline Cost Externalities Associated with Global Climate Change: An Update to CTA's Real Price of Gasoline Report* (Washington, DC: September 2004); ICTA, *Gasoline Cost Externalities: Security and Protection Services: An Update to CTA's Real Price of Gasoline Report* (Washington, DC: January 2005); Terry Tamminen, *Lives Per Gallon: The True Cost of Our Oil Addiction* (Washington, DC: Island Press, 2006), p. 60; with price deflators from Bureau for Economic Analysis, "Table 3 - Price Indices for Gross Domestic Product and Gross Domestic Purchases," *GDP and Other Major Series, 1929-2007* (Washington, DC: August 2007); oil consumption from BP, *BP Statistical Review of World Energy* (London: June 2007); and gasoline consumption from Energy Information Administration, "Total Crude Oil and Petroleum Products," at [tonto.eia.doe.gov/dnav/pet/pet\\_cons\\_psup\\_dc\\_nus\\_mbbbl\\_a.htm](http://tonto.eia.doe.gov/dnav/pet/pet_cons_psup_dc_nus_mbbbl_a.htm), updated 26 November 2007.