

THE NET BENEFITS OF LOW AND NO-CARBON ELECTRICITY TECHNOLOGIES

Table 9A. Net Benefits per Year per MW: Displacement of Coal Baseload Production					
Benefits per MW per Year	Wind	Solar	Hydro	Nuclear	Gas CC
Avoided Emissions (1)	\$106,697	\$69,502	\$168,934	\$405,574	\$416,534
Avoided Energy Cost (2)	\$74,412	\$50,938	\$141,991	\$289,565	\$296,836
Avoided Capacity Cost (3)	\$69,570	\$45,702	\$152,350	\$315,755	\$323,577
Costs per MW per Year:					
New Plant Emissions (1)	\$0	\$0	\$0	\$0	(\$137,796)
New Plant Energy Cost (2)	\$0	\$0	\$0	(\$72,403)	(\$250,737)
Capacity Cost Incurred (3)	(\$270,195)	(\$351,427)	(\$282,843)	(\$614,692)	(\$113,033)
Other Costs (4) (5)	(\$5,816)	(\$3,535)	\$0	(\$5,230)	\$0
Total Net Benefits	(\$25,333)	(\$188,820)	\$180,432	\$318,569	\$535,382
<i>Footnotes:</i>					
(1) Avoided and new plant emissions from Table 2A have been valued at \$50 per ton.					
(2) Avoided and new plant energy costs are from Table 4A.					
(3) Avoided and new plant capacity costs are from Tables 6A and 7.					
(4) Other costs for nuclear are from Table 8.					
(5) Wind and solar other costs are based on Ellerman and Marcantonini (May, 2013)					

Source: Charles R Frank Jr, *Global Economy and Development*, Brookings Institution

Revised estimates, accounting for more recent prices of technologies

Net Benefits per year per MW: Displacement of Coal Baseload Production					
Benefits per MW per year	Wind	Solar	Hydro	Nuclear	GasCC
Total Net Benefits	31,200	(158,800)	156,800	261,300	476,600

Cost of CO2 = \$50/tonne