Cost benefit analysis of solar and wind local power generations for greenhouse gas emission mitigation

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Introduction

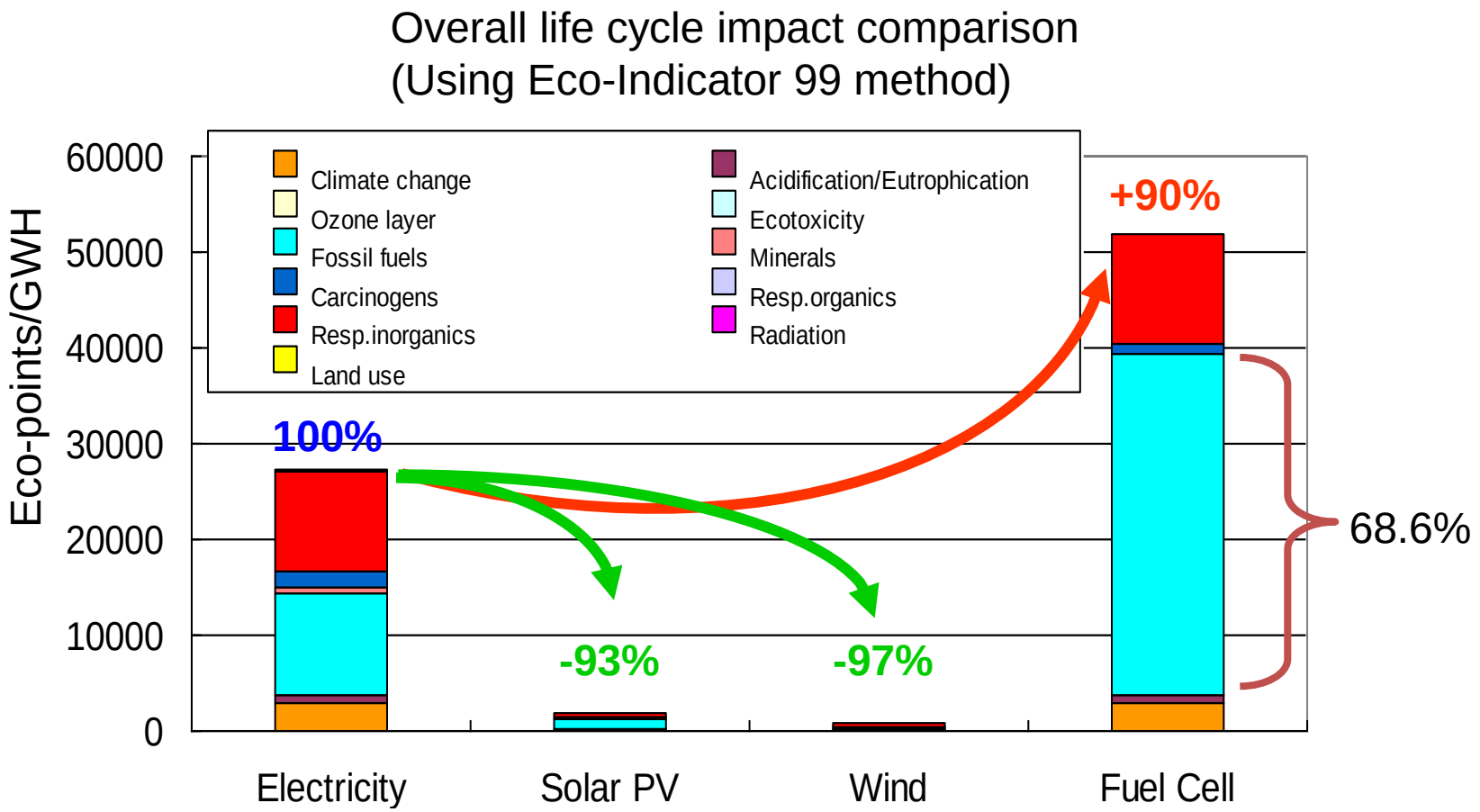
Almost No GHG

GHGs

GHGs Reduction Through clean power supply

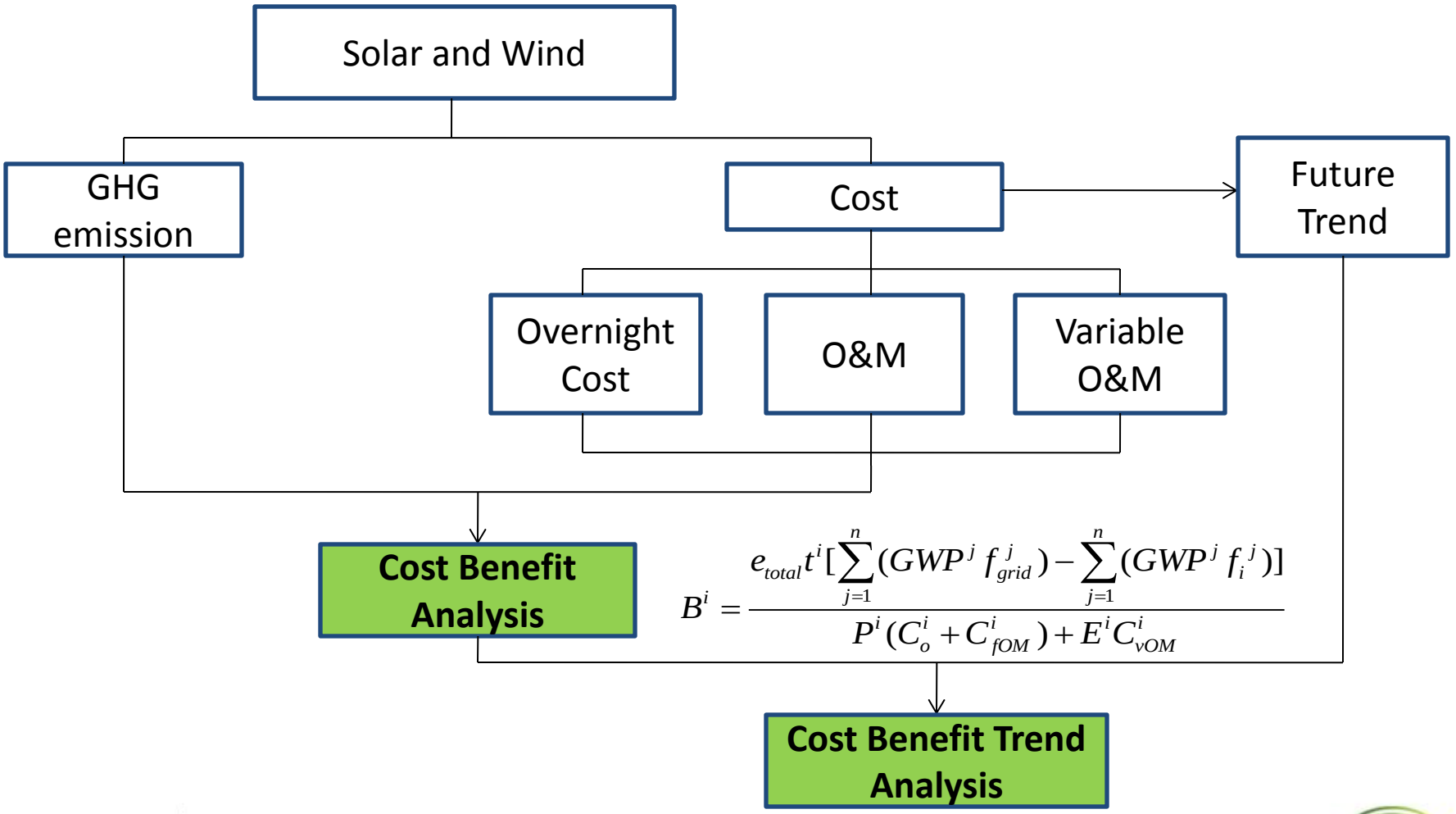
Solar and Wind

Life Cycle Impacts of Electricity

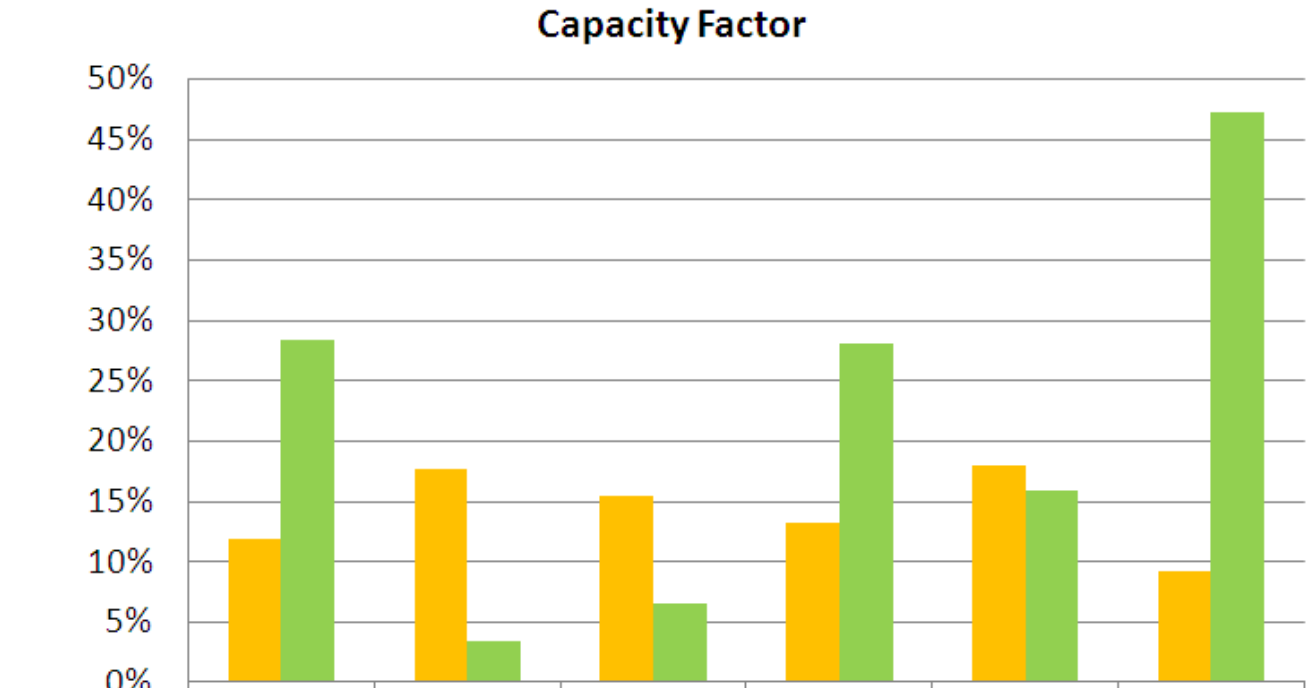


References: (PRe, 2000)(EIOLCA, 2006)(Jungbluth, 2005)(Martinez, 2009)(Bauer, 2008)(Rooijen, 2006)

Cost Benefit Analysis Structure

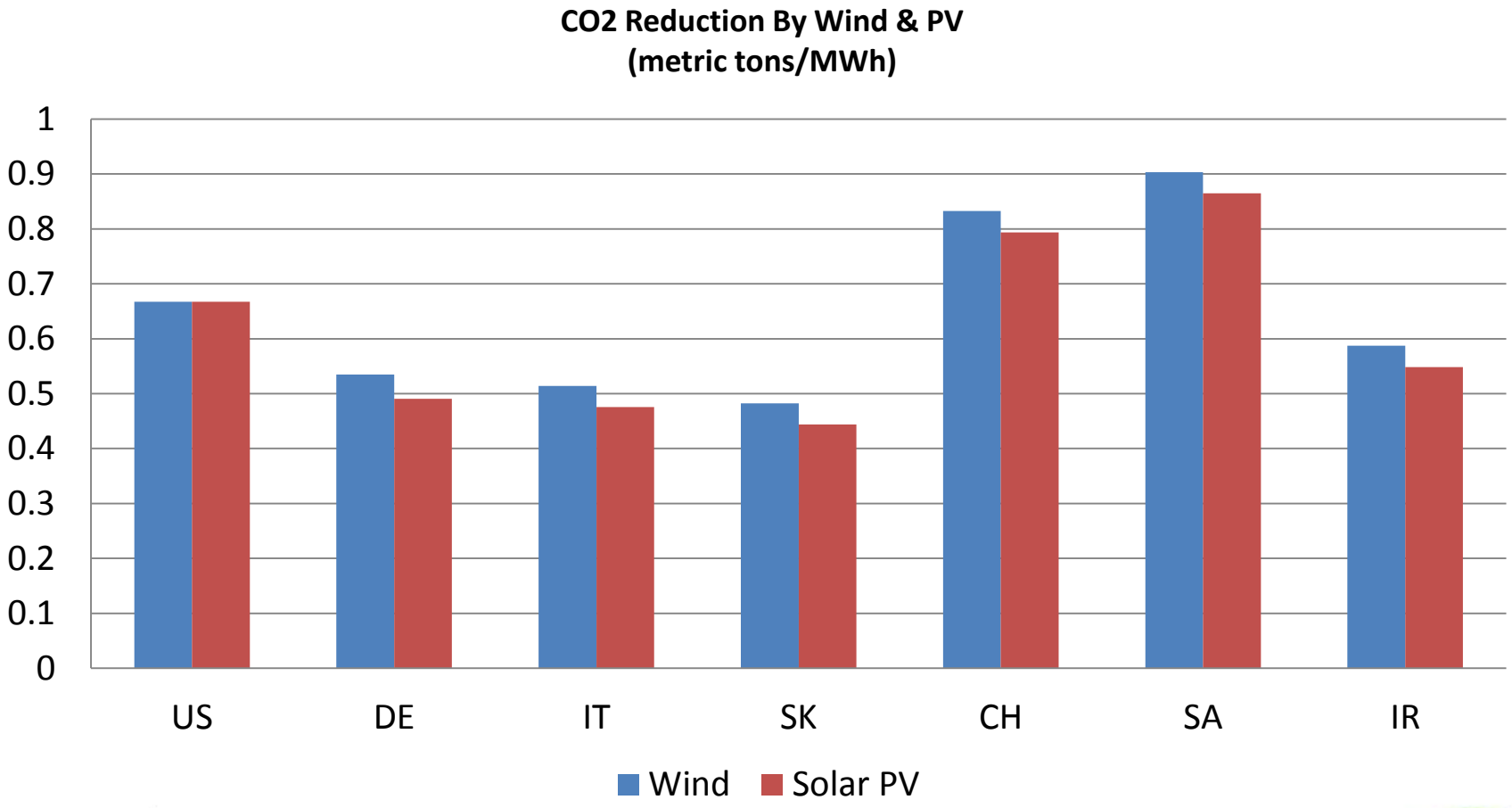


Capacity Factors of Solar and Wind

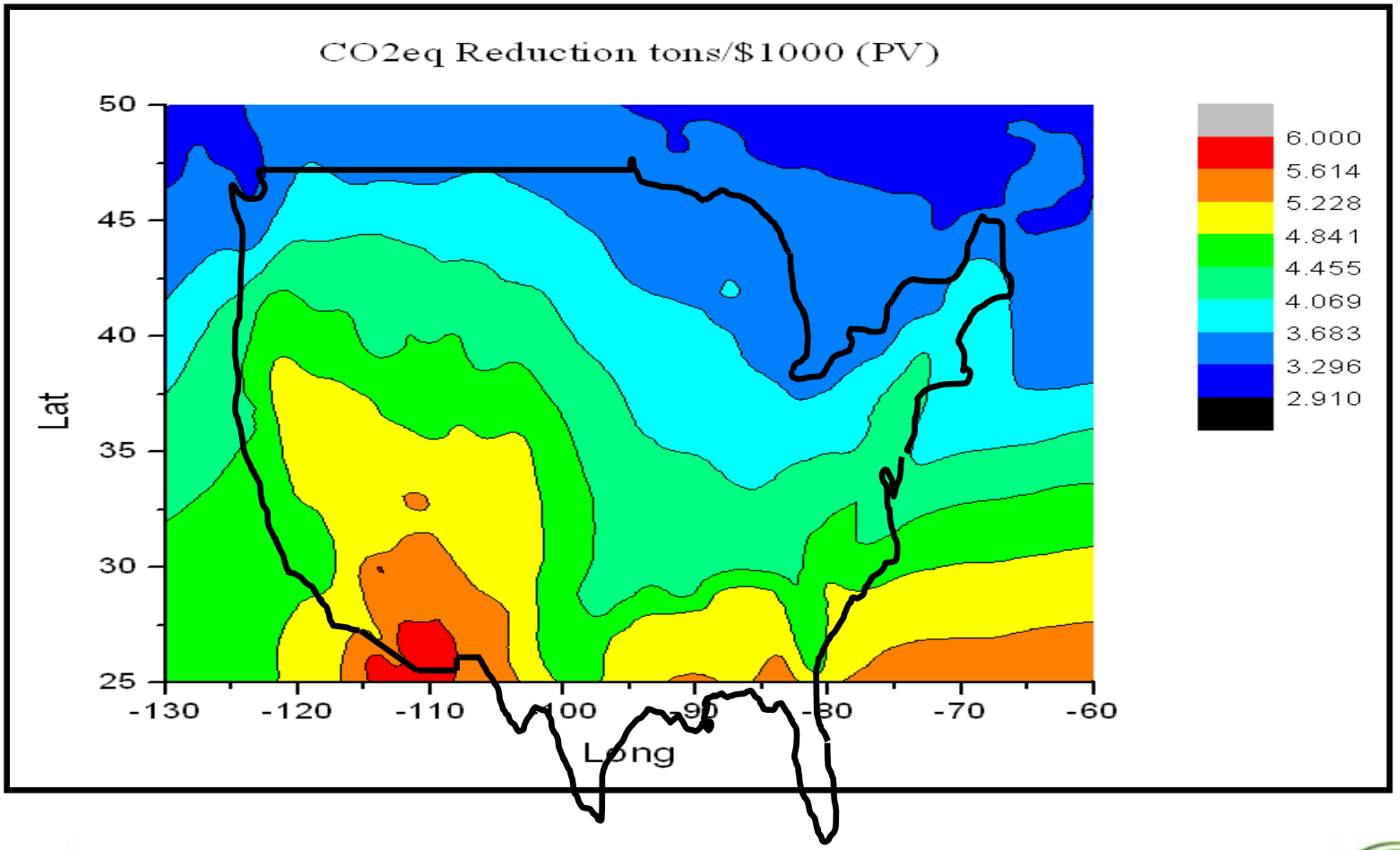


	Detroit	Mexico City	Sao Paulo	Shanghai	Cairo	Bochum
Solar PV	11.84%	17.62%	15.48%	13.15%	17.98%	9.19%
Wind	28.42%	3.39%	6.48%	28.09%	15.97%	47.24%

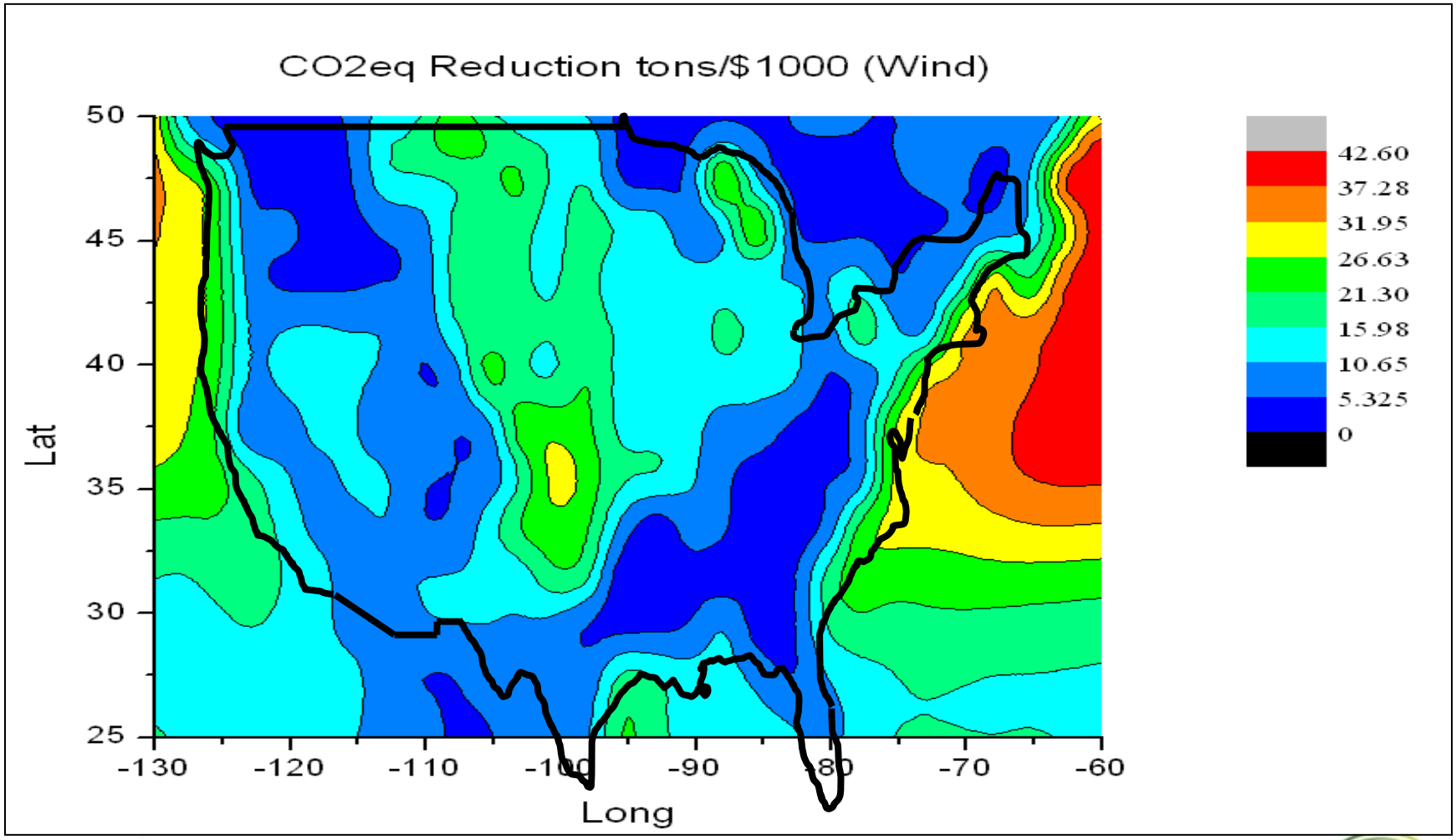
GHG emission mitigations through Solar PV and wind by countries



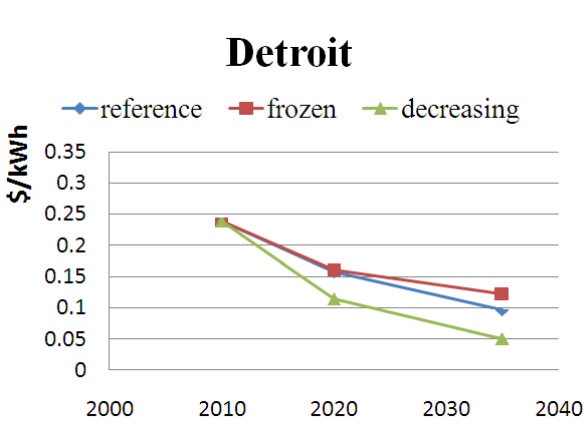
Cost Benefit of CO_2 Mitigation: Solar

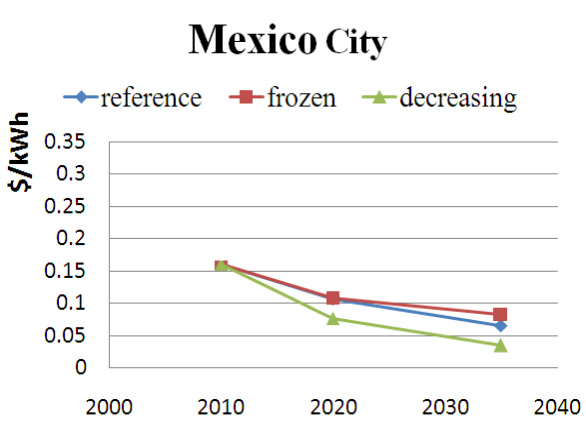


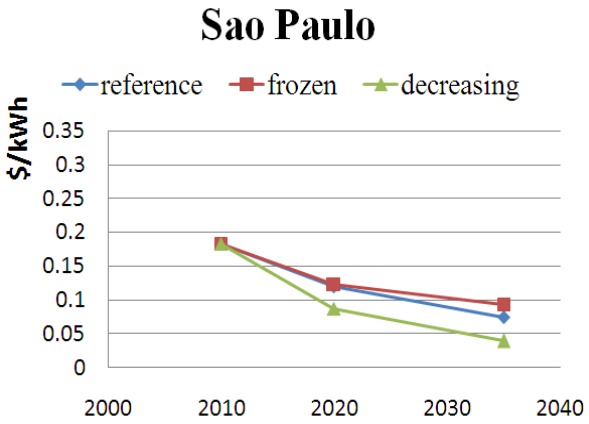
Cost Benefit of CO_2 Mitigation: Wind

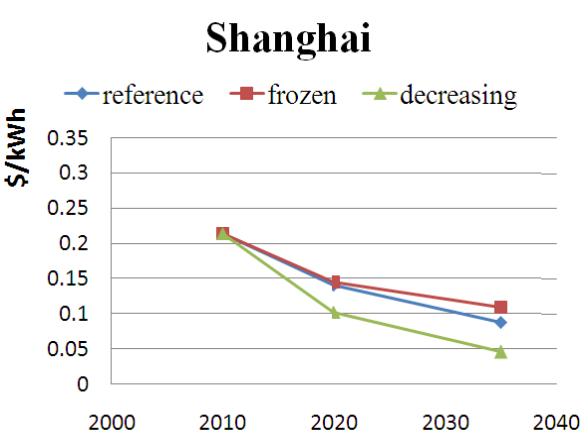


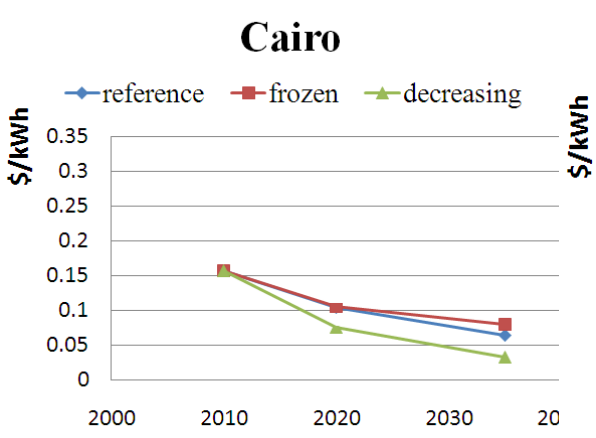
Levelized Cost Trend of Solar PV

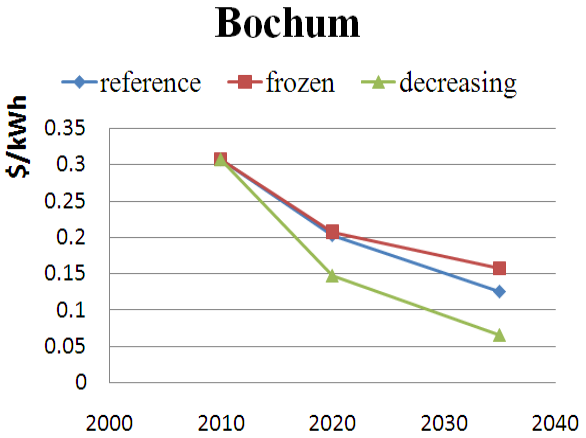












Cost Benefit Trend of Solar