

# “EAT YOUR BROCCOLI?”

*Designing Climate Policy  
as if the Present Generation Matters*



**James K. Boyce**

*Department of Economics & Political Economy Research Institute  
University of Massachusetts, Amherst*

# Air Quality Co-Benefits



# WHY AIR QUALITY CO-BENEFITS MATTER

An example



Oil refinery in Torrance, California

PM emissions: 350 tons/yr  
Population within 6-mi radius: 800,000



Power plant near Bakersfield, California

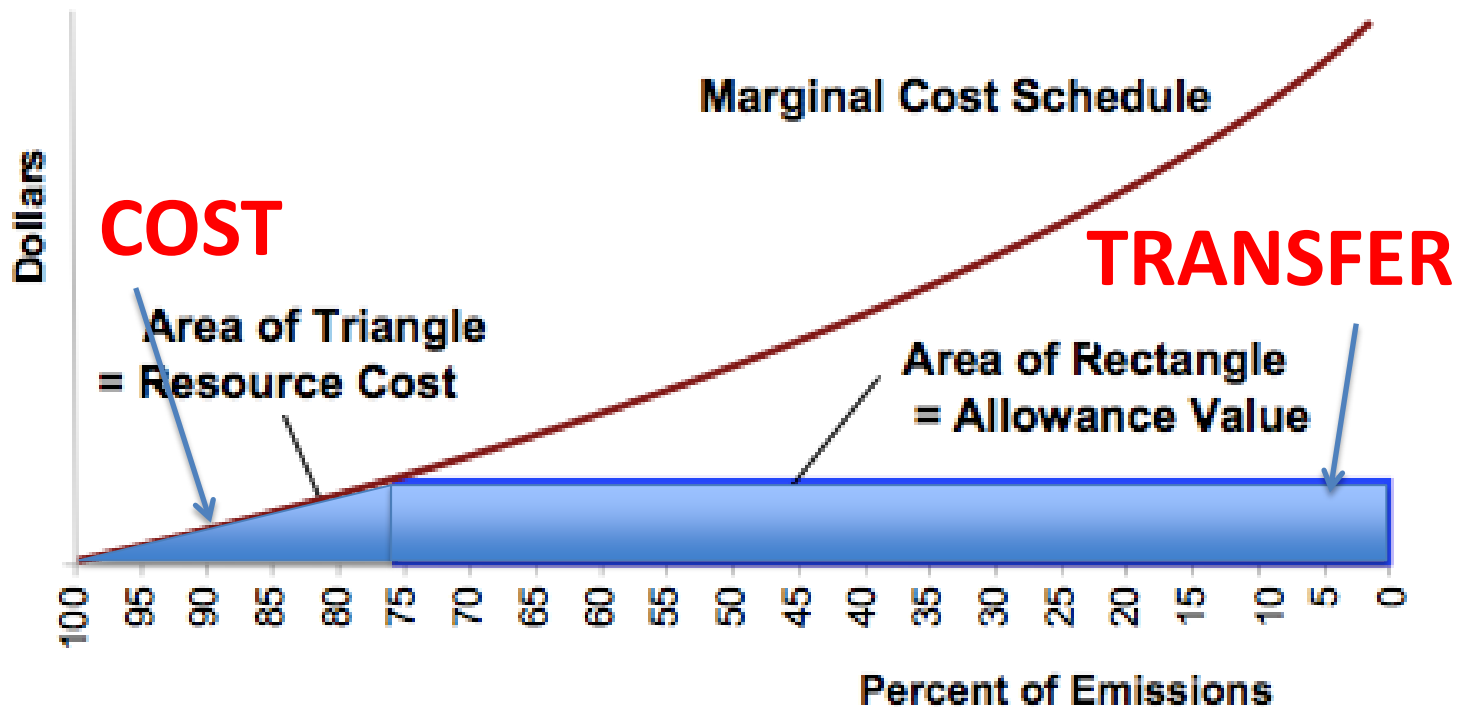
PM emissions: 50 tons/yr  
Population within 6-mi radius: 600

# Carbon Rent



# Carbon capping: costs versus transfers

Figure 4. Resource Cost and Allowance Value in CO<sub>2</sub> Cap-and-Trade Program



Source: Dallas Burtraw et al., "The Incidence of U.S. Climate Policy." Washington, DC: Resources for the Future, April 2009.

# Who pays carbon rent?

## Consumers pay

- in proportion to their direct and indirect use of fossil fuels
- in absolute terms, richer households use more than poorer households
- as a share of income, however, in some countries, including the U.S., poorer households pay more -> equivalent to a regressive tax



# Who will receive the carbon rent?





DIEGO RIVERA (1941)

FLOWER VENDOR (GIRL WITH LILIES)

IMAG. © 2007 ROS RUIZ

*“La tierra es de todos con el aire el agua i la luz i el calor de sol.”*

- Diego Rivera, La Asamblea Primero de Mayo. Ministry of Public Education, Mexico City.



# For more

- J.K. Boyce and Manuel Pastor, 'Clearing the Air: Incorporating Air Quality and Environmental Justice into Climate Policy,' *Climatic Change* 102(4), 2013.
- J. K. Boyce, 'Climate Policy as Wealth Creation,' *Dollars & Sense*, July 2014.