I should probably start by putting my cards on the table. I'm not really an advocate of cap and trade as compared with other forms of regulation. What I care about is getting effective carbon restrictions in place, whether they take the form of cap and trade, a carbon tax, industry-wide regulations, or something else. The big advantage of cap and trade from that perspective is that some systems are already up and running, and unlike a carbon tax, it doesn't directly violate any political taboos. Any of these systems will only be as good as its implementation anyway.

There's been a lot of debate about environmental justice and cap-and-trade, including some interesting exchanges on this blog prompted by the California litigation on the subject. I thought it would be worth looking into this more carefully, resulting in a short paper on the subject. The most debated issue is whether disadvantaged neighborhoods are likely to get a disproportionate share of pollution ("hotspots") under cap and trade. The answer depends at least in part on how you define the comparison.

If the question is whether pollution will be higher when you add a new cap-and-trade scheme on top of existing pollution laws, the answer is probably no. The empirical studies of existing trading schemes don't support show that. As a matter of economics, this would only if for some reason it was cheaper to add even more controls, restrict production, or close down newer, more efficient plants rather than old, inner-city ones, which seems unlikely.

On the other hand, it's harder to say how the results of a cap-and-trade scheme compare with those of conventional technology-based regulation in terms of pollution at specific locations. Presumably, as a result of trading, emissions would be higher at some places and lower at others than they would be under a uniform regulation. One complicating factor is that the conventional regulations will cost more and as a result, it may not be politically feasible to aim at the same overall reduction in emissions. For instance, one study found that low-income neighborhoods actually did better under a California cap-and-trade scheme for NOx than they would have done under conventional regulation. In addition, the higher costs of conventional regulation would be reflected in utility rates for low-income consumers, another fairness problem. One advantage of cap and trade is that it may be easier to build in mechanisms to finance programs to decrease the burden on those consumers.

On the whole, the environmental justice issues can't just be dismissed, but they're fairly speculative. Notably, the trial judge in the California case upheld the government's approach, which was to do some modeling to check out existence of hot spots and then monitor to see if any actually develop later. That strikes me as a reasonable approach.