If you put aside their environmental impacts, fossil fuels are wonderful for generating electricity. They are cheap, reliable, and currently in abundant supply. But the environmental drawbacks are considerable, and the most serious one is their contribution to climate change. To deal with climate change, do we need to adopt an attitude of unremitting hostility to fossil fuels, everywhere and under all circumstances? Or is a more nuanced approach warranted?

The issues are complicated and I haven't reached any final conclusions. But despite my strong belief in renewable energy, I'm not quite as negative about the future of fossil fuels as many environmentalists.

Fracking and expanded use of natural gas. In the U.S., the near-term question is expanded use of natural gas. This raises two issues, in terms of climate change mitigation. First, as Jonathan Zasloff points out (here), methane leakage is a concern that needs to be addressed. Second, expanded use of natural gas is a great benefit to the extent it crowds out coal, but a negative if it crowds out renewable energy.

It seems to me that the discussion of this issue has overlooked geographic distinctions. In states like California, where coal is not a big part of the mix for electricity generators, natural gas is a net negative in climate terms. So states that are not coal dependent should continue to reserve a big place for renewables and should not encourage natural gas. On the other hand, in a number of states (especially in the South), renewable capacity is limited, not to mention regulatory interest, so natural gas could make a very positive contribution by lowering reliance on coal. So pursuing different policies about natural gas use in different places seems desirable. And if natural gas can replace coal rather than renewable energy, and if the benefits aren't cancelled out by leakage, there is a good environmental case for natural gas.

"Clean coal." Both presidential candidates have endorsed the idea of clean coal, but many environmentalists are deeply skeptical. As Ann Carlson has noted, we do seem to be making progress in terms of sequestering CO2, but we don't seem very close to a commercially viable method of capturing the CO2 in the first place. (here) However, despite the technical challenges, I think it's only a matter of time before carbon capture and sequestration (CCS) becomes a reality. The reason is simple. Coal is really cheap, reliable, and abundant. So if it can only be used with CCS, there will be a tremendous economic incentive to make CCS work. But this will probably only happen if we keep up the pressure on coal to make the change.

The bottom line is that renewable energy should be a very high priority, but there’s a reasonable argument that. under the right circumstances, fossil fuels may also have a role to play in our future.