In many situations, public policies supporting greenhouse gas reduction also support other environmental goals. But sometimes, different environmental policies bump up against each other. It is left for enlightened public officials to sort it all out. Here is a link to comments recently filed with the California Energy Commission by the Center for Law, Energy, & the Environment pointing out one of the bumps. The subject is the laudable goal of generating electricity from cow manure.

California's dairy industry is the largest in the nation, with more than $5 billion in annual sales. It's the state's 1.7 million dairy cows that deserve all of the credit, and they don't ask much of us in return – except, maybe, for relying on us to figure out what to do with more than 67 billion pounds of cow manure.

Ignoring it has proven to be an unattractive option. Annually, the manure emits 450,000 tons of methane, a greenhouse gas 20 times more potent than carbon dioxide. Ammonia, phosphorous, pathogens and other organic matter contaminate surface and groundwater, leaving high concentrations of salts and nitrates for good measure. And manure from California cows, contented or otherwise, contributes more than 2,000 tons of volatile organic compounds to the air.

Lucky for us that cow chips have other attractive qualities, beyond serving as Frisbees. Consider, for instance, the magic of anaerobic digestion, through which bacteria break down the organic matter contained in the manure into biogas, which consists of methane, carbon dioxide, and other gases. If you can capture that gas, you've got an energy source for generating electricity or heat.

Here is the problem: there are only two common ways to use the gas – put it in a natural gas pipeline for use elsewhere, or burn it onsite to generate electricity. Most dairy farms are far from gas pipelines, or face prohibitive gas quality standards. That leaves us with generating electricity. But farmers have found that while manure processing eliminates certain kinds of pollutants, burning it to produce power releases others – most notably, criterion air pollutants that are so hard to control in places like California's San Joaquin Valley.

The result is that methane capture projects designed to reduce the release of greenhouse gases are meeting resistance from some air districts that are obligated to look at what is coming out of the smokestack, but less likely to look at the full range of environmental implications. A well-designed methane power project may actually reduce criterion pollutants over the full life cycle, if one considers such things as fuel savings in the transportation sector resulting from on-site management of the cow chips. Regardless,

regulators will need to face head-on the question of how to balance the pressing need to attain Federal air quality standards with the equally compelling need to reduce greenhouse gas emissions.