

Energy Policy - 2007

THE INTEREST IN RENEWABLES IS LAUDABLE, BUT COAL-FIRED GENERATION CANNOT BE WISHED AWAY

Both the House and the Senate of the U.S. Congress are working on versions of an Energy Bill to address the critical issue of energy policy for the nation. So far, the process has produced some interesting and worthwhile outcomes.

The Renewable Energy Portfolio Standard has returned as part of the House Energy Bill, and requires 15% of the energy generated by utilities to come from renewable sources by 2020. The language allows for a portion of this to come from energy efficiency measures, including Combined Heat and Power. This is a much needed correction to the removal of similar requirements by the Energy (lack of) Policy Act 2005.

Vehicle fuel economy is being debated, but clearly the intent is to raise the overall Corporate Average Fuel Economy (CAFE) standards. There are implementation issues with regard to timing and specific level, as well as individual vehicle class or fleet averages, and there is a proposed exemption for trucks used on farm or other workplaces. In general, I do not like averages as they tend to mask inefficiencies through some form of cross-subsidy, and I do not favor exclusions or exemptions as they can turn into loopholes. But raising CAFE standards is long overdue.

Biomass is a realistic and important component in the energy mix. I do not like ethanol from corn and saw the administration's State of the Union fuel economy initiatives as a product of special interests. I am open to the use of cellulosic-based ethanol fuels, provided there is a full and honest accounting of its overall energy balance, including its impact on water use and disposal. Both the House and Senate versions support research in these areas.

Carbon Dioxide Capture & Sequestration (CC&S) figures prominently in both the versions. The U.S. Department Of Energy is tasked to conduct further research related to sequestration, including field validation and testing. The specific requirement is to conduct not less than seven large-volume — defined as 1 million metric tons — sequestration tests for geologic containment of carbon dioxide.

This does not address where the CO₂ is going to come from, which is an important issue. As noted earlier (p. 48, Sept./Oct. 2006), CO₂ is actually in short supply, and at the going rate of \$35 per metric ton, 1 million metric tons of it is a lot of money. This almost certainly requires the storage to be in some form of Enhanced Oil Recovery application, where a portion of these costs can be offset.

The CC&S language also calls for three to five demonstration projects for large-scale capture using one of three capture technologies: pre-combustion, post-combustion or oxy-fuels. Candidate facilities include refineries, iron & steel, cement, cement

clinker, chemicals, ethanol, and fertilizer plants. Power plants are not mentioned, so it would appear that these demo projects may be the intended source of the CO₂ for the various storage demos.

There is not much discussion of coal-fired power plants themselves and all the U.S. presidential candidates seem to be positioning themselves away from what they perceive to be the "third rail" of the energy issue. Meanwhile, a rapidly growing number of state Public Utility Commissions have been pushing back on permitting requests for new coal-fired generation until such time as the electric utility provides specific plans and actions to mitigate the CO₂ produced. At best the utility will be able to say "capture ready," but other than providing space on the site and suitable connections to a presumed post-combustion clean-up process, there is precious little consensus and little or no detail to be had.

This may lead companies to additional natural gas-fired solutions as an expedient. Adding natural gas capacity would be lunacy given the current and projected U.S. fuel supply issues and the abundant coal reserves that the U.S. possesses.

I feel that we are at some sort of tipping point on so many issues, and that the information being served up is so loaded with rhetoric that rational outcomes are in doubt. I am not sure which way things will go.

The discussions to date have been driven mostly by climate change, but energy security issues must provide a needed counter-balance to the decision making process. This seems to be as much a product of the "early" election process and the politicized nature of discussion as anything else. Civility has been a casualty and everything is now debated at its emotional extremes. All the candidates want to be on the right side of every issue. I would like some pragmatism on the issue.

We are already seeing a rise in tensions and disputes over the world's diminishing resources. The recent claims and counter-claims over the Arctic resource are but one example. The actual coal-fired power plants and the associated CC&S permitting issues need to be addressed forcefully and soon, as they are among the few alternatives we have to relieve global tension over energy supplies. **T**

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