

# Dear George,

I know that you have lots of things on your mind right now, so I'll be brief. I see you struggling to find common ground between the seriously divided and so-called "red" and "blue" states, along with what they are supposed to represent. At the same time, I see you struggling with the increasingly important energy dependence on imported oil and now LNG, along with worldwide concerns over global warming and homeland security.

These objectives are generally looked upon as being conflicting, requiring tough choices and compromise. But these goals do not have to be mutually exclusive, and I would offer that you can make a positive contribution to all of these objectives, and do so simultaneously. The concept is called Combined Heat & Power, or simply CHP.

Although considerable progress has been made in improving efficiencies of new gas-fired combined cycle plants, the vast majority of the existing coal-fired fleet is in the 35-40% efficiency range.

CHP can be 80% efficient. That's right. CHP can do the same job using half the fuel, which, of course, means that we produce half the CO<sub>2</sub>. Because these assets are located to serve both thermal and electric power loads, they are by nature "distributed." Distributed assets are inherently less vulnerable to terrorist attacks, and they are of a size that will minimize the impact of their individual loss. There are no above-ground transmission lines in this picture.

This is also the "new technology" that you so often refer to, but it is here and it is now. Like the commercial says: "Just do it!" The only problem is that the market for it has been systematically eliminated.

## Cogen framework

The electric utilities realize that they are at a competitive disadvantage against CHP and will lose load if it is deployed in their service territory. They use every means available to discourage its use and are quite skillful at blocking these projects through the permitting and regulatory processes available to them.

Most of the attempts to implement change have been directed at the national level, but it is clear that this is a state-level game. The Federal Energy Regulatory Commission

attempted to create a market climate for distributed power generation with efforts to define and implement a Standard Market Design (SMD). But, I am led to believe that some influential "red state" southern congressmen were not in favor of the SMD initiative, and it was taken off the agenda.

The irony in all of this is that the most compelling opportunities for CHP deployment are in the so-called "blue states." You could actually solve many of their critical power needs, driven by grid constraints and environment needs, as well as addressing some homeland security issues with an aggressive CHP deployment.

You need to be forewarned that the electric utilities still won't like this, so we need to

## We need to encourage individual states to establish a voluntary CHP Portfolio Standard

think creatively on how the regulatory framework can turn CHP into a good thing, not a bad thing for the electric utility. Undoubtedly, this takes the form of allowing them to participate in the deployment, but they will still need encouragement.

The problem with electric utilities is that their focus is limited to the substation. They really don't care about "the other side of the meter," as it is called. This jargon, in-itself, ought to be a tip-off.

If you decide to actively encourage CHP, as many countries that support the Kyoto Treaty have already done, there are some issues that need to be dealt with to insure success. First, recognize that any task force that you have formed that is led by utility executives is not going to consider CHP as an option. Second, we need to let the electric utilities in this game, but do so in a way that encourages CHP deployment, rather than some form of "electric only" build-out at the sub-stations. To do this and in exchange for clarifying their right to own generating assets, we need to restrict that ownership to the customer side of the meter. This will insure that the equipment is right-sized without requiring a lot of administrative oversight.

Third, we have to provide an incentive gas rate for small CHP users. The original fuel aggregator was the gas company, but they have

either shied away from, or have been prohibited from producing electricity themselves.

Part of the problem is that many of the gas companies have been purchased by the local electric utility, or at least co-opted, because the electric utility is likely to be their largest customer and the threat of "by-pass" is a very real one. To insure successful deployment, it will be essential to develop some fuel aggregation system that will allow individual users a viable fuel option. If there is no way to do it locally, empower the Federal Energy Management Program to set up a buying co-op on behalf of qualified small CHP users, using their purchasing power as leverage.

Lastly, but most importantly, we need to encourage the individual states to establish a

voluntary CHP Portfolio Standard. This would be similar to the Renewable Portfolio Standard, but made available in exchange for lessening the emissions requirements on those 35-40% efficient coal-fired power plants. I think this quid pro quo is both needed and fair, and will provide the necessary incentive to those who can really affect change.

The threshold levels for such a standard would have to be set as a function of the so-called "spark spread" to have credibility. The good news is that the spark spread is most attractive in the "blue states." In fact, it is almost an entirely "blue state" phenomena and such a measure could be implemented without compromising your existing base of support.

Who knows? We may even begin to bridge philosophical differences by re-labeling these states as "green states." Sorry, just a stray thought!

Yours truly:

Pete 

### Author

Peter Baldwin is an industry consultant ([www.base-e.net](http://www.base-e.net)) and a former executive of Ingersoll-Rand Company's northern Research and Engineering Corp. (NREC) subsidiary. Reach him at [pete\\_baldwin@base-e.net](mailto:pete_baldwin@base-e.net).

