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August 4, 2009

TO: Austin Generation Resource Planning Task Force

FROM: Cary Ferchill - Member

RE: Issues for Discussion

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## **Impact of Generation Plan on Electric Rates.**

In the course of our first weeks working on the generation plan, I have been aware that one issue arises often that I believe we should push to the back burner for now. That issue is how the costs of the future generation plan will be allocated to the various ratepayer groups under the existing rate structure. Electric rates are an important issue. However, in my view rates are only tangentially related to the work we have before us, which is more an issue of technology, markets, risks, economic cost and environmental stewardship.

Rates are used to allocate economic costs among the various customer categories, but have little to do with the efficiency of a generation plan. The rate structure is determined through a business/political/social bargaining process that is obviously related to, but still independent from, the actual cost of producing electricity and even from actual consumption.

I worry that if we start with trying to figure out how costs would be allocated under the current rate plan, we will have a difficult time moving forward with our work. I think we should be pursuing an efficient generation plan, and then consider the relative impact on different rate classes.

I would like to believe that if we determined that a given generation plan is superior in terms of technology, economic cost, risk and environmental stewardship, that we would not reject it simply because it would raise prices for a particular customer group under the existing rate structure. Instead, I would assume that we would be smart enough to simply recommend adoption of the best generation plan and recommend a change in the rate structure as necessary to reallocate economic costs in light of the realities of the market. AE's existing rate structure has been in place for some time with only slight modifications, but it is not written in stone. It can and should be changed if it no longer fits the company's business.

## **Preliminary Analysis of Generation Plan Options**

Although I am aware that some of us are still working to digest the analysis included in the Pace Consulting studies, I am confident that their conclusions to date are quite reasonable, even if I would perhaps change some details if I were doing the work myself. My confidence comes mostly from the fact that the Pace results validate the work done over the last year in the LBJ School modeling.

The baseline scenario suggests, not surprisingly, that no matter what we do, even if we do essentially nothing, the cost of generating electricity will increase over time. The other scenarios suggest that each attempt to achieve the City's goals for meeting electricity demand and achieving carbon reductions will have a pretty similar future cost, regardless of the method chosen for generation. You may find this surprising. I certainly did find it surprising when we did the same analysis earlier this year. In particular, I was surprised how similar the cost was for high renewable scenarios versus existing fossil fuel scenarios.

However, after reviewing the scenarios, it becomes clear that there are good reasons for this convergence:

Rather obviously, any scenarios that are extraordinarily costly get ferreted out early in the process and don't get detailed consideration because they are not practicable. That is why, for example, we have not seen any scenarios that rely primarily on putting solar panels on top of every house and business. It simply would not be economical nor would it meet demand requirements.

It has become clear that the federal government will be imposing new costs on carbon emissions. In years past this cost was usually not factored in to the analysis, or not given much weight, because it was not clear that a carbon regime would be put in place or how much impact it would have. Now we cannot ignore this cost, it is going to happen. When it does happen, it will naturally level out the cost benefit that coal and gas have previously had. After all, that is what a carbon regime is intended to do.

Renewable generation, particularly wind generation, has proved to be very economical and in many cases has actually gone down over time. This has created the rush to build additional wind generation capacity in West Texas, which has in turn created the congestion problems in the Texas transmission system. Now that the PUC has moved to alleviate the congestion problems, we can expect to see transmission cost come down again in a few years.

The markets for fossil fuels have become increasingly volatile. As we have become more aware of the limits to fossil fuel production, the floor for projected future costs has gotten higher and the ceiling has gotten much higher. This situation leads to significantly higher projected future cost for fossil fuel-based generation.

While all the scenarios we have seen involve significant uncertainty, I feel comfortable in assuming that future fuel prices involve greater uncertainty than current capital costs. This leads me to the conclusion that the renewable scenarios which involve high capital costs but low fuel costs deserve serious consideration.

If we accept that the high renewable scenario is a reasonably competitive approach on cost, in my mind it becomes a strong favorite for recommendation because it has so much greater benefit in terms of carbon reduction. If we can choose among alternatives that have similar cost and very disparate environmental impact, why would we not choose the alternative with the more favorable environmental impact?

I am aware that you may have a much different approach to analyzing this issue, but I wanted to kick off the discussion by putting forward my initial thoughts. I look forward to working with you on this.