

June 21, 2004  
RE: Proposal to Develop a Master Energy Plan

Santa Fe Board of County Commissioners  
102 Grant Avenue  
P.O. Box 276  
Santa Fe, NM 87504-0276

Dear Commissioners:

Local Energy would like to assist you in developing the joint City/County task force to help plan our community's energy future. As a tax-exempt nonprofit organization created specifically to help communities solve energy problems, Local Energy is uniquely capable of offering assistance with projects such as this one.

In a recent poll in which 1,200 Santa Fe residents were asked to name the most important problems facing Santa Fe, more than 700 responses cited the water shortage. Only one of the respondents mentioned energy. As our energy problems become more acute, less than one-tenth of one percent of the community is even aware of the very serious issues we now face concerning our energy future.

Attached you will find a proposal outlining some of the most critical questions that must be answered relative to our electric power issues. Please feel free to contact me to discuss this proposal, and let me know your ideas on how we might proceed from here.

Thanks again for your active interest in creating a bright energy future in Santa Fe. We can work together to meet our energy challenges, and in fact, we must. The future of energy in Santa Fe is in our hands.

Sincerely,

Mark Sardella, PE  
Executive Director, Local Energy

**Recommended Study Items for the Proposed City/County Energy Task Force**  
Presented to Santa Fe County by Local Energy  
June 21, 2004

The following suggestions specifically relate to the issue of providing reliable and affordable electricity service to the Santa Fe community.

**Authority and Jurisdiction Issues**

It is important to know what authority the City and County have regarding the utility's proposed installation of new transmission and distribution lines. Specifically, we must know the terms under which we can approve or deny utility projects, and what rights we have to:

- require third-party neutral studies of alternatives to power lines
- provide incentives for non-rate-based alternatives
- require disclosure of technical information regarding loads
- implement programs or measures that obviate the need for the new lines

Specifically, the task force should consider the following questions:

1. **What specific authority does Santa Fe have related to this effort?** The rights and limitations of Santa Fe's authority over matters such as taxation, economic development, public health, safety, and welfare, building codes, siting, zoning, franchising, and municipal utility operations must be considered throughout the process. Studying these rights generates ideas for proposals, and knowing the limitations of these rights prevents us from wasting time trying to enact rules or programs over which we have no jurisdiction.
2. **Does Santa Fe have authority to require formal studies of the potential for demand-side management and on-site generation projects?** If so, this could be a precondition of granting siting approval for all new power line projects. The studies should be third-party neutral, since the results will affect utility revenues.
3. **Could Santa Fe offer incentives to independent developers of demand response technology that would eliminate the need for transmission and distribution upgrades?** The value of strategically placed demand-response technology can greatly exceed the cost of installing it. In such cases, very little incentive will be needed.
4. **What are our options relative to municipal utility creation?** Residential customers with public power systems pay an average of 12% less for their electricity than customers of investor-owned utilities, and the economic impact of this rate reduction would be significant. Albuquerque has a municipal utility that they have never activated, and Santa Fe could at least put one on the books. Beyond that there are many options, including creating a Municipal Utility District, a Power Authority, or even a full-scale Municipal Utility.

## **Regulatory Issues**

Utility regulation can be a complex topic, but in light of the damage inflicted by Enron and other utilities as they pushed their deregulation scandal on unwitting ratepayers, the importance of understanding basic utility regulation cannot be overstated.

Several regulatory questions that relate directly to power line issues in Santa Fe should be asked by the task force:

- 1. What is the regulatory significance of encircling the city with sub-transmission?** The utility has been seeking to do this for a long time. Is there a regulatory reason? Would having a ring-bank of sub-transmission (115kV) around the City prevent competitive electric companies from ever being able to serve the City? Would such companies have to pay a tariff? This must be thoroughly investigated.
- 2. Who in Santa Fe has a load-retention rate?** Utilities sometimes offer special rates to customers that express a desire to self-generate their electricity. The rate is expressly designed to prevent the customer from generating electricity. This may be anticompetitive, since the sale and installation of generators is a competitive industry. Is this practice being used in Santa Fe, and is it contributing to the need for power-line upgrades?
- 3. Should Santa Fe intervene in the utility's 440 filing at the Commission?** The utility does not need Public Regulation Commission approval for projects below transmission voltage, but they do file a Form 440 at the Commission. Santa Fe may be able to file a motion asking the Commission to review this filing on grounds that alternatives beneficial to ratepayers may not have been adequately considered.
- 4. If the distribution capacity created with demand response technology can be made available to the utility for less than the cost of a power line upgrade, is the utility required to purchase it?** The attorney general's office may be able to best answer this kind of consumer protection question.

## Technical Issues

Energy issues don't have to be as complex as they are made out to be. The power line problem in Santa Fe, for instance, can be solved in two ways:

- Adding new power lines, or
- Reducing the load on the existing power lines

Since the task force is directed to study alternatives to new power lines, its current focus will be on ways to reduce the load on existing power lines. This can be done in just three ways:

- Reducing the usage by consumers (fuel switching, efficiency, advanced controls)
- Moving loads to off-peak times (behavior changes, storage, or automation)
- Installing strategically placed generation (load-side generators)

Answers to the following questions will help decide the most beneficial ways to reduce loads on the system:

- 1. What is the daily load profile for a summer peak? Winter peak?** The utility has been very forthcoming with peak load data on distribution lines, but more information is needed. The 24-hour load profile from a peak day would show the time-of-day that the peak occurs, and thus yield information about what is likely causing it.
- 2. What is the duration of the peak load?** Often peak loads last only a short time, and this informs the selection of an appropriate remedy. Peaks lasting less than 20-hours per year could possibly be reduced using electronic load control. If the peak lasts less than 100-hours, a standby generator may be a good solution. The task force should request load duration curves for all of the feeders in question.
- 3. How much local electric load could be switched to another fuel?** Our biomass study identified about a half-megawatt of electric space heat in the downtown area, but there is much more than that on the south side of town. Homes built in the '60's and '70's were often all-electric, and are very expensive to heat. Pumping loads can also sometimes be switched to another fuel.
- 4. How much existing local generation could be interconnected to serve peaks?** In Albuquerque, backup generators were interconnected with the utility grid to serve peak loads. Are there existing generators located in bottleneck areas in Santa Fe? The Chavez Center? Community College? Sewage treatment plant? Are there strategic locations where generators could be added to relieve electrical feeders?
- 5. What is the potential of offering interruptible service in Santa Fe?** How many customers would pay a lower rate in exchange for having their service cut during peak loads?
- 6. What is the potential of electronic DSM systems in Santa Fe?** Electronic systems using radio-controlled switches to temporarily interrupt hot-water heaters, air-conditioners, and other loads during peak hours are common. How effective could they be in Santa Fe?

### **Economic Issues**

Energy costs play an important role in economic health. A 1987 study by UNM's *Bureau of Business and Economic Research* showed that a 15% drop in electricity prices would create 2,600 new manufacturing jobs, increase total state employment by 5,100 jobs, and increase personal income by \$125 million. Clearly care must be taken when policy decisions affect energy prices!

What's more, the structural changes already taking place in the energy industry are rapidly driving up prices. Electricity rates are frozen until January 1, 2008, which is why we haven't yet experienced price increases that we've seen in oil and natural gas. Electricity rates, when thawed, will likely increase sharply as well, however. Estimating the increase is critical, since the economic effects of electricity price increases are severe and regressive.

### **Additional Sources of Help**

Local Energy can offer assistance in answering many of the questions posed herein. For those questions that we cannot answer, we are in touch with a variety of experts that can assist Santa Fe in making the best energy choices. Some entities that should be contacted for this project include:

- Alison Sylverstein – Senior Energy Policy Advisor, FERC
- Anthony Mazy – California Office of Ratepayer Advocacy
- Dave Hoffman - Celerity Energy
- Wagner Power Systems – Distributed Resources Department (Albuquerque)
- The American Public Power Association
- The Regulatory Assistance Project