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Dear Client:

Electricity generated by nuclear power is the least expensive, and cleanest, source of power among the major generators such as natural gas and coal. And now UTAustin physicists have designed a system that could eliminate one of the biggest arguments against nuclear power.

The availability of electrical power is vitally important for the Austin area in the future. And nuclear power *can* be an important element in that equation. But it is controversial. **Most people cite nuclear waste as the main reason they oppose nuclear fission as a source of power.** Toxic nuclear waste currently is stored at sites around the US. One large-scale geological storage site under construction at Yucca Mountain in Nevada is criticized as costly, dangerous and inadequate.

UTAustin scientists have designed a new system that, when fully developed, would use fusion to eliminate most of the waste produced by nuclear power plants. This is significant. The invention could make nuclear power even cleaner and a more viable replacement for carbon-heavy energy sources, such as coal.

The scientists say the waste destruction system will be relatively inexpensive and that it could drastically decrease the need for any additional or expanded geological repositories. There are more than 100 fission reactors producing power in the US. The waste from these reactors is stored and not reprocessed.

The UTAustin invention is no larger than a small room. The Compact Fusion Neutron Source would ultimately reduce the waste from the original fission reactors by up to 99%. **Importantly, burning that waste also produces energy.**

This is not the forum to go into the scientific details on how the process works. (The details are published in the journal *Fusion Engineering and Design*.) **The UTAustin scientists say their invention has already gained acceptance in the fusion community.** Several groups, in the United Kingdom and the US, are considering implementing the technology on their machines.

Their goal? The UTAustin scientists say they hope to make **nuclear energy a more viable alternative to coal and oil, while waiting for renewable like solar and pure fusion to ramp up.** This is important for Austin because the City is considering an expansion of its nuclear-generated electricity sources. Let's examine that aspect in the next item.

For the first time in years, voters will elect a mayor and a mega-majority of the Austin City Council. This is significant in and of itself, but there is one major issue that should be high on the list of concerns and, so far, you would be hard-pressed to find any focus on the issue.

Austin City Council members are elected to staggered terms to ensure continuity. Three council members are elected one year. **Then three more and the mayor are elected two years later, which is the situation this year.** So, under normal circumstances, the May 9, 2009 election would be important because voters would be selecting a majority of the council.

But, because one councilmember whose term does not end on this cycle is resigning his seat to run for mayor, another council seat is opening up. Thus, a *mega-majority* of seats will be on the 5/9/09 ballot – **four council seats and the mayor's post, a total of five of the seven voting members.** As a result, this council election becomes more important than most recent elections. A hotly-contested mayor's race is shaping up. So you can anticipate some lively campaigning on issues that should dictate Austin's future direction.

One very important issue impacting Austin's long-range future needs to be made soon – whether to **expand Austin Energy's utilization of nuclear power to generate electricity for businesses and residences in its service area.** It's controversial and it is a costly proposition – hardly the stuff that politicians relish dealing with.

But consider some important facts. **Much of the electricity you use day-in-and-day-out, right now, is generated by a nuke power plant.** It's been this way for 35 years. Austin voters decided in 1973 to participate to the tune of 16% in the South Texas (Nuclear) Project located near the Gulf Coast in Matagorda County.

Sure, Austin gets electricity from a number of other power sources – natural gas, coal, solar, wind, etc. But the **electricity generated by the nuke is the cheapest of all these sources,** so much so that it is the first electricity sent by Austin Energy to your home or business to keep your costs lower.

There is absolutely no question that, with Austin's historic growth since its founding, there will be a **need for much more electric power – probably sooner rather than later.** At any rate, decisions need to be made soon because power plants take years to build after decisions are made to build them.

The popular focus, especially in green-oriented Austin, is to expand alternative sources of energy such as wind, solar, etc. But the harsh reality is that **alternative energy sources alone will not be sufficient to meet all the electrical demands of the Austin area.** And you have elected officials (who have more *political* experience than *operational expertise* in running a utility) making policy decisions to meet future demand. We'll continue an examination of this important, and immediate, issue in the next item.

The question of additional electricity generated by nuclear power is not just a theoretical debate in the Austin area. A decision-making juncture is looming.

Even as Austin is pulling down relatively inexpensive nuke-generated electricity, its operating partner in the South Texas Project (NRG Energy) is planning to double its capacity and is **offering Austin an opportunity to invest in the expansion in return for additional electricity**. The City of Austin missed one deadline for responding and has indicated *if* it decides to go ahead it may put the issue before voters.

This is happening at a time of **major new pushes toward nuclear power all over the US**. One report indicated about 30 new nuke facilities may be built in the US over the next 20 years with as many as 140 plants in operation by 2025. In fact, another nuke operator, Exelon, is planning a nuclear power plant just a few miles from Austin's South Texas Project.

As we have said, nuclear power is controversial. But in the 35 years since Austin hooked up to the STP, complaints have also surfaced about other power sources. Take coal. Austin gets a lot of its electricity from the coal-fired Fayette Power Plant east of Austin near La Grange. **Coal is coming under heavy fire from environmentalists because of the polluting aspects** that arise from burning coal.

Natural gas is also catching its share of flak as a source for electricity. And while alternative energy sources are darlings of the environmentalists, **solar power and wind power are a long way from attaining enough critical mass** to be heavily relied-upon. Put all this together and you see no single source is a panacea.

This brings us back to where we started. **Many of the arguments against nuclear power that echoed throughout Austin 35 years ago did not come to pass**. There have been no major radioactive leaks. Despite a few early interruptions, operations of the nuke plant have been relatively hassle-free and it has been very dependable in providing Austin Energy with electricity. And yes, there were cost overruns during construction, but when all is said and done, the STP is churning out electricity cheaper than any other source.

The one big national argument against nuclear power that has remained is what to do with the waste after the power has been generated. France (where 78% of its electricity is nuke-generated) and Germany *reprocess* that waste. But the US, for whatever reason, has concentrated on *storage* – with all the problems that entails. Now, physicists right here in Austin, at UTAustin, have designed a system that eliminates most of the waste produced by nuclear power plants.

Admittedly while this invention is a major breakthrough, it is not developed to the extent it can be brought to market today. **However, the solution is on the horizon and it takes a minimum of five years to build a nuclear power plant**. The landscape is changing.

Is the Texas economy *leading* that of the nation, or is it simply *lagging* behind?

It's a very basic question. As we have repeated over the years, recessions are primarily regionally based. California, Florida and other housing-bubble states were hit first and hardest by tough times. **Texas, and the Austin area in particular, were not as heavily impacted by the overblown housing speculation and lending problems that hammered the other states.** As a result of this and other factors, Texas has fared better economically than other states and the nation as a whole – so far.

Here are some concrete, up-to-the-minute examples. While the US economy *lost* more than 2.8 million jobs from December 2007 to December 2008, Texas *gained* 154,600 jobs over the same time period. **Looks pretty good, right?** Put it another way. Texas unemployment rose from 4.2% in December 2007 to 6% in December 2008, while the US numbers went from 4.9% to 7.2% during the same time period. **The Texas situation is obviously better in this snapshot.**

But there are warning signs. First of all, some of the Texas trend lines are in the wrong direction. **Going from 4.2% to 6% unemployment in Texas is not a good sign, even though it is better than what is happening nationally.**

The economists at the TexasA&M Real Estate Center point out that **recent decreases in oil prices have begun to adversely affect** the Texas oil and natural gas industry's ability to generate jobs. It's not a crisis yet. In fact, the oil and gas industry ranked first among Texas industries in 2008 job creation.

The accurate answer to the question of whether Texas is *leading* or *lagging* in this economic struggle will not be known for some time. Powerful external forces are still at play and will continue to be in the months/years ahead. It bears close watching and tracking.

Dr. Louis Overholster quibbles with President Franklin Roosevelt's quote that "The only thing we have to fear is fear itself." Overholster says "fear" is now running seventh!

Sincerely



Editor/Publisher