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Dear Client:

**Water/energy. Energy/water. These two often-intertwined topics are essential to how the Austin area's future develops. They are both regulated by governmental entities and you have no direct control over them. Be advised, though: major changes are underway.**

As you are aware, the Austin area's **major water supplies have been in the throes of drought conditions** for years, with increasing demands for this precious resource. At the same time, city leaders are **altering the sources of energy to power this fast-growing region**. And water is vital to some of the energy sources. Here is some of what is happening as we speak.

City-owned Austin Energy is aggressively adding more and more renewable electricity capacity, such as wind power, to its quiver full of energy options. For example, this week the Austin City Council moved ahead to **spend \$31 million a year for 18 years for wind-generated electricity** from a not-yet-completed facility in the Panhandle, southwest of Amarillo. And it is currently seeking proposals for a large community solar project. Austin's goal (currently under review) is to achieve 35% renewable energy by 2020 and is ahead of that pace.

**It is still discussing curtailing electricity from a coal-fired electricity-generating plant in nearby LaGrange**, that uses large amounts of water from the Colorado River. A report it ordered recently said it was not financially feasible to bail out of the plant altogether.

**The Austin Water Utility is seriously considering raising your water rates.** It seems Austin users have followed the city's drought-driven advice and cut back considerably on water usage. Okay. But the city is facing a **revenue shortfall of millions of dollars because water sales have fallen off**. Now the city is talking about raising your water usage rate. (Go figure. Can't the shortfall be eased by cutting back on expenses that are volume-dependent?)

Speaking of water/energy relationships, UTAustin researchers recently reported that **efficient natural gas-fired plants save 25-50 times more water than fracking consumes** – contrary to shrill criticism that blasting millions of gallons of water underground to release natural gas reserves through hydraulic fracturing (fracking) is a waste of water. This needs a bit of explanation, with some qualifications, which you will find in the next item.

**During these drought-stricken times, can Texas afford to blast millions of gallons of water into the ground to release oil and gas, despite the economic bonanza hydraulic fracturing (fracking) has brought to the Lone Star State? The answer is mostly yes. But it depends.**

**How can pouring so much precious water into holes in the ground be economical and “water-saving?”** Researchers from UT Austin’s Jackson School of Geosciences and the Bureau of Economic Geology came up with an answer.

First of all, the fracking-propelled natural gas production boom has been instrumental in **Texas producing half of its electricity with natural gas-fired plants.** And the researchers note that newer and more efficient combined cycle **natural gas-fired power plants use 2/3 less water than a steam turbine coal-fired power plant.**

(Remember Austin Energy gets much of its electricity from the Fayette coal-fired plant in LaGrange. **And that plant guzzles water that flows down the Colorado River from Lakes Buchanan and Travis, through Austin,** to generate the electricity used in the Austin area.)

The researchers say this means the increase in water use for fracking is easily balanced out, by several orders of magnitude, at the natural gas-fired power plant. **So you use *more* water for hydraulic fracturing of wells, but you use *less* water for the power plant. And over the life cycle, you use less water, they claim.**

**The sticking point: the place where you use more water for fracking may *not* be the same place where you use less water for cooling.** For instance, much of the fracking activity is in South or West Texas. The water drawn to “frack” those gas wells can lower those particular basins while the water savings at the power plant in Central Texas benefits. This can be a **very sensitive local issue** even though statewide the net savings is large.

**Okay. Are you ready for March? Sure spring weather will likely dominate and spring break is a good time for many families. But are you *really* ready for what else March brings to the Austin area? We’re talking crowds of visitors.**

Yep, it’s **Austin’s version of March Madness** when restaurants become more crowded, traffic is more clogged than usual (can that be?) and long security lines can be expected at the airport. First of all you have the **ever-expanding SXSW** with this year looking to be bigger than ever. Then you have the **GrandAm of the Americas.** Oh yeah, high schools from all over the state will be sending their pride and joy basketball teams for the **UIL state basketball tournaments** (girls one weekend, boys the next). Don’t forget **Rodeo Austin.** And the first-ever **IHeartRadio Country Music Festival.** Are you *really* ready for all this?

**Drone technology is in extremely high demand and the rules and regs are on a fast track for completion. Austin and Texas are very much caught up in this red-hot developing world.**

As we've previously reported, a drone (unmanned aerial vehicle, to be precise) is a **small aircraft controlled either from the ground or from a computer that has been pre-programmed**. Drones have both commercial and military application. One industry group thinks drones could become an \$82 billion industry in the US alone.

You know about military drones that can be armed with missiles and/or bombs. Let's examine **the commercial and non-military aspects**. According to **Mary Scott Nabers**, CEO of Strategic Partnerships, here are a few examples:

Police departments of all sizes are analyzing how drone technology with cameras can be used, such as **pursuing and monitoring criminals**.

NASA is using drones to conduct **cutting-edge research related to hurricanes and tropical storms**. In fact, NASA has already flown more than 100 drone missions to study violent meteorological events that would be too dangerous or impractical for human pilots.

**Drones help farmers** by providing more precise guidelines for where and when to spray pesticides and, using infrared cameras, detect ailing crops because healthy plants reflect more infrared light than decaying ones.

We've told you in previous issues about **widespread usage of drones for commercial aerial photography**, examples of which can be seen in Austin. This usage is relatively inexpensive and can provide high-quality images. But the general technology can create problems, such as:

1) They can be knocked out of the sky by **bad weather and high winds**; 2) control of a drone can be interrupted if the guiding radio frequency is disrupted by any type of **interference over the airwaves**; and 3) the one most discussed: **privacy issues because of the potential for increased surveillance of private citizens**. This is a real controversial hot-button issue.

Mark it down: **drones will become highly regulated**. The process is already underway by the Federal Aviation Administration, with testing in Texas and five other states. For instance, some current regs state that operators must be able to see the drone at all times. This means they can't be flown at night. You can bet more and more regs will be added to drone usage.

“But, governmental agencies and private companies alike are **clamoring to get their hands on drone technology**,” Nabers points out. “And once they do, it's likely that **all kinds of new uses will be found**.” (Back to the military usage, check out the next item where the US Army's nearby Fort Hood is heavily involved in drone development and deployment.)

**The Fort Hood building where 13 were killed and more than 30 wounded 11/5/09 was finally demolished in the last few days. At the same time, nearly a \$1 billion of new construction and big projects are in the works at the massive Central Texas military base. This is occurring even with the announcement Monday that the USArmy is scheduled to shrink to its smallest size in 74 years.**

Though seldom mentioned in discussions of the area economy, **the world's largest USArmy base is a powerful contributor to the economic wellbeing of Central Texas.** With a land mass much larger than the City of Austin, it is about an hour's drive to the northwest. It's not in the Austin metro area, but it is close enough and large enough to have an economic impact.

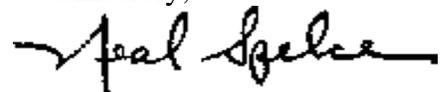
**So when you talk about \$1 billion in spending this close to Austin, you take notice.** The funds are allocated to a number of projects including a new exchange, a hotel and facilities for units and training. **In fact, last week officials broke ground on a \$24 million Training Support Center** on South Range Road inside the base boundaries. The new 160,975 square-foot facility will serve as a "mega store warehouse" to support soldiers training at Fort Hood. It will open in 2015.

This facility is not only for troops at Fort Hood, but it will be utilized for **training support throughout 126 counties, including National Guard and ROTC.** Across the post, work has continued on other projects, such as an Army Medical Center, expected to open in 2015 along with the new exchange. Incidentally, **in a nod to future warfare, an *unmanned* aerial system hangar will open** at West Fort Hood this summer. The hangar has enough space inside for two football fields.

By the way, the Fort Hood shooter, **Nidal Hassan**, was sentenced to death last August by a military jury and is on the military's death row at Fort Leavenworth, Kansas.

**Dr. Louis Overholster**, counseling one of his patients, told him that a clear conscience is usually the sign of a bad memory!

Sincerely,



Editor/Publisher