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Renewable Energy Policies Said Greatest Issue Facing Texans

By Colleen Schreiber

SAN ANGELO — As U.S. policymakers turn away from domestic production of crude toward renewable energy, Texas will once again find itself as the dominant supplier of U.S. domestic energy production. In fact, Texas is already not only the frontrunner in renewable energy development, it also has the greatest growth potential.

It is for that reason that attorney Glen Webb says that Texas' renewable energy policy is the single greatest issue facing the state. It is the single greatest issue, in part, he opined, because few people really understand the enormous political, economic and social consequences of the policy in place.

Webb, who is also a landowner, is the current secretary of the Texas Wildlife Association. Speaking at the first of five transmission line seminars jointly offered by the Texas Wildlife Association and the Texas and Southwestern Cattle Raisers Association, Webb provided a primer on wind economics with a focus specifically on the various policies, which are largely tax incentive-based, that the U.S. Congress and the Texas legislature have established to encourage the growth of the renewable energy industry.

First, however, he took a step back in time to talk briefly about how the nation and the state of Texas have arrived where they are today with respect to renewable energy. First, he reminded listeners that Texas is no stranger to energy development. It all started with the Spindletop discovery in East Texas in 1901. For the last century that discovery, too, he pointed out, has had huge political, social and economic consequences on the state of Texas.

The U.S. domestically produces about five million barrels of crude a day. Texas remains the number one producer of domestic crude, with about one million barrels a day. Yet U.S. consumers use 21 million barrels of crude on a daily basis, leaving the U.S. with a daily deficit of 16 million barrels.

According to a 1987 report by the United States Department of Interior, beneath the Arctic National Wildlife Refuge are reportedly five to as much as 30 billion barrels of recoverable oil and natural gas. However, as Webb pointed out, the national consensus, at least for the last four presidential elections, has been not to produce from ANWR. Thus policymakers have made the decision to try to close the crude deficit through the development of renewable energy.

Renewable energy has become politically favored because unlike crude, natural gas and coal, which are all carbon-based, wind does not emit greenhouse gases.

Texas, Webb said, has eight quads of renewable energy potential. One quad is equal to 183 million barrels of petroleum,

38.5 million tons of coal, or 980 billion cubic feet of natural gas. Renewable energy includes wind, biomass and solar, but it is wind energy in which Texas really excels. In fact, Texas surpassed California in 2006 to become the domestic leader in wind-generated electricity.

“Many will say that Texas has hit its high point in wind energy development,” commented Webb. “I respectfully disagree.”

He noted that President Obama’s administration has articulated a 20 percent wind scenario by 2030. Currently the U.S. has 17 megawatts of wind-generated capacity. Reaching that 20 percent scenario would require 305 gigawatts of wind generated energy, which, as Webb pointed out, is a “light-years” jump.

“If that even comes close to happening, there will be wind farms all across the state of Texas.”

To put that in a better perspective, he pointed out that today renewable energy only accounts for six percent of the entire U.S. domestic energy portfolio and wind energy only accounts for two percent of the renewable energy portion.

“What the policymakers in Washington are talking about doing is going from two percent of six percent up to 20 percent of our entire energy portfolio in 20 to 30 years.”

He offered a quick tutorial on units of power associated with the wind industry. Wind turbines are measured in megawatt output. A megawatt is a thousand kilowatts and a gigawatt is 1000 megawatts. Texas currently has about eight gigawatts of installed capacity, Webb said.

“That is the largest installed capacity in the U.S. Five percent of the worldwide installed capacity is right here in Texas,” he told listeners. “The Next Era wind farm, right outside of Abilene, is the largest wind farm currently in the U.S. The Next Era farm, formerly known as Florida Power and Light, utilizes 1.5-megawatt GE turbines, the workhorse of West Texas, and 2.3-megawatt Siemens turbines.”

The reason this is happening in Texas, Webb said, is simple. Wind development is incredibly land-intensive, and Texas has 150 million acres of open space. At one point, he said, Shell Energy was planning a huge wind project in Briscoe County. According to the *Wall Street Journal*, it was to be a three-gigawatt wind farm, which would require 120 square miles of open space.

“What’s interesting about that farm is according to the *Wall Street Journal*, it will only produce electricity equivalent to one coal-fired power plant,” Webb told listeners. “The point is, as we move our energy portfolio away from natural gas, coal and petroleum toward renewable energy, the size of land that will be needed to produce that type of electricity or energy is huge, and Texas has that land. Nowhere in the world can developers negotiate with one family or one entity or one community and negotiate for 20,000 to 50,000 acres...you can do that in Texas, and you can do it on land that has class four-plus wind,” Webb said.

However, perhaps the greatest reason Texas is the leader in wind energy development, he said, is because of the grid system.

There are four grid systems in the entire North American continent, and Texas has one of them. The Electric Reliability Council of Texas, ERCOT, connects 38,000 miles of transmission lines in the state of Texas. Though it varies, on average the cost to build a transmission line is \$1 to \$2 million per mile.

“Extrapolate that times 38,000 miles and you can see the type of capital investment that has been made in Texas that has not been made in North Dakota or South Dakota or Nebraska or New Mexico.”

ERCOT is regulated by the Texas Public Utilities Commission, and because it is intrastate, not interstate, the Texas legislature has enormous legislative authority over electricity generation in the state, Webb told listeners.

ERCOT currently covers about 75 percent of the state and is responsible for about 85 percent of the state’s electricity load, or about 20 million Texans.

“Ironically, the greatest area of wind-generated energy in the state is in the Panhandle of Texas,” Webb continued, “and ERCOT doesn’t currently cover that area.”

Webb shifted into a discussion on the business model used by the renewable energy business in Texas. That business model, he told listeners, is not based strictly on shareholder profit, rather it is based more about federal and state policy. The most powerful policy tool that Congress has at its disposal, Webb said, is the production tax credit. The PTC came into being when President George H.W. Bush signed into law the Energy Policy Act of 1992. It was most recently renewed on December 31 with the American Recovery and Reinvestment Act, commonly referred to as the bailout bill.

The PTC provides a two-cent tax credit per kilowatt hour of electricity produced and transmitted for wind-generated electricity facilities for the first 10 years of production.

“That’s a dollar for dollar offset against tax liability,” Webb stressed. “It’s not a deduction; it’s a credit. That’s why when the PTC lapses, wind development comes to a standstill.”

Responding to political pressure over Texas’ coal-fired power plants and natural gas-powered plants and also recognizing an opportunity to create more jobs and expand the tax base, the Texas legislature created in Webb’s opinion, “the most favorable atmosphere for renewable energy development in the U.S.”

It all started in 1999 with Senate Bill 7, signed into law by then Governor George W. Bush, which created the Texas Renewable Portfolio Standard.

“RPS is a mandate created by the state government which requires electricity providers to generate 2000 megawatts of additional renewable energy — known as the RPS goal,” he explained. “Each provider of electricity is required to obtain new renewable energy capacity based on their market share of sales times the RPS goal.”

Electricity retailers who fall short are subject to a fine imposed by the state government.

Texas was the first state to create an RPS; other states have since followed suit. In fact, 24 states currently have an RPS, and most recently the U.S. House passed the American Clean Energy Security Act of 2009, which calls for a 20 percent standard nationwide. The legislation, commonly referred to as “cap and trade,” is pending in the U.S. Senate.

Additionally, the Texas legislature, with the passage of SB 7, also created renewable energy credits. One REC equals one megawatt of renewable energy production.

“RECs are another very powerful policy tool, but to receive a REC a wind farm must generate and transmit,” Webb told listeners.

Today there is an active nationwide trading market for RECs. In 2010 it was reportedly a \$900 million market.

“Here’s how it works. If you’re a retail provider of electricity in the state of Texas and you don’t meet the RPS, you can go to ERCOT and buy a certain number of RECs to meet your RPS goal and therefore avoid a fine or penalty,” Webb explained.

Additionally, a wind energy company can sell RECs and another entity in the U.S. can buy these RECs to offset their carbon footprint.

“The statute has created a commodity and a virtual economy for renewable energy,” Webb told listeners. “Unlike gold or petroleum or beef or wheat, which has intrinsic value based on market demand, an REC contains value because state government has mandated renewable energy production. Therefore, the government is creating an artificial market for RECS. This is very progressive legislation coming out of the Texas legislature.”

Texas wind production, he noted, quadrupled as a result of SB 7, and yet the Texas legislature did not stop there. In 2005 state Senator Troy Fraser, chairman of the Texas Business and Commerce Committee which has oversight of the PUC, authored SB 20. This legislation expanded the RPS goal to 5880 megawatts by 2015 and established a goal of 10,000 megawatts by 2025.

As Webb repeatedly pointed out, Texas currently has eight gigawatts of installed capacity but the current grid system can only handle four gigawatts. Thus, while there were all these great federal and state tax benefits — RECs and the PTC — the companies for the most part were not benefiting from the statutes for the lack of transmission. The PTC and RECS only become applicable upon transmission. Therefore, when wind farms are curtailed, the developers do not receive the benefit of the PTC or RECs.

Recognizing the curtailment issue through the passage of SB 20, the legislature created Competitive Renewable Energy Zones. As Webb explained, CREZ is a statutory plan to expand transmission infrastructure to get the wind resource from the remote areas of West Texas over to the metropolitan areas, basically the I-35 corridor.

The legislation also called for the development of four scenarios for building the transmission infrastructure from the CREZ zones to the load centers in the state, again basically the I-35 corridor. In July 2008, the PUC adopted scenario two, which called

for the development of lines with a capacity to transmit 18,456 megawatts of wind-generated electricity, enough to power four million homes.

“There will be more wind farms in the state of Texas as a result of this,” Webb assured listeners.

To transmit the 18,000-plus megawatts of capacity requires roughly 2334 miles of 345 kilovolt lines using a right-of-way of 100 feet, give or take, Webb said. And, according to Texas Parks and Wildlife Department, that will require about 56,000 acres of private land.

The state has contracted with 13 transmission service providers to build the lines at an estimated cost of \$4 billion. However, the legislation does not cap the amount of capital or put limits on the cost due to inflation. Therefore, some estimates provide for as much as \$8 billion in capital.

“What’s interesting is that the Texas legislature allows the transmission service providers, those entities building the lines, to recoup their capital and the state’s power of eminent domain to condemn land. They’re going to get back all their costs to build those lines from Texas consumers, and they get a return on top of that. So while landowners are spending huge amounts of money on attorneys to fight the condemnation process involved with the development of these transmission lines, the utility companies building the lines get their attorney fees paid for by the very people who they’re fighting.” Webb pointed out that the legislation was codified in Texas Utilities Code, including Section 36.051.

Webb continued with more information on state policies related to the wind industry. He noted that the state’s finance system for schools and county governments is largely based on property tax. Thus, another wind industry incentive is that the legislature through the Tax Code Section 312.001 granted statutory authority to county governments acting through their elected county commissioners and their county judges, to enter into tax abatement agreements with wind companies for wind farm improvements.

Likewise, through the Texas Economic Development Act, school districts acting through their elected representatives are also granted statutory authority to enter into agreements with wind farms.

“It’s a little different than the county tax abatements,” Webb pointed out. “It’s a tax credit for the first two years of the project and an eight-year limitation on the appraised value of the qualified property. In the statute, tax relief is based on a minimum investment and a guarantee to create a fixed number of new jobs within the school district.”

He also explained that different categories are set by the Texas comptroller, an elected representative, for rural and non-rural school districts. Thus, for example, under the statute a Category 2 school district has the authority to limit the appraised value of the wind farm in their district to \$20 million even though the project might seek \$200 million in capital.

“It’s a great incentive and an extremely powerful policy tool that the State of Texas has granted to school boards across the state,” Webb told listeners.

In an article dated April 5, 2009, the AP reported that 44 school districts had received \$248 million in exchange for \$700 million in tax abatements.

“Those are payments in lieu of taxes, or what’s called PILOT payments,” Webb explained.

The way it works is that the wind company works with the school district to set up a 501(c)3. The payments are deposited into that 501(c)3, and in so doing, the school district is able to avoid the Robin Hood school plan. The Robin Hood plan, put in place by the state legislature, essentially requires rich school districts to share the wealth with less privileged districts.

“That has many state legislators up in arms,” remarked Webb. “They say that was not the way school finance was intended, and it’s not the way the statute, giving school districts the power to offer incentives to wind companies, was intended to be used.”

However, as Webb pointed out, these dollars are real. He cited two examples; the small communities of Blackwell and Trent, near Abilene in the heart of the wind energy development, are building new schools and new infrastructure.

“Trent has a brand-new high school, middle school and elementary school right next to their brand-new football stadium where the Trent Gorillas play six-man football on Astroturf,” he told listeners. “That’s all from those PILOT payments.

“It’s a real benefit to West Texas rural school children,” Webb reiterated, “and it’s all part of this combination of federal, state and local policy that has been brought to you via the U.S. Congress and the Texas legislature.”

So why is all this happening?

“Wind economics,” Webb opined. “The wind industry is incredibly capital-intensive. According to the U.S. Department of Energy, it costs about \$1920 a kilowatt or \$1.92 million per megawatt to build a wind farm.”

Consequently, to get started, these wind companies form a partnership with a tax equity partner. That partner may be Wall Street, an investment bank or perhaps a hedge fund. In any event, the tax equity partner is an entity with a large source of capital to invest.

The tax equity partner, Webb explained, typically puts up the majority of capital to get the project off the ground. In turn, the wind company allocates all the tax benefits from the PTC and depreciation to that tax equity partner plus any revenue which, he noted, is little for the first 10 years of the project. When the tax benefits expire, the tax equity partner comes out of the partnership and the wind developer owns 100 percent or a large majority of the project going forward. The partnership is commonly referred to as a “Flip.”

“That’s been blessed by the IRS in Rev. Proc. 2007-65,” Webb told listeners. “It is a legitimate tax shelter under U.S. income tax laws.”

Webb put it all together by offering a hypothetical example of

how all this works. The total electricity produced by a two-megawatt turbine is 2000 kilowatts. If that wind turbine blows 40 percent of the time, for example, it would produce seven million kilowatt-hours of electricity per year. That means, then, that one turbine would generate \$140,000 in tax benefits just from the two-cent PTC credit. If there were 50 turbines in a project, the total annual tax credit from the PTC alone would be \$7 million; extended out 10 years, it comes to \$70 million.

The modified accelerated cost recovery system or MACRS that Congress implemented adds considerably more tax benefits.

Webb said the cost of a turbine is about \$2 million, so the total cost for a 50-turbine project comes out to about \$100 million. Congress allows the wind company to depreciate that cost out over five years, with bonus depreciation in the first year. So \$100 million divided by five years comes out to a \$20 million deduction. That figure multiplied by the current 35 percent tax rate tallies up to an additional \$7 million per annum over five years.

Total tax benefits from depreciation alone, Webb reiterated, are \$35 million. Add in the \$70 million from the PTC credit and the total tax benefit to the tax equity partner for that 50-turbine project is \$105 million.

“The tax equity partner gave the wind company \$100 million and they made \$5 million on their money just in tax benefits, prior to selling any electricity at a profit,” remarked Webb. “My point is the initial return on these projects is for tax benefits. That’s what Congress intended. It’s also why we have transmission lines in the state of Texas. You do not get the PTC benefits unless you avoid curtailment and transmit electricity. You cannot avoid curtailment unless the grid system is greatly expanded, i.e. CREZ.”

Webb wrapped up with a brief discussion on the competitiveness of the renewable energy industry. He offered a chart from the U.S. Department of Energy which showed that wind-generated electricity cost more than 30 cents a kilowatt hour in 1980. It has fallen dramatically since then, due to advances in research and development made possible through federal policy. That said, wind-generated electricity, Webb said, is still not competitive with coal-fired powered plants and natural gas.

“Congress is giving all these resources to these companies because they’re hoping that efficiencies of scale will come in, making it cost-effective, which in theory might encourage us to wean ourselves from our strong reliance on petroleum and coal.”

The international business community, Webb said, has taken notice of the federal, state and local policy intervention. In 2007 \$148 billion was invested worldwide in renewable energy and \$9 billion of that was invested in the U.S. wind industry.

“The majority of that \$9 billion was invested right here in Texas, and a significant portion in West Texas. The companies doing business in the state are some of the largest utility companies in the world.”

Webb concluded that over time, the American people will realize whether or not the renewable energy development was good for the country. However, he sounded a word of caution to the

audience that current renewable energy development in Texas is the result of powerful federal and state policies, which benefit large multinational corporations. Those who stand to be burdened the greatest by renewable energy development policy will be Texas landowners whose lands are condemned.

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