

# Should Texas Be Subsidizing Wind Energy Producers at the Expense of its School Children?



*Prepared for:*

**The Cross Timbers Landowners Conservancy**

*Prepared by:*

**Bernard L. Weinstein, Ph.D.  
Terry L. Clower, Ph.D.\***



**July 2008**



\*The authors are professors of applied economics at the University of North Texas in Denton. Views expressed are the authors' alone and not those of the university, its officers or regents.

## **The sorry state of public education in Texas**

Texas prides itself on being a low-tax, low-spend state; and the state's business and political leaders often attribute Texas' rapid population gains and dynamic economy to our competitive fiscal climate. But despite its economic dynamism, Texas' per capita income was four percent lower than the U.S. average of \$38,611 in 2007. Though this disparity can be partly attributed to the state's high rate of immigration and changing demographic structure, it also reflects an historic "under-investment" in public education—at least compared to the rest of the U.S.

In 1995, Texas ranked 25<sup>th</sup> among the 50 states in spending per pupil. But by 2006, we had slipped to 44<sup>th</sup>. At \$7,561 per pupil, Texas' spending on public education was more than 17 percent below the national average of \$9,138. Even Arkansas, Alabama and Louisiana spent more per pupil on public education than Texas in 2006 despite recording incomes well below that of the Lone Star State.<sup>1</sup>

Texas also trails the nation in teacher salaries. According to the National Education Association, the average salary in Texas was \$41,744 during the 2005-2006 school year, placing us 36<sup>th</sup> in the nation.<sup>2</sup> Again, teachers in lower-income states like Arkansas, Kentucky, South Carolina and Tennessee were better paid than ours. Perhaps, then, it should come as no surprise that teacher turnover in Texas is exceptionally high. Indeed, a recent survey conducted for the Texas State Teachers Association by Sam Houston State University found that 44 percent of the respondents were seriously thinking about quitting their teaching jobs.<sup>3</sup> Low salaries and poor working conditions

---

<sup>1</sup> U.S. Bureau of the Census, *Public Education Finances 2006*, April 2008.

<sup>2</sup> NEA, *Estimates Database*, 2007.

<sup>3</sup> "Survey: Morale low for Texas teachers," *Dallas Morning News*, April 19, 2008.

were the most frequently cited reasons for wanting to leave the profession. The survey also found that one in four Texas teachers moonlight at second jobs to make ends meet.

Though recent years have seen some modest improvement in the state-mandated TAKS tests, by most measures of student achievement Texas still lags the nation. For example, in 2006 Texas students ranked 44<sup>th</sup> among the states on the ACT test and also 44<sup>th</sup> on the SAT.<sup>4</sup> Over the past decade, Texas' scores have fallen slightly while national average scores have risen. More seriously, Texas ranks 36<sup>th</sup> in the nation when it comes to high school dropouts. The Dallas Independent School District, with a dropout rate of 55.6 percent, was the 7<sup>th</sup> worst among school systems in the nation's 50 largest cities.<sup>5</sup> Dropout rates in the Houston, San Antonio, and Fort Worth ISDs are almost as high.

Texas' sub-par performance in educational outcomes has significant economic implications. According to a recent analysis by the Alliance for Excellent Education, improving the state's high school graduation rates would benefit Texas and its residents in a number of ways:

- More than 123,000 students did not graduate from Texas' high schools in 2007; the lost lifetime earnings in Texas for that class of dropouts alone total more than \$32 billion.
- Texas would save more than \$1.5 billion in health care costs over the course of the lifetimes of each class of dropouts had they earned their diplomas.
- Texas households would have over \$7 billion more in accumulated wealth if all heads of households had graduated from high school.
- More than \$46 billion would be added to Texas' economy by 2020 if students of color graduated at the same rate as white students.
- If Texas' high schools graduated all students ready for college, the state would save more than \$282 million a year in community college remediation costs and lost earnings.

---

<sup>4</sup> [www.GeorgiaEducation.org](http://www.GeorgiaEducation.org)

<sup>5</sup> "Cities in Crisis," *America's Promise Alliance*, April 2008.

- Texas' economy would see a combination of savings and revenue of more than \$691 million in reduced crime spending and increased earnings each year if the male high school graduation rate increased by just five percent.<sup>6</sup>

Though spending more money on public education isn't a guarantee of improved outcomes, education policy researchers have found strong correlations between higher incremental spending and improved student performance. Put differently, though increased per pupil spending by itself isn't sufficient to guarantee higher test scores and improved graduation rates, it is clearly a necessary step. In short, Texas will have to allocate more resources to public education in the years ahead if we want to maintain a qualified workforce that can keep our economy growing.

There are already indications that public education funding will be the primary focus of the next regular legislative session in 2009, though the debate will likely center on the redistribution of education dollars rather than a substantial increase in total spending. But there are other ways to provide additional resources for public education even if the Legislature doesn't increase funding for the Foundation School Program. For example, school district property tax abatements to certain businesses under HB1200 will reduce available funding by more than \$500 million in the 2010-2011 biennium, enough to give a pay increase of nearly \$1,000 to each Texas classroom teacher. Allowing school districts to grant tax abatements works at cross-purposes to the goal of increasing educational resources, and the Legislature should seriously consider repealing this bill.

The Legislature should also revisit Chapter 313 of the Texas Economic Development Act that allows developers of wind generators for commercial use to apply for a value limitation that significantly reduces their public school district tax obligation.

---

<sup>6</sup> "Potential Economic Impacts of Improved Education on Texas," *Alliance for Excellent Education*, October 2007.

Though a fairly new program, the current and potential revenue losses from this program are sizeable—up to \$14 billion by the year 2025.

The balance of this report focuses on the future of wind-powered energy in the state of Texas and questions whether this energy source, which is already heavily subsidized by the federal government, should also be drawing upon the largess of the state and its school districts—at the ultimate expense of the school children of Texas.

### **The “pros” and “cons” of wind energy**

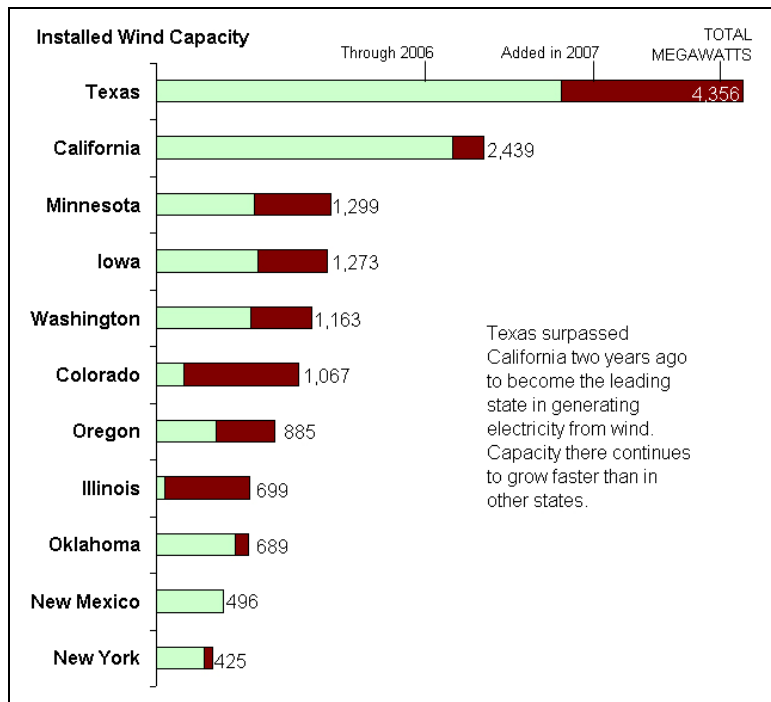
Green, renewable energy is all the rage these days. Politicians, pundits and the media are especially enamored of wind generators, which are seen as a carbon-neutral alternative to fossil fuels for producing electricity. Indeed, in 2007 the U.S. wind energy industry installed 5,244 megawatts, nearly doubling the nation’s wind generating capacity in one year. According to the American Wind Energy Association (AWEA), wind will generate about 48 billion kilowatt-hours (kWh) of electricity in 2008, supplying one percent of the nation’s power supply.

The dramatic growth of investments in wind power is not surprising, given that 24 states, including Texas, require their utilities to obtain a certain amount or percentage of their kilowatts from renewable sources. In addition, such investments are stimulated by Federal tax credits and, in many cases, state and local fiscal incentives.

Texas, perhaps more than any other state, has aggressively encouraged the development of renewable energy supplies, including wind. For example, the Texas Public Utility Commission established a Renewable Energy Credit (REC) trading program several years ago to promote an additional 2,000 megawatts of renewable

capacity by 2009 and 10,000 megawatts by 2025. Currently there are active interconnection requests for new wind developments totaling 50,919 MW. This program, along with tax abatements and other local fiscal incentives, has propelled Texas well ahead of California to become the nation's number one state for installed wind capacity (see Figure 1). Wind power today accounts for about three percent of Texas' installed capacity.

**Figure 1**  
**Largest States Ranked by Installed Wind Capacity**



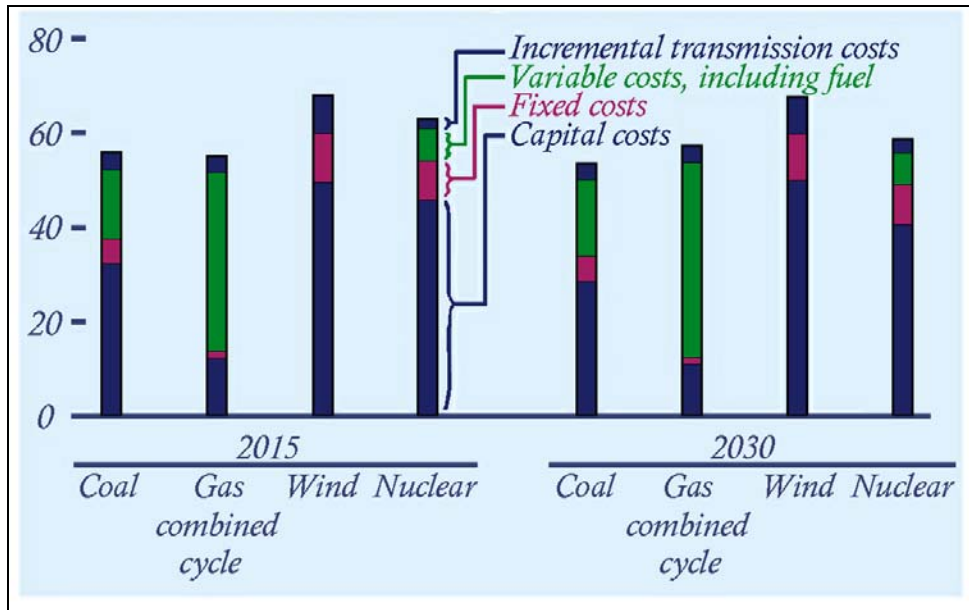
Source: American Wind Energy Association; The New York Times

According to the Electric Reliability Council of Texas (ERCOT), wind generation, at about \$53 per megawatt hour (MWh), is one of the most expensive methods to produce electricity.<sup>7</sup> And projections from the U.S. Department of Energy

<sup>7</sup> This cost estimate assumes 30 percent of wind capacity utilization. Actual operating capacity is closer to 20 percent, increasing the cost to \$80 per megawatt hour.

through the year 2030 show wind generators remaining the most expensive form of power generation, despite presumed economies of scale (see Figure 2).

**Figure 2**  
**Levelized Electricity Costs for New Plants, 2015 and 2030**  
**(2005 mills per kilowatt-hour)**



Source: American Wind Energy Association

Wind farms cannot be considered base-load generating capacity since they don't operate when the wind is still, as happens on hot, sultry days in West Texas. That means even under the most optimistic assumptions of the potential contributions of wind and other renewables to the power grid, the state's utilities will still have to build dozens of base-load fossil fuel or nuclear plants over the next several decades.

What's more, the most sustainable winds are found in Far West Texas while most of the state's population and industry is located in the eastern part of the state. Installing the infrastructure to gather power from thousands of wind generators and then transmit that power to the state's population centers without incurring significant "line losses" will

require huge investments that could further inflate delivered power costs to Texas households and businesses.<sup>8</sup> Texas now ranks as the 15<sup>th</sup> most expensive state in the nation for electricity, paying 36% more than the median.<sup>9</sup> To the extent heavier reliance on wind power increases the average cost of electricity in Texas, it may put the state at a competitive disadvantage in the quest for new and expanding industry.

### **Does wind power need state incentives in addition to huge Federal subsidies?**

Wind energy is the most heavily subsidized form of power generation in the U.S. today. On an investment of \$100 million, the wind developer receives more than \$74 million in Federal tax credits and accelerated depreciation alone. In Texas, the developer is also eligible for a variety of state and local credits and incentives (see discussion below).

As mentioned above, installed wind generation has been growing rapidly, both nationally and in Texas. Without question, much of this investment has been driven by Federal tax write-offs and credits, most notably the “renewable energy production” tax credit. Renewable energy providers receive an income tax credit of two cents per kilowatt-hour of electricity they produce. No further tax subsidies are needed or justified to encourage the development of wind power—**especially subsidies that reduce funds that could be used to improve Texas’ public education system.**

---

<sup>8</sup> Complicating matters further, much of the Texas Panhandle, where many wind farms are located, operates on a different grid from most of the state.

<sup>9</sup> [http://www.eia.doe.gov/cneaf/electricity/epm/epm\\_sum.html](http://www.eia.doe.gov/cneaf/electricity/epm/epm_sum.html)

## **Fiscal incentives for wind power in Texas**

Texas has become the nation's leading wind power state not only because of ERCOT (Electric Reliability Council of Texas) mandates, available land, and usually reliable winds but also in response to several state and local fiscal incentives that make the return on investment analysis in wind and other renewables extremely attractive.

For example, businesses that either use, manufacture or install wind energy generators can deduct the total cost of the system from the company's taxable capital or take 10 percent of the system's cost off the company's income under the state's franchise tax.<sup>10</sup> The state also allows counties and municipalities to grant property tax exemptions for wind-powered energy devices if they are used primarily for production and distribution of energy for on-site use.<sup>11</sup>

Under Chapter 313 of the Texas Economic Development Act, developers of wind farms for commercial use can apply for a "value limitation" that significantly reduces their public school district tax obligation. The value at which the property is limited (and therefore taxed) varies with the size of the school district. For small districts, the cap on projects can be as low as \$1 million while for large school districts the cap can go as high as \$100 million. When an agreement is reached between the wind company and the school district, the value of the property is capped and the state makes up the difference between the capped value and the appraised value. The valuation cap then reduces the taxes paid by the wind company for a 10-year period.<sup>12</sup>

---

<sup>10</sup>The franchise tax is in the process of being replaced with the new Texas business tax; but the write-offs will be applicable to the new tax as well.

<sup>11</sup> Texas Tax Code, Title 1, Property Tax Code, Subtitle C, Section 11.27.

<sup>12</sup> In practice, the wind power generation company pays the school district tax based on the total appraised value for the first two years of operation. At the end of the ten-year period, the state rebates the differential payment from the first two years to the wind company.

School districts obviously find this an attractive arrangement because they are held harmless by the state. What's more, wind farm developers are making payments in lieu of taxes to the school districts, putting school administrators in a compromised position because these payments are outside regular school funding. However, the wind developer is typically paying the school district 40% of the tax savings. This means that 60% has been taken away from funds that could be used to the benefit of the Texas education system. Additionally, it should be noted that the number of jobs created by the wind development is minimal (see Table 1 below). Some school districts have even had to waive the job creation requirement set forth in Texas Tax Code 313.051(b) in order to allow the wind developer to qualify for the value limitation.

### **Who really bears the burden of the state and local subsidies for wind power?**

As discussed above, wind energy is the most heavily subsidized form of electricity in the nation. Adding together the federal production credits and the subsidies available from the state of Texas and local governments, the wind generation companies can't lose. It's no wonder Texas leads the U.S. in total megawatts of installed wind capacity. But because there's no such thing as a "free lunch," someone must be paying for the state's largess—and that someone is both the taxpayers and schoolchildren of Texas.

Through January of this year the Texas Comptroller of Public Accounts has approved appraised value limitations for *non-wind projects* with investments of \$9.5 billion and creating 4,453 new jobs. The property value abated under HB1200 for *non-wind projects* totals \$8.5 billion to date. ***By contrast, wind development projects totaled***

**\$12.1 billion with \$11.2 billion of the property value abated while creating only 563 new jobs. Applying a tax rate of \$1.50 per hundred<sup>13</sup> to the property value abated results in tax revenue lost for *wind projects* of \$168.2 million per year, which is almost \$300,000 per new job per year (see Table 1).**

**Table 1**  
**Cost of Incentives for Power Generating Projects in Texas**  
(\$ in millions except for per job data)

<b>Projects</b>	<b>Investment</b>	<b>Limited Value</b>	<b>Property Value Abated</b>	<b>Tax Rev Lost (@\$1.50)</b>	<b>New Jobs</b>	<b>Tax Rev Lost per Job per Year</b>
Non-Wind	\$9,509	\$1,146	\$8,473	\$127	4,453	\$28,541
<b>Wind Only</b>	<b>\$12,060</b>	<b>\$844</b>	<b>\$11,216</b>	<b>\$168</b>	<b>563</b>	<b>\$298,816</b>
All Projects	\$21,569	\$1,990	\$19,689	\$295	5,016	\$58,877

*Source: Texas Comptroller of Public Accounts and authors' calculations*

This means that the State of Texas will be reimbursing school districts in the amount of \$168 million in 2008. Because the valuation limitation is valid for 10 years, the state is probably obligated to send \$1.7 billion of its own-source revenue to participating school districts over the next decade. And this estimate does not include the loss of state business tax receipts nor property tax abatements granted by counties and municipalities, which could easily represent another \$100 million over a ten-year period. In short, Texas taxpayers may be subsidizing existing wind energy generators to the tune of \$1.8 billion or more over the next decade for wind developments currently installed.

According to the ERCOT's *Monthly Status Report* for May 2008, active interconnection requests for proposed new wind developments currently total 50,919

---

<sup>13</sup> \$1.50 is the current property tax cap for maintenance and operation expenses for Texas school districts. Most districts in the state are at or near the cap.

MW.<sup>14</sup> Assuming a cost of approximately \$1.75 million per megawatt for commercial-scale turbines, \$89.1 billion of new capital may be invested in wind energy in the near future.<sup>15</sup> Historically, 93% of the capital invested for wind developments has received a value limitation, which would calculate to total property value abated for new wind projects of \$82.9 billion. Applying a tax rate of \$1.50 per hundred to the property value abated results in tax revenue lost for new wind projects of \$1.2 billion per year, or more than \$12 billion over a ten year period. *Combined with the abatements already in place, that's almost \$14 billion that could otherwise be spent improving the quality of public education in Texas.*

## **Conclusion**

Wind power and other renewables have their place in the energy mix. However, since the federal subsidies for wind farms are so large, it's unclear that the State of Texas needs to provide additional incentives. It seems improbable that the benefits from wind generation, however defined and measured, are offsetting the tremendous cost to Texas taxpayers. In that regard, the Legislature and ERCOT would be well advised to revisit Chapter 313 of the Texas Economic Development Act and to subject the program to rigorous cost-benefit analysis.<sup>16</sup>

**The value limitations and abatements on wind turbines currently in operation or planned will reduce the revenue available for public education by**

---

<sup>14</sup> The entire report can be found at the following website:  
[http://www.ercot.com/content/meetings/ros/keydocs/2008/0612/08\\_May\\_08\\_Sys\\_Plan\\_Report\\_to\\_ROS\\_a\\_v\\_\(060908\).pdf](http://www.ercot.com/content/meetings/ros/keydocs/2008/0612/08_May_08_Sys_Plan_Report_to_ROS_a_v_(060908).pdf)

<sup>15</sup> <http://www.windustry.org/how-much-do-wind-turbines-cost>

<sup>16</sup> The Legislature may be forced to reconsider both tax abatements and school district tax limitation agreements for wind generators as the Texas Attorney General has called into question whether "leaseholders" can be considered property "owners" as required by law under sections 312 and 313 of the Tax Code.

**almost \$14 billion. These are funds that could be used to raise teacher salaries and otherwise upgrade the quality of public education in the state of Texas. Reclaiming these funds will not by itself solve the current education crisis in our state, but it would be a step in the right direction.**