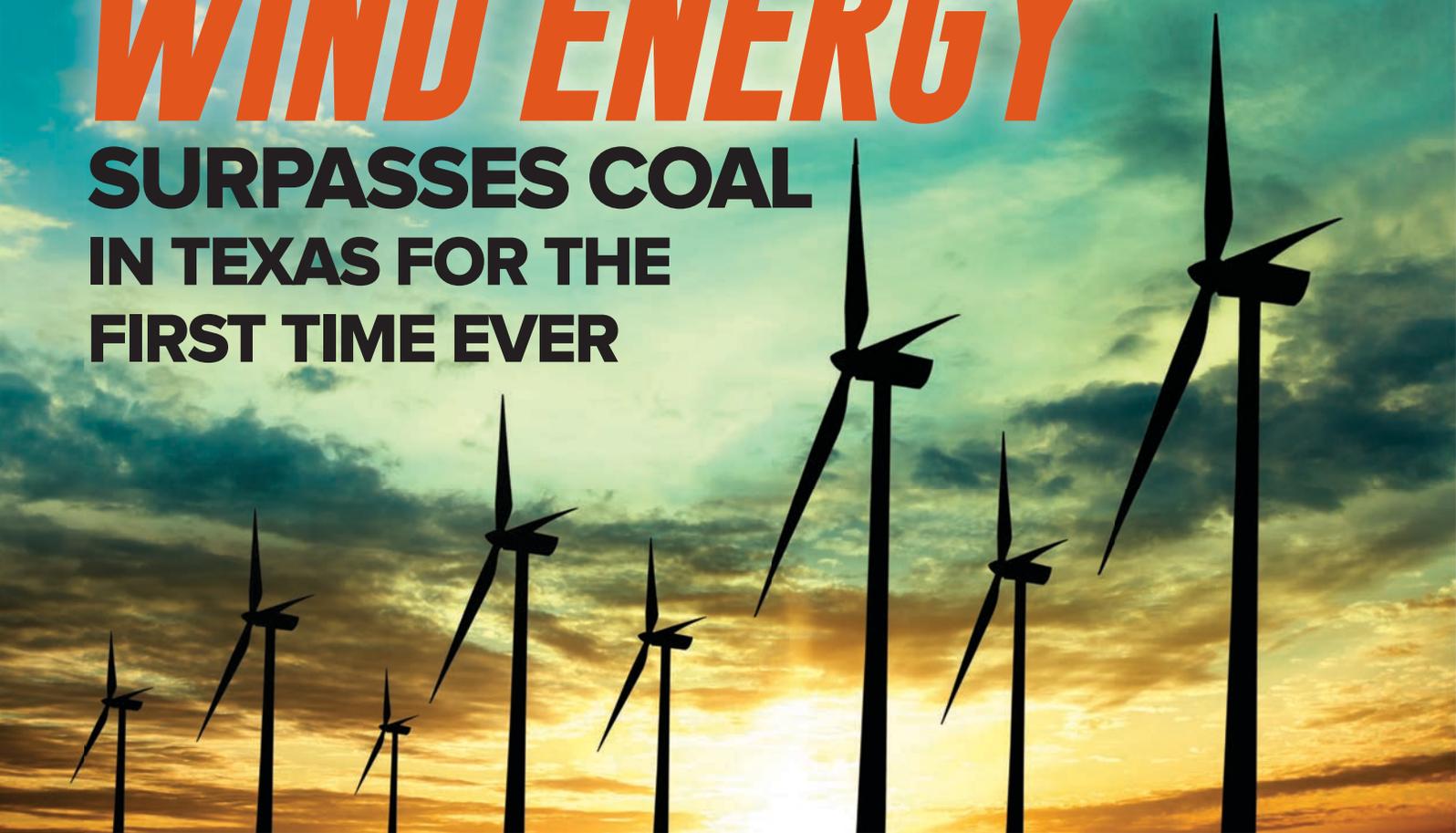


WIND ENERGY

SURPASSES COAL IN TEXAS FOR THE FIRST TIME EVER



By Alan Lammey

There's no doubt that most Texans are aware that electricity generated from 'wind energy' has grown by leaps and bounds over the last decade. However, what most people are not aware of is that in late 2017, for the first time ever, wind power surpassed coal-fired electricity generation to become the second-largest electricity source in Texas next to natural gas. This not only marked a historic event in the State's ambitions of being a US leader in renewable energy, but it's also helping to drive down the cost of commercial power for Texas business owners.

While the achievement of wind energy surpassing coal power generation is something to be celebrated in many respects, there is a dark side to the story where the reliability of power could be affected.

NEW TEXAS WIND POWER GENERATION SOARS PAST COAL

According to the Electric Reliability Council of Texas (ERCOT), in December 2017, when a 155-megawatt wind farm in West Texas launched its commercial operation, it was the catalyst that elevated the State's wind power capacity to new highs, coming in at more than 20,000 megawatts, which exceeded the 19,800 megawatts of capacity from coal-fired power plants. As a rule of thumb, one megawatt is enough to power about 200 homes on a very warm Texas afternoon.

Even though Texas still derives a majority of its electricity from natural gas and other fuels, wind power generation now accounts for roughly 15% of the power mix, which is up from a mere 2% in 2008.

The decommissioning and looming closure of three Texas coal-fired

electricity plants, the Monticello, Big Brown and Sandow, owned by Dallas-based Vistra Energy, will result in the loss of about 4,000 megawatts of coal-fired power capacity that will further expand the overall percentage of wind power in Texas over the next couple of years as these plants are shut down. The closing of these coal-fired power plants is primarily due to the inability of these facilities to compete on an economic basis with other lower-cost fuels as well as the political pressures to reign-in emissions from energy sources that are deemed responsible for creating so-called global warming.

CLOSURE OF COAL POWER PUTS ELECTRICITY RELIABILITY IN JEOPARDY

According to the ERCOT, the closure of these coal power plants will

happen over the course of 2018 and 2019, resulting in the loss of several hundred jobs. However, the upside for Texas businesses is that with the further expansion of wind generation, electricity costs are projected to decline for business and residential users. This is particularly the case at night when overall power demand is at its lowest, yet wind power continues to be generated via 24/7-turning wind-mills, thus squashing the wholesale cost of electricity down to nearly zero in some cases.

As wind power claims a larger percentage in Texas's electricity mix, it should be noted that the State's wholesale power operators are struggling to adjust to a power market that has already been distressed by historically low natural gas prices in recent years, which has significantly slashed profit margins. Additionally, some reliability concerns have emerged with the forthcoming shut down of the three coal-fired power plants, and in fact, Texas's summer power reserves may fall below recommended cushion levels by the ERCOT.

It is a chief responsibility of the ERCOT to make sure that the Lone Star State has adequate power to meet demand when electricity consumption peaks during the summer months. In 2010, the ERCOT adopted guidelines to ensure the Texas grid is generating capacity that exceeds demand by at least 13.75% in order to be certain that there would be ample power during particularly large periods of demand. The difference between generating capacity and demand is called the reserve margin.

2018 RESERVE MARGINS OF SUMMER POWER BELOW RECOMMENDED LEVELS

At this juncture, the ERCOT's forecasts for the summer of 2018 show that the reserve margin will fall to around 9.3%, down from earlier forecasts of more than 18% and well below the ERCOT's recommended cushion levels. Texas reached record highs for electricity demand during the summer of 2016 and hasn't backed-off since. Looking ahead, power demand in the Lone Star

State is projected to rise by roughly 2% every year for the next decade.

So, while the increase of clean energy via new record levels of wind power is reason for Texas businesses to applaud, the shortcoming is that if Mother Nature throws Texas a curveball in terms of unusually hot summers over the next two years, it could result in rolling brown-outs

or even black-outs during times of particularly high-power demand. **N**

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