

Austin's 7X Energy Leads The Way Toward A Renewable Energy Future

By Mike Clifford, submitted for Austin Sierran Newsletter, June 2019

Many Austinites are dismayed by the fact that we still receive over 20% of our energy from the heavily-polluting Fayette coal power plant, but change is on the horizon, thanks to companies like [Austin-based 7X Energy](#). The company recently secured its final power purchase agreement for what will be the largest solar power project in Texas, the 690MW_p Taygete solar farm near Pecos, with Phase I (342 MW_p) scheduled to go online Q1 2021.

Taygete will provide a much-needed solar boost to the ERCOT grid's energy mix, helping to move Texas away from fossil fuels and towards renewable sources, which currently account for about 26% of the state's generating capacity.¹ The project will be 7X Energy's third large-scale solar project in Texas. In addition to Taygete, 7X originated and developed the 136 MW_p Lapetus project near Midland and jointly developed the 315 MW_p Phoebe project near the Texas/New Mexico border. The three projects combined represent a capital investment of over \$1 billion dollars into Texas solar power. The name "7X" originates from the Iroquois Indian philosophy challenging leaders to consider how each decision we make today will contribute to the well-being of the seven generations to come.

"Taygete will be the 5th largest solar project in the U.S., and the largest in the ERCOT market", says 7X Senior Director of Marketing Raheleh Folkerts. "We see a rapid expansion of utility-scale renewable power as an essential strategy for energy sustainability. 7X alone has over 5000 MW_p of solar projects in its development portfolio." In just its first year of operation, Taygete will provide a reduction in CO2 emissions equivalent to 116,070 homes' electricity use for one year.

West Texas-Sized Benefits Of Solar

It's no coincidence that the three largest 7X solar projects are based in west Texas, as the combination of affordable land, southern latitude, 300+ sunny days per year, access to power transmission infrastructure, and flat topography make the region ideal for solar farms. Also, as Fig. 1 below shows, there aren't a lot of residents displaced with these projects.



Fig. 1: The Taygete site near Pecos will soon be covered with 900,000 solar energy modules (courtesy 7X Energy)

The massive 450 MW_p High Lonesome project and the even larger 497 MW_p Roadrunner project, both developed by [Enel Green Power North America](#), are also located in west Texas.

Texas hits its peak energy consumption each year during the hottest summer months, due to the increased use of air conditioning. This also happens to be the time of year when solar output is greatest, helping to meet the heavy demand on the ERCOT grid. Solar also complements wind energy well, as its output typically peaks mid-day, whereas wind turbine output tends to peak at night. Even during colder winter months, solar offers an advantage in that the solar PV efficiency is higher at lower temperatures, which comes in handy in an area that sits close to 3000 feet elevation with average January low temperatures of 28 degrees.²

Interestingly, the prevalence of wind farms in west Texas has helped the development of solar projects in the region. Much of the power transmission infrastructure in the area was developed as part of the [\\$7 billion CREZ project](#), which helped connect over 40 west Texas wind projects to the ERCOT grid. The distribution infrastructure now in place has allowed solar farms to piggyback onto these transmission lines. Recent advancements in battery storage technology will also aid the future proliferation of solar and wind projects.



Fig. 2: Solar and wind energy are complementary renewable energy technologies

Support Solar Power In Texas

So what can you do to help move Texas towards renewable energy? In addition to supporting local environmental organizations like the Sierra Club's Austin chapter, you can join [Solar Austin](#), a local nonprofit working to accelerate the transition to clean renewable energy. Solar Austin is the local chapter of the [Texas Solar Energy Society](#) (TXSES), which also has chapters in Dallas, Houston, and San Antonio. "We love the work 7X Energy is doing, and it's amazing what they've accomplished in just the past 3 years" says Lucy Stolzenburg, TXSES Executive Director. "The transition to renewable energy has to happen quickly, and projects like Taygete are the cornerstone of these efforts."

1 <https://www.greentechmedia.com/articles/read/a-snapshot-of-texas-growing-appetite-for-wind-and-solar-power#gs.90g8f5>

2 <https://www.usclimatedata.com/climate/pecos/texas/united-states/ustx1033>