

Monday, October 5, 2020

# TEXAS INC

HOUSTON'S  
BUSINESS  
INSIDER



## Second Time a CHARM

**ENCHANTED ROCK CEO THOMAS McANDREW PIVOTED TO  
TURN POWER RELIABILITY INTO A MONEYSMAKER**

**TOMLINSON** HOW OIL COMPANIES CAN SLASH THEIR CARBON OUTPUT  
**NOTEBOOK** COMPANIES ARE CHARGING TOWARD AN ELECTRIC FUTURE – IS TEXAS READY?

## C-SUITE INSIDER

# NO MAGIC WAND

Enchanted Rock CEO Thomas McAndrew turns power reliability into a moneymaker

By **L.M. Sixel**  
STAFF WRITER

**P**ower outages are becoming increasingly common problems for businesses in Texas, especially during bad thunderstorms. To keep the lights on and the air conditioning running, more companies are taking matters into their own hands and installing backup power generation.

Enchanted Rock, the Houston company founded and led by Thomas McAndrew that provides backup electricity to commercial and industrial customers such as H-E-B and Buc-ee's, has built its business model finding a fix to those reliability problems.

The company became part of last year's CenterPoint Energy rate hearings when H-E-B filed a complaint about persistent problems with CenterPoint electricity service reliability with the Public Utility Commission and told regulators that it hired Enchanted Rock to make sure it could keep its food at the right temperature and its lights on. The testimony had impact, and CenterPoint, which sought to raise rates by \$161 million, eventually agreed to a \$13 million increase. It also

agreed to lower its return on equity to 9.4 percent, down from 10 percent.

Enchanted Rock has been expanding to other states and most recently to Ireland, where large data centers are required to have enough backup power supplies.

McAndrew, CEO of the 100-person company, sat down to talk to the Chronicle. Below are his edited remarks.

**Q: Why did you start Enchanted Rock?**

**A:** My partners and I were concerned about grid reliability issues in California, and we thought there was a business model there. Most folks really don't want to be in the business of owning and operating backup generation. What they want are for the lights to stay on. They want to stay in business if the utility power is lost.

We worked on that out in California, and we quickly found out we were way early. The last mile of conductivity just wasn't there yet, and that was critical to our business. We didn't have the ability to communicate to all the different sites. The technology of how we control at the specific site wasn't there yet. And the electricity market wasn't mature

enough. We ended up selling that to Calpine back in 2000 and said, maybe someday it's something we could bring back to life.

**Q: So, what happened?**

**A:** Fast forward to 2008. We had formed Enchanted Rock in 2006 with a focus on technology at the final point of electricity consumption that would decrease costs, increase reliability and decrease our carbon footprint. But between 2006 and 2008 we didn't really have any idea on how to make money on that.

Then Hurricane Ike happened in Houston. And what we saw is that small- and medium-sized commercial and industrial businesses have a 50 percent failure rate with their backup generation for various reasons. The mainte-

---

**Thomas McAndrew, CEO of Enchanted Rock Energy, checks on a natural gas generator installed at an H-E-B store in Houston. Enchanted Rock has developed new technology and a new business model that will make emergency generation more affordable for companies like H-E-B.**





Chris Tomlinson / Staff

nance wasn't occurring, the facility had outgrown the generation that had been installed or didn't have the right refueling contracts. Backup generation during and after Hurricane Ike didn't perform that well.

We thought maybe it was time to resurrect that old concept. Everything that wasn't ready in 2000 was ready in 2008.

**Q: Hurricane Ike played a big role then?**

**A:** The poor performance of backup generation and the long power outages of one to three weeks really got the business moving. It also opened up other issues. About 75 percent of the Houston water supply comes from the Trinity River, and a reservoir holds about 10 days of water. The pumping station lost power for about that long and the city of Houston almost went into a water emergency.

Because of that, legislation was passed that water pumping facilities had to have backup power generation in the three- or four-county area around Houston. That was the beginnings of the business.

**Q: Did you play a role in the lobbying effort to get the Texas Legislature to change the rules?**

**A:** We were not actively involved in that. We knew folks who were. Our focus is more on the technology side.

**Q: Who was your first big customer?**

**A:** It was the city of Houston. It was NRG's customer, and we helped them structure that deal and close it and then design it and build those systems and then turned it over to NRG.

On a stand-alone basis, our first

*Enchanted continues on B10*

**“I think we provide a critical service to the electric grid.”**

*Thomas McAndrew, CEO of Enchanted Rock*

**Enchanted from page B8**

customer was Gulf Coast Water Authority, a water utility down in Texas City. They provide water to the petrochemical industrial complex in that area. Feed stock, cooling water. It's a critical service. They take water from the Brazos River and distribute it to Fort Bend, Brazoria and Galveston counties. They pump water from a canal and send it across to Texas 146.

It was 2013, and we didn't have much of a sales force back then. They called us and they asked why we didn't respond to their request for proposal, and we said we didn't even know they had one out. We ended up winning that RFP. They ended up becoming our first big customer.

**Q: What was the next step?**

**A:** We realized around 2014 that we really needed to move to natural gas. Diesel fuel can be difficult to deliver when roads are blocked or flooded after major weather events. More customers were also saying they didn't want diesel, they wanted a cleaner fuel. And natural gas had much lower costs. We would have greater grid revenues, which meant we could bring the price to our customers even lower than what we could do with diesel.

Our first big customer with natural gas microgrids was H-E-B.

**Q: You became sort of famous in the recent rate case with CenterPoint because of the reliability problems H-E-B documented with the PUC. Now they said every store is built with a Enchanted Rock backup generator. Has that led to more customers for you?**

**A:** The primary value proposition for any of our customers is



Yi-Chin Lee / Staff photographer

**Thomas McAndrew, CEO of Enchanted Rock, says the company fills a critical need for backup generation.**

they have a certain cost of business interruption when they lose power. Most of CenterPoint's infrastructure is above ground and subject to severe weather events and construction problems. No matter how big you are, there's that exposure with above-ground infrastructure.

We kind of stay out of what happened between H-E-B and CenterPoint. We helped H-E-B get to the point where they have a much higher level of electric reliability. I don't want to get in the middle of those discussions in the rate case.

**Q: Why are we seeing more electric reliability problems?**

**A:** We are seeing similar challenges for utilities everywhere there is above-ground infrastructure. What is happening for H-E-B and others is a combination of above-ground infrastructure

and an increasing number of severe weather events. It's not just the hurricanes, but it's the storms that pop up out of nowhere and we get 6 to 12 inches of rain.

Those are the kind of ones you can't manage with trailers. You have to have permanent generation to respond to that. More and more people are interested in having some type of backup. There are options to build underground, but that's incredibly expensive. Most utilities won't do that.

Most customers typically provide some type of service affected by the outages. They can't just say, "It's the weather and we can't do anything about it."

**Q: When you install a generator for a company, who owns that power? Do you then generate power when prices in-**

**crease and then sell it back to the grid?**

**A:** If it's a utility outage, then the microgrid is set up to serve only that location. If it's not an emergency from a power standpoint and they're still connected to the grid and it's a high price, we actually turn on the generator. We serve their load first and then we export it. We sell it back to the Texas grid operator and get paid the market price.

**Q: So do customers need to buy the equipment that sits behind their stores?**

**A:** Our typical model is we own the equipment. We do have customers that own the equipment because they want the grid revenues. But most of the time our customers would rather have the reliability of the service at the lowest cost. We basically own the asset and the grid revenues come to the asset owner, not to the customers.

**Q: Were you able to take advantage of the high electricity prices last year when wholesale price soared to the state maximum of \$9,000 per megawatt hour?**

**A:** We did. I think we provide a critical service to the electric grid.

We're not running that often. We run 3 percent to 4 percent of the hours in a year. Typically, we're only running when much more efficient generation isn't available or there is some grid emergency.

**Q: How much does it cost you to generate a kilowatt of power?**

**A:** On average, in Houston, between 5 and 6 cents per kilowatt hour.

**Q: So the wholesale price of**

**power has to be between \$50 and \$60 per megawatt hour to make it worthwhile to turn on your generators if your customers don't need the power themselves?**

**A:** That's correct. Most of the time prices are in the teens to the low 30s, so we really don't run that often.

**Q: How expensive are the machines, and where are they made?**

**A:** The average fully installed cost for this type of microgrid is about \$1 million per megawatt. A large H-E-B store needs about 1.2 megawatts, so approximately \$1.2 million. The two biggest components of our microgrids are the electric generator and the automatic transfer switch, which transfers the store load between the electric grid and the on-site generators.

The generators are manufactured in Wisconsin and have very little foreign content. Likewise, our automatic transfer switches are assembled in both California and Texas and have very little foreign content as well.

**Q: You're a private company now. Any thoughts of going public?**

**A:** We are always monitoring the capital markets, public and private, to evaluate the cost of capital for building and operating microgrids. To date, the private markets have been the most affordable.

If the public markets recognize the scale, scope and duration of the macro trends we are serving and provide capital at a lower cost than private markets, we believe we would be well positioned to explore going public.

*lynn.sixel@chron.com  
twitter.com/lmsixel*