

No “Free Rides”

All Generators on Equitable Footing in ERCOT



EXECUTIVE SUMMARY

From the beginning of the February 2021 extreme winter event in Texas that resulted in blackouts and billions of dollars in damages, some interest groups began spreading misinformation about renewable energy, stating that thermal resources are penalized in ways that renewable resources are not when they do not deliver power to the market. This claim is not true. Below are the facts.

- **FACT:** Both thermal and renewable resources must satisfy contractual obligations under power purchase agreements or financial commitments to hedge counterparties. Both thermal and renewable generators took financial losses during the February 2021 event to fulfill such obligations.
- **FACT:** All generation resources – thermal or renewable – are required to pay financial penalties or provide replacement power if they cannot satisfy forward market obligations in the day-ahead or ancillary services markets unless they comply with ERCOT outage notification protocols.
- **FACT:** The ancillary services market already rewards dispatchable resources. This *voluntary market* is dominated by thermal resources and is designed to pay dispatchable power for being available, even if not ultimately needed. But, if dispatched, the resource must provide the services it committed to ERCOT, replace them or pay for replacement. The Real-Time Market is also set up to “reward” dispatchable resources that meet the definition of “quick start resources (QSR).”
- **FACT:** All generation resources – thermal or renewable – must deliver the power that they *can* provide, consistent with ERCOT dispatch instructions. Failure to deliver power can result in penalties, known as “base point deviation charges.” Both thermal and renewable resources are treated consistently. These are rules designed by all ERCOT market participants, who can change market protocols if they desire.

POWER PURCHASE CONTRACTS

Bilateral contracts between power generators (thermal, wind, solar) and power buyers vary greatly. They can be physical or financial and include many variables, including power prices, gas prices, weather, and more. If a power plant cannot deliver power, some bilateral agreements (for any resource type) have requirements that the plant owner buy backup power or pay the real-time market price for power not delivered to their customer. Other contracts do not have these provisions. Thermal and renewable generators were impacted differently depending on each unit’s ability to operate during the event and the associated contracts they had in place, but both thermal and renewable energy plants saw financial damages during the winter event.

BASE POINT DEVIATION CHARGES

Most power in the ERCOT market is sold ahead of time under contracts or in the day-ahead market. While approximately 5-15% of energy is sold in the real-time market, ERCOT uses the

real-time market as one of its tools to balance supply and demand on the power grid. Any generator, thermal or renewable, that submits an energy offer curve (a bid) to ERCOT in the real-time market is expected to follow ERCOT's dispatch signals.

If a generator is not following its ERCOT dispatch signal, it is subject to a penalty known as a "base point deviation charge." Penalties can apply to all generators, depending on the violation. Over a year, these penalties are not typically substantial, and any payments collected by ERCOT are then distributed to consumers. Base point deviation charges are low because generators follow their dispatch instructions.

The protocol's central idea is that ERCOT needs generators to deliver the power they *can* provide within ERCOT dispatch instructions to help balance the grid. Because they have no fuel cost, renewable generators will always produce the maximum amount of power they can generate unless directed to curtail by ERCOT.

OUTAGES OR UNAVAILABILITY

However, if a thermal plant has an operational issue that causes it to go down (called a "forced outage"), it is not penalized. Similarly, if the wind does not blow or the sun does not shine, renewable generators are not penalized. ERCOT protocols recognize the variable nature of wind and solar, and reward thermal dispatchability, but encourage full output of wind and solar to lower costs to consumers.

So, there is no difference between thermal and renewable generation. All generators are expected to deliver the power that they can provide within ERCOT instructions. If they cannot provide it, they are not penalized provided they comply with the ERCOT Protocols concerning notice of outages to ERCOT.

DAY-AHEAD AND ANCILLARY SERVICES MARKETS

The day-ahead and ancillary services markets are *voluntary* forward markets in ERCOT. The ability to participate in the day-ahead and ancillary services markets at relatively low risk is one way that the ERCOT market *rewards dispatchable thermal resources*.

The day-ahead market is an energy market open to all resources. Generators offer what they expect to deliver the following day and are selected by ERCOT to provide that power in real-time if they are part of the least-cost solution. The day-ahead market requires generators to deliver power or pay the cost of that power in the real-time market.

Ancillary services are required to maintain grid stability and security and support the continuous flow of electricity so that supply will continually meet demand. If a generator offers ancillary services into the day-ahead ancillary services market and cannot deliver those services in real-time, it must arrange for another generator to supply them or pay ERCOT to replace them. This applies to all generators regardless of fuel source.

Ancillary Services are reliability services, so failure to provide can have both financial "penalties" or "claw-backs." Public Utility Commission and/or NERC administrative penalties are also possible if an obligation is not suitably replaced. Finally, there are no ancillary services in ERCOT that have been created or implemented specifically because of wind and/or solar generation, or for any other type of generation for that matter.