

# Flaring Burns Texas Economy:

## *Commission's Failure to Stop Waste Runs Risk of Letting the State's Financial Future Go Off the Rails*

### Executive Summary

Flaring — the venting of unneeded natural gas into the air — is a waste of natural resources and money. If the amount of gas flared in Texas in 2018 had been sold on the market, it would have brought \$749.9 million to Texas oil producers.

Determining how to minimize waste is not only a matter of common sense, it is a critical element of the legislative mandate of the Texas Railroad Commission (“RRC”).

On May 5, 2020, the RRC abdicated its statutory responsibility by rejecting a motion to curtail oil production *based on economic waste* without a serious discussion of flaring. The connection between flaring as evidence of oversupply (and low prices as evidence of the same) escaped scrutiny. The underlying cause of the flaring is an oversupply of gas and oil — a condition that preceded the pandemic and the price war between Saudi Arabia and Russia. The RRC and most of the industry believed the way to relieve these immediate symptoms of oversupply was to treat another symptom, the diminishing size of oil storage capacity. The RRC chose a path of simply relying on individual company and industry pledges to improve storage capacity. In so doing, the commission ignored the more basic and difficult challenge it faces — managing the decline of the oil and gas sector in Texas while supporting overall growth in the Texas economy.

The RRC, according to Texas law, is required to take action when oil supply exceeds reasonable market demand. The oversupply is considered waste and it is declared to be illegal. Pioneer Natural Resources and Parsley Energy brought a complaint to the RRC in March 2020, asking for action to cut oil production by 20%. They argued that the twin problems of severe demand reduction from the pandemic and a price collapse due to Saudi Arabian and Russian efforts to punish United States oil producers created a severe condition of oversupply that would soon exhaust storage capacity. That proposal was opposed by most of the large, organized oil and gas interests in the state, and was defeated by a 2-to-1 vote of the three-member commission.

Both proponents and opponents of the proposal acknowledged the recent five-year price decline, or as one put it, “the long-term depression of prices.”

Advocates of the “no action” path believed that the price dysfunction would correct itself, but they cavalierly dismissed overwhelming evidence of the severity of the oil and gas industry’s problem:

- The recent short spate of negative prices for oil moved prices from a low-price environment (\$50+ per barrel range) to a dangerously low-price environment; however, the \$50+ per barrel average price had been stable since 2017.
- During the same three years of price stability, nevertheless, the oil and gas sector placed last in the Standard and Poor's (S&P) 500, as investors fled former blue-chip companies like BP, Exxon Mobil, Shell and Chevron.
- These last three years have capped a much longer decline of the industry. From the world's leading sector in the economy, commanding an impressive 28 percent of the S&P 500 portfolio in the 1980s, the oil and gas sector now holds just three percent.
- Moreover, for most of this past decade, the oil and gas sector has performed at or near the bottom of the S&P 500, when it previously led all sectors in all parts of the world.

The various reasons for this substantial fall in market position and value destruction for investors have combined to weaken the fundamental financial soundness of oil and gas production and use, even as that production has increased.

In the wake of the RRC's decision, the price of oil has increased to the \$30-per-barrel level and some project that it will rise to \$40 per barrel, perhaps later this year and into 2021. The business models used by the oil and gas producers, unfortunately, will now lead the companies simply to continue to oversupply the market. If the oil and gas sector demonstrated last-in-class financial performance with oil prices in the high \$50-per-barrel range, then the industry's performance will remain last-in-class at \$40 per barrel.

The truth is, to regain its place of financial and energy leadership would require oil to rise to at least \$80 per barrel for several years. It would also require a robust market for existing reserves, debt used to create revenue-producing assets, debt levels declining, credit rating upgrades, strong stock performance, a cessation of bankruptcies, fiscal stability of state-owned enterprises and access to rising energy demand unfettered by competitors. These are the elements of a positive outlook. This is an almost impossible scenario to achieve.

The weakness of the industry and its poor stock performance is not just a financial matter. The drivers of the world economy are now information technology, consumer products and communications. Industrial, real estate, utilities, and the finance sectors are also better positioned than the oil and gas sector. The reality is that for the past decade, economic growth has become decoupled from the growth of the oil and gas sector, as most industries and many countries have become materially less reliant on fossil fuels.

The RRC's recent actions indicate that it is unprepared to address the long-term negative outlook of the oil and gas sector. The Commission has yet to come to terms with the critical and perhaps historically unprecedented paradox that faces it today: Flaring was once a tool used to restore balance to supply and demand, profit and prices, yet it can no longer claim to play that role. Flaring was a tool of business self-regulation, although it had negative consequences for natural resources. As this report points out, flaring now is at peak levels, yet the profitability of the industry is weaker. From a financial and regulatory perspective, flaring is a gratuitous display of oversupply with detrimental consequences for the environment and it is, simultaneously, an impediment to the growth requirements of the Texas economy.

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The RRC has an obligation to take these trends seriously and help people in the oil and gas sector manage these trends and to do so while helping the economy of Texas to grow. The issues are not going away.

## Authority and Role of the Railroad Commission to Regulate Waste

The RRC was established in 1891 to regulate the rail industry,<sup>1</sup> but the Legislature expanded its duties to cover energy and mining. While it no longer controls railroads, the RRC today regulates oil and gas exploration, production (including wells) and transport, along with other matters.<sup>2</sup>

### *The RRC's Mandate to Prevent Waste in Oil and Gas Production*

Among the RRC's statutory purposes is the duty to prevent waste of the state's natural resources. The Texas Natural Resources Code, § 85.045, governing oil wells, states:

*"WASTE ILLEGAL AND PROHIBITED. The production, storage, or*

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<sup>1</sup> 1891 Tex. Gen. Laws, Ch. 51. The RRC's existence is subject to a "sunset" provision; it must be reauthorized on or before September 1, 2029, or it dissolves. Texas Natural Resources ("Tex. Nat. Res.") Code § 81.01001.

<sup>2</sup> Tex. Nat. Res. Code § 81.051.

*transportation of oil or gas in a manner, in an amount, or under conditions that constitute waste is unlawful and is prohibited.”<sup>3</sup>*

The RRC is empowered — and in fact mandated — to take action to prevent oil or gas production practices that waste the resource.<sup>4</sup> Section 85-202(b) states an overarching mandate:

*“The commission shall do **all things necessary** for the conservation of oil and gas and prevention of waste of oil and gas and may adopt other rules and orders as may be necessary for those purposes.”* (Emphasis added.)

Section 85.051 states that if the RRC determines that waste is taking place or is reasonably imminent, “it *shall* adopt a rule or order” to “correct, prevent, or lessen the waste (emphasis added).”<sup>5</sup> Similarly, § 86.082, governing gas wells, states that the RRC “*shall* exercise its authority to prevent waste” (emphasis added) when it finds that the evidence indicates “the presence or imminence of waste”.

The definition of waste, under Section 85.046(a), includes, but is not limited to:

- permitting any natural gas well to burn wastefully (§ 86.012 has identical language);
- physical waste or loss incident to or resulting from drilling, equipping, locating, spacing, or operating a well or wells in a manner that reduces or tends to reduce the total ultimate recovery of oil or gas from any pool (§ 86.012 has nearly identical language);
- Surface waste or surface loss, including unnecessary or excessive surface losses, or destruction without beneficial use, either of oil or gas;
- Escape of gas into the open air in excess of the amount necessary in the efficient drilling or operation of the well from a well producing both oil and gas (§ 86.012 has nearly identical language); and
- Production of oil in excess of transportation or market facilities or reasonable market demand (§ 86.012 has nearly identical language), and the commission may determine when excess production exists or is imminent and ascertain the reasonable market demand.<sup>6</sup>

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<sup>3</sup> Section 86.011, governing gas wells, similarly states, “The production, transportation, or use of gas in a manner, in an amount, or under conditions which constitute waste is unlawful and is prohibited.”

<sup>4</sup> Section 85-202(a) authorizes the RRC to issue rules and orders “to prevent waste... of oil and gas in drilling and producing operations” as well as in storage, piping, and distribution.

<sup>5</sup> Pursuant to § 85.049, the RRC may hold a hearing about waste on its own volition or in response to a complaint.

<sup>6</sup> Tex. Nat. Res. Code § 85.046(a). Section 86.012 adds to this list, “permitting gas produced from a gas well to escape into the air before or after the gas has been processed for its gasoline content,” unless allowed by § 86.185. The RRC, pursuant to §85.203. may consider any combination of these definitions in identifying waste.

Gas produced from oil wells, known as “casinghead gas,” is included in the term “oil.”<sup>7</sup>

### *The RRC Must Protect the Public Interest Against Both Conservation and Economic Adverse Impacts*

In taking action to prevent waste, the RRC must protect the public interest. Section 85.056 states:

*“PUBLIC INTEREST. In the administration of the provisions of this chapter that were formerly a part of Chapter 2, Acts of the 42nd Legislature, 4th Called Session, 1932, as amended, the commission shall take into consideration and protect the rights and interests of the purchasing and consuming public in oil and all its products, such as gasoline and lubricating oil.”*

That “public interest” includes the overall economy. The U.S. Supreme Court, in considering a challenge to one RRC proration order that affected small operators, stated:

*“Not only are the individual interests of these small operators involved, but their effect on the state's economy is an appropriate factor to be taken into account when plans are devised to keep the wells open.”<sup>8</sup>*

Another U.S. Supreme Court decision, which declared that all cases arising from the RRC’s actions under the statute must be brought in Texas even when a party is from another state, cited the legislative history of the statute and stated:

*“Texas interests in this matter are more than that very large one of conserving gas and oil, two of our most important natural resources. It must also weigh the impact of the industry on the whole economy of the state and must consider its revenue, much of which is drawn from taxes on the industry and from mineral lands preserved for the benefit of its educational and eleemosynary [charitable social service] institutions.”<sup>9</sup>*

The mandate to protect the “public interest” also includes conservation. The RRC has a duty to conserve oil and gas as natural resources. As the Texas Supreme Court has explained:

*“Our Constitution authorizes the conservation of our natural resources. Article XVI, Section 59a. The authority to execute this constitutional provision in so far as it applies to oil and gas has been vested by the Legislature in the Railroad Commission of the State.”<sup>10</sup>*

Section 86.042 states that the RRC “shall” adopt rules and orders to “conserve and prevent the waste of gas.” Similarly, in a provision empowering the RRC to allow

<sup>7</sup> *Livingston Oil Corp. v. Waggoner*, 273 SW 903 (Tex. Civ. App. - Amarillo 1925, writ ref'd).

<sup>8</sup> *Railroad Commission of Texas v. Rowan & Nichols Oil Company*, 310 US 573 (1940).

<sup>9</sup> *Burford v. Sun Oil Co.*, 319 US 315, 320 (1943).

<sup>10</sup> *Railroad Commission v. Marrs*, 177 SW2d 941 (Tex. 1944).

production by commingling oil or gas from two or more tracts of land or reservoirs, § 85.046(c) states that the RRC may do so if it finds that such action “will prevent waste, promote conservation, or protect correlative rights,”<sup>11</sup> and declares that the RRC “has broad discretion in administering this subsection.” The Texas Supreme Court, upholding a RRC prorating order regarding natural gas, stated:

*“If this gas, which is an important natural resource, is to be conserved, some action is necessary to prevent its further unnecessary waste. It will be too late to speculate on what to do when the gas is exhausted through waste.”<sup>12</sup>*

In a case upholding the RRC’s power to prevent gas flaring by a company that had not wanted to shoulder the expense of connecting to a pipeline system, a Texas court of civil appeals stated bluntly:

*“If the prevention of waste of natural resources such as gas is to await the time when direct and immediate profits can be realized from the operation, there would have been little need for the people of Texas to have amended their Constitution by declaring that the preservation and conservation of natural resources of the State are public rights and duties and directing that the Legislature pass such laws as may be appropriate thereto,... for private enterprises would not need the compulsion of law to conserve these resources if the practice were financially profitable.”<sup>13</sup>*

This premise was echoed by the Texas Supreme Court in a case that rejected closure of some non-wasteful wells but, with regard to the wasteful wells, stated:

*“That some operators will have a less profitable operation, be delayed in recovering their gas, or be in trouble with their creditors does not affect the Commission’s duty to enforce conservation by preventing waste.”<sup>14</sup>*

Thus, the RRC may take actions that prioritize waste prevention over

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<sup>11</sup> See nearly identical language in §86.012(b). Also, § 85.042(b) states that the RRC may, as necessary, adopt general or field-specific rules “for the prevention of actual waste of oil or operations in the field dangerous to life or property.”

<sup>12</sup> *Railroad Commission v. Sterling Oil and Refining Company*, 218 SW2d 415 (Tex. 1949).

<sup>13</sup> *Railroad Commission v. Flour Bluff Oil Corp.*, 219 SW2d 506 (Tex. Civ. App. - Austin 1949, writ refused).

<sup>14</sup> *Railroad Commission v. Rowan Oil Company*, 259 SW2d 173 (Tex. 195). The court confirmed that the RRC has the power to shut down a wasteful well, and to regulate the flow from a non-wasteful well to protect correlative rights, but the court overturned the RRC order because part of the order completely shut down non-wasteful wells to protect correlative rights, which the RRC cannot do.

companies' profits when the reasonableness of its action is supported by substantial evidence.

### *The RRC Has Broad Discretion to Carry Out Its Mandate*

Among its regulatory tools, the RRC has authority to issue "proration orders" to limit the production of oil or gas. These limits are assigned based on factors such as tested well capability, reservoir mechanics, market demand for production, and past production. The RRC also has the authority under certain circumstances to shut down wasteful wells.

Courts review the RRC's actions based on the "substantial evidence" test,<sup>15</sup> yet also adhere to the standard judicial principle of giving deference to decisions made by administrative agencies with expertise. Courts have granted ample deference to the RRC's expertise, allowing it broad discretion. The U.S. Supreme Court, in rejecting a challenge to one RRC prorating order that had been based on hourly potential (rather than estimated recoverable reserves), stated:

*"Certainly in a domain of knowledge still shifting and growing, and in a field where judgment is therefore necessarily beset by the necessity of inferences bordering on conjecture even for those learned in the art, it would be presumptuous for courts, on the basis of conflicting expert testimony, to deem the view of the administrative tribunal, acting under legislative authority, offensive to the Fourteenth Amendment."*<sup>16</sup>

A subsequent U.S. Supreme court case upheld another prorating order, stating:

*"For its own good reasons Texas vested authority over these difficult and delicate problems in its Railroad Commission. Presumably that body, as the permanent representative of the state's regulatory relation to the oil industry equipped to deal with its ever-changing aspects, possesses an insight and aptitude which can hardly be matched by judges who are called upon to intervene at fitful intervals."*<sup>17</sup>

Thus, while the evidence supporting the action must be "substantial," the courts are very reluctant to second-guess the RRC's balancing of conflicting evidence or analyses.

## **Flaring Is Waste, and It Wastes Money**

### *Flaring Is Waste*

Flaring is a process used primarily in the production of crude oil, in which natural gas is burned off at the well head rather than released into the atmosphere. While the Texas Commission on Environmental Quality has jurisdiction over air emission standards and pollution control requirements for flaring exercised through its air

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<sup>15</sup> *Trapp v. Shell Oil Company*, 198 SW2d 424 (Tex. 1946).

<sup>16</sup> *Railroad Commission of Texas v. Rowan & Nichols Oil Company*, 310 US 573 (1940).

<sup>17</sup> *Railroad Commission of Texas v. Rowan & Nichols Oil Company*, 311 US 570 (1941).

permitting authority, the RRC otherwise has primary jurisdiction over whether or to what extent flaring can occur.<sup>18</sup>

Flaring has a storied history in Texas. The Declaration of Policy for Texas's statutory chapter governing the RRC's authority to prorate gas production, in §86.001, states:

*"In recognition of past, present and imminent evils occurring in the production and use of gas as a result of waste in this production and use of gas in the absence of correlative opportunities of owners of gas in a common reservoir to produce and use the gas, the provisions of this chapter are enacted for the protection of public and private interests against these evils by prohibiting waste and compelling ratable production."*

Those evils involved property rights and a struggle between major and independent producers.

In the early years of oil drilling in the U.S., landowners learned that the common law (which applies in the absence of a statute) governing the rights of owners whose land contains petroleum resources was based on the "rule of capture." That rule allows an owner to drill down and drain oil or gas not only from the owner's property but also from adjacent lands. Some owners sought to drill and pump quickly before their neighbor siphoned off the resource. Texas sought to address the issue, starting in 1899, but its efforts were largely ineffective until 1932.

What spurred passage of Texas's 1932 statute, which granted the RRC authority to prorate production based on reasonable market demand, was activity in the East Texas Field. That expansive oil field was discovered in 1930, and by 1931 it was yielding over a million barrels a day — one-third of all U.S. production. This drove crude oil prices down so low that some smaller independent producers went bankrupt.

Facing rioting, the governor declared martial law and shut down the wells. With the East Texas Field closed, oil prices climbed. More people became comfortable with empowering an agency to prorate production. The Legislature held hearings, and in 1932 adopted a law empowering the RRC to prorate production based on reasonable market demand.

In 1947, the RRC ordered a shutdown of all 615 oil wells in the Seeligson Field in South Texas until a plant could be built to process the gas for use, rather than flaring it. The Texas Supreme Court upheld the RRC order against a challenge from Shell, Sun and Magnolia.<sup>19</sup> Following that case, the RRC in 1948 shut down every oil well in 16 fields from which casinghead gas was being flared. The Texas Court of Civil

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<sup>18</sup> A Memorandum of Understanding (MOU) between the RRC and TCEQ sets forth the two agencies' respective jurisdictions over various O&G activities, but does not address air pollution. See [Title 16 Texas Administrative Code \(TAC\) §3.30](#).

<sup>19</sup> See *Railroad Commission v. Shell Oil Co.*, 306 SW2d 235 (1947).



Appeals held that the order was supported by substantial evidence."<sup>20</sup>

Today, however, the RRC operates under a rule that substantially limits its ability to regulate wasteful flaring of gas — a rule that the RRC itself chose to adopt.

The RRC's Statewide Rule 32 authorizes gas flaring while drilling a well and for up to 10 days after a well's completion.<sup>21</sup> For flaring to persist beyond that period, the RRC requires operators to obtain an "exception" to Rule 32, but the RRC staff may issue exceptions on a discretionary basis for up to 180 days (typically issued in 45-day intervals). An extension beyond 180 days requires a proceeding and order from the RRC,<sup>22</sup> but the rule allows wide latitude.

Rule 32 provides that the operator must submit information to show the "necessity" for the flaring, but it includes in that definition, for oil well casinghead gas,<sup>23</sup> "the unavailability of a gas pipeline or other marketing facility, or other purposes and uses authorized by law."<sup>24</sup> One legal expert interprets this provision, with dismay, to mean that:

*"The Rule requires no weighing of the relative benefit of producing the crude oil more quickly versus the economic loss caused by the flaring of the natural gas, nor does it require any factual showing that crude oil would ultimately be lost if it were not produced immediately. Instead, the only evidence required to prove 'a necessity' ... is that a gas pipeline connection or other marketing facility is not readily available."*<sup>25</sup>

One case, however, is questioning that interpretation of "unavailability" and what types of financial arguments may properly be made under the rule.<sup>26</sup>

## Flaring Wastes Money

In 2018, the Texas oil industry produced a record-setting 1.3 billion barrels of

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<sup>20</sup> *Railroad Commission v. Flour Bluff Oil Corp.*, supra. See D. Prindle, [The Texas Railroad Commission and the elimination of the flaring of natural gas](#), SW Hist. Qtrly 84(33): 293-308 (1981).

<sup>21</sup> 16 Tex. Admin. Code §3.32(f)(1)(A).

<sup>22</sup> 16 Tex. Admin. Code § 3.32(h). Operators must report to the RRC the volumes of gas flared on their monthly Production Report form. See 16 Tex. Admin. Code § 3.32(f)(2) and § 3.27(c).

<sup>23</sup> The RRC reports that most requests for flaring exceptions are for flaring casinghead gas from oil wells. It reports that it does not issue long-term exceptions allowing flaring from gas wells, since as natural gas is the main product of a gas well. Texas Railroad Commission. [Flaring Regulation](#). Retrieved May 25, 2020.

<sup>24</sup> 16 Tex. Admin. Code § 3.32(f)(2)(D). The RRC discloses that flaring may be allowed because existing pipelines may have reached capacity. Texas Railroad Commission webpage, [Flaring Regulation](#), supra.

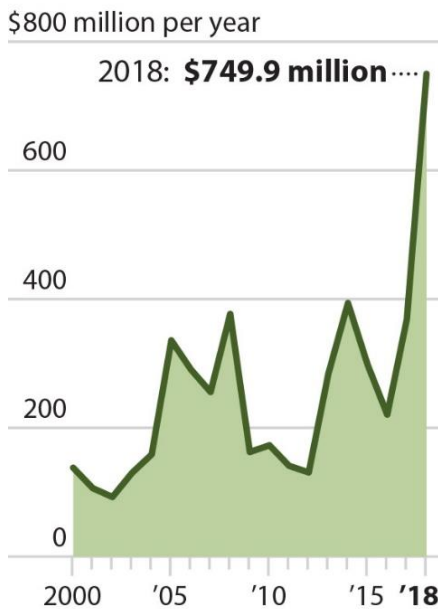
<sup>25</sup> Bret Wells. [Please Give Us One More Oil Boom; I Promise Not To Screw It Up This Time: The Broken Promise Of Casinghead Gas Flaring In The Eagle Ford Shale](#). Texas Journal of Oil, Gas and Energy Law 9:321-355, 330-331. July 12, 2014.

<sup>26</sup> See [Complaint](#), *Williams MLP Operating LLC, et al, v. Railroad Commission of Texas*, Travis Ct. Dist. Ct., Case No. D-1-GN-19-008123, filed November 20, 2019.

crude.<sup>27 28</sup> It was also a peak year for Texas oil and gas flaring (see Figure 2). If the flaring volumes estimated by the Energy Information Administration (EIA) for 2018 had actually been sold on the market,<sup>29</sup> IEEFA projects that it would have resulted in \$749.9 million in revenues to oil producers.<sup>30</sup>

**Figure 1: Texas Value of Onshore Gas Vented and Flared**

Based on annual average Henry Hub spot price for gas.



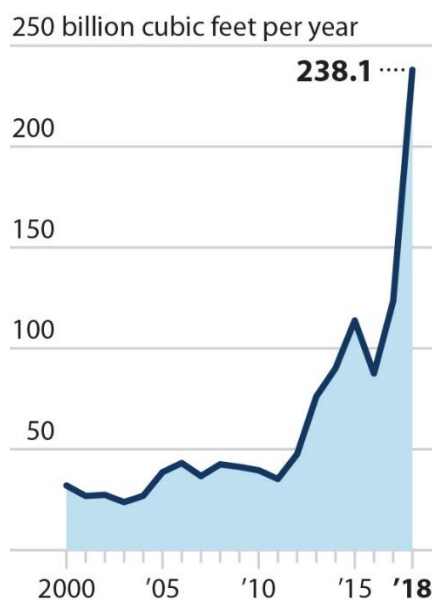
Source: EIA. *Selected national average natural gas prices, 2015-2020, Table 3, Natural Gas Monthly*. April 2020.

<sup>27</sup> 2018 is the most recently reported full year of data by the Energy Information Administration. Rystad has published its estimate that flaring increased further in 2019. Rystad Energy. [Permian gas flaring reaches yet another high](#). November 5, 2019. It states that flaring is expected to decline in 2020 due to the pandemic: Rystad Energy. [A downturn silver lining: Permian gas flaring has decreased and is expected to fall further in 2020](#). April 6, 2020.

<sup>28</sup> Texas Railroad Commission. [Historical Production: Crude Oil Production and Well Counts Since 1935](#). Retrieved May 29, 2020.

<sup>29</sup> Energy Information Administration. [Natural Gas Gross Withdrawals and Production, Vented and Flared, Texas Onshore, 2013-2018](#). Retrieved May 29, 2020.

<sup>30</sup> Energy Information Administration. [Selected national average natural gas prices, 2015-2020, Table 3, Natural Gas Monthly](#). April 2020. EIA uses the daily closing price of natural gas out of the Henry Hub in Louisiana.

**Figure 2: Texas: Onshore Venting and Flaring**

Source: EIA. *Natural Gas Gross Withdrawals and Production, Vented and Flared, Texas Onshore, 2013-2018*. Retrieved May 29, 2020.

Put in perspective, \$749.9 million represents 42% of ExxonMobil's 2018 earnings and 137% of its 2019 United States upstream earnings.<sup>31</sup> ExxonMobil is the largest publicly traded company by market capitalization in Texas and the industry, and is one of the state's leading producers of oil and gas.<sup>32</sup> ExxonMobil's investments in the Permian Basin are its top United States upstream investment strategic project.<sup>33</sup>

## Production Cut Debate Restated, Challenges for the Commission

### *Beyond the Production Cut Debate*

The RRC is granted broad discretion to determine if waste is occurring and to explore the underlying factors that lie at the cause of the dysfunction. Its recent decision to decline reducing production was based on a narrow and inaccurate definition of the problem. The reasons provided by the opponents to the resolution — Commissioner Christi Craddick and Chairman Wayne Christian — offer insights into the philosophical, political and legal challenges the two commissioners considered, but those reasons were far removed from the underlying fundamental financial issues raised by the proponents.<sup>34</sup> Continued inattention to broader issues

<sup>31</sup> ExxonMobil, *2019 Form 10-K, Business Profile, Financial, Earnings After Taxes, Upstream United States*. February 26, 2020, p. 36.

<sup>32</sup> Texas Railroad Commission. *Top 32 producers of 2018*.

<sup>33</sup> ExxonMobil. *Barclays Energy Conference*. September 2019. The Permian Basin is considered by ExxonMobil as its only strategic upstream project in the United States, p. 18.

<sup>34</sup> Houston Chronicle. *Opinion: Texas capping oil production? Chairman Wayne Christian picks a side*. April 29, 2020.

ensures that the RRC will fail to play a constructive role as the Texas oil and gas sector continues to decline and becomes a troublesome disruptor of the Texas economy, with adverse impacts on government, local communities and Texans employed in the industry.

### *The Definition of the Problem*

The sponsoring resolution summarizes the case. The supply of storage capacity for the oil industry is rapidly diminishing.<sup>35</sup> This overfill situation threatens the smooth functioning of the markets, and as a legal matter creates a condition under which the statutory triggers defining waste in the system of oil production in Texas is met. The overfill condition also contributed to various other dysfunctions, including oil prices that fall below cost.

The immediate exacerbation of the waste condition was brought on by the pandemic virus and a simultaneous price war, as Russia and Saudi Arabia teamed up to harm U.S. oil and gas interests. The pandemic caused substantial segments of the United States economy to close. This closure dramatically reduced demand for oil and gas. Producers continued to produce, and oil supplies threatened to surpass existing storage capacity.<sup>36</sup>

Concurrently, Russia and Saudi Arabia sought to address their long-term objections to U.S. oil producers failing to curtail production, a factor that keeps prices low and threatens their respective economies. Saudi Arabia and Russia planned to flood the global market with supplies, driving down prices. The combined impact of these market factors, according to the Pioneer Natural Resources, compelled the RRC to hold a hearing, consider the facts and adopt a resolution to reduce oil production by 20%.<sup>37</sup>

Testimony at the hearings was dominated by this analysis. Witnesses focused on how oil producers are reacting to the conditions, what options are available to the RRC to regulate in such a circumstance and the implications for the many stakeholders — small and large — of intervening or continuing with the status quo, the “free market” alternative.

Two testimonies, on opposite sides of the question, suggested that longer term issues were also at stake. They asserted that the low oil prices and oversupply were industry problems before the pandemic, and that the production and attendant financial problems will continue to plague the industry even as the economy recovers.

The American Petroleum Institute (API), a strong opponent of the resolution, questioned whether the storage problem was an actual constraint, predicting that it

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<sup>35</sup> Texas Railroad Commission. [Motion on Verified Complaint of Pioneer Natural Resources U.S.A., Inc. and Parsley Energy Inc. regarding conservation and prevention of waste of crude petroleum and natural gas in the State of Texas](#). March 30, 2020.

<sup>36</sup> Rystad Energy. [Oil Market Update](#) (attached to Pioneer Natural Resource Submission to the Texas Railroad Commission). April 7, 2020.

<sup>37</sup> Ibid.

would quickly abate. API described the pandemic as a short-term problem that would remedy itself with additional federal storage facility use and prudent management of existing commercial storage resources:<sup>38</sup>

*“Although we have reason to believe demand responsiveness will be resilient as the effects of COVID-19 subside, increased oil supply and responsiveness at relatively lower prices has been a structural characteristic of the market for the past five years.”<sup>39</sup>*

In an opinion piece in the Dallas Morning News, Scott Sheffield, the CEO of Pioneer Natural Resources, made clear that the immediate problems facing the industry were triggered by pandemic virus, but he also warned that the industry was threatened by low prices:

*“In ordinary times, an industry shakeout of weaker players would be the expected, even healthy, consequence of a down cycle. But in its origins and impact, the current market collapse is anything but ordinary, and a prolonged period of oil price depression threatens U.S. national interests.”<sup>40</sup>*

Pioneer focused its arguments before the RRC on the immediate problem of oversupply and a temporary mandate to cut production, but it extended the argument and the interests at stake beyond Pioneer, the industry and the State of Texas. Pioneer pointed out that the RRC had broad powers and that its actions also could take into account the needs of the Texas economy.<sup>41</sup> Indeed, Pioneer argued that the proposal had the nation’s interest in mind.

Thus, each of these stakeholders — one for the production cuts and one against — see the twin evils of oversupply and low prices predating the pandemic and a presenting a critical challenge to the sector for the future.

**“In ordinary times, an industry shakeout of weaker players would be the expected, even healthy, consequence of a down cycle. But... the current market collapse is anything but ordinary, and a prolonged period of oil price depression threatens U.S. national interests.”**

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<sup>38</sup> American Petroleum Institute. [Letter from R. Dean Foreman to Texas Railroad Commission](#). April 8, 2020.

<sup>39</sup> API Testimony. The Institute offered a technically more precise rendering of the problem. After describing the historical dynamics of supply and demand balance the Institute stated: “However, the U.S. energy revolution appears to have altered this relationship by increasing oil resources and production more rapidly than global demand grew. In basic economics terms, the supply curve shifted outward and flattened, enabling more global oil production for any given price level and increasing the sensitivity of supply growth to oil prices.”

<sup>40</sup> Dallas Morning News. [Pioneer Natural Resources CEO: The U.S. must do more to restrain oil supply](#). April 13, 2020.

<sup>41</sup> Pioneer Natural Resources. [Memorandum of Law](#). April 8, 2020, p. 6.

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While neither these industry leaders nor the commissioners followed up on these longer-term matters, fundamental factors need attention.

- During the past three years, despite a relative price rebound, the oil and gas sector placed last in the Standard and Poor's 500. For most of the past ten years, the sector has placed near last or in last place in the S&P 500.<sup>42</sup>
- In the 1980s, seven of the S&P 500 top 10 performers were from the oil and gas sector. Today, none have achieved that placement on the list.<sup>43</sup>
- In 1980, oil and gas stocks commanded 28 percent of the S&P portfolio.<sup>44</sup> Today, the oil and gas sector commands only 3 percent.<sup>45</sup>

The narrow view that relief from the demand shock of the pandemic or an OPEC oil price deal would occur best if companies were allowed to self-regulate production cuts won the day, as the commissioners rejected the Pioneer Natural Resources and Parsley Energy proposal. While the RRC did not address the structural factors described at its hearing, those factors nevertheless will drive the challenges that will continue to face the RRC and the oil and gas industry.

The public discussion on oil prices, led in large measure by API and the oil majors, and supported by oil and gas independents, focused on what constitutes a healthy oil price. The perspectives put forward by both industry proponents and opponents, however, were unrealistic.

Today, as oil prices have risen above \$30 per barrel, some producers are claiming victory.<sup>46</sup> Others are expressing a more modest small sigh of relief and the expectation that this will stave off bankruptcies. Oil prices are expected to rise modestly but stay in the \$30-per-barrel range through next year. A stronger oil price rebound would put oil prices up into the \$45 to \$50 range thereafter.<sup>47</sup> That will not be enough to pull the industry from its quagmire.

Recent history makes the point that the oil and gas industry's former blue-chip status will not return with oil prices at \$30, \$40, \$50 or even \$60 per barrel. Oil prices bottomed out in 2016 at \$29 per barrel in February 2016. Prices recovered by June 2016 to \$50 per barrel. From June 2016 through February 2020, oil prices ranged from \$50 per barrel to \$77 per barrel.

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<sup>42</sup> IEEFA. [IEEFA Update: Oil and gas stocks place dead last in 2019 again, despite 30% price rise.](#) January 9, 2020.

<sup>43</sup> Bloomberg. [Exxon Poised to Drop From S&P 500's Top 10 for First Time Ever.](#) August 30, 2019.

<sup>44</sup> IEEFA. [ExxonMobil's Fall From the S&P 500 Top Ten: A Long Time Coming.](#) August 2019.

<sup>45</sup> Standard and Poor's. [U.S. Indexes, Equity 500.](#) Retrieved May 26, 2020.

<sup>46</sup> Bloomberg. [Shale Producers Eye Potential Fracking Revival at \\$30 Oil.](#) May 5, 2020.

<sup>47</sup> Scott Sheffield. [Pioneer Natural Resources CEO On Whether Fuel Demand will snap-back when U.S. oil production ramps up this summer.](#) May 22, 2020.

**Figure 3: Oil Prices Historical 2015 to Present**

Source: Macro Trends. *Crude Oil Price History Chart, 2015 to Present*. Retrieved May 25, 2020.

The oil and gas sector posted a strong stock market performance in 2016, a year of price recovery. Oil prices all but doubled during 2016. Prices stabilized between 2017 and early 2020, in the \$50- to \$75-per-barrel range. Yet during this period, the oil and gas sector became the poorest performing sector in the S&P 500, a position it currently retains.

The current recovery scenario in the \$30- to \$40-per-barrel range makes it increasingly likely that the oil and gas sector will remain in last place in the stock market for the foreseeable future. Industry profits and fortunes are unlikely to return to blue-chip performance levels with oil prices at this level. Investors fled the industry when prices stayed in the mid to upper \$50s.

The average price of West Texas Intermediate (WTI) oil was \$58 for 2017-19.<sup>48</sup> Permian producers during this period underperformed, as did the rest of the oil and gas industry as it promoted unconventional drilling.<sup>49</sup> Exxon Mobil's performance in the Permian Basin,<sup>50</sup> for example, has been dismal.<sup>51</sup> In 2017 the company posted negative U.S. upstream earnings in three of the four quarters. The fourth quarter produced positive earnings due to Washington tax cuts.<sup>52</sup> In 2018, the company's

<sup>48</sup> Macro Trends. *WTI Crude Oil Prices — 10 Year Daily Chart*. Retrieved May 29, 2020.

<sup>49</sup> Wall Street Journal, *Wall Street Tells Frackers to Stop Counting Barrels, Start Making Profits*. December 13, 2017. Also: Wall Street Journal. *Big Fracking Profits at 50 a Barrel? Don't Bet on It*. December 4, 2018. Also: Wall Street Journal. *Shareholders Have No Love for Shale Companies*. August 13, 2019.

<sup>50</sup> Oil & Gas 360. *Drilling Down: Top Texas Drillers of 2019*. December 30, 2019.

<sup>51</sup> IEEFA. *IEEFA Update: ExxonMobil abandons goal of "quick cash" from Permian fracking*. November 13, 2019.

<sup>52</sup> ExxonMobil. *4Q 2017 Earnings*. February 2, 2018.

U.S. upstream efforts produced \$1.7 billion in earnings,<sup>53</sup> and in 2019 less than \$500 million.<sup>54</sup>

The years 2017 to 2020, a period of relative price stability, also did not improve the position of the world's other oil and gas leaders. Saudi Arabia and Russia were driven to such desperate straits that they resorted to unprecedented actions that arguably damaged their own interests to compel U.S. oil producers to cut production to create higher prices.

The RRC did not address the fundamental factors underlying this low-price environment. Those factors are an oversupply of the market spurred by a combination of unconventional oil and gas drilling in the United States,<sup>55</sup> greater competition among producer nations,<sup>56</sup> rising market share of renewables,<sup>57</sup> transport and efficiency,<sup>58</sup> an uncertain outlook for petrochemicals,<sup>59</sup> and a decrease in energy intensity as a foundation for general economic growth.<sup>60</sup>

Taken as individual problems, the profitability of the oil and gas industry would not be impaired. Taken together, these seemingly small and medium risks have ushered in a prolonged period of low prices and dismal investment performance.

For the RRC, the issue of waste is not simply one of prudent management of a natural resource. Condoning flaring today does not foster a healthy free market or a profitable oil and gas sector. The practical questions of break-even prices, survival prices or prices to avoid bankruptcy are not the basis for industry recovery. Whether it is in large oil-producing countries like Saudi Arabia, Russia, Canada or smaller emerging places like Argentina — or even the Permian Basin — the oil and gas industry is far from its blue-chip past.

To regain its place of financial and energy leadership would require oil to rise to at least \$80 per barrel oil for several years. It would also require a robust market for

**Taken as individual problems, the profitability of the oil and gas industry would not be impaired. Taken together, these seemingly small and medium risks have ushered in a prolonged period of low prices and dismal investment performance.**

<sup>53</sup> Exxon Mobil. [4Q 2018 Earnings](#). February 1, 2019.

<sup>54</sup> ExxonMobil. [4Q 2019 Earnings](#). January 31, 2020.

<sup>55</sup> WorldOil. [America is awash with natural gas, and it's about to get worse](#). January 17, 2020.

<sup>56</sup> Wall Street Journal. [Oil-Price War Batters Poorer OPEC Members as Coronavirus Looms](#). March 31, 2020.

<sup>57</sup> Deloitte. [2020 Renewable Energy Industry Outlook](#).

<sup>58</sup> Wall Street Journal. [Shift to Cloud, Renewable Energy Top CIOs Sustainability Agendas](#), December 26, 2019.

<sup>59</sup> S&P Global Platts, [China petrochemical sector braces for global recession as coronavirus leaves economies reeling](#). March 31, 2020.

<sup>60</sup> McKinsey Quarterly. [The decoupling of GDP and energy growth: A CEO guide](#). April 24, 2019.



existing reserves, debt used to create revenue producing assets, debt levels declining, credit rating upgrades, strong stock performance, a cessation of bankruptcies, fiscal stability of state-owned enterprises and access to rising energy demand unfettered by competitors. These are the elements of a positive outlook.

This is an almost impossible scenario to achieve. The weakness of the industry and its poor stock performance is not just a financial matter. The drivers of the world economy are now information technology, consumer products and communications. Industrial, real estate, utilities and the finance sectors are also better positioned than the oil and gas sector. The reality is that for the past decade, economic growth has become decoupled from the growth of the oil and gas sector, as most industries and many countries have become materially less reliant on fossil fuels.

## The Challenges Going Forward

The failure of the RRC to put recent events into the broader context of the oil and gas sector's structural decline and the outlook for the Texas economy is unfortunate. In the coming months and years, many of these issues and more will resurface, and the RRC will remain unprepared.

The RRC needs to confront the central issues:

- A shrinking oil and gas industry, and lost revenue from flaring;
- The potential impacts of the oil and gas sector's declining revenue base and profitability on Texas universities, the permanent school fund, general revenue, transportation and the state's rainy day fund; and
- Persistent legal and governance issues related to waste.

**More and more, oil and gas companies today resemble just another desperate interest in their twilight years.**

RRC Chairman Christian voiced his concern that the production cut resolution was using an antiquated policy tool.<sup>61</sup> The dialogue that will emerge in the wake of that resolution will illuminate both the regulatory flaws in the system and the quality of leadership at the RRC. Most disappointing in the recent debate was the commissioners' nearly blanket, unquestioning acceptance of the positions of large oil companies. These companies are not the blue-chip leaders of years past, but increasingly behave as speculative financial laggards. Oil and gas companies today, more and more, resemble just another desperate interest in their twilight years.

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<sup>61</sup> Houston Chronicle. [Opinion – Texas capping oil production? Chairman Wayne Christian picks a side.](#) April 29, 2020.

A plan to reduce flaring would bring two sets of benefits. The environmental benefits are well documented, and multiple policy options have been offered by environmentalists often working in collaboration with industry representatives.<sup>62</sup>

The financial benefits need to be articulated as well. A prudent policy to reduce flaring would reduce the amount of oil and gas produced. The current business model used by the oil and gas industry is under stress and is driven by a permanent state of competition and oversupply. One prominent industry CEO referred to the model as a form of “slow suicide.”<sup>63</sup> The following considerations would inform an effective flaring reduction policy:

- Mandated reductions in production driven by flaring will serve as a significant complement to reductions implemented by OPEC and participating countries.
- The overall reduction in production is geared to raising prices. Low prices have reduced oil and gas industry revenues to the point where the energy sector’s value-destroying business model is the worst-performing industry in the S&P 500.
- An increase in oil and gas revenues should produce greater tax and royalty revenues for the State of Texas and investors.
- A cutback in production should eliminate the storage capacity concerns that prompted some oil and gas interests to support the RRC’s resolution last month.
- A cutback in production eliminates the extraordinarily shortsighted view that more pipelines, pushing more product into an oversupplied market, will somehow raise prices. This incredible proposition has been widely discredited yet remains a common theme in industry discourse, regardless of fact or rational criticism.<sup>64</sup>

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<sup>62</sup> EDF Website. [Site Search: Flaring](#). Retrieved June 1, 2020. Forbes. [EDF and ExxonMobil Discuss Technology and Regulation to Reduce Methane Emissions](#). March 12, 2019.

<sup>63</sup> S&P Global. [Former EQT CEO: Gas revolution an ‘unmitigated disaster’ for buy, hold investors](#). June 24, 2019.

<sup>64</sup> See, Merrill Lynch: “The capacity of these pipelines will dwarf Permian Oil Production growth,” in Wall Street Journal, [Shrinking U.S. Crude Discount Threatens Exports](#). August 20, 2019; Also IHS Markit: “It is simply too much, too fast. Drillers are now able to increase supply faster than domestic or global markets can consume it.” Business Wire. [U.S. Natural Gas Price Will Fall to Levels Not Seen Since 1970s, HIS Markit Says](#). September 12, 2019. Also: Citigroup: “We agree there’s going to be an overabundance for the next two to three years. We see prices being challenged for the next two to three years. We see Brent in the low \$50s, and WTI in the high \$40s, which is not an environment where there’s going to be much as much reinvestment, as there is. We’ll have to modify our expectations for production growth, given the increased likelihood that global GDP is going to be low and even without a recession, demand will be lower.” CNBC. [The U.S. is about to send a lot more oil into an oversupplied market](#). August 27, 2019. Also: Argus Media: “The biggest driver of these natural gas lows are a string of new oil infrastructure projects that have helped ease Permian bottlenecks that limited oil production growth.” Argus Media. [Permian oil pipelines aggravate gas glut](#). April 3, 2019.

## Conclusion

The oil and gas industry has been undergoing fundamental change over the past several years, transforming from a cash-inundated juggernaut to an unstable, declining player that the State of Texas depends upon for its financial health. In this context, the RRC's duty to address waste in oil and gas production is not only a legal requirement but also a practical imperative that is becoming more and more critical for the financial future of Texas.

How the RRC responds to the challenge of waste in today's oil and gas production industry will bear heavily on the extent to which Texas can adopt a constructive economic environment that successfully manages the long-term decline of this sector. If the RRC neglects to provide proper oversight, its failure to act will put the Texas economy at risk. On May 5, 2020, the RRC disregarded its duty. It needs to recalibrate itself and align its actions with its critical responsibility to protect the public from the irresponsible excesses of the oil and gas industry that jeopardize the future of Texas.

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## About IEEFA

The Institute for Energy Economics and Financial Analysis (IEEFA) examines issues related to energy markets, trends and policies. The Institute's mission is to accelerate the transition to a diverse, sustainable and profitable energy economy. [www.ieefa.org](http://www.ieefa.org)

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