

# The High Costs of Unplanned Oil Refinery Closures

Emily Moore, Director of Climate and Energy



Marathon's oil refinery near Anacortes, Washington. Source: [Flickr](#)

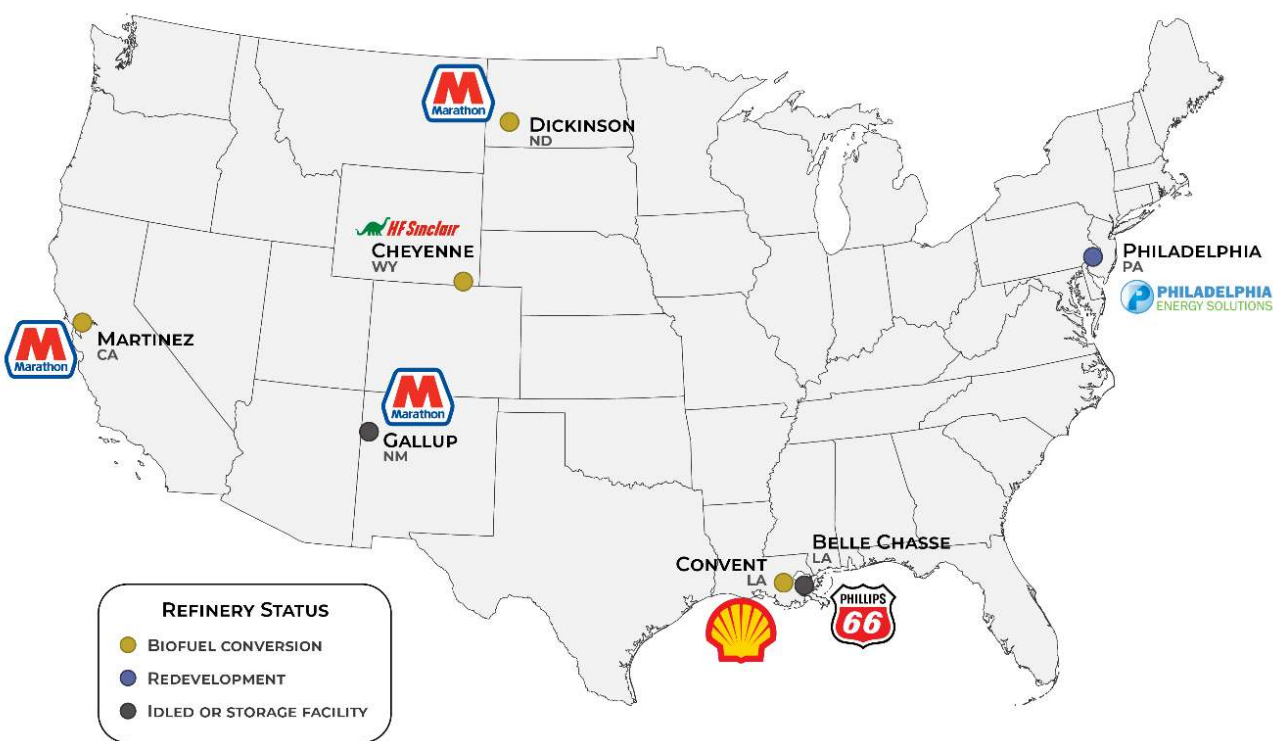
## Executive summary

- **Since 2019 seven oil refineries have closed across the United States, almost all without warning.** Oil companies are planning at least two additional US refinery closures within the coming year. More are certain to follow as oil use peaks and economies decarbonize.
- **Combined, recent refineries' abrupt closures cost more than 3,400 high-paying jobs and \$21 million in local tax revenue annually in the communities that hosted them.** In many cases, communities lost their biggest employer and taxpayer virtually overnight.
- **The abrupt nature of almost all of the closures prevented communities from weighing in on a transition plan.** The companies that owned the refineries —HF Sinclair, Marathon Petroleum, Philadelphia Energy Solutions, Phillips 66, and Shell— made decisions about the refineries' futures behind closed doors, following one of three paths:
  - Two refineries are keeping skeletal operations open to store oil or “idle” indefinitely, laying off almost all of their workers and forgoing environmental cleanup.
  - Four refineries are converting to processing biofuels, in most cases with a sliver of their former workforce and no environmental remediation of the sites. Plus, some environmental groups object to the continued polluting impact of refining biofuels.
  - Just one refinery is redeveloping entirely, in Philadelphia. There, nearby residents are concerned that they have not been adequately informed about remediation plans and that the new owner has not signed a community benefits agreement.
- **Washington state has the chance to learn from these recent closures and do things differently.** Marathon Petroleum, HF Sinclair, and Phillips 66, the same owners of several recently closed refineries, own three of the state's five oil refineries.
- **More than 2,000 employees work at Washington's refineries, plus an additional average of about 2,400 contractors annually.** The refineries together paid more than \$24 million in local property taxes in 2021, primarily in Skagit and Whatcom counties.
- **Washington can start planning ahead now** with its own refinery-hosting communities to avoid the economic shocks and environmental hazards that oil corporations left in their wake in other cities and towns around the country. The question for Washington state, which does most of Cascadia's refining, is not if the state's oil refineries will close but rather when, how, in which order, and what comes next?



## Seven US oil refineries have closed since 2019.

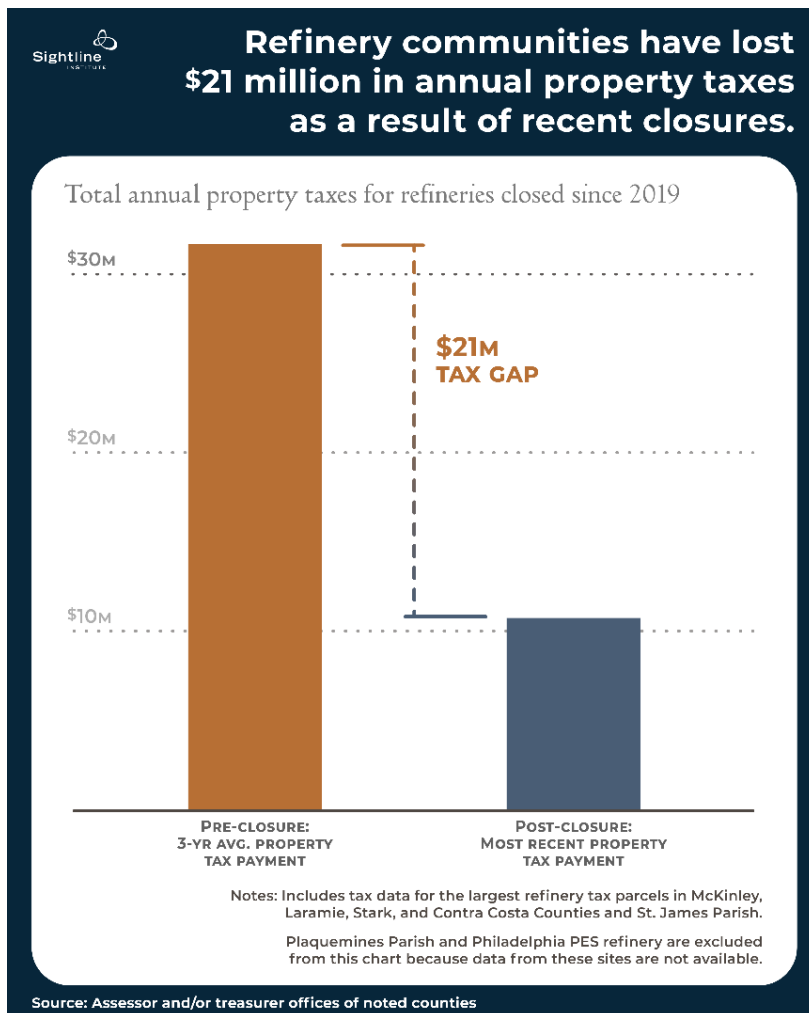
Location, owner, and current status of recent oil refinery closures



Sources: Marathon Petroleum, New Mexico Environment Department, Phillips 66, Transport Topics, HF Sinclair, Shell, the Advocate, Oil & Gas Journal, U.S. Energy Information Administration, WHYY

## Introduction

Global climate progress means that oil refineries inevitably will start closing. In fact, they already have. Since 2019 seven refineries have shuttered in the United States alone.<sup>i,1</sup> Refiners' current windfalls belie their long-term decline: analysts expect oil demand to peak between the mid-2020s and mid-2030s, and as many as 20 refineries across Asia, Europe, and North America could shut their doors in the next few years.<sup>2</sup> "There will never be another new refinery built in the United States," predicted Chevron CEO Mike Wirth in June 2022.<sup>3</sup>



The question for Washington state, which does most of Cascadia's refining, is not if the state's oil refineries will close but rather when, how, in which order, and what comes next?

Recent US oil refinery closures illustrate what Washington would be smart to avoid: unplanned, unexpected, and sudden shutdowns. All but one of the seven closures since 2019 precipitated the swift loss of hundreds of high-paying jobs and erased millions from local governments' coffers. As a result of the closures, property tax revenues in refinery communities are down by more than \$20 million annually so far,<sup>ii</sup> and more than 3,400 workers have lost their jobs. In some cases, the abrupt nature of the closures also pitted community members against each other. Some wanted the long-polluting facilities gone, and others were desperate to save their livelihoods. Without exception, oil companies decided the refinery sites' future without community input.

<sup>i</sup> In addition, a refinery in the US Virgin Islands attempted to restart in 2021 after a decade idle, but the EPA ordered it shut it down just a few months later due to imminent health threats to nearby residents. Several other refineries have partially closed in recent years; Sightline has not included them in this report.

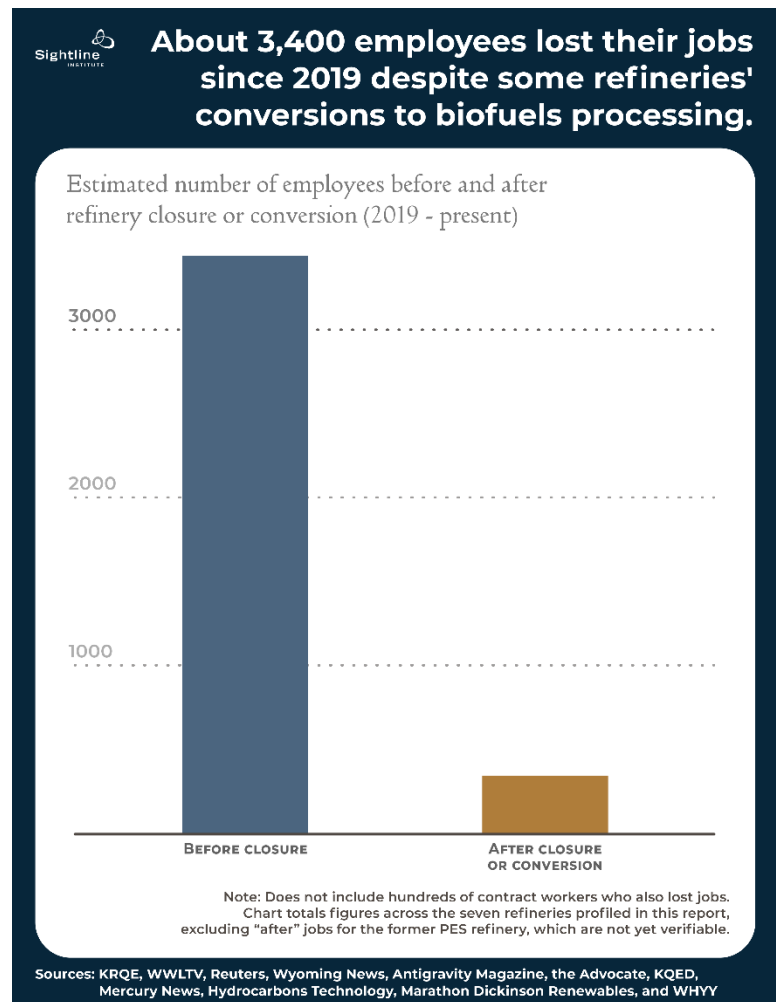
<sup>ii</sup> \$20 million is the difference between the average of three years' of property tax payments pre-closure and the most recent tax payment post-closure for the six refineries for which data was available. The Philadelphia Department of Revenue, Office of Property Assessment, and Department of Commerce have not replied to Sightline's request for information about the former Philadelphia Energy Solutions refinery's taxes.

Each of the seven refineries that shut followed a different post-closure path, none ideal, from the perspective of workers or the environment, but some better than others. In a lose-lose outcome, two facilities managed to stay technically open as “idled” facilities or oil storage terminals. The owners slashed all but a handful of jobs while forestalling full cleanup. Incidentally, the two companies pursuing that approach are Phillips 66 and Marathon Petroleum (Marathon), which also own two of Washington’s refineries. Four other refineries are attempting conversions to produce biofuels, mostly “renewable diesel,” or have completed such conversions.<sup>iii</sup> Again, owners of Washington refineries are among this group: Marathon and HF Sinclair. (BP’s Washington refinery already produces some renewable diesel, and conversion is a much-discussed option for Washington’s refineries.)

The companies promise some new jobs but almost always fewer than the oil refineries had provided. Meanwhile, some groups hotly contest the purported environmental benefit of refining biofuels, and full remediation is not possible while the sites are still in use.

Just one refinery, in Philadelphia, is being totally redeveloped. There, nearby community members, who for decades suffered from the site’s pollution, are concerned about the adequacy of the cleanup and the purported economic benefits of the new logistics hub that is replacing the refinery.

Washington has a chance to do things differently. Not to save a dying, polluting industry but to create a smoother path for workers and communities, by planning ahead now. Otherwise, the refinery owners and the whims of the volatile oil market may chart the state’s future for it.



<sup>iii</sup> Renewable diesel is chemically identical to petroleum diesel but produced from vegetable oil (primarily soybean and corn oil) or animal fats instead of from crude oil.



## Two refineries skirted responsibilities by maintaining skeletal operations

An “indefinite idling” in Gallup, McKinley County, New Mexico



Marathon's idled refinery in Gallup, NM. Source: [Library of Congress](#)

The city of Gallup, New Mexico, population 21,000, sits on Route 66 in the northwest part of the state, a short distance from the Navajo Nation. The city's residents, roughly half of whom are Native American, have struggled economically.<sup>4</sup> A third live under the Census Bureau's poverty line. So when Marathon, the United States' largest oil refining company (and owner of Washington's third-largest refinery, in Anacortes) announced in August 2020 that it was closing its 65-year-old Gallup refinery and laying off 220 workers, many in the town reeled.<sup>5</sup>

The unexpected nature of the closure, driven by the pandemic-induced crash in oil demand, left many who had worked at the refinery for decades scrambling to find comparable employment. One refinery worker who had been employed at the refinery for ten years told the *New York Times* that “no other jobs pay as well” in the area.<sup>6</sup> The city's mayor predicted that the closure would “affect all the businesses” in the city.<sup>7</sup> McKinley County, home to the refinery, has lost about \$3 million total so far in property taxes, which fund services including schools and hospitals.<sup>iv</sup>

Despite laying off all its workers, Marathon has thus far managed to squirm out of its cleanup obligations by maintaining that the refinery is not officially closed. Marathon calls it “idled

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<sup>iv</sup> In 2020 the refinery paid \$2,074,231 in property taxes to McKinley County on its largest tax parcel. That payment dropped to \$547,996 in 2021 and \$543,124 in 2022, according to documents the McKinley County treasurer shared with Sightline.

indefinitely.” This is a strategy Marathon is employing to avoid the long and expensive task of clean-up, a representative from the New Mexico Environment Department told Sightline. He estimates that cleanup, which under New Mexico law requires restoring the land to residential land use standards, could take 20 to 50 years and cost tens of millions of dollars. For now, the refinery continues to “idle,” without workers, on heavily polluted land, and with no plans in sight for redevelopment.

## A conversion to an oil storage facility in Belle Chasse, Plaquemines Parish, Louisiana



*Phillips 66's flooded oil refinery in Belle Chasse, Louisiana after Hurricane Ida. Source: [Flickr](#)*

Plaquemines Parish, Louisiana, looks quite different than Gallup, New Mexico, but a similar fate befell one of its oil refineries in the town of Belle Chasse. Just outside New Orleans, Plaquemines is predominantly white, with roughly half the poverty rate of Gallup.<sup>8</sup> Belle Chasse is the largest community in Plaquemines Parish and part of the Greater New Orleans metropolitan area. The parish encompasses the final stretch of the Mississippi River before it reaches the Gulf of Mexico, a busy route for Louisiana's many oil tankers.

In August 2021 Phillips 66 (owner of one of Washington's refineries in Whatcom County), put its refinery in Belle Chasse up for sale as part of the company's overall shrinkage of its refining portfolio.<sup>9</sup> But after Hurricane Ida damaged the refinery and reduced its value by \$300 million, the company announced in November 2021 that it would instead shut down the refinery and convert it into an oil terminal, a facility where oil is stored until it is shipped elsewhere.<sup>10</sup>

Once again, the abrupt nature of the closure left the community scrambling. The refinery had been the largest private employer in the area.<sup>11</sup> Phillips 66 laid off roughly 470 employees and severed ties with 400 contractors.<sup>12</sup> The refinery had also been the parish's biggest single source of property tax revenue, paying \$7.4 million of the parish's total estimated \$60 million in tax revenue in 2021.<sup>13</sup> (This is about the same amount as the two refineries in Skagit County, Washington, paid the same year.<sup>v</sup>)

By continuing slimmed-down operations as a terminal, Phillips 66 managed to stay in business while offering minimal economic benefits to the surrounding community. Just 27 hourly workers continued on to operate the terminal.<sup>14</sup> And the Plaquemines Parish assessor's office anticipates that the local government's tax revenue will fall significantly once it reassesses the property's value as a storage facility in 2023.<sup>15</sup> Already, Phillips 66 is appealing its 2022 assessment, saying it is too high, the Parish assessor told Sightline. To top it off, a full environmental cleanup is impossible as long as the site operates as an oil terminal.

## Four refineries are converting to produce biofuels, raising environmental concerns and offering fewer jobs

### A pilot conversion in Cheyenne, Laramie County, Wyoming

Some oil companies are pursuing a different path to delay their demise: converting refineries to produce biofuels such as renewable diesel. They are incentivized by policies, including the federal Renewable Fuel Standard program, California's Low Carbon Fuel Standard, Oregon's Clean Fuels program, and Washington's upcoming Clean Fuel Standard.

Cheyenne, Wyoming's capital and most populous city, with 65,000 (mostly white) residents, is home to one of the first US refineries to test out this conversion strategy.<sup>16</sup> In 2020 HF Sinclair (which owns one of Washington's refineries in Skagit County) announced it was shutting down its Cheyenne oil refinery to convert it to be able to produce biodiesels. The converted refinery is now up and running, turning soybeans into renewable diesel that it sells to fuel producers and importers in California.<sup>17</sup>

But the retrofitted refinery produces just 12 percent of the quantity of fuels it used to.<sup>vi, 18</sup> Correspondingly, it offers the local community a fraction of its former jobs and tax benefits. The company laid off most of its workforce—about 200 employees—in 2020, causing Cheyenne's mayor to describe HF Sinclair's decision as a “gut punch.”<sup>19</sup> Today about 80 people work at the converted facility, and HF Sinclair's property taxes dropped from about \$3.2 million in 2020 to

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<sup>v</sup> HollyFrontier paid at least \$4.3 million in local property taxes in 2021, and Marathon paid at least \$3.5 million the same year, according to the Skagit County assessor's office.

<sup>vi</sup> The oil refinery's capacity was [52,000 barrels per day](#). The renewable diesel facility's capacity is [6,000 barrels per day](#).



just under \$670,000 in 2022, a nearly 80 percent plunge.<sup>20</sup> The long-term tax implications of the conversion remain to be seen.<sup>vii</sup>

Once again, full environmental cleanup is not possible while the facility is still operating. “There is contamination there that won’t be able to be cleaned up until [HF Sinclair] decommissions the equipment and buildings,” a representative from Wyoming’s Department of Environmental Quality told Sightline. He estimated that the cleanup could cost tens of millions of dollars and take decades, given the site’s level of contamination.

What the HF Sinclair refinery could become if it were cleaned up would depend on many factors, including just how polluted it is. But an idea of a different future can be found just a few hundred miles away, in Casper, Wyoming. There, a refinery that BP shut down in 1991 is now a multiuse site with a business park, golf course, and kayak course that employs more than 200 people.<sup>21</sup>

### A proposed conversion in Convent, St. James Parish, Louisiana



*Part of Cancer Alley in Louisiana. Source: Flickr*

Between New Orleans and Baton Rouge, just a few miles from the Phillips 66 refinery in Belle Chasse, is “Cancer Alley.” This is a stretch of the Mississippi River that residents and environmental justice advocates have so dubbed due to the disproportionately high cancer rates in nearby communities, particularly Black communities.<sup>22</sup> Cancer Alley is home to 150 big

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<sup>vii</sup> In 2020 HF Sinclair paid \$3.2 million in property taxes to Laramie County, according to the Laramie County assessor’s office. This decreased to \$1.6 million in 2021 and \$0.67 million in 2022.



polluters, including refineries, plastics plants, and chemical facilities.<sup>23</sup> A Shell oil refinery in Convent, a small town in St. James Parish within Cancer Alley, was once among them.

Like Phillips 66, Shell first tried to sell its refinery, putting it on the market in July 2020 as part of the company's broader strategy to reduce its refining and chemicals portfolio by more than half.<sup>24</sup> (Shell also sold its refinery near Anacortes, Washington, in 2021 to HollyFrontier, now HF Sinclair, for \$350 million.<sup>25</sup>) But Shell failed to find a buyer and so announced in November 2020 that it would shutter the refinery.

What happened next should be familiar by now: St. James Parish lost its biggest single taxpayer, which will cost the parish an estimated \$26 million in revenue between 2021 and 2023.<sup>viii, 26</sup> More than 1,000 people lost their jobs—about 700 employees and 400 contract workers.<sup>27</sup>

Then in February 2021 Shell announced that it planned to invest \$1.48 billion to convert the refinery and begin producing “sustainable aviation fuel” and renewable diesel.<sup>28</sup> Once that conversion is complete (currently projected for 2028), Shell estimates that the new facility will create just 24 new permanent jobs.<sup>29</sup>

And as with the former Phillips 66 refinery in nearby Belle Chasse and the HF Sinclair refinery in Cheyenne, full remediation of this site is not possible while it is still operating. The environmental impact of the site's conversion to biofuels is also yet unknown, including whether it will prolong some of the long-standing environmental injustices in St. James through continued air pollution.

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<sup>viii</sup> Shell paid \$19.4 million in property taxes in 2020. Based on an agreement between Shell, St. James Parish, the school board, and the sheriff's office, the company agreed to pay \$17.4 million in 2021, \$10 million in 2022, and \$4.5 million in 2023. \$26 million is the summed difference between the 2020 tax value and the negotiated tax levels between 2021 and 2023.

## A controversial conversion to biofuels in Martinez, Contra Costa County, California



*Marathon's refinery in Martinez, CA. Source: [Contra Costa County site](#)*

Closer to Cascadia, in the San Francisco Bay Area, sat another of Marathon's refineries. While the place looks different, the story repeats. Martinez, a city of 38,000, is in California's Contra Costa County and has a median household income of \$109,000, a poverty rate roughly half the national average, and a predominantly white population.<sup>30</sup>

Just as in Gallup, New Mexico, so too in Martinez: the sudden drop in oil demand due to the pandemic led Marathon to shut its refinery suddenly in 2020, laying off 740 workers.<sup>31</sup> (That's about the same number of employees at Washington's largest refinery, the BP facility in Whatcom County.) Marathon's Martinez refinery was one of the top taxpayers in Contra Costa County; so far, its tax payments have dipped from a high of \$8.5 million pre-closure to \$3.7 million in the 2022–2023 tax year.<sup>32</sup> The steady decline in the company's tax payments has cost the county at least \$14 million total.<sup>ix</sup>

In environmentally minded California, the complicated politics of a big polluting facility's abrupt closure were on full display. Hollin Kretzmann, an attorney with the nonprofit Center for Biological Diversity in Oakland, summed up many environmentalists' views in an interview with KQED: "Communities near this dangerous refinery can breathe a little easier now that operations have halted, but the state desperately needs a just transition plan that protects workers when oil companies toss their employees to the curb with little warning."<sup>33</sup>

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<sup>ix</sup> In 2018–2019, Marathon paid \$8.5 million to Contra Costa County in property taxes for one of its parcels of land. Sightline compared this to the subsequent tax bills on the same parcel for the subsequent four tax years. The difference is \$14 million. Source: Contra Costa County Tax Records. Marathon likely paid additional taxes on other parcels.

Then in November 2020 Marathon filed for a permit to convert the site to a renewable diesel plant.<sup>34</sup> Contra Costa County approved the permit in March 2022.<sup>35</sup> The conversion alarmed some local environmental groups, which sued the county over what they said was a rushed approval and an incomplete and misleading environmental review.<sup>36</sup> Among the groups' concerns are the potential role of biofuels in driving food insecurity; the climate impact of converting forests and other carbon sinks to grow biofuel feedstock such as soybeans and corn; local air, water, and soil pollution from refining biofuels; and the delayed full remediation of the heavily polluted site.<sup>37</sup>

As for the jobs saved by the conversion, Marathon has indicated that it will hire about 110 people, just 15 percent of the 740 the oil refinery once employed.<sup>38</sup>

## A case of exceptions in Dickinson, North Dakota



*Soybean fields in North Dakota. Source: [North Dakota state site soybean report](#)*

Some 1,500 miles away from Martinez, California, is the small city of Dickinson, North Dakota. Dickinson is home to yet another oil refinery that has converted to make renewable diesel. The refinery, which MDU Resources Group and its partners opened in 2015, was the first new refinery built in the United States since 1976.<sup>39</sup> Almost immediately it faced financial trouble. The owners lost \$7.2 million in the first quarter of 2016 and sold it at a loss to Tesoro later that year.<sup>40</sup> Searching for a way to salvage the facility, Tesoro (by then known as Andeavor) announced in 2018 it would fully convert the refinery to produce renewable diesel after a successful small-scale pilot the year prior. Marathon, which merged with Andeavor in 2018, completed the conversion in 2021.<sup>41</sup> The Dickinson refinery is now the second-largest renewable diesel producer in the United States.<sup>42</sup>

Perhaps thanks to this lead time, Dickinson and surrounding Stark County avoided some of the job and tax losses other refinery communities suffered when the refineries abruptly closed and later tried conversion. Marathon does not appear to have laid off any of the 80 employees that worked at the former oil refinery.<sup>43</sup> The company says that it now employs 100 people at the retrofitted facility.<sup>44</sup> The refinery also paid roughly the same amount of property taxes (about



\$1.4 million) to Stark County in 2015 (pre-conversion) as in 2021 (post-conversion). Still, it has not yet reached its 2016 pre-conversion tax payment peak of \$2.1 million, according to county tax records.<sup>x</sup>

Given this relatively smooth transition, the Dickinson example may look like a tempting road map for Washington refineries to follow. Indeed, it does show some benefits to planning ahead. But the specificities of the case reveal how unlikely it is that a Washington refinery could follow the same path. For starters, the Dickinson refinery's original capacity of 19,000 barrels per day is less than half that of Washington's smallest refinery (in Tacoma). This made it relatively easy to maintain a comparable level of output of the new product and, correspondingly, a similar-size workforce. Plus the Dickinson refinery produced mostly diesel before its conversion, meaning that most of its capacity could be replaced by renewable diesel. Washington refineries' output, however, is just 23 percent diesel.<sup>45</sup> And unlike the Washington refineries, the newest of which was built more than 50 years ago, the Dickinson refinery was arguably less deeply embedded in its local community, given how recently it had been built. Finally, North Dakota is one of the United States' top soybean and corn producers, unlike Washington, providing the Dickinson refinery with easy access to the feedstock necessary to make renewable diesel.

Business questions aside, the environmental impacts of the conversion should also give Washington refinery communities pause. The Dickinson refinery's point source greenhouse gas emissions increased after its conversion, largely due to the construction of a second hydrogen plant to process the new fuel.<sup>xi, 46</sup>

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<sup>x</sup> Based on the taxes paid on the refinery's largest tax parcel.

<sup>xi</sup> See the application package Tesoro submitted to the [North Dakota Department of Environmental Quality](#) on March 23, 2018.



## Just one refinery that recently closed is fully redeveloping

A sudden closure pitted environmental justice and labor groups against each other in Philadelphia



Artist's rendering of the "Bellwether District," site of the former PES oil refinery in Philadelphia. Source: [Hilco Bellwether District Project Site](#)

Like their counterparts in the San Francisco Bay Area, some environmental and community groups in Philadelphia were eager for the oil refinery in their city to close and be replaced with something cleaner and greener. What they didn't want was what happened: a dangerous explosion that resulted in an abrupt closure, followed by redevelopment with minimal community involvement or oversight.

The Philadelphia Energy Solutions (PES) refinery had been the oldest and largest on the US East Coast, dating back to 1870. It was also Philadelphia's top air polluter.<sup>47</sup> The zip codes surrounding the refinery, where the populations are predominantly Black, also have some of the highest asthma rates in the city.<sup>48</sup> In 2017 environmental justice group Philly Thrive tried to kick-start a community-led conversation about planning for refinery transition and surveyed local residents about the site. Some 82 percent of survey respondents expressed negative feelings about the refinery, and most wanted the site to be cleaned up and made safe.<sup>49</sup>

But instead of a planned transition, the PES refinery shuttered without warning after a huge fire in June 2019. The company announced that it was too expensive to make necessary repairs and would be laying off about 1,000 workers, including about 640 union members.<sup>50</sup> It then filed for

bankruptcy for the second time in three years.<sup>51</sup> PES initially offered no severance pay to laid-off workers, even while it rewarded a handful of executives with \$4.5 million in bonuses.<sup>52</sup> Ultimately the workers' union managed to secure \$5 million in total severance pay, equivalent to about \$7,700 for each unionized worker.<sup>53</sup>

The chaos of the unplanned transition meant that the company decided the fate of the refinery behind closed doors in a bankruptcy auction with minimal community involvement.<sup>54</sup> Meanwhile, tensions flared among groups with competing visions for the area's future. Many former refinery workers hoped that PES would sell the site to another refiner.<sup>55</sup> Environmental justice groups and many who lived near the refinery wanted a guarantee that the site would not become another fossil fuel facility. The city had no official power over what would become of the site because it was on private land, but a more inclusive, public, and much earlier deliberation process about the refinery's future might have eased some of these conflicts.

Ultimately Hilco Redevelopment Partners bought the site and is turning it into a multiuse complex that will house e-commerce, logistics, and life sciences businesses. Redevelopment is likely to cost billions.<sup>56</sup> The company has rebranded the former refinery site The Bellwether District, which it says will create 8,000 union construction jobs and 10,000 permanent jobs over the next decade.<sup>57</sup> That promise of jobs led the Philadelphia City Council to extend tax breaks to the company that the PES refinery had also enjoyed, a move some community members decried.<sup>58</sup>

Hilco has demolished the refinery equipment and is in the process of remediating the site. Another entity, Evergreen, is responsible for cleaning up pre-2012 legacy pollution. Still, nearby residents are concerned about not being adequately informed about remediation plans; continued pollution at the site, including from cancer-causing benzene; and the lack of a community benefits agreement with Hilco.<sup>59</sup>

## Washington has no plan should one or more of its refineries close

More closures are coming: Lyndell Basell Industries announced that it will be closing its Houston refinery in 2023, and Phillips 66 plans to convert another one of its refineries in the Bay Area to biofuels production by 2024.<sup>60</sup>

A refinery closure may be coming soon for Washington, too. Marathon, Phillips 66, and HF Sinclair, three of the companies that have shuttered refineries in recent years, own three of Washington's five refineries. Should a refinery shut its doors abruptly in Washington, hundreds of workers would be laid off, local governments would lose millions, and a mammoth and expensive cleanup would be required. More than 2,000 employees work at Washington's five refineries, plus an additional average of about 2,400 contractors annually. The refineries together paid more than \$24 million in local property taxes in 2021 (see appendix, table 2). These taxes cover public services, including schools, fire departments, and libraries. For example, the Blaine School District in Whatcom County received more than \$2 million from the local

property taxes BP paid in 2021. At the same time, the Washington refineries have profited roughly \$2 billion per year from their operations in the state between 2017 and 2019 (the most recent years for which data is available).<sup>61</sup>

Some protection against a sudden closure is already baked into state law. Laid-off workers would qualify for state unemployment benefits, which include up to \$25,974 over six months.<sup>62</sup> They could also access Worksource, a program to help them find new work, and apprenticeship programs.<sup>63</sup> As for the environmental damage, the refinery owners could be liable for the environmental cleanup of the refinery sites under Washington's Model and Toxics Control Act and required to pay for environmental remediation.<sup>64</sup>

In other ways, though, Washington is wholly unprepared. The state and relevant counties have not identified industries that laid-off refinery workers might transition to, nor have they charted out how to manage sudden losses in tax revenue. There is no clear community-led vision for what the sites should or could become if a refinery closes down. Similarly, there are no guardrails to prevent refineries from lingering for decades as oil terminals or export facilities, with site cleanup stalled and paltry job figures and tax payments for local communities.

Plus the cost of full cleanup is unknown, and if a refinery owner chose to file for bankruptcy, Washington taxpayers could be left on the hook for some or most of the costs. At the same time, other environmental cleanups in the state could go unfunded if a refinery closed suddenly. This is because the program that pays for them today is almost entirely bankrolled by a tax on refined petroleum products.<sup>xii, 65</sup>

All these unknowns, plus the predicted declines in global oil consumption, point to the wisdom of planning ahead.

Washington leaders have a choice. They can ignore the warnings and let a crisis dictate outcomes and impacts. Or they can start planning now. They can begin engaging with Tribes, refinery workers, and residents of Whatcom, Skagit, and Pierce counties. They can create a road map to alternative high-paying jobs and a healthy environment. And they can avoid the economic shocks and environmental hazards that oil corporations left in their wake in the communities of Gallup, Belle Chasse, Cheyenne, Convent, Martinez, and Philadelphia.

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<sup>xii</sup> MTCA accounts for [40 percent of Washington Department of Ecology's operating budget](#); MTCA is almost entirely funded through the Hazardous Substance Tax (HST).

# Appendix



**Table 1**  
**Seven refineries have closed in the United States since 2019.**

REFINERY DETAILS			ECONOMIC IMPACT OF CLOSURE			PLAN FOR FUTURE		
Owner	Location	Closure year	Pre-closure # of employees	Estimated local tax loss	Current status	Is environmental remediation underway?	Post-closure estimated # of employees	
Marathon Petroleum	Gallup, NM	2020	~220	\$1.5M annually <sup>*1</sup>	Idled indefinitely	No	Unknown	
	Martinez, CA	2020	~740	\$3.7M annually <sup>*2</sup>	Approved conversion to biofuel refining	No	110 (85% reduction)	
	Dickinson, ND	2020	~80	Increase of \$500K annually <sup>*1, *2</sup>	Completed conversion to biofuel refining	No	~100 (25% increase)	
Phillips 66	Belle Chasse, LA	2021	~500 (plus 400 contractors)	Significant reduction expected from \$7.4M paid in 2021 <sup>*3</sup>	Completed conversion to oil storage and shipping facility	No	27 (95% reduction)	
Shell	Convent, LA	2020	~700 (plus 400 contractors)	\$13.7M annually <sup>*1, *2</sup>	Proposed conversion to biofuel refining	No	24 (97% reduction)	
HF Sinclair (formerly Holly Frontier)	Cheyenne, WY	2020	~200	\$2.5M annually <sup>*1, *2</sup>	Completed conversion to biofuel refining	No	~80 (60% reduction)	
Philadelphia Energy Solutions (PES)	Philadelphia, PA	2019	~1,000	Unknown <sup>*4</sup> (Same or all of PES' tax liability transferred on to the new owner)	Demolition/redevelopment into multi-use business site	Yes	New owner promises 10K jobs in 10 years	

<sup>\*1</sup> The difference between the average of the three years of property tax payments pre-closure on the largest tax parcel and the agreed-upon 2021 tax payment (Shell) or the most recent tax payment available post-closure (Marathon M&L and HF Sinclair).

<sup>\*2</sup> The long-term tax impact of conversion to biofuels is unclear.

<sup>\*3</sup> Plaquemines Parish has not yet reassessed the refinery post-closure.

<sup>\*4</sup> The Philadelphia Department of Revenue, Office of Property Assessment, and Department of Commerce have not replied to Sightline's request for information.

For sources, see Sightline's full report: The High Costs of Unplanned Oil Refinery Closures



Table 2

**Washington oil refineries' capacity, employees, and local taxes**

REFINERY OWNER	LOCATION	CAPACITY (BARRELS PER DAY)	EMPLOYEES (EXCL. CONTRACTORS)	2021 LOCAL PROPERTY TAXES
<b>BP</b>	Whatcom County	235,000	800	\$9.5M
<b>Phillips 66</b>	Whatcom County	105,000	285	\$4.5M
<b>HF Sinclair</b> (formerly Holly Frontier)	Skagit County	135,000 - 160,000	470	\$4.3M
<b>Marathon Petroleum</b>	Skagit County	120,000	330	\$3.5M
<b>U.S. Oil</b>	Pierce County	42,000	190	\$2.2M
		<b>Total</b>	<b>2,075</b>	<b>~\$24M</b>

Note: Property tax levels are based on the largest tax parcel assessed in each county. Employment numbers do not include contractors. Between 2010 and 2019, the refineries also employed an average of 2,415 contractors annually.

Sources: Washington State Department of Ecology; Skagit, Pierce, and Whatcom county assessor offices

*Zane Gustafson contributed research for this report.*

<sup>1</sup> Kristoffer Tigue, "Plans to Reopen St. Croix's Limetree Refinery Have Analysts Surprised and Residents Concerned," Inside Climate News, Dec. 17, 2021, <https://insideclimatenews.org/news/17122021/limetree-st-croix-oil-refinery-reopening>.

<sup>2</sup> Adela Suliman, Aaron Gregg, and Evan Halper, "BP Profits Highest in 14 Years, Raking in \$8.5 Billion Amid Gas Pump Pinch," Washington Post, Aug. 2, 2022, [www.washingtonpost.com/business/2022/08/02/bp-record-profit-oil-gas-ukraine/](http://www.washingtonpost.com/business/2022/08/02/bp-record-profit-oil-gas-ukraine/); International Energy Agency, "Oil," [www.iea.org/fuels-and-technologies/oil/](http://www.iea.org/fuels-and-technologies/oil/); Simon Flowers, "Oil Refining's Four Big Challenges," Wood Mackenzie, July 2, 2021, [www.woodmac.com/news/the-edge/oil-refining-four-big-challenges](http://www.woodmac.com/news/the-edge/oil-refining-four-big-challenges).

<sup>3</sup> Kevin Crowley and Alix Steel, Bloomberg Law, "Chevron CEO Says There May Never Be a New Refinery Built in US," June 3, 2022, <https://news.bloomberglaw.com/environment-and-energy/chevron-ceo-says-there-may-never-be-a-new-refinery-built-in-us>.

<sup>4</sup> US Census Bureau, "QuickFacts, Gallup City, New Mexico," [www.census.gov/quickfacts/gallupcitynewmexico](http://www.census.gov/quickfacts/gallupcitynewmexico).

<sup>5</sup> Brady Wakayama, "Oil Refinery in Gallup Closing Indefinitely," KRQE News, Aug. 3, 2020, [www.krqe.com/news/new-mexico/oil-refinery-in-gallup-closing-indefinitely](http://www.krqe.com/news/new-mexico/oil-refinery-in-gallup-closing-indefinitely).

<sup>6</sup> Adam Ferguson, "The Place Hit Hardest by the Virus," *New York Times*, Dec. 27, 2020, [www.nytimes.com/2020/12/27/business/economy/the-place-hit-hardest-by-the-virus.html](http://www.nytimes.com/2020/12/27/business/economy/the-place-hit-hardest-by-the-virus.html).

<sup>7</sup> Wakayama, "Oil Refinery in Gallup Closing Indefinitely," [www.krqe.com/news/new-mexico/oil-refinery-in-gallup-closing-indefinitely](http://www.krqe.com/news/new-mexico/oil-refinery-in-gallup-closing-indefinitely).

<sup>8</sup> US Census Bureau, "QuickFacts, Plaquemines Parish, Louisiana," [www.census.gov/quickfacts/plaqueminesparishlouisiana](http://www.census.gov/quickfacts/plaqueminesparishlouisiana).

<sup>9</sup> Erwin Seba, "Phillips 66 Puts Alliance, Louisiana, Refinery Up for Sale," Reuters, Aug. 24, 2021, [www.reuters.com/business/energy/phillips-66-puts-alliance-louisiana-refinery-up-sale-2021-08-24](http://www.reuters.com/business/energy/phillips-66-puts-alliance-louisiana-refinery-up-sale-2021-08-24).

<sup>10</sup> Anthony McAuley, "Phillips 66 to Shutter Alliance Refinery, Convert It to Fuel Terminal; 900 Jobs in Jeopardy," Nola.com, Nov. 8, 2021, [www.nola.com/news/business/article\\_f575d58c-40e0-11ec-b0e1-23ce3af13577.html#:~:text=Houston%2Dbased%20Phillips%2066%20said,hit%20to%20Louisiana's%20refining%20sector;Phillips%2066,%20Phillips%2066%20to%20Convert%20Alliance%20Refinery%20to%20Terminal%20Facility,Nov.%208,%202021,https://investor.phillips66.com/financial-information/news-releases/news-release-details/2021/Phillips-66-to-Convert-Alliance-Refinery-to-Terminal-Facility/default.aspx](http://www.nola.com/news/business/article_f575d58c-40e0-11ec-b0e1-23ce3af13577.html#:~:text=Houston%2Dbased%20Phillips%2066%20said,hit%20to%20Louisiana's%20refining%20sector;Phillips%2066,%20Phillips%2066%20to%20Convert%20Alliance%20Refinery%20to%20Terminal%20Facility,Nov.%208,%202021,https://investor.phillips66.com/financial-information/news-releases/news-release-details/2021/Phillips-66-to-Convert-Alliance-Refinery-to-Terminal-Facility/default.aspx).

<sup>11</sup> Paul Murphy, "Plaquemines Parish Will Lose Hundreds of Jobs, Millions in Tax Dollars with Refinery's Closure," WWL-TV, Nov. 9, 2021, [www.wwltv.com/article/news/local/plaquemines-parish-stands-to-lose-12-of-tax-base-as-refinery-closes/289-8e0e5666-2fd3-49ae-9211-89107eec8f49](http://www.wwltv.com/article/news/local/plaquemines-parish-stands-to-lose-12-of-tax-base-as-refinery-closes/289-8e0e5666-2fd3-49ae-9211-89107eec8f49).

- <sup>12</sup> William Taylor Potter, “Nearly 500 Employees to be Laid Off from Belle Chasse Phillips 66 Refinery,” *Lafayette Daily Advertiser*, Nov. 29, 2021, [www.theadvertiser.com/story/money/business/2021/11/29/nearly-500-employers-laid-off-belle-chasse-phillips-66-refinery/8792688002](http://www.theadvertiser.com/story/money/business/2021/11/29/nearly-500-employers-laid-off-belle-chasse-phillips-66-refinery/8792688002).
- <sup>13</sup> Anthony McAuley, “‘Gut Punch to the Community.’ Plaquemines Parish Braces for Fallout from Alliance Refinery Closure,” *Nola.com*, Nov. 10, 2021, [www.nola.com/news/business/article\\_867b5516-417c-11ec-ac49-bf71045823f9.html](http://www.nola.com/news/business/article_867b5516-417c-11ec-ac49-bf71045823f9.html).
- <sup>14</sup> Reuters, “Layoffs Begin at Shuttered Phillips 66 Alliance Louisiana Refinery – Sources,” Feb. 9, 2022, [www.reuters.com/business/energy/layoffs-begin-shuttered-phillips-66-alliance-louisiana-refinery-sources-2022-02-09](http://www.reuters.com/business/energy/layoffs-begin-shuttered-phillips-66-alliance-louisiana-refinery-sources-2022-02-09).
- <sup>15</sup> McAuley, “‘Gut Punch to the Community,’” [www.nola.com/news/business/article\\_867b5516-417c-11ec-ac49-bf71045823f9.html](http://www.nola.com/news/business/article_867b5516-417c-11ec-ac49-bf71045823f9.html).
- <sup>16</sup> US Census Bureau, “QuickFacts, Cheyenne City, Wyoming,” [www.census.gov/quickfacts/cheyennecitywyoming](http://www.census.gov/quickfacts/cheyennecitywyoming).
- <sup>17</sup> Noël Fletcher, “Wyoming Group: Most Local Refineries Sell Fuel Elsewhere,” *Transport Topics*, Oct. 27, 2022, [www.ttnews.com/articles/wyoming-group-most-local-refineries-sell-fuel-elsewhere](http://www.ttnews.com/articles/wyoming-group-most-local-refineries-sell-fuel-elsewhere)
- <sup>18</sup> Reuters, “HollyFrontier to Convert Oil Refinery into Renewable Diesel Plant,” [www.reuters.com/article/us-hollyfrontier-refining-cheyenne/hollyfrontier-to-convert-oil-refinery-into-renewable-diesel-plant-idUSKBN2383LF](http://www.reuters.com/article/us-hollyfrontier-refining-cheyenne/hollyfrontier-to-convert-oil-refinery-into-renewable-diesel-plant-idUSKBN2383LF); Janet McGurty, “Refinery News: HollyFrontier Cheyenne RD Conversion Complete by End-Week,” *S&P Global*, Nov. 3, 2021, [www.spglobal.com/commodityinsights/en/market-insights/latest-news/agriculture/110321-refinery-news-hollyfrontier-cheyenne-rd-conversion-complete-by-end-week](http://www.spglobal.com/commodityinsights/en/market-insights/latest-news/agriculture/110321-refinery-news-hollyfrontier-cheyenne-rd-conversion-complete-by-end-week).
- <sup>19</sup> Tom Coulter, “HollyFrontier Announces Plan to Lay Off Roughly 200 Employees at Cheyenne Refinery,” *Wyoming Tribute Eagle*, June 1, 2020, [www.wyomingnews.com/news/local\\_news/hollyfrontier-announces-plan-to-lay-off-roughly-200-employees-at-cheyenne-refinery/article\\_e5dad692-d50d-5eb5-a253-d0f35d672d7f.html](http://www.wyomingnews.com/news/local_news/hollyfrontier-announces-plan-to-lay-off-roughly-200-employees-at-cheyenne-refinery/article_e5dad692-d50d-5eb5-a253-d0f35d672d7f.html).
- <sup>20</sup> *Ibid.*
- <sup>21</sup> US Environmental Protection Agency, “Economic Profile: BP Casper Former Refinery,” Sept. 2022, at [www.epa.gov/system/files/documents/2022-04/bp-casper-econ-profile\\_04202022\\_508.pdf](http://www.epa.gov/system/files/documents/2022-04/bp-casper-econ-profile_04202022_508.pdf).
- <sup>22</sup> Wesley James, Chunrong Jia, and Satish Kedia, “Uneven Magnitude of Disparities in Cancer Risks from Air Toxics,” *US National Library of Medicine, National Center for Biotechnology Information*, Dec. 3, 2012, at [www.ncbi.nlm.nih.gov/pmc/articles/PMC3546767](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3546767).
- <sup>23</sup> “Environmental Racism in Louisiana’s ‘Cancer Alley’ Must End, Say UN Human Rights Experts,” *UN News*, March 2, 2021, <https://news.un.org/en/story/2021/03/1086172>.
- <sup>24</sup> Reuters, “Factbox: Shell to Reduce Refinery Portfolio by More than Half,” July 8, 2021, [www.reuters.com/business/energy/shell-reduce-refinery-portfolio-by-more-than-half-2021-07-08](http://www.reuters.com/business/energy/shell-reduce-refinery-portfolio-by-more-than-half-2021-07-08).
- <sup>25</sup> Seba, “Phillips 66 Puts Alliance, Louisiana Refinery Up for Sale,” [www.reuters.com/business/energy/phillips-66-puts-alliance-louisiana-refinery-up-sale-2021-08-24](http://www.reuters.com/business/energy/phillips-66-puts-alliance-louisiana-refinery-up-sale-2021-08-24).
- <sup>26</sup> WBRZ-TV, “Convent Shell Announces Shutdown Process; 698 Employees Laid Off,” Dec. 28, 2020, [www.wbrz.com/news/convent-shell-announces-shutdown-process-698-employees-laid-off](http://www.wbrz.com/news/convent-shell-announces-shutdown-process-698-employees-laid-off); Robert Stewart, “Shell Confirms Shuttered Convent Facility Will Become an Alternative Fuels Complex,” *Advocate*, Feb. 24, 2022, [www.theadvocate.com/baton\\_rouge/news/business/article\\_ad522d06-95ad-11ec-9457-bb64f61e4803.html](http://www.theadvocate.com/baton_rouge/news/business/article_ad522d06-95ad-11ec-9457-bb64f61e4803.html).
- <sup>27</sup> Chris Staudinger, “A Bitter Sting,” *ANTIGRAVITY*, May 2021, <https://antigravitymagazine.com/feature/a-bitter-sting>.
- <sup>28</sup> Robert Stewart, “Shell to Convert Convent Site to Sustainable Aviation Fuel, Renewable Diesel Production Facility,” *Advocate*, Aug. 23, 2022, [www.theadvocate.com/baton\\_rouge/news/business/article\\_f523a7c6-2325-11ed-b1ee-b3d162eb0e0c.html](http://www.theadvocate.com/baton_rouge/news/business/article_f523a7c6-2325-11ed-b1ee-b3d162eb0e0c.html).
- <sup>29</sup> *Ibid.*
- <sup>30</sup> US Census Bureau, “QuickFacts; Martinez City, California,” [www.census.gov/quickfacts/martinezcitycalifornia](http://www.census.gov/quickfacts/martinezcitycalifornia).
- <sup>31</sup> Ted Goldberg, “Shutdown of Marathon’s Martinez Refinery Prompts Calls for ‘Just Transition’ for Oil Workers,” *KQED*, Aug. 3, 2020, [www.kqed.org/news/11831607/shutdown-of-marathons-martinez-refinery-prompts-calls-for-just-transition-for-oil-workers](http://www.kqed.org/news/11831607/shutdown-of-marathons-martinez-refinery-prompts-calls-for-just-transition-for-oil-workers).
- <sup>32</sup> Contra Costa County, “Top Ten Taxpayers, Fiscal Year 2021–22,” at [www.contracosta.ca.gov/DocumentCenter/View/2646/Top-Ten-Taxpayers-in-County-PDF?bidId=](http://www.contracosta.ca.gov/DocumentCenter/View/2646/Top-Ten-Taxpayers-in-County-PDF?bidId=). Note Marathon is listed by its subsidiary’s name, Tesoro.
- <sup>33</sup> Ted Goldberg, “Shutdown of Marathon’s Martinez Refinery,” *KQED*, Aug. 3, 2020, [www.kqed.org/news/11831607/shutdown-of-marathons-martinez-refinery-prompts-calls-for-just-transition-for-oil-workers](http://www.kqed.org/news/11831607/shutdown-of-marathons-martinez-refinery-prompts-calls-for-just-transition-for-oil-workers).
- <sup>34</sup> Robert Brelsford, “Marathon Petroleum On Track for Martinez Refinery-to-Renewables Conversion,” *Oil and Gas Journal*, Aug. 2, 2022, [www.ogi.com/refining-processing/refining/operations/article/14280678/marathon-petroleum-on-track-for-martinez-refinerytorenewables-conversion](http://www.ogi.com/refining-processing/refining/operations/article/14280678/marathon-petroleum-on-track-for-martinez-refinerytorenewables-conversion).
- <sup>35</sup> Shomik Mukherjee, “Martinez Oil Refinery Cleared to Start Producing More ‘Renewable’ Biofuels,” *Mercury News*, March 24, 2022, [www.mercurynews.com/2022/03/24/martinez-oil-refinery-cleared-to-start-producing-more-renewable-biofuels](http://www.mercurynews.com/2022/03/24/martinez-oil-refinery-cleared-to-start-producing-more-renewable-biofuels).

- 
- <sup>36</sup> CBS Bay Area, “Environmentalists Sue Over Martinez Refinery Conversion Plan,” June 8, 2022, [www.cbsnews.com/sanfrancisco/news/environmentalists-sue-over-martinez-refinery-conversion-plan](http://www.cbsnews.com/sanfrancisco/news/environmentalists-sue-over-martinez-refinery-conversion-plan).
- <sup>37</sup> Communities for a Better Environment and Center for Biological Diversity v. County of Contra Costa; Board of Supervisors of County of Contra Costa; Contra Costa County Department of Conservation and Development; and DOES 1–20, at [www.biologicaldiversity.org/programs/climate\\_law\\_institute/pdfs/Petition-for-Writ-of-Mandate-Phillips66-2022-06-07.pdf](http://www.biologicaldiversity.org/programs/climate_law_institute/pdfs/Petition-for-Writ-of-Mandate-Phillips66-2022-06-07.pdf).
- <sup>38</sup> Mukherjee, “Martinez Oil Refinery Cleared,” [www.mercurynews.com/2022/03/24/martinez-oil-refinery-cleared-to-start-producing-more-renewable-biofuels](http://www.mercurynews.com/2022/03/24/martinez-oil-refinery-cleared-to-start-producing-more-renewable-biofuels).
- <sup>39</sup> Dorinda Anderson, “New Dickinson, N.D., Diesel Refinery First in U.S. Since 1976,” Construction Equipment Guide, Aug. 14, 2014, [www.constructionequipmentguide.com/new-dickinson-nd-diesel-refinery-first-in-us-since-1976/23397](http://www.constructionequipmentguide.com/new-dickinson-nd-diesel-refinery-first-in-us-since-1976/23397).
- <sup>40</sup> Reuters Media, “America’s Newest Refinery, Built in Western North Dakota, Falls Victim to Oil Price Slump,” *Grand Forks Herald*, May 5, 2016, [www.grandforksherald.com/business/americas-newest-refinery-built-in-western-north-dakota-falls-victim-to-oil-price-slump](http://www.grandforksherald.com/business/americas-newest-refinery-built-in-western-north-dakota-falls-victim-to-oil-price-slump); Ernest Scheyder, “Dakota Prairie Refinery Sold to Tesoro at a Loss, Hurt by Oil Price Slump,” *Dickinson Press*, June 28, 2016, [www.thedickinsonpress.com/business/dakota-prairie-refinery-sold-to-tesoro-at-a-loss-hurt-by-oil-price-slump](http://www.thedickinsonpress.com/business/dakota-prairie-refinery-sold-to-tesoro-at-a-loss-hurt-by-oil-price-slump).
- <sup>41</sup> NS Energy, “Dickinson Renewable Diesel Facility,” [www.nsenergybusiness.com/projects/dickinson-renewable-diesel-facility](http://www.nsenergybusiness.com/projects/dickinson-renewable-diesel-facility).
- <sup>42</sup> US Energy Information Administration, “Petroleum and Other Liquids: US Renewable Diesel Fuel and Other Biofuels Plant Production Capacity,” Aug. 8, 2022, [www.eia.gov/biofuels/renewable/capacity](http://www.eia.gov/biofuels/renewable/capacity).
- <sup>43</sup> Hydrocarbons Technology, “Dakota Prairie Refinery, Stark County, North Dakota,” [www.hydrocarbons-technology.com/projects/dakota-prairie-refinery-stark-north-dakota](http://www.hydrocarbons-technology.com/projects/dakota-prairie-refinery-stark-north-dakota).
- <sup>44</sup> Marathon Petroleum Corporation/One Energy, “Marathon Dickinson Renewable Fuels Facility,” <https://marathondickinsonrenewables.com/about-the-facility.html>.
- <sup>45</sup> Washington Research Council, “Economic Profile: The Economic Contribution of Washington State’s Petroleum Refining Industry in 2017,” Feb. 2019, <https://researchcouncil.org/wp-content/uploads/2018-Refinery-Report-final.pdf>.
- <sup>46</sup> CERIS-ND, “Tesoro Refining and Marketing Company LLC—Marathon Dickinson Refinery,” <https://ceris.deq.nd.gov/ext/nsite/map/results/detail/5009864111485120560/documents>.
- <sup>47</sup> Catalina Jaramillo, “With South Philadelphia Refinery in Bankruptcy Proceedings, Neighbors See an Opportunity for Cleaner Air,” WHYY, Jan. 31, 2018, <https://whyy.org/articles/south-philadelphia-refinery-bankruptcy-proceedings-neighbors-see-opportunity-cleaner-air>.
- <sup>48</sup> Statistical Atlas, “Race and Ethnicity in Philadelphia, Pennsylvania,” <https://statisticalatlas.com/place/Pennsylvania/Philadelphia/Race-and-Ethnicity>; Joseph Otis Minott, “Philadelphians Deserve a Voice in Debate over Future of Local Refineries,” WHYY, June 20, 2019, <https://whyy.org/articles/philadelphians-deserve-a-voice-in-debate-over-future-of-local-refineries>.
- <sup>49</sup> Philly Thrive, “#WeDecide Our Energy Future Survey Report,” Nov. 2017, at [https://drive.google.com/file/d/1lKhuPdTUmbnsTrWQMuxGk\\_VMli4vJ/view](https://drive.google.com/file/d/1lKhuPdTUmbnsTrWQMuxGk_VMli4vJ/view).
- <sup>50</sup> Susan Phillips, “South Philly Refinery Damaged by Fire Will Close, City Says; Union Calls Layoffs a ‘Disgrace,’” WHYY, June 26, 2019, <https://whyy.org/articles/largest-oil-refinery-on-east-coast-will-close-after-fire>.
- <sup>51</sup> Susan Phillips, “PES Refinery Demolition to Take Four Years, New Owner Hilco Says,” WHYY, June 4, 2021, <https://whyy.org/articles/pes-refinery-demolition-to-take-four-years-new-owner-hilco-says>.
- <sup>52</sup> Catalina Jaramillo, “Bonuses Paid to PES Refinery Executives Infuriate Ex-Workers and Environmentalists,” WHYY, Sept. 10, 2019, <https://whyy.org/articles/bonuses-paid-to-pes-refinery-executives-infuriate-ex-workers-and-environmentalists>.
- <sup>53</sup> Thomas M. Conway, letter to United Steelworkers members, Feb. 13, 2020, at [www.usw.org/districts/district-10/documents/10-1/Toms-Letter.pdf](http://www.usw.org/districts/district-10/documents/10-1/Toms-Letter.pdf).
- <sup>54</sup> Catalina Jaramillo, “Future of PES Refinery Could Be Decided Friday Behind Closed Doors,” WHYY, Jan. 17, 2020, <https://whyy.org/articles/future-of-pes-refinery-could-be-decided-friday-behind-closed-doors>.
- <sup>55</sup> Catalina Jaramillo, “Pro-Refinery Factions Intensify Pressure to Negate PES Sale Agreement,” WHYY, Jan. 30, 2020, <https://whyy.org/articles/pro-refinery-factions-intensify-pressure-to-negate-pes-sale-agreement>.
- <sup>56</sup> Sophia Schmidt, “As Hilco Tears Down Former PES Refinery, Questions Remain about the Site’s Future,” WHYY, Jan. 30, 2022, <https://whyy.org/articles/as-hilco-tears-down-former-pes-refinery-questions-remain-about-the-sites-future>.
- <sup>57</sup> Hilco Redevelopment Partners, “The Bellwether District,” [www.thebellwetherdistrict.com](http://www.thebellwetherdistrict.com); Catalina Jaramillo, “Company Buying Bankrupt PES Refinery Promises 18,000 Jobs in Next 10 Years,” WHYY, June 16, 2020, <https://whyy.org/articles/company-buying-bankrupt-pes-refinery-promises-18000-jobs-in-next-10-years>.
- <sup>58</sup> Catalina Jaramillo, “Philadelphia School Board Changes Its Mind, Approves Tax Break for Hilco Refinery Redevelopment,” *Philadelphia Business Journal*, Sept. 18, 2020, [www.bizjournals.com/philadelphia/news/2020/09/18/philadelphia-hilco-refinery-approved-for-tax-break.html](http://www.bizjournals.com/philadelphia/news/2020/09/18/philadelphia-hilco-refinery-approved-for-tax-break.html).

- 
- <sup>59</sup> Susan Phillips, “Cancer-Causing Benzene Continues to Flow from PES Refinery Complex,” WHYY, May 10, 2021, <https://whyy.org/articles/cancer-causing-benzene-continues-to-flow-from-pes-refinery-complex>; Justine McDaniel, “South Philly Residents Demand Input in Redevelopment of Refinery Site,” *Philadelphia Inquirer*, April 21, 2022, [www.inquirer.com/news/philadelphia/refinery-redevelopment-hilco-south-philadelphia-20220421.html](http://www.inquirer.com/news/philadelphia/refinery-redevelopment-hilco-south-philadelphia-20220421.html).
- <sup>60</sup> Erwin Seba, “Lyondell Basell to Shutter Houston Oil Refinery in Exit from Refining,” Reuters, April 29, 2022, [www.reuters.com/business/energy/lyondell-basell-shutter-houston-oil-refinery-2023-2022-04-21](http://www.reuters.com/business/energy/lyondell-basell-shutter-houston-oil-refinery-2023-2022-04-21); Phillips 66, “Phillips 66 Makes Final Investment Decision to Convert San Francisco Refinery to a Renewable Fuels Facility,” <https://investor.phillips66.com/financial-information/news-releases/news-release-details/2022/Phillips-66-Makes-Final-Investment-Decision-to-Convert-San-Francisco-Refinery-to-a-Renewable-Fuels-Facility/default.aspx>.
- <sup>61</sup> Zane Gustafson and Eric de Place, “Oil Refinery Profits, Taxes, and Spending: A Primer,” Sightline Institute, Oct. 6, 2021, [www.sightline.org/2021/10/06/oil-refinery-profits-taxes-and-spending-a-primer/#fn-2](http://www.sightline.org/2021/10/06/oil-refinery-profits-taxes-and-spending-a-primer/#fn-2).
- <sup>62</sup> Washington State Employment Security Department, “Estimate Your Benefit,” <https://esd.wa.gov/unemployment/calculate-your-benefit>.
- <sup>63</sup> Washington State Department of Labor and Industries, “Become an Apprentice,” <https://lni.wa.gov/licensing-permits/apprenticeship/become-an-apprentice>.
- <sup>64</sup> Washington State Legislature, Washington Administrative Code 173-340-550: Payment of remedial action costs, <https://app.leg.wa.gov/wac/default.aspx?cite=173-340-550>.
- <sup>65</sup> Washington Department of Ecology, “Model Toxics Control Act Capital Account: Ten-Year Financing Report 2020,” Nov. 2020, <https://apps.ecology.wa.gov/publications/SummaryPages/2009060.html>.