



Clean Harbors:

engagement commentary

Federated Hermes SDG Engagement Equity Fund
Q2 2021



ENGAGEMENT COMMENTARY: Clean Harbors

Clean Harbors, Inc. is a waste management company which is the leading provider of environmental, energy, and industrial services throughout North America.

Clean Harbors handles and disposes of hazardous and non-hazardous waste, provides environmental clean-up on customer sites or other locations and collects used oil primarily for re-refining. Its services help industrial customers improve their environmental impact, performance, and resource efficiency.

Market capitalisation:

\$4.5bn

Revenue:

\$3,144.1m

Number of employees:

14,000

of which 14% are female

Carbon intensity (scopes 1 and 2 emissions per \$m revenue):

499.2 tCO₂-e/\$m

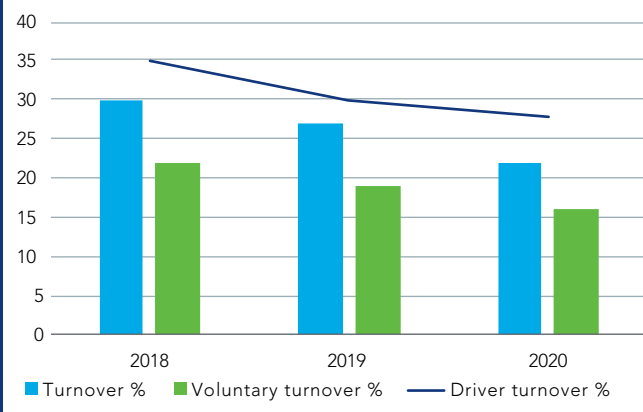
Headline progress

Clean Harbors has invested in its workforce and is making good progress on reducing turnover although further strides to improve diversity are still needed. We believe the company can deliver a greater net-positive climate impact through investment in and development of its recycling and incineration services while making greater use of renewable energy and reducing emissions from its sizeable fleet of vehicles. In figures 1 and 2, we document the significant progress the firm has made on employee turnover and the volume of emissions avoided.

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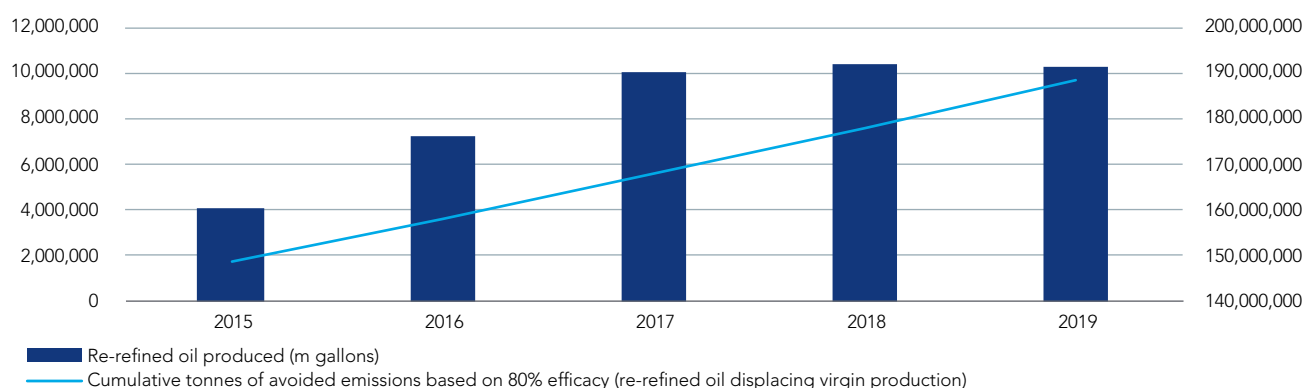


Figure 1. Employee turnover has decreased markedly between 2018 and 2020



Source: Clean Harbors, as at 31 December 2020.

Figure 2. Cumulative tonnes of avoided emissions



Source: Federated Hermes calculation based on company reported gallons of re-refined oil produced, as at 2019.

Investment case

Clean Harbors owns nine of the 13 incinerators in North America that can accept high-hazard and ozone-depleting waste: it therefore has strong pricing power and should benefit from long-term expansionary trends in the US. Clean Harbors has historically been highly acquisitive: with low leverage and ample cash on its balance sheet, it is well positioned to engage in future M&A.

Theory of change

Our impact thesis is twofold:

1. Decent work

By investing in pay and benefits and improving broader workplace practices Clean Harbors should be able to broaden workforce diversity and improve the physical, mental and economic wellbeing of their existing employees. A large proportion of its workforce are drivers, who are typically older and are in short supply.

2. Advancing positive climate impact

By investing in, developing and growing its recycling and re-refining services while reducing the environmental impact from its large vehicle fleet, the company can deliver a net positive contribution towards climate change mitigation.

Practice of change

Over the period of our investment in Clean Harbors we have met extensively with management to discuss issues of interest and have been encouraged by the progress made. The company has been very forthcoming on the decent work agenda in particular and the progress made since the appointment of a new Chief Human Resources Officer in February 2018 has been striking.

On the environmental side, in February 2019 the company published its first sustainability report. This was followed by a second report in February 2021 which included a number of important targets such as a 50% increase in the use of renewable energy by 2030 alongside net climate benefit

calculations. We are now pushing for the company to articulate more fully and quantifiably its strategy for transitioning to cleaner energy vehicles in order to reduce their direct emissions footprint.

1. Decent work

According to the American Trucking Association, the US trucking industry was short of roughly 60,800 drivers in 2018, up nearly 20% from 2017.¹ If current trends hold, the shortage could swell to over 160,000 by 2028. A significant exacerbating factor is the demographics of the existing driver population, with the Bureau for Labor Statistics estimating that truck drivers are 94% male, with an average age of 55.

Clean Harbors has been particularly impacted by this labour shortage. Its drivers need to have a number of qualifications owing to the nature of the group's operations. As a result, the company suggests that its investment in training is higher than many peers. As a result, its drivers are often poached, mostly in year one soon after completing training. Currently, the company pays no premium over e-commerce and logistics firms despite the skilled nature of the work its employees do — given the context we believe this is unlikely to be a sustainable position. There is a clear need therefore for the company to put in place initiatives to retain its existing employees while also broadening out its recruitment pool.

Having previously cut pay and benefits due to industry headwinds, in 2018 the company announced positive steps to reinvest in its workforce. It estimated the cost of the plans for that year at \$30m, to cover higher average wages, greater bonus compensation, reinstatement of a 401k matching programme and increases in healthcare benefits and driver retention programs. Reinvestment continued through 2019 and was safeguarded during 2020 despite the pandemic. Under future plans, investment in training and development is set to increase by a further 31% over this decade. At the same time, the company has restructured its hiring and training and ensured much greater interaction between employees and their line managers.

¹ "Trucker driver shortage analysis 2019," published by the American Trucking Associations.

Between 2018 and 2020, Clean Harbors has invested approximately \$75m into its workforce.

As a result of this investment,



Employee turnover has decreased from 30% to 22%



Voluntary turnover has decreased from 22% to 16%



Driver turnover has decreased from 35% to 28% (and voluntary turnover has fallen from 25% to 20%)

Going forward, the company aims to further improve retention. A key focus will be the first six months of an employee's tenure, with specific targets to reduce turnover rate.

With costs of around \$10,000 per individual for training upon recruitment, the 8% overall reduction in employee turnover already achieved equates to a saving of \$8-11m per year. Alternatively, if we assume a cost of 20% of median salary (a reasonably prudent estimate) to replace the departed individual, **the saving from reduced turnover increases to \$15m per annum**. Given this includes only the explicit costs of recruitment, this is likely to be a conservative estimate of the overall savings achieved.

Clean Harbors is also working to broaden its recruitment base and improve diversity as it replaces its ageing driver workforce over the next decade. As well as job fairs at colleges and technical schools, talent acquisition efforts already include military recruiting for drivers, operators and mechanics. To date, approximately 6% of the company's workforce are military veterans. In October 2018 it signed a partnership with the US Army through its Partnership for Youth Success programme, which guarantees an interview to any soldier interested in a role and gives priority access to exiting service members.

Currently the company has a target of growing the percentage of alternative vehicles in its light-duty fleet to more than



10%

by 2030 (compared to less than 1% in 2019).

Given the demographics of the existing driver population – predominantly white, male and over 50 – there is a need to broaden the diversity of the labour pool – looking towards age, gender and ethnicity. To that end, it is encouraging to note that Clean Harbors was named a 'Top Company for Women to Work For in Transportation' in 2020 by the Women in Trucking Association.² Workforce diversity KPIs are ones therefore worth monitoring as the company looks to manage the upcoming glut of retirements from its aging driver workforce over the next decade (as of 2020: 14% female and 65% white).

More broadly however, we believe there may be opportunities to develop programmes that target cohorts such as the homeless, displaced, long-term unemployed or previously incarcerated. Such programmes not only benefit society by breaking cycles of poverty, they also tend to recruit employees who value the job opportunity. An illustrative example is Waste Management Inc.'s Innovative Employment Pathways programme, which launched in June 2019 and has seen 50% higher short-term retention rates among program participants compared to nonparticipants. Pleasingly, Clean Harbors is assessing the opportunities afforded by such programmes.

2. Advancing positive climate impact

Clean Harbors has an undoubted environmental footprint – it:

- Has a presence in 480 locations across the US.
- Runs nine of the 13 commercial hazardous waste incinerators in North America.
- Runs seven industrial landfills, including five for hazardous waste.
- Operates a fleet of around 8,000 vehicles.

This operational footprint is a clear source of emissions; however, it also presents opportunities for realising efficiencies.

On the other side of the ledger, the company is North America's largest re-refiner of used oil. This combined with its safe disposal and incineration of ozone-depleting substances and other hazardous wastes results in significant avoided emissions and/or emissions prevented.

By further reducing its direct emissions and scaling its recycling efforts, Clean Harbors is able to generate a meaningful net-positive contribution towards climate mitigation.

Over the next 15 years, the company intends for its used oil collection and recycling, along with its solvent recycling and our other services, to result in an overall reduction of GHG emissions three times greater than its generated Scope 1 and Scope 2 emissions.

Operational emissions

Clean Harbors' Scope 1 emissions (those associated with emissions from sources that are owned or controlled by the company) are significant — in particular, it runs one of the largest private vehicle fleets in North America. According to the company's 2020 sustainability report, its fleet is responsible for 255,000 metric tonnes of CO₂ emissions per annum, or 16.5% of the group's total Scope 1 emissions.

The company has two main levers to pull to reduce its negative climate impact from operational emissions: a) making greater use of renewable energy, and b) reducing its fleet emissions. Clean Harbors is in the process of setting itself a target for Scope 1 emissions reduction.

In the longer term, the path to reducing fleet emissions is through shifting to alternative clean fuels, likely a mixture of hydrogen and electric. Currently the company has a target of growing the percentage of alternative vehicles in its light-duty fleet to more than 10% by 2030 (compared to less than 1% in 2019).

² For more information, see: <http://www.womenintrucking.org/blog/women-in-trucking-names-clean-harbors-top-company-for-women-to-work>

In the interim the company can refurbish existing vehicles to improve fuel efficiency, and increase its usage of alternative diesels such as biodiesels. To date, just 2% of the company's fuel usage is from bio-diesel.

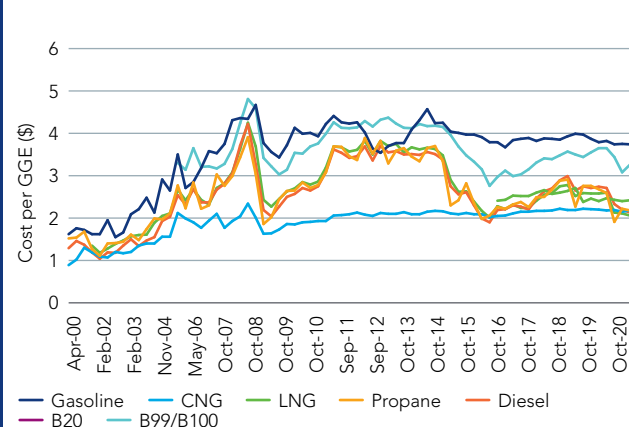
Most diesel consumed in the US is domestically produced: in 2019 US refineries produced about 73.6bn gallons of ultra-low sulphur diesel and US consumption was 61.3bn gallons. In the same year, the US produced only about 41 million barrels of 100% biodiesel and 1.7bn gallons of B20, with 20% bio content, representing just 2% of total diesel production. This biodiesel came from just five plants in the US that produce renewable diesel, with a combined capacity of 400m gallons per year. While production is expected to grow in the coming years, it will remain a long way short of meeting the potential need. Clean Harbors' current usage of cleaner fuel is therefore in line with the current national average.

Shifting to alternative fuels is therefore not straightforward, not least given the scarcity of supply.

Beyond supply, another constraint is simply price. The UK Government, for example, aims to reduce vehicle greenhouse gas emissions to net zero by 2050 under its 'Road to Zero' strategy. Biodiesel is anticipated as offering a stepping-stone in this journey while other technologies are developed.

Studies have shown biodiesel achieves noticeable reductions in CO₂ and particulates emissions³. However, given the lack of any benefit in fuel efficiency, the fuel's primary drawback is price. As illustrated in figure 3, B100 (100% biodiesel) is priced at a significant premium to regular diesel in the US. This is a sizable additional cost and it is unsurprising that those countries that have seen sizable market penetration of biodiesel provide duty concessions – for example, in Sweden, the share of biofuels in road transport is around 20% while in Finland and Norway the share is 15%.

Figure 3. Average retail fuel prices in the US



Source: US Department of Energy, as at October 2020.

The UK Government, for example, aims to reduce vehicle greenhouse gas emissions to net zero by 2050 under its 'Road to Zero' strategy.

We continue to engage with the company regarding its strategy for reducing its fleet emissions. This dialogue encompasses both the potential for these transitional steps as well as the investments in technology innovations.

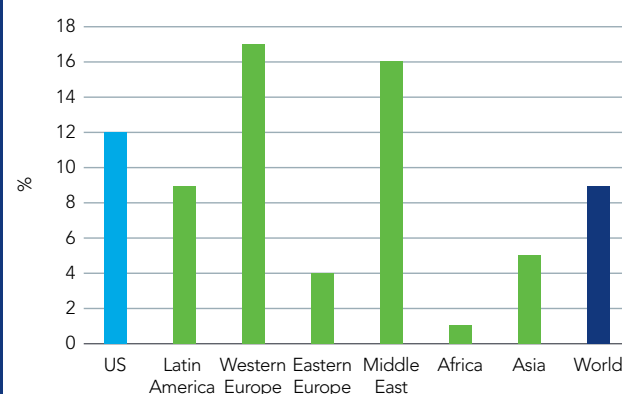
Avoided and prevented emissions

Counterbalancing the company's own emissions are those prevented or avoided as a result of its recycling and incineration services. Most notably, its Safety-Kleen business collects over 200m gallons of used oil each year and re-refines approximately 80% of this oil back into virgin oil. Its closed-loop system allows, in principle, for oil to be recycled and reused indefinitely with no detrimental impact on quality.

Clean Harbors' own life cycle analysis estimates that re-refining one gallon of used motor oil saves 8kg of greenhouse gas compared to a gallon of motor oil refined from crude oil⁴. Additionally, across multiple life cycle analyses, re-refining used oils tends to have a lower global warming potential than combustion of used oils.

A 2020 US Department of Energy report⁵ estimated that presently 12% of lubricant consumed in the US is from re-refined oil and that just 31% of used oil collected in the US is re-refined today. There is therefore plenty of scope to scale up this activity in the coming years.

Figure 4. Re-refined base stocks as a percentage of lubricant consumption



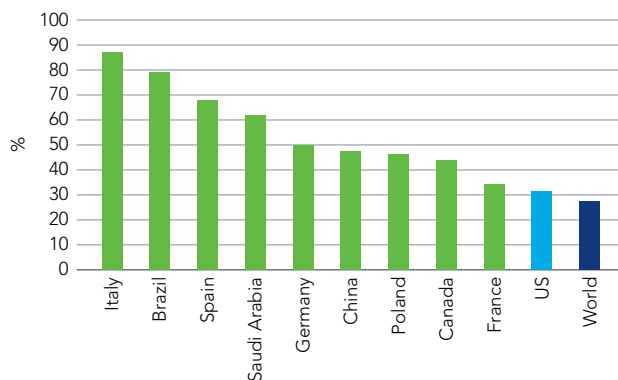
Source: US Department of Energy, as at December 2020.

³ "HVO and GTL – alternative fuels with few drawbacks," published by Commercial Fleet in July 2020.

⁴ Clean Harbors, 2020 sustainability report.

⁵ Department of Energy, Used Oil Management and Beneficial Reuse Options to Address Section 1: Energy Savings from Lubricating Oil Public Law 115-345, Report to Congress, December 2020.

Figure 5. Re-refined base stocks as a percentage of used oil collected⁶



Source: US Department of Energy, as at December 2020.

As of 2019 there were 13 operating used oil refineries producing base stocks in the US, with the largest six accounting for 89% of installed capacity; Clean Harbors operates the two largest.

However, to date only California provides a financial incentive for re-refining used motor oil into base lubricants. It is hoped that the aforementioned 2020 Department of Energy study and its 18 recommendations may prove to be a catalyst for more US states and governmental agencies to promote re-refining. This has the potential to be a tailwind for Clean Harbors if it can invest behind this part of its business, this in turn will also scale up its positive environmental impact.

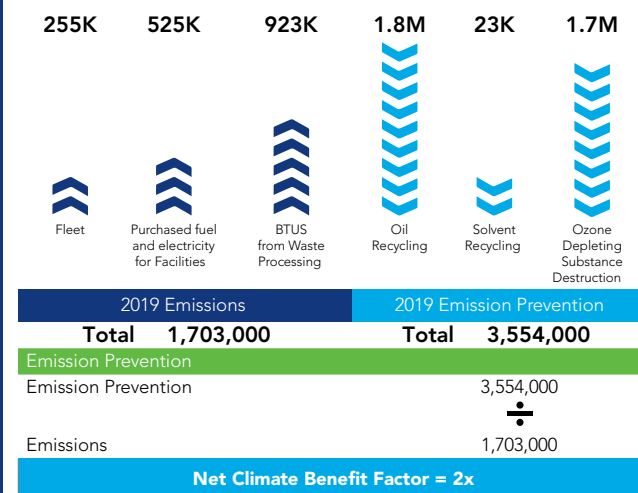
Figure 2 (see page 3) provides an illustrative guesstimate of Clean Harbors' avoided emissions from 2015-2019, based on the company's life cycle assessment that re-refined oil is 80% more carbon efficient than virgin production. We believe it is reasonable to contend that one gallon of re-refined oil has the potential to displace demand for one gallon of virgin production.

Similarly, shown in figure 6 is the company's calculated net climate benefit as provided in its [2020 sustainability report](#). Its calculation also captures the emissions prevented if its destroyed ozone depleting substances (ODS) had not been responsibly incinerated. The company has the nation's largest disposal capacity for chlorofluorocarbons (CFCs), destroying 907 tonnes of CFCs in 2019.

⁶ Department of Energy, as at December 2020.

Figure 6. Average retail fuel prices in the US

Calculating our 2019 Net Climate Benefit (Metric Tons of CO₂e)



Source: Clean Harbors, as at 2020.

Without proper destruction, CFCs have the potential to release significant amounts of carbon dioxide equivalent emissions into the atmosphere. The only approved destruction method for CFCs is high-temperature incineration, which destroys over 99.99% of the material. However, only limited amounts can be processed at any one time in any one incinerator, with Clean Harbors' facilities in many cases the only viable option.

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For context, many legacy refrigerants are 5-10,000 times more destructive to the ozone layer than other GHGs. For example, CFC-12 was a refrigerant used in most vehicle air-conditioning systems until the mid-1990's and had a global potential of 10,900.

Next steps

Clean Harbors has made clear progress, but we believe there is still scope for greater workforce diversity, in particular in their driver population, which we believe can be a source of productivity gains. We similarly hope to see further growth of its recycling and re-refining businesses while at the same time reducing its own operational environmental footprint and as a result enhancing further the company's net positive climate impact. We will continue to engage with the company to pursue these agendas.





Engagement timeline

Closed objectives

- 1. Employee benefits and welfare:** invest in pay and benefits and publish employee turnover metric
 - Closed in March 2021
- 2. Enhance sustainability reporting:** publish an inaugural sustainability report
 - Closed in February 2019

Open objectives

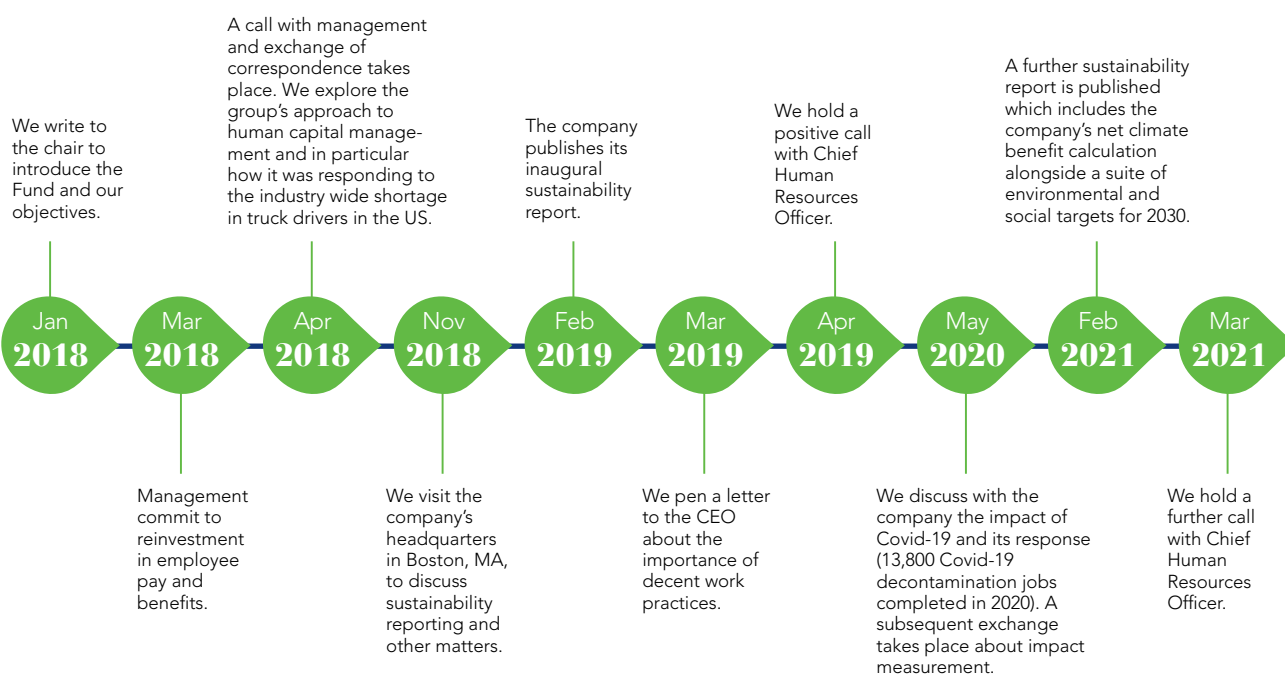
- 1. Scope 1 emissions (M4):** our objective is for the company to disclose its fleet emissions and articulate more fully and quantifiably its strategy for transitioning to cleaner energy vehicles such as CNG, electric or hydrogen.
- 2. Opportunity employment (M3):** our objective is for the company to develop programmes that break the cycles of poverty while recruiting employees who attach greater value to the job opportunity provided.
- 3. Workforce diversity (M3):** our objective is for the company to establish targets for workforce diversity to broaden out its employee base and in so doing broaden its ability to recruit from these populations.

Milestone 1 Initiate dialogue

Milestone 2 Issue validated

Milestone 3 Plan developed

Milestone 4 Plan implemented



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