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Gasoline Margin Management: Refinery-Specific Profit-Sharing Concept

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Gross Gasoline Margin

What is GGM?

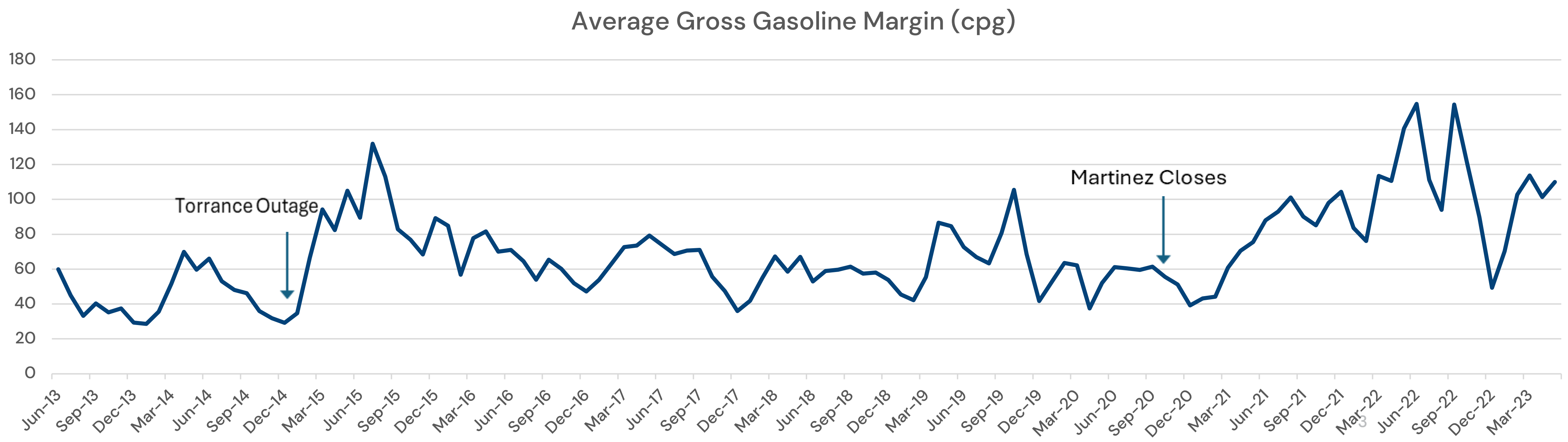
$$Gross\ Gasoline\ Margin\ (GGM)$$
$$= weighted\ average\ sales\ price\ of\ gasoline\ - weighted\ average\ purchase\ price\ of\ crude,\ gasoline, and\ gasoline\ blendstocks$$

- GGM is the control mechanism; calculated monthly after the month is concluded. Basis is data provided by the industry under SB 1322.
- In most cases, higher GGM's will correlate to higher refinery profits, however the GGM <u>does not represent the actual profits of the refineries as it does not include</u>:

Refinery operating costs, both fixed and variable	Impacts from refinery performance (e.g. outages, poor operations)	The relative value of other products produced in the refinery to crude oil

Factors Driving GGM – Supply and Demand Balance

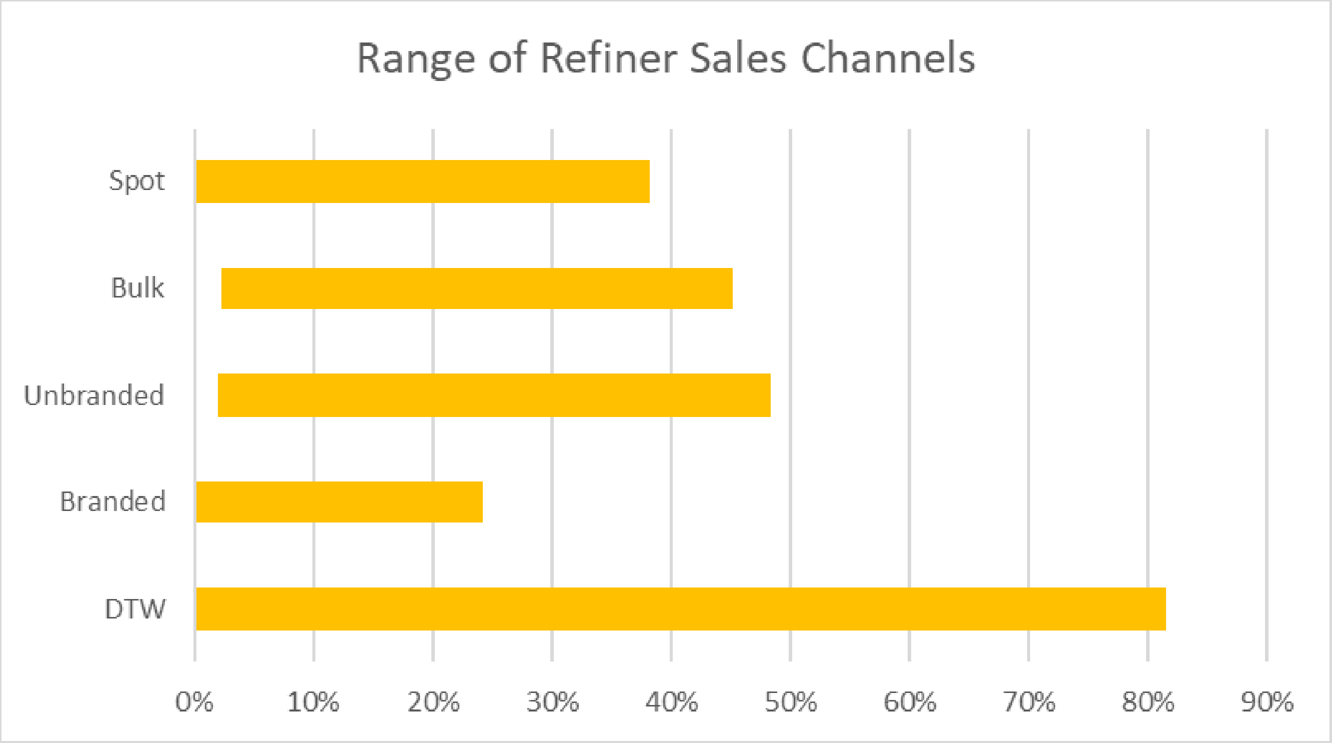
- GGM for all refineries is higher post-2020 after Marathon Martinez closed and the supply-demand balance tightened.
- GGMs may increase again after the Phillips Rodeo closure as imports will need to be incentivized.
- GGMs are higher in the summer vs. winter months due to both lower seasonal demands in winter and the added supply from the higher winter RVP. Winter margins (Nov to Feb) are 17 to 23 cpg lower than the summer period.



Factors Driving GGM – Sales Mix

Each refiner markets through different wholesale channels – DTW, Branded, Unbranded, spot and bulk. This results in a very diverse GGM for each refiner based on their sales mix.

Sales Mix – 2013 to 2023



	DTW	Branded	Unbrand	Bulk	Spot
Average Price, CPG	247.55	241.50	213.77	218.51	213.89

- There are significant differences in realizations across the sales channels. Refiners selling DTW have a significantly higher realization than refiners selling to unbranded or bulk and spot channels, because DTW includes truck transportation costs to retail stations.
- Applying "one" threshold will primarily impact those refiners selling DTW and branded if it is keyed off average sales realizations across the industry.
- Refiners selling Bulk and Spot are selling to ExxonMobil, Shell, BP and others. Those purchasing parties are effectively bypassing the margin management and are not required to report their sales.

Note: DTW and Rack sales contain ethanol

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Factors Driving GGM – Purchase Mix

- Crude oil is the primary feedstock for all refineries, and some refiners have access to (and ability to process) cheaper crudes than others, and that is the primary driver to lowering refinery crude costs.
- Refiners who require gasoline purchases to supplement their refinery production to meet gasoline demands will have their average total purchase cost higher by $1 to $4 per barrel dependent on the gasoline volume purchased and the price.

Percent Crude Purchases	75 to 96
Percent Gasoline Purchases	4 to 25
Average Crude Price (2013-2023)	$68-71/bbl
Average Crude plus Gasoline	$69-74/bbl

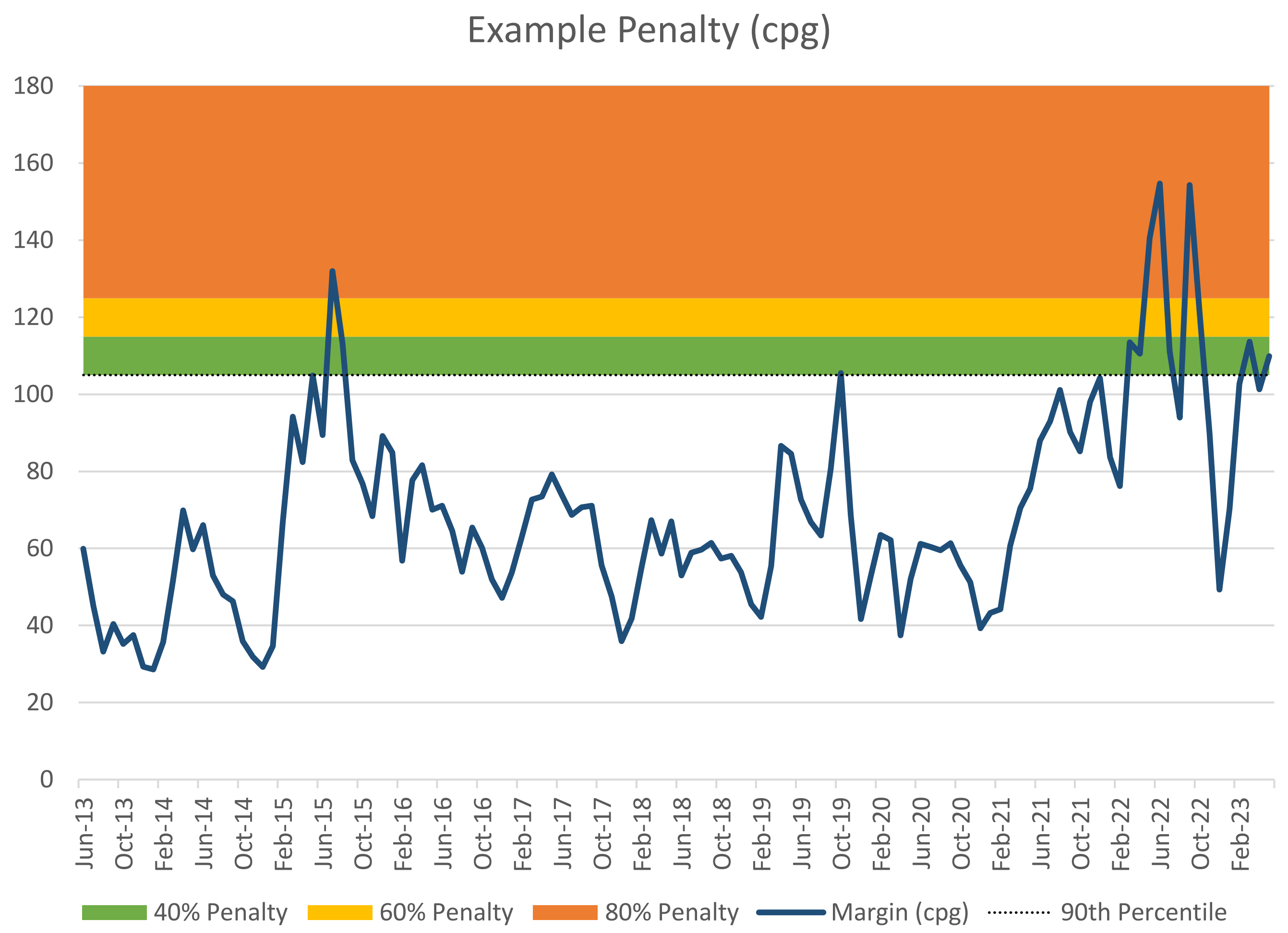
Basis: Data reported by Refiners to CEC under SB X1-2

Refinery-Specific Profit-Sharing Concept

- The GGM Profit-Sharing "threshold" **is** recommended to be unique to each refiner based on their historical GGM over the past 10 years. Each refiner has very different sales realizations due to different sales channels. The Statute is not clear on this but appears to be crafted for "by refiner".*
- The Profit-Sharing percentage will be tiered based on the degree the refiner exceeds the threshold (i.e., the higher the GGM exceeds the threshold, the greater will be the Profit-Sharing fraction).
- It is recommended that the operational costs be excluded due to inconsistent data submissions and inability to accurately assign costs specifically to gasoline.
- The GGM Profit Sharing threshold would be based on the 90th percentile of the historic monthly GGM over the last 10 years. It would be updated annually to include the prior year data.

*(**b**) The commission may, by regulation or order at a business meeting, subject to the requirements of subdivision (f), set a maximum gross gasoline refining margin." Cal. Pub. Resources Code § 25355.5

Profit Share Example



Note that over the past 10 years, there were just a few periods where a portion of the profits would be shared back – the "Torrance event" in 2015, and several periods of spikes in 2022/2023.

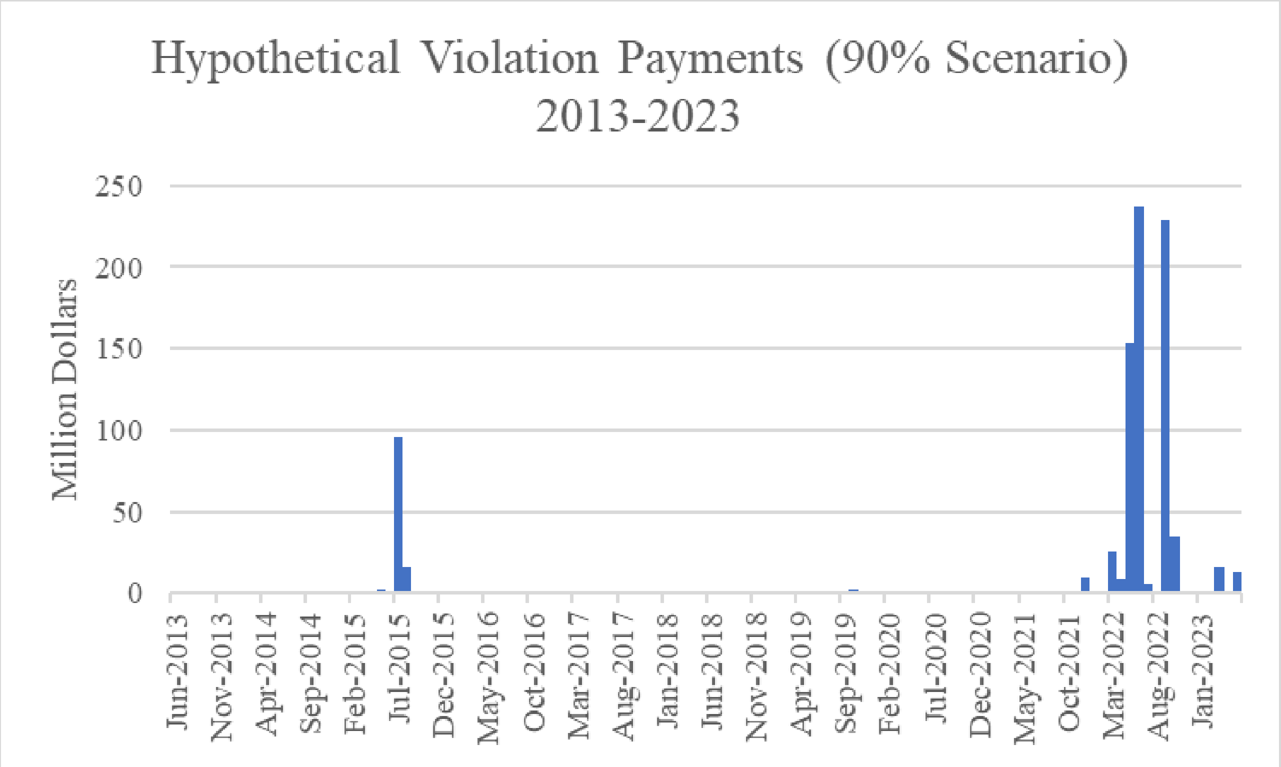
- The "threshold" for this example is based on the 90th percentile of previous 10-Year GGM at 105 cpg.
- There are three tranches of profit-sharing, with escalating profit-sharing at each level.
  - Level 1: 0-10 cpg above the threshold
  - Level 2: 10-20 cpg above the threshold
  - Level 3: >20 cpg above the threshold
- The profit-sharing percentages are applied progressively to each "tranche" with rates rising as GGM increases similar to tax brackets.
  - The sharing percentage is proposed at 40% for Level 1, 60% for Level 2, and 80% for everything at Level 3.

Refinery X Sharing Calculation

Refinery X Sharing Calculation - June 2022			CPG
Sales, MB			1,800
10 year threshhold, GGM with Gasoline purchases			105
June 2022 GGM			155
Margin above threshhold, cpg	CPG	Share	50
First Threshold with 40% Share	0 to 10	40%	$ 3,024,000
Second Threshold with 60% Share	10 to 20	60%	$ 4,536,000
Third Threshold with 80% Share	>20	80%	$18,144,000
Refinery X Share back to CA for June 2022			$25,704,000
Refinery X Retains in June 2022			$12,096,000

- In June 2022, Refiner X exceeded their 10-year threshold by 50 cpg.
- The profit share included all three tranches of excess margin in this example.
- State would collect $26 million from the refiner, but the refiner would retain $12 million.
- Refiner also makes significant money up to their ceiling and even above.
- A separate evaluation would apply to each refiner.
- The 90th percentile of historical prices that define the first threshold is set by the historical experience of this refiner.
- The profit sharing percentages would still incentivize refiners to sell gasoline above the ceiling, as seen by the retained profits.

Profit Sharing Estimates



Company	90% Scenario
Refinery A	$147,397,066
Refinery B	$124,329,827
Refinery C	$155,408,195
Refinery D	$159,930,866
Refinery E	$157,148,343
Refinery F	$107,429,082
Total (6 Refineries)	$851,643,379

- California would have received about $850 million from these 6 refineries from 2013-2023 on the 90% scenario, and $570 million on a 95% scenario.
- Refiners would "retain" over $1.2 billion in profits in the 90% case, and $900 million in the 95% percentile threshold.
- 78% of the violations under the 90^{th} percentile criteria have occurred since the start of 2020 (Market changed with the Marathon Martinez closure).
- Despite different sales models, GGMs appear to peak in the same month, indicating that all wholesale sales channels will rise as the spot market rises.

Methodology Benefits

- Uses the GGM definition in the Statute which recognizes that crude costs and purchases of gasoline/blendstocks are an appropriate cost basis for the GGM.
- Measures GGM by the average sales realization in all wholesale sales channels, which is being provided monthly by refiners.
- Allows refiners to keep 90% of their GGM based on their sales channels, and provides a consistent mechanism to share profits over that threshold (or a 95% threshold as determined by the State).
- Bases the profit sharing only on GGM, excluding operational costs, which are impossible to accurately isolate to gasoline only. This preserves the opportunity for the refiners to increase their energy efficiency and cost structure.
- Does not “cap” GGM which could result in aberrant market behavior to avoid the cap.
- Provides a mechanism to return some refiner profits to impacted constituents in California while preserving an incentive to run the refineries.

Issues Not Addressed

- The profit sharing mechanism as proposed impacts refineries only. Parties who purchase wholesale gasoline are free to sell that gasoline at retail without restriction (Shell, BP, ExxonMobil, others) during price spike periods.
- Retail dealers are also not impacted by this mechanism. It is clear that retail dealers increase prices as their costs from suppliers increase, and that there is a significant lag in retail prices returning where they were before the event. There may be more pressure on retail dealers in the future as their sales volumes will decline as the EV penetration grows.
- As with any regulatory change, the impacted parties may find ways to mitigate the cost to their business (although the transitory nature of price spikes may limit the appetite for parties to make material changes in their business).

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