



Kern Oil & Refining Co.

7724 E. PANAMA LANE
BAKERSFIELD, CALIFORNIA 93307-9210
(661) 845-0761 FAX (661) 845-0330

October 12, 2012

VIA ELECTRONIC POSTING

Margaret Chu
CARB Staff Lead on Refinery Allocation
California Air Resources Board
1001 I Street,
Sacramento, CA 95814

Re: Comments on August 28 Workshop on Refinery Benchmark for the Second and Third Compliance Periods

Dear Ms. Chu:

Kern Oil & Refining Co. (Kern) is providing comments on the California Air Resources Board's (CARB) August 28, 2012, workshop regarding establishing a new refinery sector benchmark for the second and third compliance period, and, specifically, CARB's effort to refine the Carbon Weighted Tonne (CWT) benchmarking approach. Kern is one of only two remaining small refiners in California producing transportation fuels, and the only small refiner in California producing CARB Reformulated Gasoline and Ultra Low Sulfur Diesel.

Overall, Kern would like to urge CARB to fully vet and consider the advantages and disadvantages of the CWT approach and to also consider the experience, and lack of experience with regard to the CWT, of the European Union. The timing and scale of the EU model are significantly different than what is being proposed here and also demonstrate weaknesses in the CARB proposal including: lack of sufficient reporting data to formulate accurate and appropriate benchmarks and lack of a sufficient regulated pool of refineries to justify the 10% target. Kern also echoes and expands upon concerns raised by the Ecofys Refineries Preliminary Workproduct (Ecofys Report) regarding the disadvantages of the CWT approach for atypical small refineries like Kern and urges CARB to tailor an approach for such atypical refineries to address these discrepancies. Kern comments are outlined below.

General CWT Considerations:

- ARB's adoption of the CWT approach is premature. The EU has been collecting emissions data utilized to calculate the benchmarks since 2005, yet is only now preparing to utilize the

CWT approach in 2013. Clearly it takes time to get the comparisons right and, more importantly, data consistency and integrity eliminate gaming of the system. Without confidence that a benchmark “ranking” reflects real performance, it will not drive behavior change. With the EU only on the cusp of employing the CWT benchmarking approach, there has not been time for CARB, the EU or refiners to observe the effects of that approach on the Cap-and-Trade program.

- The benchmarks CARB is looking to adopt from EU’s system are noted as being “ambitious.” Those EU facilities meeting the benchmarks are among the most efficient and the benchmarks have been based on the top 10% best performing facilities. In the EU, there were 114 refineries taken into account, therefore the EU’s development of the 0.0295 benchmark took 10 to 11 refineries into account. In CA the refinery population is less than 15; therefore the top 10% would be only 1 refinery, which calls the appropriateness of the bench mark into question.
- The Ecofys Report notes that the CWT approach was specifically adapted to typical operations of European refineries, and that details of that adaptation are proprietary to CONCAWE and Solomon.¹ This highlights the lack of transparency in the CWT method. What has CARB done, or does it plan to do, to understand the differences between California refineries and European refineries in order to determine any notable differences that should be adjusted or otherwise compensated for? How does CARB plan to address the lack of transparency in the CWT approach?
- As previously acknowledged by CARB Staff with regard to the currently utilized benchmarking methodology, a wide spread between the best and worst facilities could create a significant change in the in-state competitive playing field for California refiners. CARB Staff expressly acknowledged a “wide initial gap is not in keeping with the concept of minimizing ‘transition risk’ as outlined in the cap-and-trade Initial Statement of Reasons” and accordingly modified the refinery allocation proposal to reduce the spread between the best and worst facilities in the first compliance period.² The CWT approach would have same effect about which Staff previously expressed concern, namely, creating a wide spread between best and worst facilities, with some facilities overcompensated and others at risk. Compare Figure 3 on page 20 to Figure 7 on page 43 in the Ecofys Report. Figure 3 is the distribution of refineries as compared to the benchmark when using a crude-throughput approach (similar to the simple barrel currently utilized). There are 7 refineries “below the line” and 8 refineries “above the line” – the wide gap that CARB referenced in the September of 2011.³ Figure 7 is the distribution of refineries as compared to the benchmark when using the CWT method proposed. Now there are only 4 “below the line” and 11 refineries “above

¹ Ecofys Report, p. 27, Section 5.3.1; see also p. 28, Section 5.3.2 [indicating that the CWT was never intended for use outside of the EU.]

² Appendix A to 2nd 15-day Cap-and-Trade Regulatory Text: Refinery Allocation Methodology, September 2011, p. 1.

³ *Ibid.*

the line.” Given the similarity, how does CWT meet the goal of reducing the spread between the best and the worst, and how does it minimize the risk of leakage and soften transition risk?

- ARB Staff previously concluded that transition risk will have diminished in the second compliance period, however, Staff has set forth no practical evidence to support that assertion.⁴ CARB further currently lacks sufficient historical data to set appropriate and reliable benchmarks or consider the potential transition risk of the CWT approach. First, the EU is only transitioning to the CWT method for refinery benchmarking starting in 2013. While the EU will have had 8 program years for “transition risk” to diminish prior to employing the CWT, by contrast, as currently proposed, California will only have had 2 years. The refinery sector-specific guidance published by the European Commission nonetheless notes the sector as “EXPOSED” to leakage risk, which is what CARB should be trying to avoid.⁵ With the EU only on the cusp of employing this benchmarking approach, CARB, EU, and refiners have had no time to observe the effects of the CWT benchmarking approach. There is no practical evidence to support CARB’s assertions regarding diminished transition risk or to demonstrate the impact of CWT on European refiners, the degree of leakage, and/or its unintended consequences. Kern suggests allowing the California program to mature to give CARB time to observe the EU implementation of the CWT approach, which would give a real world demonstration of the effects of the CWT, as opposed to a premature determination that CWT is in the best interest of the California program, and would actually allow time for the transition risks to diminish.
- As proposed, facility improvement will not be sufficient to reach the CWT benchmarking goals and the only other option for compliance is the cost to purchase credits. If the goal of Cap-and-Trade is CO2 reductions as opposed to revenue generation, benchmarking needs to be altered in a way that it does not monetarily penalize refiners beyond reasonable facility improvements to reduce emissions.
- The Ecofys Report references a correction factor utilized in the EU facility CWT determination, which accounts for the non-process assets like tank farms, wastewater treatment units, etc. that are not accounted for via the CWT factors.⁶ The determination of this factor is not detailed in the Ecofys Report. CARB has not included such a factor in calculating a facility’s CWT score. Why not? What is being done to develop this?
- The description of Figure 7 in the Ecofys Report states that the emission intensity assessment performed using CARB emissions data and estimated facility process unit throughputs determined a range from 0.02 to 0.05 MT CO2/CWT. However, the figure illustrates the

⁴ *Id.* at p. 6.

⁵ The European Union’s Emission Trading Scheme Sector specific guidance, at p. 116: http://ec.europa.eu/clima/documentation/ets/docs/benchmarking/gd9_sector_specific_guidance_en.pdf (accessed October 12, 2012).

⁶ Ecofys Report, P. 31, Sections 5.6.2 and 5.6.3.

lowest point on the curve as approximately 0.01. Also, the high point on the curve is approximately 0.0475 and not all the way to 0.05 as the stated range would suggest. If the average was 0.033 MT/CWT, and baseline is supposed to be 90%, then why has CARB set the baseline at 0.0295 rather than 0.0297 (.033*.9)?

- Also regarding Figure 7, the explanatory text states that results from primary data may deviate substantially from the illustrated results from using the estimated data. It is unclear whether the 0.295 benchmark has been set based on EU refinery data or this California estimated data, but if using actual data may substantially change this, then how can stakeholders be confident in the benchmark? Is CARB proposing to amend the benchmark based on actual data, not estimated data?
- In line with this possible substantial deviation in Figure 7, the high point on the curve has an intensity of approximately 0.0475 MT CO₂/CWT. Kern is curious what facility this data point represents. Kern calculated a preliminary CWT score using actual operations data, the 2010 emissions data in the Ecofys Report Table 1, and determined an emissions intensity in excess of the 0.05 MT CO₂/CWT stated as the high end of CARB's estimated range. For the purpose of making an example, assume that the 0.0475 (based on Ecofys and CARB estimates) on the curve is Kern; this compared to our preliminary score using actual facility data would suggest a difference of nearly 20%, which clearly is a substantial difference. How will CARB address this discrepancy?

Need to Address Atypical Refinery Benchmarking:

- Kern urges CARB to acknowledge atypical refineries and develop a fair alternative to the CWT for such refineries. The Ecofys Report expressly acknowledges "it is well known that the CWT approach is not suitable for smaller refineries" and goes on to suggest that the CWT may not be suited for some of the smaller, "atypical" refineries in California.⁷ For such refineries, the Ecofys Report suggests it may be more appropriate to use alternative allocation methodologies such as energy benchmarking. As one of its conclusions, the Ecofys Report raises the issue of whether certain refineries should be regarded as atypical and whether those refineries should be included in the CWT approach.⁸
- The Ecofys Report states: "...emissions from atypical refineries represent a very small share of the total emissions of the refinery sector."⁹ In fact, there are 8 listed on Table 11, but in reality this list of 8 gets boiled down to 3: Kern, San Joaquin, & Lundy Thagard. According to emissions data in Table 1, the emissions total from these 3 refineries in 2010 was 267,029 MT CO₂e, or only 0.834% of all refinery emissions in the California in that year. This demonstrates the minimal emissions impact of small, atypical refineries and the ability of CARB to address their issues without disrupting statewide CO₂ reduction goals.

⁷ Ecofys Report, p. 44.

⁸ Ecofys Report, p. 46.

⁹ *Id.* at p. 44, inside Box 3.

- The CARB regulations should include an option to consider individual circumstances for “atypical” refiners or pull out similarly situated “atypical” refiners into a separate peer group.
 - The Ecofys Report states: “We propose to assess the appropriateness of applying the CWT methodology to these (atypical refineries) on a case-by case basis.”¹⁰ Kern would agree that case-by-case is one option for CARB to consider. For example, the Australian system has a separate program where facilities can apply to receive additional allocations given their specific circumstance, which is one option for CARB to consider.
 - In addition to a case-by-case basis consideration, CARB should consider maintaining the 2-pronged approach that is currently in place. For example, one consideration might be to use CWT for allocating allowances to “typical” or mainstream refineries and maintain the modified simple barrel currently in place for the allocating allowances to “atypical” refineries. Alternatively, a 2-pronged approach could use CWT for allocations to all refineries, but create a custom peer group for which a more appropriate benchmark for the “atypical” refineries is determined and used in the allowance allocation calculations.

Anticipated Impact to Kern under the CWT Approach:

- Kern remains concerned about the significant impacts if CARB moves forward with the CWT as opposed to the modified simple barrel approach currently in place.
- Using the 2010 production rates for each unit to calculate Kern’s CWT score and the average emissions reported for years 2008, 2009 and 2010 as a compliance target, Kern calculated its allowances under both the CWT and the simple barrel approach. Under the simple barrel allocation method, Kern should have to acquire roughly 3,000 and 7,000 additional allowances and/or offsets in the first two years of the Cap-and-Trade program, respectively. However, under the CWT method, Kern would be short over 110,000 allowances in each of years 2015 and 2016. That represents an approximate **105,000** allowance delta annually – two orders of magnitude different - between the CWT and the modified simple barrel approach, which, depending on the allowance purchase price, could represent over \$1.5 million annually for Kern to comply. Again we ask, how does this meet the goal of reducing the spread between the best and the worst, and how does it minimize the risk of leakage and soften transition risk?

¹⁰ *Id.* at p. 44, Section 6.3.

Ms. Margaret Chu, ARB
October 12, 2012
Page 6 of 6

In conclusion, Kern appreciates CARB's consideration of Kern's comments and looks forward to receiving the clarifications requested. This matter is far too critical, its impacts far too significant to not get it right. As always, we are committed to working with Staff throughout this regulatory process.

Sincerely,

A handwritten signature in black ink, appearing to read 'Melinda L. Hicks', written over the word 'Sincerely,'.

Melinda L. Hicks
Manager, Environmental Health and Safety
Kern Oil & Refining Co.