

SUBMISSION COVER SHEET

IMPORTANT: Check box if Confidential Treatment is requested

Registered Entity Identifier Code (optional): 24-183

Organization: New York Mercantile Exchange, Inc. ("NYMEX")

Filing as a: DCM SEF DCO SDR

Please note - only ONE choice allowed.

Filing Date (mm/dd/yy): 05/28/24 Filing Description: Initial Listing of the Soybean Oil – NY Harbor ULSD Spread Financial Futures Contract

SPECIFY FILING TYPE

Please note only ONE choice allowed per Submission.

Organization Rules and Rule Amendments

- Certification § 40.6(a)
- Approval § 40.5(a)
- Notification § 40.6(d)
- Advance Notice of SIDCO Rule Change § 40.10(a)
- SIDCO Emergency Rule Change § 40.10(h)

Rule Numbers:

New Product

Please note only ONE product per Submission.

- Certification § 40.2(a)
- Certification Security Futures § 41.23(a)
- Certification Swap Class § 40.2(d)
- Approval § 40.3(a)
- Approval Security Futures § 41.23(b)
- Novel Derivative Product Notification § 40.12(a)
- Swap Submission § 39.5

Official Product Name: See filing.

Product Terms and Conditions (product related Rules and Rule Amendments)

- Certification § 40.6(a)
- Certification Made Available to Trade Determination § 40.6(a)
- Certification Security Futures § 41.24(a)
- Delisting (No Open Interest) § 40.6(a)
- Approval § 40.5(a)
- Approval Made Available to Trade Determination § 40.5(a)
- Approval Security Futures § 41.24(c)
- Approval Amendments to enumerated agricultural products § 40.4(a), § 40.5(a)
- "Non-Material Agricultural Rule Change" § 40.4(b)(5)
- Notification § 40.6(d)

Official Name(s) of Product(s) Affected:

Rule Numbers:

May 28, 2024

VIA ELECTRONIC PORTAL

Mr. Christopher J. Kirkpatrick
 Office of the Secretariat
 Commodity Futures Trading Commission
 Three Lafayette Centre
 1155 21st Street, N.W.
 Washington, D.C. 20581

Re: CFTC Regulation 40.2(a) Certification. Initial Listing of the Soybean Oil – NY Harbor ULSD Spread Financial Futures Contract. NYMEX Submission No. 24-183

Dear Mr. Kirkpatrick:

New York Mercantile Exchange, Inc. (“NYMEX” or “Exchange”) is certifying to the Commodity Futures Trading Commission (“CFTC” or “Commission”) the initial listing of the Soybean Oil – NY Harbor ULSD Spread Financial Futures contract (the “Contract”) for trading on the CME Globex electronic trading platform (“CME Globex”) and for submission for clearing via CME ClearPort, effective Sunday, June 16, 2024, for trade date Monday, June 17, 2024 as described in the table below.

Contract Title	Soybean Oil – NY Harbor ULSD Spread Financial Futures
Commodity Code	BHO
Rulebook Chapter	151
Settlement Type	Financial
Contract Size	42,000 gallons
Price Quotation	U.S. dollars and cents per barrel
Minimum Price Fluctuation	\$0.0001
Value per Tick	\$4.20
Listing Schedule	Monthly contracts listed for the current and next 2 calendar years. List monthly contracts for a new calendar year following the termination of trading in the December contract of the current year.
Initial Listing	July 2024 to December 2026
Floating Price	The Floating Price for each contract month is the arithmetic average of The Board of Trade of the City of Chicago, Inc. (“CBOT”) Soybean Oil Futures contract (Commodity Code: 07, CBOT Chapter 12) first nearby non-spot contract month settlement price for each Business Day that it is determined multiplied by a factor of .075 minus the arithmetic average of the NYMEX NY Harbor ULSD Futures contract (Commodity Code: HO, NYMEX Chapter 150) first nearby contract month settlement price for each Business Day that it is determined during the applicable period for the contract month, except as set forth in Section (A) below. (A) The settlement price of the second nearby contract month for the NYMEX NY Harbor ULSD Futures contract will be used on the last day of trading for the expiring NYMEX NY Harbor ULSD Futures contract.

	The applicable period for each contract month will be the last Business Day of the month prior to the contract month through the penultimate Business Day of the contract month, which is the last trading day of the contract.
Block Trade Minimum Threshold	5 contracts - subject to a 15-minute reporting window
Termination of Trading	Trading shall cease one Business Day prior to the last Business Day of the contract month
CME Globex Match Algorithm	F- FIFO
Trading and Clearing Hours	<p>CME Globex Pre-Open: Sunday 4:00 p.m. - 5:00 p.m. Central Time / CT Tuesday - Thursday 4:45 p.m. - 5:00 p.m. CT</p> <p>CME Globex: Sunday - Friday 5:00 p.m. CT with a daily maintenance period from 4:00 p.m. - 5:00 p.m. CT</p> <p>CME ClearPort: Sunday - Friday 5:00 p.m. - 4:00 p.m. CT with no reporting Tuesday - Thursday from 4:00 p.m. - 5:00 p.m. CT</p>

The Contract is an average price contract that is based on the spread between the settlement prices of The Board of Trade of the City of Chicago, Inc. (“CBOT”) Soybean Oil Futures contract (Commodity Code: 07) and the NYMEX NY Harbor ULSD Futures contract (Commodity Code: HO). The Soybean Oil Futures and the NY Harbor ULSD Futures contracts are referenced contracts.

Exhibit A provides NYMEX Chapter 151. Exhibit B provides the Position Limits, Position Accountability and Reportable Level Table. Exhibit C provides the Exchange fees. Exhibit D provides the NYMEX Rule 588.H. (“Globex Non-Reviewable Trading Ranges”) Table. Exhibit E provides the Cash Market Overview and the Analysis of Deliverable Supply.

The Exchange reviewed the designated contract market core principles (“Core Principles”) as set forth in the Commodity Exchange Act (“CEA” or “Act”) and identified that the Contract may have some bearing on the following core principles:

- **Compliance with Rules:** Trading in the Contract will be subject to the rules in Rulebook Chapter 4 which includes prohibitions against fraudulent, noncompetitive, unfair and abusive practices. Additionally, trading in the Contract will also be subject to the full panoply of trade practice rules, the majority of which are contained in Chapter 5 and Chapter 8 of the Rulebook. As with all products listed for trading on one of CME Group’s designated contract markets, activity in the new product will be subject to extensive monitoring and surveillance by CME Group’s Market Regulation Department. The Market Regulation Department has the authority to exercise its investigatory and enforcement power where potential rule violations are identified.
- **Contract Not Readily Subject to Manipulation:** The Contract is not readily susceptible to manipulation and are based on the liquidity and robustness of the underlying cash markets.
- **Prevention of Market Disruption:** Trading in the Contract will be subject to the Rules of NYMEX which include prohibitions on manipulation, price distortion and disruptions of the delivery or cash-settlement process. As with all products listed for trading on one of CME Group’s designated contract markets, activity in the new products will be subject to extensive monitoring and surveillance by CME Group’s Market Regulation Department.
- **Position Limitations or Accountability:** The speculative position limits for the Contract as demonstrated in this submission are consistent with the Commission’s guidance.

- **Availability of General Information:** The Exchange will publish on its website information regarding contract specifications, terms and conditions, as well as daily trading volume, open interest and price information for the Contract.
- **Daily Publication of Trading Information:** The Exchange will publish information on contract trading volumes, open interest levels, and price information daily on its website and through quote vendors for the Contract.
- **Execution of Transactions:** The Contract will be listed for trading on the CME Globex electronic trading and for clearing through CME ClearPort. The CME Globex trading venue provides for competitive and open execution of transactions. CME Globex affords the benefits of reliability and global connectivity.
- **Trade Information:** All required trade information for the Contract will be included in the audit trail and is sufficient for the Market Regulation Department to monitor for market abuse.
- **Financial Integrity of Contract:** The Contract will be cleared by the CME Clearing House, which is a registered derivatives clearing organization with the Commission and is subject to all Commission regulations related thereto.
- **Protection of Market Participants:** NYMEX Rulebook Chapters 4 and 5 contain multiple prohibitions precluding intermediaries from disadvantaging their customers. These rules apply to trading on all of the Exchange's competitive trading venues and will be applicable to transactions in the Contract.
- **Disciplinary Procedures:** Chapter 4 of the Rulebook contains provisions that allow the Exchange to discipline, suspend or expel members or market participants that violate the rules. Trading in the Contract will be subject to Chapter 4, and the Market Regulation Department has the authority to exercise its enforcement power in the event rule violations in these Contracts is identified.
- **Dispute Resolution:** Disputes with respect to trading in the Contract will be subject to the arbitration provisions set forth in Chapter 6 of the Rulebook. The rules in Chapter 6 allow all nonmembers to submit a claim for financial losses resulting from transactions on the Exchange to arbitration. A member named as a respondent in a claim submitted by a nonmember is required to participate in the arbitration pursuant to the rules in Chapter 6. Additionally, the Exchange requires that members resolve all disputes concerning transactions on the Exchange via arbitration.

Pursuant to Section 5c(c) of the Act and CFTC Regulation 40.6(a), the Exchange hereby certifies that the Contract complies with the Act, including regulations under the Act. There were no substantive opposing views to the proposal.

The Exchange certifies that this submission has been concurrently posted on the CME Group website at <http://www.cmegroup.com/market-regulation/rule-filings.html>.

Should you have any questions concerning the above, please contact the undersigned at (312) 466-7478 or via e-mail at CMEGSubmissionInquiry@cmegroup.com.

Sincerely,

/s/ Timothy Elliott
Managing Director and Chief Regulatory Counsel

Attachments: Exhibit A: NYMEX Rulebook Chapter 151
Exhibit B: Position Limits, Position Accountability and Reportable Level Table in Chapter 5 of the NYMEX Rulebook (attached under separate cover)
Exhibit C: Exchange Fees
Exhibit D: NYMEX Rule 588.H. – (“Globex Non-Reviewable Trading Ranges”) Table
Exhibit E: Cash Market Overview and Analysis of Deliverable Supply

Exhibit A

NYMEX Rulebook Chapter 151

Soybean Oil – NY Harbor ULSD Spread Financial Futures

151100. SCOPE OF CHAPTER

The provisions of these rules shall apply to all contracts bought or sold on the Exchange for cash settlement based on the Floating Price. The procedures for trading, clearing and cash settlement of this contract, and any other matters not specifically covered herein shall be governed by the general rules of the Exchange.

151101. CONTRACT SPECIFICATIONS

The Floating Price for each contract month is the arithmetic average of The Board of Trade of the City of Chicago, Inc. ("CBOT") Soybean Oil Futures contract ([CBOT Chapter 12](#); Code: 07) first nearby non-spot contract month settlement price for each Business Day that it is determined multiplied by a factor of .075 minus the arithmetic average of the NYMEX NY Harbor ULSD Futures contract ([NYMEX Chapter 150](#); Code: HO) first nearby contract month settlement price for each Business Day that it is determined during the applicable period for the contract month, except as set forth in Section (A) below.

(A) The settlement price of the second nearby contract month for the NYMEX NY Harbor ULSD Futures contract will be used on the last day of trading for the expiring NYMEX NY Harbor ULSD Futures contract.

The applicable period for each contract month will be the last Business Day of the month prior to the contract month through the penultimate Business Day of the contract month, which is the last trading day of the contract.

151102. TRADING SPECIFICATIONS

The number of months open for trading at a given time shall be determined by the Exchange.

151102.A. Trading Schedule

The hours of trading for this contract shall be determined by the Exchange.

151102.B. Trading Unit

The contract unit shall be 42,000 U.S. gallons (1,000 U.S. barrels). Each contract shall be valued as the contract quantity (42,000) multiplied by the settlement price.

151102.C. Price Increments

Prices shall be quoted in U.S. dollars and cents per gallon. The minimum price fluctuation shall be \$0.0001 per gallon.

151102.D. Position Limits, Exemptions, Position Accountability and Reportable Levels

The applicable position limits and/or accountability levels, in addition to the reportable levels, are set forth in the Position Limit, Position Accountability and Reportable Level Table in the Interpretations & Special Notices Section of Chapter 5.

A Person seeking an exemption from position limits for bona fide commercial purposes shall apply to the Market Regulation Department on forms provided by the Exchange, and the Market Regulation Department may grant qualified exemptions in its sole discretion.

Refer to Rule 559 for requirements concerning the aggregation of positions and allowable exemptions from the specified position limits.

151102.E. Termination of Trading

Trading shall cease one Business Day prior to the last Business Day of the contract month.

151103. FINAL SETTLEMENT

Final settlement under the contract shall be by cash settlement. Final settlement, following termination of trading for a contract month, will be based on the Floating Price. The final settlement price will be the Floating Price calculated for each contract month.

Exhibit B
NYMEX Rulebook
Chapter 5
(“Trading Qualifications and Practices”)
Position Limits, Position Accountability and Reportable Level Table
(attached under separate cover)

Exhibit C
Exchange Fees

	Member	Non-Member
CME Globex	\$1.00	\$2.20
EFP	\$1.00	\$2.20
Block	\$1.00	\$2.20
EFR/EOO	\$1.00	\$2.20
Processing Fees		
	Member	Non-Member
Cash Settlement	\$0.10	\$0.10
Facilitation Fee		\$0.60
Give-Up Surcharge		\$0.05
Position Adjustment/Position Transfer		\$0.10

Exhibit D
NYMEX Rulebook
Chapter 5
(“Trading Qualifications and Practices”)

Rule 588.H. (“Globex Non-Reviewable Trading Ranges”) Table

(additions underscored)

Instrument	Globex Symbol	Outrights			Spreads	
		Globex Non-Reviewable Ranges (NRR)	NRR: Globex Format	NRR: Minimum Ticks	NRR: Globex Format	NRR: Minimum Ticks
<u>Soybean Oil – NY Harbor ULSD Spread Financial Futures</u>	<u>BHO</u>	<u>\$0.015 per gallon</u>	<u>150</u>	<u>150</u>	<u>N/A</u>	

Exhibit E

Cash Market Overview and Analysis of Deliverable Supply

Soybean Oil – NY Harbor ULSD Spread Financial Futures

New York Mercantile Exchange, Inc. (“NYMEX” or “Exchange”) is certifying to the Commodity Futures Trading Commission (“CFTC” or “Commission”) the listing of the Soybean Oil – New York Harbor ULSD Financial Futures contract, which is a financially-settled contract based on the spread between The Board of Trade of the City of Chicago, Inc. (“CBOT”) Soybean Oil Futures contract (Commodity Code: 07) and the NYMEX NY Harbor ULSD Futures contract (Commodity Code: HO).

ANALYSIS OF DELIVERABLE SUPPLY

SOYBEAN OIL FUTURES

MARCH 2024

In estimating deliverable supply for the Soybean Oil Futures contract, The Board of Trade of the City of Chicago Inc. (“CBOT”) relied on long-standing precedent, which provides that the key component in estimating deliverable supply is the portion of typical production and supply stocks that could reasonably be considered to be readily available for delivery. In its guidance on estimating deliverable supply, the Commodity Futures Trading Commission (“CFTC” or “Commission”) states:

In general, the term “deliverable supply” means the quantity of the commodity meeting a derivative contract’s delivery specifications that can reasonably be expected to be readily available to short traders and saleable by long traders at its market value in normal cash marketing channels at the derivative contract’s delivery points during the specified delivery period, barring abnormal movement in interstate commerce. Typically, deliverable supply reflects the quantity of the commodity that potentially could be made available for sale on a spot basis at current prices at the contract’s delivery points. For a non-financial physical-delivery commodity contract, this estimate might represent product which is in storage at the delivery point(s) specified in the futures contract or can be moved economically into or through such points consistent with the delivery procedures set forth in the contract and which is available for sale on a spot basis within the marketing channels that normally are tributary to the delivery point(s).

Background:

Soybean oil is a by-product created from crushing soybeans and is a widely consumed vegetable oil and is also used extensively in the production of ink and paint. The United States Department of Agriculture (“USDA”) estimates 2023/24 U.S. soybean oil production at 27,024 million pounds,¹ a 3% increase from 2022/23.

Delivery Capacity:

The CBOT Soybean Oil Futures contract calls for the delivery of 60,000 pounds of crude soybean oil. Most soybean oil produced in U.S. soybean processing facilities is eligible for delivery against the CBOT Soybean Oil Futures contract. The Soybean Oil Futures contract requires that delivered crude soybean oil meet the following specifications:

- (a) It shall be one of the following types: Expeller pressed, expeller pressed degummed, solvent extracted, or solvent extracted degummed. Mixtures of one type with any other is not deliverable;

¹ <https://apps.fas.usda.gov/psdonline/app/index.html#/app/home>

- (b) It shall contain no more than 0.3% moisture and volatile content;
- (c) It shall be lighter in green color than Standard "A" and when refined and bleached shall produce a refined and bleached oil of not deeper color than 3.5 red on the Lovibond scale;
- (d) It shall refine with a loss not exceeding 5% as determined by the "neutral oil" method;
- (e) It shall have a flash point not below 250 degrees Fahrenheit, closed cup method; and
- (f) It shall contain no more than 1.5% unsaponifiable matter (exclusive of moisture and volatile matter).

No lower grades are deliverable. Higher grades may be delivered at contract price except when the refining loss is less than 5% as determined by the "neutral oil" method, a premium of one percent of the cash market price at the time of loading is paid for each one percent under the 5% loss (fractions figured throughout) with a maximum credit of 4½%.

When a bushel of soybeans weighing 60 pounds is crushed, the conventional result is 11 pounds of soybean oil, 44 pounds of soybean meal, 4 pounds of hulls, and 1 pound of waste.²

The Soybean Oil Futures contract has 6 delivery territories consisting of:

- (a) Illinois Territory (That portion of the state of Illinois north of latitude 38°00' N.)
- (b) Eastern Territory (Those portions of the states of Indiana and Kentucky west of the Ohio-Indiana border and its extension and north of latitude 38°00'N.)
- (c) Eastern Iowa Territory (That portion of the state of Iowa east of longitude 93°50'W.)
- (d) Southwest Territory (Those portions of the states of Missouri and Kansas north of latitude 38°00'N. and east of longitude 97°00'W.)
- (e) Western Territory (Those portions of the states of Iowa west of longitude 93°50'W., and Nebraska east of longitude 97°00'W.)
- (f) Northern Territory (Those portions of the states of Minnesota south of latitude 45°10'N., and South Dakota south of latitude 45°10'N., and east of 97°00'W.)

Soybean oil is a very storable commodity, and the amount of soybean oil CBOT allows registered delivery facilities to deliver (regular capacity) is based on the lesser of each facility's approved storage space or 20 times their registered daily rate for loading jumbo tank cars. Below are the facilities regular for delivery against the CBOT Soybean Oil Futures contract and the maximum number of warehouse receipts each facility may deliver:³

FIRM / FACILITIES	REGULAR SPACE (POUNDS)	MAXIMUM WAREHOUSE RECEIPTS ALLOWED TO ISSUE
AG PROCESSING, INCORPORATED		
Dawson, MN	20,040,000	334
Eagle Grove, IA	20,000,000	333
Emmetsburg, IA	88,000,000	1,466
Manning, IA	9,000,000	150
Mason City, IA	36,000,000	600
Omaha, NE	40,000,000	666
Sergeant Bluff, IA	21,000,000	350
Sheldon, IA	19,200,000	320
St. Joseph, MO	24,000,000	400
ARCHER DANIELS MIDLAND CO.		
Decatur, IL	118,400,000	1,973

² <https://www.cmegroup.com/education/files/soybean-crush-reference-guide.pdf>

³ https://www.cmegroup.com/content/dam/cmegroup/market-regulation/rule-filings/2017/06/17-260_APPA.pdf

Des Moines, IA	44,421,696	740
Frankfurt, IN	40,600,000	676
Lincoln, NE	63,600,000	1,060
Mexico, MO	29,600,000	493
Quincy, IL	48,400,000	816
Mankato, MN	37,020,000	616
BUNGE NORTH AMERICA (EAST), LLC		
Decatur, IN	118,950,000	1,333
BUNGE NORTH AMERICA (OPD WEST), INC.		
Emporia, KS	10,000,000	166
CARGILL, INC.		
Ackley, IA	190,000,000	3,166
Bloomington, IL	6,750,000	112
Cedar Rapids, IA	3,840,000	64
Cedar Rapids, IA	9,300,000	155
Iowa Falls, IA	20,000,000	233
Kansas City, MO	10,364,000	172
Lafayette, IN	10,364,000	172
Creve Coeur, IL	50,000,000	833
Camanche, IA	44,500,000	498
CHS INC. (Harvest States Oilseed Processing and Refining division)		
Mankato, MN	14,600,000	243
INCOBRASA INDUSTRIES, LLC		
Gilman, IL	23,000,000	383
LOUIS DREYFUS COMPANY CLAYPOOL HOLDINGS LLC		
Claypool, IN	30,000,000	370
MINNESOTA SOYBEAN PROCESSORS		
Brewster, MN	88,800,000	1480
SHELL ROCK SOY PROCESSING LLC		
Shell Rock, IA	15,000,000	250
SOLAE LLC		
Gibson City, IL	45,600,000	760
SOUTH DAKOTA SOYBEAN PROCESSORS, LLC		
Volga, SD	97,200,000	1,620
ZEELAND FARM SERVICES, INC.		
Portage, IN	21,000,000	350

As of March 2024, the CBOT Soybean Oil Futures contract has over 1.469 billion pounds of approved regular storage capacity and firms may deliver up to 23,353 warehouse receipts.

Deliverable Supply:

The U.S. Census Bureau collected and the USDA published monthly soybean oil production estimates for the U.S. until September 2011 when the *Oilseed Crushings* report was discontinued. The National Oilseed

Processors Association (“NOPA”) continues to publish monthly soybean oil production and storage for its member firms. A list of processing plants included in the NOPA statistical crush report may be viewed here:

<http://www.nopa.org/oilseed-processing/nopa-plant-locations/>

Information regarding the NOPA monthly statistical crush report may be viewed here:

<https://www.refinitiv.com/en/financial-data/indices/commodity-indices/nopa-crush-report>

NOPA reports soybean oil production and stocks for 63 processing plants. Of these 63 plants, 28 of them are regular for delivering against the Soybean Oil Futures contract. Additionally, there are 7 plants that are regular for futures delivery but not part of the NOPA statistical crush report.

NOPA production and stocks reports are broken down into the following six regions:

- Illinois
- Pennsylvania, Indiana, Kentucky, Ohio, Michigan
- Southeast
- Southwest
- Iowa
- Minnesota, North Dakota, South Dakota, Montana

NOPA Territory	Number of NOPA Reporting Plants	Number of NOPA Plants that are Regular for Delivery	Percentage of NOPA Plants that are Regular for Delivery
Illinois	7	4	57.14%
Pennsylvania, Indiana, Kentucky, Ohio, Michigan	14	4	28.57%
Southeast	10	0	0.00%
Southwest	11	5	45.45%
Iowa	14	11	78.57%
Minnesota, North Dakota, South Dakota, Montana	7	4	57.14%
TOTAL	63	28	44.00%

Deliverable supply is estimated based on NOPA reported soybean oil stocks in each of their territories during the month prior to each futures contract delivery. These values are then weighted by the percentage

of NOPA member processing plants that are also regular for delivery against the Soybean Oil Futures contract to estimate futures deliverable supply.⁴

JANUARY (Dec. Stocks)			
NOPA Territory	NOPA Stocks (1,000 lbs)	Weighting	Estimated Deliverable Supply (1,000 lbs)
Dec-21			
Illinois	274,164	57%	156,665
PA, IN, KY, OH, MI	461,305	29%	131,801
Southeast	167,726	0%	0
Southwest	456,599	45%	207,545
Iowa	545,676	79%	428,745
MN, ND, SD, MT	125,942	57%	71,967
ESTIMATED			996,724
DELIVERABLE			
SUPPLY 2022		Contracts	16,612
Dec-22			
Illinois	251,089	57%	143,479
PA, IN, KY, OH, MI	327,579	29%	93,594
Southeast	169,470	0%	0
Southwest	360,343	45%	163,792

⁴ The crushing capacity of plants is proprietary data. In aggregate, however, as of March 2024, regular firms had a 30-day crushing capacity of 95,745,330 bushels of soybeans. Without knowing the crushing capacity of NOPA members that are not also regular for delivery against the Soybean Oil Futures contract, total NOPA crush capacity has to be estimated. From January 2021 to current, the maximum NOPA crush was during December 2023 when NOPA member firms crushed 195,328,000 bushels of soybeans. Assuming this maximum NOPA crush is near 100 percent of NOPA capacity, Soybean oil regular firms have crushing capacity that is 49 percent of NOPA capacity despite being only 28/63 = 44 percent of NOPA member firms, which suggests plants regular for delivery against the Soybean Oil Futures contract are, on average, larger than the average NOPA reporting plant. The current deliverable supply estimate based on regular firms that are also NOPA members uses 44 percent of NOPA reported stocks (i.e., the estimate does not include the 7 regular firms that are not NOPA members). Thus, the deliverable supply estimate is a very conservative estimate.

Iowa	530,329	79%	416,687
MN, ND, SD, MT	151,760	57%	86,720
ESTIMATED			904,273
DELIVERABLE			
SUPPLY 2023		Contracts	15,071
Dec-23			
Illinois	172,999	57%	98,857
PA, IN, KY, OH, MI	265,005	29%	75,716
Southeast	175,338	0%	0
Southwest	359,690	45%	163,495
Iowa	252,588	79%	198,462
MN, ND, SD, MT	134,350	57%	76,771
ESTIMATED			613,301
DELIVERABLE			
SUPPLY 2024		Contracts	10,222
ESTIMATED			838,099
DELIVERABLE			
SUPPLY 2022-2024		Contracts	13,968

MARCH (Feb. Stocks)			
NOPA Territory	NOPA Stocks (1,000 lbs)	Weighting	Estimated Deliverable Supply (1,000 lbs)
Feb-22			
Illinois	299,147	57%	170,941

PA, IN, KY, OH, MI	455,272	29%	130,078
Southeast	132,435	0%	0
Southwest	452,907	45%	205,867
Iowa	576,904	79%	453,282
MN, ND, SD, MT	142,668	57%	81,525
ESTIMATED			1,041,692
DELIVERABLE			
SUPPLY 2022		Contracts	17,362
Feb-23			
Illinois	263,437	57%	150,535
PA, IN, KY, OH, MI	353,872	29%	101,106
Southeast	180,220	0%	0
Southwest	321,892	45%	146,315
Iowa	555,974	79%	436,837
MN, ND, SD, MT	133,421	57%	76,241
ESTIMATED			911,034
DELIVERABLE			
SUPPLY 2023		Contracts	15,184
Feb-24			
Illinois	203,082	57%	116,047
PA, IN, KY, OH, MI	334,276	29%	95,507
Southeast	184,466	0%	0
Southwest	371,221	45%	168,737
Iowa	426,982	79%	335,486
MN, ND, SD, MT	169,814	57%	97,037
ESTIMATED			812,814
DELIVERABLE			

SUPPLY 2020		Contracts	13,547
ESTIMATED			921,846
DELIVERABLE			
SUPPLY 2022-2024		Contracts	15,364

MAY (Apr. Stocks)			
NOPA Territory	NOPA Stocks (1,000 lbs)	Weighting	Estimated Deliverable Supply (1,000 lbs)
Apr-21			
Illinois	271,536	57%	155,163
PA, IN, KY, OH, MI	339,274	29%	96,935
Southeast	147,191	0%	0
Southwest	295,848	45%	134,476
Iowa	501,480	79%	394,020
MN, ND, SD, MT	146,936	57%	83,963
ESTIMATED			864,559
DELIVERABLE			
SUPPLY 2021		Contracts	14,409
Apr-22			
Illinois	265,080	57%	151,474
PA, IN, KY, OH, MI	416,853	29%	119,101
Southeast	121,517	0%	0
Southwest	351,627	45%	159,830

Iowa	538,741	79%	423,297
MN, ND, SD, MT	120,381	57%	68,789
ESTIMATED			922,491
DELIVERABLE			
SUPPLY 2022		Contracts	15,375
Apr-23			
Illinois	275,835	57%	157,620
PA, IN, KY, OH, MI	402,230	29%	114,923
Southeast	184,717	0%	0
Southwest	400,876	45%	182,216
Iowa	550,885	79%	432,838
MN, ND, SD, MT	142,501	57%	81,429
ESTIMATED			969,027
DELIVERABLE			
SUPPLY 2023		Contracts	16,150
ESTIMATED			918,692
DELIVERABLE			
SUPPLY 2021-2023		Contracts	15,312

JULY (Jun. Stocks)			
NOPA Territory	NOPA Stocks (1,000 lbs)	Weighting	Estimated Deliverable Supply (1,000 lbs)
Jun-21			
Illinois	242,585	57%	138,620

PA, IN, KY, OH, MI	322,810	29%	92,231
Southeast	145,706	0%	0
Southwest	234,529	45%	106,604
Iowa	495,034	79%	388,955
MN, ND, SD, MT	96,621	57%	55,212
ESTIMATED			781,623
DELIVERABLE			
SUPPLY 2021		Contracts	13,027
Jun-22			
Illinois	259,508	57%	148,290
PA, IN, KY, OH, MI	357,731	29%	102,209
Southeast	156,829	0%	0
Southwest	333,074	45%	151,397
Iowa	514,737	79%	404,436
MN, ND, SD, MT	144,953	57%	82,830
ESTIMATED			889,163
DELIVERABLE			
SUPPLY 2022		Contracts	14,819
Jun-23			
Illinois	287,149	57%	164,085
PA, IN, KY, OH, MI	328,442	29%	93,841
Southeast	170,633	0%	0
Southwest	319,078	45%	145,035
Iowa	464,788	79%	365,191
MN, ND, SD, MT	119,811	57%	68,463
ESTIMATED			836,615
DELIVERABLE			

SUPPLY 2023		Contracts	13,944
ESTIMATED			835,800
DELIVERABLE			
SUPPLY 2021-2023		Contracts	13,930

AUGUST (Jul. Stocks)			
NOPA Territory	NOPA Stocks (1,000 lbs)	Weighting	Estimated Deliverable Supply (1,000 lbs)
Jul-21			
Illinois	240,431	57%	137,389
PA, IN, KY, OH, MI	289,515	29%	82,719
Southeast	194,914	0%	0
Southwest	297,692	45%	135,315
Iowa	503,281	79%	395,435
MN, ND, SD, MT	90,970	57%	51,983
ESTIMATED			802,840
DELIVERABLE			
SUPPLY 2021		Contracts	13,381
Jul-22			
Illinois	280,146	57%	160,083
PA, IN, KY, OH, MI	344,945	29%	98,556
Southeast	126,057	0%	0
Southwest	286,581	45%	130,264

Iowa	477,102	79%	374,866
MN, ND, SD, MT	168,753	57%	96,430
ESTIMATED			860,199
DELIVERABLE			
SUPPLY 2022		Contracts	14,337
Jul-23			
Illinois	276,003	57%	157,716
PA, IN, KY, OH, MI	282,313	29%	80,661
Southeast	190,936	0%	0
Southwest	287,489	45%	130,677
Iowa	377,427	79%	296,550
MN, ND, SD, MT	112,824	57%	64,471
ESTIMATED			730,074
DELIVERABLE			
SUPPLY 2023		Contracts	12,168
ESTIMATED			797,705
DELIVERABLE			
SUPPLY 2021-2023		Contracts	13,295

SEPTEMBER (Aug. Stocks)			
NOPA Territory	NOPA Stocks (1,000 lbs)	Weighting	Estimated Deliverable Supply (1,000 lbs)
Aug-21			
Illinois	237,878	57%	135,930

PA, IN, KY, OH, MI	288,488	29%	82,425
Southeast	201,872	0%	0
Southwest	318,745	45%	144,884
Iowa	527,284	79%	414,295
MN, ND, SD, MT	93,560	57%	53,463
ESTIMATED			830,997
DELIVERABLE			
SUPPLY 2021		Contracts	13,850
Aug-22			
Illinois	218,304	57%	124,745
PA, IN, KY, OH, MI	279,666	29%	79,905
Southeast	139,895	0%	0
Southwest	311,266	45%	141,485
Iowa	487,853	79%	383,313
MN, ND, SD, MT	127,745	57%	72,997
ESTIMATED			802,444
DELIVERABLE			
SUPPLY 2022		Contracts	13,374
Aug-23			
Illinois	212,994	57%	121,711
PA, IN, KY, OH, MI	224,807	29%	64,231
Southeast	165,042	0%	0
Southwest	301,007	45%	136,821
Iowa	245,695	79%	193,046
MN, ND, SD, MT	100,217	57%	57,267
ESTIMATED			573,076
DELIVERABLE			

SUPPLY 2023		Contracts	9,551
ESTIMATED			735,506
DELIVERABLE			
SUPPLY 2021-2023		Contracts	12,258

OCTOBER (Sep. Stocks)			
NOPA Territory	NOPA Stocks (1,000 lbs)	Weighting	Estimated Deliverable Supply (1,000 lbs)
Sep-21			
Illinois	248,547	57%	142,027
PA, IN, KY, OH, MI	318,808	29%	91,088
Southeast	187,475	0%	0
Southwest	365,371	45%	166,078
Iowa	486,707	79%	382,413
MN, ND, SD, MT	77,239	57%	44,137
ESTIMATED			825,742
DELIVERABLE			
SUPPLY 2021		Contracts	13,762
Sep-22			
Illinois	166,735	57%	95,277
PA, IN, KY, OH, MI	251,280	29%	71,794
Southeast	120,242	0%	0
Southwest	309,102	45%	140,501

Iowa	477,243	79%	374,977
MN, ND, SD, MT	134,657	57%	76,947
ESTIMATED			759,496
DELIVERABLE			
SUPPLY 2022		Contracts	12,658
Sep-23			
Illinois	169,038	57%	96,593
PA, IN, KY, OH, MI	199,127	29%	56,893
Southeast	172,161	0%	0
Southwest	250,302	45%	113,774
Iowa	201,248	79%	158,123
MN, ND, SD, MT	115,762	57%	66,150
ESTIMATED			491,533
DELIVERABLE			
SUPPLY 2023		Contracts	8,192
ESTIMATED			692,257
DELIVERABLE			
SUPPLY 2021-2023		Contracts	11,538

DECEMBER (Nov. Stocks)			
NOPA Territory	NOPA Stocks (1,000 lbs)	Weighting	Estimated Deliverable Supply (1,000 lbs)
Nov-21			
Illinois	277,110	57%	158,349

PA, IN, KY, OH, MI	404,405	29%	115,544
Southeast	180,053	0%	0
Southwest	334,493	45%	152,042
Iowa	542,779	79%	426,469
MN, ND, SD, MT	93,359	57%	53,348
ESTIMATED			905,752
DELIVERABLE			
SUPPLY 2021		Contracts	15,096
Nov-22			
Illinois	201,156	57%	114,946
PA, IN, KY, OH, MI	274,914	29%	78,547
Southeast	172,317	0%	0
Southwest	349,689	45%	158,950
Iowa	481,827	79%	378,578
MN, ND, SD, MT	150,299	57%	85,885
ESTIMATED			816,906
DELIVERABLE			
SUPPLY 2022		Contracts	13,615
Nov-23			
Illinois	124,552	57%	71,173
PA, IN, KY, OH, MI	229,370	29%	65,534
Southeast	159,975	0%	0
Southwest	337,413	45%	153,370
Iowa	211,442	79%	166,133
MN, ND, SD, MT	150,758	57%	86,147
ESTIMATED			542,357
DELIVERABLE			

SUPPLY 2023		Contracts	9,039
ESTIMATED			755,005
DELIVERABLE			
SUPPLY 2021-2023		Contracts	12,583

Seasonality:

CBOT evaluates seasonality on the deliverable supply across all Soybean Oil Futures contract months. To the extent that 25 percent of any contract month’s future estimated deliverable supply falls below the current spot month limit, CBOT will evaluate whether there is a need to adjust the spot-month position limit for that corresponding contract month.

Long Term Contracts:

Data regarding soybean oil under long-term contracts or agreements that are not be deliverable on futures is not readily available and have not be counted in deliverable supply estimates. The Exchange obtained feedback from warehousemen which suggests that such long-term agreements should not impact deliverable soybean oil stocks should these agreements become economically beneficial to deliver against the CBOT futures contract.

ANALYSIS OF DELIVERABLE SUPPLY

Most NOPA member soybean oil stocks data would meet CBOT Soybean Oil Futures contract specifications. NOPA does not distinguish among quality attributes in its monthly statistics. Thus, CBOT does not account for stocks that may not meet CBOT quality specifications. However, this is likely a very conservative estimate because, although stocks not meeting specifications are not subtracted, none of the significant stocks produced and/or stored at plants and storage facilities regular for delivery against the Soybean Oil Futures contract that are not NOPA member processing plants are included.

Based on the above analysis, the CBOT estimates the monthly deliverable supply over the past 3 years to be over 811 million pounds or **13,531** contract equivalents (contract size: 60,000 pounds). The current spot month limit of 1,100 represents **8.13%** of this estimated monthly deliverable supply.

NEW YORK MERCANTILE EXCHANGE, INC.

ANALYSIS OF

DELIVERABLE SUPPLY

NY HARBOR ULSD FUTURES

March 2024

In estimating deliverable supply for the NY Harbor ULSD Futures contract, New York Mercantile Exchange, Inc. (“NYMEX” or “Exchange”) relied on long-standing precedent, which provides that the key component in estimating deliverable supply is the portion of typical production and supply stocks that could reasonably be considered to be readily available for delivery. In its guidance on estimating

deliverable supply, the Commodity Futures Trading Commission (“CFTC” or “Commission”) states:

In general, the term “deliverable supply” means the quantity of the commodity meeting a derivative contract’s delivery specifications that can reasonably be expected to be readily available to short traders and saleable by long traders at its market value in normal cash marketing channels at the derivative contract’s delivery points during the specified delivery period, barring abnormal movement in interstate commerce. Typically, deliverable supply reflects the quantity of the commodity that potentially could be made available for sale on a spot basis at current prices at the contract’s delivery points. For a non-financial physical-delivery commodity contract, this estimate might represent product which is in storage at the delivery point(s) specified in the futures contract or can be moved economically into or through such points consistent with the delivery procedures set forth in the contract and which is available for sale on a spot basis within the marketing channels that normally are tributary to the delivery point(s).⁵

I. Methodology and Data Sources

The Exchange considered four components in evaluating deliverable supply estimates of Ultra Low Sulfur Diesel (“ULSD”) for the New York Harbor delivery location of the NY Harbor ULSD Futures contract:

- A. ULSD production at Bayway Refinery;
- B. ULSD deliveries to the NY Harbor on Colonial Pipeline;
- C. ULSD storage levels in the delivery area; and
- D. ULSD imports and exports into the delivery area.

For production, storage and import/exports, the Exchange determined to use data collected by the United States Department of Energy (“DOE”) Energy Information Administration (“EIA”) for its analysis and evaluation of deliverable supply estimates for ULSD in the New York Harbor. The EIA provides detailed data on the key components of deliverable supply. The EIA provides such data on a monthly and annual basis. Where EIA data was not available, the Exchange also incorporated data from the United States International Trade Commission (“USITC”), and from industry sources.

II. Introduction

ULSD is a distillate fuel that has a dual-use as a heating oil and as a transportation fuel. As of December 1, 2010, all on-highway diesel fuel consumed in the U.S. is ULSD as mandated by federal regulations.⁶ Unlike diesel fuel used in transportation, heating oil has no federal sulfur content restrictions. However, various state initiatives to apply comparable sulfur limits to heating oil are in planning or implementation stages in the Northeast, the main heating oil consuming region.

According to the EIA, New England and the Central Atlantic Coast of the United States (collectively known as the “Northeast” for data purposes) are the main consumers of heating oil, typically accounting for 80% of the sales.⁷ As of July 1, 2012, New York State mandated that all heating oil sold for residential, commercial and industrial heating applications within the State contain no more than

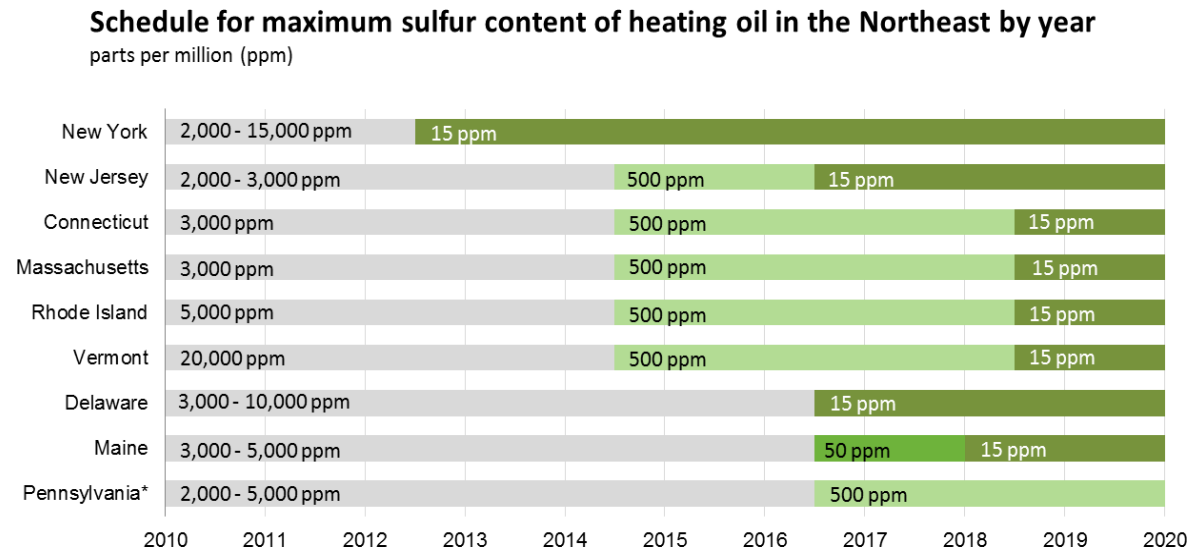
⁵ http://www.ecfr.gov/cgi-bin/text-idx?SID=74959c3dbae469e2efe0a42b45b8dfae&mc=true&node=ap17.1.38_11201.c&rgn=div9

⁶ <https://www.federalregister.gov/documents/2005/11/22/05-22807/control-of-air-pollution-from-new-motor-vehicles-revisions-to-motor-vehicle-diesel-fuel-sulfur>

⁷ <https://www.eia.gov/todayinenergy/detail.php?id=4070#:~:text=Over%2080%25%20of%20homes%20that,oil%20were%20built%20before%201950.>

15 parts per million (“ppm”) of sulfur. Following New York’s path, Delaware and New Jersey transitioned to 15ppm sulfur content in 2016. As of July 1, 2018, Connecticut, Maine, Massachusetts, Rhode Island and Vermont transitioned to ULSD for heating purposes.⁸ Figure 1 below is a summary of the specification changes to heating oil by state.

Figure 1 - Heating Oil Sulfur Specification Changes per State⁹



⁸ <https://www.eia.gov/energyexplained/heating-oil/#:~:text=In%202012%2C%20New%20York%20became,ULSHO%20on%20July%201%2C%202018.>

⁹ http://www.eia.gov/forecasts/steo/special/winter/2014_winter_fuels.pdf

The NY Harbor ULSD Futures contract is the main benchmark used for pricing the distillate products market, which includes diesel fuel, heating oil, and jet fuel. The Exchange has amended the grade and quality specifications in response to changes in environmental regulations in the Northeast, requiring cleaner, lower sulfur diesel standards for heating oil. Effective beginning with the May 2013 delivery month, the NY Harbor ULSD Futures contract required delivery of on-road ULSD with a maximum of 15ppm sulfur content.¹⁰

After transitioning to lower sulfur grade in May 2013, the NY Harbor ULSD Futures contract serves as a dual-use contract that is a price reference and hedging instrument for both the heating oil and on-road diesel markets. The heating oil pool will eventually be fully integrated into the ULSD market and the widespread adoption of a 15ppm sulfur content limit for heating oil is likely to encourage the development of a seamless ULSD distillate market throughout the entire East Coast, according to the EIA.

New York Harbor Delivery Region

New England and the Central Atlantic Coast of the United States, collectively defined by the EIA as the “Northeast,” is a well-connected and integrated geographical region in terms of oil and products infrastructure. The region is part of the larger Petroleum Administration for Defense District (“PADD”) system, specifically PADD 1.¹¹

Located in both New York and New Jersey, the New York Harbor area is the largest oil importing and second largest container port in the nation and is the main oil and refined products pricing and trading hub. Petroleum products in New York Harbor are supplied by refineries located in New Jersey, Delaware and Pennsylvania, all located within 100 miles of the New York Harbor area. East Coast refineries, a majority of which are located in New Jersey and Philadelphia, send products by local pipelines into New York Harbor.

Among the refineries serving the NY Harbor area, Bayway refinery is the largest supplier of ULSD. Located on the New York Harbor in Linden, New Jersey, the Phillips-66-owned refinery processes mainly light, low-sulfur crude oil. Bayway's refining units include fluid catalytic cracking (“FCC”), hydrodesulfurization units, a naphtha reformer, an alkylation unit and other processing equipment. The refinery's total crude capacity is 258,000 barrels per day (b/d), while its ULSD capacity is 108,000-115,000 b/d.¹²

Colonial Pipeline is the largest refined products pipeline in the U.S. and a key products supply link for the Northeast. The pipeline connects the Northeast to refinery output from the US Gulf Coast and foreign imports, principally from Canada, Virgin Islands, Caribbean and Europe. Colonial Pipeline's network of pipelines crosses 14 states, serving more than 260 marketing terminals in the Southern and Eastern U.S.. The pipeline provides a link from the U.S. Gulf Coast to the New York Harbor area through the south and across the Eastern seaboard. It generally takes approximately 14 to 24 days for a product batch on Colonial Pipeline to get from Houston, Texas to the New York Harbor, with an average of 18.5 days. The Philadelphia-area refineries are strategically located along Colonial Pipeline.

In 2011, Colonial Pipeline expanded the northern end of its Houston-to-New York system, adding 100,000 barrels per day (b/d) of capacity. In addition, the company completed a series of system upgrades leading to more than 100,000 b/d of capacity for distillates specifically serving the New Jersey, Pennsylvania, and New York markets. Also, Colonial Pipeline added an additional 100,000 b/d of gasoline and distillates capacity in early 2013 to meet demand in on the northern portion of the

¹⁰ <https://www.eia.gov/todayinenergy/detail.php?id=11211>

¹¹ <http://www.eia.gov/analysis/petroleum/nerefining/prelim/>

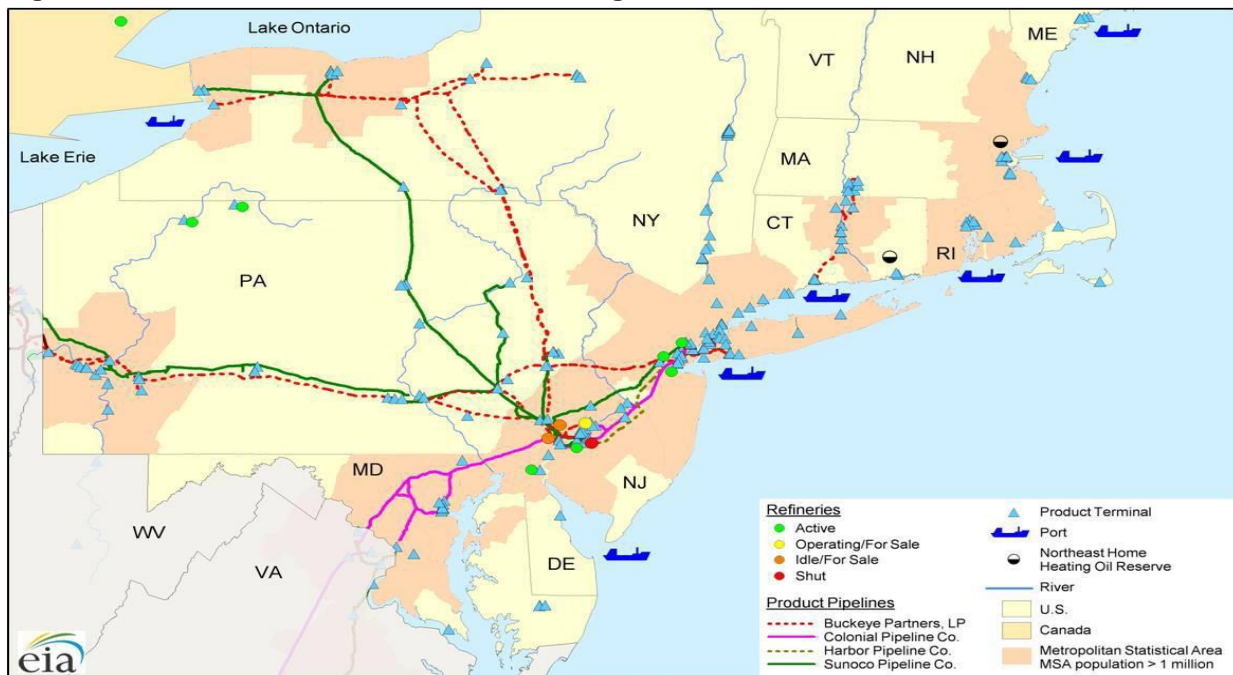
¹² <http://www.phillips66.com/EN/about/our-businesses/refining/Pages/Bayway-Refinery.aspx>

line (Greensboro, NC to Linden, NJ).¹³

The Harbor Pipeline is an approximately 80-mile 171,000 b/d refined product common carrier pipeline originating near Woodbury, New Jersey and terminating in Linden, New Jersey. It is majority-owned and operated by Sunoco.¹⁴

Many of the petroleum products delivered to New York Harbor are redistributed to smaller ports where they supply local demand. In particular, the Hudson River, which meets the Atlantic Ocean in New York Harbor, provides a major inland water route for petroleum product barges supplying eastern New York and parts of western New England. Significant volumes are shipped to New England via barge from New York Harbor. On the other side of the state, western New York product markets are primarily supplied from Canada at the Port of Buffalo, and via the Buckeye and Sunoco Logistics pipeline systems from Pennsylvania and the Midwest.¹⁵ Figure 2 below illustrates the logistics of refining and products transportation in the Northeast.

Figure 2. Northeast Refined Products Market Logistics¹⁶



As of January 1, 2023, there were 129 operable refineries, in which 124 were operating in the U.S. with total atmospheric crude oil distillation capacity of 18.1 million barrels per calendar day.¹⁷ On the East Coast (PADD 1), there are seven operable refineries with 878 thousand b/d of atmospheric crude distillation capacity. The region has 310,000 b/d of FCC capacity. PADD 1 includes all states in New England, the Mid-Atlantic, and the South Atlantic and is subdivided into 3 sub-PADDs.

- PADD 1A – New Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut
- PADD 1B – New York, Pennsylvania, New Jersey, Delaware, Maryland, District of Columbia
- PADD 1C - West Virginia, Virginia, North Carolina, South Carolina, Georgia, Florida

¹³ <https://www.colpipe.com/news/press-releases/colonial-2013-capacity-expansions-progressing-well>
¹⁴ <https://investor.phillips66.com/financial-information/sec-filings/sec-filings-details/default.aspx?filingid=11867386>
¹⁵ <https://www.eia.gov/state/print.php?sid=NY>
¹⁶ <http://www.eia.gov/analysis/petroleum/nerefining/update/pdf/neprodmkts.pdf>
¹⁷ http://www.eia.gov/dnav/pet/pet_pnp_cap1_dcu_nus_a.htm

Supply dynamics for each of the 3 sub-PADDs vary. PADD 1A, New England, has no refineries and relies on imports and transfers from other PADDs, primarily PADD 1B. PADD 1C, the South Atlantic, also has no operating refineries and relies primarily on pipeline transfers and marine shipments from PADD 3 and imports. PADD 1B is supplied by a combination of in-region refineries, transfers from other PADDs—primarily from PADD 3—and imports.¹⁸

The majority of PADD 1B refineries are located in New Jersey, Delaware and Pennsylvania, and within 100 miles of the New York Harbor area. These refineries are directly connected to the New York Harbor market by local pipelines and/or waterborne barges. A list of Northeast refineries is provided in Table 1.

Table 1 – Mid-Atlantic (PADD 1B) Refineries¹⁹

Name	State	Owner	Capacity	Status
Delaware City Refining Co LLC	Delaware City, DE	PBF Energy Co LLC	171,100 b/d	Operational
Paulsboro Refining Co LLC	Paulsboro, NJ	PBF Energy Co LLC	160,000 b/d	Operational
Phillips 66 Company	Linden, NJ	Phillips 66 Company	258,500 b/d	Operational
American Refining Group Inc	Bradford, PA	American Refining Group Inc	11,000 b/d	Operational
United Refining Co	Warren, PA	Red Apple Group Inc	65,000 b/d	Operational
Monroe Energy LLC	Trainer, PA	Delta Airlines Inc	190,000 b/d	Operational

III. Deliverable Supply Estimates

A. ULSD Production

According to EIA’s “Refinery Capacity by Individual Refinery” data²⁰ as well as data reported by Phillips-66,²¹ the total distillate fuel capacity at the Bayway refinery is approximately 108,000-130,000 b/d. Industry interviews indicate that almost all of Bayway’s distillate fuel capacity is used for ULSD production. In estimating ULSD production at the Bayway refinery, the Exchange adjusted the capacity figure downward due to seasonal factors, to 108,000 barrels per day. Further, EIA provides operable refinery utilization rates for the “East Coast” area of PADD 1, which is an accurate representation of the utilization rate for the Bayway refinery. EIA’s operable utilization rates represent the utilization of the atmospheric crude oil distillation units and are calculated by dividing the gross input to these units by the operable calendar day refining capacity of the units. Accordingly, the EIA refinery utilization rate is 86.4% utilization for the 3-year period of 2021 through 2023²² (83.6%, 92.7% and 83.0% respectively). Finally, according to industry sources at Phillips-66, it was explained that approximately 10,000 barrels per day of ULSD production are committed to long-term customers. Therefore, after

¹⁸ http://www.eia.gov/petroleum/refinery/outage/pdf/refinery_outage.pdf

¹⁹ <https://www.eia.gov/petroleum/refinerycapacity/table5.pdf>

²⁰ Refinery Capacity by Individual Refinery Data: <https://www.eia.gov/petroleum/refinerycapacity/refcap23.xls> under the category “desulfurization, diesel fuel”

²¹ <http://www.phillips66.com/EN/about/our-businesses/refining/Pages/Bayway-Refinery.aspx>

²² http://www.eia.gov/dnav/pet/pet_pnp_unc_dcu_rec_a.htm

accounting for long-term commitments, the net ULSD production at Bayway Refinery is estimated at 83,312 b/d, or approximately 2.50 million barrels per month.

Table 2. Bayway Refinery Production

ULSD Capacity (b/d)	Capacity Utilization (3-Year Average)	Net ULSD Production (b/d)	ULSD Production committed to Long-Term Contracts (b/d)	Net ULSD Production Barrels per Month
108,000	86.4%	93,312	10,000	2,499,360

B. ULSD Deliveries

The main pipeline supplying ULSD to the NY Harbor market is Colonial Pipeline. Data for precise ULSD flows are not publicly shared by pipeline operators, however the Exchange estimated these figures using a combination of publicly available EIA data and other industry sources.

To estimate the amount of ULSD on Colonial Pipeline, the Exchange previously utilized a 5-step approach based on the Federal Energy Regulatory Commission (“FERC”) surcharge data to estimate the numbers of barrels per month that were shipped north of Booth, Pennsylvania in the Philadelphia area. In addition to the FERC surcharge, this included data from Colonial Pipeline distillate fuel deliveries, PADD 1 receipts by pipeline, tanker, and barge from PADD 3, and EIA prime supplier sales volumes data from Pennsylvania.

Colonial Pipeline discontinued the FERC surcharge on ULSD as of January 1, 2017.²³ As a result, the Exchange employed a revised approach to calculate the amount of ULSD that reaches New York Harbor which is the end point of Colonial Pipeline.

The amount of ULSD that reaches the New York Harbor area on Colonial Pipeline can be estimated using data provided by the EIA and other publicly available data for the Northeast. For the purpose of this calculation the “Northeast” is defined as the states that make up PADD 1A (Connecticut, Massachusetts, Vermont, New Hampshire, Rhode Island, and Maine) plus New York, New Jersey and Pennsylvania, which are a large subset of PADD1B. As previously described and shown in Figure 2, this region of the U.S. is relatively independent, with regional demand being met by local refinery production, imports, and pipeline deliveries from PADD 2 at the Pennsylvania border, or from PADD 3 via Colonial Pipeline. As all the of the preceding supply/demand variables except pipeline deliveries from Colonial Pipeline are available directly or indirectly, the Exchange uses the following formula to calculate ULSD deliveries to the Northeast from Colonial Pipeline:

Colonial Pipeline Deliveries of ULSD = Northeast ULSD Demand + Northeast ULSD Exports + Northeast stock builds - Northeast ULSD Imports - Northeast ULSD Receipts from PADD 2.

The Exchange outlines the sources, and any adjustments and rationale for the above variables as shown below. The data and results are demonstrated in **Table 3**:

- **Northeast ULSD Demand:** Through March of 2022, the EIA provided Prime Suppliers Sales volumes of No. 2 Distillate Fuel Oil,²⁴ which includes on-road diesel plus home heating oil (also called “fuel oil”)²⁵ for each state. According to the EIA the Prime Suppliers report data measure

²³ https://colpipe.s3-us-west-1.amazonaws.com/media/Tariffs/Archived/ferc-98-29-0-transmittal-letter_190703_060304.pdf?mtime=20190702230304&focal=none

²⁴ https://www.eia.gov/dnav/pet/pet_cons_prim_a_EPD2_P00_Mgalpd_m.htm

²⁵ https://www.eia.gov/dnav/pet/TblDefs/pet_cons_prim_tbldef2.asp

primary petroleum product deliveries into the states where they are used for local marketing and consumption²⁶ and represent state-level demand data. For the 3 years ending March 2022, EIA's prime suppliers sales volumes of No. 2 Distillate Fuel Oil for the Northeast averaged 45% of their total PADD 1 Product Supplied of ULSD. Therefore, for the months after March 2022 through December 2023 when Prime Suppliers data ceased to be reported, the Exchange calculated Northeast No.2 Distillate Fuel Oil demand as 45% of the PADD 1 Product Supplied for each month.

Further, in the Prime Suppliers Sales data, the EIA does not provide comprehensive state-level data specific to the ultra-low-sulfur classification of No.2 Distillate Fuel Oil. However, the vast majority of diesel demand in the region is ULSD, consistent with the regulatory sulfur requirements outlined earlier. For PADD 1 in total, the EIA reports Product Supplied²⁷ of Distillate that is greater than 15ppm (not ULSD), and this averages less than 1% of total Distillate Product Supplied. However, to be conservative, the Exchange assumes all of this higher-sulfur diesel is in the Northeast and deduct the total PADD 1 Product Suppliers of Distillate greater than 15ppm from the Northeast ULSD demand estimate. Over the 3 years from January 2021 to December 2023, Northeast ULSD demand averaged 504,000 barrels per day.

- **Northeast ULSD Exports:** The United States Census Bureau, via the USITC²⁸, provides export detail by port of exit. USITC data for HTS-Code 271019 which is the code the EIA uses for Diesel Fuel,²⁹ from the Northeast ports is reported in both kilograms and barrels. The Exchange converted the kilograms to barrels using a conversion factor of 1 barrel = 136 kilograms.³⁰ Diesel exports from Northeast ports averaged 36,000 barrels per day. However as with demand, a portion of these exports may be higher sulfur. The Exchange also conservatively reduced the USITC export data for the Northeast by the EIA's total PADD 1 exports for Distillate Fuel oil greater than 15ppm, which averaged 7,000 barrels per day. Northeast exports of ULSD are estimated to have averaged 29,000 barrels per day from 2021 through 2023.
- **Northeast Stock Builds:** The EIA directly reports stock changes in PADDs 1A and 1B for Distillate Fuel Oil less than 15ppm, which over the 3-year period of January 2021 to December 2023 averaged to a small draw of 19,000 barrels per day.
- **Northeast Imports:** According to the EIA's Company-level Import dataset,³¹ imports of ULSD into port cities within the Northeast averaged 161,000 barrels per day for the 3-year period ending December 2023. This includes waterborne imports as well as any imports from Canada over land.
- **Northeast Receipts from PADD 2:** The EIA reports pipeline receipts of ULSD from PADD 2 to PADD 1, averaging 30,000 barrels per day over the 3-year period ending December 2023. Refined product pipelines from PADD 2 to PADD 1 only deliver into the Northeast region.³² These pipelines are also shown in Figure 2.

Considering the above factors, the remaining supply needed to balance Northeast ULSD supply and demand is calculated: pipeline deliveries into the Northeast via Colonial Pipeline, as outlined in Table 3. Based on the methodology described above, the average volume of ULSD delivered into the Northeast on Colonial Pipeline is 109,000 barrels per day, which is equivalent to 3.27 million barrels per month, over the January 2021 to December 2023 period.

²⁶ <https://www.eia.gov/petroleum/marketing/prime/#tabs-volumes-1>

²⁷ https://www.eia.gov/dnav/pet/pet_cons_psup_dc_r10_mbbldpd_m.htm

²⁸ <https://dataweb.usitc.gov/trade/search/TotExp/HTS>

²⁹ https://www.eia.gov/trilateral/content/documents/sp_energytrade_revised.pdf

³⁰

https://energyeducation.ca/encyclopedia/Barrels_of_oil_equivalent#:~:text=Since%20average%20domestic%20crude%20oil,pounds%20or%20about%20136%20kilograms

³¹ <https://www.eia.gov/petroleum/imports/companylevel/>

³² https://www.energy.gov/sites/default/files/2023-08/Pipeline%20Backgrounder_FINAL_508.pdf

Table 3. Northeast Supply/Demand Variables & Receipts of ULSD from Colonial Pipeline

(Thousand Barrels per Day)

	Northeast ULSD Demand	EIA Northeast Stock Build (Draw)	Northeast USITC Diesel Exports	Less EIA P1 Diesel Exports not ULSD	Total Demand	EIA P1b ULSD Production	EIA P1 Pipe from P2	Northeast ULSD Imports	Known Northeast Supply	Receipts on Colonial (Calc'd)
3-yr Average	504	-19	36	7	514	214	30	161	405	109
12/1/2023	568	211	11	1	789	252	37	206	495	294
11/1/2023	495	40	26	1	559	247	33	107	387	172
10/1/2023	481	(71)	11	1	420	200	40	72	312	108
9/1/2023	385	(4)	39	1	419	238	35	73	346	73
8/1/2023	431	25	48	9	495	244	30	91	365	130
7/1/2023	350	69	30	0	449	197	30	88	315	134
6/1/2023	408	(45)	43	0	406	203	24	96	323	83
5/1/2023	433	(16)	20	1	437	232	28	107	367	70
4/1/2023	485	42	9	3	534	250	25	129	404	129
3/1/2023	665	(228)	89	6	520	188	27	120	335	185
2/1/2023	642	68	41	1	750	214	28	254	497	254
1/1/2023	666	9	30	14	691	225	23	229	477	214
12/1/2022	529	91	24	5	639	236	35	176	447	192
11/1/2022	505	84	19	7	601	251	34	196	481	120
10/1/2022	449	33	18	3	498	226	33	82	340	157
9/1/2022	409	(47)	34	1	395	218	26	90	334	61
8/1/2022	357	18	42	1	416	229	25	98	352	63
7/1/2022	371	29	62	8	454	224	24	116	364	90
6/1/2022	412	65	50	5	521	230	30	70	331	191
5/1/2022	416	(0)	16	8	424	232	38	98	368	56
4/1/2022	526	(100)	17	3	440	191	46	84	321	120
3/1/2022	592	(175)	74	21	470	203	35	148	386	84
2/1/2022	680	(33)	36	0	684	213	38	347	598	86
1/1/2022	679	(212)	35	0	503	207	26	192	425	77
12/1/2021	632	(44)	66	28	627	225	33	201	459	168
11/1/2021	563	74	53	25	666	213	34	233	481	185
10/1/2021	488	33	25	9	538	175	27	218	420	118
9/1/2021	415	(75)	36	10	366	183	23	145	352	14
8/1/2021	392	105	42	22	517	190	28	170	388	130
7/1/2021	380	(51)	25	21	332	177	31	115	323	9
6/1/2021	405	58	44	10	497	205	23	187	414	83
5/1/2021	444	(77)	27	0	394	192	25	187	404	-10
4/1/2021	466	(128)	16	10	344	185	23	154	362	-18
3/1/2021	638	(115)	40	0	563	200	30	368	598	-34
2/1/2021	709	(204)	88	11	582	194	27	256	477	105
1/1/2021	681	(112)	5	0	574	209	24	311	545	29

C. Inventories of ULSD in the New York Harbor Market

New York Harbor has a petroleum bulk terminal storage capacity of over 75 million barrels, making it the largest petroleum product hub in the country. For the purposes of ULSD delivery in NY Harbor against the NYMEX NY Harbor ULSD Futures contract, the Exchange has 17 approved delivery terminals. Based on conversations with these facilities the total cumulative working tank capacity for ULSD at all Exchange-approved delivery terminals equals 18,278,750 barrels. Table 4 below details the list of facilities approved by the Exchange.

Table 4 – ULSD Facilities in NY Harbor

Name of Facility	Facility Code
PHILLIPS 66 - TREMLEY POINT	E78
INTERNATIONAL MATEX TANK TERMINAL (IMTT) - BAYONNE	E79
BUCKEYE PERTH AMBOY TERMINAL LLC	E80
BUCKEYE BRONX TERMINAL	E81
CITGO - LINDEN	E82
FEDERAL TERMINAL - ELIZABETH	E84
KINDER MORGAN - CARTERET	E85
KINDER MORGAN - CARTERET TRUCK RACK	E76
BUCKEYE PORT READING TERMINAL LLC	E86
SPRAGUE - BRONX SEC TERMINAL	E88
SHELL OIL PRODUCTS US - SEWAREN	E89
SHELL OIL PRODUCTS US - NEWARK	E83
ST TERMINAL - LINDEN	E91
BUCKEYE BAYONNE TERMINAL	E92
KINDER MORGAN - PERTH AMBOY	E94
BUCKEYE RARITAN BAY TERMINAL LLC	E96
PHILLIPS 66 - BAY WAY	E97

In addition to commercial stocks held in New York Harbor terminals, the Northeast Home Heating Oil Reserve (“NEHHOR”), which was established in 2000 to provide heating fuel supply security in the Northeast, has a 1 million barrel supply of ULSD. The ULSD is stored in 4 terminals in the NY Harbor area: Groton, Connecticut; Port Reading, New Jersey; and Chelsea and Revere, Massachusetts.

The 3-year average of ULSD stocks held in the Central Atlantic, or PADD 1B, region is approximately 14.32 million barrels (See Table 5). According to market participants, the New York Harbor area, which includes storage terminals in New York and New Jersey, accounts for 50% to 60% of the inventories reported in EIA’s PADD 1B statistics. Using a conservative estimate of 50% of PADD 1B inventories, the average stock level of ULSD is estimated to be approximately 7.16 million barrels in New York Harbor.

Table 5. Central Atlantic (PADD 1B) ULSD Stocks

Thousand Barrels (Annual Averages using Weekly Data)	PADD 1³³	PADD 1B³⁴ (Central Atlantic)
March 2021 – February 2022	36,959	18,332
March 2022 – February 2023	25,998	11,502
March 2023 – February 2024	27,240	13,134
Average	30,065	14,323

Based on estimates from industry experts, the Exchange determined that the operational minimum levels for storage tanks in the New York Harbor area are approximately 5% to 10%. Using the more conservative estimate of 10%, the Exchange estimates that approximately 716 thousand of the 7.16 million barrels of stored ULSD are used for operational purposes, leaving approximately 6.45 million barrels available for spot month delivery. While the majority of ULSD in storage is available in the spot market, the Exchange applied a 20% reduction on storage figures to account for long-term agreements to arrive at a final 5.16 million barrels per month figure.

D. Imports and Exports

The New York Harbor area is the largest oil import hub in the U.S. According to the EIA's import data by port of entry,³⁵ ULSD imports into the New York Harbor area (which encompasses New Jersey and New York ports) averaged 58,000 barrels per day for the 3-year period of January 2021 through December 2023. Further, ULSD exports from PADD 1 averaged 12,900 barrels per day for the same three 3-year period.³⁶ Based on conversations with industry experts, the Exchange estimates that approximately 30% of the exports figure represents the New York Harbor delivery area. Therefore, applying a 70% reduction to exports resulted in 3,900 b/d in the New York Harbor. As a result, the net imports figure for January 2021 - December 2023 was 54,100 barrels per day, or 1.62 million barrels per month.

³³ http://www.eia.gov/dnav/pet/hist/LeafHandler.ashx?n=PET&s=WD0ST_R10_1&f=W

³⁴ http://www.eia.gov/dnav/pet/hist/LeafHandler.ashx?n=PET&s=WD0ST_R1Y_1&f=W

³⁵ <http://www.eia.gov/petroleum/imports/companylevel/archive/>

³⁶ https://www.eia.gov/dnav/pet/pet_move_exp_dc_R10-Z00_mbbldpd_m.htm

ANALYSIS OF DELIVERABLE SUPPLY

Based on the above analysis, the Exchange determined at this time to base its estimates of deliverable supply on the sum of:

- A. *Bayway Refinery Production: 2.5 million barrels per month;*
- B. *ULSD Deliveries on Colonial Pipeline: 3.27 million barrels per month;*
- C. *ULSD Storage: 5.16 million barrels per month; and*
- D. *Net Imports: 1.62 million barrels per month.*

The Exchange estimates the monthly deliverable supply of ULSD to the New York Harbor to be approximately 12.55 million barrels, which is equivalent to **12,550** contracts per month (contract size 42,000 gallons or 1,000 barrels). Twenty-five percent of deliverable supply would result in a spot month position limit of 3,138 futures equivalent contracts. The Exchange and federal spot month position limit for the NY Harbor ULSD Futures contract is 2,000 contracts or **15.94%** of the estimated monthly deliverable supply.

Analysis of Spot Month Position Limits

The Soybean Oil – NY Harbor Heating Oil Spread Financial Future contract (the “Contract”) is an average price contract that is based on the spread between the settlement prices of the CBOT Soybean Oil Futures contract (CBOT Code: 07) and the NYMEX NY Harbor ULSD Futures contract (NYMEX Code: HO). The Soybean Oil Futures and the NY Harbor ULSD Futures contracts are referenced contracts.

The spot month position limit for the Contract of 200 contracts (200,000 barrels) is equivalent to 1.6% of the 12.55 million barrel deliverable supply for NY Harbor ULSD Futures.

The spot month position limit for the Contract of 200 contracts is approximately equal to 63 million pounds of soybean oil (200 x 42,000 gallons x 7.5) or 1,050 Soybean Oil Futures contracts (contract size: 60,000 pounds). The position limit for the Contract is equivalent to approximately 7.8% of the deliverable supply for soybean oil of 811 million pounds.

APPENDIX

1. PADD 1 and PADD 1B ULSD Stocks (in Thousand Barrels)

Year	Month	PADD 1¹	PADD 1B²
2021	Mar	42,600	22,334
	Apr	40,861	20,289
	May	34,134	16,209
	Jun	36,556	17,805
	Jul	37,073	17,893
	Aug	37,653	18,039
	Sep	37,159	19,579
	Oct	35,241	17,275
	Nov	36,613	17,474
	Dec	39,216	20,274
2022	Jan	35,704	17,796
	Feb	30,691	15,020
	Mar	27,452	11,850
	Apr	23,258	9,371
	May	19,446	7,814
	Jun	24,828	9,654
	Jul	25,173	11,358
	Aug	25,119	11,341
	Sep	25,259	11,068
	Oct	22,611	9,762
	Nov	24,049	10,333
	Dec	30,356	14,165
2023	Jan	30,349	14,570
	Feb	34,078	16,733
	Mar	30,368	14,986
	Apr	25,507	11,587

¹ EIA, Monthly averages using weekly data: http://www.eia.gov/dnav/pet/hist/LeafHandler.ashx?n=PET&s=WD0ST_R10_1&f=W

² EIA, Monthly averages using weekly data: http://www.eia.gov/dnav/pet/hist/LeafHandler.ashx?n=PET&s=WD0ST_R1Y_1&f=W

	May	24,838	11,091
	Jun	25,376	11,136
	Jul	27,060	12,716
	Aug	26,997	13,923
	Sep	27,097	14,336
	Oct	24,556	12,317
	Nov	24,007	10,826
	Dec	27,520	13,213
2024	Jan	32,453	15,808
	Feb	31,098	15,668