

SUBMISSION COVER SHEET

IMPORTANT: Check box if Confidential Treatment is requested

Registered Entity Identifier Code (optional): 21-228 (1 of 4)

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): 06/18/21 **Filing Description:** Initial Listing of Four (4) Financially-Settled Dutch TTF Natural Gas Futures and Option Contracts

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

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:

June 18, 2021

VIA ELECTRONIC PORTAL

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

Re: CFTC Regulation 40.2(a) Certification. Initial Listing of Four (4) Financially-Settled Dutch TTF Natural Gas Futures and Option Contracts. NYMEX Submission No. 21-228 (1 of 4)

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 three (3) financially-settled Dutch TTF futures and one (1) financially-settled Dutch TTF option contract (the “Contracts”) for trading on the CME Globex electronic trading platform and for submission for clearing via CME ClearPort effective Sunday, July 11, 2021, for trade date Monday, July 12, 2021, as noted in the tables below:

Contract Title	Dutch TTF Natural Gas Financial Calendar Month Futures
CME Globex/CME ClearPort Code	TTG
Rulebook Chapter	1013
Settlement Type	Financial
Contract Size	1 MW x 24 hours x # of calendar days in the contract month
Listing Schedule	Monthly contracts listed for the current year and the next 5 calendar years. List monthly contracts for a new calendar year following the termination of trading in the December contract of the current year.
Pricing Quotation	EUR/MWh
First Listed Month	August 2021
Minimum Price Fluctuation	€0.005 per MWh
Value per tick	€3.360 - €3.725
Block Trade Minimum Threshold	5 contracts – subject to a minimum 15-minute reporting window
Termination of Trading	Trading terminates at 17:00 London time on the second last London business day of the month prior to the contract month. If this is not a U.S. business day, trading terminates on the prior U.S. and London business day.
CME Globex Matching Algorithm	First in First Out (FIFO)

Contract Title	Dutch TTF Natural Gas Financial Day-Ahead/Weekend (ICIS Heren) Calendar Month Futures
CME Globex/CME ClearPort Code	TTI
Rulebook Chapter	1014
Settlement Type	Financial
Contract Size	1 MW x 24 hours x # of calendar days in the contract month

Listing Schedule	Monthly contracts listed for the current year and the next 5 calendar years. List monthly contracts for a new calendar year following the termination of trading in the December contract of the current year.
Pricing Quotation	EUR/MWh
First Listed Month	August 2021
Minimum Price Fluctuation	€0.005 per MWh
Value per tick	€3.360 - €3.725
Block Trade Minimum Threshold	5 contracts – subject to a minimum 15-minute reporting window
Termination of Trading	Trading terminates at 17:00 London time on the second last London business day of the month prior to the contract month. If this is not a U.S. business day, trading terminates on the prior U.S. and London business day.
CME Globex Matching Algorithm	First in First Out (FIFO)

Contract Title	Dutch TTF Natural Gas Financial (USD/MMBtu) (ICIS Heren) M-1 Average Price Calendar Month Futures
CME Globex/CME ClearPort Code	TTB
Rulebook Chapter	1015
Settlement Type	Financial
Contract Size	10,000 MMBtu
Listing Schedule	Monthly contracts listed for the current year and the next 5 calendar years. List monthly contracts for a new calendar year following the termination of trading in the December contract of the current year.
Pricing Quotation	U.S. dollars and cents per MMBtu
First Listed Month	August 2021
Minimum Price Fluctuation	\$0.001 per MMBtu
Value per tick	\$10
Block Trade Minimum Threshold	5 contracts – subject to a minimum 15-minute reporting window
Termination of Trading	Trading terminates at 17:00 London time on the second last London business day of the month prior to the contract month. If this is not a U.S. business day, trading terminates on the prior U.S. and London business day.
CME Globex Matching Algorithm	First in First Out (FIFO)

Contract Title	Dutch TTF Natural Gas Futures-Style Margined Financial Calendar Month Option
CME Globex/CME ClearPort Code	TTL
Rulebook Chapter	1016
Settlement Type	Financial
Contract Size	1 MW x 24 hours x # of calendar days in the contract month
Listing Schedule	Monthly contracts listed for 36 consecutive months. Add a new contract month after the nearby expiry.
Pricing Quotation	EUR/MWh
First Listed Month	August 2021
Minimum Price Fluctuation	€0.005 per MWh
Value per tick	€3.360 - €3.725
Block Trade Minimum Threshold	5 contracts – subject to a minimum 15-minute reporting window
Termination of Trading	Trading terminates on the 5th last day of the month prior to the contract month. If this is not both a U.S and London business day, trading terminates on the prior U.S. and London business day. If either of those days is also the termination of trading in the underlying futures, trading terminates on the prior U.S and London business day.
CME Globex Matching Algorithm	First in First Out (FIFO)
Underlying Futures Contract Title / Commodity Code	Dutch TTF Natural Gas Calendar Month Futures / TTF
Strike Price Increment	€0.005 per MWh
Strike Price Listing Rule	Minimum 20 strikes at €0.500 per MW strike increment above and below the at-the-money strike plus dynamic strikes at €0.005 per MW strike increment for the nearest 12 months. Minimum 10 strikes at €0.500 per MW strike increment

	above and below the at-the-money strike plus dynamic strikes at €0.005 per MW strike increment for months 13-24. Minimum at-the-money strike at €0.500 per MW strike increment plus dynamic strikes at €0.005 per MW strike increment for months 25-36.
Option Type	European Style
Margining Style	Futures-Style

Trading and Clearing Hours:

CME Globex	Sunday - Friday 6:00 p.m. - 5:00 p.m. Eastern Time/ET (5:00 p.m. - 4:00 p.m. Central Time/CT) with a 60-minute break each day beginning at 5:00 p.m. ET (4:00 p.m. CT)
CME Globex PreOpen	Sunday 5:00 p.m. – 6:00 p.m. ET (4:00 p.m. - 5:00 p.m. CT). Monday – Friday 5:45 p.m. – 6:00 p.m. ET (4:45 p.m. - 5:00 p.m. CT)
CME ClearPort	Sunday - Friday 6:00 p.m. - 5:00 p.m. ET (5:00 p.m. - 4:00 p.m. CT) with a 60-minute break each day beginning at 5:00 p.m. ET (4:00 p.m. CT)

The Exchange is also certifying block trading on the Contracts with a minimum block threshold of five (5) contracts which is commensurate with the Exchange’s existing TTF natural gas futures and option contracts listed on NYMEX.

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

- **Availability of General Information:** The Exchange will publish information on the Contracts’ specifications on its website, together with daily trading volume, open interest and price information.
- **Contracts Not Readily Subject to Manipulation:** The Contracts are based on cash price series that is reflective of the underlying cash market and is commonly relied on and used as a reference price by cash market brokers and commercial market participants.
- **Compliance with Rules:** Trading in these Contracts will be subject to Chapter 4 of the Exchange rules which includes prohibitions against fraudulent, non-competitive, unfair and abusive practices and will be subject to extensive monitoring and surveillance by CME Group’s Market Regulation Department. The Market Regulation Department may use its investigatory and enforcement power where potential rule violations are identified during its regular surveillance reviews.
- **Prevention of Market Disruption:** Trading in these Contracts will be subject to the Rules of NYMEX which include prohibitions on manipulation, price distortion, and disruption to the cash settlement process. As with any new product listed for trading on a CME Group designated contract market, trading activity in the Contracts proposed herein will be subject to monitoring and surveillance by CME Group’s Market Regulation Department.
- **Position Limitations or Accountability:** The speculative position limits for the Contracts as demonstrated in this submission are consistent with the Commission’s guidance.
- **Financial Integrity of Contracts:** The Contracts traded on the Exchange will be cleared by the CME Clearing House.
- **Execution of Transactions:** The Contracts will be listed for trading on the CME Globex electronic trading and for clearing through CME ClearPort. The CME Globex electronic trading venue provides

for competitive and open execution of transactions. CME Globex affords the benefits of reliability and global connectivity.

- **Trade Information**: All requisite trade information for the Contracts will be included in the audit trail and is sufficient for the Market Regulation Department to monitor for market abuse.
- **Protection of Market Participants**: Chapter 4 contains multiple prohibitions precluding intermediaries from disadvantaging their customers and which apply to trading on all of the Exchange's competitive trading venues.
- **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 Rulebook. Trading in the Contracts 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 this product are identified.
- **Dispute Resolution**: Disputes with respect to trading in the Contracts will be subject to the arbitration provisions set forth in Chapter 6 of the Rulebook. Chapter 6 allows all non-members 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 non-member is required to participate in the arbitration pursuant to Chapter 6. Additionally, the Exchange requires that members resolve all disputes concerning transactions on the Exchange via arbitration.
- **Daily Publication of Trading Information**: Trading volume, open interest and price information will be published daily on the Exchange's website and via quote vendors.

Pursuant to Section 5c(c) of the Act and CFTC Regulations 40.2(a), the Exchange certifies that the listing of the Contracts complies with the Act, including regulations under the Act. There were no substantive opposing views to this 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 (212) 299-2200 or via e-mail at CMEGSubmissionInquiry@cmegroup.com.

Sincerely,

/s/ Christopher Bowen
Managing Director and Chief Regulatory Counsel

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

Exhibit A

NYMEX Rulebook

Chapter 1013

Dutch TTF Natural Gas Financial Calendar Month Futures

1013100. 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.

1013101. CONTRACT SPECIFICATIONS

The Floating Price for each contract month is equal to the final settlement price of the Dutch TTF Natural Gas Calendar Month Futures on the last trading day of that contract month.

1013102. TRADING SPECIFICATIONS

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

1013102.A. Trading Schedule

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

1013102.B. Trading Units

The contract quantity shall be measured in MWh. The contract quantity shall be 1 MWh (megawatt-hour) per hour for each hour in the contract month. Each contract shall be valued as the contract quantity multiplied by the settlement price.

1013102.C. Price Increments

Prices shall be quoted in Euros per MWh. The minimum price fluctuation shall be €0.005 per MWh on CME Globex and CME ClearPort. There shall be no maximum price fluctuation. The minimum final settlement price fluctuation shall be €0.001 per MWh.

1013102.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.

1013102.E. Termination of Trading

In respect of a contract month, trading shall cease on the second London business day immediately preceding the first calendar day of the contract month, unless such day is not also a NYMEX business day, in which case trading shall cease on the first preceding NYMEX business day that is also a London business day. On the last trading day, trading shall terminate at 17:00 hours London prevailing time.

1013103. 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.

Chapter 1014

Dutch TTF Natural Gas Financial Day-Ahead/Weekend (ICIS Heren) Calendar Month Futures

1014100. 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.

1014101. CONTRACT SPECIFICATIONS

The Floating Price for each contract month will be equal to the arithmetic average of all midpoints between the published bid and offer quotations for the TTF Day-Ahead and Weekend contracts, as applicable, for each calendar day in the contract month as published by ICIS Heren in the European Spot Gas Market report.

For the avoidance of doubt, the calculated arithmetic average will take each period's exact number of hours into account.

1014102. TRADING SPECIFICATIONS

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

1014102.A. Trading Schedule

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

1014102.B. Trading Units

The contract quantity shall be measured in MWh. The contract quantity shall be 1 MWh (megawatt-hour) per hour for each hour in the contract month. Each contract shall be valued as the contract quantity multiplied by the settlement price.

1014102.C. Price Increments

Prices shall be quoted in Euros per MWh. The minimum price fluctuation shall be €0.005 per MWh on CME Globex and CME ClearPort. There shall be no maximum price fluctuation. The minimum final settlement price fluctuation shall be €0.001 per MWh.

1014102.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.

1014102.E. Termination of Trading

In respect of a contract month, trading shall cease on the second London business day immediately preceding the first calendar day of the contract month, unless such day is not also a NYMEX business day, in which case trading shall cease on the first preceding NYMEX business day that is also a London business day. On the last trading day, trading shall terminate at 17:00 hours London prevailing time.

1014103. FINAL SETTLEMENT

Final settlement under the contract shall be by cash settlement. Final settlement, following the publication of the last applicable ICIS Heren European Spot Gas Market Report, will be based on the Floating Price. The final settlement price will be the Floating Price calculated for each contract month.

1014104. DISCLAIMER

See [NYMEX/COMEX Chapter iv. \("DISCLAIMERS"\)](#) incorporated herein by reference.

Chapter 1015
Dutch TTF Natural Gas Financial (USD/MMBtu) (ICIS Heren) M-1 Average Price
Calendar Month Futures

1015100. 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.

1015101. CONTRACT SPECIFICATIONS

The Floating Price for each contract month is equal to the arithmetic average of all midpoints between the published bid and offer quotations for the TTF price assessment in US dollars per million British thermal units for the contract month, published by ICIS Heren in the European Spot Gas Market, for each publication day during the Settlement Period.

The Settlement Period for a specified contract month shall be the one month period that starts on, and includes, the last London business day of the month that is two months prior to the contract month, and ends on, and includes, the second last London business day of the month prior to the contract month.

For the avoidance of doubt, the calculated Floating Price will be rounded to three decimal places.

1015102. TRADING SPECIFICATIONS

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

1015102.A. Trading Schedule

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

1015102.B. Trading Units

The contract quantity shall be 10,000 MMBtu (million British thermal units). Each contract shall be valued as the contract quantity (10,000) multiplied by the settlement price.

1015102.C. Price Increments

Prices shall be quoted in U.S. dollars and cents per MMBtu. The minimum price fluctuation shall be \$0.001 per MMBtu. There shall be no maximum price fluctuation.

1015102.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.

1015102.E. Termination of Trading

In respect of a contract month, trading shall cease on the second London business day immediately preceding the first calendar day of the contract month, unless such day is not also a NYMEX business day, in which case trading shall cease on the first preceding NYMEX business day that is also a London business day. On the last trading day, trading shall terminate at 17:00 hours London prevailing time.

1015103. 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.

1015104. DISCLAIMER

See [NYMEX/COMEX Chapter iv. \("DISCLAIMERS"\)](#) incorporated herein by reference.

Chapter 1016

Dutch TTF Natural Gas Futures-Style Margined Financial Calendar Month Option

1016100. 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.

1016101. CONTRACT SPECIFICATIONS

The Floating Price for each contract month is equal to the exercise & assignment price for the Dutch TTF Natural Gas Futures-Style Margined Financial Calendar Month Option as observed at 13:00 hours London prevailing time on that option's expiry day.

1016102. TRADING SPECIFICATIONS

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

1016102.A. Trading Schedule

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

1016102.B. Trading Units

The contract quantity shall be measured in MWh. The contract quantity shall be 1 MWh (megawatt-hour) per hour for each hour in the contract month.

A Dutch TTF Natural Gas Futures-Style Margined Financial Calendar Month Call Option traded on the Exchange represents the differential between the Floating Price and the strike price, multiplied by the contract quantity, or zero, whichever is greater. A Dutch TTF Natural Gas Futures-Style Margined Financial Calendar Month Put Option traded on the Exchange represents the differential between the strike price and the Floating Price, multiplied by the contract quantity, or zero, whichever is greater.

1016102.C. Price Increments

Prices shall be quoted in Euros per MWh. The minimum price fluctuation shall be €0.005 per MWh on CME Globex and CME ClearPort. There shall be no maximum price fluctuation. The minimum final settlement price fluctuation shall be €0.001 per MWh.

1016102.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.

1016102.E. Termination of Trading

Trading terminates on the fifth calendar day immediately preceding the first calendar day of the Contract Month, unless such day is not both a NYMEX business day and a London business day, in which case trading terminates on the first preceding NYMEX business day that is a London business day. However, if that day is also the last trading day of the underlying Futures contract, trading shall terminate on the first preceding NYMEX business day that is a London business day. On the last trading day, trading terminates at 13:00 hours London prevailing time.

1016102.F. Type of Option

The option is a European-style option cash settled on expiration day.

1016101.G. Settlement Variation and Option Value

This contract is a future-style margin option. Settlement variation rules for futures-style margin options conform to those set forth for non-options stipulated in NYMEX Rule 814. As such, when a clearing member or its customers is long or short any amount of any commodity for a settlement cycle, as indicated by Clearing House records, settlement for any outstanding exposure shall be made with the Clearing House based on the settlement price for that settlement cycle. For futures-

style margin options, each clearing member and its customers shall pay to, or collect from, the Clearing House any loss or profit, as the case may be, represented by the difference between (x) the settlement price of the futures-style margin option for such settlement cycle and (y) the settlement price of the futures-style margin option for the prior settlement cycle (or, for the first settlement cycle after the purchase/sale of such option, the price at which the option was purchased or sold).

1016103.

EXERCISE PRICES

Transactions shall be conducted for option contracts as set forth in Rule 300.20.

Exhibit B

**NYMEX Rulebook
Chapter 5
("Trading Qualifications and Practices")**

Position Limits, Position Accountability and Reportable Level Table

(attached under separate cover)

Exhibit C

**NYMEX Rulebook
Chapter 5
("Trading Qualifications and Practices")
NYMEX 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>Dutch TTF Natural Gas Financial Calendar Month Futures</u>	<u>TTG</u>	<u>€1.00 per MWh</u>	<u>1000</u>	<u>200</u>	<u>Each leg evaluated as an outright</u>	
<u>Dutch TTF Natural Gas Financial Day-Ahead/Weekend (ICIS Heren) Calendar Month Futures</u>	<u>TTI</u>	<u>€1.00 per MWh</u>	<u>1000</u>	<u>200</u>	<u>Each leg evaluated as an outright</u>	
<u>Dutch TTF Natural Gas Financial (USD/MMBtu) (ICIS Heren) M-1 Average Price Calendar Month Futures</u>	<u>TTB</u>	<u>\$.10 per MMBtu</u>	<u>100</u>	<u>100</u>	<u>Each leg evaluated as an outright</u>	
Energy Options						
	Globex Symbol	Globex Non-Reviewable Ranges (NRR)				
<u>Dutch TTF Natural Gas Futures-Style Margined Financial Calendar Month Option</u>	<u>TTL</u>	<u>The greater of the following:</u> <ul style="list-style-type: none"> <u>•Delta multiplied by the underlying futures non-reviewable range</u> <u>•20% of premium up to ¼ of the underlying futures non-reviewable range</u> <u>•5 ticks</u> 				

Exhibit D
Exchange Fees

Dutch TTF Natural Gas Financial Calendar Month Futures

Dutch TTF Natural Gas Financial Day-Ahead/Weekend (ICIS Heren) Calendar Month Futures

	Member	Non-Member
CME Globex	\$1.35	\$1.50
EFP	\$1.35	\$1.50
Block	\$1.35	\$1.50
EFR/EOO	\$1.35	\$1.50
Processing Fees	Member	Non-Member
Cash Settlement	\$0.02	\$0.03
Facilitation Fee	\$0.60	
Give-Up Surcharge	\$0.05	
Position Adjustment/Position Transfer	\$0.10	

Dutch TTF Natural Gas Financial (USD/MMBtu) (ICIS Heren) M-1 Average Price Calendar Month Futures

	Member	Non-Member
CME Globex	\$5.00	\$7.00
EFP	\$5.00	\$7.00
Block	\$5.00	\$7.00
EFR/EOO	\$5.00	\$7.00
Processing Fees	Member	Non-Member
Cash Settlement	\$1.00	\$1.00
Facilitation Fee	\$0.60	
Give-Up Surcharge	\$0.05	
Position Adjustment/Position Transfer	\$0.10	

Dutch TTF Natural Gas Futures-Style Margined Financial Calendar Month Option

	Member	Non-Member
CME Globex	\$1.50	\$2.10
EFP	\$1.50	\$2.10
Block	\$1.50	\$2.10
EFR/EOO	\$1.50	\$2.10
Processing Fees	Member	Non-Member
Cash Settlement	\$1.00	\$1.00
Facilitation Fee	\$0.60	
Give-Up Surcharge	\$0.05	
Position Adjustment/Position Transfer	\$0.10	

Exhibit E

Cash Market Overview and Analysis of Deliverable Supply

Cash Market Overview

New York Mercantile Exchange Inc. (“NYMEX” or “Exchange”) currently lists a range of Dutch TTF Natural Gas Futures and Options contracts for trading on CME Globex and for submission into clearing via CME ClearPort. In order to complement the existing product slate, the Exchange proposes to launch four (4) new futures and option contracts:

- The **Dutch TTF Natural Gas Financial Calendar Month Futures (TTG)** is a financial lookalike of the existing **Dutch TTF Natural Gas Calendar Month Futures (TTF)** contract, that has been listed on the Exchange since 2017. TTG will financially settle against the final settlement price of the physically deliverable TTF product.
- The **Dutch TTF Natural Gas Financial Day-Ahead/Weekend (ICIS Heren) Calendar Month Futures (TTI)** contract is a financially settled monthly contract that will settle against the average of all day-ahead and weekend prices¹ as published by ICIS Heren within the contract month. ICIS Heren² is a publisher of prices for the European gas market. Its flagship report, the *European Spot Gas Markets* (ESGM) report³ is widely followed in the industry. It tracks pricing at the London close (16:30 pm London local time) across all main European gas hubs and across all maturities from day-ahead (next day gas delivery) to deferred months, seasons, and calendar years. ICIS Heren confirms with the IOSCO principles and is externally audited on a yearly basis to certify compliance⁴.
- The **Dutch TTF Natural Gas Financial (USD/MMBtu) (ICIS Heren) M-1 Average Price Calendar Month Futures (TTB)** is a financially settled monthly contract that settles against the average of all daily ICIS Heren contract month assessments published in the ESGM. It uses the same reference price as the existing **Dutch TTF Natural Gas (USD/MMBtu) (ICIS Heren) Front Month Futures (TTE)**, only that it averages that reference price across the month rather than using the reference price on Last Trade Date only. TTE has been listed on the Exchange since 2017.
- The **Dutch TTF Natural Gas Futures-Style Margined Financial Calendar Month Option (TTL)** is a financial lookalike option contract of the existing **Dutch TTF Natural Gas Futures-Style Margined Calendar Month Option (TFO)** option contract. TTL will be financially settled based on the exercise & assignment price of the TFO contract. TTF options have been listed on the Exchange since 2019.

The Exchange relied on a number of publicly available source to determine Deliverable Supply (“DS”) in Dutch TTF Natural Gas.

The Exchange is utilizing data from the European Union’s statistical office, [Eurostat](#), the European Network of Transmission System Operators for Gas, [ENTSOG](#), and the European Association of Renewable and

¹ In European natural gas markets, day-ahead refers to the next weekday, and weekend to the next Saturday and Sunday (at a uniform price). A calendar week therefore consists of 5 day-ahead prices and one weekend price.

² <https://www.icis.com/compliance/reports/european-spot-gas-market/>

³ <https://cjp-rbi-icis-compliance.s3.eu-west-1.amazonaws.com/wp-content/uploads/2021/01/05110336/European-Spot-Gas-Markets-Methodology-29-January-2021.pdf>

⁴ <https://www.icis.com/compliance/documents/icis-audit-report-2020/>

Low-carbon Gases Infrastructure Operators, [GIE](#). In addition, we are using data from [Gasunie Transport Services \(GTS\)](#), the gas transmission system operator operating in the Netherlands.

Physical market participants can deliver natural gas into the TTF virtual trading hub via various routes. They can produce gas within the Netherlands, import gas from neighboring countries, import gas from undersea pipelines, or take delivery from gas molecules from LNG cargoes via LNG import terminals. Finally, they can also make use of local gas storage sites to take delivery of natural gas that was previously injected into storage. Following this approach, TTF deliverable supply will be defined as the sum of:

- Netherlands internal production of natural gas
- Netherlands pipeline import capacity – pipelines that connect into the TTF hub
- Netherlands LNG import capacity – capacity of LNG terminals to feed into the TTF
- Gas storage capacity – gas storage sites which can release natural gas into the TTF

Because capacity figures are not subject to seasonal fluctuations, the Exchange does not include a seasonality adjustment on pipeline and storage capacity. However, domestic production of natural gas in the Netherlands is seasonal: typically, domestic gas fields produce more during the winter months to match increased heating demand. Because of this seasonality, we propose to adjust domestic production figures to account for that seasonality effect.

TTF deliverable supply is not adjusted for long-term contracts. The Exchange believes that this is not required, as the TTF market is highly developed and spot market liquidity across exchanges and OTC provides ample access to natural gas to meet short term supply requirements. Public data sources provide a good overview of prevalent market liquidity to assess the suitability of this methodology. Gasunie tracks monthly churn rates which documents the significant increase in TTF liquidity across the past few years. The market churn is defined as the volume of gas traded (OTC and on exchange) as a ratio to nominated volume. Over the past years, market churn rates in TTF have increased from an average of 54x (in 2018) to 91x (in 2020) as depicted in Table 1 below.

Table 1 – Monthly Churn Rates at the TTF Virtual Trading Hub

Monthly Churn rates TTF			
	Minimum	Average	Maximum
2011	10x	18x	26x
2012	10x	20x	31x
2013	13x	20x	30x
2014	20x	34x	54x
2015	25x	40x	53x
2016	23x	46x	78x
2017	25x	42x	59x
2018	30x	54x	85x
2019	36x	72x	107x
2020	70x	91x	128x

Source: [Gasunie Transport Services](#)

Table 2 provides natural gas primary production in the Netherlands. Table 3 provides a monthly primary production breakdown in the Netherlands. Compared to the annual average production, production during the lowest active months (in Q2 and Q3) amount to between 80-90% of the annual average.

Table 2 – Annual Natural Gas Primary Production in the Netherlands

	2017	2018	2019	Average
Terajoules	1,544,415	1,297,096	1,122,222	1,321,244
GWh	429,008	360,307	311,731	367,015
TWh	429	360	312	367

Source: [Eurostat](#)

Table 3 – Monthly Natural Gas Primary Production in the Netherlands

Terajoules	2017	2017%	2018	2018%	2019	2019%
Jan	150,840	117%	129,613	120%	147,157	157%
Feb	143,942	112%	109,499	101%	100,345	107%
Mar	137,045	106%	133,728	124%	106,564	114%
Apr	136,979	106%	101,178	94%	87,082	93%
May	119,885	93%	103,877	96%	94,662	101%
Jun	107,490	84%	99,894	92%	87,415	93%
Jul	116,820	91%	102,643	95%	84,380	90%
Aug	124,284	97%	98,219	91%	87,468	94%
Sep	112,288	87%	97,519	90%	77,663	83%
Oct	122,118	95%	93,324	86%	69,198	74%
Nov	136,845	106%	108,589	100%	87,757	94%
Dec	135,879	106%	119,013	110%	92,531	99%
Average	128,701		108,091		93,519	
Total	1,544,415		1,297,096		1,122,222	

Source: [Eurostat](#)

Table 4 provides the Netherlands' pipeline import capacity – from neighboring countries as well as underwater pipelines and LNG import terminals.

Table 4 – Netherlands Pipeline Import Capacity – Border Countries

Netherlands Import capacity (GWh/day)					
Gas year	17/18	18/19	19/20	3-year average	
Belgium	394	394	393	394	
Germany Gaspool	344	341	348	344	
Germany NCG	162	162	245	190	
Norway (underwater)	963	963	963	963	
LNG import terminals	399	385	418	401	
Sum				2,291	

Source: [ENTSOG system development maps](#)

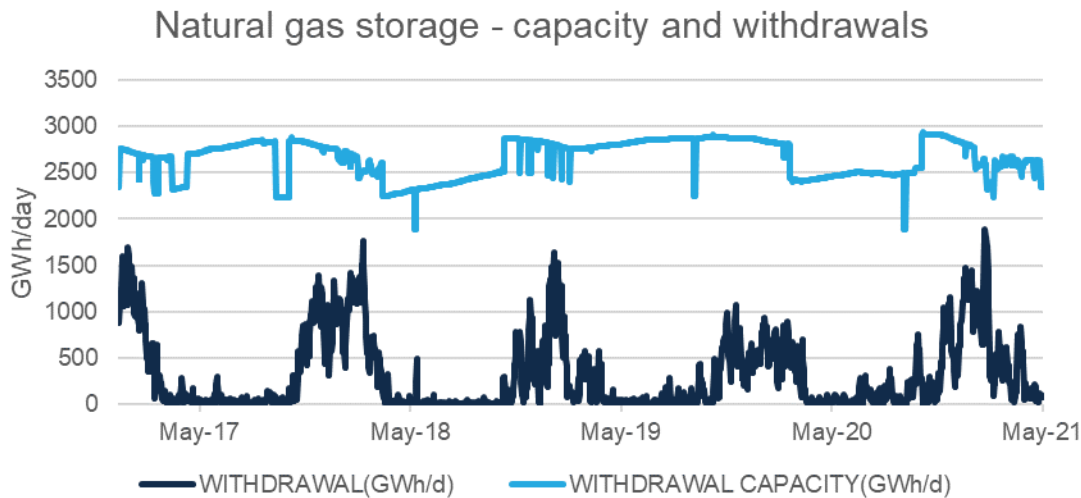
Finally, [GIE](#) provides domestic gas storage volume data for the Netherlands. As of July 1, 2018, the technical withdrawal capacity aggregated across all storage sites in the Netherlands was 2791 GWh/day.

Table 5 – Netherlands Storage Capacity

Operator	Facility/Location	Status	Investment	Start-up year	Withdrawal technical GWh/day
EnergyStock BV	EnergyStock	operational	existing	2011	422
EnergyStock BV	EnergyStock	planned	planned		-
NAM	Grijpskerk	operational	existing	1997	719
NAM	Norg (Langelo)	operational	existing	1997	742
TAQA Gas Storage	Bergermeer	operational	existing	2015	554
TAQA Piek Gas	Alkmaar	operational	existing	1997	353
Sum					2,791

Source: [GIE](#)

The below chart shows that withdrawals from Dutch storage sites occur mainly during winter months to respond to seasonal heating demand. It also shows that storage capacity is stable across the years.



Source: GIE, <https://agsi.gie.eu/#/graphs/NL>

Analysis of Deliverable Supply

Table 6 summarizes the capacity and volume information for physical gas deliveries within the Netherlands. To account for lower production during summer months, domestic production figures are adjusted downwards by 20%.

Table 6 – TTF Deliverable Supply and Spot-Month Position Limit

Natural gas domestic production	367	TWh
Natural gas domestic production seasonally adjusted	294	TWh (A)
Netherlands import capacity	2,291	GWh/day
	836	TWh (B)
Netherlands storage withdrawal capacity	2,791	GWh/day
	1,019	TWh (C)
Deliverable Supply (annual)	2,149	TWh (A+B+C)
Deliverable Supply (monthly)	179	TWh
	179,050,851	MWh
	248,682	Contracts*
Spot month Position limit	50,000	Contracts
% of DS	20.11%	

* Note = 720 MWh contract equivalent

It is proposed to apply the spot month position limits of 50,000 contracts to the **Dutch TTF Natural Gas Financial Calendar Month Futures (TTG)**, **Dutch TTF Natural Gas Financial Day-Ahead/Weekend (ICIS Heren) Calendar Month Futures (TTI)**, and the **Dutch TTF Natural Gas Futures-Style Margined Financial Calendar Month Option (TTL)**. It is further proposed to aggregate positions in the **Dutch TTF Natural Gas Futures-Style Margined Financial Calendar Month Option (TTL)** into the **Dutch TTF Natural Gas Financial Calendar Month Futures (TTG)**. A spot month position limit of 50,000 contracts is equivalent to 20.11% of deliverable supply.

For the **Dutch TTF Natural Gas Financial (USD/MMBtu) (ICIS Heren) M-1 Average Price Calendar Month Futures (TTB)**, which trades in 10,000 MMBtu units, Exchange staff proposes a spot month position limit of 12,000 contracts⁵, equivalent to 19.65% of deliverable supply.

⁵ 12,000 TTE contract equivalents amount to 120,000,000 MMBtu, which is equal to 35,168,514 MWh, or 48,854 TTF equivalents.