

## The MOS OIL questionnaire

Cristina Martello

E.5 (Energy)

EUROSTAT

EnC Workshop – Vienna 25 May 2022

### **OVERVIEW**

- Legal bases
- Data submission and questionnaire info
- The questionnaire: Supply, trade, stocks (Tables 1 5)
- The questionnaire: Emergency stocks (Tables 5b 9 and days equivalent calculation)
- Data validation and compliance monitoring
- Questions, Q&A session, exercise



# Legal bases



## MOS – Legal Bases

#### **Energy Statistics Regulation**

**Regulation (EC) No 1099/2008** of the European Parliament and of the Council of 22 October 2008 on energy statistics (Text with EEA relevance)

+ amendments in 2010, 2013, 2014, 2017, 2019, 2022 (EU) 2022/132 of 28 January 2022 (no Jodi oil: Importance of punctuality of MOS OIL submissions)

ANNEX A: DEFINITION OF OIL Chapter 3 "PRODUCTS", Sub-Chapter 3.4 "OIL (Crude oil and petroleum products)"

ANNEX C: MONTHLY ENERGY STATISTICS Chapter 3 "OIL AND PETROLEUM PRODUCTS" listing: Applicable energy products, list of aggregates, stocks, units of measure and deadline for transmission of data

Latest consolidated version 2020: <a href="https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A02008R1099-20220220">https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A02008R1099-20220220</a>



## MOS – Legal Bases

#### **Emergency Oil Stocks Directive**

Council Directive 2009/119/EC of 14 September 2009, imposing an obligation on Member States to maintain minimum stocks of crude oil and/or petroleum products

+ amendment in 2018: **Commission Implementing Directive (EU) 2018/1581** which modified Article 3: Emergency stocks — Calculating stockholding obligations

MOS reporting countries: EU Member States, European Economic Area (EEA) countries, EU candidate and potential candidate countries, Energy Community contracting parties.

Latest consolidated version:

https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:02009L0119-20200101



## MOS – Legal Bases

 Table 1 to 5: Supply side + stocks + deliveries Regulation (EC) No 1099/2008

Production of primary products, refinery intake of primary, output of secondary products, flows to and from petrochemical industry, imports and exports, international marine bunkers use, stocks in national territory, inland deliveries.

 Table 5b to 9: Emergency and commercial stocks Council Directive 2009/119/EC

Stocks in national territory, own emergency, held for others or by others, to be imported or exported, stocks by location, commercial stocks.

+ Table: New days equivalent calculation



SUMMARY: MOS oil data collection is fundamental for meeting the reporting obligations described in both the Energy Statistics Regulation and the Oil Stocks Directive.

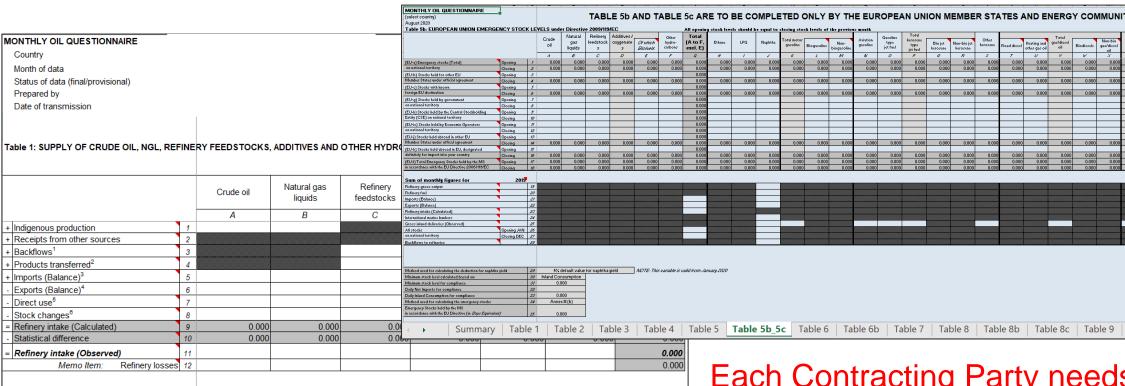


Table 5b 5c | Table 6 | Table 6b | Table 7 | Table 8

MOS oil - Current Version: 2020.1

Summary Table 1 Table 2 Table 3 Table 4 Table 5

Each Contracting Party needs to fully understand the reporting details and methodologies related the MOS.

European Commission

# Data submission and questionnaire info



## MOS – Submitting data

- Deadlines for reporting: <u>55 days</u> after the end of the reporting month
- Reporting obligations for EnC CPs
  - MOS ESR data: Obligation started with ref month Jan 2014\* (\*Georgia 2017)
    - ➤ Most CPs are currently reporting some/all data Tab 1 5
  - Emergency oil stocks: Obligation to start with ref month Jan 2023
    - ➤ Stock build and emergency stock data reporting
- Via eDAMIS under the dataset: ENERGY\_MOSOIL\_M
- Data with no errors must be transmitted by the deadline
- Revisions due to data improvements and updates are accepted
- Questionnaire here: <a href="https://ec.europa.eu/eurostat/web/energy/methodology/monthly">https://ec.europa.eu/eurostat/web/energy/methodology/monthly</a>
- Reporting instructions: <a href="https://ec.europa.eu/eurostat/documents/Reporting\_Instructions\_Oil\_Gas\_2020.pdf">https://ec.europa.eu/eurostat/documents/Reporting\_Instructions\_Oil\_Gas\_2020.pdf</a>



### **MOS** - Information

- Considers automatically the implications due to Brexit
- Includes the changed calculation provisions: amendment (EU) 2018/1581 to the Oil Stocks Directive
- Includes changes needed due to legal interpretation developments: EnC CPs stocks location
- New format (possibly starting with Jan 2023) will have more features – the methodology for reporting will NOT change
  - ->Time series, flags, graphs, helpful warnings, more internal checks, errors output sheet.
  - -> You can volunteer to test its development
  - -> Old format (2020.1) still usable



## The questionnaire: Table 1 – 5

Energy Statistics - Regulation (EC) No 1099/2008



#### Table 1 – Table 5

- Products: 19 (plus breakdowns)
- Tables:
  - Table 1: Supply of primary fuels (and others)
  - Table 2: Supply of finished products (secondary) + Other info (Selected deliveries)
  - Table 3: Imports
  - Table 4: Exports
  - Table 5: Stocks
  - Units of measure: Thousand metric tons (kilo-tonnes)



#### (a) All stocks on national territory (b+c+d+e+f+g+h+i) 1

- (b) Stocks held for other countries under official agreement
- (c) Stocks with known foreign destination
- (d) Stocks held in bonded areas and not included in (b) or (c)
- (e) Stocks held by major consumers, obligated by law
- (f) Stocks held on board incoming ocean vessels in port or at mooring
- (g) Stocks held by government on national territory
- (h) Stocks held by stock holding organisation on national territory
- (i) All other stocks held on national territory
- (j) Stocks held abroad under official agreement (o+p+q)\*
- (k) Stocks held abroad designated definitely for import into your country
- (I) Total stocks (a-b-c+j+k)

#### Table 5 - Stocks

- Opening and closing
- Some of the closing amounts are found in Table 6 to 9

- (m) Other stocks in bonded areas
- (n) Pipeline
- (o) Government stocks held abroad under official agreement\*
- (p) Holding organisation's stocks held abroad under official agreement\*
- (q) Other stocks held abroad under official agreement\*



# The questionnaire: Table 5b – 9 and calculation sheet.

Emergency and commercial stocks - Council Directive 2009/119/EC



# Table 5b – Table 9: Emergency and commercial stocks\* (\*read labels as EU=EnC)

- Products: 19 (plus breakdowns)
- Tables:
  - Table 5b: European union emergency stock levels under directive 2009/119/EC
  - Table 5c: European union commercial stocks held by economic operators on national territory under directive 2009/119/EC
  - **Table 6:** Closing stocks held for other countries under official agreement, by beneficiary
  - Table 6b: Closing stocks held for other countries under official agreement, of which held as stock tickets, by beneficiary
  - **Table 7:** Closing stocks with known foreign destination, by beneficiary
  - Table 8: Closing stocks held abroad under official agreement, by location
  - Table 8b: Closing stocks held abroad under official agreement, of which held as stock tickets, by location
  - **Table 8c:** Emergency stocks closing stocks held abroad, of which pursuant to government / cse delegation, by location
  - Table 9: Closing stocks held abroad designated definitely for import into your country, by location
  - Table: New Days equivalent calculation



#### Table 5b – European Union Emergency Stocks Levels

| (EU-a) Emergency stocks (Total)                 | Opening |
|---|---------|
| on national territory                           | Closing |
| (EU-b) Stocks held for other EU                 | Opening |
| Member States under official agreement          | Closing |
| (EU-c) Stocks with known                        | Opening |
| foreign EU destination                          | Closing |
| (EU-g) Stocks held by government                | Opening |
| on national territory                           | Closing |
| (EU-h) Stocks held by the Central Stockholding  | Opening |
| Entity (CSE) on national territory              | Closing |
| (EU-ie) Stocks held by Economic Operators       | Opening |
| on national territory                           | Closing |
| (EU-j) Stocks held abroad in other EU           | Opening |
| Member States under offical agreement           | Closing |
| (EU-k) Stocks held abroad in EU, designated     | Opening |
| definitely for import into your country         | Closing |
| (EU-I) Total Emergency Stocks held by the MS    | Opening |
| in accordance with the EU Directive 2006/119/EC | Closing |

- Directive 2009/119/EC
- Excludes non-emergency stocks
- Excludes non-EU and non-EnC
- Some differences based on definitions/requirements (c) (d) (f) (h) in Tab 5
- Opening (enter)
- Closing. If grey = calculated or linked to:
  - > EU-b Table 6
  - EU-c Table 7
  - EU-j Table 8
  - EU-k Table 9



# Table 5c - European Union Commercial Stocks held by economic operators on national territory

| Commercial stocks held by | Opening |
|---------------------------|---------|
| Economic Operators        | Closing |

- Directive 2009/119/EC
- Stocks held by economic operators in the national territory for they own operational and commercial needs which can be considered available to use in case of crises.
- Enter both opening and closing



### Example of a closing stocks table: Table 6

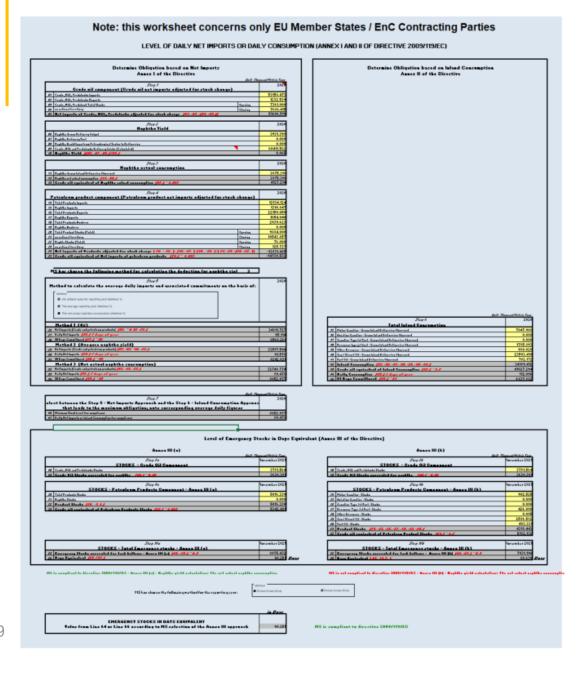
| Table 6: CLOSING STOCKS HELD FOR OTHER COUNTRIES UNDER OFFICIAL AGREEMENT, BY BENEFICIARY |   |              |                           |                        |                        |                      |                            |              |
|---|---|--------------|---------------------------|------------------------|------------------------|----------------------|----------------------------|--------------|
|   |   | Crude<br>oil | Natural<br>gas<br>liquids | Refinery<br>feedstocks | Additives / oxygenates | Of which<br>Biofuels | Other<br>hydro-<br>carbons | Tot<br>(A to |
|   |   | Α            | В                         | С                      | D                      | Е                    | F                          | G            |
| Albania   | 1 | 0.000        | 0.000                     | 0.000                  | 0.000                  | 0.000                | 0.000                      |              |
| Armenia   | 2 | 0.000        | 0.000                     | 0.000                  | 0.000                  | 0.000                | 0.000                      |              |
| Australia   | 3 | 0.000        | 0.000                     | 0.000                  | 0.000                  | 0.000                | 0.000                      |              |
| Austria   | 4 | 0.000        | 0.000                     | 0.000                  | 0.000                  | 0.000                | 0.000                      |              |
| Belarus   | 5 | 0.000        | 0.000                     | 0.000                  | 0.000                  | 0.000                | 0.000                      |              |
| Belgium   | 6 | 0.000        | 0.000                     | 0.000                  | 0.000                  | 0.000                | 0.000                      |              |

- Report closing stocks by country
- Same for all remaining tables: Tab 6b – Tab 9

| Total EnC Contracting Parties | 58 | 0.000 | 0.000 | 0.000 | 0 |
|-------------------------------|----|-------|-------|-------|---|
| Total <sup>1</sup>            | 57 | 0.000 | 0.000 | 0.000 | 0 |
| Others                        | 56 | 0.000 | 0.000 | 0.000 | 0 |
| United States                 | 55 | 0.000 | 0.000 | 0.000 | 0 |
| United Kingdom                | 54 | 0.000 | 0.000 | 0.000 | 0 |
| Ukraine                       | 53 | 0.000 | 0.000 | 0.000 | 0 |
| Turkey                        | 52 | 0.000 | 0.000 | 0.000 | 0 |

- Total world -> Table 5 (line b)
- Total EnC -> Table 5b (line EU b)





# Table: New Days Equivalent Calculation

- To aid the calculation for compliance to the emergency oil stocks holding directive.
- Calculation of obligations AND qualifying stocks levels
- Applies to EU MS
- Applies to EnC contracting parties (from reporting month Jan 2023 or before on a voluntary bases).



# Table: New Days Equivalent Calculation - Top part: Determining the obligations

#### LEVEL OF DAILY NET IMPORTS OR DAILY CONSUMPTION (ANNEX I AND II OF DIRECTIVE 2009/119/EC)

Determine Obligation based on Net Imports
Annex I of the Directive



Calculation\*

Determine Obligation based on Inland Consumption
Annex II of the Directive



Calculation\*

\*based on Y-2 (Jan – Jun) or Y-1 (Jul - Dec)

Deducing the naphtha yield:

- 1. 4%
- 2. the average naphtha yield
- 3. the net actual naphtha consumption



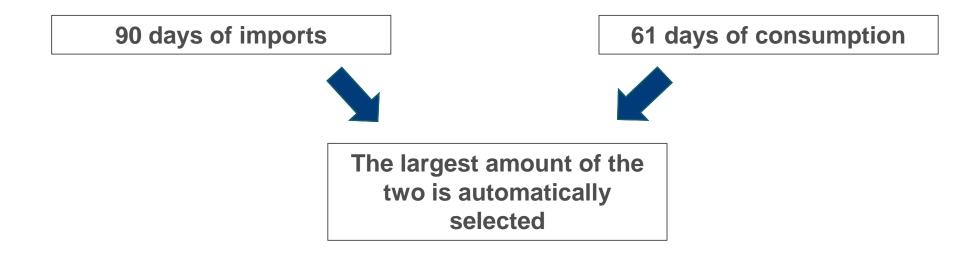
Amount of stocks equivalent to 90 days of imports



Amount of stocks equivalent to 61 days of consumption



# Table: New Days Equivalent Calculation - Middle part: determining the obligations

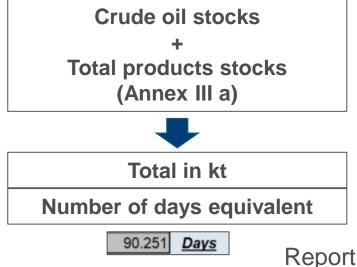


Art 3: "whichever of the two quantities is greater"



# Table: New Days Equivalent Calculation - Bottom part: Counting the stocks

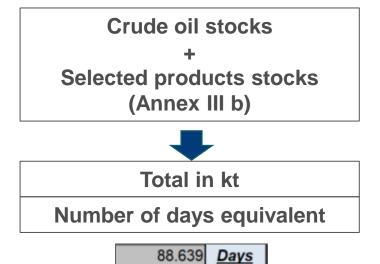
#### Level of Emergency Stocks in Days Equivalent (Annex III of the Directive)



MS is compliant to directive 2009/119/EC

Different weights apply to the three elements!

Both totals are corrected for bottom tanks



Reporting country can choose (once a year):



MS is not compliant to directive 2009/119/EC -



#### New Days Equivalent Calculation sheet and Table 5b\_5c

Yearly figures in the Table 5b\_5c:

| Sum of monthly figures for         | 2020        |
|------------------------------------|-------------|
| Refinery gross output              |             |
| Refinery fuel                      |             |
| Imports (Balance)                  | `           |
| Exports (Balance)                  |             |
| Refinery intake (Calculated)       |             |
| International marine bunkers       |             |
| Gross inland deliveries (Observed) |             |
| All stocks                         | Opening JAN |
| on national territory              | Closing DEC |
| Backflows to refineries            |             |

**INPUT** 

Summary and results is also displayed also in the Table 5b\_5c:

| Method used for calculating the deduction for naphtha yield | 29 | The net actual naphtha consumption |  |
|---|----|------------------------------------|--|
| Minimum stock level calculated based on:                    | 30 | Net Imports                        |  |
| Minimum stock level for compliance                          | 31 | 8052.977                           |  |
| Daily Net Imports for compliance                            | 32 | 89.478                             |  |
| Daily Inland Consumption for compliance                     | 33 |                                    |  |
| Method used for calculating the emergency stocks            | 34 | Annex III (a)                      |  |
| Emergency Stocks held by the MS                             |    |                                    |  |
| in accordance with the EU Directive (in Days Equivalent)    | 35 | 90.251                             |  |

**OUTPUT** 



#### Questions



#### **QUESTION 7**

Reporting countries can make two choices in the Days Equivalent Calculation sheet. Which two answers are correct?

- a) 90 Days of Imports vs 61 Days of Consumption (Annex I vs Annex II)
- b) Method for deducting the Naphtha yield (Method 1, 2, or 3)
- c) The components of the stocks used to comply (Annex III a vs Annex III b)



#### Questions



#### **QUESTION 8**

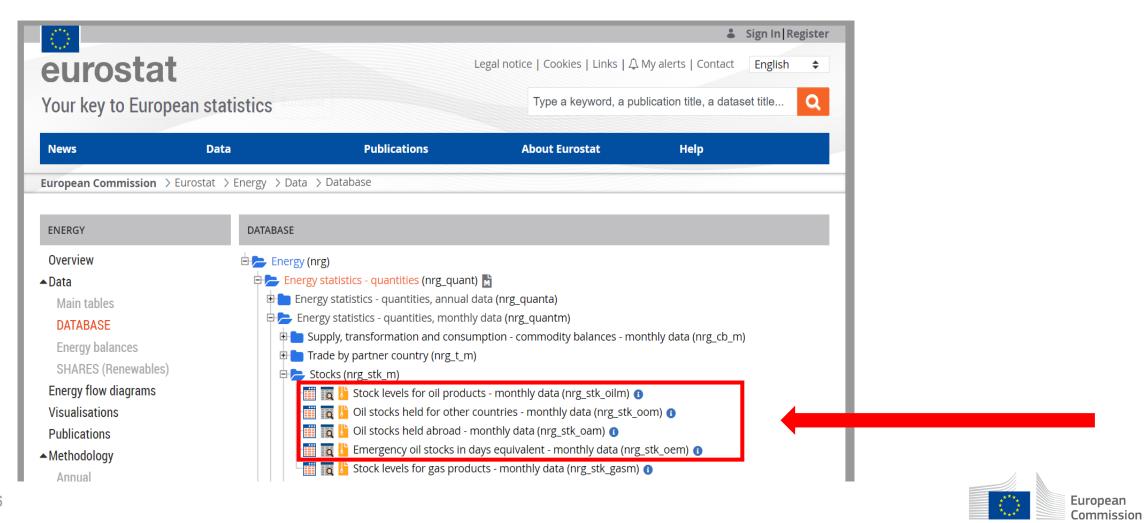
The level of stocks for compliance can be calculated based on:

- a) Imports of year Y-2 in the reporting months Jan-Jun.
- b) Consumption of year Y-1 in the reporting for months Jan-Jun
- c) 60 day of consumption.



#### OIL STOCKS DATABASE

Oil stocks data can be found here: <a href="https://ec.europa.eu/eurostat/web/energy/data/database">https://ec.europa.eu/eurostat/web/energy/data/database</a>



#### OIL STOCKS DATABASE

#### Table 5b = *nrg\_stk\_oilm* = Stock levels

- (EU-a) Emergency stocks (Total) on national territory
- (EU-b) Stocks held for other EU Member States under official agreement
- (EU-c) Stocks with known foreign EU destination
- (EU-g) Stocks held by government on national territory
- (EU-h) Stocks held by the Central Stockholding Entity (CSE) on national territory
- (EU-ie) Stocks held by Economic Operators on national territory
- (EU-j) Stocks held abroad in other EU Member States under official agreement
- (EU-k) Stocks held abroad in EU, designated definitely for import into your country
- (EU-I) Total Emergency Stocks held by the MS in accordance with the EU Directive 2006/119/EC

Table 6 and 6b and 7 = *nrg\_stk\_oom* = Stocks held for other countries or with known foreign destination

Table 8 and 8b and 8c and  $9 = nrg_stk_oam = Stocks held abroad or destined for your country$ 



#### Questions



#### **QUESTION 9**

Commercial stocks as defined according to Directive 2009/119/EC are reported:

- a) On a voluntary basis
- b) In Table 4
- c) If held on national territory



#### **Sheet: Remarks**

The remarks sheet: describe important information, clarification.

Remember to use it!

#### **Remarks MOS OIL**



#### Questions



#### **QUESTION 10**

Which of the following statement is correct?

- a) The deadline for submitting MOS oil data is 45 days after the end of the reporting period.
- b) Stock data are collected but never published by Eurostat.
- c) Data with no errors must be transmitted by the deadline.



# Validation and compliance monitoring



#### **MOS Data Validation**

- Embedded checks, cell protection, and info.
- Automatic validation: StruVal and ConVal being implemented.
- Further content validation via email (soon via platform):
  - Intra questionnaire checks
  - Time series checks
- Easier validation with the upcoming new Excel questionnaire format

Section on methodology: <a href="https://ec.europa.eu/eurostat/web/energy/methodology">https://ec.europa.eu/eurostat/web/energy/methodology</a>

Validation manual and rules: Validation manual



## Compliance monitoring

Compliance with the Energy Statistics Regulation as regards the monthly oil statistics

- ➤ DG ESTAT: for EU countries
- ➤ EnC Secretariat: for contracting parties
  - Compliance monitoring issues are presented and discussed in the ENERGY STATISTICS WORKING GROUP (ESWG)

Compliance with the Oil Stocks Directive as regards the **emergency oil stockholding obligations** 

- >DG ENER: for EU countries
- ➤ EnC Secretariat: for contracting parties
  - Compliance monitoring issues are presented and discussed in the OIL COORDINATION GROUP and/or OIL FORUM



## Questions?





## Exercise



## MOS OIL – Emergency Stock data exercise

- 1. Word document: Scenario and data-entry questions.
- 2. Excel file: MOS oil, partially prefilled with data.
- Enter in the MOS oil the remaining data described in the questions.



# Thank you

Cristina.MARTELLO@ec.europa.eu

Eurostat oil team: Cristina MARTELLO, Krzysztof PIELA, Gaspar MELLADO TORIO, Rajmund LACZKO, and Tamas EDELENYI.

ESTAT-ENERGY-MONTHLY@ec.europa.eu

ESTAT-ENERGY@ec.europa.eu



## Solutions

Q7: b + c

Q8: a

Q9: c

Q10: c

