The MOS OIL questionnaire

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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


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

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:
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**
  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.

Each Contracting Party needs to fully understand the reporting details and methodologies related the MOS.
Data submission and questionnaire info
MOS – Submitting data

• Deadlines for reporting: **55 days** 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: [https://ec.europa.eu/eurostat/web/energy/methodology/monthly](https://ec.europa.eu/eurostat/web/energy/methodology/monthly)

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
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)
### Table 5 - Stocks

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

<table>
<thead>
<tr>
<th>Description</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) All stocks on national territory (b+c+d+e+f+g+h+i) (^1)</td>
<td></td>
</tr>
<tr>
<td>(b) Stocks held for other countries under official agreement</td>
<td></td>
</tr>
<tr>
<td>(c) Stocks with known foreign destination</td>
<td></td>
</tr>
<tr>
<td>(d) Stocks held in bonded areas and not included in (b) or (c)</td>
<td></td>
</tr>
<tr>
<td>(e) Stocks held by major consumers, obligated by law</td>
<td></td>
</tr>
<tr>
<td>(f) Stocks held on board incoming ocean vessels in port or at mooring</td>
<td></td>
</tr>
<tr>
<td>(g) Stocks held by government on national territory</td>
<td></td>
</tr>
<tr>
<td>(h) Stocks held by stock holding organisation on national territory</td>
<td></td>
</tr>
<tr>
<td>(i) All other stocks held on national territory</td>
<td></td>
</tr>
<tr>
<td>(j) Stocks held abroad under official agreement (o+p+q)(^*)</td>
<td></td>
</tr>
<tr>
<td>(k) Stocks held abroad designated definitely for import into your country</td>
<td></td>
</tr>
<tr>
<td>(l) Total stocks (a-b-c+j+k)</td>
<td></td>
</tr>
<tr>
<td>(m) Other stocks in bonded areas</td>
<td></td>
</tr>
<tr>
<td>(n) Pipeline fill</td>
<td></td>
</tr>
<tr>
<td>(o) Government stocks held abroad under official agreement(^*)</td>
<td></td>
</tr>
<tr>
<td>(p) Holding organisation's stocks held abroad under official agreement(^*)</td>
<td></td>
</tr>
<tr>
<td>(q) Other stocks held abroad under official agreement(^*)</td>
<td></td>
</tr>
</tbody>
</table>

\(^1\) Opening and closing

Some of the closing amounts are found in Table 6 to 9.
The questionnaire: Table 5b – 9 and calculation sheet.

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

Units of measure: Thousand metric tons (kilo-tonnes)
Table 5b – European Union Emergency Stocks Levels

- 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

<table>
<thead>
<tr>
<th>Commercial stocks held by</th>
<th>Opening</th>
<th>Closing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economic Operators</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Directive 2009/119/EC
- Stocks held by economic operators in the national territory for their 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>
<thead>
<tr>
<th>Country</th>
<th>Crude oil</th>
<th>Natural gas liquids</th>
<th>Refinery feedstocks</th>
<th>Additives/ oxygenates</th>
<th>Other</th>
<th>Total (A to excl)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Albania</td>
<td>1</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td>Armenia</td>
<td>2</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td>Australia</td>
<td>3</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td>Austria</td>
<td>4</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td>Belarus</td>
<td>5</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td>Romania</td>
<td>6</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td>Turkey</td>
<td>52</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td>Ukraine</td>
<td>53</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>54</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td>United States</td>
<td>55</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td>Others</td>
<td>56</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td>Total</td>
<td>57</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
</tr>
</tbody>
</table>

- Report closing stocks by country
- Same for all remaining tables: Tab 6b – Tab 9
- Total world -> Table 5 (line b)
- Total EnC -> Table 5b (line EU - b)
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)**

<table>
<thead>
<tr>
<th>Determine Obligation based on Net Imports</th>
<th>Determine Obligation based on Inland Consumption</th>
</tr>
</thead>
</table>

**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

90 days of imports

61 days of consumption

The largest amount of the two is automatically selected

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)

<table>
<thead>
<tr>
<th>Crude oil stocks + Total products stocks (Annex III a)</th>
<th>Different weights apply to the three elements!</th>
</tr>
</thead>
<tbody>
<tr>
<td>90.251 Days</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Crude oil stocks + Selected products stocks (Annex III b)</th>
<th>Both totals are corrected for bottom tanks</th>
</tr>
</thead>
<tbody>
<tr>
<td>88.639 Days</td>
<td></td>
</tr>
</tbody>
</table>

- Reporting country can choose (once a year):
  - Follow Annex III (a)
  - Follow Annex III (b)

**MS is compliant to directive 2009/119/EC**
New Days Equivalent Calculation sheet and Table 5b_5c

Yearly figures in the Table 5b_5c:

Summary and results is also displayed also in the Table 5b_5c:
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)
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: https://ec.europa.eu/eurostat/web/energy/data/database
Table 5b = \textit{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-l) Total Emergency Stocks held by the MS in accordance with the EU Directive 2006/119/EC

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

Table 8 and 8b and 8c and 9 = \textit{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!
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):
  o Intra questionnaire checks
  o Time series checks

• Easier validation with the upcoming new Excel questionnaire format

Section on methodology: https://ec.europa.eu/eurostat/web/energy/methodology
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


2. Excel file: MOS oil, partially prefilled with data.

➤ Enter in the MOS oil the remaining data described in the questions.
Thank you

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Solutions

Q7: b + c
Q8: a
Q9: c
Q10: c