Monthly Oil and Gas Statistics
IEA Checking Process

Joint Rosstat - IEA workshop on
Energy Statistics
Moscow, Russia, 14-17 February 2012
IEA Checking Process

- Internal questionnaire checks
- Time series analysis
- Verification of submissions of other countries
- Inter-questionnaire verification (MOS vs JODI)
- Comparison with annual data
- Third party statistics
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*Internal questionnaire checks*

- **Prior to loading to the database**
  - Arithmetically
    - Right date, no missing figures
    - Aggregates
    - Stock change (closing – opening stock levels)
    - No breaks in stock levels
    - Meme items
  - Internal consistency
    - Ex: Total imports by origin (Table 3)
      = Imports on supply report (Tables 1 and 2)
Internal questionnaire checks - Example

### Example Table

<table>
<thead>
<tr>
<th>Country</th>
<th>Сырая нефть</th>
<th>Природные газоконденсаты</th>
<th>Нефтеперерабатывающие остатки</th>
<th>Прочие углеводороды</th>
<th>ВСЕГО</th>
<th>Бор (т)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Russia</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>January 2012</td>
<td>22741</td>
<td>22741</td>
<td>22741</td>
<td>22741</td>
<td>22741</td>
<td>22741</td>
</tr>
</tbody>
</table>

*Example: All data should be entered in thousand metric tons with no decimal place.*
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*Time series verification*

- After loading into the database
  - **Time series analysis**
    - Use of Excel and Beyond 2020 software
    - Checking figures mainly for last months available
    - Identify/explain outliers, extreme figures, double counting?
    - Comparison with historical information (trend, seasonality)
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*Time series analysis – Example Seasonality*

**MOS Table 5 - Country X - Motor Gasoline - Closing Stock Levels - Other National Territory**
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*Time series analysis – Example Growth Rates*

**MOS Table 2 - Country Y - Gas Diesel - Gross Inland Deliveries (Observed)**

![Diagram showing time series analysis of gas diesel deliveries from 2004 to 2010. The deliveries show a general increase over the years.]
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Verification of submission from other countries

Stocks under Bilateral Agreement - Naphtha

Reported by Country 1 - Held under bilateral agreement
Reported by Country 2 - Held abroad under bilateral agreement
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*Inter-questionnaire verification (MOS vs GTF)*
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Comparison with Annual data

Country X - Gas Diesel Oil

<table>
<thead>
<tr>
<th>Thousand Metric Tons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Refinery output</td>
</tr>
<tr>
<td>Imports</td>
</tr>
<tr>
<td>Exports</td>
</tr>
<tr>
<td>International Marine Bunkers</td>
</tr>
<tr>
<td>Statistical Differences</td>
</tr>
<tr>
<td>Total consumption</td>
</tr>
</tbody>
</table>

2009 Annual  2009 Monthly
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*Comparability with other sources*

Sources include

- National administration websites
- Publications
- Data sent by administrations
- Third party websites

Thank you