Schwechat Refinery Visit

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Downstream Oil Value Chain

2017 figures

Crude supply
- Equity crude production: 4.3 mn t
- Crude from third parties: 11.7 mn t

Refinery production
- Crude oil refining: 16 mn t
  (90% utilization rate of 17.8 mt refining capacity)¹
- Purchase of semi-finished products: 1.4 mn t¹
- Purchase of finished products: 4.0 mn t²

Product supply and logistics
- Storage
- Rail/truck/ship

Petrochemical/ commercial/ retail sales
- Retail: 6.2 mn t
- Business-to-business: 9.5 mn t
- Aviation: 1.9 mn t
- Petrochemicals: 2.2 mn t
- OMV Petrol Ofisi: 4.0 mn t³

Customer allocation in %
- Captive market: 47%
- Wholesale: 53%

Notes:
1 10% internal consumption to be deducted.
2 Volume includes blending components and excludes purchase of products for OMV Petrol Ofisi
3 OMV Petrol Ofisi divested in June 2017
4 Retail and petrochemical sales
OMV Refining & Petrochemicals’ assets are operated as one refinery system

OMV Refining assets
- 17.8 mn t annual crude processing capacity
- 2.5 mn t petrochemical production capacity
- High conversation rate
- High refinery utilization rate, constantly above EU average

Competitive advantages
- Three sites operated as one refinery, maximizing returns
- High flexibility in crude processing
- Favorable product yield structure
- Forward integrated into petrochemicals
- Secure marketing outlets
- Above average net cash margin vs inland peers
Integrated refinery yield

Integrated refinery yield %

- 12% Petrochemicals
- 17% Gasoline
- 9% Jet fuel
- 41% Middle distillates
- 9% Heavy products
- 3% Others
- 9% Internal consumption

- Operated as „3 Sites – 1 Refinery“;
- 50% middle distillates
- 9% heavy products, thereof:
  - 1% low sulfur heavy fuel oil
  - 1% high sulfur heavy fuel oil

Note: LPG and naphta used as feedstock for petrochemicals
1 Excluding jet fuel
2 Thereof 1% low sulfur heavy fuel oil and 1% high sulfur heavy fuel oil
Schwechat refinery – Connected to product terminals, crude and product pipelines
Schwechat refinery – In a nutshell

- Sole refinery in Austria
- Flagship OMV refinery with **9.6 mn t** annual capacity
- ~ 700 employees
- **10% equity crude** intake supplied domestically
- Wide range of crudes (heavy, medium, light) supplied via **TAL pipeline** from Trieste
- **Complex** refinery with **flexible** crude intake
- Product pipelines: e.g. Jet fuel pipeline to Vienna airport
- Low black product yield
- Forward integrated into **petrochemicals** – Borealis across the fence
- Safety is the basis for success: no occupational injuries in 2017
Refinery Schwechat – Processed crude oil to countries of origin

Processed crude oil quantity 2017

- Others: 17%
- Nigeria: 7%
- Libya: 11%
- Azerbaijan: 12%
- Austria: 9%
- Kazakhstan: 30%
- Irak: 14%

Total: 8.1 million tons

\(^1\) In 2017 Schwechat refinery completed a full-site turnaround
Simplified, crude oil processing can be divided into four essential stages:

- **Distillation**
- **Desulfurization**
- **Upgrading**
- **Blending**
Therefore numerous technical plants are required.
# Refineries provide the full range of products

## Petrochemicals

<table>
<thead>
<tr>
<th>Basic Feedstock</th>
<th>Ethylene</th>
<th>Propylene</th>
<th>Butadiene</th>
<th>Aromatics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Basic chemical used</td>
<td>Basic chemical used</td>
<td>Basic chemical used</td>
<td>Basic feedstock</td>
</tr>
<tr>
<td></td>
<td>to produce plastics</td>
<td>to produce plastics</td>
<td>used to produce</td>
<td>for Benzene extraction</td>
</tr>
<tr>
<td></td>
<td>(polyethylene)</td>
<td>(polypropylene)</td>
<td>synthetic rubber</td>
<td></td>
</tr>
</tbody>
</table>

## Fuels

<table>
<thead>
<tr>
<th>Fuel Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Propane/Butane</td>
<td>Liquid gas used as a heating and transportation fuel</td>
</tr>
<tr>
<td>Gasoline</td>
<td>95/100 octane unleaded fuel with max. 0.001% sulfur content; contains bio components</td>
</tr>
<tr>
<td>Jet A1</td>
<td>Fuel of the highest quality for aircrafts</td>
</tr>
<tr>
<td>Diesel</td>
<td>Fuel with max. 0.001% sulfur content for passenger cars and trucks; contains bio components</td>
</tr>
<tr>
<td>Heating Oil Extra Light</td>
<td>Heating fuel with max. 0.001% sulfur content for domestic use</td>
</tr>
</tbody>
</table>

## Others

<table>
<thead>
<tr>
<th>Material Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bitumen</td>
<td>Basic material used to make road surfaces (incl. low-noise asphalt and polymer modified bitumen) and for use in construction</td>
</tr>
<tr>
<td>Sulfur</td>
<td>Basic material for the chemical and fertilizer industries</td>
</tr>
<tr>
<td>Sulfuric acid</td>
<td>Basic material for a variety of applications such as fertilizer industries</td>
</tr>
<tr>
<td>Electrical current</td>
<td>Electrical current from combined heat and power generation in the power plants</td>
</tr>
<tr>
<td>District heating</td>
<td>Heat distribution to the district heating network in Vienna and surrounding areas</td>
</tr>
</tbody>
</table>
Schwechat Refinery – Transportation Quantities

Application of refinery Schwechat and warehouse Lobau – according to shipping figures without internal pumping.