



**Mažeikių Nafta is on the path to improve efficiency**

PKN ORLEN Investors & Analysts Day

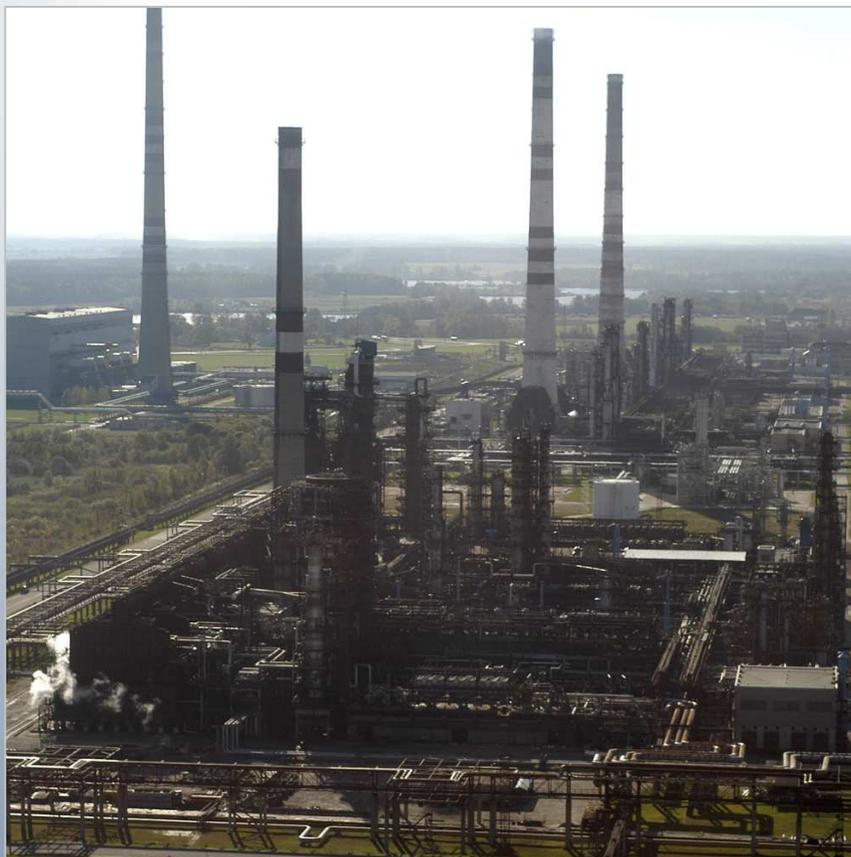
**Marek Mroczkowski, General Director**

Warsaw June 18, 2008

## The only refinery in the Baltic States

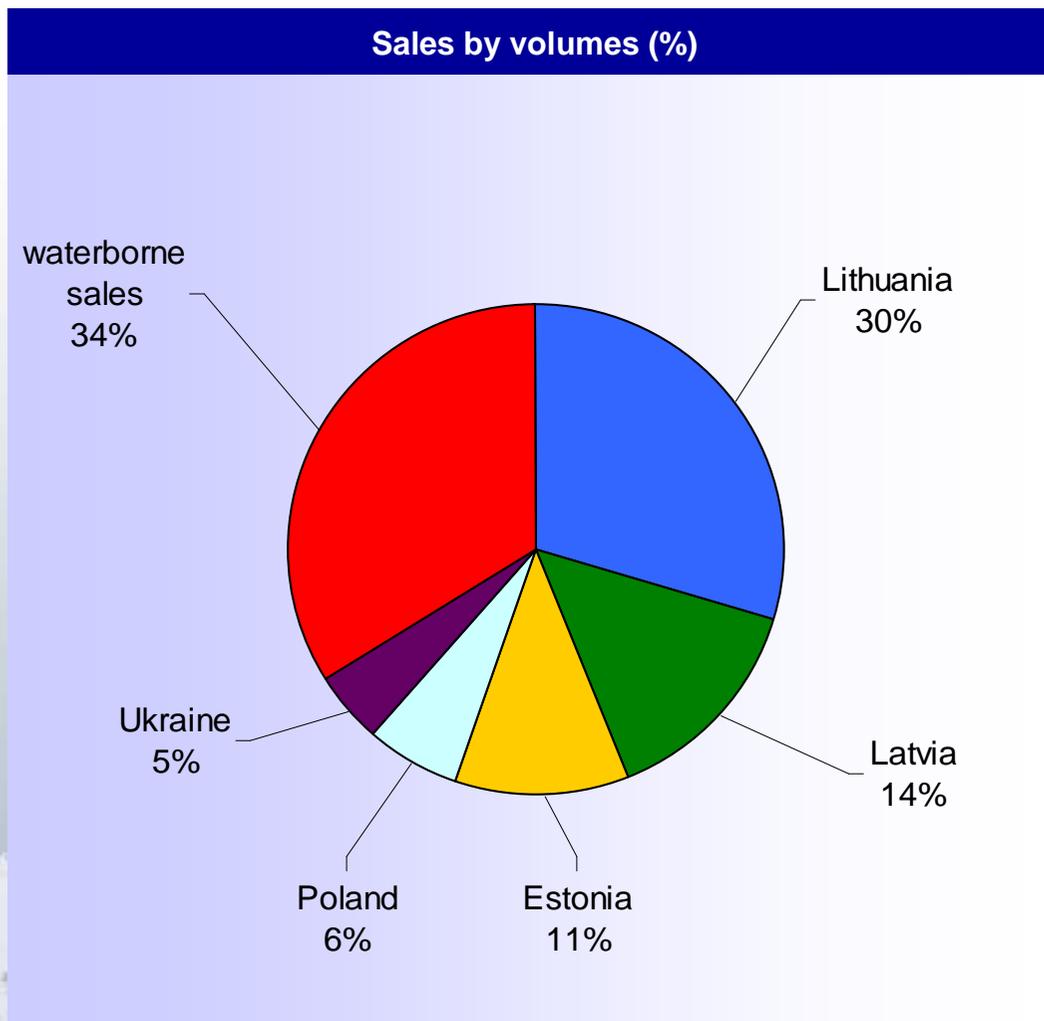


## Mažeikių Nafta in 2007 – key numbers



- **5.8 million tons of feedstock processed to produce:**
  - **1.7 mt of gasolines**
  - **1.9 mt of diesel fuel**
  - **0.15 mt of Jet fuel**
  - **0.29 mt of LPG**
  - **1.2 mt of fuel oil**
  - **94 tt of bitumen**
- **Over. 3,700 employees in Mažeikių Nafta Group**

## Mažeikių Nafta sales in 2007





## Recent important undertaking of Mažeikių Nafta

- **Completion of the largest turnaround in Mažeikių Nafta history, autumn 2007:**
  - More than 4,000 specialists of 80 contractor organizations from 15 countries arrived at the Refinery.
  - 1.8 million man-hours were spent for the turnaround.
  - Completed scope of work was three times bigger than the scope of the turnaround performed in 2003.
  - Maintenance and repairs of more than 600 major pieces of equipment: 175 heat exchangers, 64 towers, 16 reactors, 32 substations, 17 pumps.
  - Replacement of 600 pipelines.
  - Total cost related amounted to 85 mln USD.

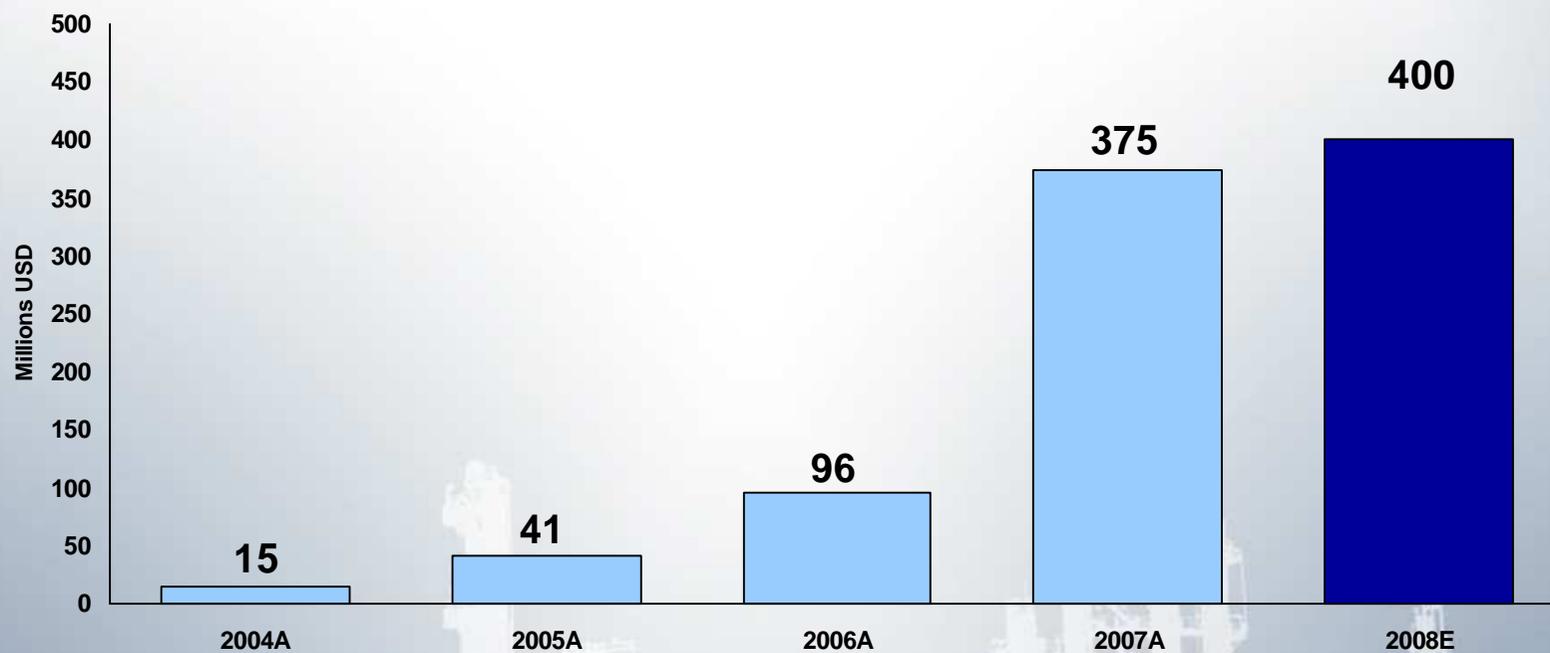


## **Recent important undertaking of Mažeikių Nafta**

- **Rebuilt of the Vacuum Distillation Unit:**
  - Rebuilding of the Vacuum Distillation Unit started in February 2007 after the removal of the fire-damaged tower.
  - Lithuanian, Polish and Italian engineering and construction companies performed most of the rebuilding work.
  - The major components of the unit were produced also in Russia, Ukraine and the Czech Republic.
  - Rebuilding of the unit completed in December 2007.
  - Total expenditure amounted to 151 mln USD (2007-2008).

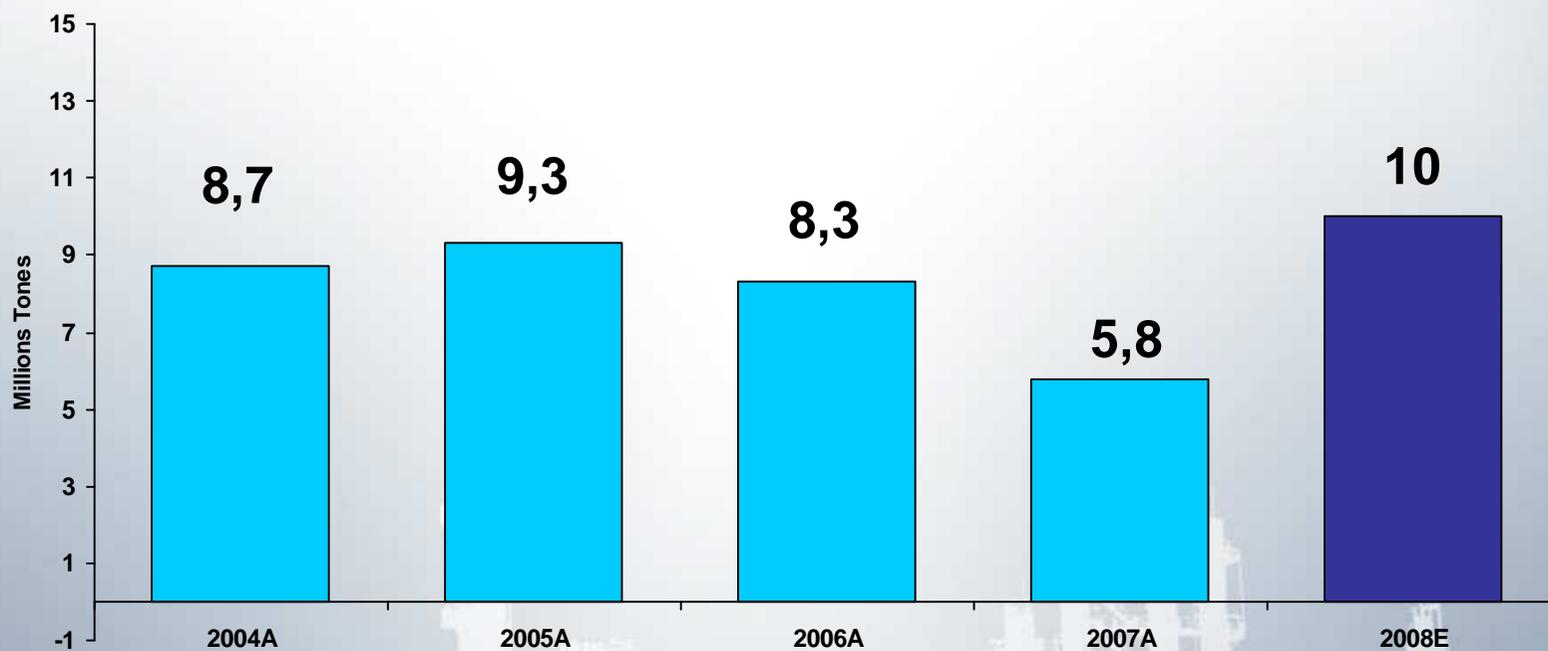


## Mažeikių Nafta investments



Total investments planned after acquisition by PKN Orlen 1.6 bln USD

## Mažeikių Nafta feedstock processed



# Mažeikių Nafta Efficiency Improvements

Key activity	Key value creation levers
Refining	<ul style="list-style-type: none"><li>• Increase white product yield</li><li>• Improve energy performance</li><li>• Optimise operating costs of the refinery</li></ul>
Wholesale and Logistics	<ul style="list-style-type: none"><li>• Improve wholesale margin</li><li>• Optimise products logistics</li><li>• Optimise other wholesale and logistics operating costs</li></ul>
Corporate and Other	<ul style="list-style-type: none"><li>• Optimise purchasing spend</li><li>• Optimise other operating costs at Mažeikių Nafta</li><li>• Introduce operational improvements in planning, coordination and performance reviews</li></ul>

# Refining Efficiency Improvement

Key value creation levers	Initiative examples
<b>Increase product yield</b>	<ul style="list-style-type: none"> <li>• Recover hydrogen and LPG flare gas</li> <li>• Control automatic level for separator in PENEX unit</li> <li>• Convert heavy viscous residue into sellable emulsion</li> <li>• Improve information system of material flows</li> <li>• Supply heavy visbreaker diesel to FCC unit</li> </ul>
<b>Improve energy performance</b>	<ul style="list-style-type: none"> <li>• Increase process condensate temperature</li> <li>• Reduce fuel consumption heaters (by 8kg/ton of feed)</li> <li>• Supply gas condensate from the refinery to power plant for burning</li> <li>• Install rotation speed regulators for air coolers and water pumps</li> <li>• Reduce pressure at gasoline reformers</li> <li>• Insulate and heat of off-spec product lines</li> </ul>
<b>Other</b>	<ul style="list-style-type: none"> <li>• Reduce maintenance costs by introducing scope challenge</li> <li>• Optimise cost of external contractors</li> <li>• Reduce laboratory costs</li> <li>• Implement DCS/ESD control systems</li> </ul>

# Efficiency Improvement in wholesale and logistics

Key value creation levers	Initiative examples
<b>Improve wholesale margin</b>	<ul style="list-style-type: none"> <li>• Increase diesel and LPG sales to Poland</li> <li>• Increase bitumen sales to Estonia</li> <li>• Establish own trading activities for waterborne sales</li> <li>• Increase sales to end-users in the Baltic States</li> <li>• Improve pricing procedures in the Baltic States</li> </ul>
<b>Reduce product delivery costs</b>	<ul style="list-style-type: none"> <li>• Optimise rail routes in the Baltic States</li> <li>• Optimise port fees</li> <li>• Pipeline to the sea</li> </ul>
<b>Other</b>	<ul style="list-style-type: none"> <li>• Optimise Butinge terminal OPEX</li> <li>• Optimise pipelines OPEX (Biržai)</li> <li>• Optimize common wholesale and logistic operation</li> </ul>

## Efficiency Improvement in corporate and other

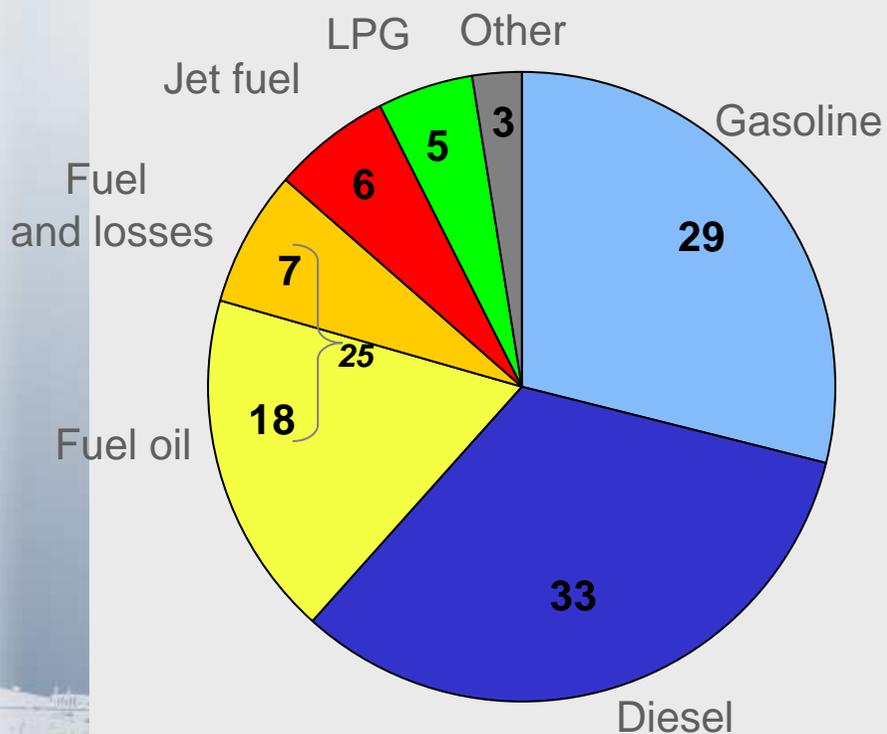
Key value creation levers	Initiative examples
<b>Optimise purchasing spend</b>	<ul style="list-style-type: none"><li>• Optimise chemicals purchasing</li><li>• Optimise indirect purchasing</li><li>• Optimise maintenance materials and services purchase costs</li><li>• Reduce warehouse costs</li></ul>
<b>Other</b>	<ul style="list-style-type: none"><li>• Reduce insurance fees</li><li>• Reduce cost of financing</li></ul>

## Key New Investments for Mažeikių Nafta

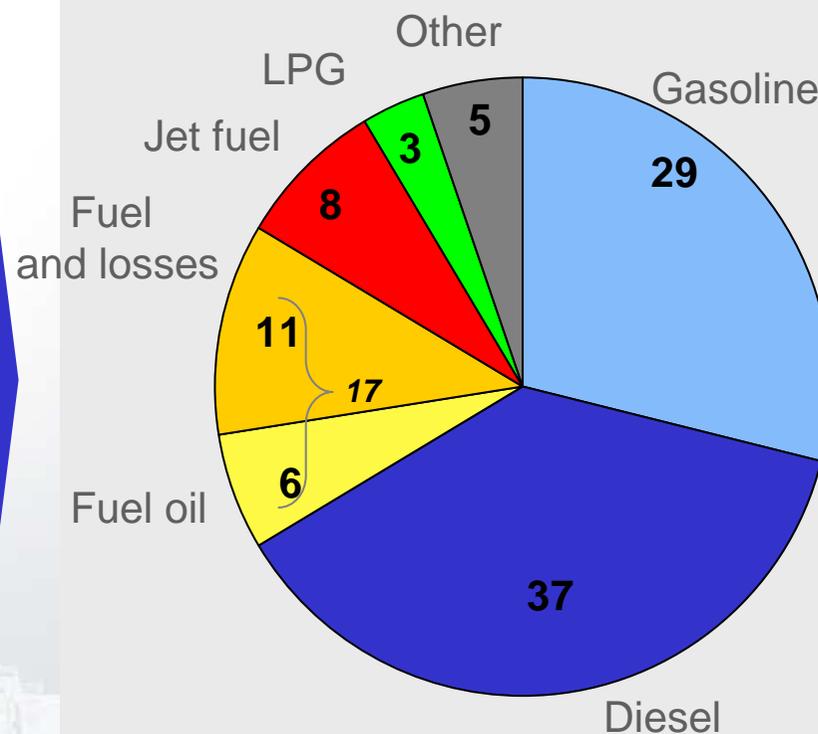
Key value creation projects	Initiative example
<b>Hydrocracking</b>	<ul style="list-style-type: none"> <li>• Increase refining conversion ratio up to 88%</li> <li>• Increase the flexibility of the refinery for Diesel versus gasoline production</li> </ul>
<b>New H<sub>2</sub> Plant</b>	<ul style="list-style-type: none"> <li>• To meet gasoline and diesel quality specification (EU 2009)</li> </ul>
<b>Vacuum Flasher</b>	<ul style="list-style-type: none"> <li>• Produce maximum feed for the hydrocracker and increase the efficiency of the crude processing</li> </ul>
<b>Propylene Splitter</b>	<ul style="list-style-type: none"> <li>• Extract petrochemical feed from the low price LPG produced at the refinery</li> </ul>
<b>Other</b>	<ul style="list-style-type: none"> <li>• To ensure low sulphur content fuel for power generation and heating plant</li> </ul>

# Mažeikių Nafta product yield significant improvement following investment

Product yield pre-investment (2006)



Product yield post-investment (2012)



# Restructuring and Reorganization at MN

## Strategic Directions

## Initiated and planned projects

### Increasing effectiveness of core activities

- Reorganization of maintenance structure
- Integration of land and seaborne sales organizations
- Investment into production facilities

### Outsourcing of non-core activities

- Creation of subsidiary organizations performing support functions:
- Medical service company
- Housekeeping company (catering, cleaning, territory handling)
- Maintenance realization shops

### Focus on quality and inter-functional integration

- Implementation of ISO systems:
- 14001 ecological system
- 17001 OHSAS (safety)
- 9001 quality systems

# Operational improvements

Area	Initiated and planned activities
<b>Planning</b>	<ul style="list-style-type: none"><li>• Budgets for investment projects developed</li><li>• Mid term planning process for investments in progress</li><li>• Ongoing program for inspection and maintenance of Refinery equipment</li><li>• Preparation activities for next Turnaround</li></ul>
<b>Coordination</b>	<ul style="list-style-type: none"><li>• Supply Chain Management was introduced</li><li>• Technical Committee was established to improve communication, problem solving and decision making in the area of refinery production, maintenance, investment realization</li><li>• Investment process defined; support and control of functions and processes introduced</li></ul>
<b>Performance reviews and controlling</b>	<ul style="list-style-type: none"><li>• Regular performance reviews introduced (production and maintenance as well as wholesale and logistics)</li><li>• Regular investment review meetings introduced, mechanisms for investment spending control introduced</li><li>• Implementation of IT tools to improve planning and control</li></ul>