

## **OIL AND PETROLEUM PRODUCT MARKET**

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### **Global oil market**

2016 witnessed the lowest crude oil prices for the past 12 years, with the average Brent oil price at an average of USD 44 per barrel. Moreover, the price of oil throughout 2016 was quite volatile, fluctuating in the range of USD 26 to USD 55 per barrel.

OPEC member countries seek to achieve a stable trend towards strengthening global oil prices through the transition from ‘sustainable mining to ‘supply-and-demand balance’ policies.

### **The European market for oil and petroleum products**

The European oil refining capacity is about 16 % of the global capacity. According to the European Petroleum Refiners Association, refinery capacity utilization in Europe in the period 2007 through 2015 fell from 87% to 78% in the period between 2007 and 2014, about 17 refineries stopped operations (mainly in Italy, France and the UK), and at the beginning of 2015 there were 83 refineries operating in Europe.

The decline in European refineries capacity utilization levels compared to 2015 was due to increase in diesel fuel imports from Russia, the USA, Asia. However, the European refineries capacity utilization level in 2016 was still significantly higher than in 2014.

In 2016, the consumer price change trend for petroleum products corresponded to the global oil price change trend in particular. The increase in oil prices in the period of January through December 2016 amounted to about 75%, while at the same time, increase in the EU amounted to 6% for gasoline and about 13% for diesel fuel.

### **Oil and condensate extraction in Ukraine**

UGV is the largest gas production company in Ukraine and second in the production of oil and condensate: in 2014 the company's share in the total gas production was 68%, and it had a 20% share in crude oil and condensate extraction in Ukraine. As of the beginning of 2015, the company's operational assets included 2 441 gas wells, 194 oil wells, and 82 drilling rigs. There are presently 139 hydrocarbon fields under development, located in Kharkiv, Poltava, Sumy, Donetsk, Dnipropetrovsk, Luhansk, Lviv, Ivano-Frankivsk, Volyn, Chernivtsi and Zakarpattia regions.

The depletion of the company's initial recoverable reserves at existing fields is estimated at almost 72% in gas, 21% in oil and 63% in condensate. In March 2015, the parliament increased the royalty rate for oil and gas companies, and for UGV it was set at 70% of revenues to ensure the state has sufficient reserves to finance utility subsidies for households following the gas price hike. The increased royalty rate, albeit introduced for plausible reasons, negatively affects the finances and production rate of UGV and, if extended for a long period of time, can lead to a sharp reduction in the production of oil and gas in Ukraine.

**Reference:**

1. journal@naftogaz.com

## **SYNERGETICS OF MANUAL AND COMPUTER GRAPHICS IN VISUAL COMMUNICATIONS**

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The visual component of the living environment is one of the priority objects of design creativity. It happens due to the fact that in the process of life a person receives most of the information through visual perception. Creating visual communication objects, the designer uses an arsenal of design tools: from layout to compositional formulation, style formation, conceptual design of the object. The purpose of the design is to provide an environment of human activity with art-shaped information models aimed at the cultural identification of a person. Creating such models, the designer (artist) works with the form, so the processes of shaping in this activity are fundamental. Through design, the designer expresses the basic idea, communicates with the consumer. In the process of searching for methods of shaping in design based on the latest achievements of science and technology, a synergistic approach is becoming actual. It is resulted in giving a form systematic and non-linear nature. Thus, with the problem of applying and combining different types of graphic expression of the form (manual and computer graphics), synergistic effect has become important.

Synergetics originated in the 1970s on the basis of the Theory of Complexity, which is related to the name of the Belgian physicist Illya Prigogin, the theory of catastrophes, founded by mathematician-topologist Rene Tom and theory of Chaos founded by the British physiologist Eduard Lorence. German theoretical physicist Hermann Hacken introduced the concept of synergetics in