



## Serbian oil sector: A new energy policy regulatory framework and development strategies

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### HIGHLIGHT

- ▶ New energy policy regulatory framework significantly complied with EU acquis.
- ▶ Full EU membership requires implementing and enforcing new energy legislation.
- ▶ NIS-Gazpromneft has defined ambitious oil sector's development programmes to 2020.
- ▶ Supply security requires mandatory oil stocks and supply source diversification.

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### ABSTRACT

Serbia has established a great part of new legislative and institutional framework as a basis for all energy sub-sectors' development in compliance with EU energy acquis. Main objectives of Serbian energy policy outlined in the new Energy Law are focused to increasing the energy supply security, energy efficiency, competitiveness of the energy market, use of renewable energy sources and environmental protection. Further steps of Serbia toward full EU membership concerning the new energy policy regulatory framework involve implementing and enforcing legislation. Besides considering the issue of Serbian energy policy and degree of its framework's alignment with the EU acquis, this paper provides an overview of new development strategies in the oil sector. The aim of Gazprom neft, a majority owner of the Petroleum industry of Serbia, is to increase crude oil production to 3 million tonnes, refining and sales volume of petroleum products to 5 million tonnes by 2020. Strategic development projects in crude oil and petroleum products transportation are: petroleum product pipeline construction in Serbia and Pan-European oil pipeline.

The basic prerequisites for oil supply security, regarding the future high dependency of Serbian economy on imported oil, are establishment of the emergency oil stocks and diversification of supply sources.

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## 1. Introduction

### 1.1. Serbian main energy indicators

Energy sector, as the one of the largest sectors in Serbian economy, involves following sub-sectors: mining, oil and gas, electric power, district heating and renewable energy sources.

Serbian energy resources are relatively small with unfavorable structure. The petroleum reserves comprise less than 1% of the total energy reserves, while the remaining 99% involve various types of coal, dominated by 93% of low-quality lignite (Government of the Republic of Serbia, Ministry of Mining and Energy, 2005). The share of coal, as a primary energy resource, in total energy production is about 70%, share of oil and gas is about 14% and the rest 16% comes from renewable energy sources (RES). Hydropower is the only renewable

utilized for electricity generation in Serbia and registered in the official Serbian Energy Balance (Golusin et al., 2010). Serbia has a significant energy potential in other renewable sources, especially biomass, geothermal energy and small hydro sources, but it is negligible exploited (Tescic et al., 2011). The basic Serbian energy indicators for period 2006–2011 are shown in Table 1 (Statistical office of The Republic of Serbia, 2011; University of Belgrade, 2012).

Nowadays, the energy sector in general is characterized by high import energy dependency of 32%, low energy efficiency of 0.96 toe/\$1000 GDP (Serbia 2020, 2010), the consumption of primary energy per capita is about two times below the EU average, and high environmental impact.

### 1.2. Brief review of oil sector's current state

In 2009, majority share package of public joint stock "Naftna Industrija Srbije" (NIS) for exploration, production, refining and trade in crude oil, petroleum products and natural gas, was acquired by the

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**Table 1**  
Main energy indicators.

Parameters	2006	2007	2008	2009	2010	2011
<b>Total primary production (Mtoe)</b>	8.847	8.796	9.441	9.487	10.539	11.073
Solids	7.044	7.120	7.369	7.330	7.228	7.779
Oil	0.655	0.640	0.660	0.686	0.940	1.103
Natural gas	0.210	0.200	0.231	0.232	0.308	0.412
RES	0.938	0.836	1.181	1.239	2.063	1.779
<b>Net import (Mtoe)</b>	5.820	6.140	7.476	6.005	5.211	5.177
Solids	0.955	0.899	0.945	0.619	0.727	0.761
Oil	2.593	2.638	3.074	2.636	2.006	1.457
Oil products	0.635	0.888	0.912	0.903	0.941	1.270
Natural gas	1.660	1.702	1.782	1.401	1.567	1.715
<b>Gross inland consumption (Mtoe)</b>	14.571	14.811	15.620	1.657	15.531	16.186
Solids	7.999	8.019	8.130	8.026	7.751	8.540
Oil	3.764	4.054	4.291	3.956	3.901	3.904
Natural gas	1.870	1.902	2.013	1.550	1.852	1.996
Other	0.938	0.836	1.185	1.126	2.027	1.746
<b>Gross inland consumption/capita in toe/inhabitant</b>	1.955	1.993	2.094	1.973	2.134	2.224
<b>Import dependency, %</b>	40	41	42	33.71	33.55	31.98



**Fig. 1.** Map of oil fields in Serbia (Danilin, 2011).

Russian company Gazprom Neft. Today, Gazprom Neft owns 56% of shares, 30% is in ownership of the Republic of Serbia and the 14% belongs to the 3 million shareholders. NIS' shares are listed at Belgrade Stock Exchange (NIS, 2010a). The only remaining publicly owned section is transport of oil and oil derivatives that is managed by public enterprise "Transnafta" founded in 2005.

Since the beginning of oil production in 1950 s, about 46 million tonnes has been produced from domestic oil fields mainly at the northern part of the country named Vojvodina, Fig. 1.

In 2011, the average daily oil production from 742 active wells was 3.5 t per well. Despite a significant increase in crude oil production in last two years, after almost three decade of decline, Serbia is still highly dependent on oil import (70%). Oil production trend for the last ten years is given in Fig. 2.

In order to further increase the oil production and current small producing reserves of 10.5 million tonnes, the new oil exploring and production domestic projects, as well as concessional projects in Bosnia and Herzegovina, Hungary and Romania are underway.

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