
**Влияние утилизации попутного нефтяного газа
на финансовые показатели и капитализацию российских нефтяных компаний**

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**Impact of associated gas utilization on
financial performance and capitalization of oil companies**

Nadia Kazakova, CFA

Май, 2007

Associated gas utilization: short-term pain vs long-term gain

- Associated gas industry in Russia

Associated gas output accounts for 4% of total hydro-carbon production

Substantial volumes of gas are flared or re-injected due to limited processing capacity

Associated gas prices are lagging behind natural gas prices

- Very low level of disclosure by state and companies

No or little disclosure on level of associated gas utilization and sales

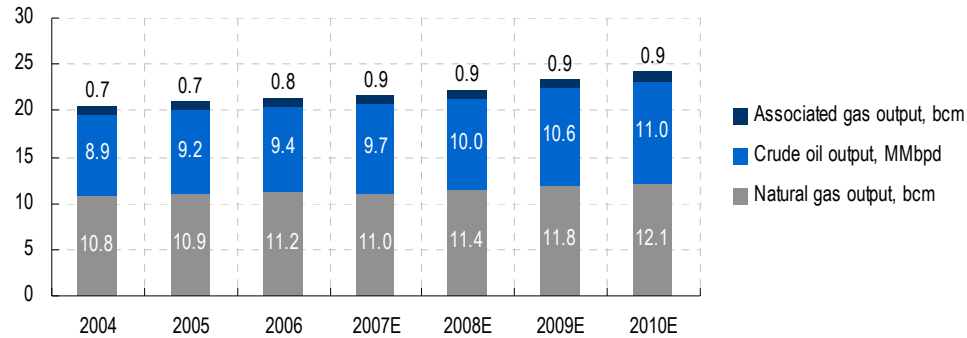
No openly available governmental statistics on associated gas utilization

Long-term investments in the sector are impeded by uncertainty over returns, prices and taxation

- **Associated gas processing is value accretive long-term, but state imposed fines and penalties might become short-term solution to the problem**

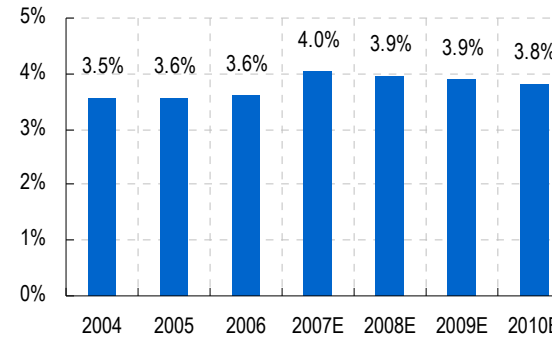
Associated gas industry in Russia: a step daughter of the oil industry

Hydro-carbon output in Russia, MMbpd



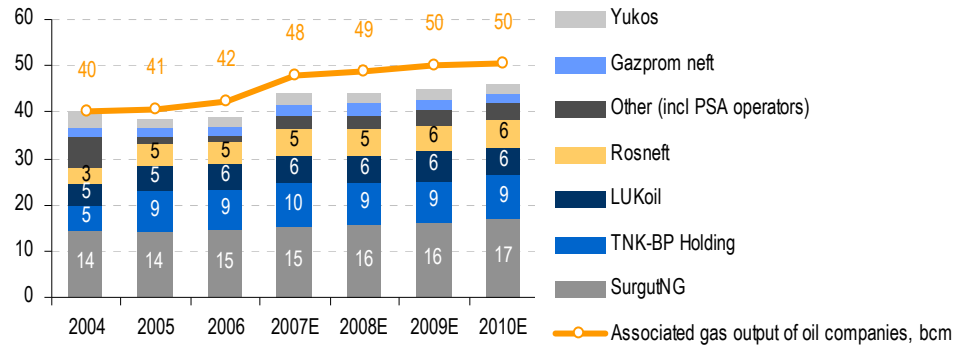
Source: MDM estimate

Associated gas output as % of total hydrocarbon output



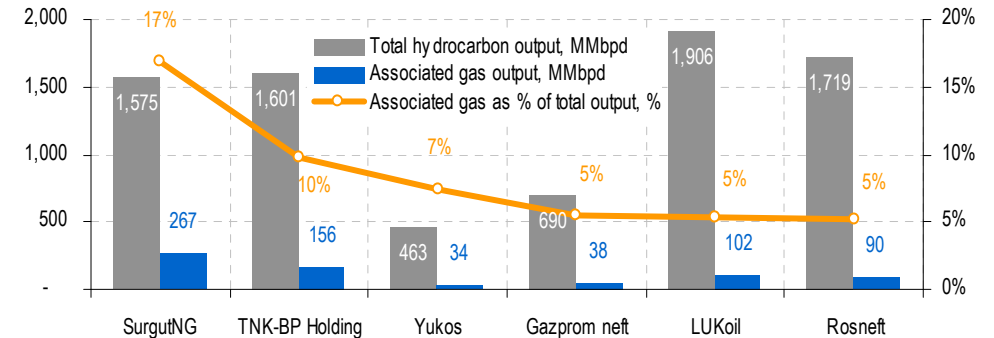
Source: MDM estimate

Associated gas output by company, bcm



Source: Company data, MDM estimates

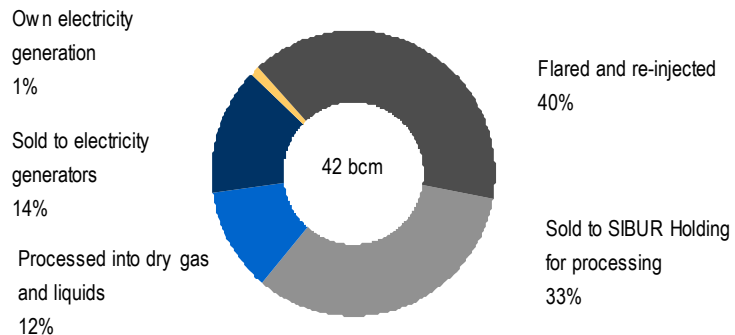
Associated gas output as % of total hydrocarbon output



Source: Company data, MDM estimates

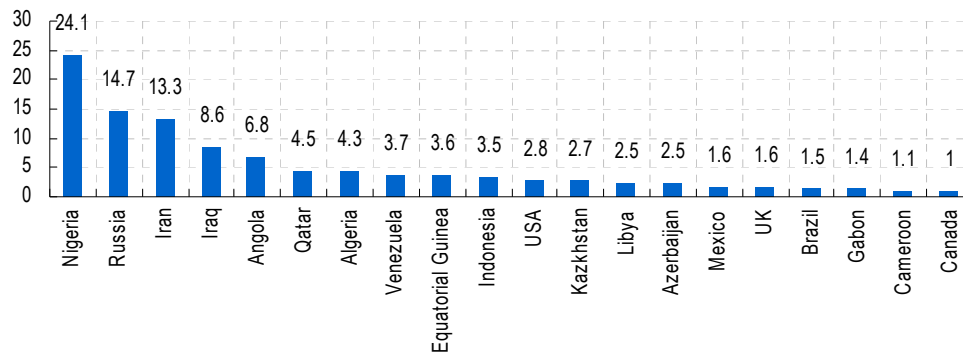
Associated gas usage: Low level of utilization is inevitable

Associated gas utilization in Russia, 2006E



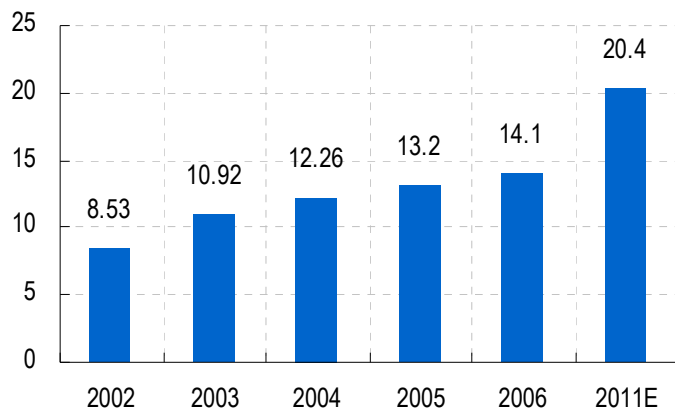
Source: InfoTEK, MDM estimate

Reported associated gas flaring in 2004, bcm



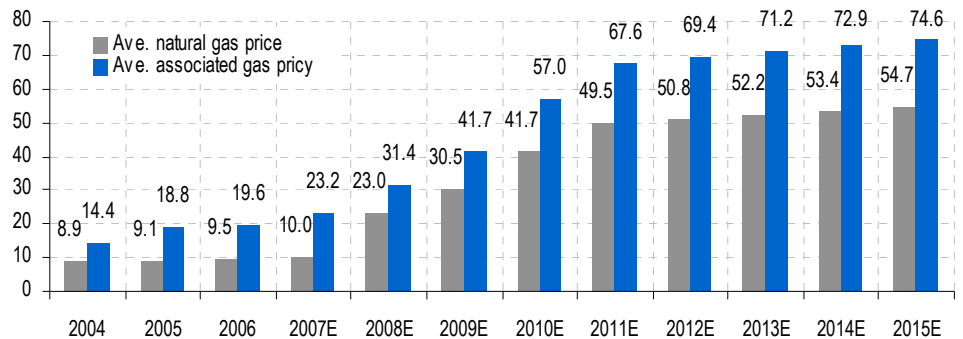
Source: <http://www.worldbank.org>

Associated gas purchased by SIBUR Holding, bcm



Source: SIBUR Holding, MDM estimates

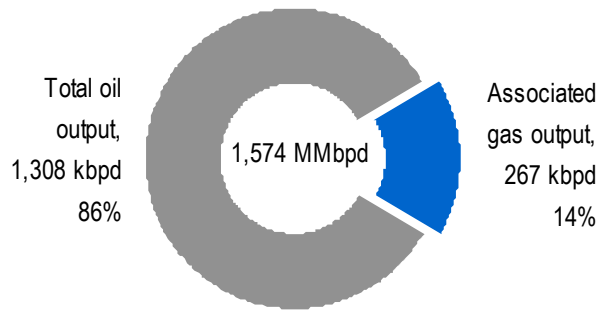
Associated and natural gas prices, USD/mcm (excluding delivery)



Source: MDM estimates

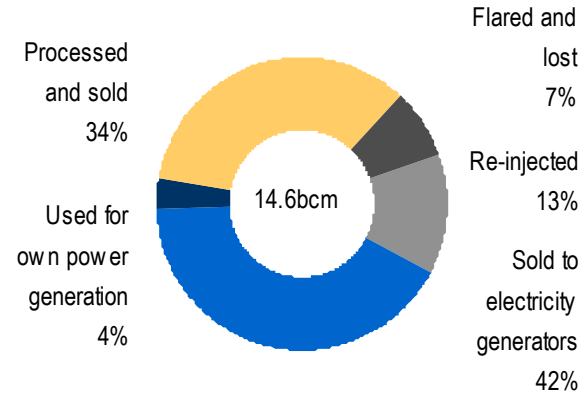
SurgutNG – the leader of the associated gas utilization

Total hydro-carbon output in 2006E, kbpd



Source: InfoTEK, MDM estimates

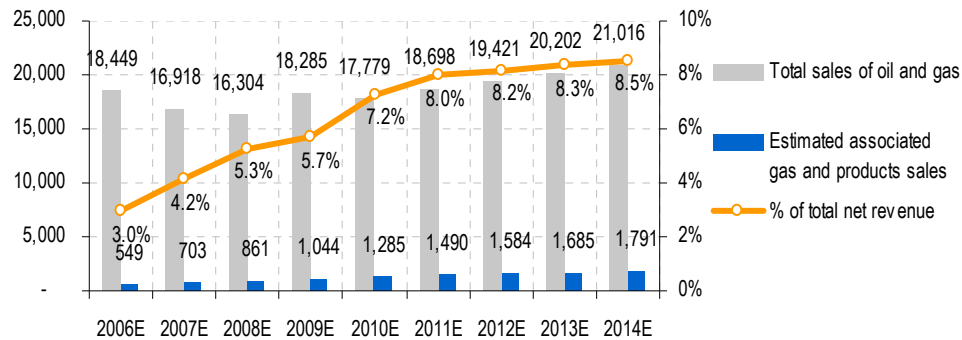
Associated gas utilization in 2006E, %



Result of ownership and modernization of Surgut GPP

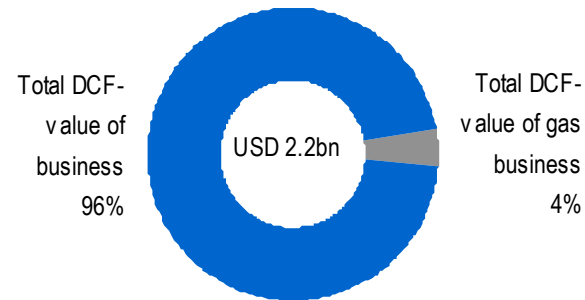
Source: MDM estimates

Associated gas revenues in total net revenues, USD mn



Source: MDM estimates

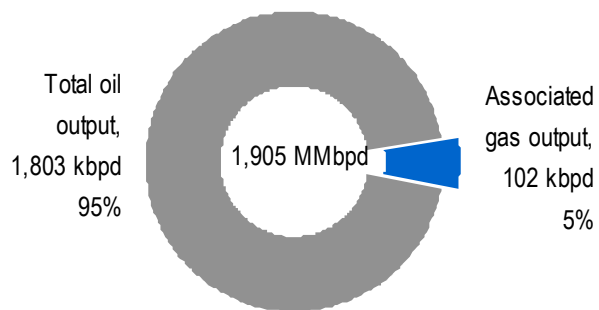
SurgutNG gas business value, USD bn



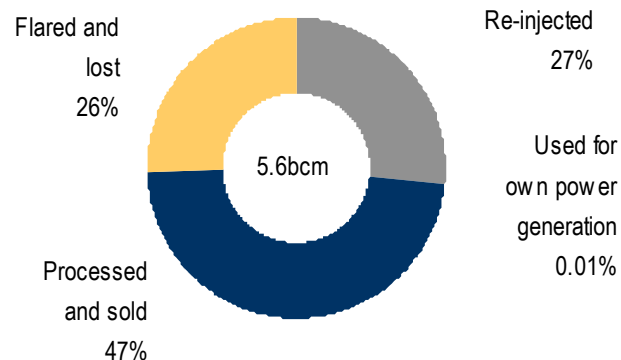
Source: MDM estimates

LUKoil: own processing capacity increases the value

Total hydro-carbon output in 2006E, kbpd



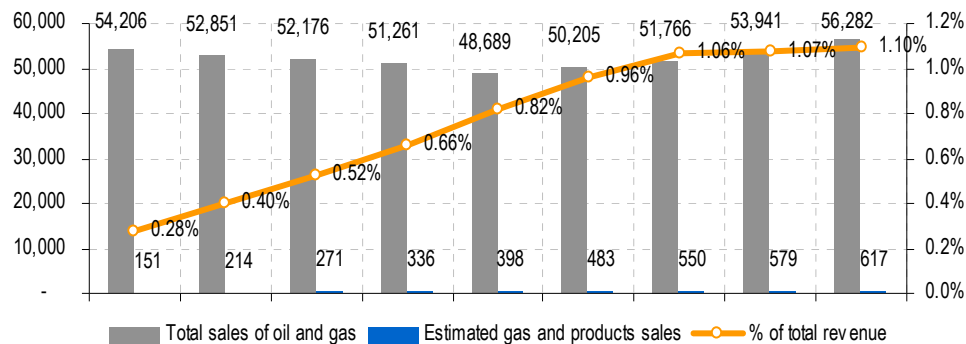
Associated gas utilization in 2006E, %



Source: MDM estimate

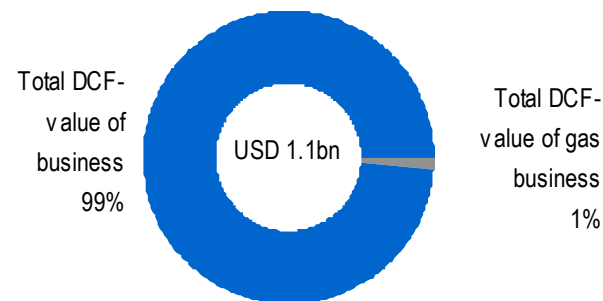
Source: MDM estimate

Associated gas revenues in total net revenues, USD mn



Source: MDM estimates

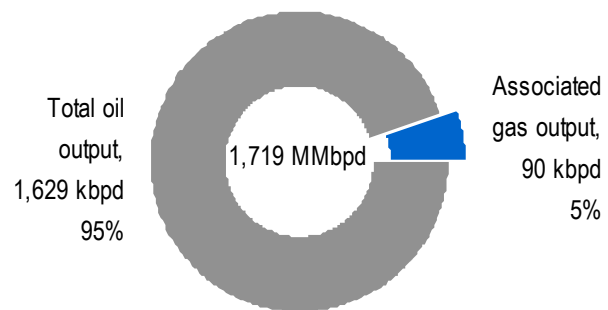
LUKoil gas business value, USD bn



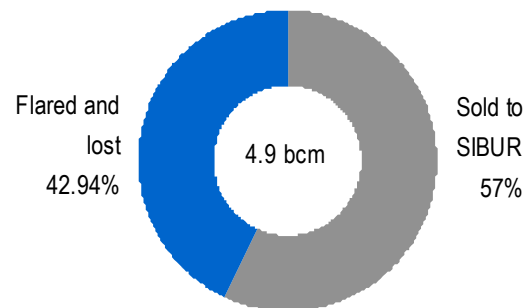
Source: MDM estimates

Rosneft: sales to SIBUR Holding should increase

Total hydro-carbon output in 2006E, kbpd



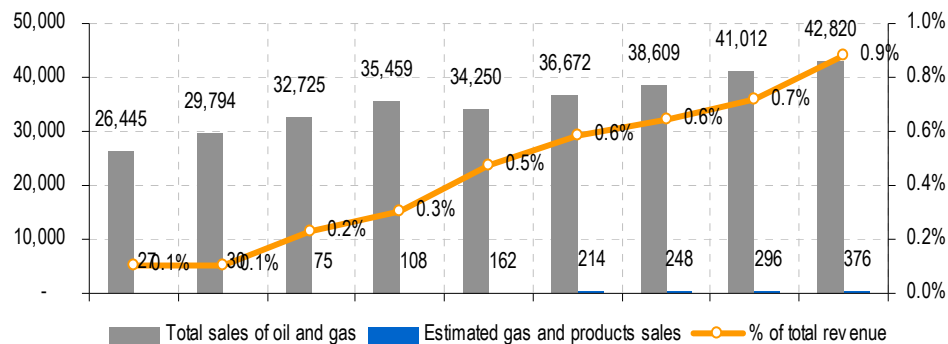
Associated gas utilization in 2006E, %



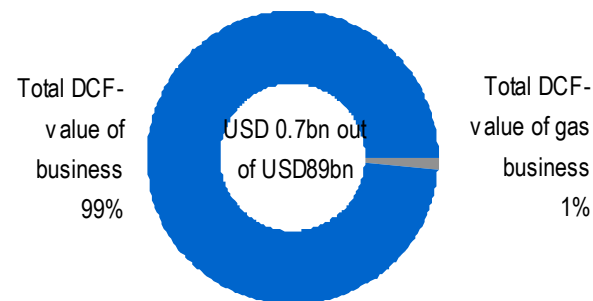
Source: MDM estimate

Source: MDM estimate

Associated gas revenues in total net revenues, USD mn



Rosneft gas business value, USD bn

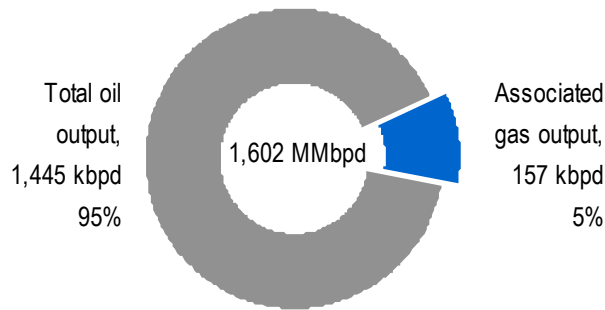


Source: MDM estimates

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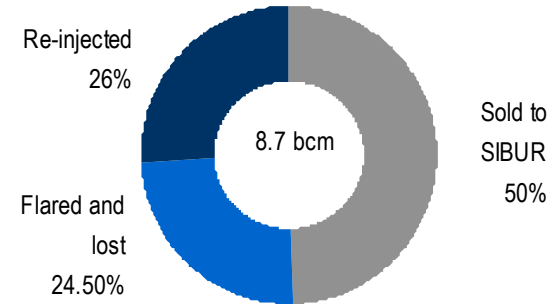
TNK-BP Holding: USD500mn investments should pay off

Total hydro-carbon output in 2006E, kbpd



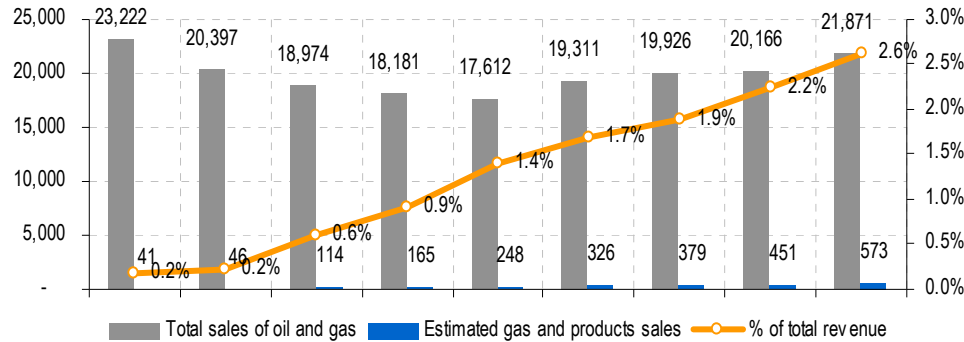
Source: MDM estimates

Associated gas utilization in 2006E, %



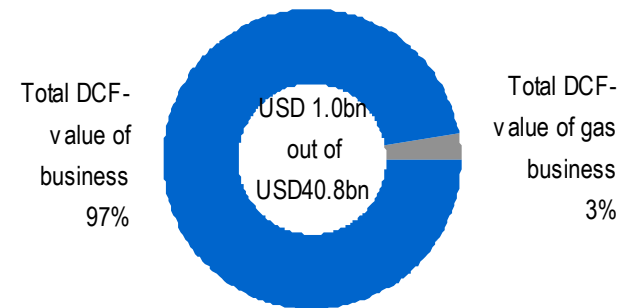
Source: MDM estimates

Associated gas revenues in total net revenues, USD mn



Source: MDM estimates

TNK-BP Holding gas business value, USD bn



Source: Gazprom, MDM estimates

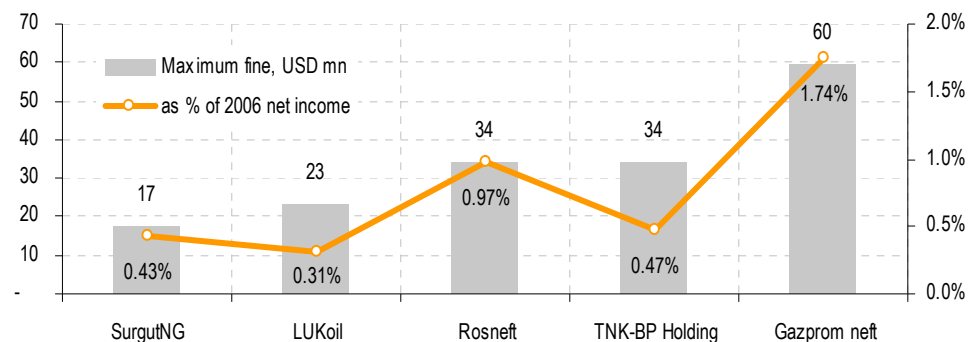
Fines and license withdrawals are short-term risk

License violation statistics in Khanty-Mansiysk region in 2005

Oil company	Number of licenses	Compliance with license requirements on rates of associated gas usage		
		Complete compliance	5% compliance	Non-compliance
LUKoil-West Siberia	44	4	15	25
SurgutNG	34	18	1	15
TNK-BP	32	7	4	21
Yuganskneftegaz	26	9	8	9
Slavneft-Megionneftegaz	12	2	1	9
Russneft	9	1	0	8
Tomskneft	7	4	0	3
Gazprom neft	5	0	1	4
Other oil companies	44	10	4	30
Total in the Khanty-Mansiysk region	213	55	34	124
Rate of compliance		26%	16%	58%

Source: IEA

Maximum fines for associated gas flaring, USD/mcm



Source: MDM estimates

- President Putin's address calls for higher utilization of associated gas
- Meeting at Ministry of Natural Resources in May
- Legislation, administrative measures to follow – license withdrawal threat could reduce capitalization sharply, especially for private and small oil producers

Conclusion

- Associated gas business accounts for 1-4% of fair market value
- Investments in natural gas utilization will pay off if prices increase but taxation remains favourable
- Penalties and license withdrawal threat is short-term risk for private and small oil producers

Appendix: Associated gas flaring legislation

■ **Associated Gas Usage**

The Russian State owns all mineral resources, and licenses, issued jointly by the Ministry of Natural Resources and the regional authorities, are required to extract oil, natural gas, and associated gas. Licensed operators may lift, process, and market associated gas and use associated gas in operations or re-inject or flare gas

■ **Permission to Flare**

Gas flaring restrictions vary from region to region as the federal Mineral Resource Act, which sets standard license terms, does not require the condition on associated gas flaring and usage to be included in the oil production license or license agreement. The issue of dealing with gas flaring has been left to the regional authorities.

- Khanty-Mansijsk set a mandatory 5 percent cap on gas flaring (95 percent of associated gas has to be used). However, this 5 percent limit might be increased if the operator's feasibility study can prove this threshold is unrealistic. Often oil companies opt not to negotiate for a higher limit since their compliance with the gas flaring condition is unlikely to be scrupulously monitored.

■ **Flaring Restrictions and Penalties**

The Resolution of the Federal Government No. 344 from June 12, 2003, lists pollutants and corresponding pollution fees producers have to pay. The list includes SOX, NOX, sulfur, and ashes, but not CO2.

■ **Monitoring and Reporting**

In theory the licensed operators are supervised by both the Ministry of Natural Resources and regional authorities, and either of the two can initiate license withdrawal in case of noncompliance with a condition stipulated in the license. To date neither regional authorities nor the ministry have revoked any license because of excessive gas flaring.

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