



A RECOGNIZED INDEPENDENT CENTRE OF THE UNIVERSITY OF OXFORD



Progress of gas market reform in Ukraine, 2017

Simon Pirani

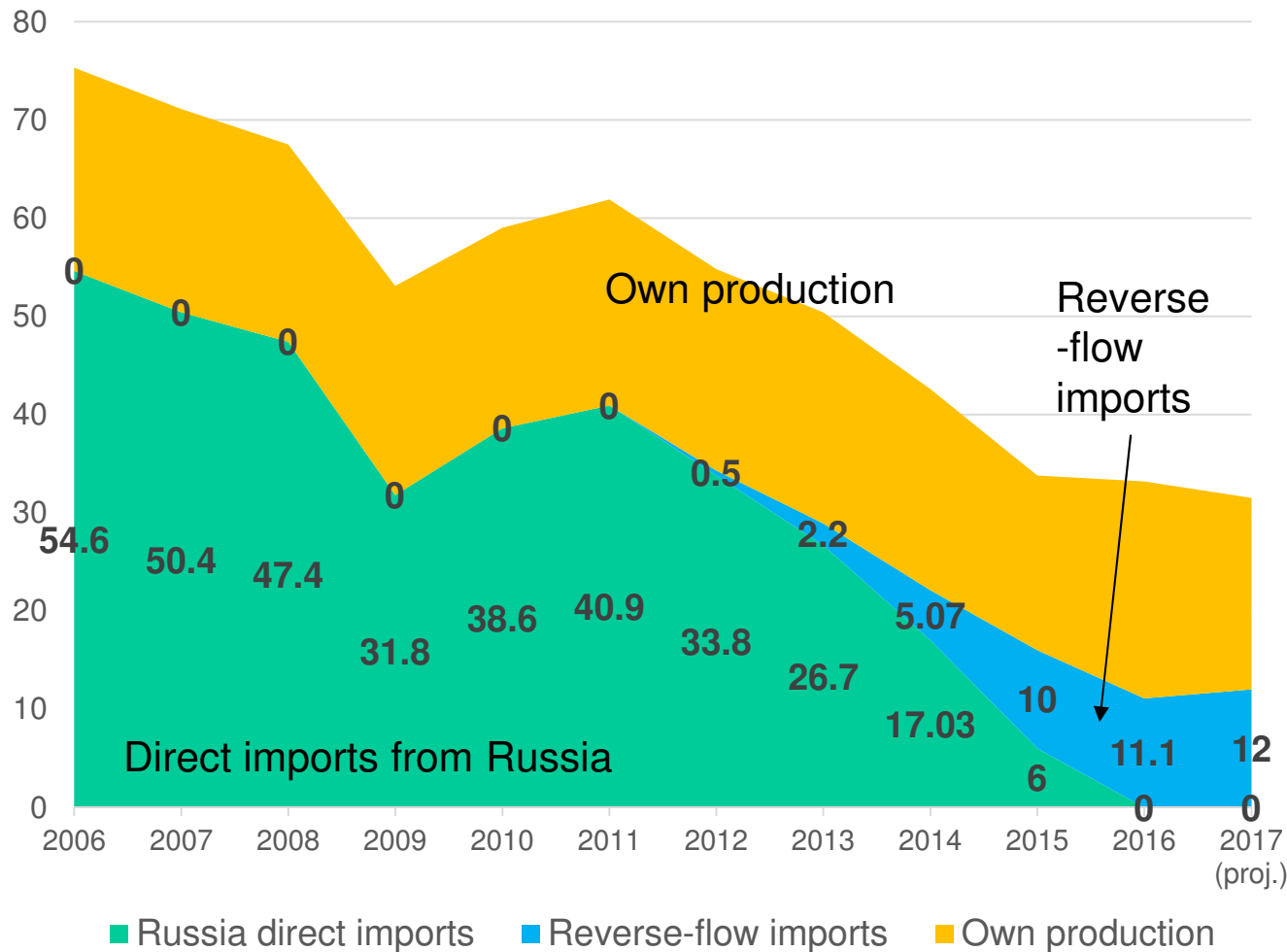
**Senior Visiting Research Fellow,
Oxford Institute for Energy Studies**

ENERGETIKA CONFERENCE, ST PETERSBURG – NOVEMBER 2017



Overview. Direct imports from Russia hit zero in 2016, and could stay there

Ukrainian gas supply, bcm, 2006-16



Note. These are estimates, net of storage injections and withdrawals

■ The main reason for low imports is the collapse of demand

■ There is a political preference by Ukraine and IFIs for reverse-flow

■ ... and domestic production is holding up



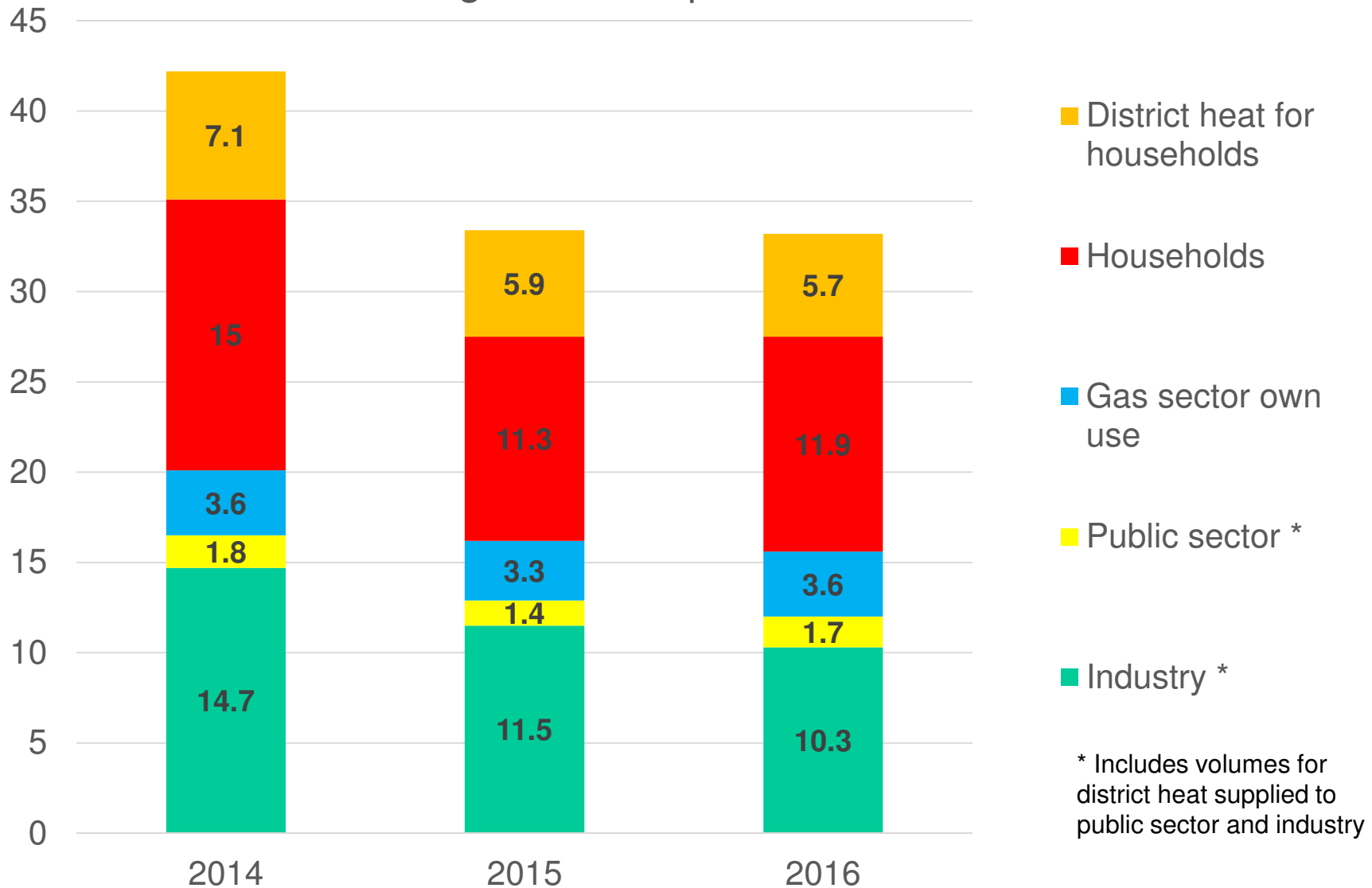
Overview. Ukraine's economy is out of recession, but remains in trouble

- GDP grew by 2.3% in 2016, after plunging for two years in succession (–6.6% in 2013, –9.9% in 2014).
- The state finances are increasingly dependent on an IMF lending programme, which comes with reform-related strings attached.
- A high-profile anti-corruption campaign is producing some results.
- The conflict in the east is unresolved, and shows no signs of being resolved. A blockade of the separatist-controlled areas, initiated by nationalist politicians early this year, has now been implemented by government.
- The blockade has (1) caused a serious shortage of coal (anthracite for power stations) and (2) destroyed progress on industrial recovery



Gas demand: will it rebound now?

Ukraine gas consumption, 2014-16, bcm





Demand: sector specifics

- Industry. Prices are at import parity and efficiency gains have been made. Factors to watch: conflict in the east and blockade; fate of chemical fertiliser plants.
- Gas industry own use. Ukrtransgaz now tendering for purchases of fuel gas. Factor to watch: fate of the transit business.
- Residential and district heating. Regulated tariffs have come close to import parity (due to low European gas prices) – but most recent rise in tariffs (1 April) was “postponed”. Price liberalisation is due in Q1 2018, but is not guaranteed.
- Power sector. Almost all Ukrainian electricity is from coal, nuclear and hydro. Could a prolonged coal shortage boost gas demand?

2017 reported domestic prices for industrial customers, per mcm.
Jan 7551.60 hry (€252.05); Feb 9214.80 hry (€307.58); Mar 8553.60 hry (€285.50);
April 7675 hry (€256.18); May 7457 hry (€248.89); June 7430 hry (€248.90)

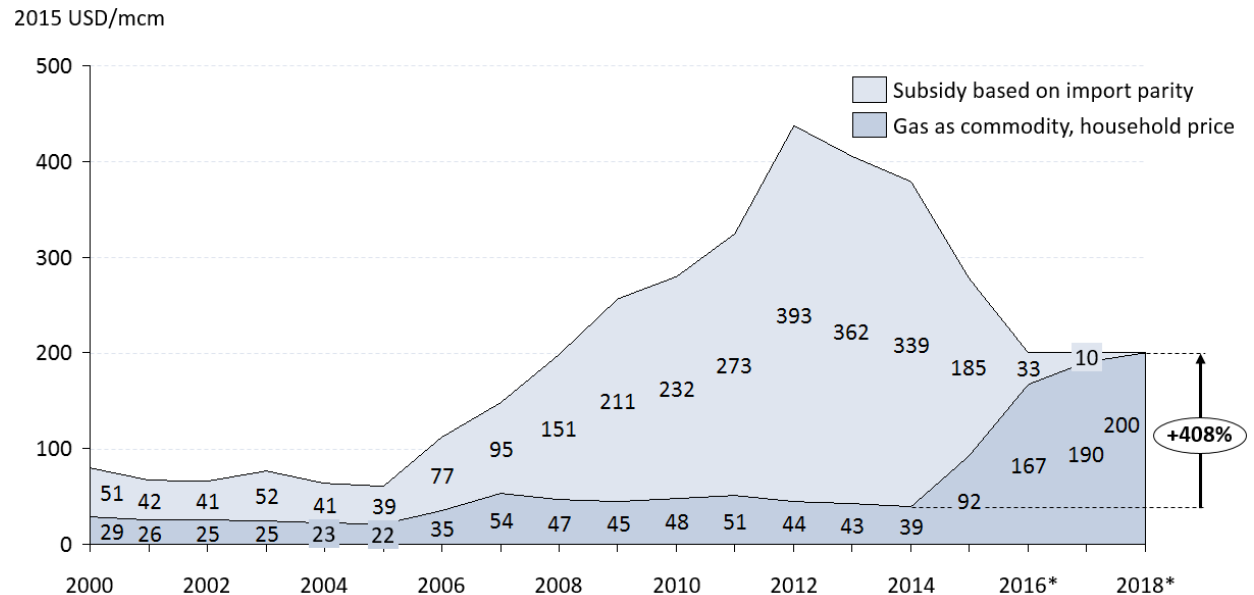
Conclusions from OIES paper by Tordengren & Rozwalka (2016)

Implicit gas subsidies are cancelled

- Gas prices in dollars held close to constant from 2008 up until 2014
- Ukrainian import prices were rising rapidly, increasing the size of the subsidy required to finance the imports
- Between 2014 and 2016, domestic prices for gas were increased rapidly while market prices were plunging

From May 2016, Ukrainian household gas prices have been raised to market levels

Household gas prices and size of subsidies, 2000 - 2018



Source: Author's own calculations and Naftogaz.

Note: In 2015, the share of the gas imported from Russia and Europe at the prices represented in the figure constitutes only around half of the total gas consumed in Ukraine. The other half was sourced domestically and sold below market value to Ukrainian households.








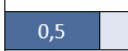


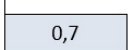
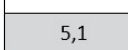

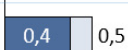


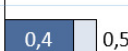

Consumption decline from energy efficiency investments

The gas price increases create incentives for energy efficiency investments:

- Individual houses: more efficient boilers and investments in heat insulation
- Apartment blocks: heat meters in each house
- District Heating Companies – replacement of gas boilers and pipes

Estimated savings are 2.4 bcm/year in the short term (2020) and 4.3 bcm/year in the long term, as compared to the 2014 level.

Estimate of gas savings in a medium scenario, long and short term

Where	What	Gas savings (bcm/y)	Investment (\$bn)	Investment efficiency (cm/US\$)
	More efficient gas boilers	 0,4 0,5	 1,2	0.43
	Modernization individual houses	 0,7 1,4	 4,2 8,4	0.16
	Heat meters with temperature regulators	 0,5 0,7	 2,2	0.33
	Modernization residential houses	 0,7 0,7	 5,1 5,1	0.14
	More efficient gas boilers	 0,4 0,5	 0,8 1,0	0.48
	Pipes replacement	 0,4 0,5	 1,1 1,5	0.35
Total (short term)		2.4 bcm	\$8.6bn	
Total (short + long term)		4.3 bcm	\$19.4bn	

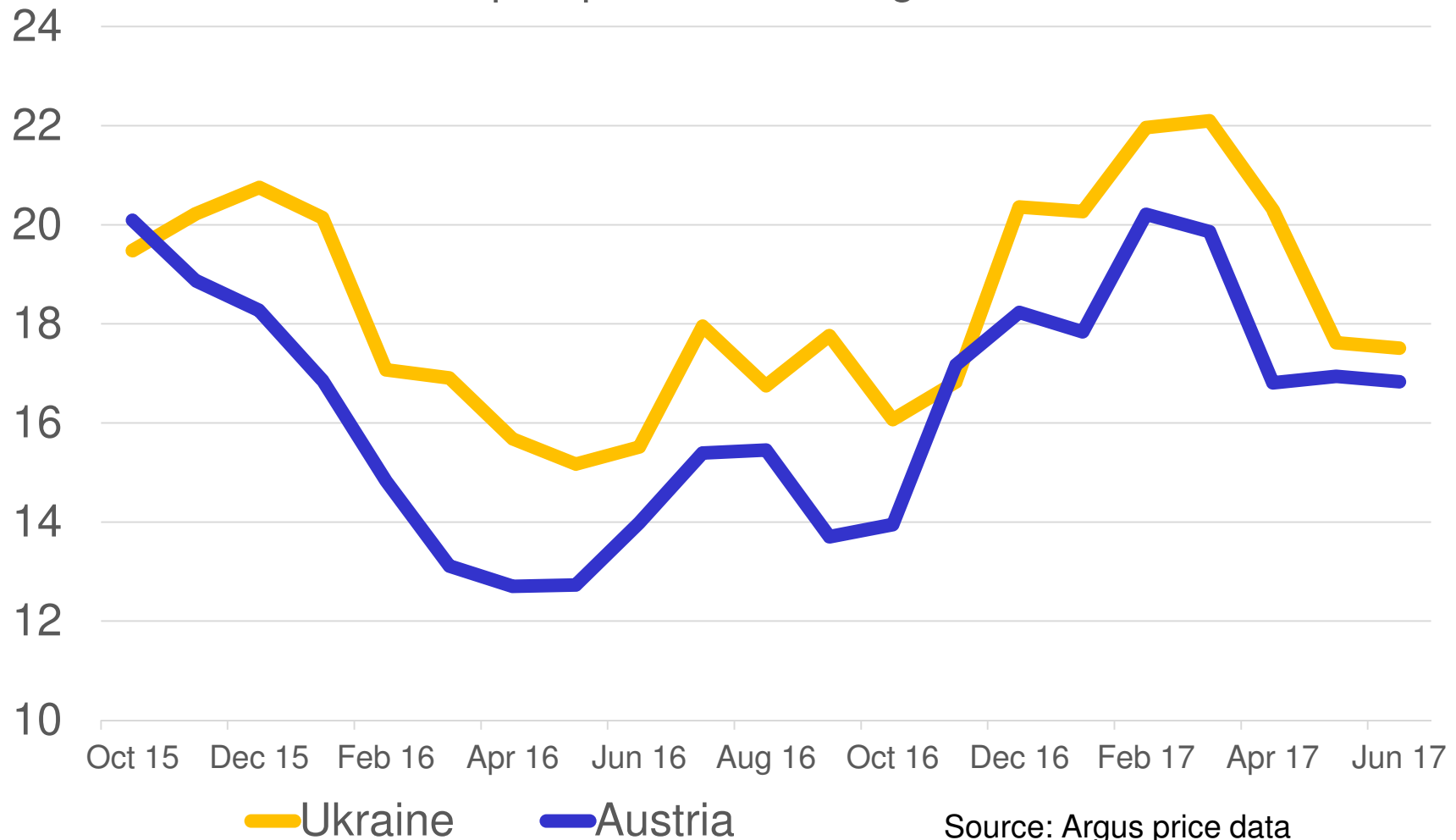
Short term (2020)
 Long term (2025)

Source: Own scenario estimates based on data from the Ministry of Regional Development and Naftogaz.



Supply. Ukraine import prices are moving to Baumgarten-plus

Ukraine import prices vs Baumgarten, €/mwh



Domestic supply: a traded, but still difficult, market



- In 2016, 26% of gas was imported by private traders (2015, 7%) and 90% of sales to industry were by private traders (2015, 78%). (Naftogaz Ukrainy figures.)
- Market reform has responded to traders' requirements. Stock reserve requirement cancelled; currency controls loosened; transport access problems ironed out.
- No exchange trading; no daily balancing. Export/re-export permitted (post Stockholm decision) on paper, but regulation missing (e.g. on exit tariffs).
- IMF pushing for monetisation of household/district heating sector. Reforms have a long way to go.
- District gas companies remain unreformed.



Domestic production: reforms take effect, but slowly

- Post-2014, oil majors (Shell, Chevron, Exxon, RWE) quit or nearly quit Ukraine; first generation of PSAs were put on ice. Crimea annexation has scuppered Black Sea offshore projects.
- Against expectations, production has been stable (20.1 bcm in 2016).
- Ukrgezvydobuvannya (14.6 bcm produced in 2016). New management; upstream development programme has stimulated market for drilling services.
- Non-Naftogaz producers can increase output most rapidly (4.2 bcm produced in 2016).
- Producers want to replace royalties with profit tax. The dialogue with government continues



Market reforms only going one way ... but how fast?

- A new energy regulator is now in place (from Nov 2016), but has much to do. Gas market law (October 2015) has now been followed by electricity market law (early 2017).
- Gas market rules need developing. Full price liberalisation due April 2018.
- IMF has been more effective at pushing things than business-government dialogue. “Ukraine has done more in the past year than the previous 20 years”, according to M. Sefcovic (June 2017).
- Corporate reform and break-up of Naftogaz. The crucial step of unbundling the transport business can not be taken until the Stockholm process is complete.
- The unbundling plan requires creation of TSO and attraction of international investor.



Outlook for self-sufficiency and exports

- **Naftogaz projections for consumption:**
 - 2017, 31.5 bcm
 - 2018, 30.1 bcm (31.8 bcm if energy efficiency low)
 - 2019, 28.7 bcm (31.4 bcm if energy efficiency low)
 - 2020, 27.1 bcm (30.2 bcm if energy efficiency low)
- **Naftogaz projection for production:**
 - 2020, 27.5 bcm. (*NB – this implies substantial change*)
- **What could alter the parameters?**
 - Rapid industrial recovery and/or resolution of conflict ...
 - Economic deterioration and/or return to recession ...
- **Ukrainian self-sufficiency in gas is possible in the 2020s.**
- **The question of export may really be a question about re-export ...**

THANK YOU!