



EUROJÄRJESTELMÄ
EUROSYSTEMET

Links Between Economic Growth and Energy Consumption in Russia

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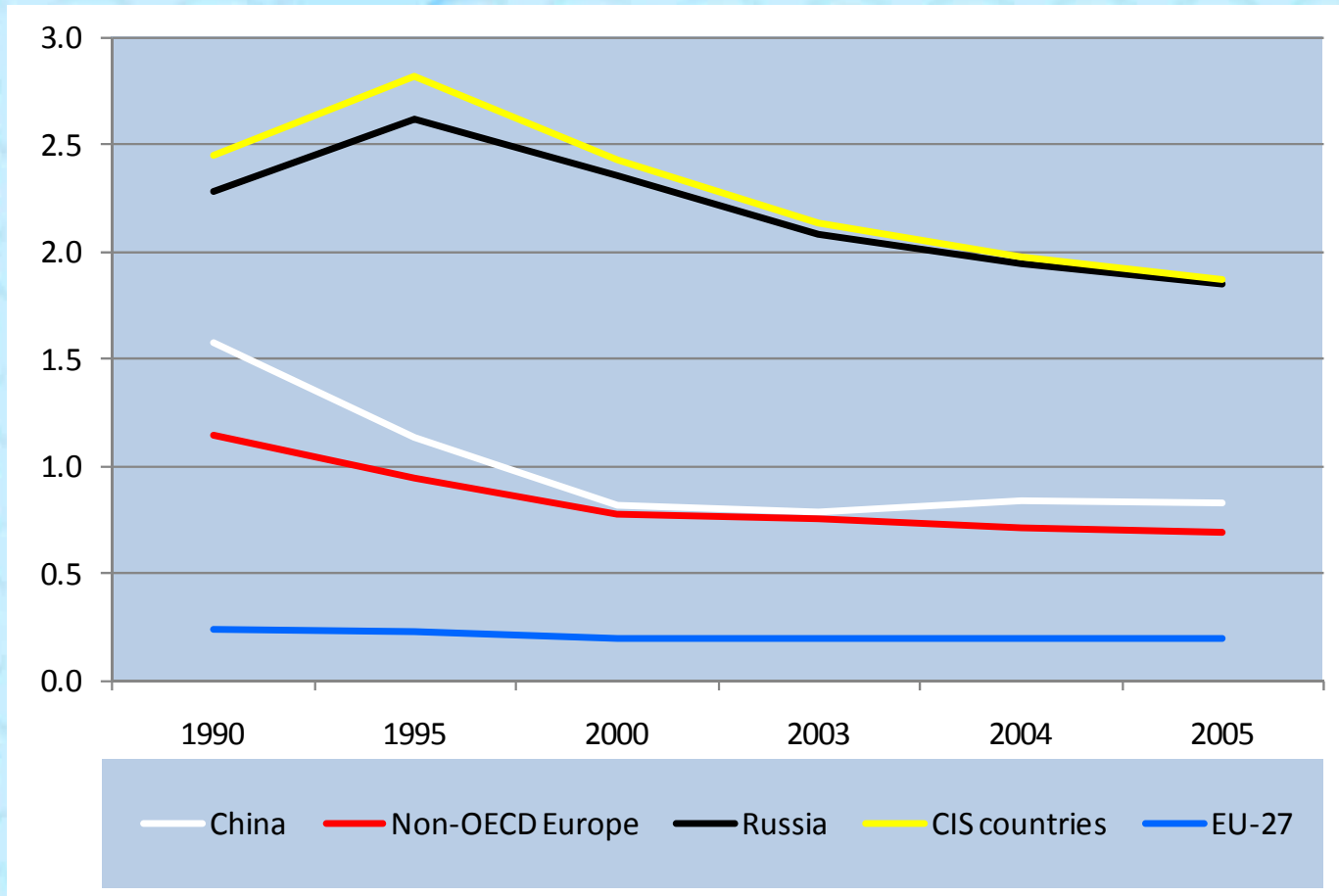
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Energy Saving and Energy Efficiency at the Forefront

- ◆ "Energy efficiency is such a topical and also for us painful issue that practically any work on that theme must be seen as very, very important. And wherever we look, we see a crucial lagging behind." D. Medvedev 2 July 2009
- ◆ The draft Energy Strategy until 2030 – perhaps to be passed in 2010 – is the first one emphasising saving and efficiency
- ◆ The time for emphasis on new energy sources has (perhaps realistically) not yet come

Russia is notoriously energy inefficient

- total primary energy supply / GDP



Source: IEA 2007

Decomposing energy inefficiency

- ◆ One estimate used by Russian government decomposes energy inefficiency in late Soviet period into
 - ◆ 45 per cent structure of production
 - ◆ 35 per cent technology
 - ◆ 20 per cent others, including climate, low capacity utilisation etc
- ◆ Thus, improving energy efficiency is both an issue of modernisation, better technologies and economic growth; higher prices alone do not suffice

Russia's revenues come from resources

- ◆ Recently:
- ◆ 2/3 of export revenue
- ◆ Almost ½ of public sector revenue, mostly export tariffs
- ◆ Some 20-30 per cent of national income (GDP)

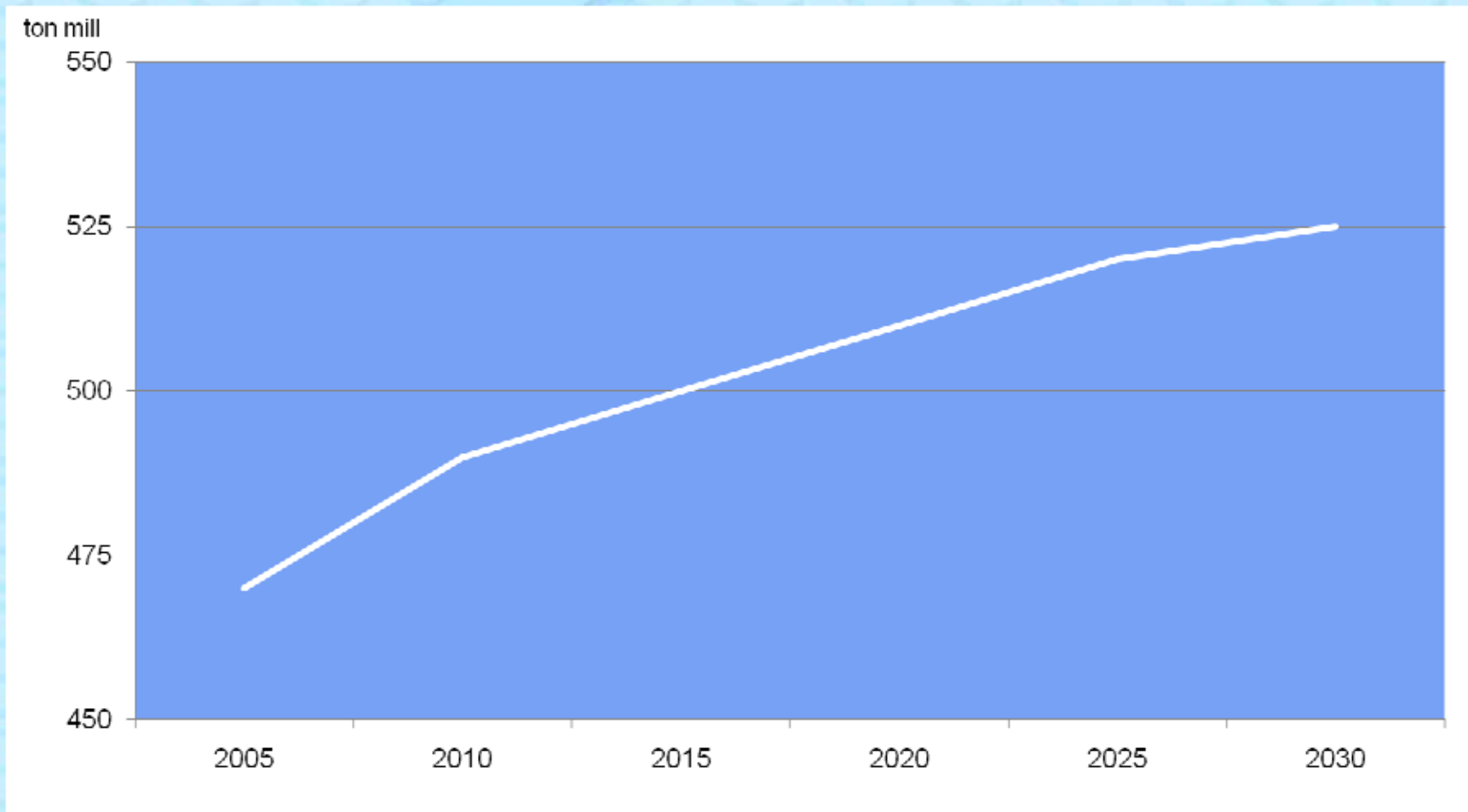
- ◆ None of this is about to change

- ◆ Therefore, maintaining existing export capacity is no 1 task in the economy

The problem being

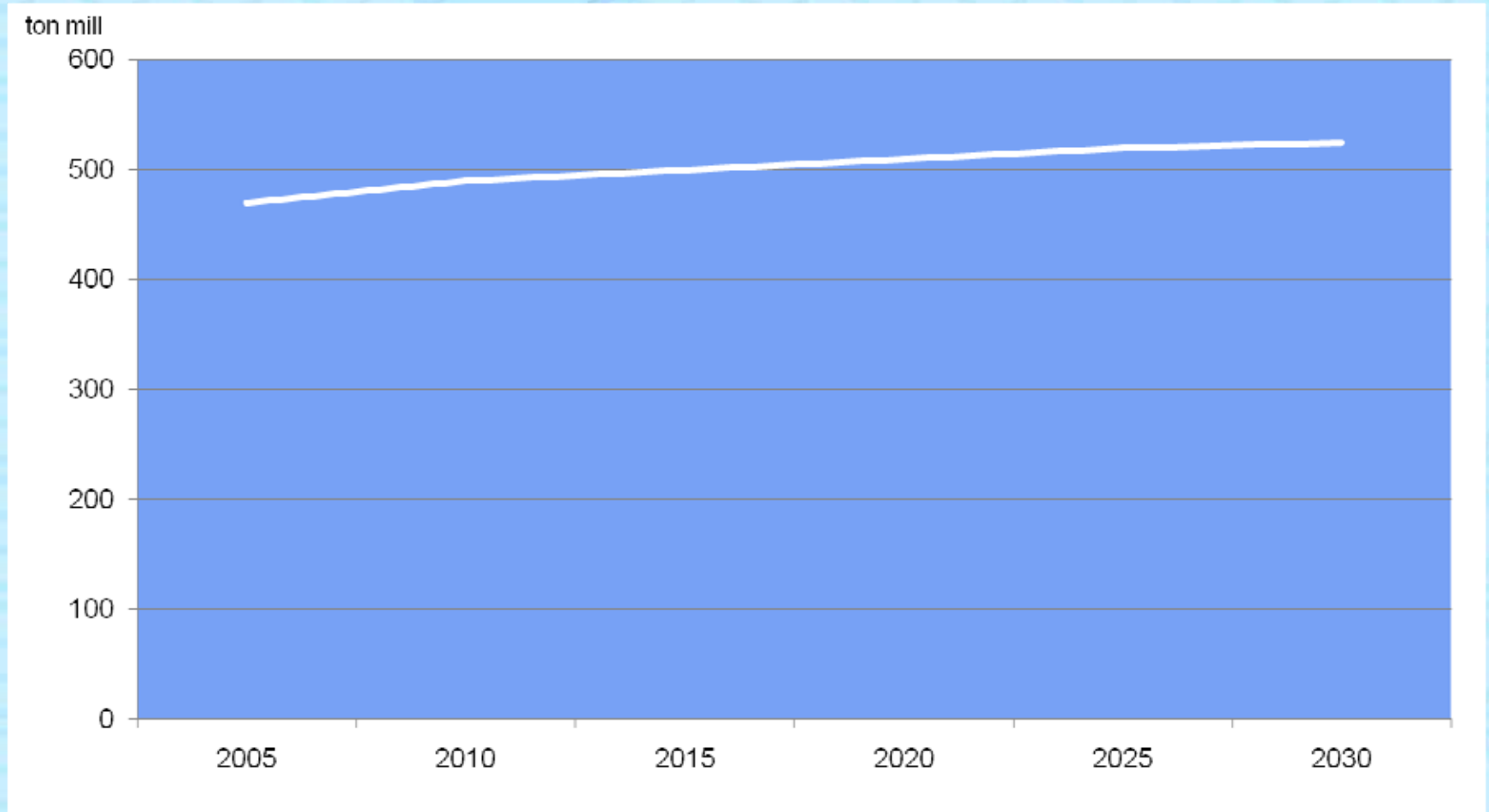
- ◆ Primary energy production will grow at best slowly
- ◆ Key unknowables being Yamal (climate change?) and Shtokman (2020s?)
- ◆ There are (unknown) limits on gas imports from Central Asia
- ◆ Economic growth resuming makes increased energy consumption basically inevitable
- ◆ So, maintaining export volumes depends on energy efficiency

MinEnergy's optimistical forecast for crude oil production: some 10% over 25 years



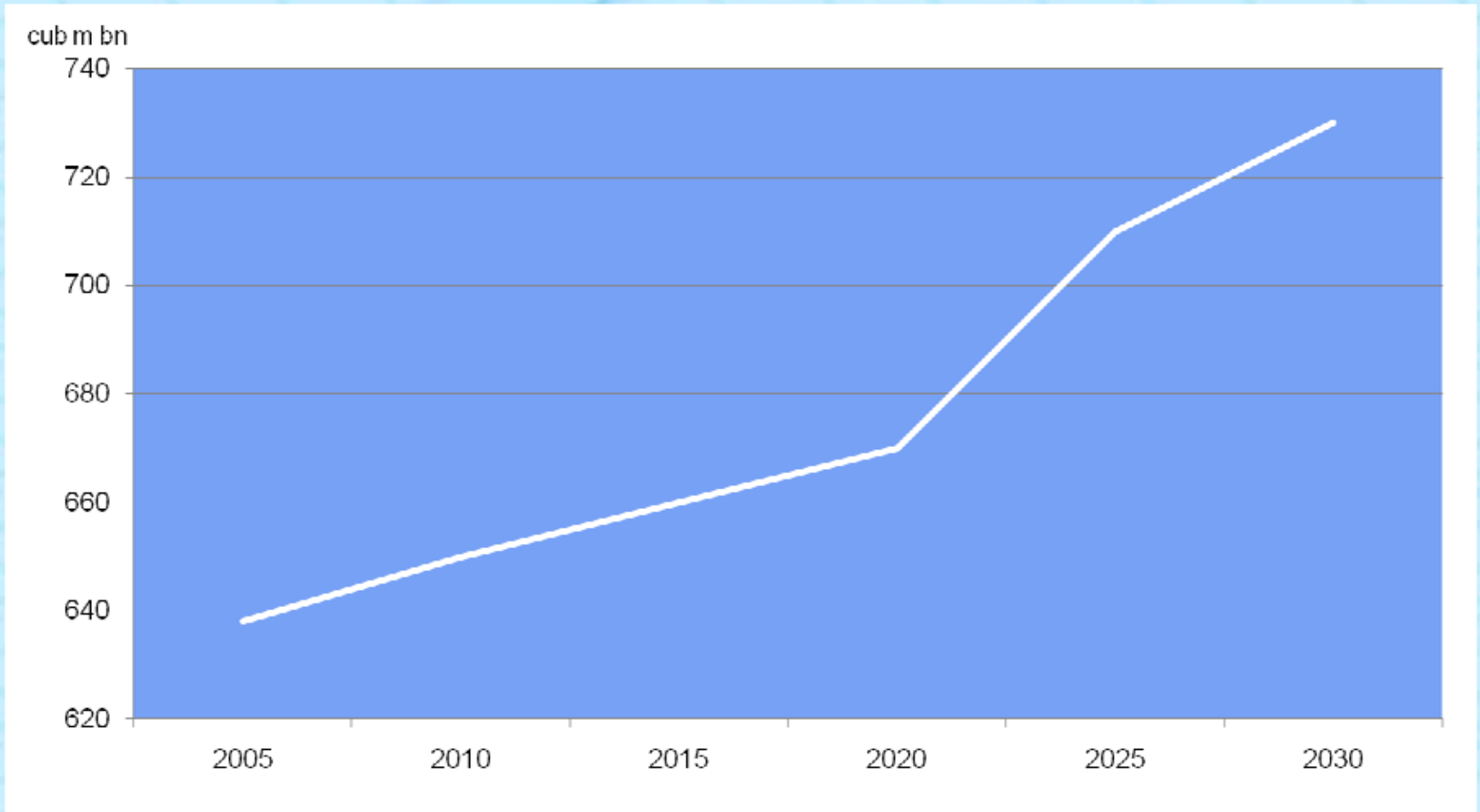
Source: MinEnergy

Seen in another light



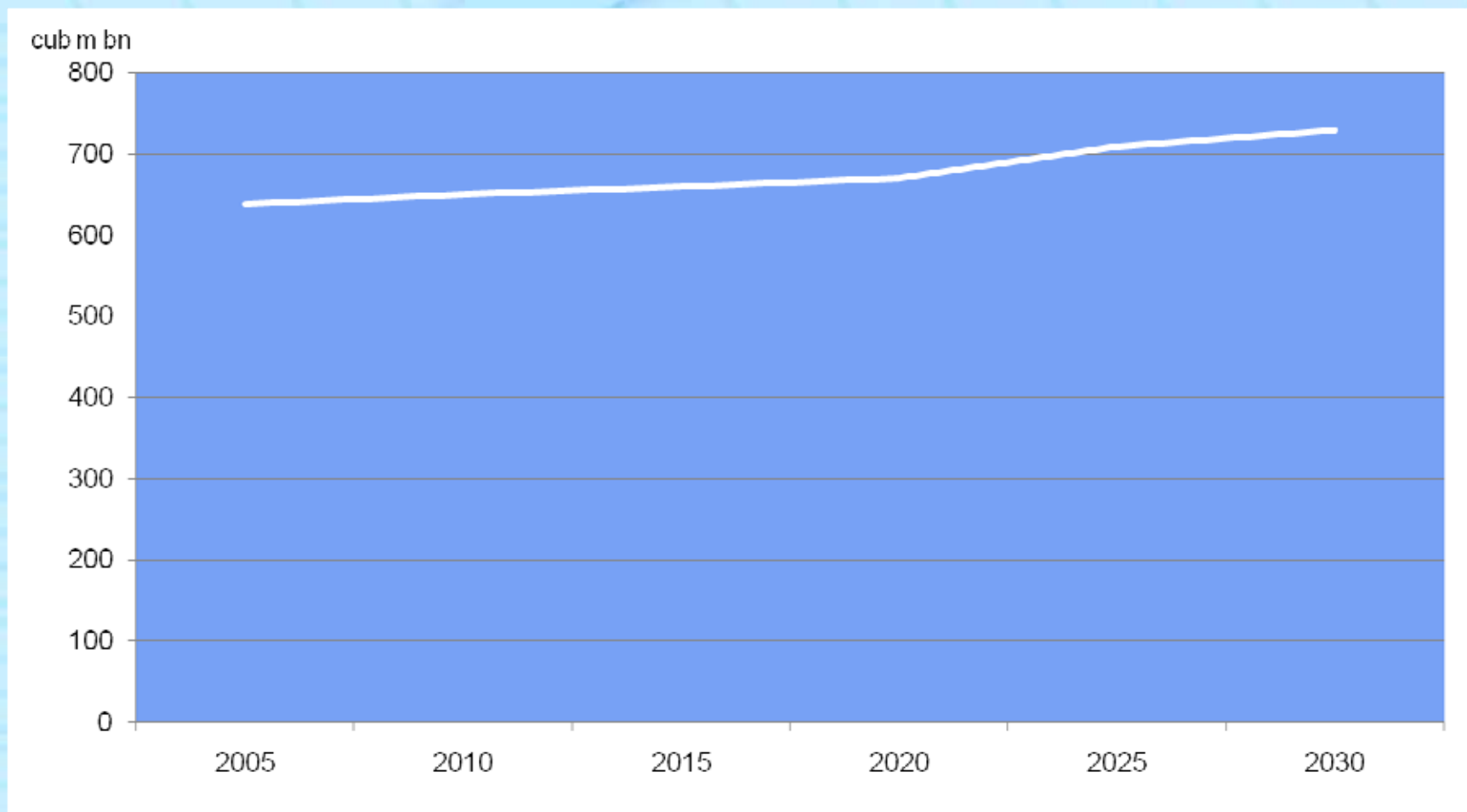
Source: MinEnergy

MinEnergy's optimistical forecast for natural gas production: some 15 % over 25 years



Source: MinEnergy

Again, seen in another light

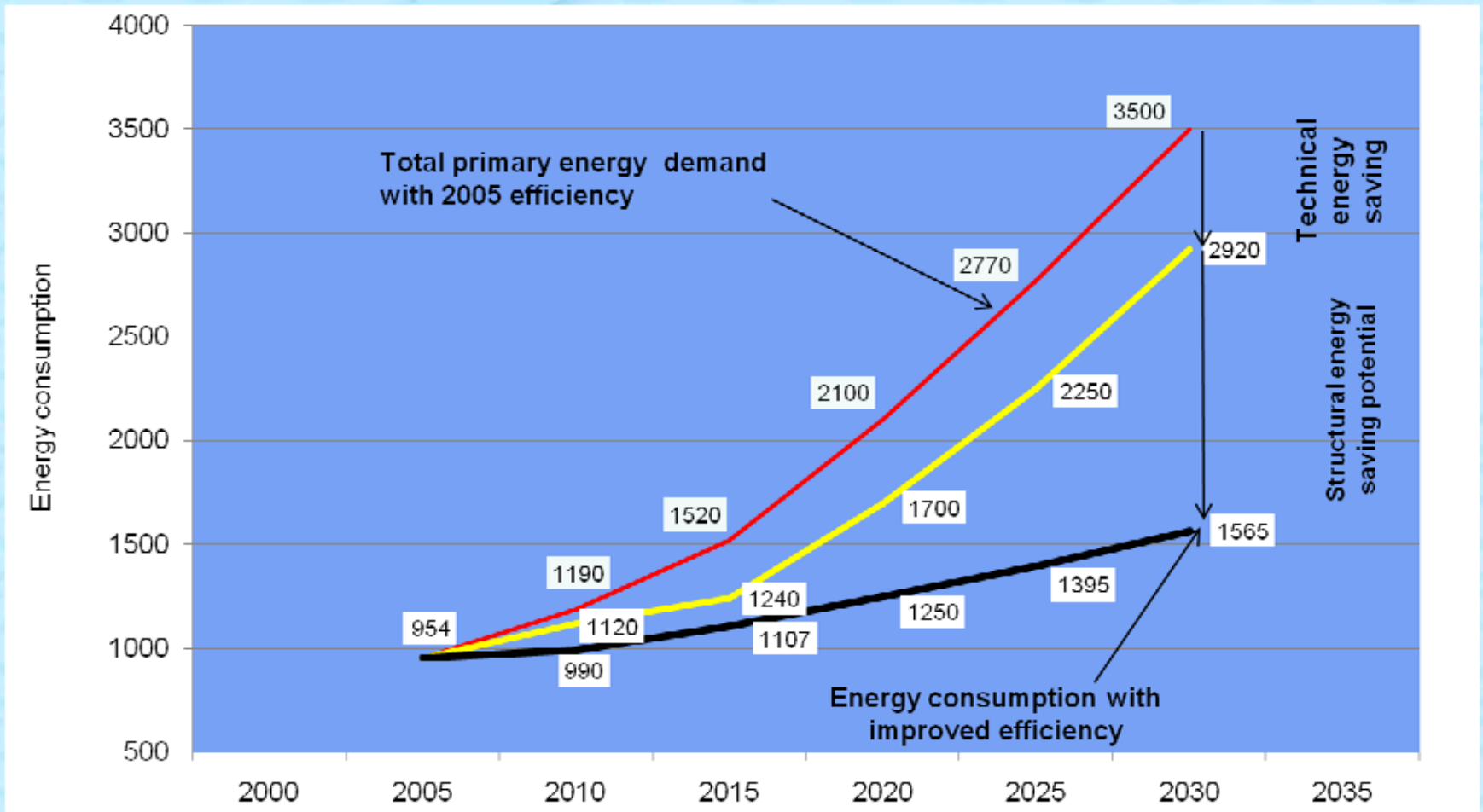


Source: MinEnergy

Statistically, energy efficiency has improved fast

- ◆ From 1990 to 2007, 2.5 per cent annually. Fastest among G8 countries.
- ◆ From 2000 to 2007, a whopping 5.3 per cent annually!
- ◆ Time to celebrate?
- ◆ Not really. Most "improvement" probably due to increased value of GDP, due to
- ◆ (1) Ongoing structural change (true, towards less energy intensive services)
- ◆ (2) High export prices of energy and metals (actually slowing down needed structural change)
- ◆ Standard growth decomposition: 2/3 (1), 1/3 (2)

Draft Energy Strategy on energy efficiency



Source: ГУ ИЭС

Is this realistical?

- ◆ Even with huge improvement in efficiency, export volumes would stagnate
- ◆ Efficiency is largely due to closing down Soviet industries. This is not being done now. Can it be done?
- ◆ But the strategy is based on overly optimistical view on growth
- ◆ After crisis, potential growth rate will be lower both globally (2-3?), in Europe (1?) and in Russia (2-3?)
- ◆ Thus, energy prices will not be hugely high (assuming no basic deterioration in supply) and growth in energy demand should be modest
- ◆ Growth in energy efficiency by 2-3 per cent annually should be feasible
- ◆ Thus, Russia's export volumes might remain on current levels