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RE: Gas Tariffs and Energy Reform in Ukraine
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Starting April 1st 2015 Ukrainian government increased residential gas tariffs 3 to 6 times following IMF requirements. The policy is aimed to reduce the deficit of the state gas-supplier monopolist and subsequent country budget deficit, incentivize energy savings, eliminate market distortions and create grounds for industry renovation and development. However because of the hard economic situation in the country and infrastructural constraints price increase won't almost certainly reach its deficit-eliminating goal. Therefore the policy should be accompanied with structural reforms including demonopolization of the gas market, energy efficiency promotion program and state subsidies reform including its monetization.

Energy prices were increased due to IMF requirements

On the 3rd of March National Energy and Communal Utilities Regulation Commission (NECURC) raised minimum gas price for the general public 3 times because of the IMF requirements (See Table 1). Following that on the 11th of March a four-year Extended Arrangement under the Extended Fund Facility of \$17.5B was approved by the Executive Board of International Monetary Fund (IMF, 2015). Among the agreed requirements is improving the primary balance of the general government from a deficit of 6.9% of GDP in 2014 to a surplus of 1.2% of GDP in 2016. The major source of the current budget deficit is with the state natural gas supplying monopolist Naftogaz – 5.7% of GDP in 2014 and 7.5% in 2013. To reduce its deficit IMF required to increase residential tariffs for natural gas and heating to the market level - up to 700%, but the final agreed average increase percentages are 285% and 71.8% for the gas and heating respectively (see Table 1).

Residential gas price level in Ukraine

Extremely low energy prices for the general public is an old problem for Ukraine that has continuously been causing the biggest hole in the state budget. To cover Naftogaz deficit Ukrainian Government spent UAH110bn in 2014, which was more than it did on a healthcare and education together (Dodonov, 2015). Residential prices were unprecedentedly low in Ukraine. According to the price-list set before the 1st of April of 2015 by the NECURC natural gas used to cook meal and heat water in the apartment houses was priced at \$47 per cubic meter if the households had a meter, and \$52 if the household did not have one (see Table 1). The biggest price was set for private houses, which consumption exceeded 6000 cubic meters per a calendar year -\$146 (see Table 1). Tariff for industry in USD equivalent decreased in 2014 because of almost 100% devaluation of the local currency, and was on the level of \$356 per a cubic meter in the end of 2014. Therefore minimum residential tariff was only 13% of the industrial one and 12% of the market price set by Russia – Ukraine's main supplier of gas - which in the December 2014 was \$378 per cubic meter (ZN.UA, 2015). The price of gas, which is sold by Naftogaz to local heating utilities is calculated is based on the average of residential tariffs and thus was comparable percentage low. Ukraine's natural gas tariffs for consumers were the lowest in Europe (see Figure 1) though the major supplier was the same – Russia (See Figure 6). Ukraine did not and does not have any

preferential terms of the contract. Terms are even worse for Ukraine than for the majority of the European countries. Moreover residential tariffs in Europe are higher than industrial due to transportation expenses. Therefore, Ukrainian private consumers paid year 6-7 times lower than their Eastern Europe neighbors did and 9 times lower than German households did (See Figure 1).

State subsidizes gas prices

Gas prices were low due to direct and indirect subsidies from the state budget. Price subsidies were extremely inefficient. According to the World Bank study in 2013 existing subsidies were heavily regressive despite the fact that they meant to help the poorest population. Poorest people received 16% of subsidies for gas and 10% for heating, while the richest population received 23% and 34% respectively (See Figure 4). Apart from that these subsidies were not monetized, existed in the form of reduced price and worked as a matching grant, when government was actually covering the majority of the market price from the state budget. As a consequence, residential consumption of the gas in Ukraine was driven by excessive demand (See Figure 5) and made country a net gas importer (See Figure 3) while according to International Energy Agency Ukraine might have been self-sufficient in natural gas (VoxUkraine, 2015).

Distortion of the market due to subsidies

What is the profile of an average gas consumer in Ukraine? The majority of consumers are urban citizens who live in old Soviet apartment houses with outdated central heating systems without individual meters. Heating infrastructure is old and deteriorated. Heat losses sometimes equal 40% while modern systems in the neighboring Europe has heating losses at the level of 10% (Dodonov, 2015). Residential gas and heating consumption according to old Soviet methodology has been calculated using norms based on square meters of apartments and number of inhabitants. This created grounds for corruption allowing local heating utilities artificially decrease expensive industrial consumption and increase cheap residential one, which in the end lead to even more overall consumption, subsidies and Naftogaz deficit. Even if the household had an individual heating or could measure and control gas consumption individually artificially low price gave a big incentive to overconsume and choose gas as a main source of heating energy. According to the studies, average residential gas consumption in Ukraine was 40-50% more than in European countries with the comparable climate conditions – Austria, Germany and Sweden (See Figure 5) (Dodonov, 2015).

Urgent need to increase gas prices

If we will add to the picture that because of the residential price level for natural gas there were no incentives for investing in the infrastructure and domestic gas exploration and extraction than it might seem obvious that this policy initiative was inevitable and is unambiguously beneficial. Increase in residential gas and heating tariffs in theory should have been equalized them with industrial ones, eliminating grounds for corruption, should have been reduced the excessive demand and incentivized citizens to save gas, should have been eliminated Naftogaz and budget deficit and even incentivized reforms in the gas sector in Ukraine (VoxUkraine, 2015).

Who will be able to pay the increased price?

However will Ukrainian citizens be able to sustain increased gas prices? Traditionally the most sensitive to energy price increase group of population are retired people. According to State Pension Fund of

Ukraine number of pensioners in Ukraine keeps increasing. If on the 1st of July 2014 the number of pensioners equaled 12,8 out population of 45 million (KP.UA, 2014). Then in the beginning of 2015 it increased to about 13,5 million which became 500 thousands more than officially registered workers contributing to the Fund (rbc.ua, 2014). Rapidly devaluating national currency deteriorates already tiny average salary and state pensions which equals to UAH3119 (business.vesti-ukr.com, 2015) and UAH1561 (segodnya.ua, 2015) or USD125 and USD62 respectively. Low average salary and number of officially registered workers paying to the Pension Fund do not allow to increase pensions, completing the vicious circle. According to preliminary calculations just utilities payment in the winter time for the average apartment may easily exceed the combined pension of two retired family members¹. If current prices are just marginally acceptable for the increased number of poor people that keep rising due to the economic situation in the country then it is obvious that people will not give away everything they have to pay for gas consumption, which they often cannot even control.

Getting back to subsidies

To cushion the price increase for citizens government reserved UAH24.5bn in 2015 state budget for direct subsidies on top of projected Naftogaz deficit of UAH31.5bn (Yeremenko, 2015). Naftogaz hopes that increased tariffs will help cover its losses. However it does not expect the dramatic result this year even with the increased fares. The case is that the new prices are in place starting from the second quarter, but the first quarter of 2015 is estimated to account for 53% of annual gas consumption. The loss of Naftogaz after the first quarter estimated to be around UAH 20.6 bln (Lyuta, 2015), which is 65% of the projected figure for the 2015. Taking into account that even having UAH/USD currency rate 8:1 for the half of the year (compared to the current 25:1) last year government spent UAH110bn to support Naftogaz, these subsidies look merely sufficient to cover the price increase for the current year. Subsidy mechanism was reformed, but not heavily. According to the document published on the 17th of March by the Ministry of Social Policy, to request a subsidy a citizen should submit an application and an income declaration stating her income for the last 6 months. The exact percentage subsidized was not disclosed, however all previous restriction were dropped. If before the changes people who owned cars or were private entrepreneurs could not request subsidies now the only eligibility factor will be a level of income (Ministry of Social Policy of Ukraine, 2015). Subsidies will be paid directly from the budget to the heating utilities – the method which proved to be far from timely.

Will increased prices reduce consumption?

Actual residential gas consumption will not reduce dramatically. According to the IMF studies price elasticity of demand for natural gas by residents is in the range of -0.26 -0.28. (Dodonov, 2015). The demand is inelastic. Price increase will not lead to dramatic decrease in consumption. Therefore, price increase will automatically lead to non-payment to gas and heating suppliers. According to the local studies in the optimistic scenario 1% increase to tariff leads to 0.2% increase in non-payments. Therefore, 300% increase in tariff may lead to 60% increase in non-payments by the citizens (Laba, 2015).

Increasing gas prices without state program to reform the gas sector has several serious flaws:

¹ Personal assessment

1. Many households do not have control upon the heating consumption because heating supply is centralized. They cannot even measure their actual consumption – they have no meters. Therefore regardless of the price people will not be able to reduce gas consumption. No state program were proposed to equip apartments with gas and heating regulators and meters. No program was proposed to deal with huge energy losses in the old and inefficient heating systems.
2. Gas market stay monopolized and there are no plans announced to change the situation and allow private gas distributors to operate: export of gas is forbidden, import is done exclusively by the state monopolist – Naftogaz, internal trading is restricted. There is no market to determine a fair equilibrium gas price and there are no plans to create one².
3. State energy subsidy scheme remains majorly unchanged – subsidies are not monetized and no plans were announced to do it. Subsidies will keep working as a matching grant incentivizing consumption. Despite the announced change to the policy aiming to assign subsidies not according to the social status (as a pensioner one) but according to the level of declared income, subsidies will remain regressive because the majority of high income people get their salaries unofficially and therefore according to their official income will be eligible to receive subsidies.

Policy measures to accompany the residential natural gas price increase should include the following:

Demonopolize the gas market². Ukraine has to admit – the state sector is the least efficient in the country, rigid and highly corrupt. The only way to increase efficiency in any sector is to bring business to operate. However because the majority of local business is owned by local oligarchs, who benefit from the corrupt system, measures should be taken to restrict local oligarchs from cheaply taking over the gas supply market and turn state monopoly into the oligarchs' monopoly. Now it is the right time having support from international institutions including IMF to allow well-known international companies to enter the gas market.

Heavily regulated gas market in the US for example in the 1970s lead to distortions and overconsumption. The estimated cost gas shortages in the 1970's were around USD2.5-5.0 bln a year. The main aim of deregulation which started in 1978 and enhanced in 1989 and 1992 were liberalizing of the country gas wholesale market and interstate transportation – wholesalers and distributors were allowed to buy gas on a short-term contracts directly from the producer bypassing "transparent" transport companies. Transport tariffs' regulation were also enhanced and pipeline users were allowed to resell their unused capacity, which dramatically enhanced transportation flexibility and flourished market relationships. As a result wellhead prices dropped on average 26 percent in real terms between 1988 and 1995, while prices for large distribution companies which buys about 75 percent of the wholesale market supply fell from 26 to 31 percent. However it should be admitted that prices for the final consumers fell less by half of that number. Anyway the overall effect on the gas market was very positive. Diverse profit opportunities attracted many private marketers, who brought numerous services and products, which in turn increased choice and customer satisfaction (Juris, 1998).

According to UNECE study gas market liberalization in UNICE region also led to decrease in wholesale prices, expansion of local gas distribution infrastructure, provision of more options and services for the

² The law on demonopolization of the gas market in Ukraine under pressure from IMF was enacted by the parliament on the 9th of April, during finalization of this paper. It was signed by the President on the 1st of May 2015

final consumers. (UNITED NATIONS ECONOMIC COMMISSION FOR EUROPE, COMMITTEE ON SUSTAINABLE ENERGY, Working Party on Gas, 2012).

Announce a state government project to increase energy efficiency. As a part of the price increase initiative there should be a program of installing unified internationally certified gas meters to all households in Ukraine. This program can be financed by international organizations because it has a direct impact on the energy and overall security in Ukraine and in Europe. Higher prices should then incentivize people save energy themselves like turning off or regulating radiators, use more efficient radiators, changing windows and doors to modern, more energy efficient, do insulations on their houses, general premises, chose between energy sources for example switch from gas “stream” water heating to electrical ones with hot water containers (VoxUkraine, 2015). Decreased residential consumption may be covered by the local production which if not monopolized will not be vulnerable to political tensions with Russia.

Monetize the subsidies for the general public including ones to cover the costs of gas. There are several major problems with subsidies in Ukraine. First is that subsidies are assigned due to the social status of the citizen, like “pensioner”, which includes miners, pilots and other relatively “high-income” professions. This approach does not allow to direct the subsidies to the neediest people. Subsidies should be need based, not social status based. The second problem is that subsidies are provided in the form of exemptions from payments which include payments for public transport, parking fees, utilities, etc. Such an approach undermines economic development of the industries involved and creates a huge ground for corruption. For example just for January 2015 losses of Ukrainian state railway monopolist in the passengers segment amounted UAH729.2 mln because of the subsidies, while the actual number of “free-riders” just cannot be checked. Moreover all subsidies being monetized and transformed into higher pensions for example will give citizens a choice and ability to prioritize their spending (rbc.ua, 2015).

These three steps should be taken as soon as possible to accompany the price increase or the latter will not only fail to solve the budget deficit problem, but create unnecessary social and economic tensions and further undermine people’s trust in government ability to do reforms.

Annex

Table 1. Residential gas prices in Ukraine, 2015, per 1000 m³, incl. VAT

Category	before 04.01.2015		after 04.01.2015		% change
	UAH	USD	UAH	USD	
Using gas o cook meal and to heat water in apartment houses:					
– with meters	1 182	47	7 188	288	608%
– without meters	1 299	52	7 188	288	553%
If usage does not excede 2500 m ³ per year:					
– with meters	1 089	44	3 600	144	331%
– without meters	1 197	48	7 188	288	601%
If usage does not excede 6000 m ³ per year:					
– with meters	1 788	72	7 188	288	402%
– without meters	1 965	79	7 188	288	366%
If usage excedes 6000 m ³ per year:					
– with meters	3 645	146	7 188	288	197%
– without meters	4 011	160	7 188	288	179%

Figure 1. Residential and Industry Prices in the IV quarter 2013 (Dodonov, 2015)

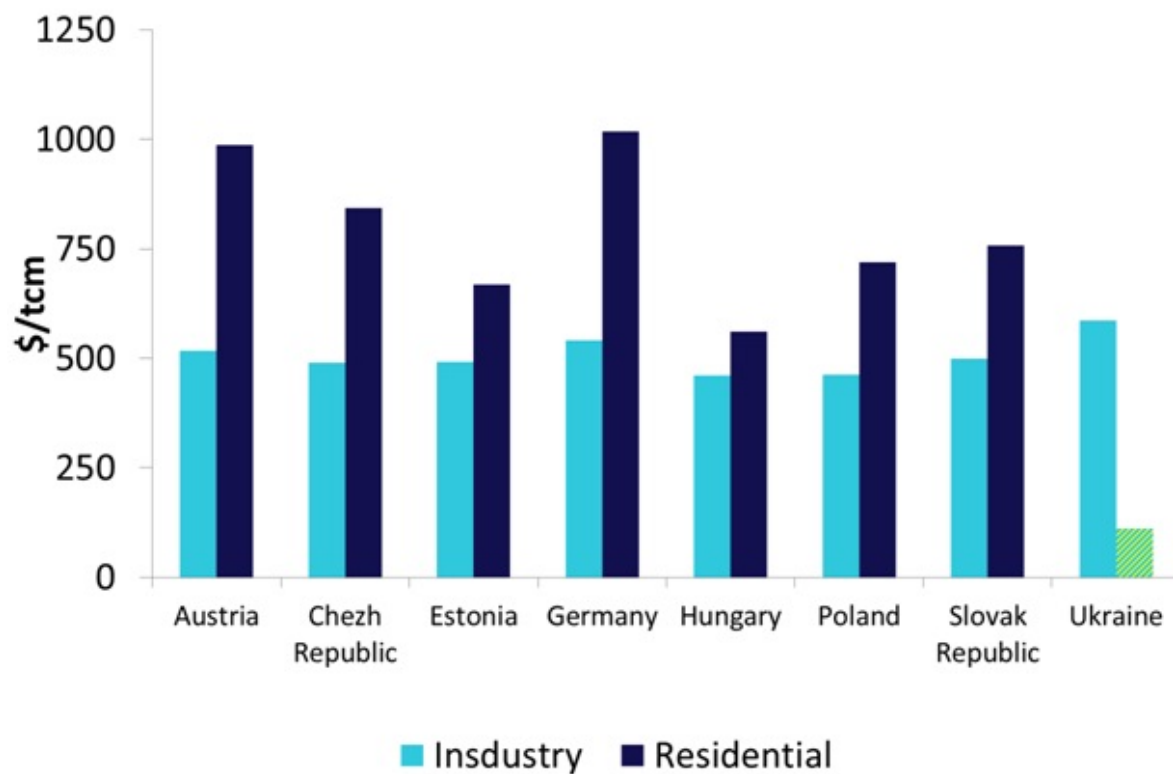


Figure 2. Gas consumption in Ukraine 2013-2014

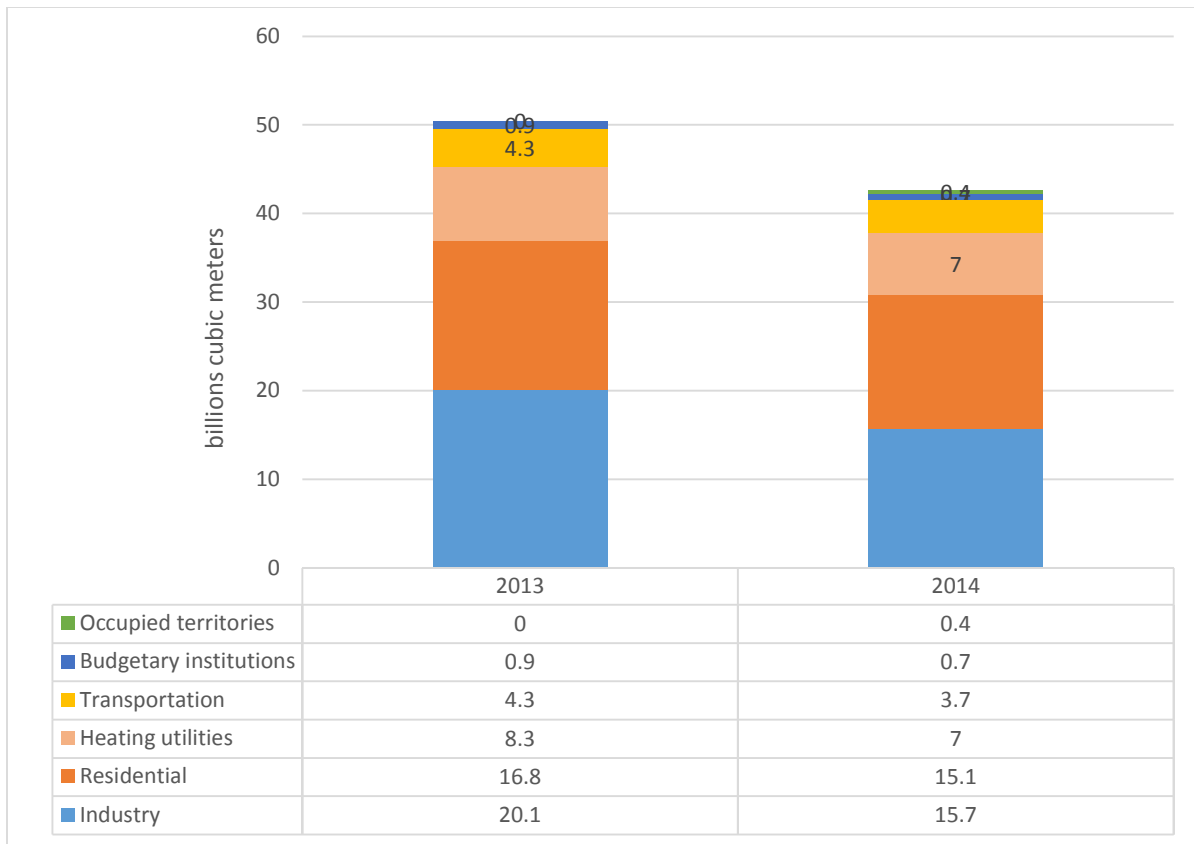


Figure 3. Gas consumption vs. Gas Supply in Ukraine (VoxUkraine, 2015)

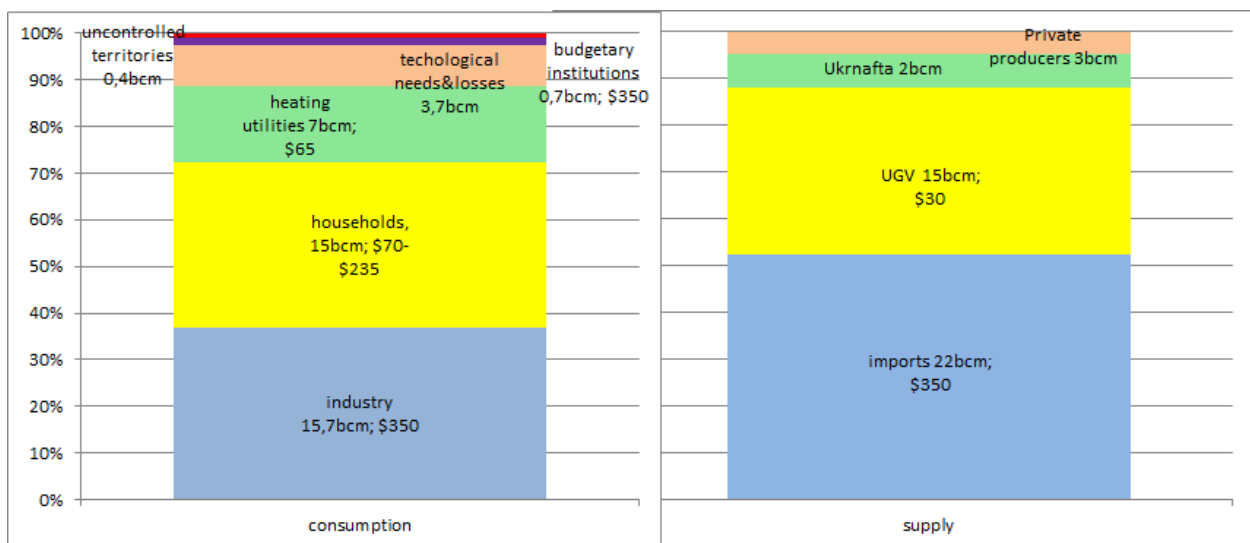


Figure 4. Distribution of direct budgetary and quasi fiscal subsidies by income quintiles (2011)
(Dodonov, 2015)

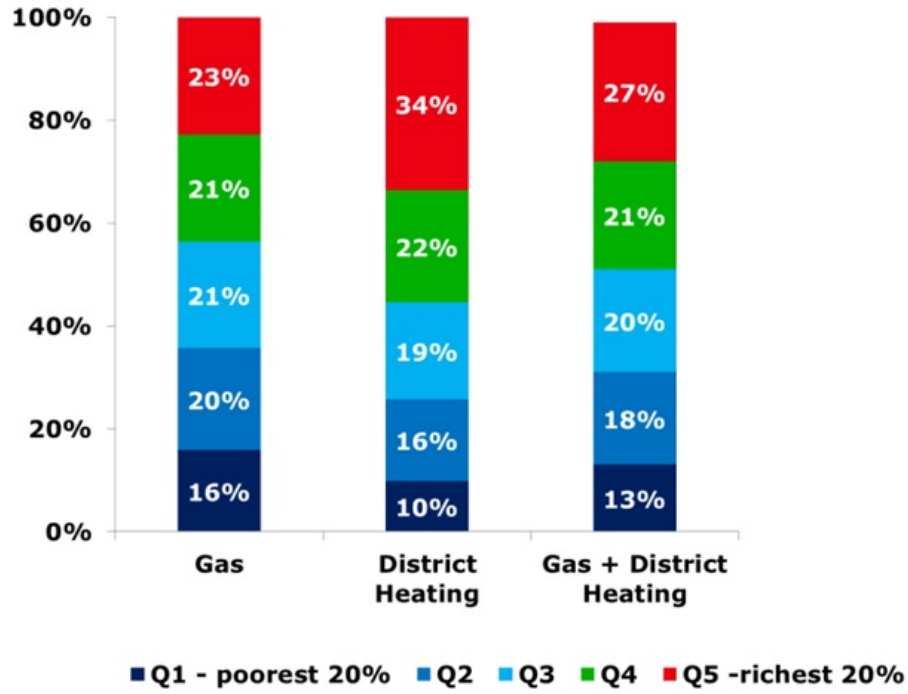


Figure 5. Residential gas consumption in Ukraine (Dodonov, 2015)

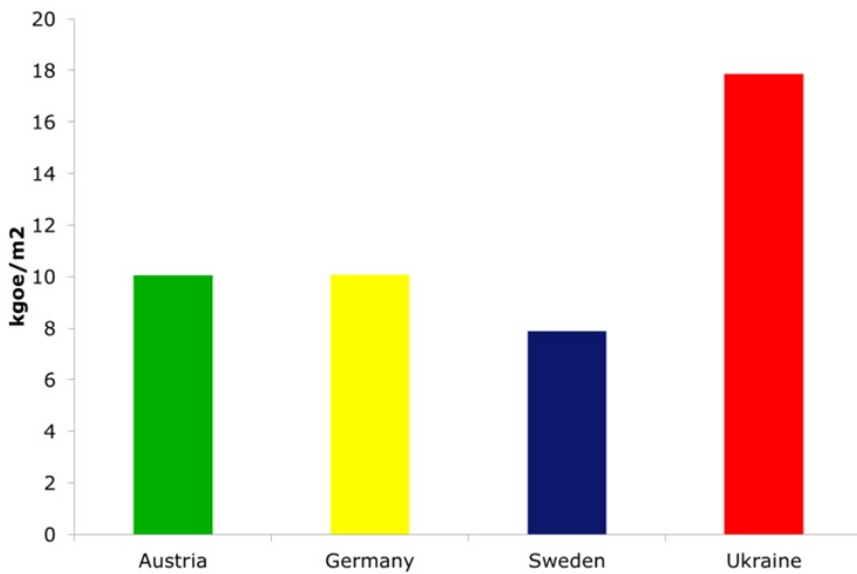


Figure 6. Natural gas import dependency on Russia (Chazan, 2014)

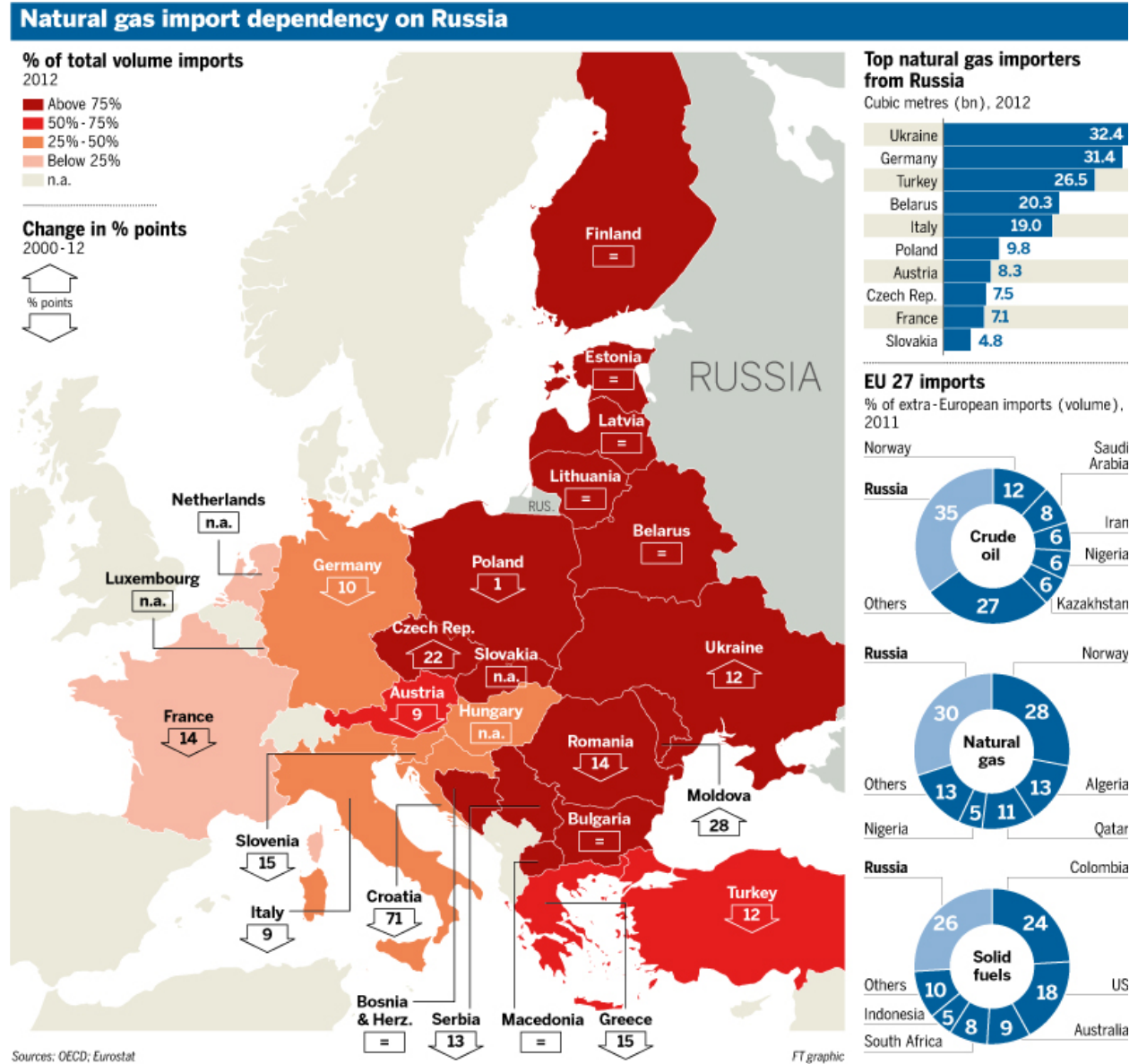
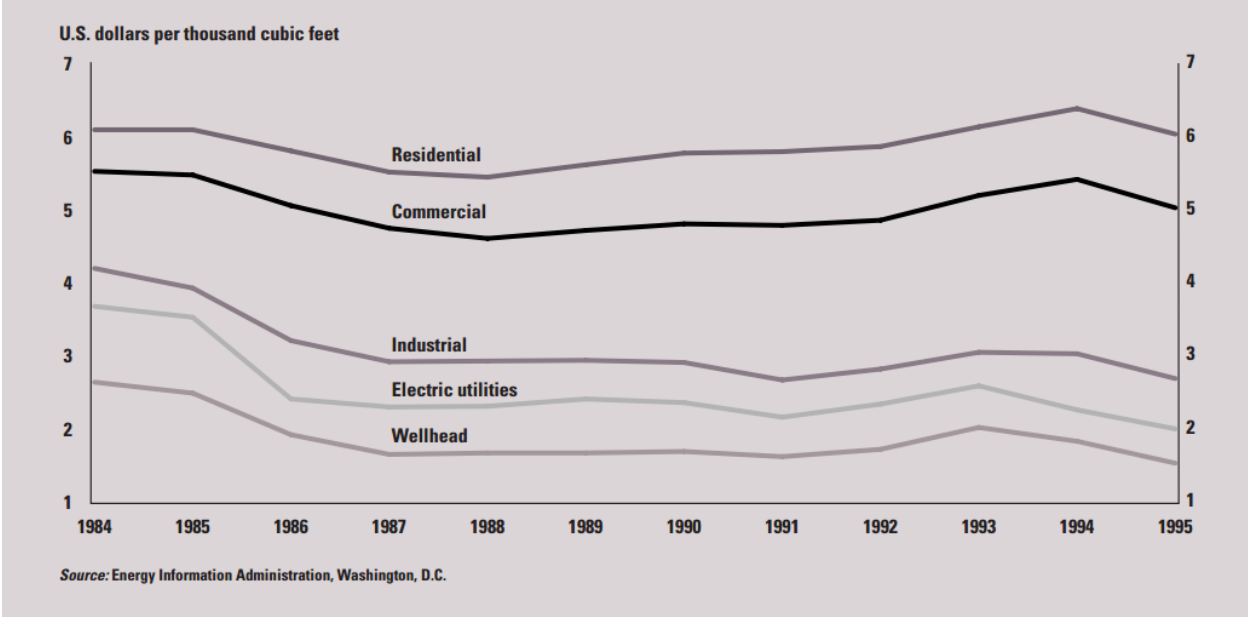


Figure 7. Average nominal gas prices in the U.S., 1984-95 (Juris, 1998)



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