

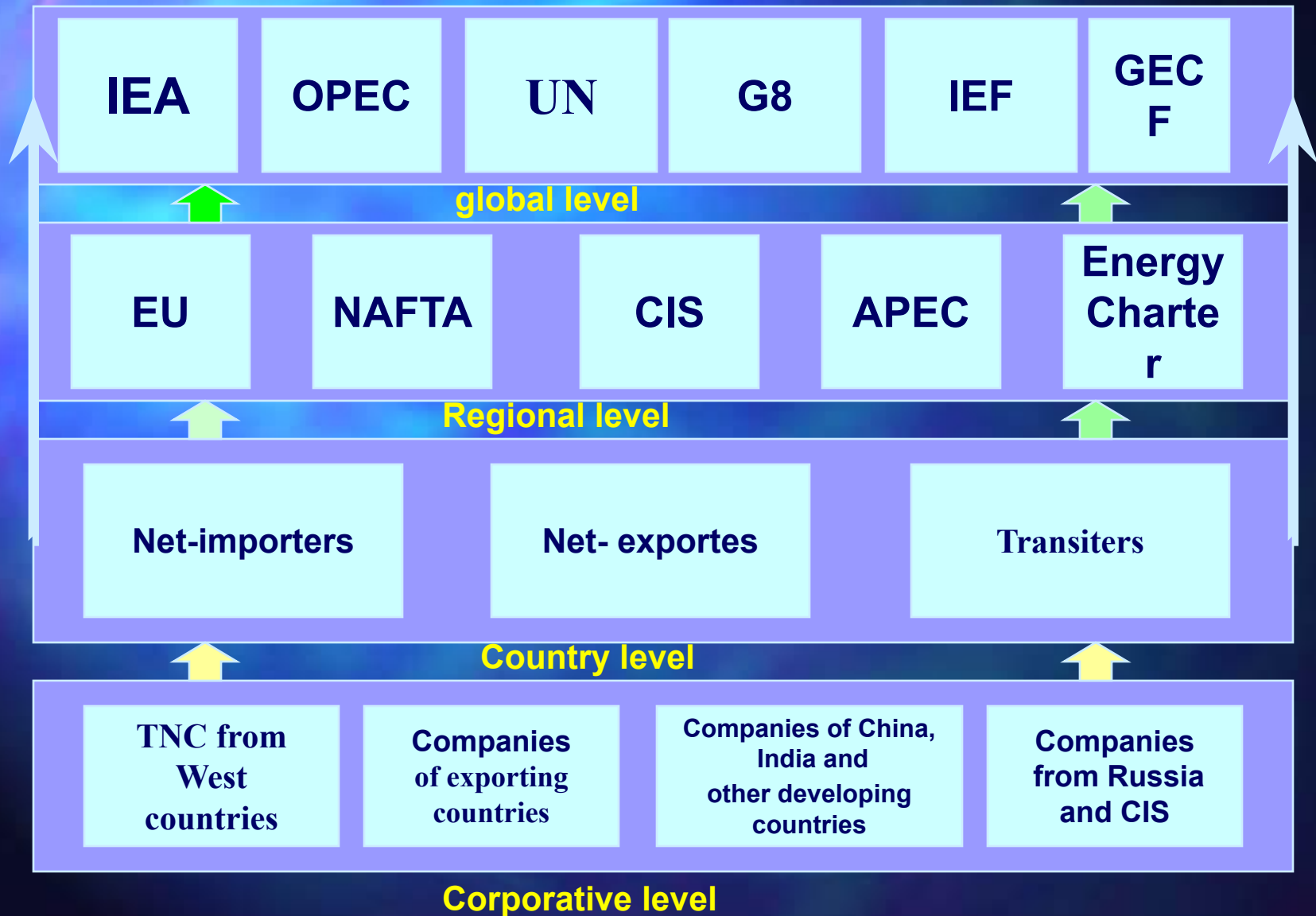
# ENERGY DIPLOMACY

## Russia and the World

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Stanislav Zhiznin  
professor

# SYSTEM OF WORLD ENERGY POLICY&DIPLOMACY



# TOPICS

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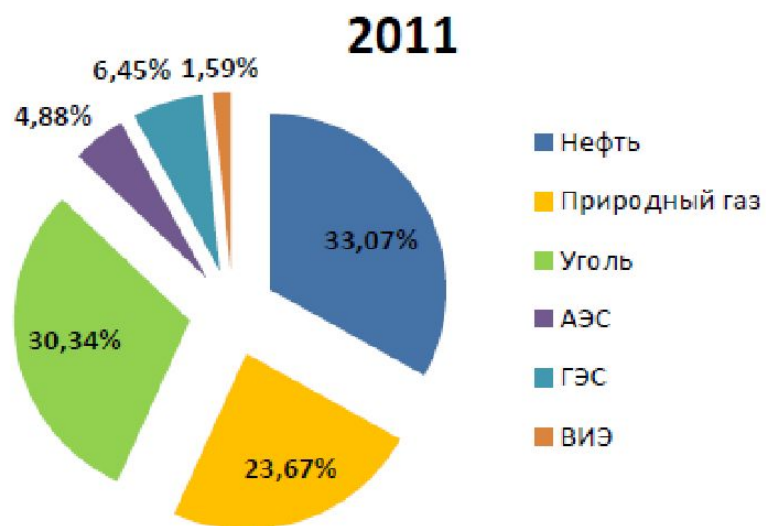
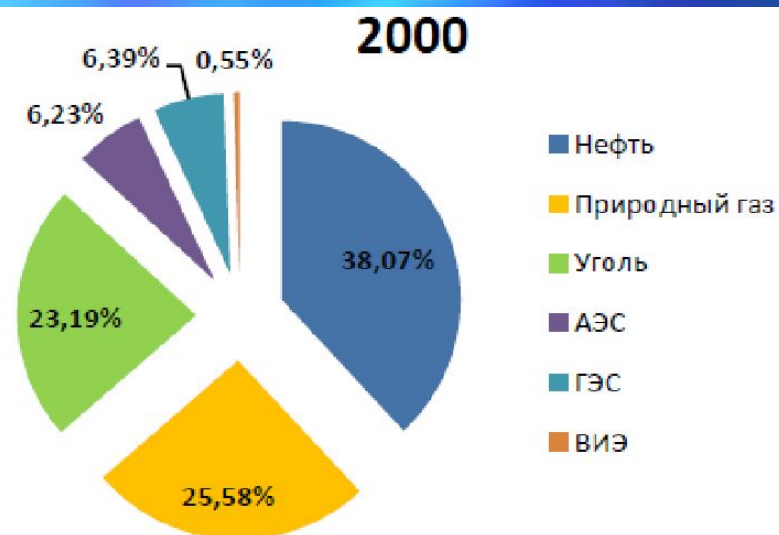
- 1.Generalities
- 2.Global level
- 3.Regional level
- 4.Bilateral relations
- 5.Practical issues

# GENERALITIES

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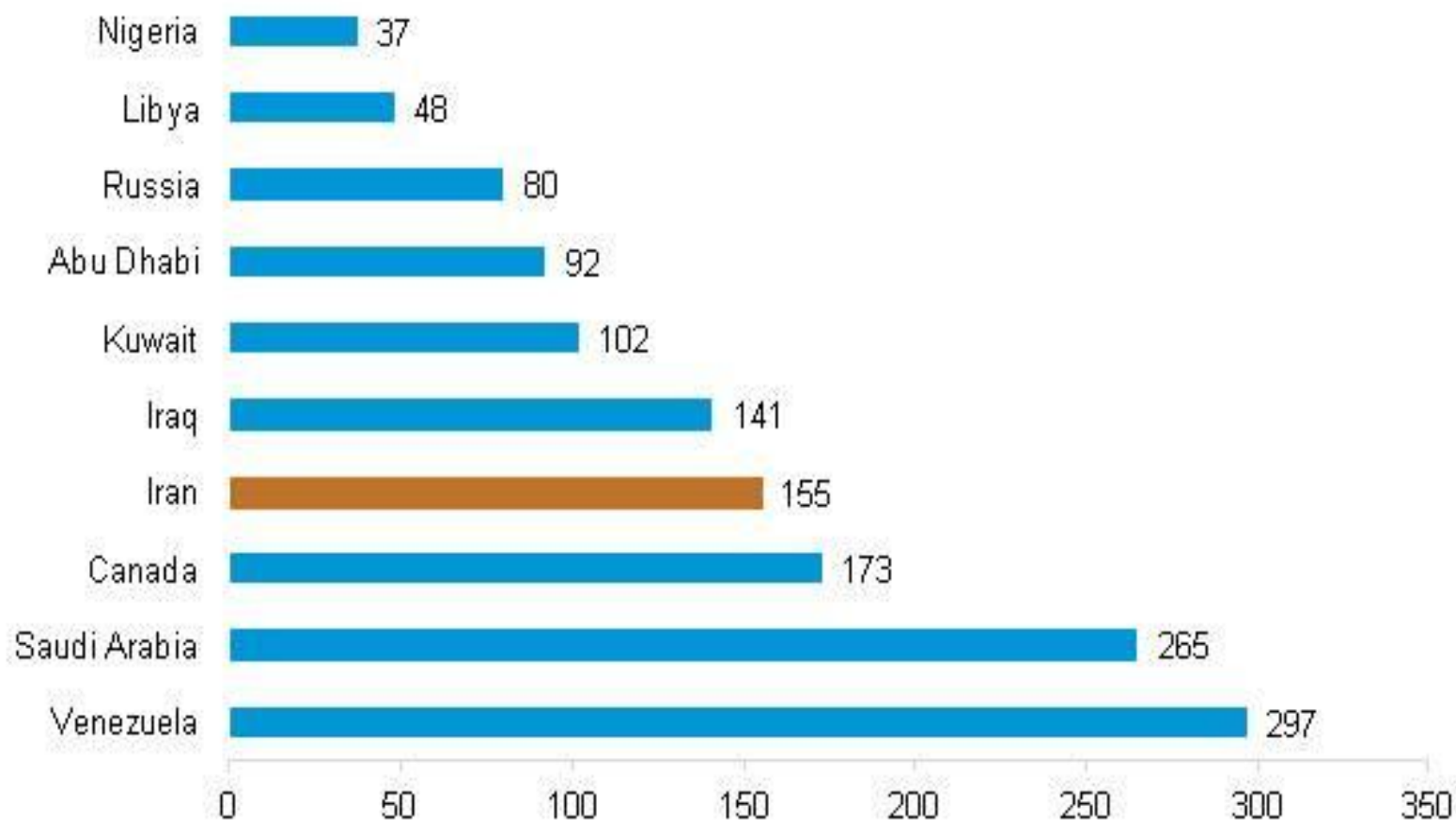
- 1.Origins of Energy diplomacy
- 2.Terms, trends
- 3.Economic aspects (trends in world and Russian energy industries)
- Geopolitical aspects
- Energy factor in foreign policy

# Trends in the world energy consumption



## Largest proven reserve holders of oil, January 2013

billion barrels

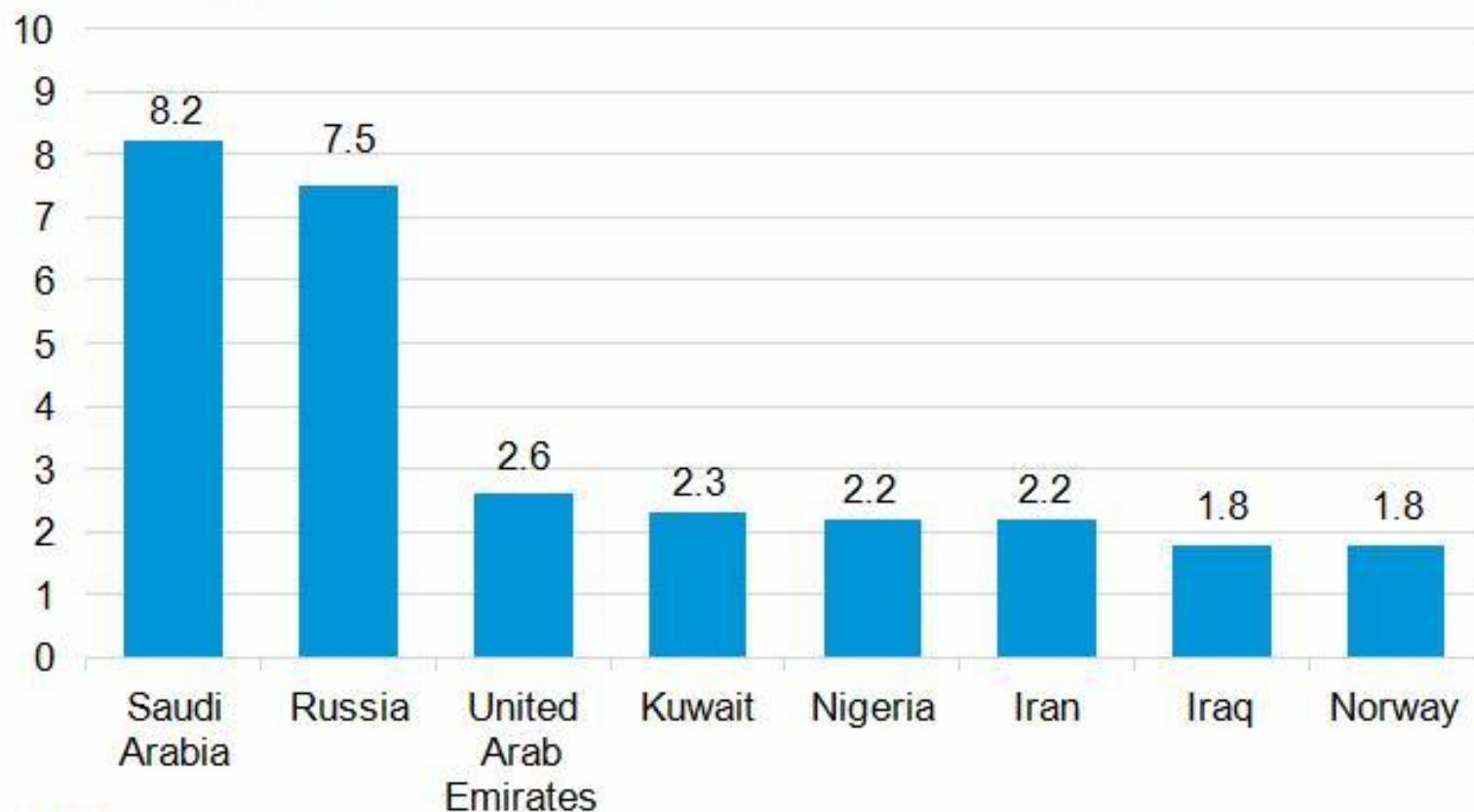


Source: Oil and Gas Journal



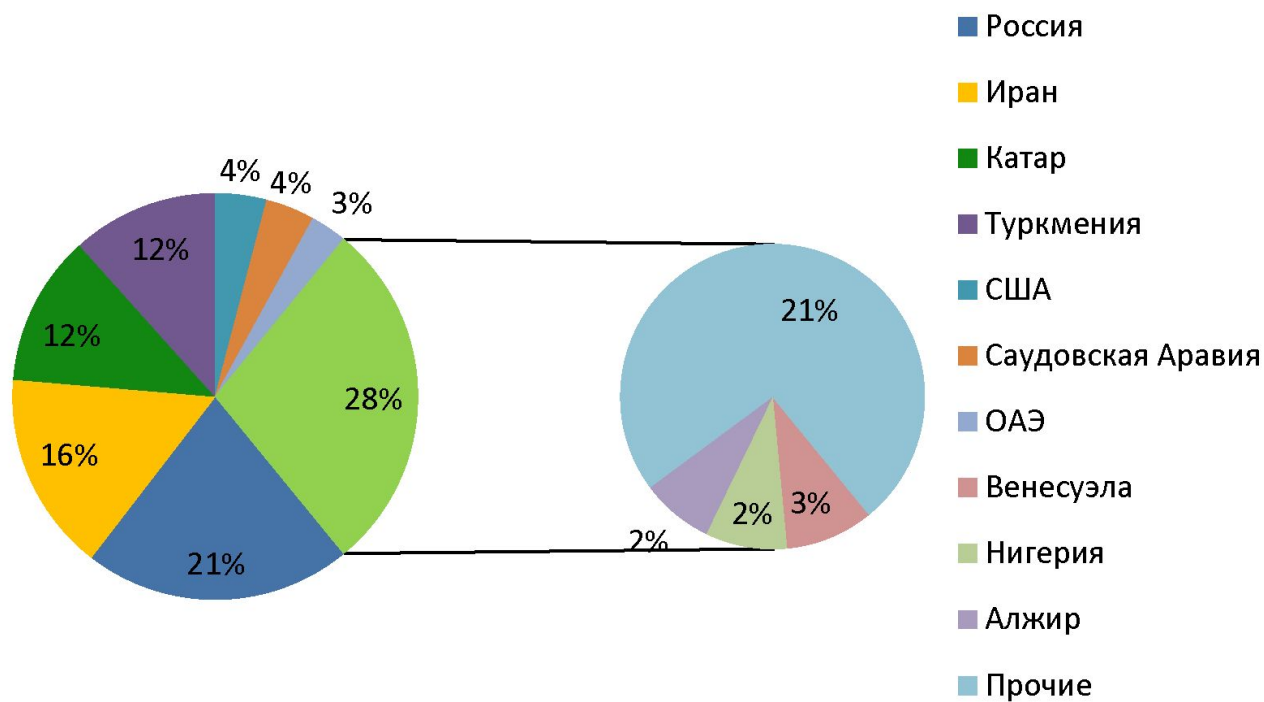
## World's top net oil exporters, 2011

million barrels per day



Source: U.S. Energy Information Administration

# Proven reserves of traditional gas





## Reserves of shale gas in the world

Запасы сланцевого газа в мире (с) EIA 2011

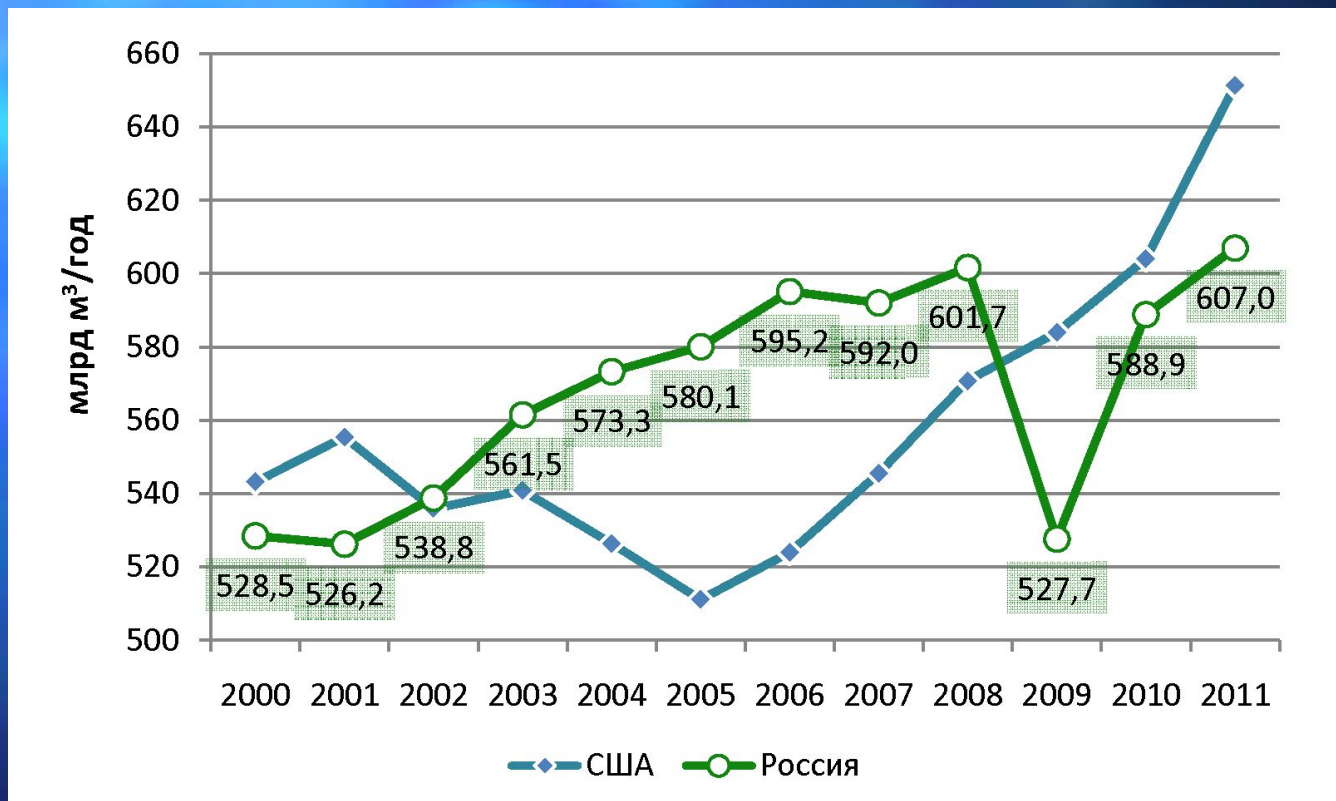


## Запасы сланцевого газа для 32 стран на 2011 год по данным EIA

Страна	Запасы, трлн куб. м	Страна	Запасы, трлн куб. м	Страна	Запасы, трлн куб. м
Китай	36,7	Франция	5,1	U.K.	0,566
США	24,4	Норвегия	2,4	Колумбия	0,538
Аргентина	21,9	Чили	1,8	Тунис	0,510
Мексика	19,3	Индия	1,8	Нидерланды	0,481
Южная Африка	13,7	Парагвай	1,8	Турция	0,425
Австралия	11,2	Пакистан	1,4	Марокко	0,312
Канада	10,9	Боливия	1,4	Венесуэла	0,312
Ливия	8,2	Украина	1,2	Германия	0,227
Алжир	6,5	Швеция	1,2	Западная Сахара	0,198
Бразилия	6,4	Дания	0,651	Литва	0,113
Польша	5,3	Уругвай	0,595		

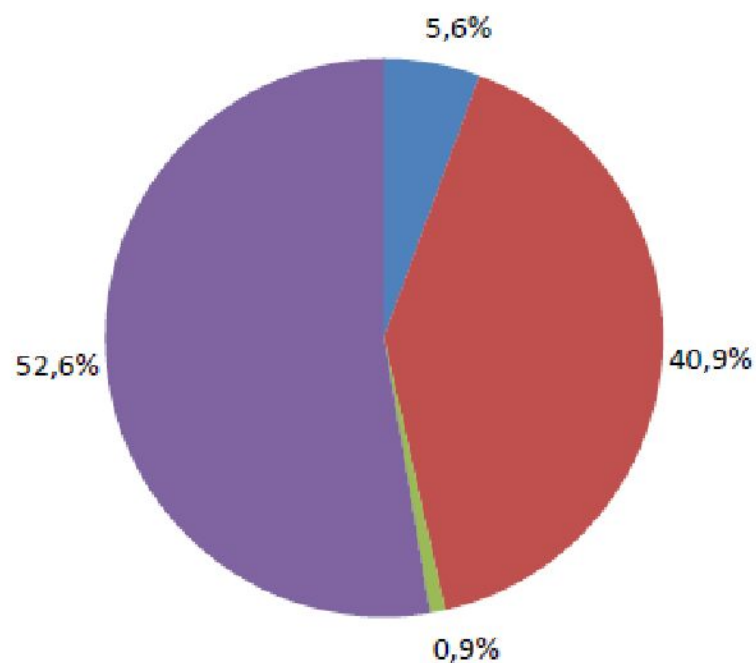
Значительное количество сланцевых месторождений находятся в тех регионах, где наблюдается недостаток традиционных источников – в частности, Китае, Южной Африке и Европе.

# Gas production in Russia and USA BP, 2012.

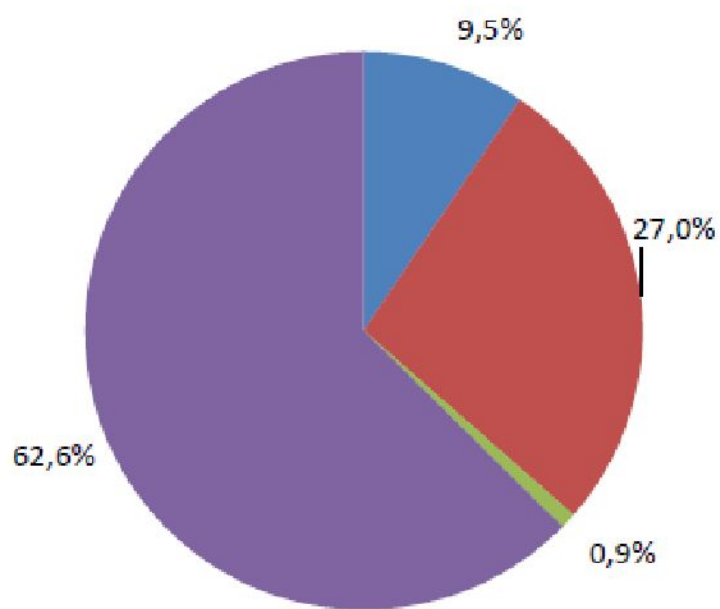


## Export structure of energy resources from Russia in 2000 and 2011. Minenergo od RF

2000 г.



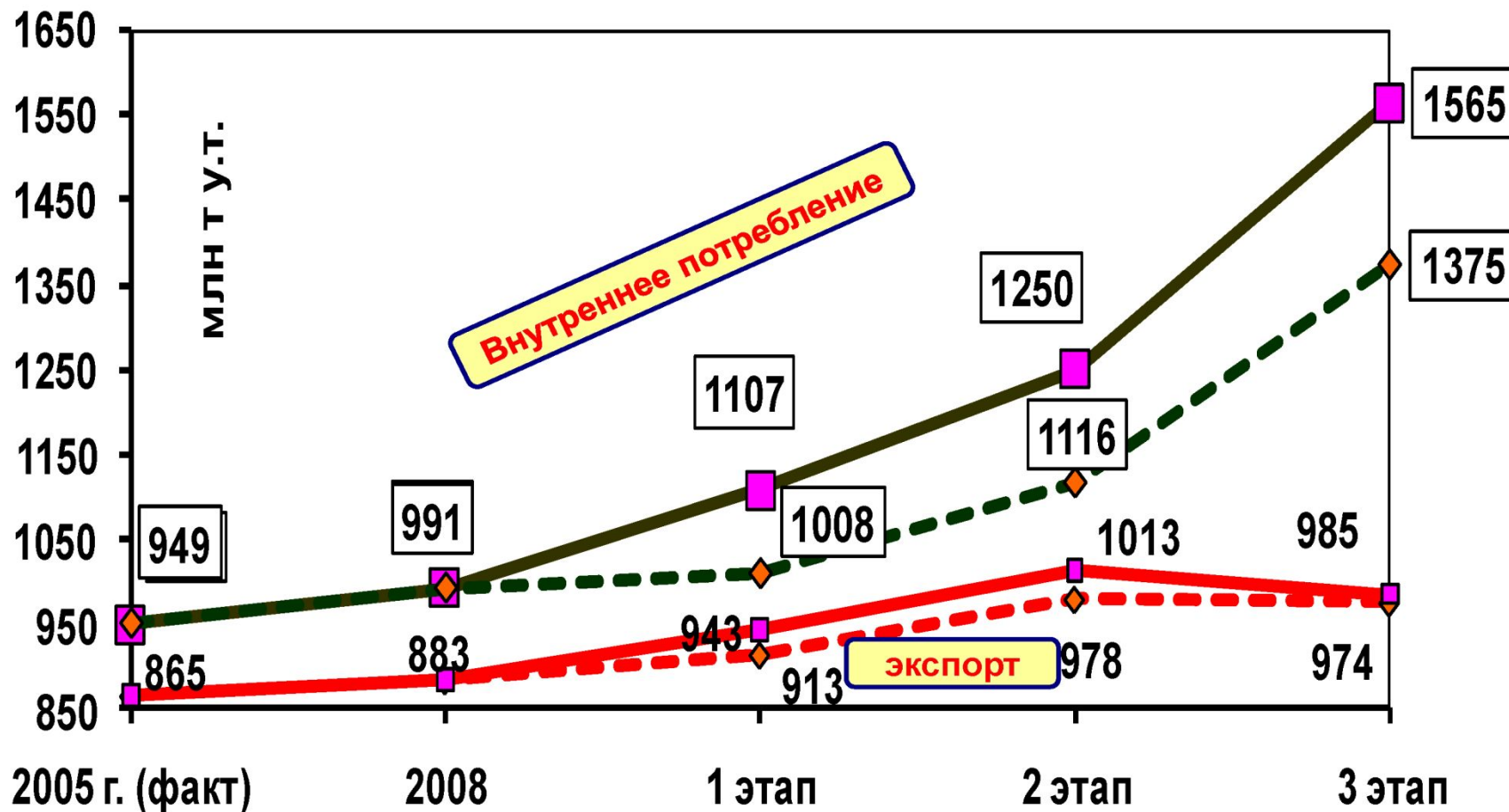
2011 г.



Уголь, кокс   Газ   Электроэнергия   Нефть и нефтепродукты



# Прогноз динамики внутреннего потребления и экспорта российских энергоресурсов на период до 2030 г.



## Прогнозный экспорт природного газа , предусмотренный Энергетической стратегией России на период до 2030 г.

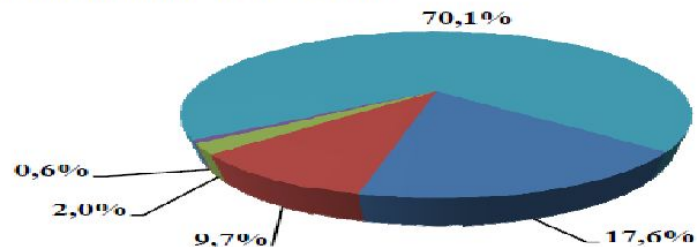
Показатели	2005 год факт	2008 год факт	1-й этап	2-й этап	3-й этап
Экспорт – всего (млн. тонн условного топлива)	865	883	913 - 943	978 1013	- 974 - 985
то же в процентах к 2005 году	100	102	106 - 109	113 - 117	113 - 114
в том числе:					
природный газ (млрд. куб. м)	256	241	270-294	332-341	349-368

ИСТОЧНИК: А.М.  
МАСТЕПАНОВ

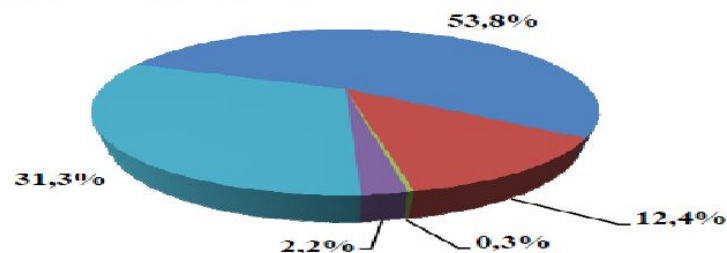


## Energy industries in Russian economy, %. Источник: ИЭС на основе данных Минэнерго России, 2012.

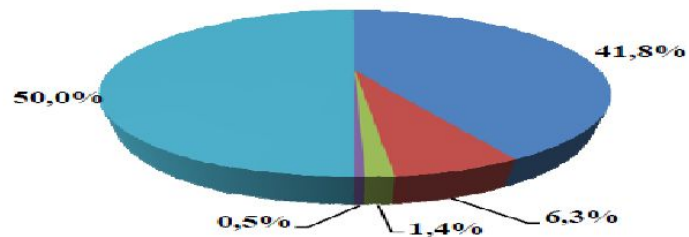
В ВВП РФ доля ТЭК - 29,9%



В экспорте РФ доля ТЭК - 68,7%



В налоговых поступлениях в бюджетную систему РФ доля ТЭК - 50%

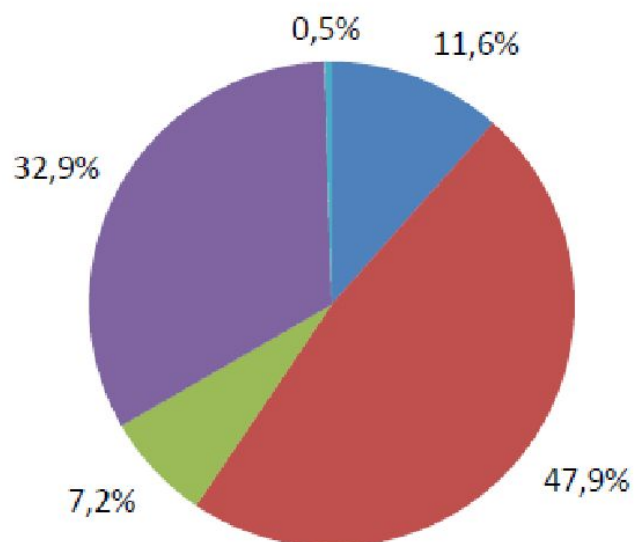


- Нефтяной комплекс (включая транспорт нефти и нефтепродуктов)
- Газовая промышленность (включая транспорт газа)
- Электроэнергетика
- Угольная промышленность
- Прочие отрасли экономики

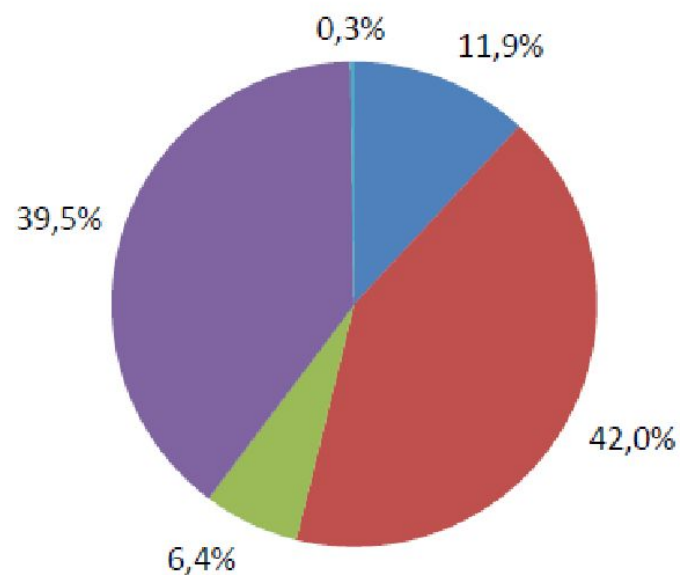
# Production of energy resources in Russia in 2000 and 2011.

## Минэнерго России, 2012.

2000 г.



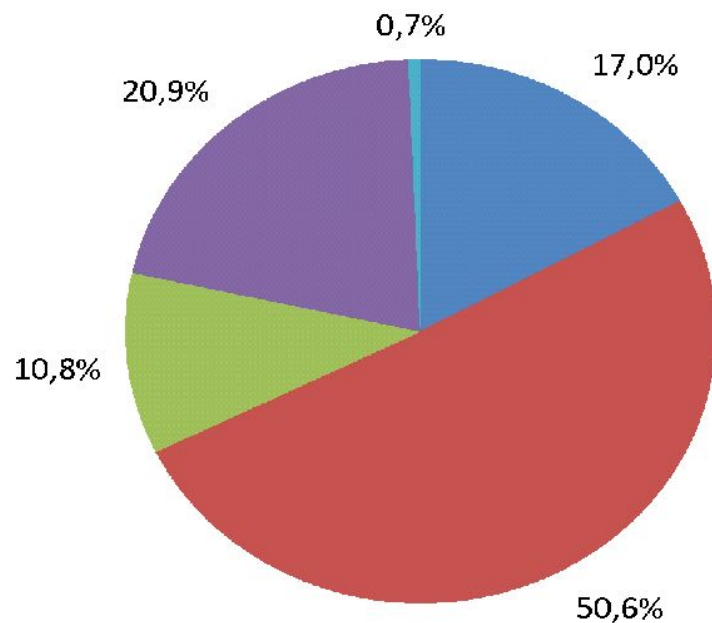
2011 г.



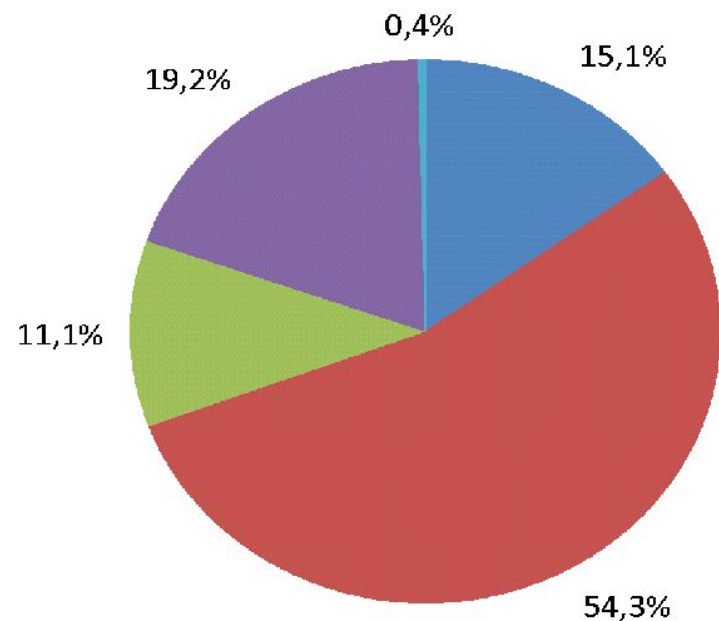
■ Уголь ■ Газ ■ Электроэнергия ГЭС и АЭС ■ Нефть ■ Прочие

## Structure of energy consumption in Russia in 2000 and 2011

2000



2011



■ Уголь, сланец ■ Газ ■ Электроэнергия ГЭС и АЭС ■ Нефть и нефтепродукты ■ Прочие

Источник: ИЭС по данным [6]

# GLOBAL LEVEL

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- 1.OPEC
- 2.IEA
- 3.GECF
- 4.IEF
- 5.G8/G20
- 6.BRICS

# OPEC

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- 1.Origins of OPEC
- 2.Organisational structure
- 3.Instruments of regulation of oil markets
- 4.Russia and OPEC



# IEA

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- 1.Origins of IEA
- 2.Structure
- The role in World energy policy
- Russia and IEA



# GECF

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- 1. History
- Structure
- Russia and GECF

# IEF, G8/G20, BRICS

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- IEF history, structure, JODI and other aspects
- G8/G20 (energy security issues)
- BRICS (energy security issues)

# REGIONAL LEVEL

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- POSTSOVIET AREA
- CASPIAN ENERGY MARATHON
- RUSSIA IN EUROPE
- RUSSIA IN ASIA
- RUSSIA- USA
- RUSSIA-EXPORTING COUNTRIES

# POSTSOVIET AREA

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- MULTILETARAL COOPERATION
- BILATERAL RELATIONS WITH TRANSIT COUNTRIES
- RELATIONS WITH RESOURCES COUNTRIES

# CASPIAN ENERGY MARATHON

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- HISTORY OF USSR-IRAN CASPIAN AGREEMENT
- ECONOMIC AND GEOPOLITICAL INTERESTS OF CASPIAN AND OTHER COUNTRIES
- PROBLEMS OF NEW LEGAL STATUS AND REGIME OF CASPIAN SEA
- PROBLEMS OF REGIONAL COOPERATION
- OIL AND GAS PROJECTS IN THE REGION



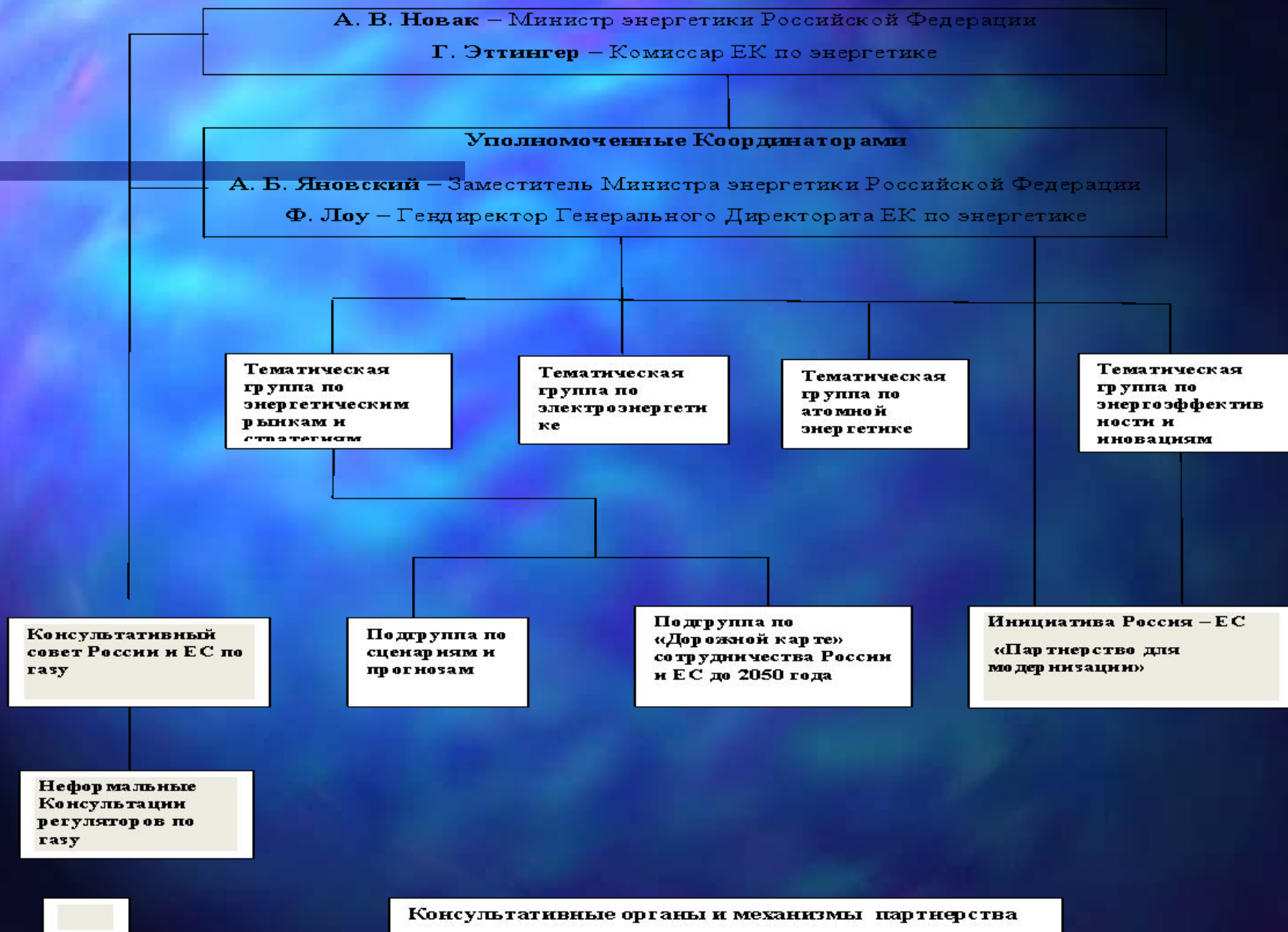
# ENERGY DIALOGUE RUSSIA-EU

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- HISTORY AND ORGANISATIONAL STRUCTURE
- PROSPECTS AND PROBLEMS
- RUSSIAN GAS IN EU MARKETS



# Структура Энергодialoga Россия – ЕС (составлено на основе материалов Минэнерго РФ)



## Gas import to EU and share of Russia: BP, 2012.

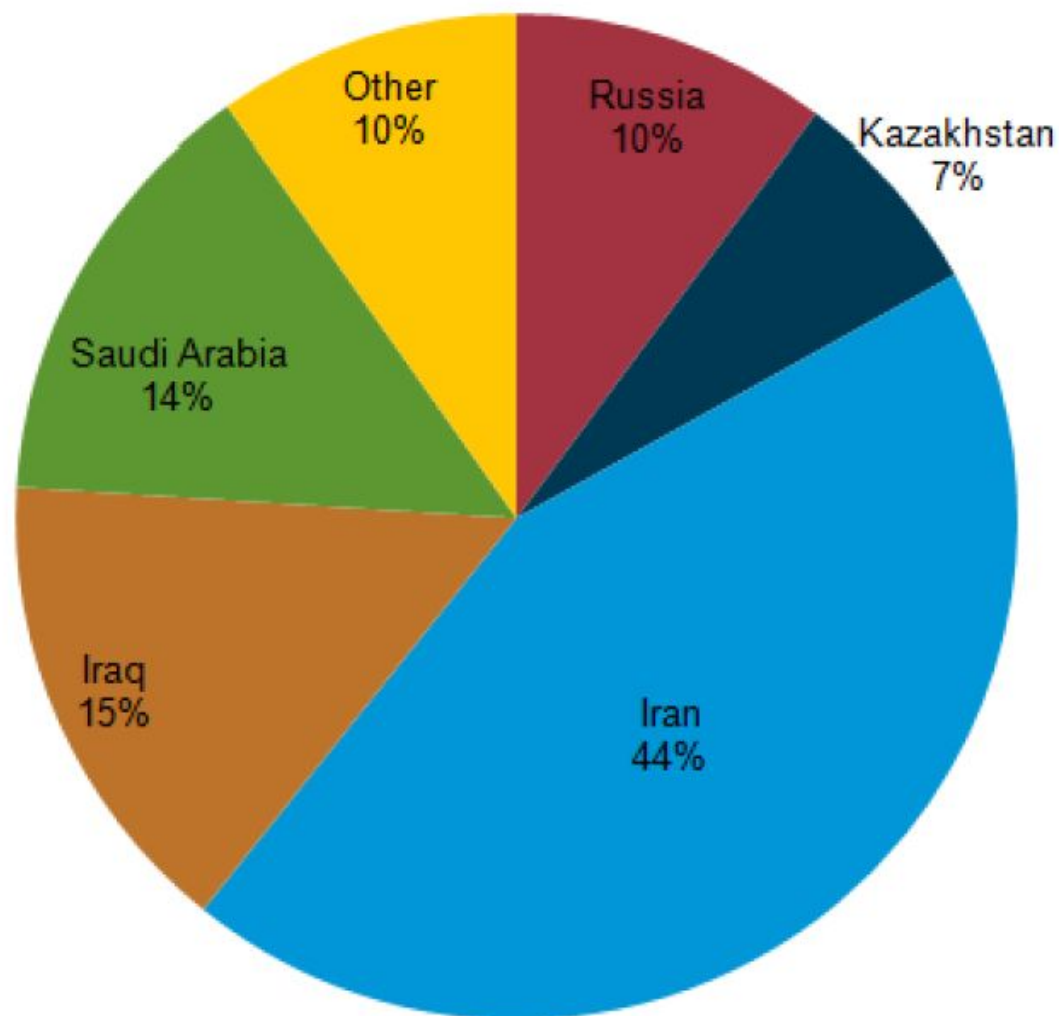




## RUSSIA-TURKEY

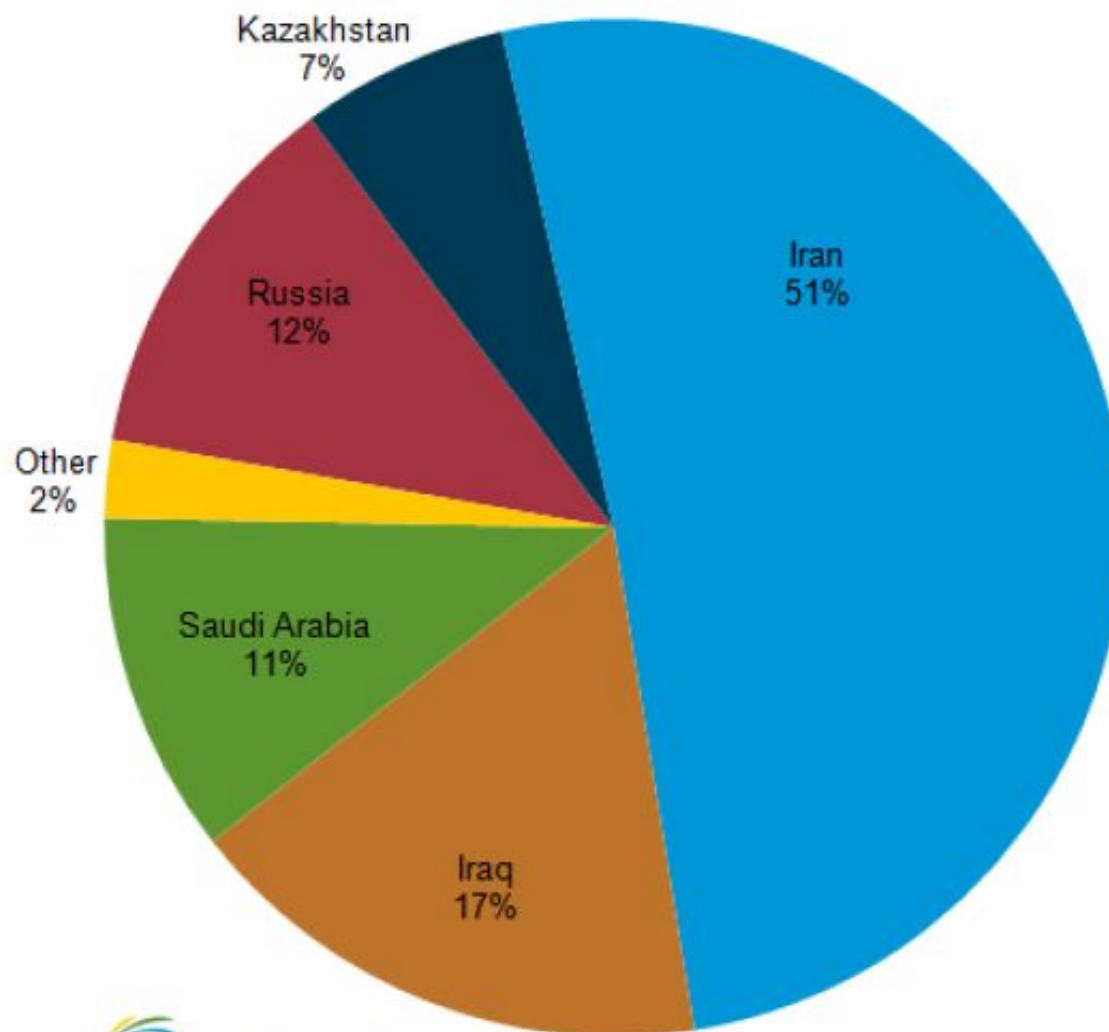
1. Political and economic cooperation
2. Prospects in gas industry
3. Prospects in oil industry
4. Other issues

## Share of Turkey's crude oil imports by country, January-September 2012





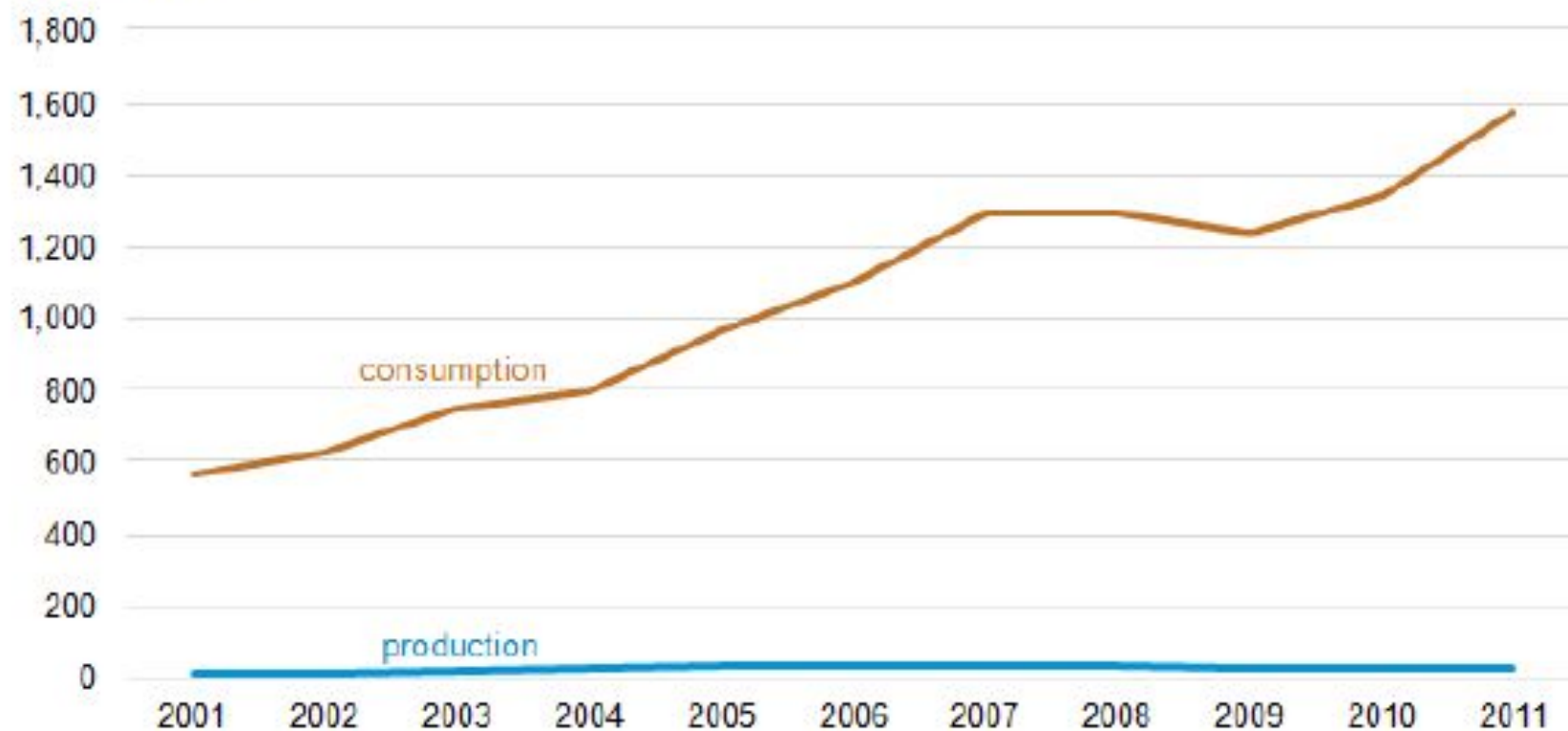
## Share of Turkey's crude oil imports by country, 2011





## Natural gas consumption and production in Turkey, 2001-2011

billion cubic feet



Source: U.S. Energy Information Administration, International Energy Statistics Database

# RUSSIA IN MULTILATERAL AND BILATERAL ENERGY COOPERATION IN ASIA

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- APEC
- CHANKAY ORGANIZATION OF COOPERATION
- EURASIAN ECONOMIC COMMUNITY
- RUSSIA-CHINA
- RUSSIA-JAPAN
- RUSSIA- SOUTH KOREA
- RUSSIA-INDIA
- RUSSIA-KAZAKSTAN

# GEOPOLITICAL AND ECONOMIC INTERESTS OF RF IN ASIA

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- 1. Political stability in the region (! NEA) стабильность в регионе
- 2. Settlement regional conflicts by peace ways and means
- 3. Development of regional energy infrastructure and system of energy security
- 4. Socio-economic development of Far East and Eastern Siberia
- 5. Bilateral and multilateral energy cooperation in the region

# RUSSIAN DOCUMENTS

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- ENERGY STRATEGY OF RUSSIA TILL 2030
- PROGRAM OF FORMATION OF THE UNITED SYSTEM OF GAS PRODUCTION, TRANSPORTATION AND SUPPLY IN EAST SIBERIA AND FAR EAST WITH PROSPECTS OF GAS EXPORTS TO ASIAN PACIFIC AREA
- ORIENTAL GAS PROGRAM
- PROJECT OF CONSTRUCTION OF OIL PIPELINE «EAST SIBERIA-PACIFIC OCEAN»
- PSA AGREEMENTS FOR REALISATION OF SAKHALIN-1 &2 PROJECTS

# MAJOR PROJECTS

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- SAKHALIN PROJECTS
- EAST SIBERIA PROJECTS
- OIL PIPELINES
- GAS PIPELINES
- OTHER PROJECTS



# Принципиальная схема Единой системы добычи и транспортировки газа в Восточной Сибири и на Дальнем Востоке России



ИСТОЧНИК: А.М.  
МАСТЕПАНОВ

# Восточная газовая Программа: рекомендуемый вариант развития – газопереработка и газохимия



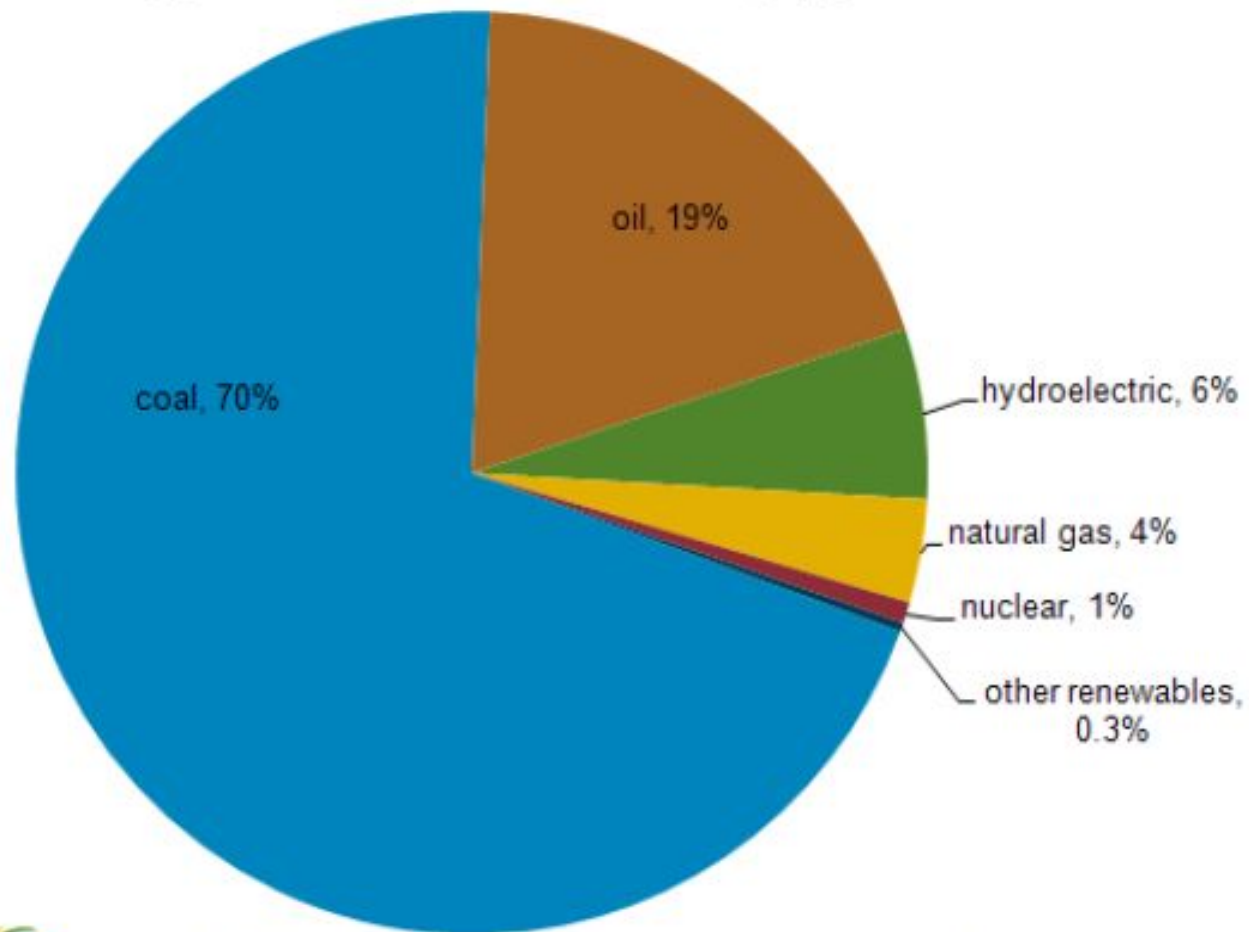
# RUSSIA-CHINA ENERGY PARTNERSHIP

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- POLITICAL AND LEGAL BASIS
- ENERGY DIALOGUE
- OIL PROJECTS
- GAS PROJECTS
- OTHER PROJECTS
- ENERGY PROBLEMS OF CHINA



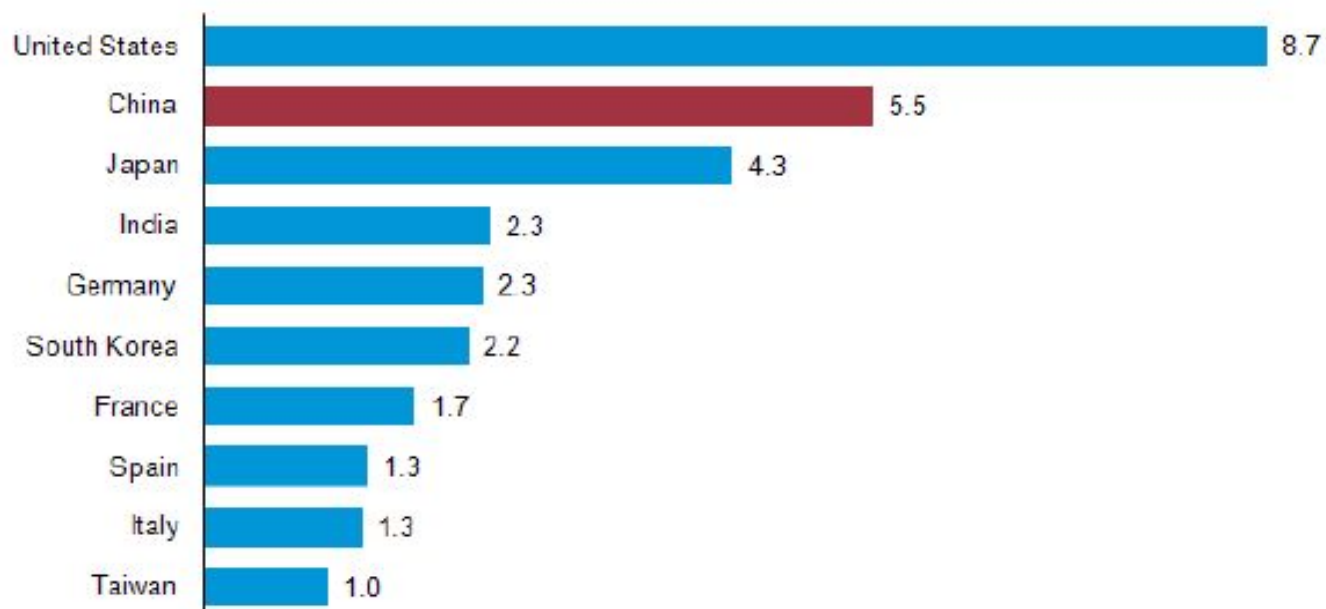
## Total energy consumption in China by type, 2009



Source: U.S. Energy Information Administration, *International Statistics*

## Top ten net oil importers, 2011\*

million barrels per day



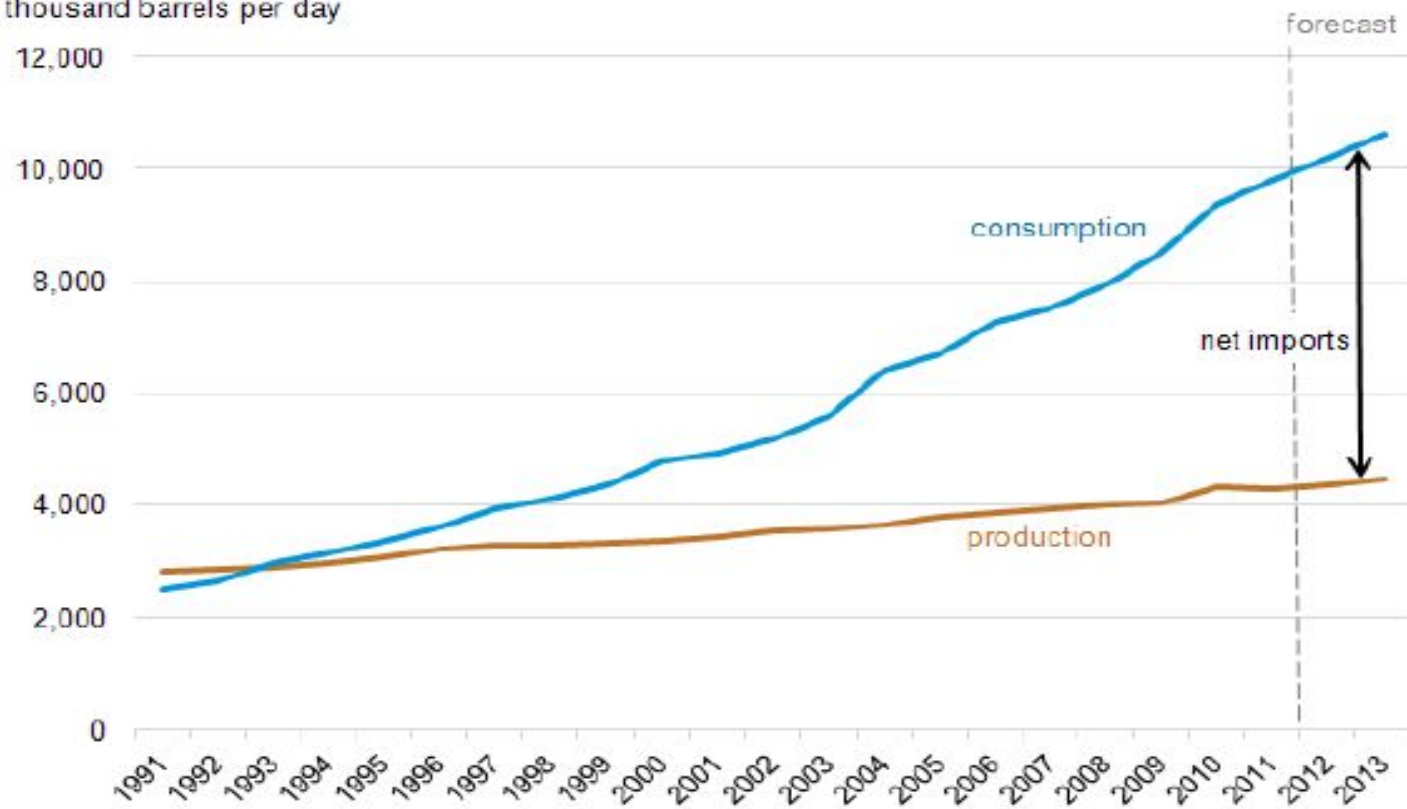
\*Estimates of total production less consumption. Does not account for stockbuild.

Source: U.S. Energy Information Administration *Short-Term Energy Outlook* (August 2012)



## China's oil production and consumption, 1990-2013

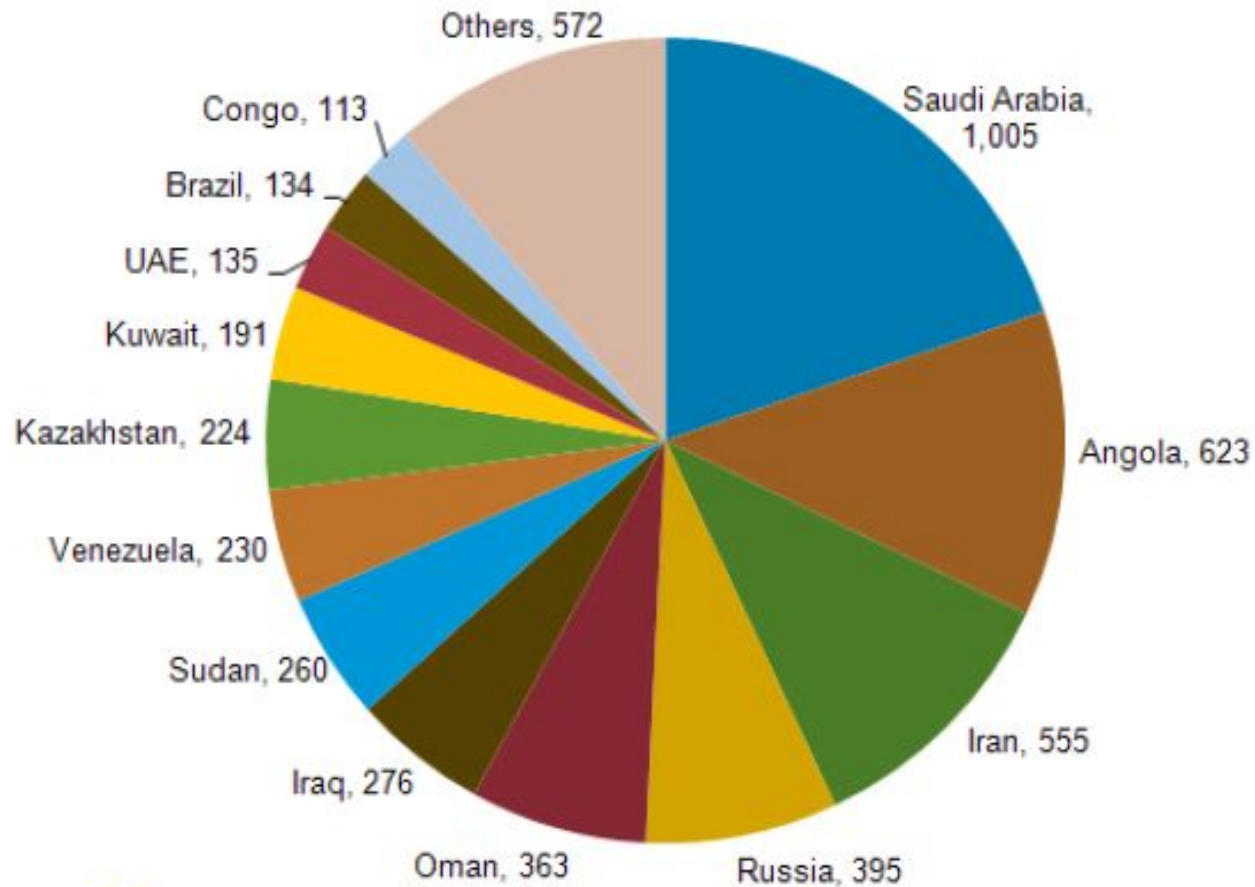
thousand barrels per day



Source: U.S. Energy Information Administration *International Energy Statistics and Short-Term Energy Outlook* (August 2012)

## China's crude oil imports by source, 2011

thousand barrels per day



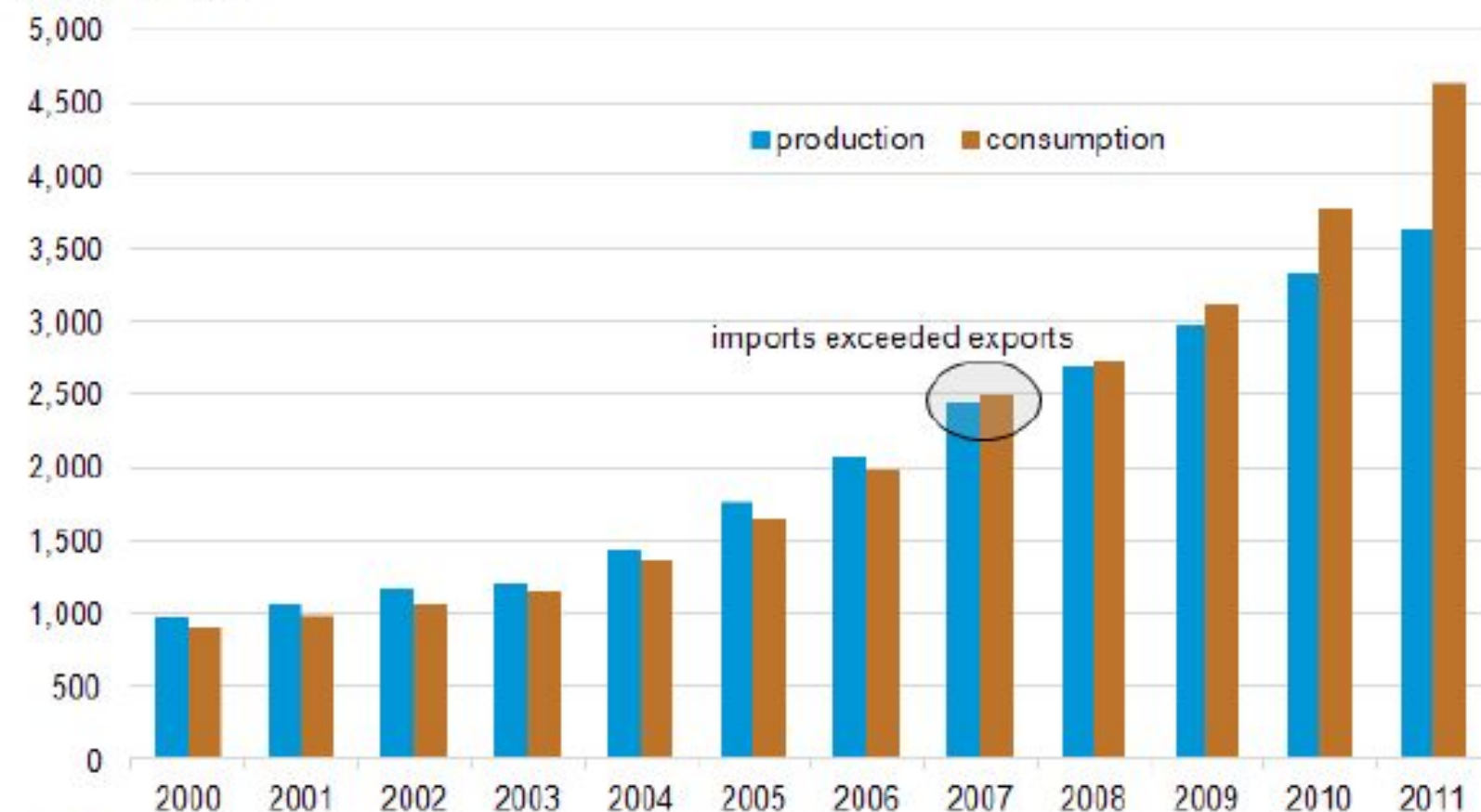
Source: FACTS Global Energy





## China's natural gas production and consumption, 2000-2011

billion cubic feet

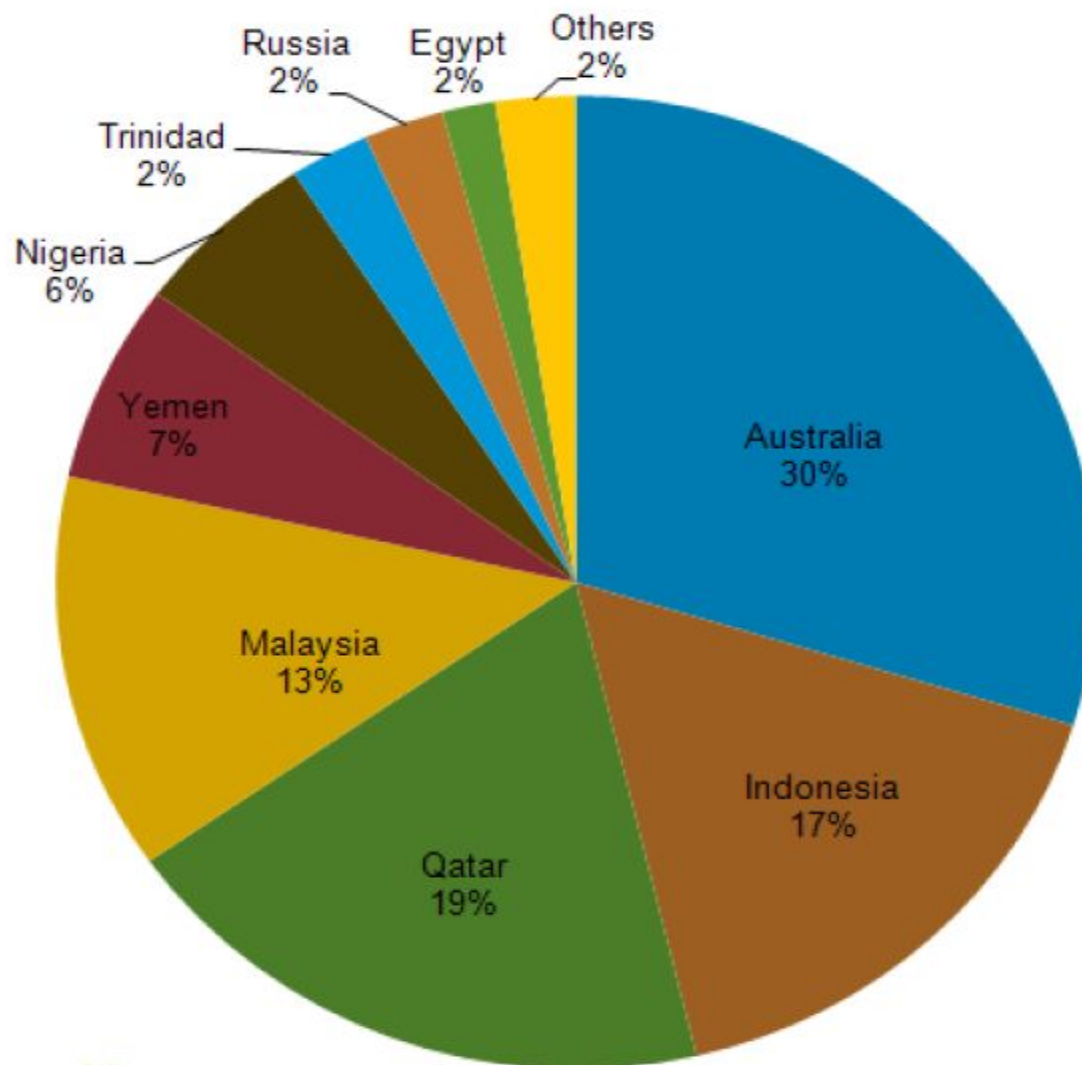


Source: U.S. Energy Information Administration *International Energy Statistics*



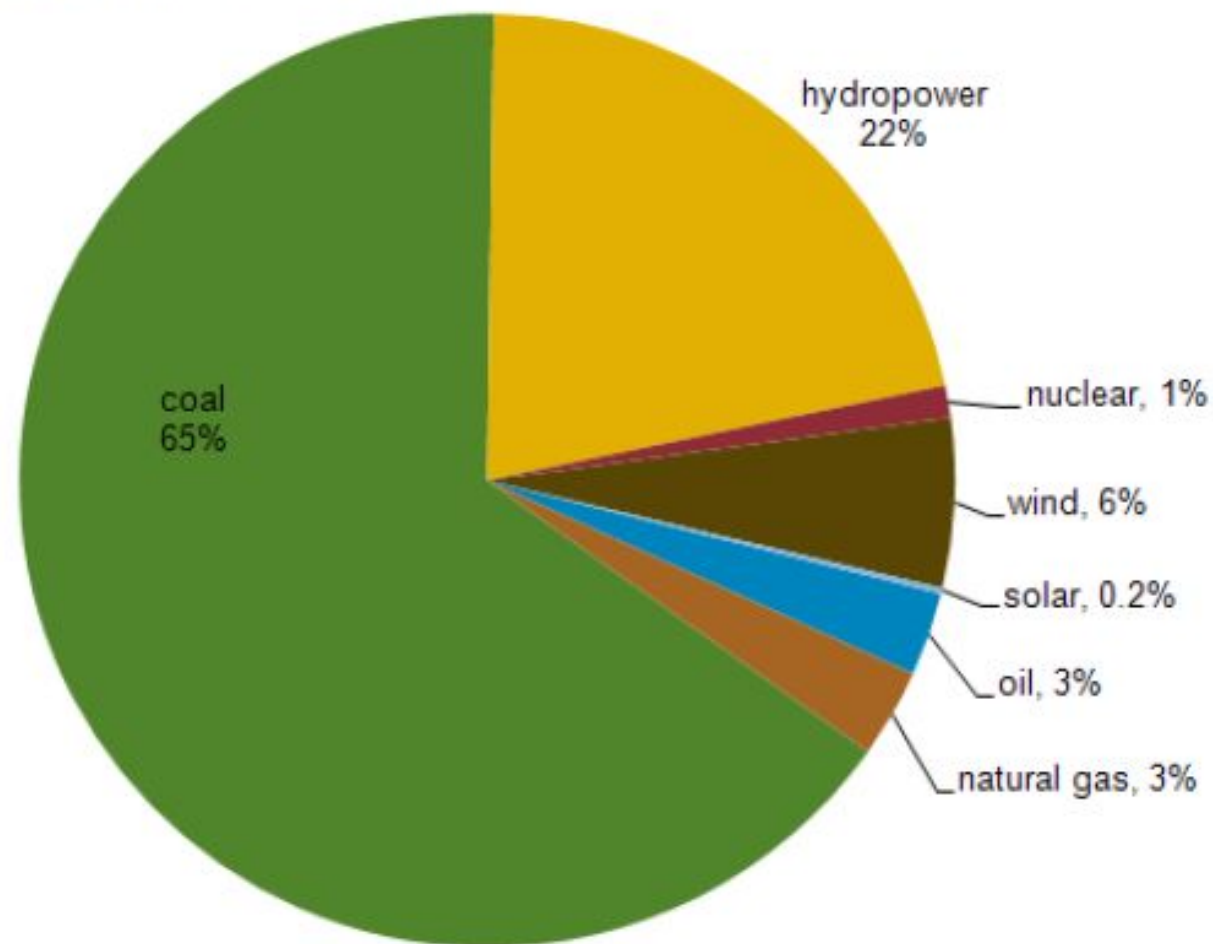


## China LNG import sources, 2011



## China's installed electricity capacity by fuel, 2011

installed capacity: 1,073 gigawatts



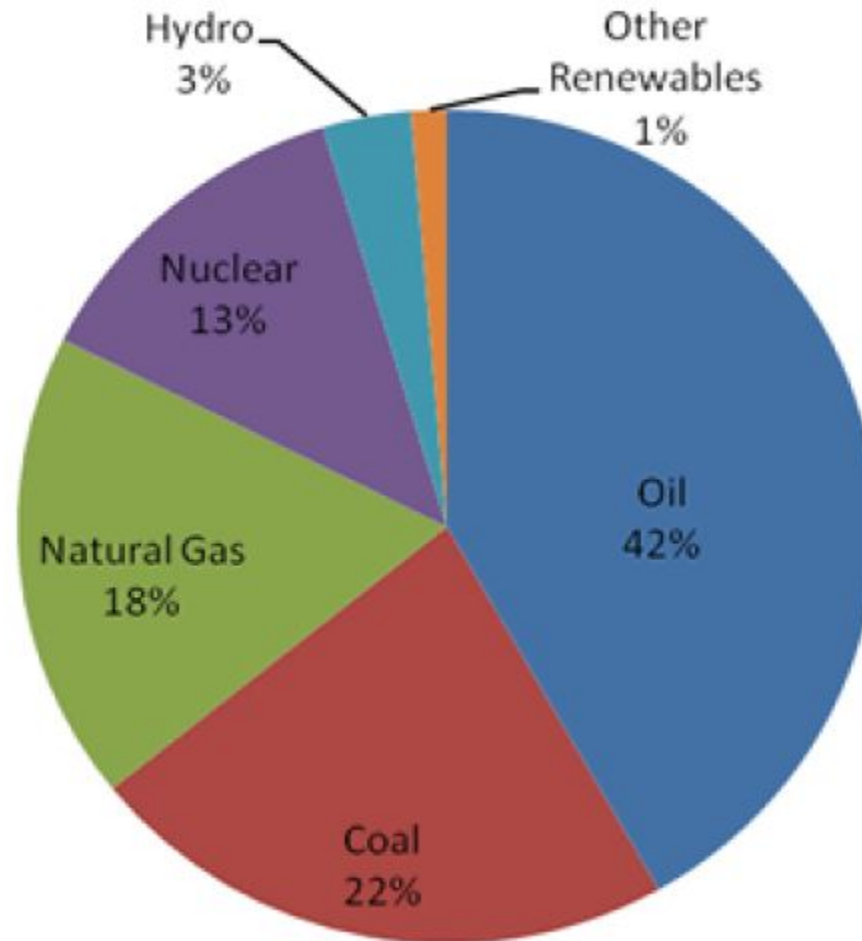
Source: FACTS Global Energy

# RUSSIA-JAPAN ENERGY RELATIONS

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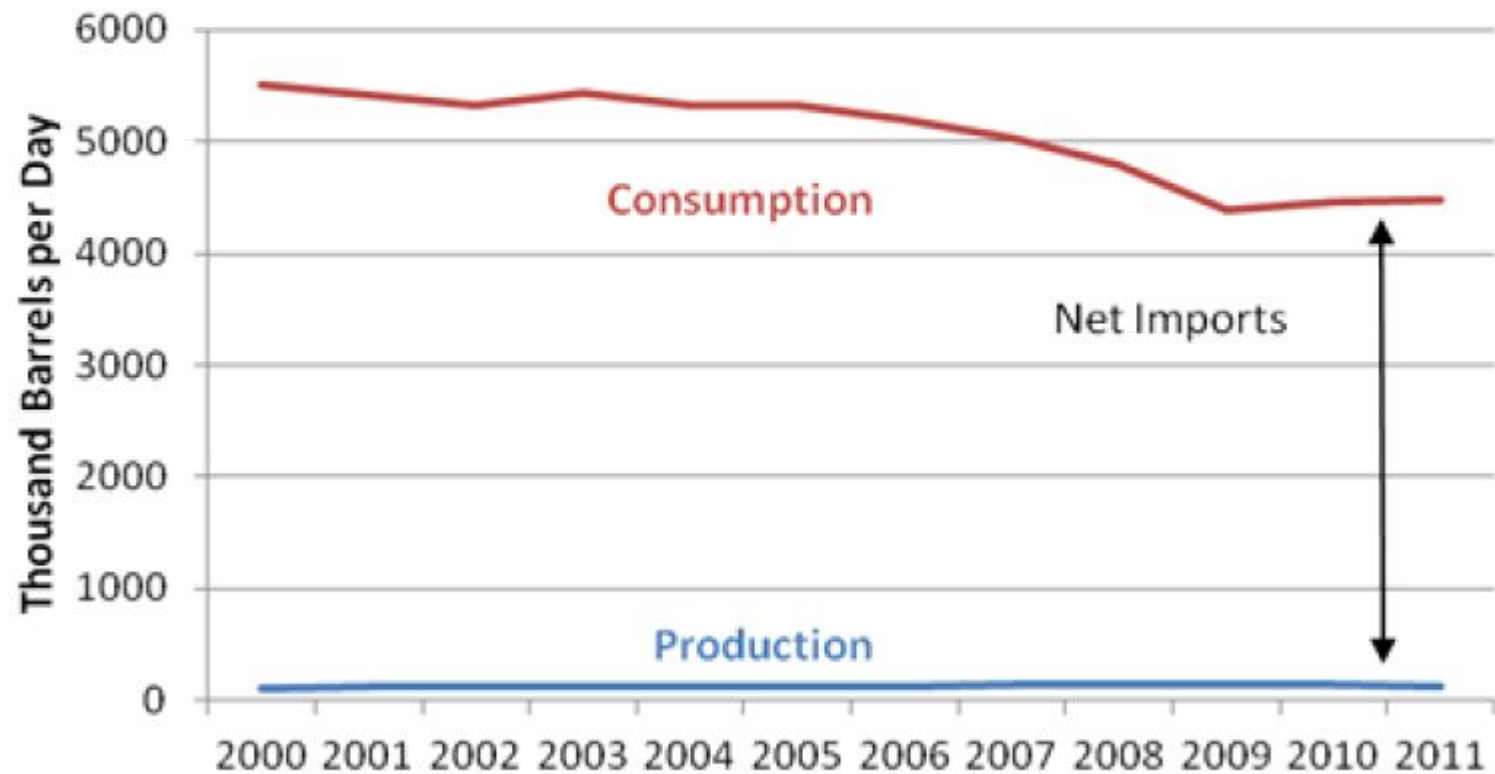
- POLITICAL AND LEGAL BASIS
- OIL PROJECTS
- GAS PROJECTS
- OTHER PROJECTS
- ENERGY PROBLEMS OF JAPAN

## Japan Total Energy Consumption, 2010



Source: EIA *International Energy Statistics*

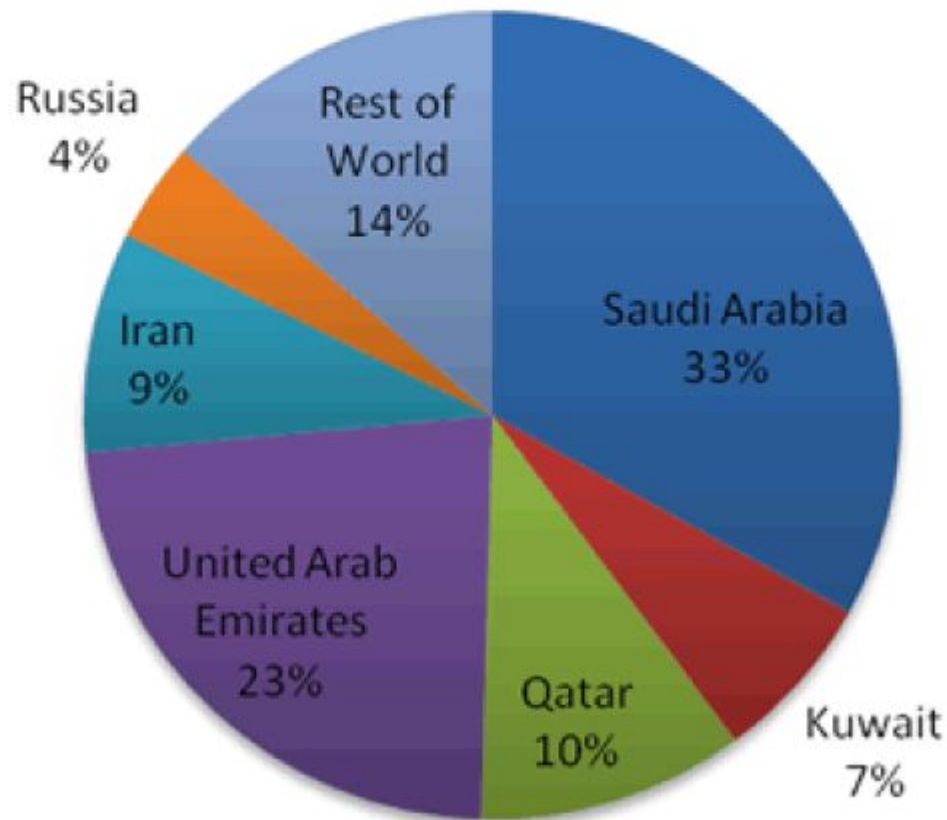
## Japan's Oil Production and Consumption, 2000-2011



Source: EIA *International Energy Statistics*

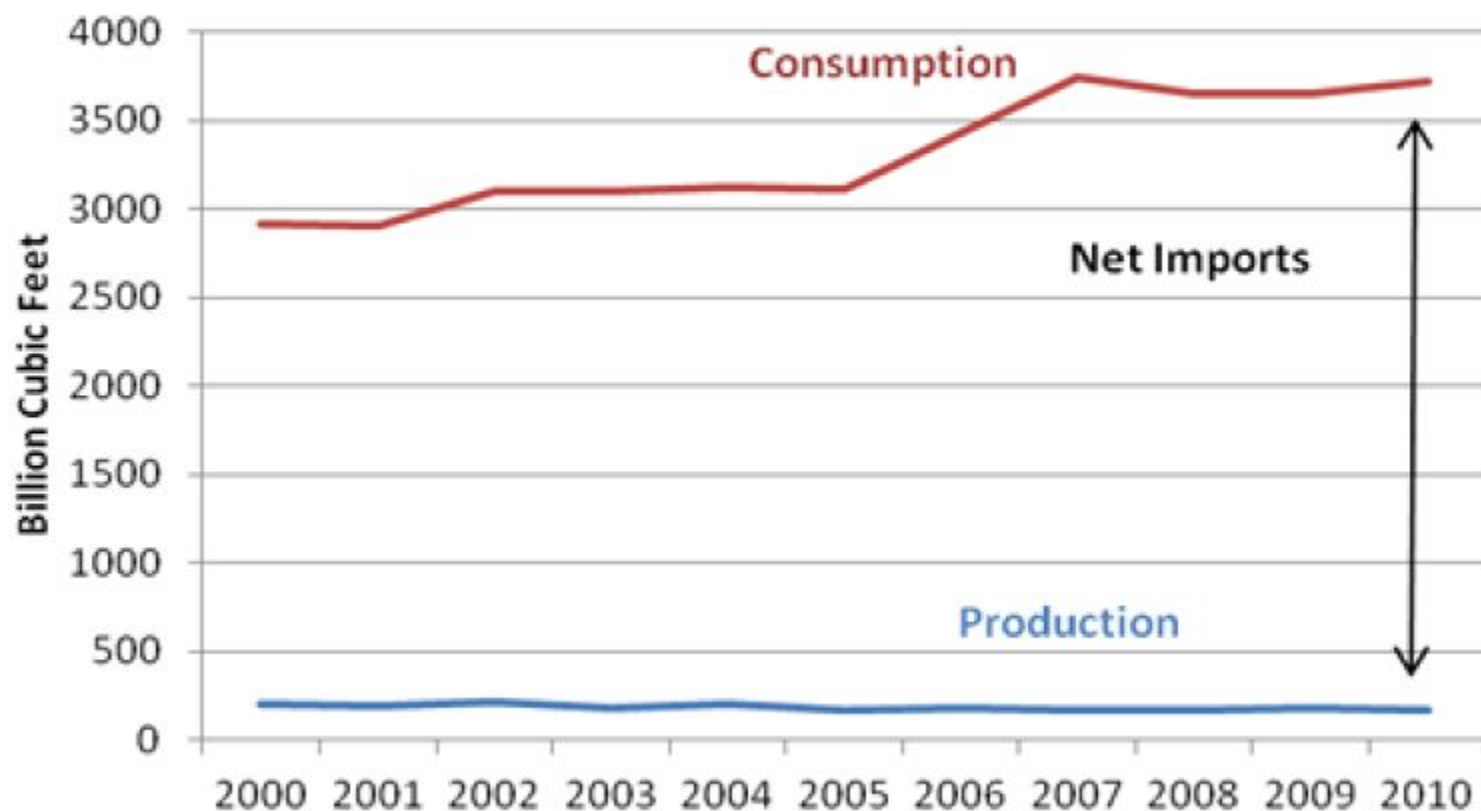


## Japan's Crude Oil Imports by Source, 2011



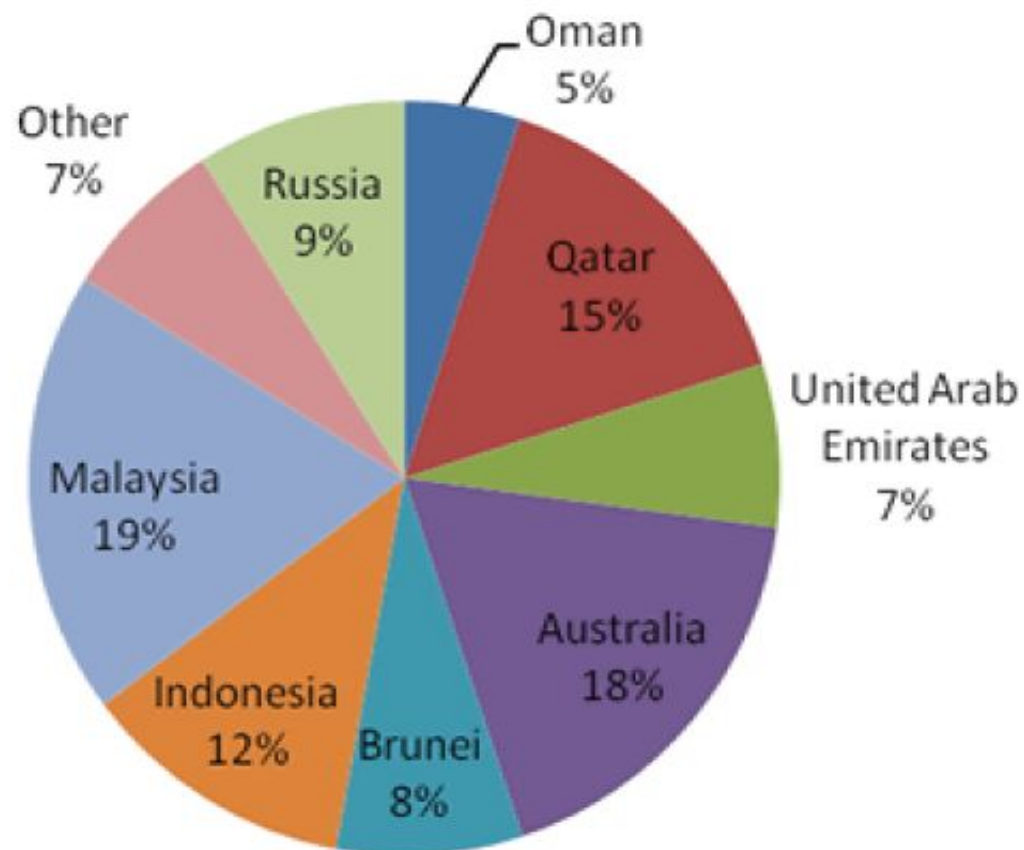
Source: Global Trade Atlas, Japanese Government

## Japan's Natural Gas Production and Consumption, 2000-2010



Source: EIA *International Energy Statistics*

## Japan LNG Imports by Source, 2011



Source: FACTS Global Energy

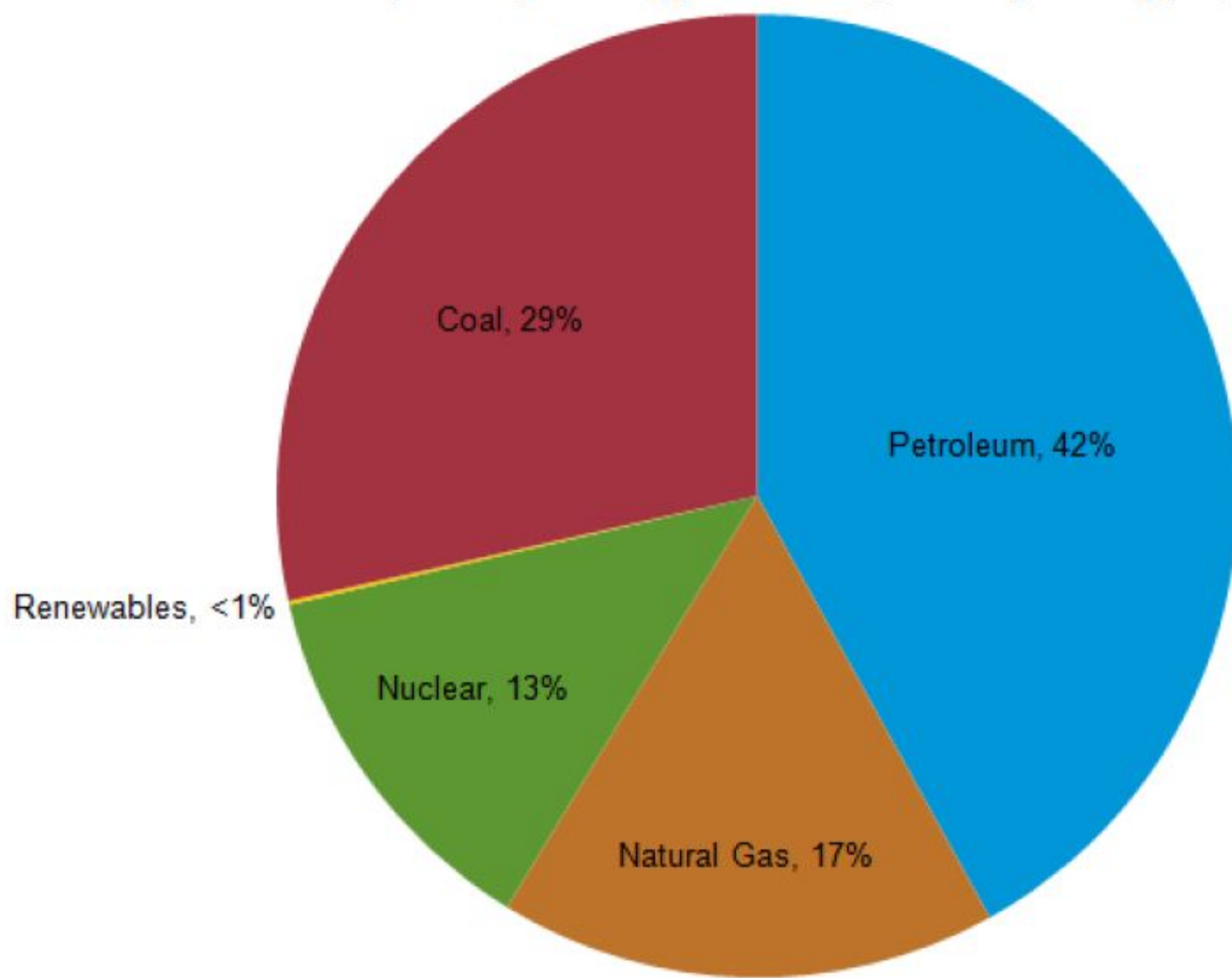
Other: US, Algeria, Egypt, Nigeria, Norway, Equatorial Guinea, Trinidad, Yemen, Peru

# RUSSIA- SOUTH KOREA

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- POLITICAL AND LEGAL BASIS
- OIL PROJECTS
- GAS PROJECTS
- ENERGY PROBLEMS OF S.KOREA

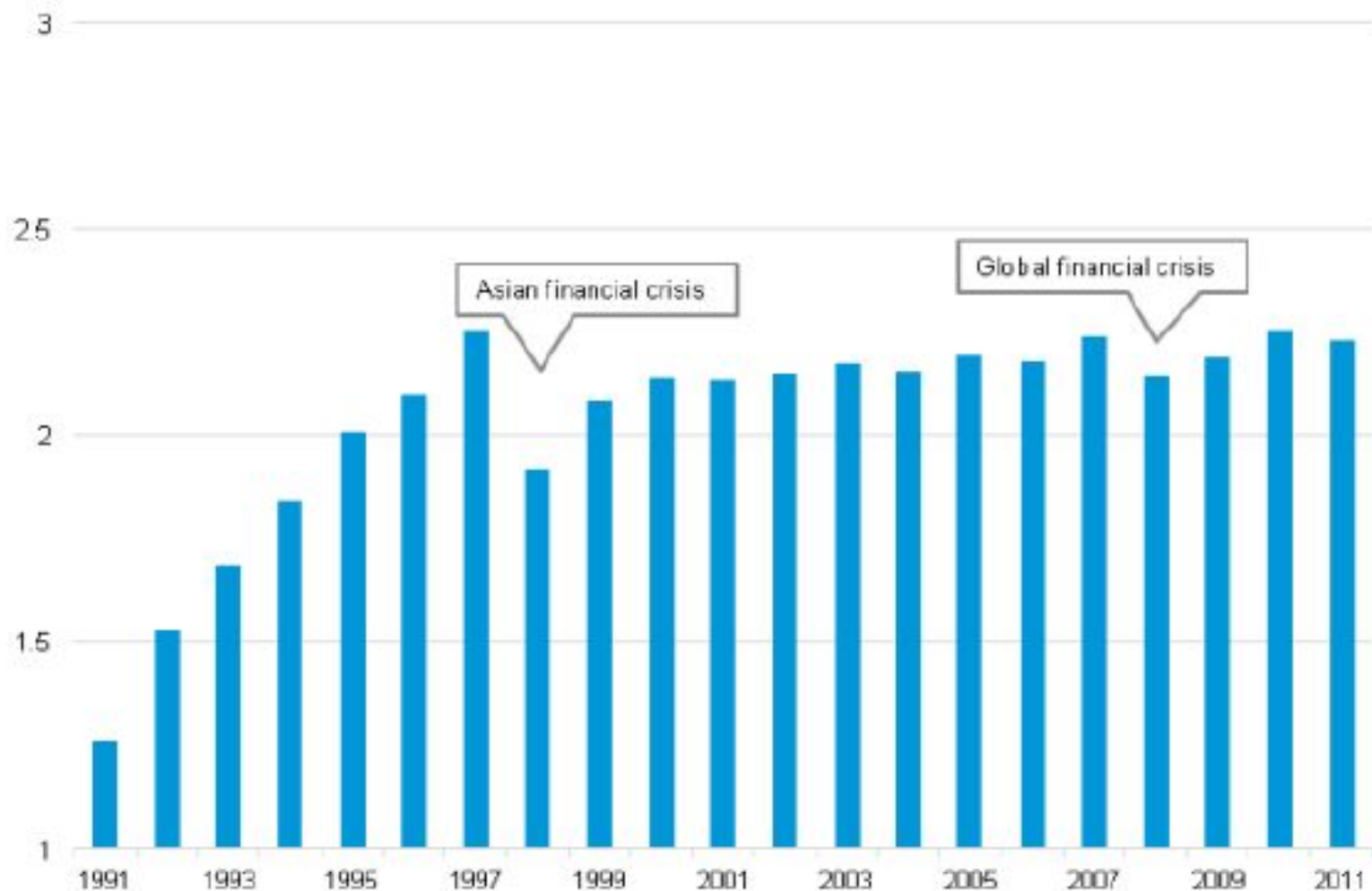
## South Korea total primary energy consumption by fuel type, 2011





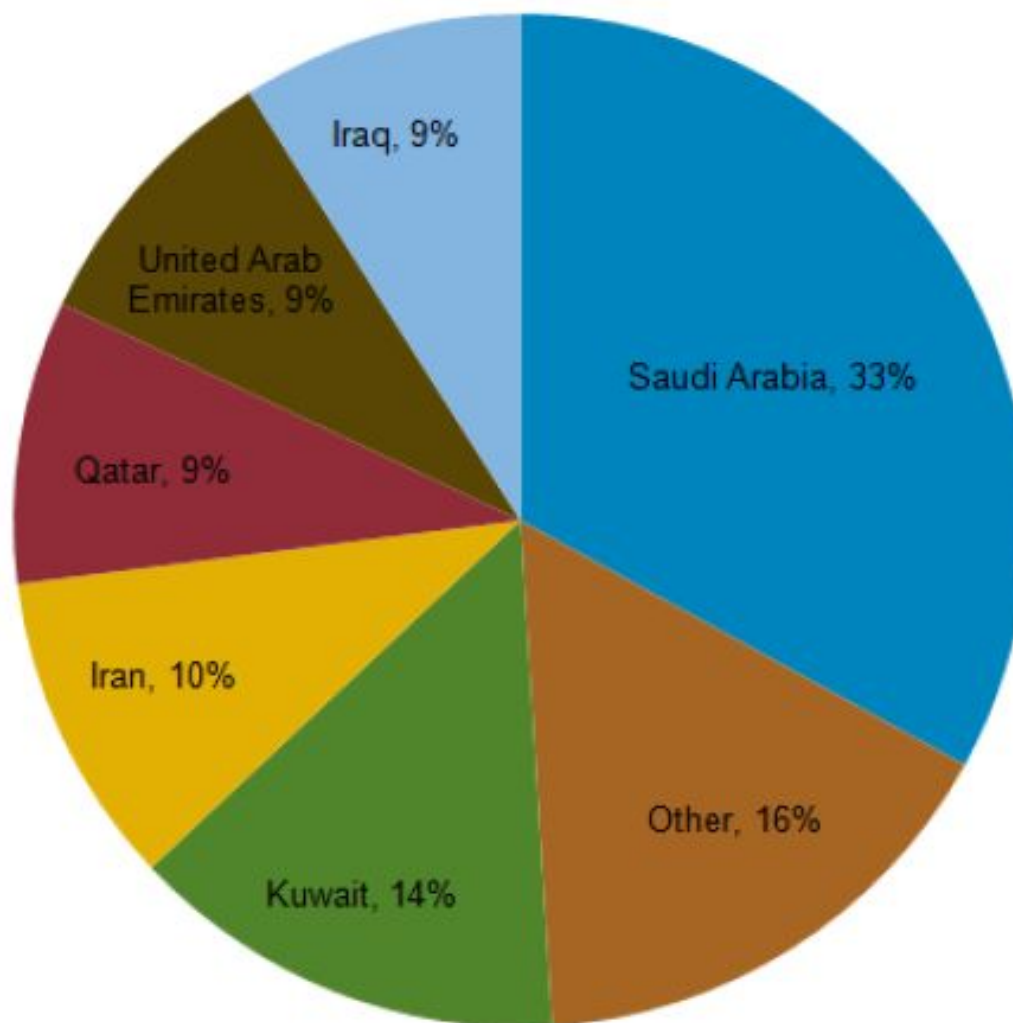
## South Korea oil consumption, 1991-2011

million barrels per day



Source: U.S. Energy Information Administration

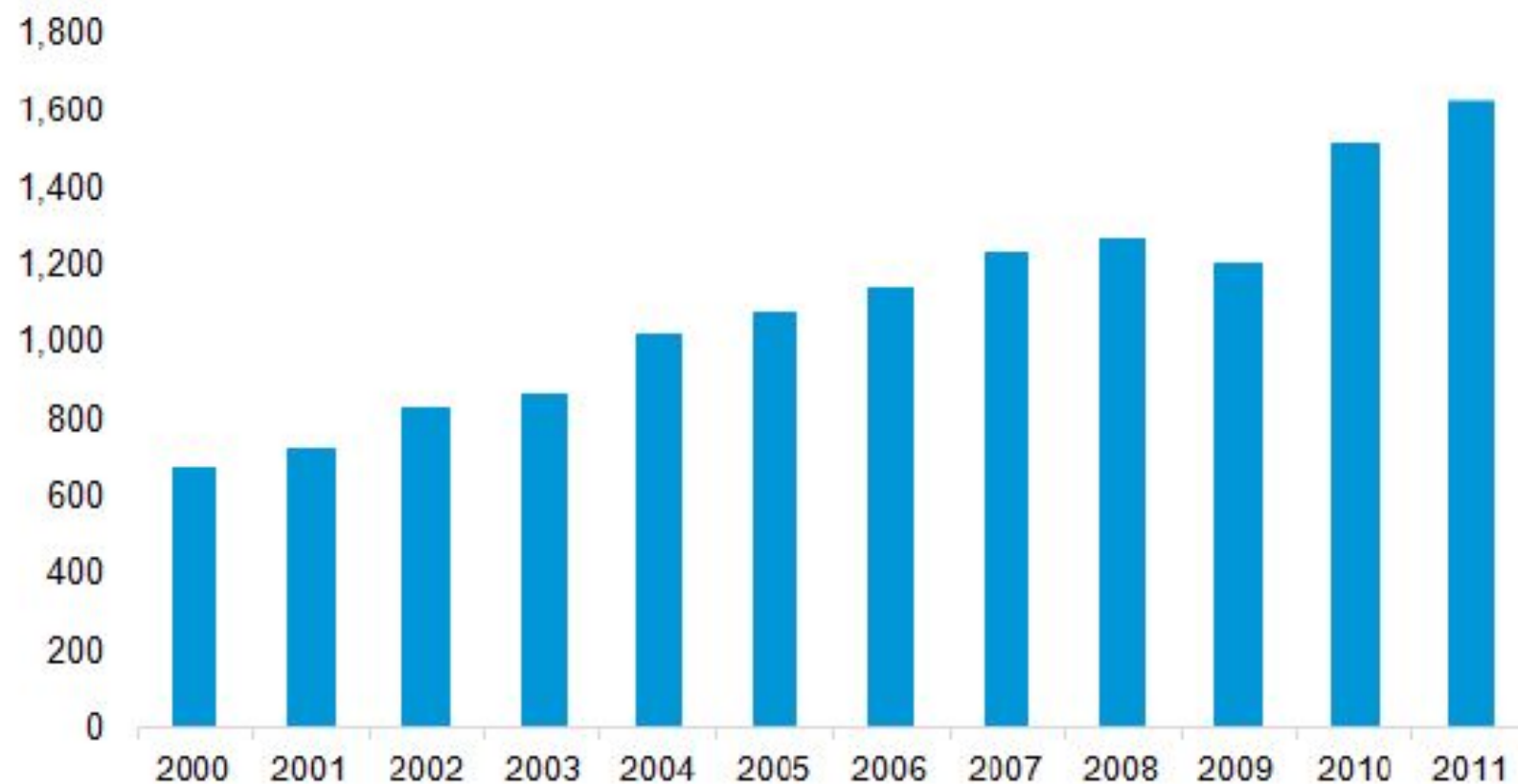
## South Korea oil imports by source, 2011



Source: U.S. Energy Information Administration, Korea Customs Services

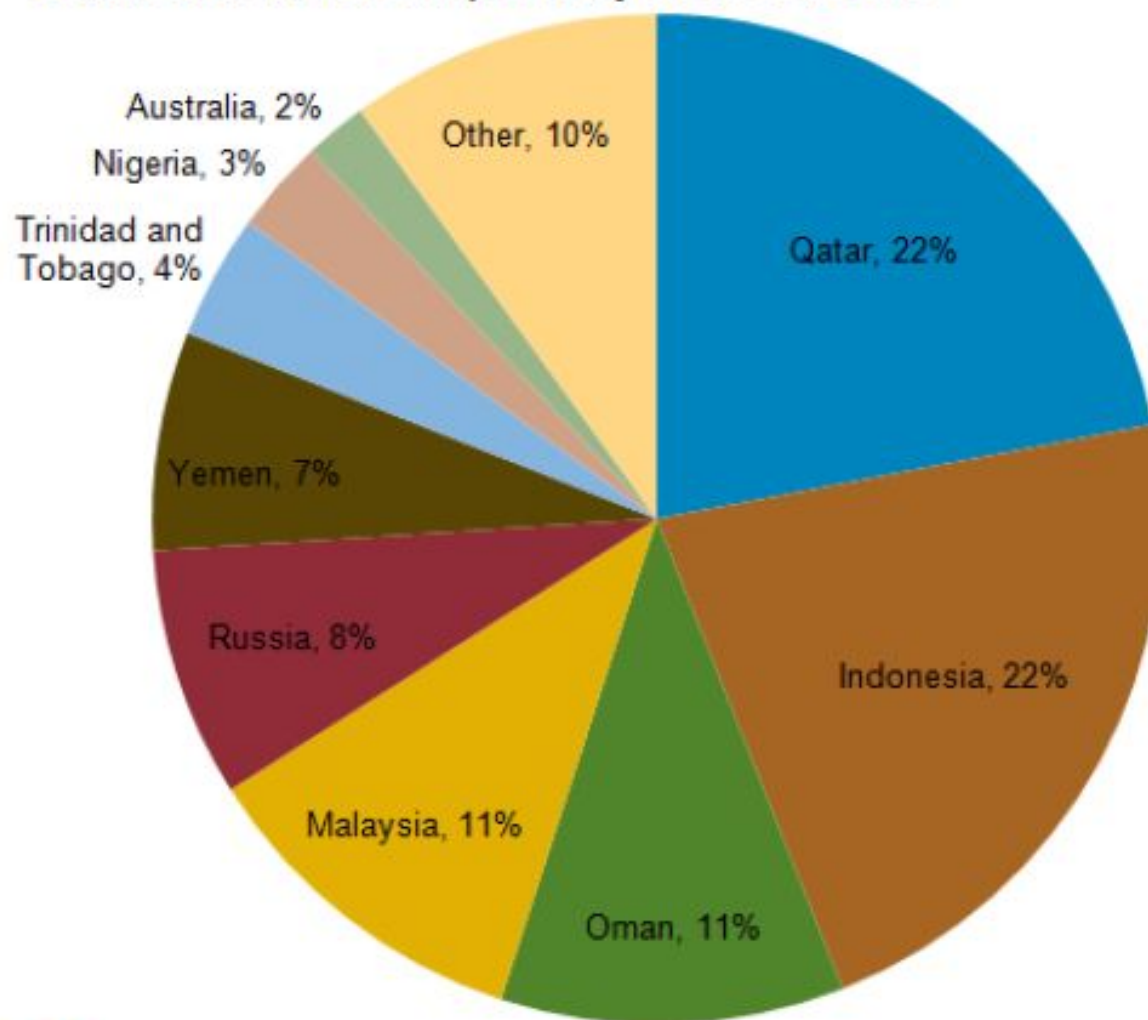
## South Korea's natural gas consumption, 2000-2011

billion cubic feet



Source: U.S. Energy Information Administration

## South Korea LNG imports by source, 2011



Source: U.S. Energy Information Administration, Korea Customs Service

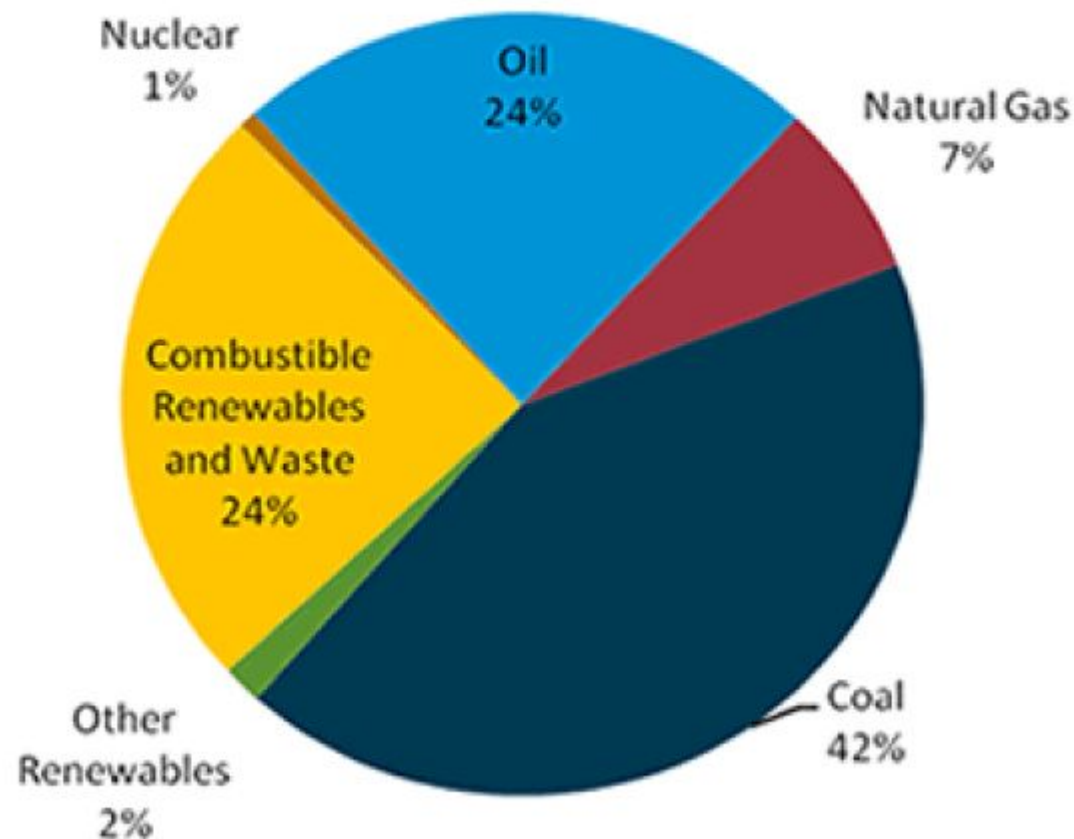
# RUSSIA-INDIA

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- POLITICAL AND LEGAL BASIS
- OIL PROJECTS
- GAS PROJECTS
- ENERGY PROBLEMS

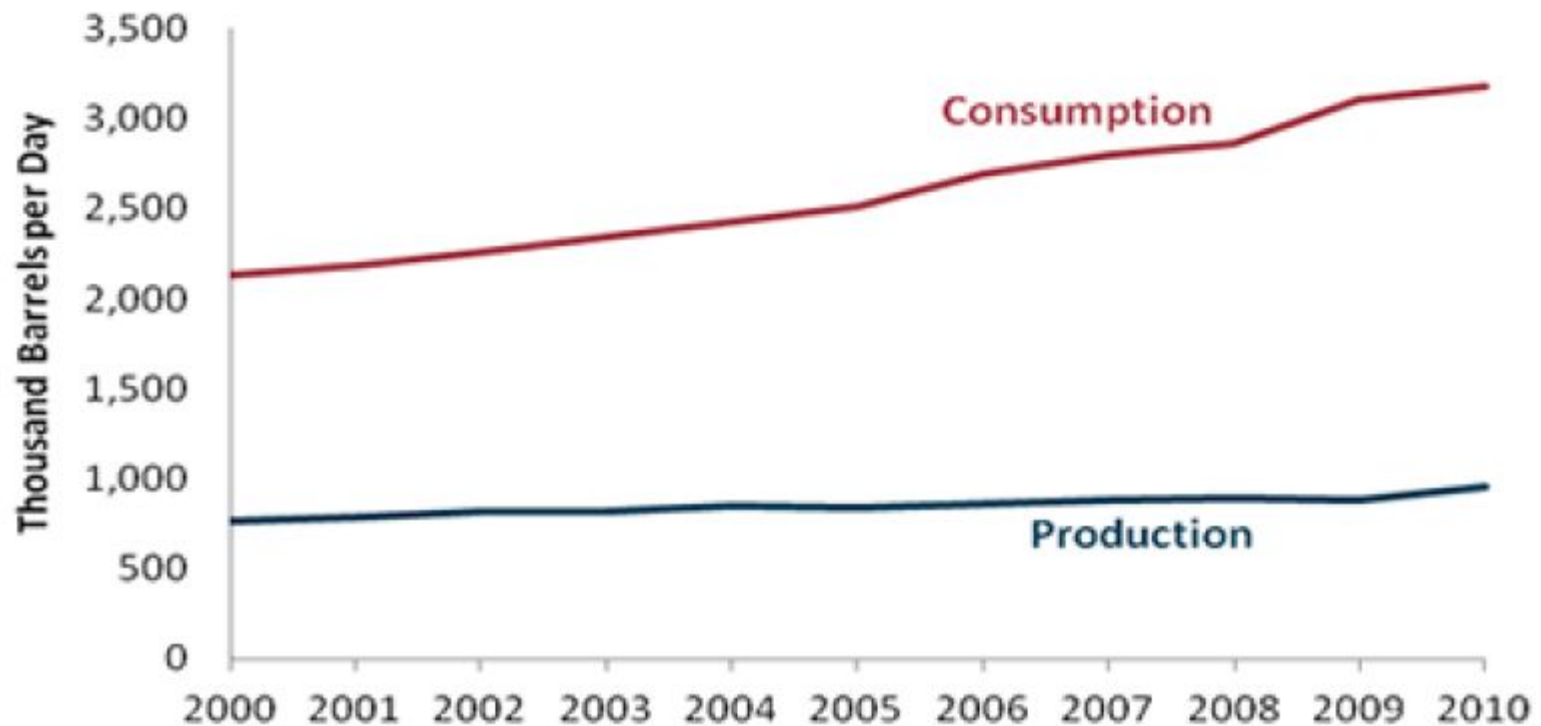


## Total Energy Consumption in India, By Type (2009)



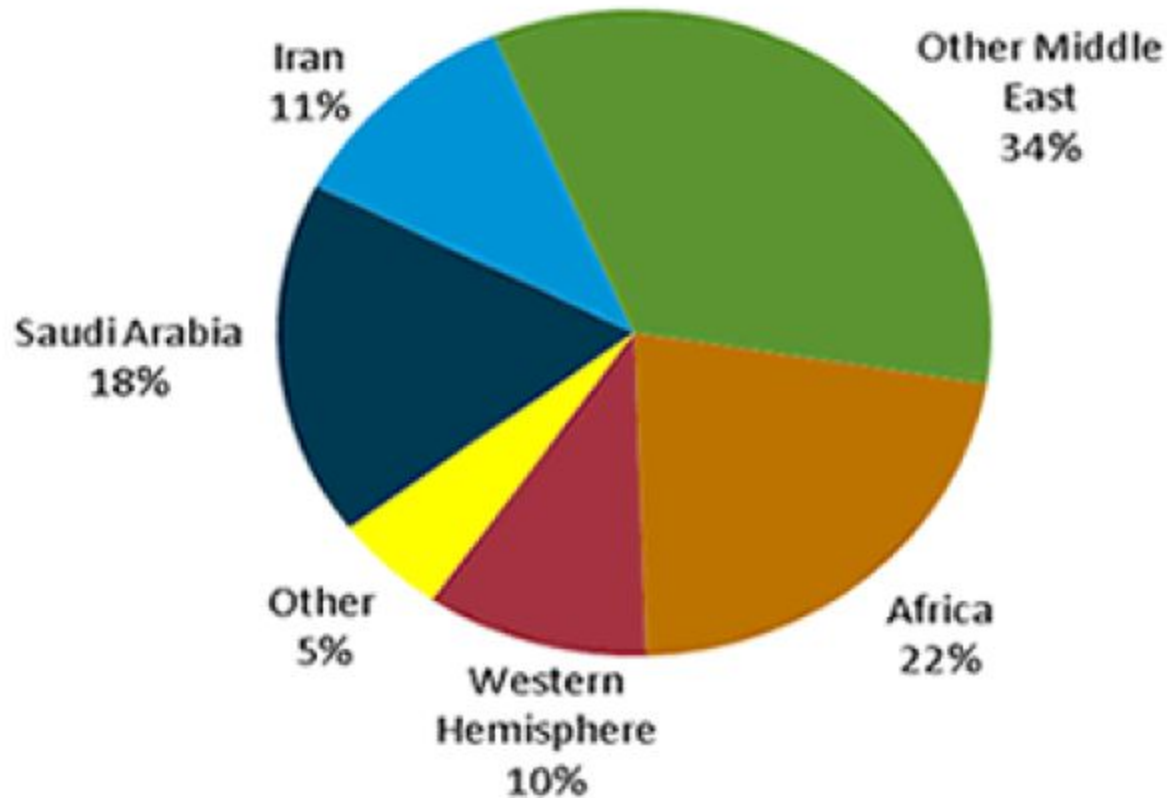
Source: The International Energy Agency

## India's Oil Production and Consumption, 2000-2010



Source: U.S. Energy Information Administration, *International Energy Statistics*

## India's Oil Imports by Source, 2010



Source: Global Trade Atlas

# RUSSIA-USA

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Prospects and problems of Energy  
Dialogue

# GENERAL ISSUES

1. Energy problems of USA
2. Economic and geopolitical aspects of Energy cooperation Russia-USA
3. American interests
4. Russian interests



# Energy Dialogue

1. History

2. Energy in Russian-American  
summits

3. Russian-American energy  
business summits 2002, 2003

4. Prospects for cooperation

## Exporting countries and Russia

Saudi Arabia

Iraq

Iran

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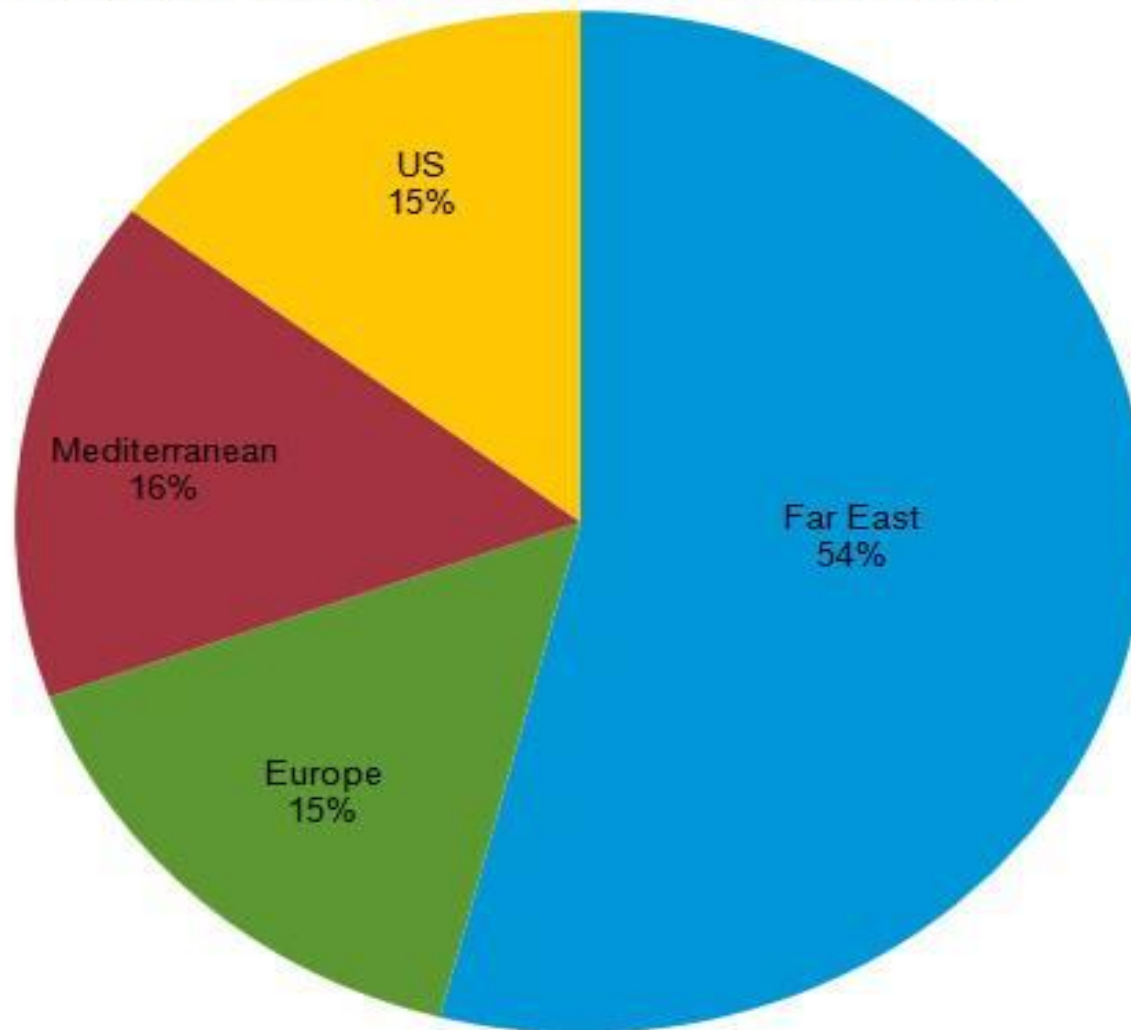
Venezuela

Norway

# SAUDI ARABIA

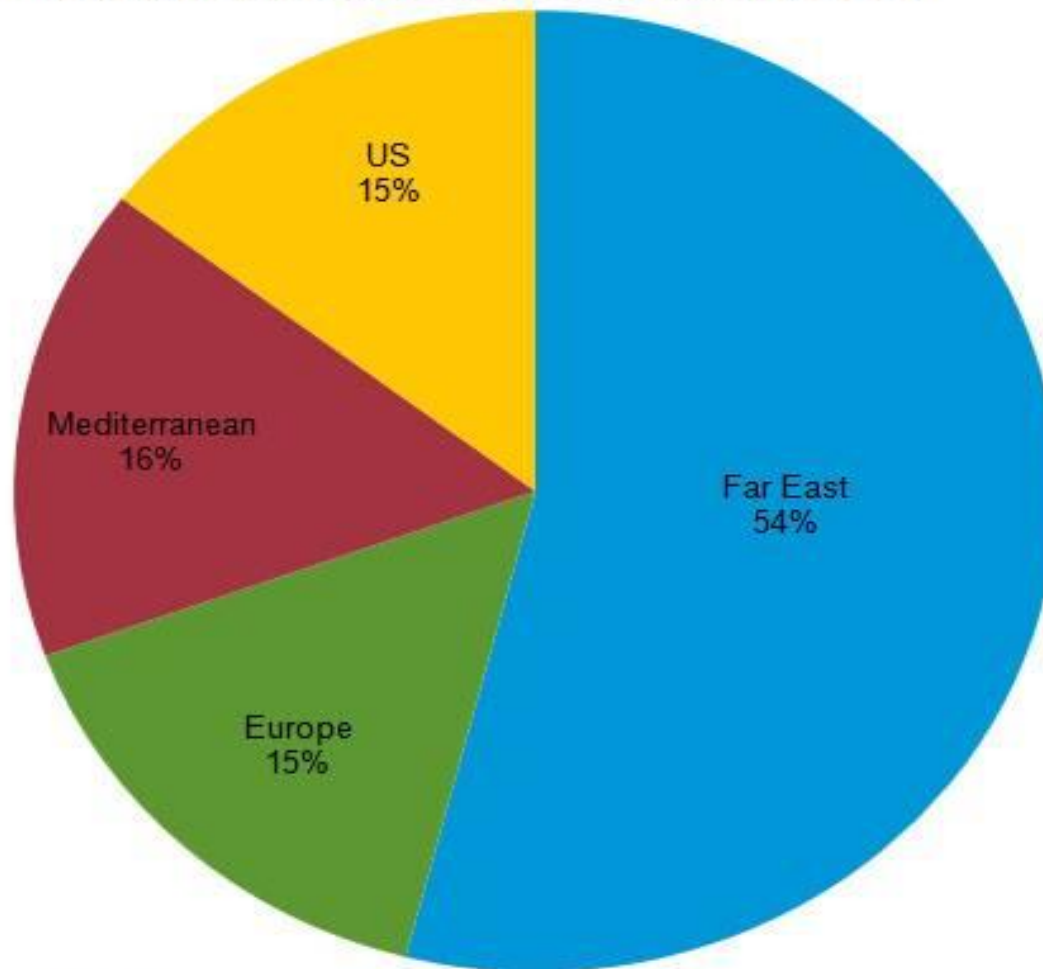
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## Saudi crude oil exports by destination (2012)



Source: U.S. Energy Information Administration, APEX

## Saudi crude oil exports by destination (2012)



Source: U.S. Energy Information Administration, APEX

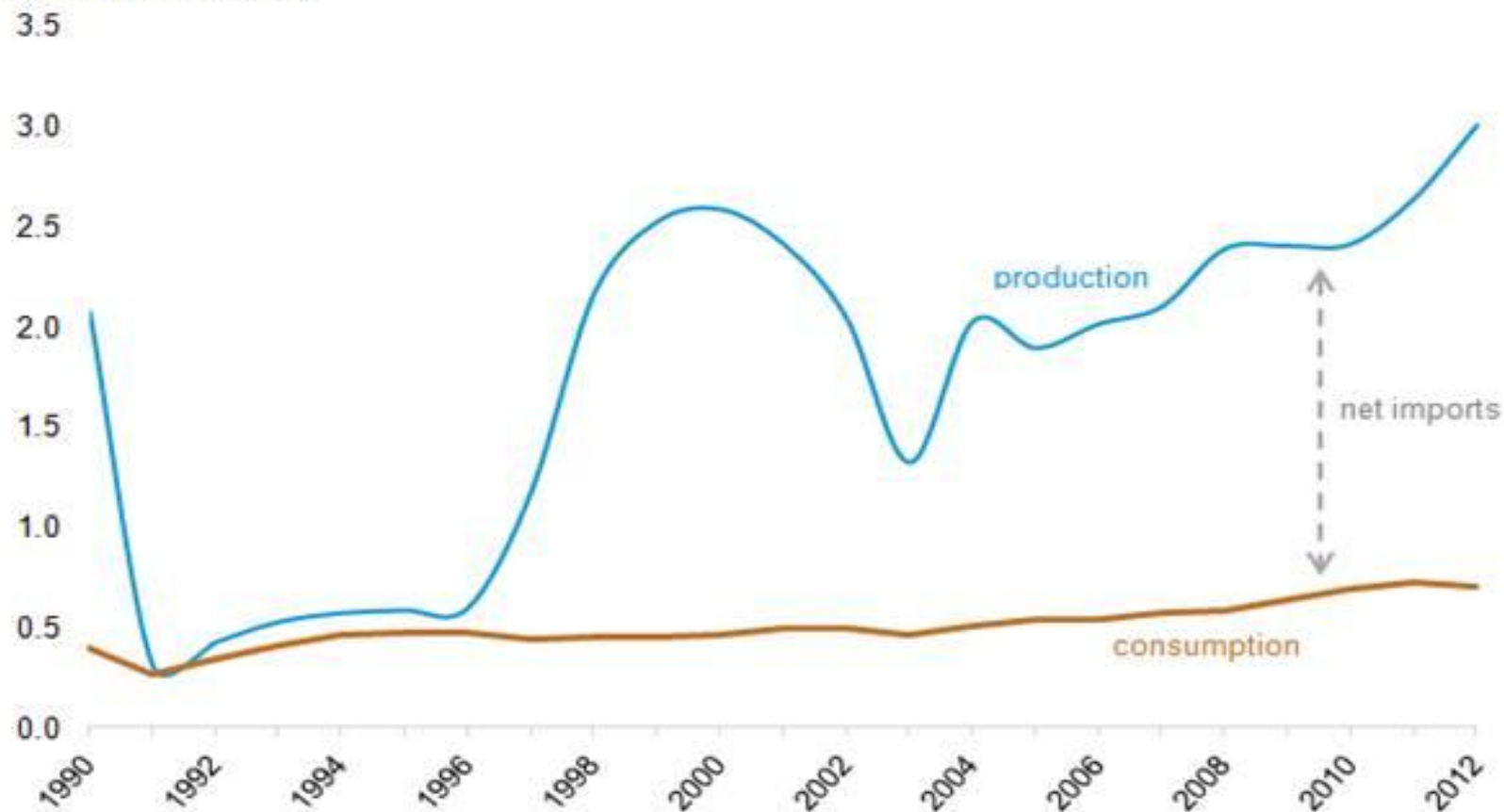




IRAQ

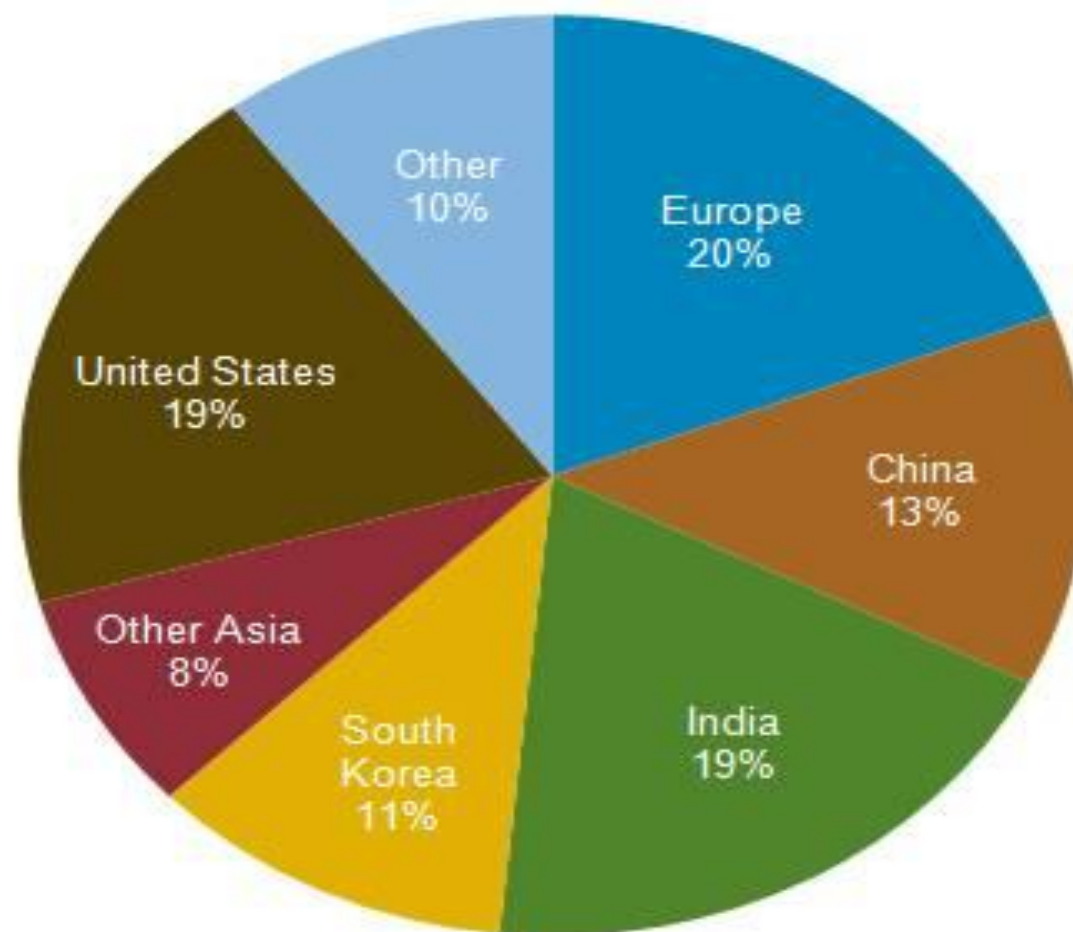
## Iraqi total petroleum liquids production and consumption, 1990-2012

million barrels per day



Source: U.S. Energy Information Administration

## Iraq crude oil exports, 2012





IRAN

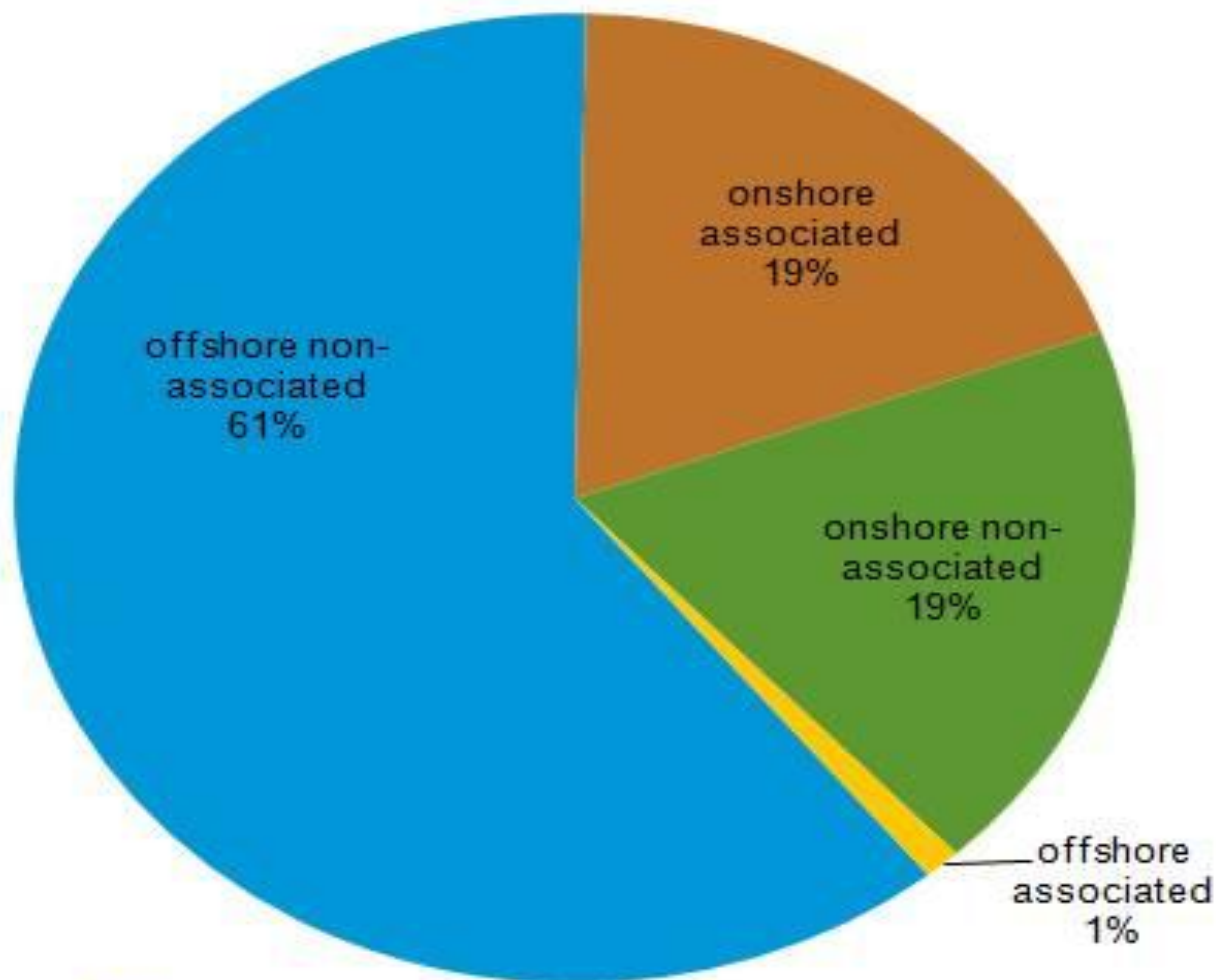
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Estimates of Iran's average exports of crude oil and condensate in 2011 and 2012, million barrels per day

	2011 average	2012 average
Japan and Korea	0.55	0.32
China and India	0.88	0.76
Other non-IEA	0.31	0.13
Greece, Italy, Spain, and Turkey	0.63	0.22
Other Europe	0.14	0.02
Total Exports	2.51	1.53



## Composition of Iranian natural gas reserves, 2011



Source: FACTS Global Energy



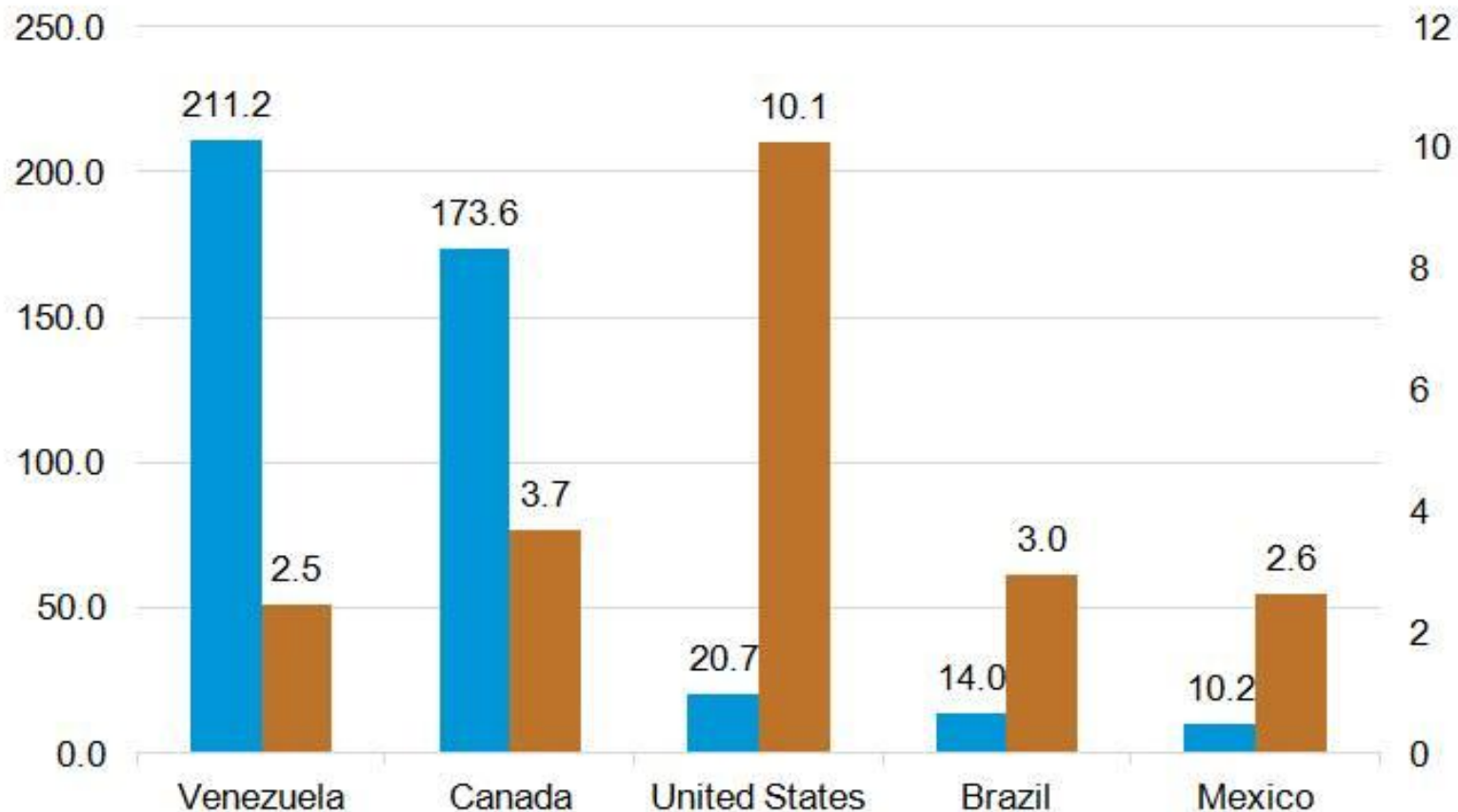
# VENEZUELA

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## Western Hemisphere proven oil reserves and production (2011)

reserves (billion barrels)

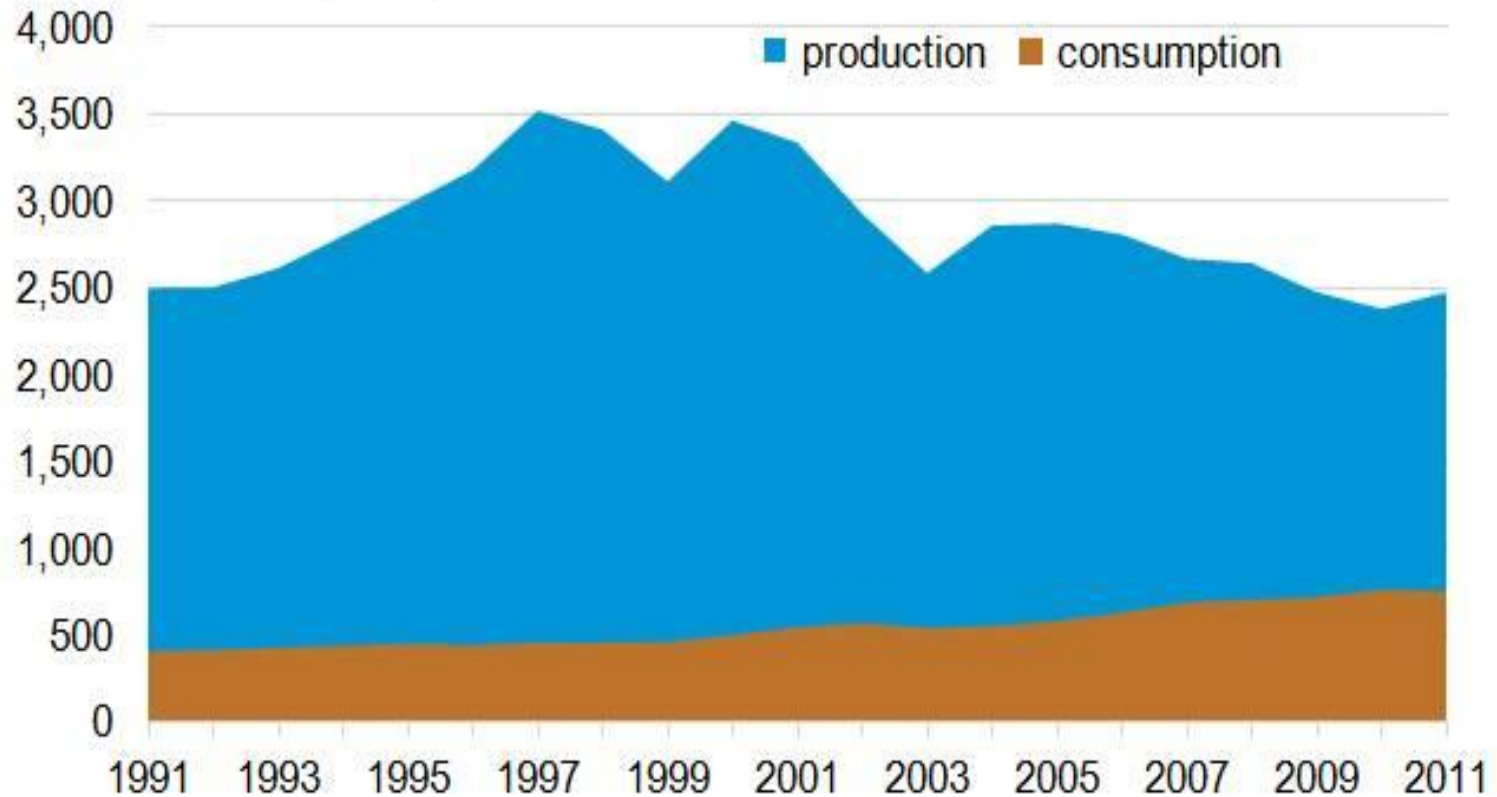
production (million barrels per day)



Sources: *Oil and Gas Journal*, U.S. Energy Information Administration

## Venezuela's oil production and consumption (1991-2011)

thousand barrels per day



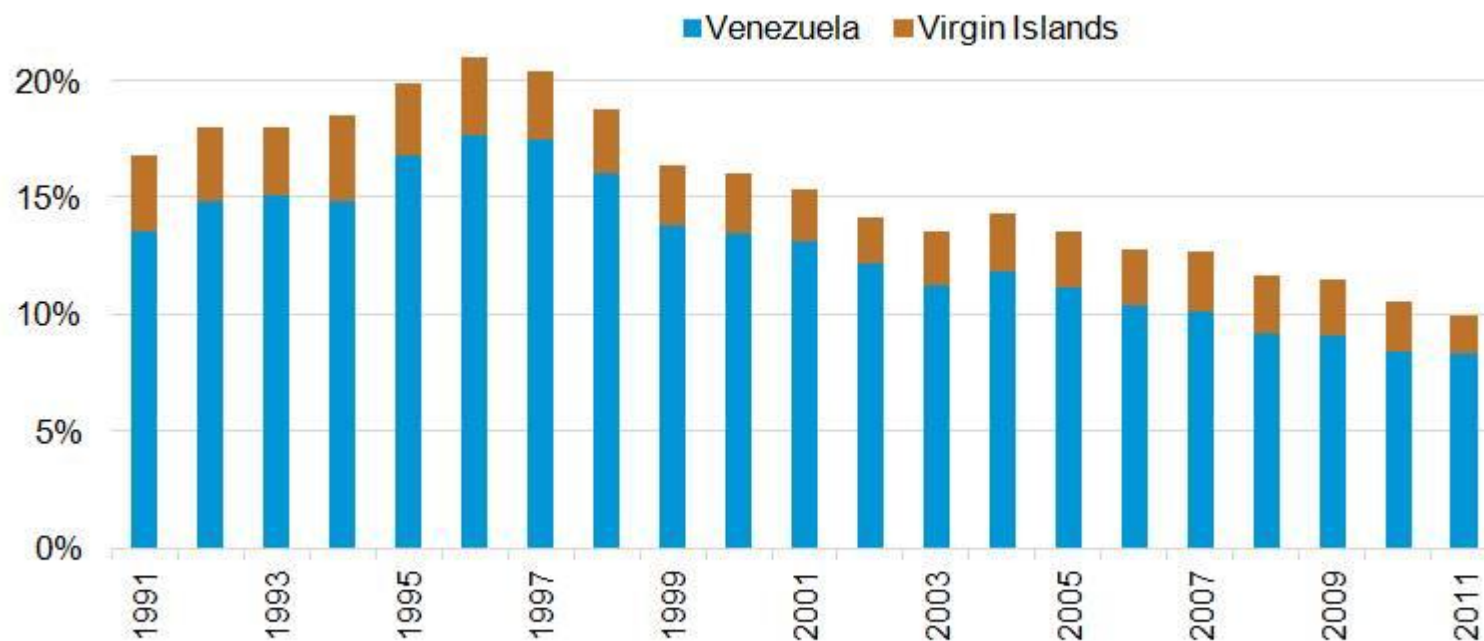
Source: U.S. Energy Information Administration





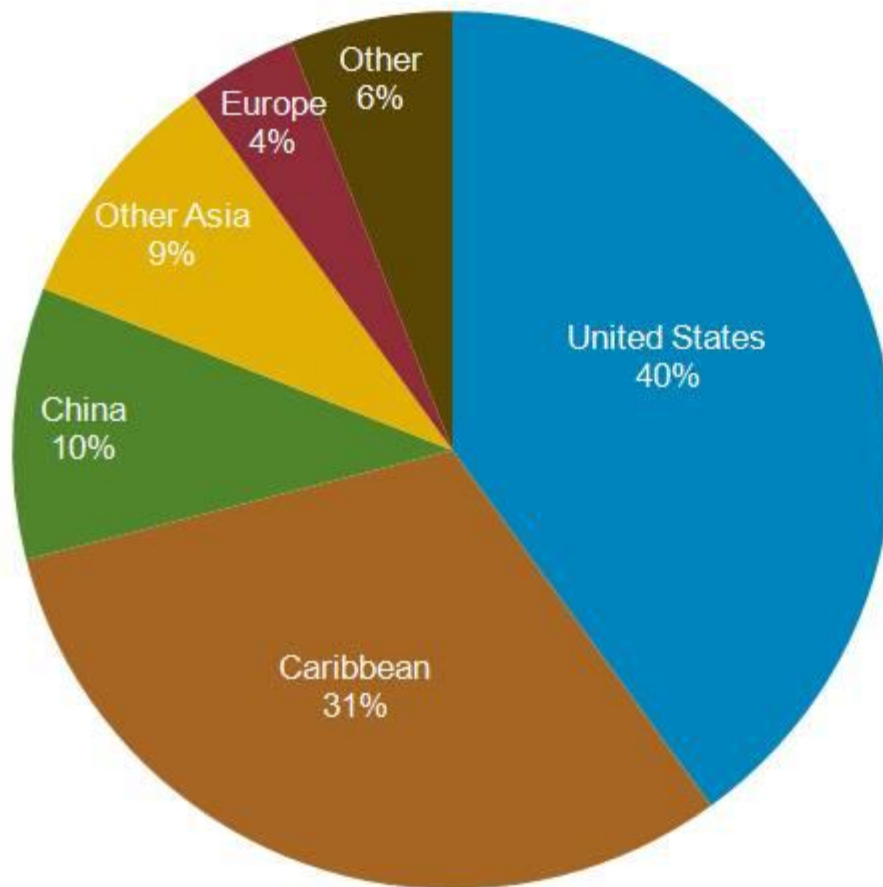


## U.S. petroleum imports from Venezuela and U.S. Virgin Islands (1991-2011)



Source: U.S. Energy Information Administration

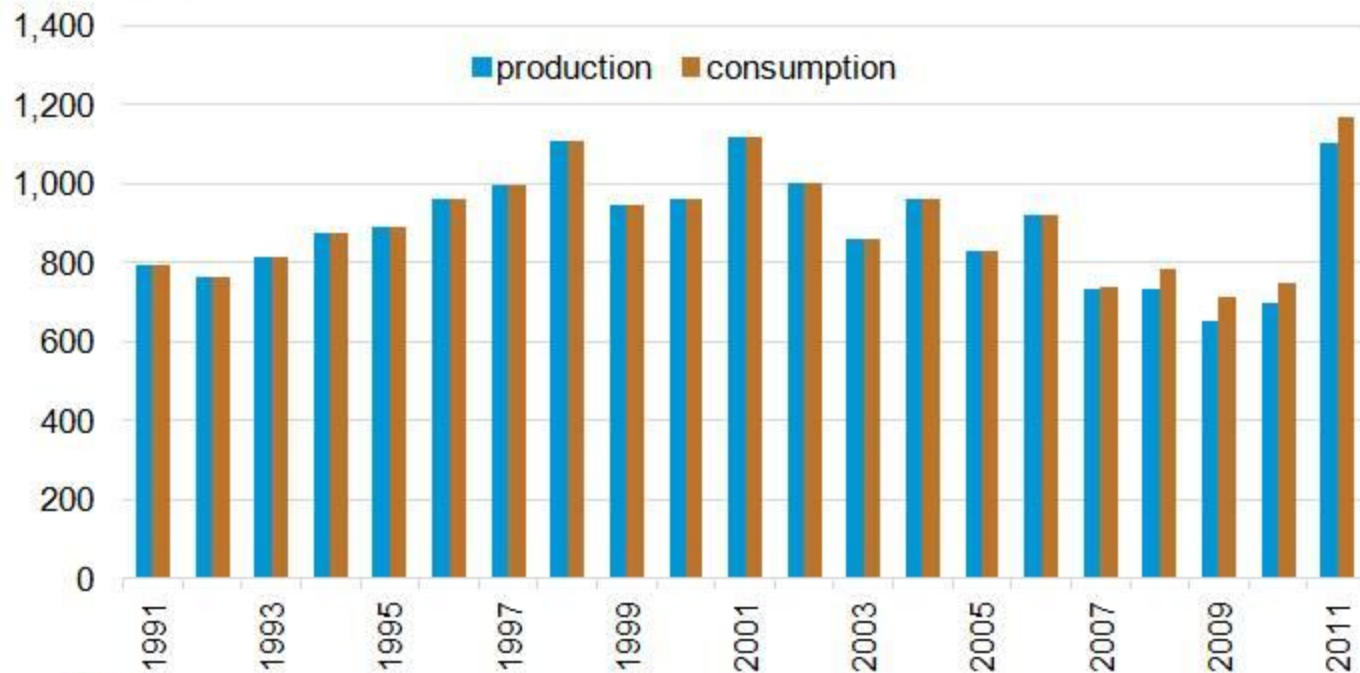
## Venezuelan crude oil exports by destination (2011)



Source: U.S. Energy Information Administration, APEX, FACTS Global Energy, Global Trade Information Services

## Venezuela's natural gas production and consumption (1991-2011)

billion cubic feet



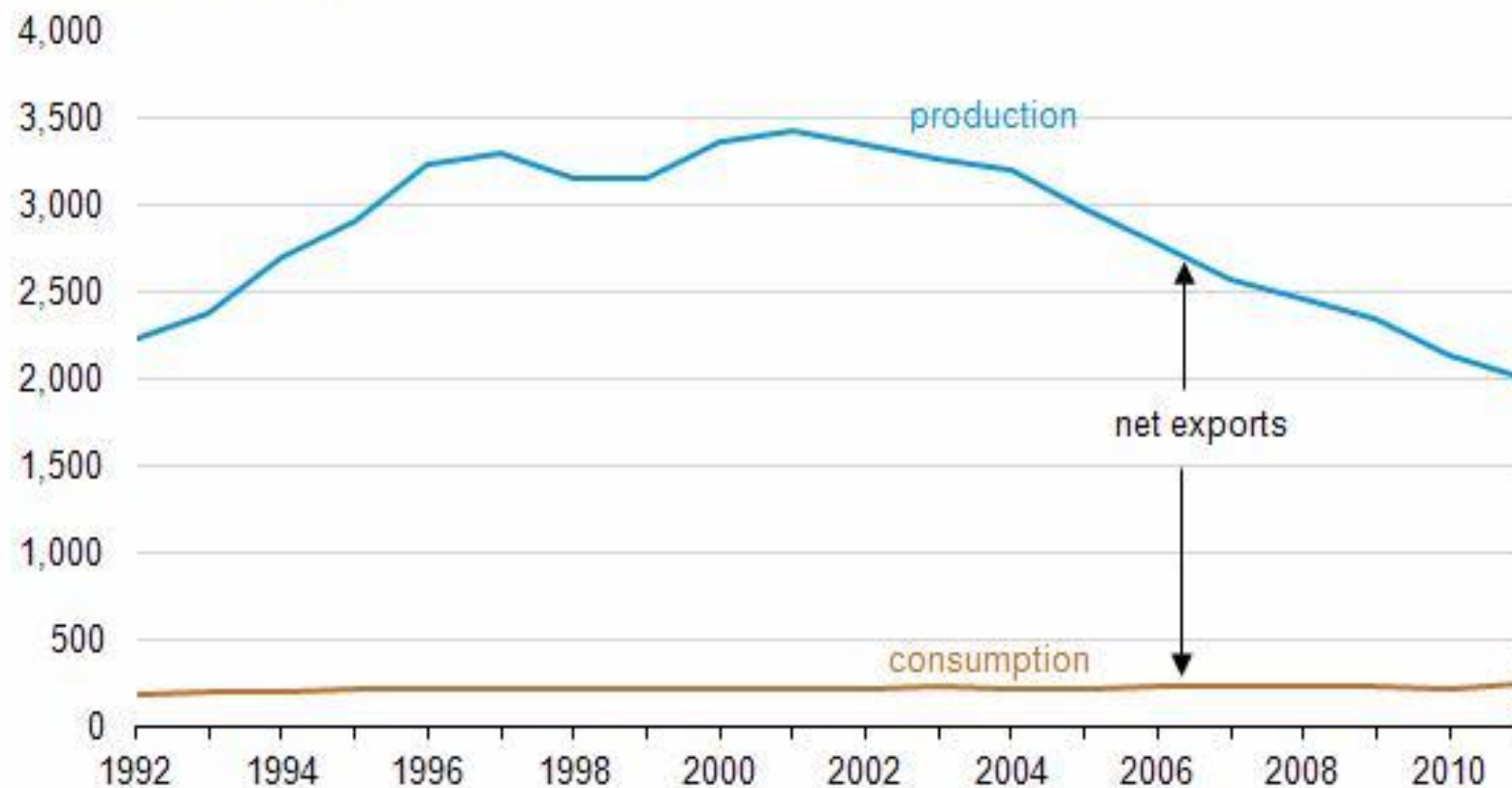
Source: U.S. Energy Information Administration

The background is an abstract, textured surface with a color gradient from deep blue to purple. A solid dark blue horizontal bar is positioned across the middle of the image, partially obscured by the text.

# NORWAY

## Norway total oil production and consumption, 1992-2011

thousand barrels per day

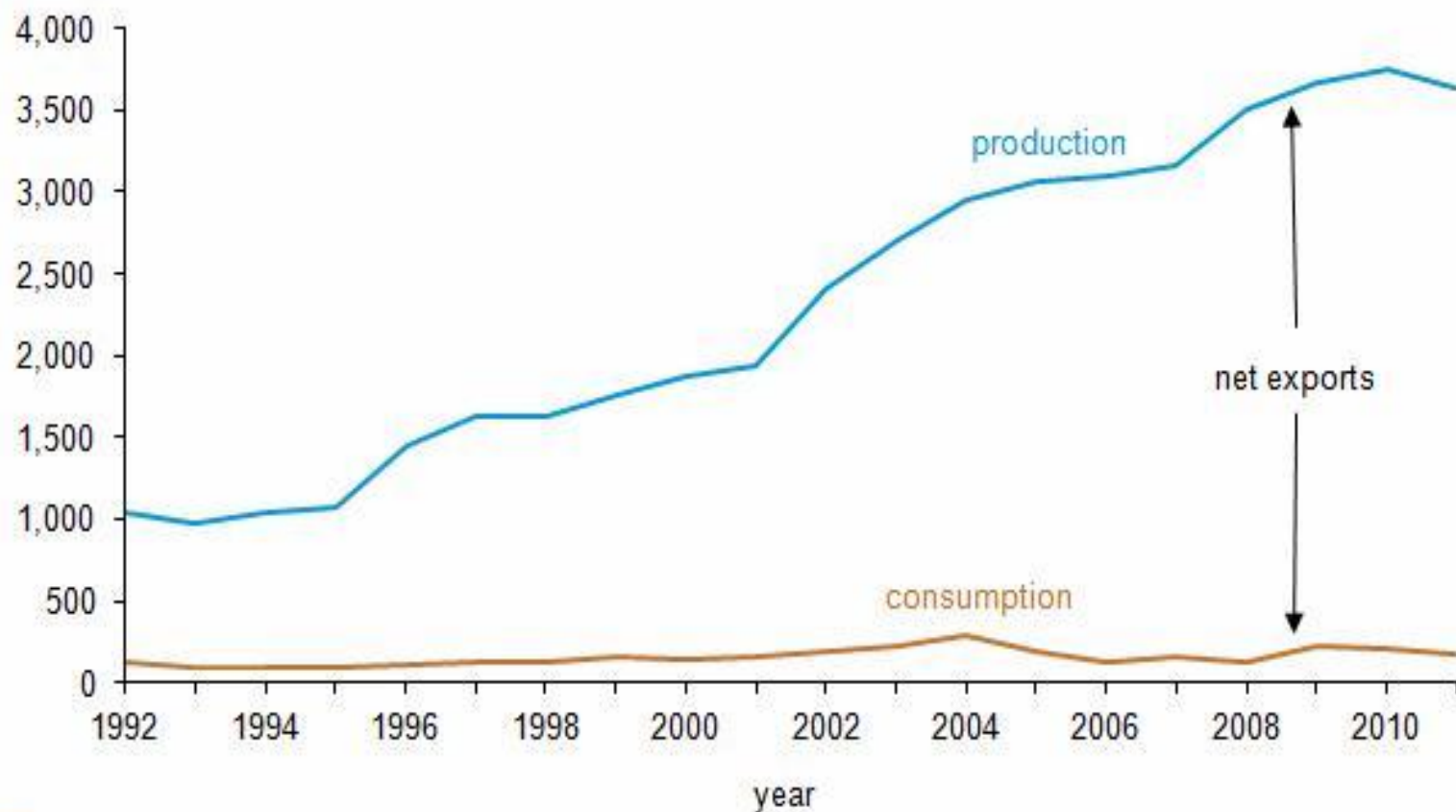


Source: U.S. Energy Information Administration



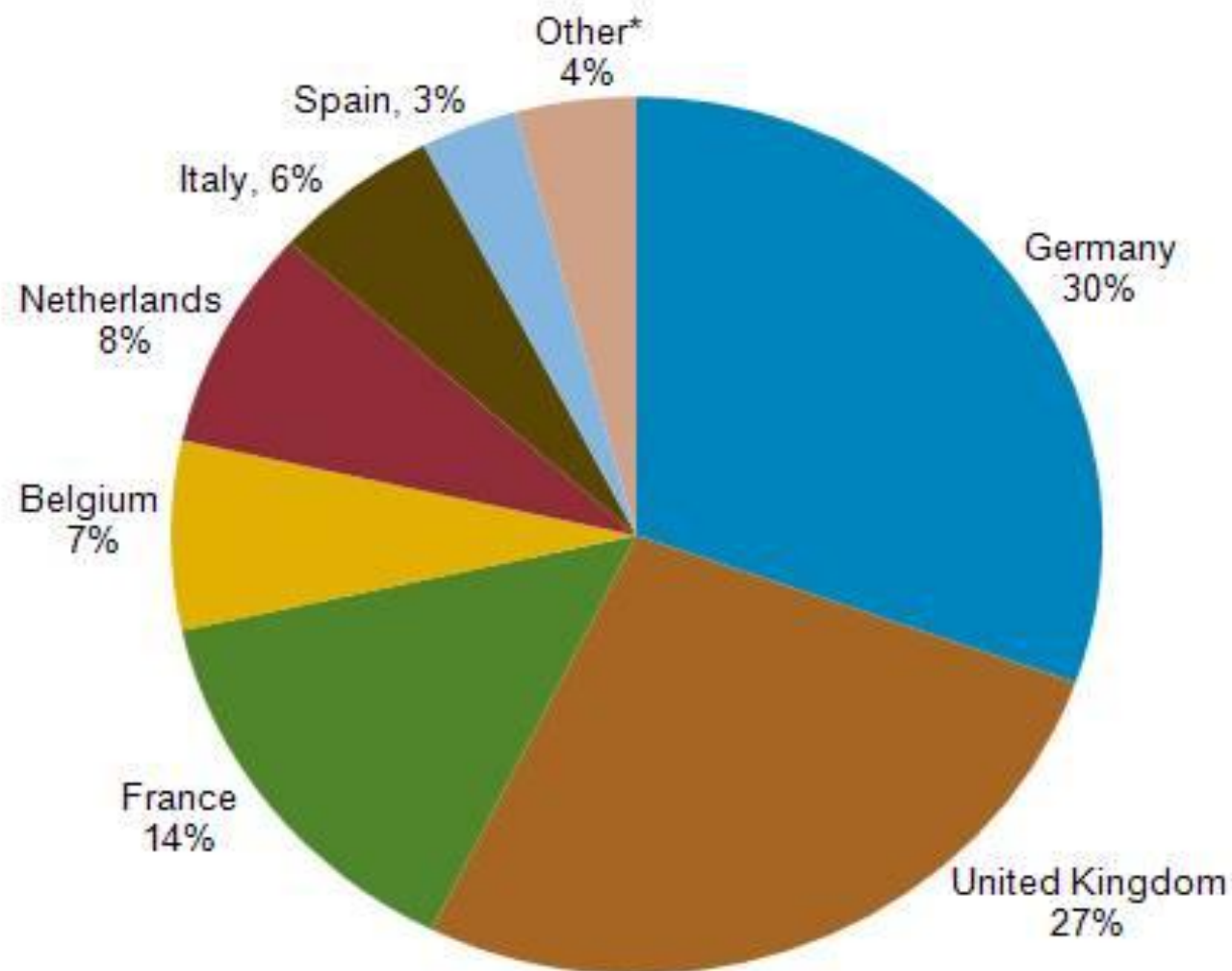
## Norway dry natural gas production and consumption, 1992-2011

billion cubic feet



Source: U.S. Energy Information Administration

## Norway natural gas pipeline exports, 2010



# MAJOR CORPORATIVE PLAYERS

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- RUSSIAN COMPANIES
- GAZPROM, ROSNEFT, LUKOIL, SURGUTNEFTAGAZ
- RUSSIAN COMPANIES WITH FOREIGN CAPITAL
- TNK-BP, SAKHALIN-ENERG, OTRES
- FOREIGN COMPANIES
- EXONMOBIL, CHEVRON, ONGC, MITSUI, MITSUBICI, CNPC, KNOC, KOGAS, BP, ROYAL DUTCH/SHELL, OTHERS