

*Update on Energy Sector Activities and
Plans in the Russian Far East*

Victor Kalashnikov

Economic Research Institute FEB RAS

Alexander Ognev

Vostokenergo-RAO EES Rossii, Khabarovsk, Russia

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Economy Figures of the Russian Far East (as of 2001)

	Far East	Share of Nation, %
Territory, mln sq km	6.2	36.4
Population, thous. people	7,038	4.9
GDP, bln. USD	12.6	4.4
TPEC, MTCE	41.8	4.4

THE FAR EAST



Southern Region

Sakhalin

CHINA

JAPAN

Southern Region's Share

Population	76.5
Regional GDP	78.6
Primary Energy Consumption	72.6

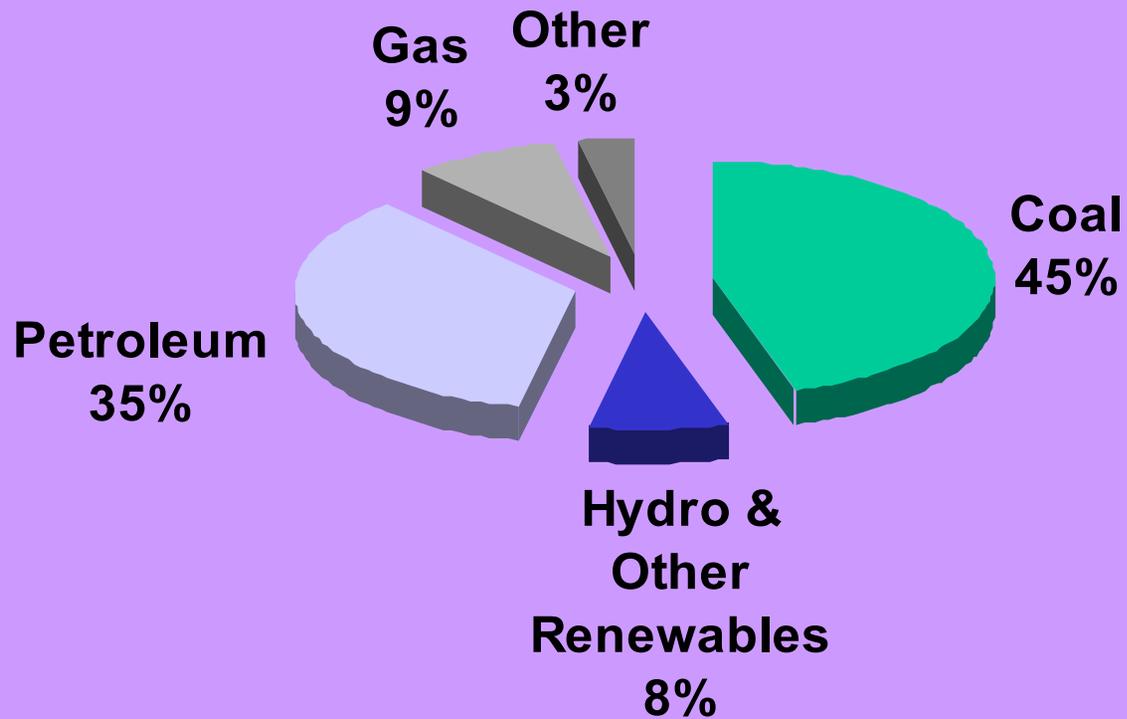
Economic & Energy Trends

1992-1998 (Recession & Crises)	1999-2002 (Recovery)
Industrial Product 38% (that of 1991)	14.2 % (over period)
TPEC 68% (that of 1991)	Electricity Consumption 11.1% (over period)

Estimated Energy Consumption, MTCE (as of 2002)

TOTAL	42.3
COAL	19.2
OIL	14.8
GAS	3.6
HYDRO & Renewables	3.4
Installed Capacities, GW	11.3

Energy Mix (as of 2002)



Conditions of Energy Supply

- **Consequences of crises still exist but loosen**
- **Financial Situation Improved**
- **Non-payments Decreased**
- **Supplying the Fuels Improved**

Conditions of Energy Supply

Investments in Energy Sector are growing

	1999	2002
TOTAL mln. USD	214	1296
Electric Power	122.4	421
OIL & GAS	81	731.5

Conditions of Energy Supply

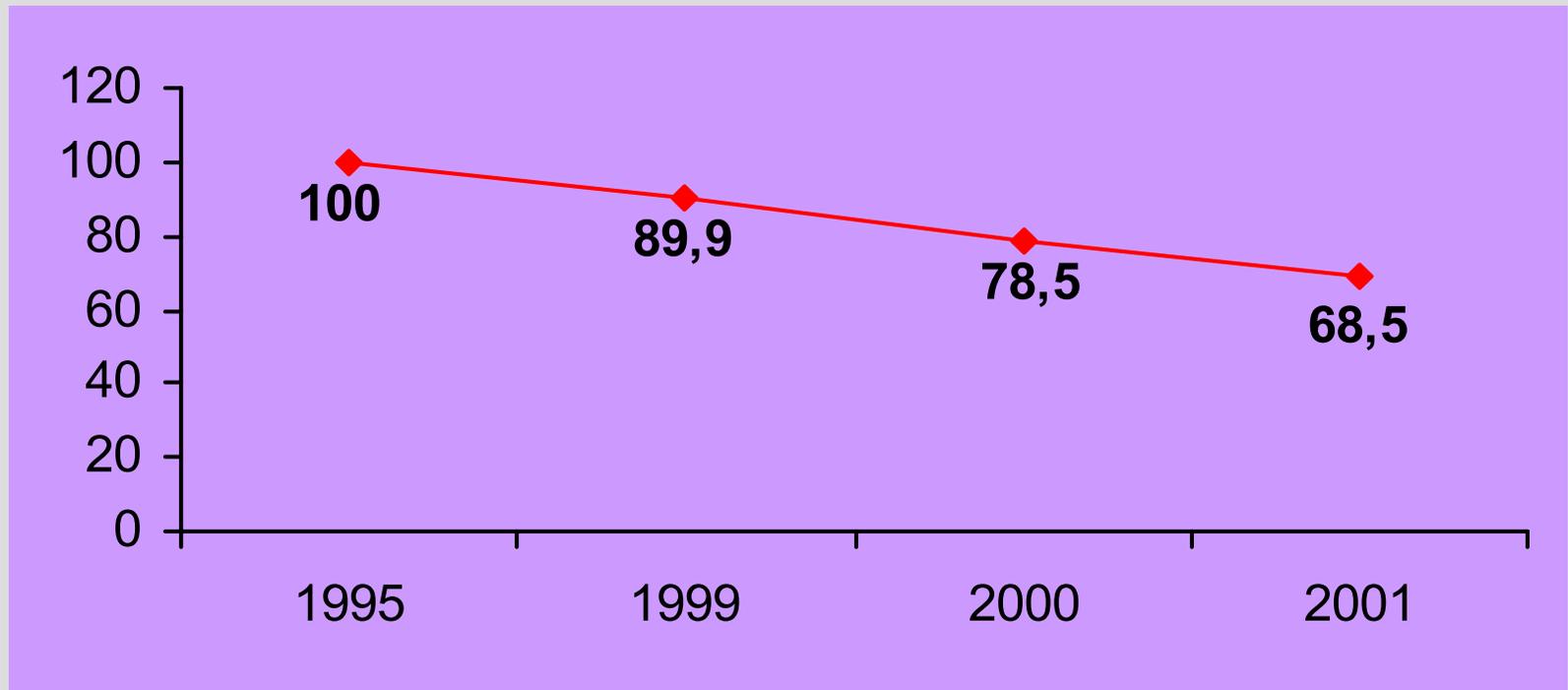
- **Demand for energy is reviving, however, in relatively unstable pace**

Growth Rates of Electricity Consumption (%)

2002	2003 (first half)
1.0	5.5

Conditions of Energy Supply

**GDP Energy Intensity declining (%)
(case of Khabarovsk Territory)**



Development Plan of Sakhalin-1 approved

- **First Phase will focus on Chaivo & Odoptu Fields**
- **First Oil expected in 2005 (12 mln t in 2010)**
- **Limited Gas Production for domestic demand (1.5 BCM since 2006)**
- **First Phase Investments come to 5 bln USD**

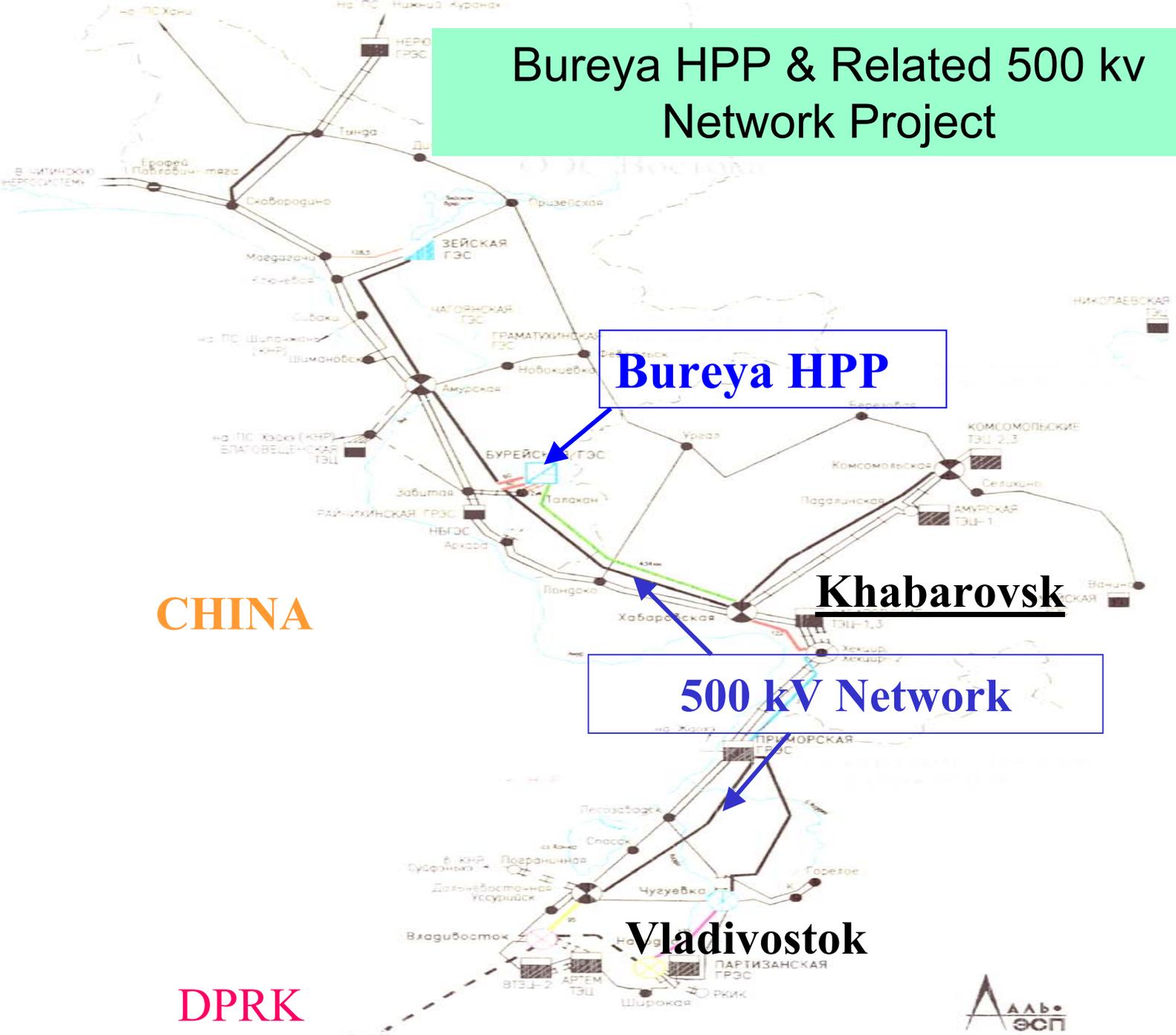
Development Plan of Sakhalin-2 approved

- **Phase 1 started in 1999 (seasonal oil production)**
- **Phase 2 will focus on round year oil & gas extraction**
- **800 km Oil & Gas Pipeline**
- **LNG Plant and Oil & Gas Terminals**
- **Round year extraction planned by 2007 (6 mln t of Oil, 4.8 mln t of LNG)**
- **Phase 2 Investments come to 8 bln USD**

Bureiskaya HPP & Network Project

- **Construction of Bureya HPP
(2 GW, 7.1 bln kWh)**
- **The 500 kV transmission from the West
(Amur Territory) to the
South-East (Vladivostok Area)**

Bureya HPP & Related 500 kv Network Project



Bureya HPP

500 kV Network

CHINA

Khabarovsk

Vladivostok

DPRK



Latest Energy Outlook for the Far East

- **ENERGY STRATEGY of Russia up to 2020**

- **FEDERAL PROGRAM:**

**Economic Development
of the Far East and Zabaikalie up to 2010**
(The Program “The Far East and Zabaikalie”)

“Energy Strategy of Russia up to 2020”

-Too General for Analysis in quantitative and regional aspects

- Key Assumptions:

- **economic growth of 5.5% on average annually**
- **radical reduction in GDP energy intensity (twofold by 2020)**
- **Russia will remain large energy exporter**

Federal Program “Far East and Zabaikalie up to 2010”

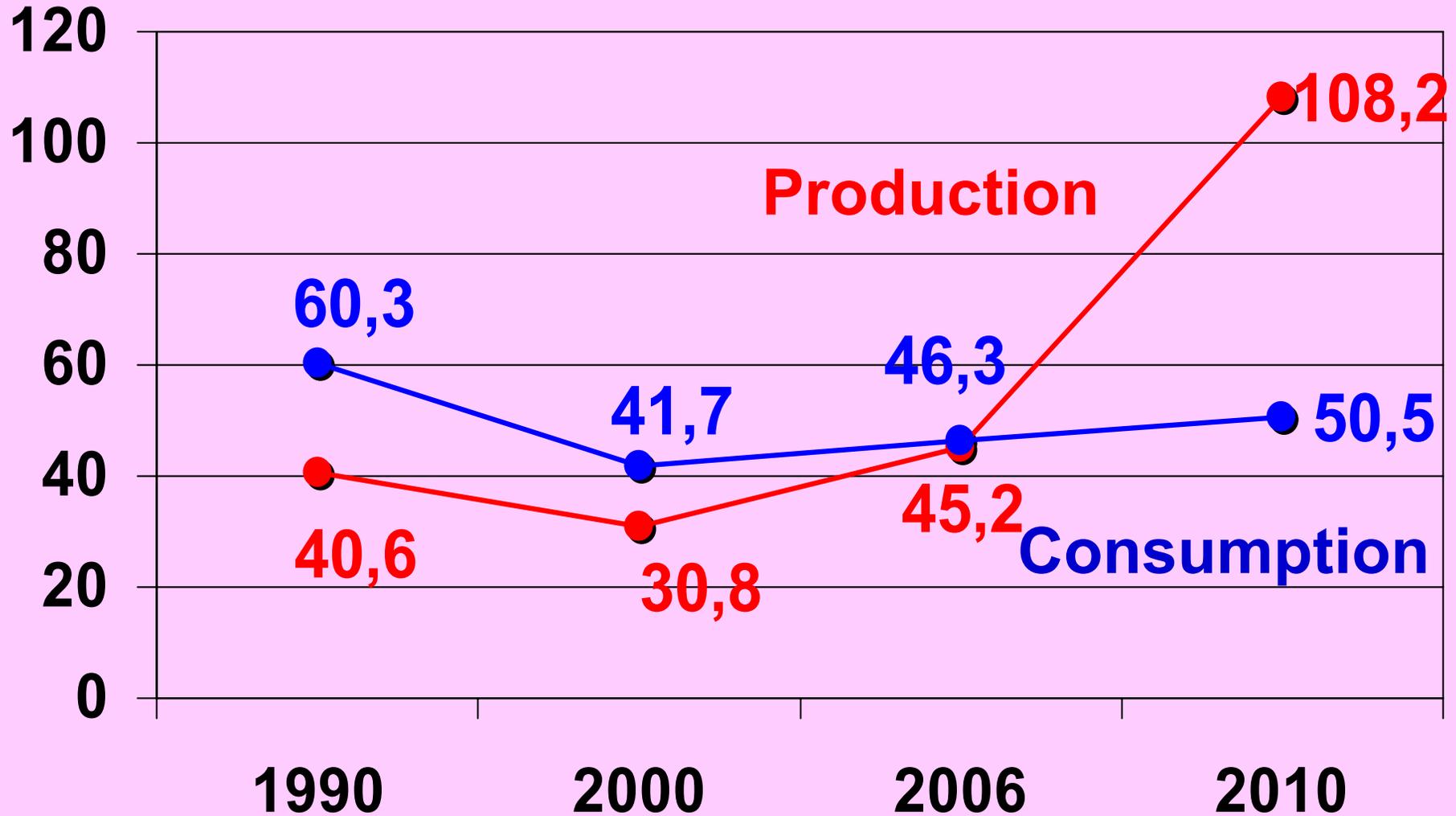
**General Objective is Energy Security
for the region**

- ***Reliable and Diversified Energy Supply***
- ***Energy independence as much as possible***
- ***Acceptable Prices for Energy***
- ***Mitigation of Local Environmental Impact***

Federal Program “Far East and Zabaikalie up to 2010”

The Program allows for general priority of the regional economic growth and increase in energy consumption, accordingly. The growth of primary energy consumption makes 1.8% annually, electricity consumption – about 3% per year

Primary Energy Production&Consumption in the Far East (MTCE)



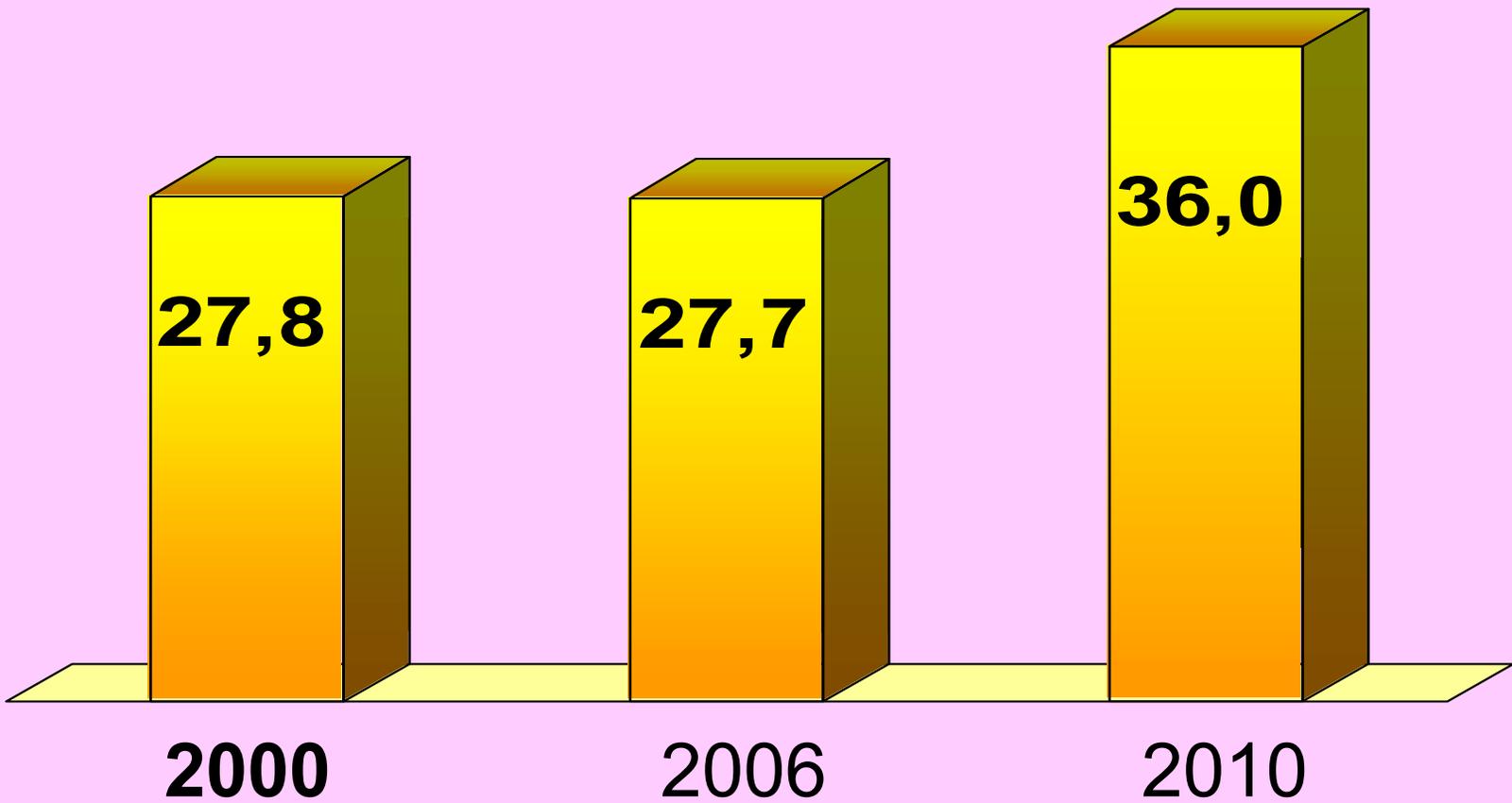
Federal Program “Far East and Zabaikalie up to 2010”

The region's electricity demand in 2010 is expected to be about 51 bln kWh.

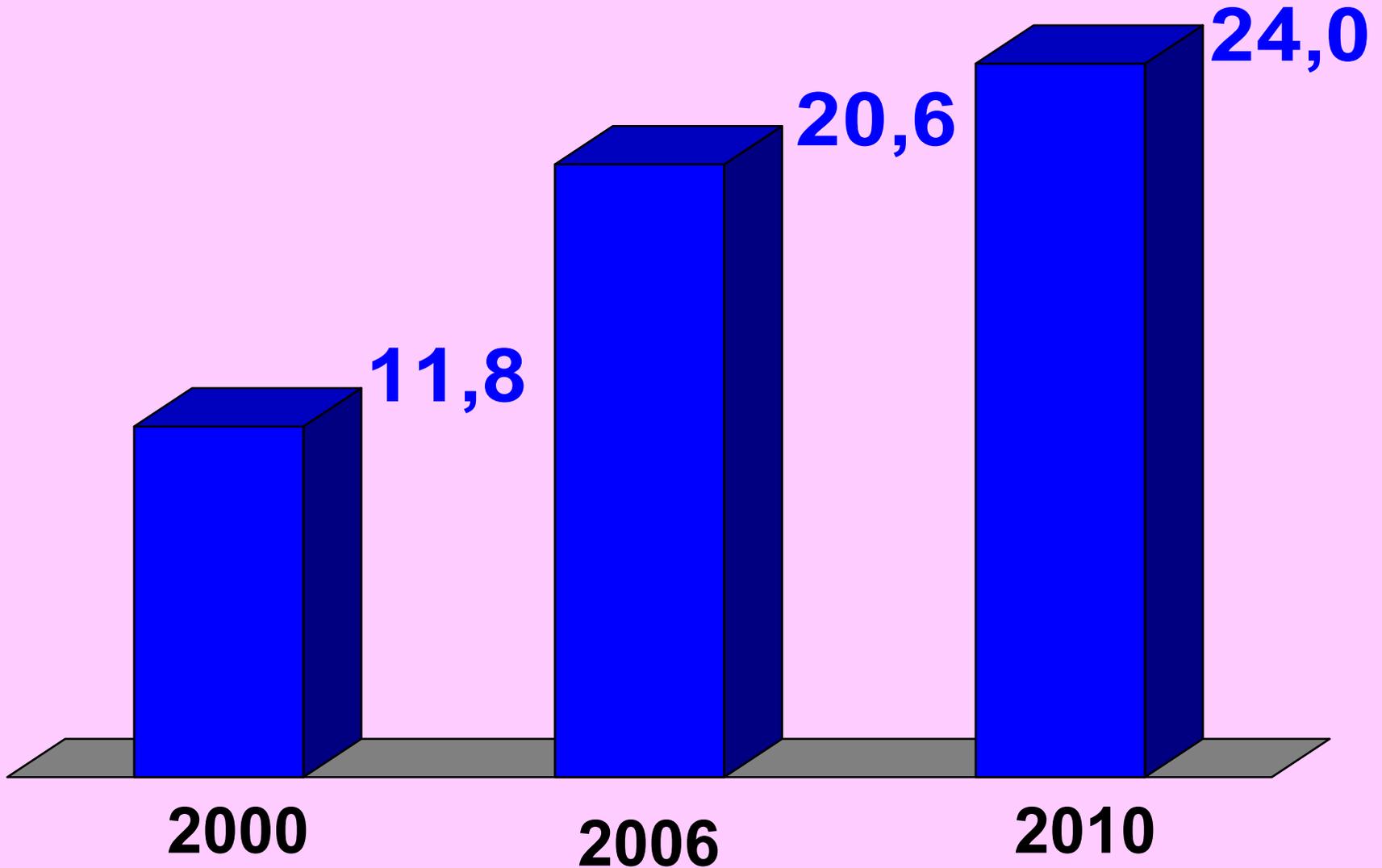
Electricity production will have reserves for expanding export to neighboring NEA countries up to 3 to 5 bln kWh

GENERATION ON THE RENEWABLE ENERGY SOURCES

Renewables Share,%



SHARE OF NATURAL GAS IN FOSSIL FUELS CONSUMPTION (%)



REGIONAL ENERGY CONCERNS

- upgrading energy infrastructure
- reasonable prices for energy resources
- restructuring energy markets (primarily in the electricity, heat, and natural gas sectors)
- developing a stable legal infrastructure to attract investments
- increasing energy efficiency
- mitigating local environment pollution
- expanding international cooperation in the energy sector

THANK YOU FOR ATTENTION !