

# Why can not Belarus assume more stringent post-Kyoto target or what did our side events argue for?



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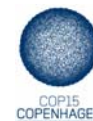
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**UN Climate Change Conference**  
**Copenhagen, Dec 7-12, 2009**



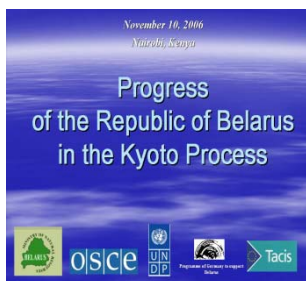
# This presentation

## content

- Our side events at UNFCCC forums
- Belarusian economy in transition
- GHG emission trends
- Climate change policy and measures
- Pathways to a low carbon economy
- GHG emission forecast until 2020
- Copenhagen and beyond
- Belarusian wetlands and forests

# Our side events

**COP/MOP Nairobi, Dec 2006; SB-26 Bonn, May 2007**



## Progress of the Republic of Belarus in the Kyoto process

- Party to the Kyoto Protocol since Nov 24, 2005
- National Kyoto Action Plan
- start elements of UNFCCC and Kyoto implementation framework
- policies and measures for energy intensity reduction
- the side event forestalled informal consultations concerning Belarusian amendment to Annex B



## Belarus Joint Implementation Status

- complete UNFCCC components
- GHG Emission Abatement Strategy
- eligibility requirements for the Kyoto mechanisms (5 of 6 requirements fully met)
- JI institutional and legal framework
- JI National Procedure and Guidance
- JI projects first proposals

# Our side events

## COP/MOP Bali, Dec 2007 and Poznan, Dec 2008



- National Climate Policy in Belarus: Domestic Measures Complemented with Kyoto Mechanisms
  - climate policy and the State Climate Change Mitigation Programme
  - GIS framework installed
  - GHG abatement project areas and selection criteria
  - the side event forestalled informal consultations concerning the proposal from Belarus to prepare for implementation of the amendment to Annex B to the Kyoto Protocol prior to its entry into force



- Climate Change Mitigation Potential in the Republic of Belarus and Post-Kyoto Commitments
  - historical context and national circumstances
  - degraded peatlands restoration
  - climate change mitigation potential assessment
  - limiting factors for climate change mitigation potential
  - post-2012 commitments

# Our side events

## SB-30 Bonn, June 2009



### GHG emission reduction for growing Belarus economy after 2012 with due account of LULUCF Sector

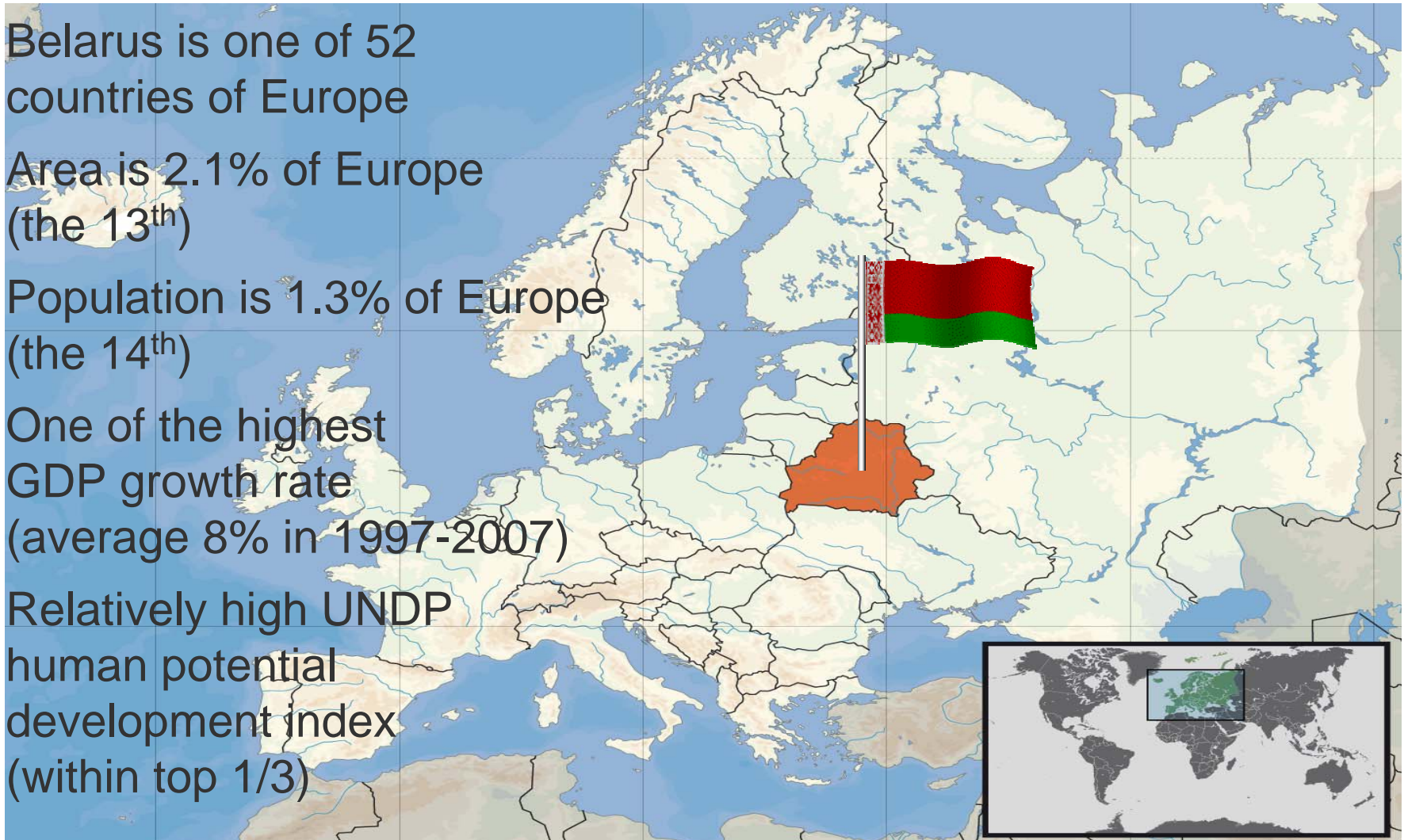
- review of compliance with country commitments under UNFCCC and Kyoto Protocol
- national circumstances and GHG emission trends
- first GHG emission forecast until 2020
- importance of LULUCF sector
- Belarusian wetlands and forests as a GHG sink
- position concerning the Post-Kyoto regime



# Belarusian economy in transition

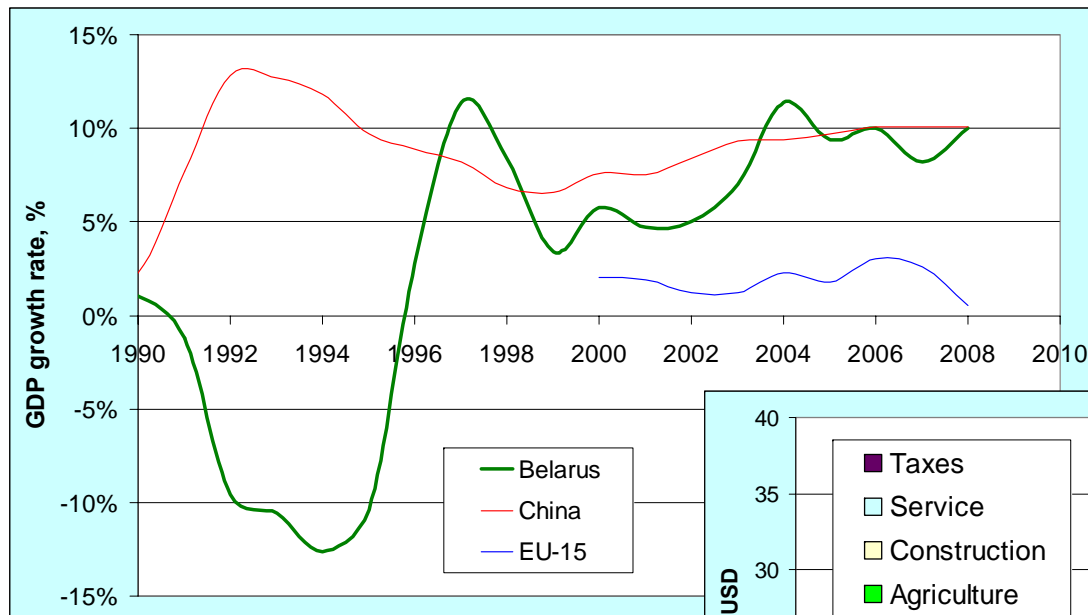
## in Europe

- Belarus is one of 52 countries of Europe
- Area is 2.1% of Europe (the 13<sup>th</sup>)
- Population is 1.3% of Europe (the 14<sup>th</sup>)
- One of the highest GDP growth rate (average 8% in 1997-2007)
- Relatively high UNDP human potential development index (within top 1/3)



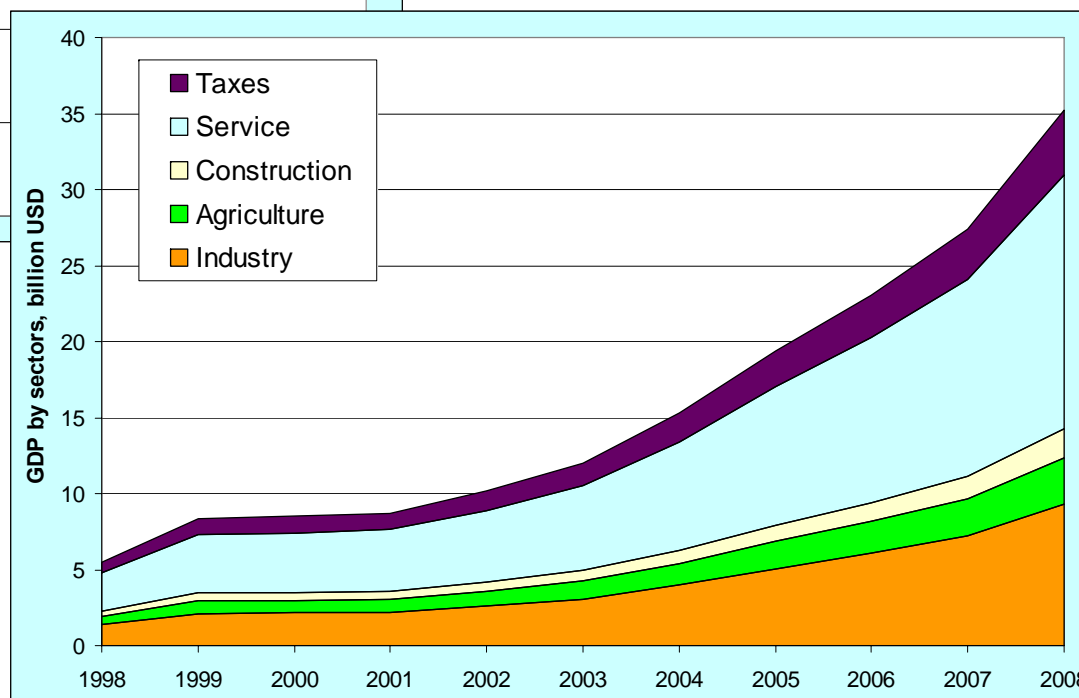
# Belarusian economy in transition

## GDP dynamic during and after recession



Financial losses until 1995

Stable growth after 1998

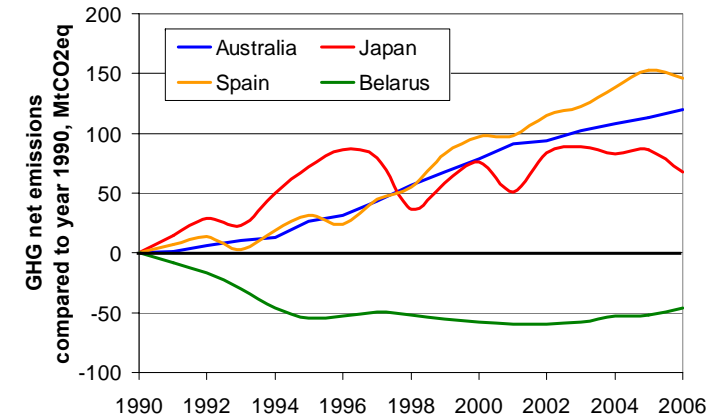
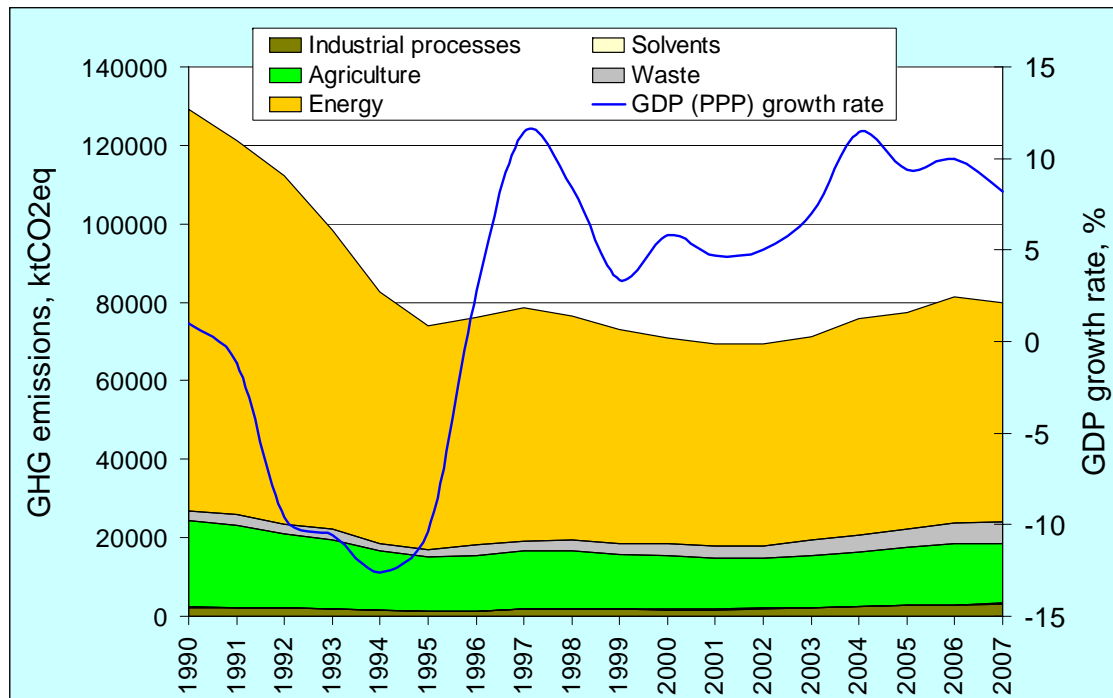


# GHG emissions trend

## GDP and respective GHG emissions

### 1990-2007: net GHG emissions reduction of 750 MtCO<sub>2</sub>eq

- 1990-1995 – economic recession
- 1995-2006 – change in energy mix and GDP structure
- 1997-present – energy efficiency and renewable energy use policies



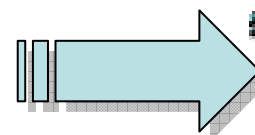
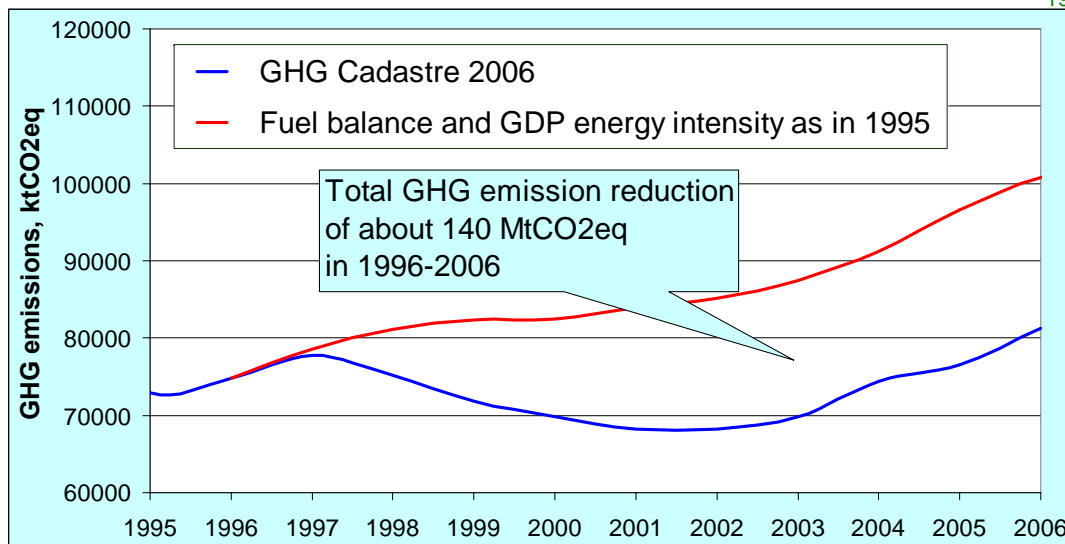
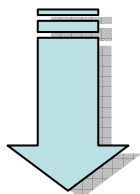
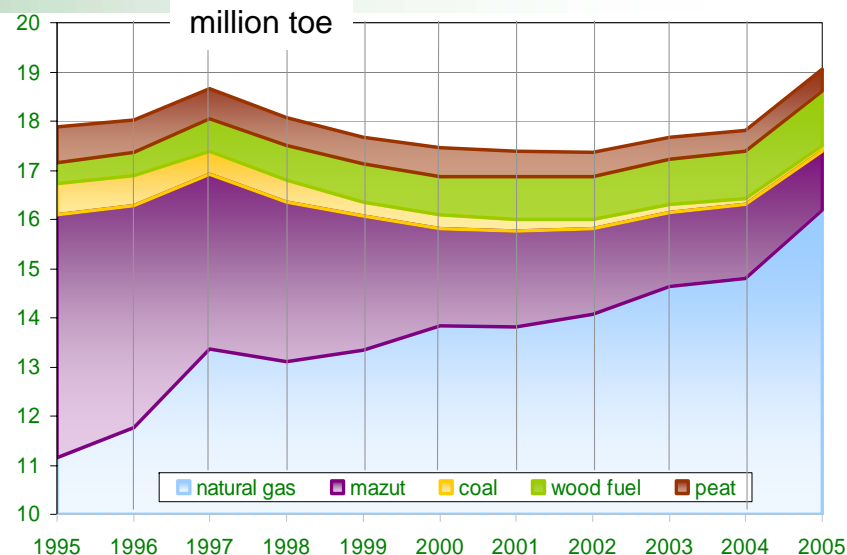
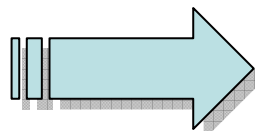
### Recent trend is an evident increase of GHG emissions by approx. 5 MtCO<sub>2</sub>eq per year

- economic growth and delayed structural/technological reforms
- increased fuel consumption
- reduced share of gas *vis a vis* peat

# GHG emissions trend

## historic background of "Hot Air"

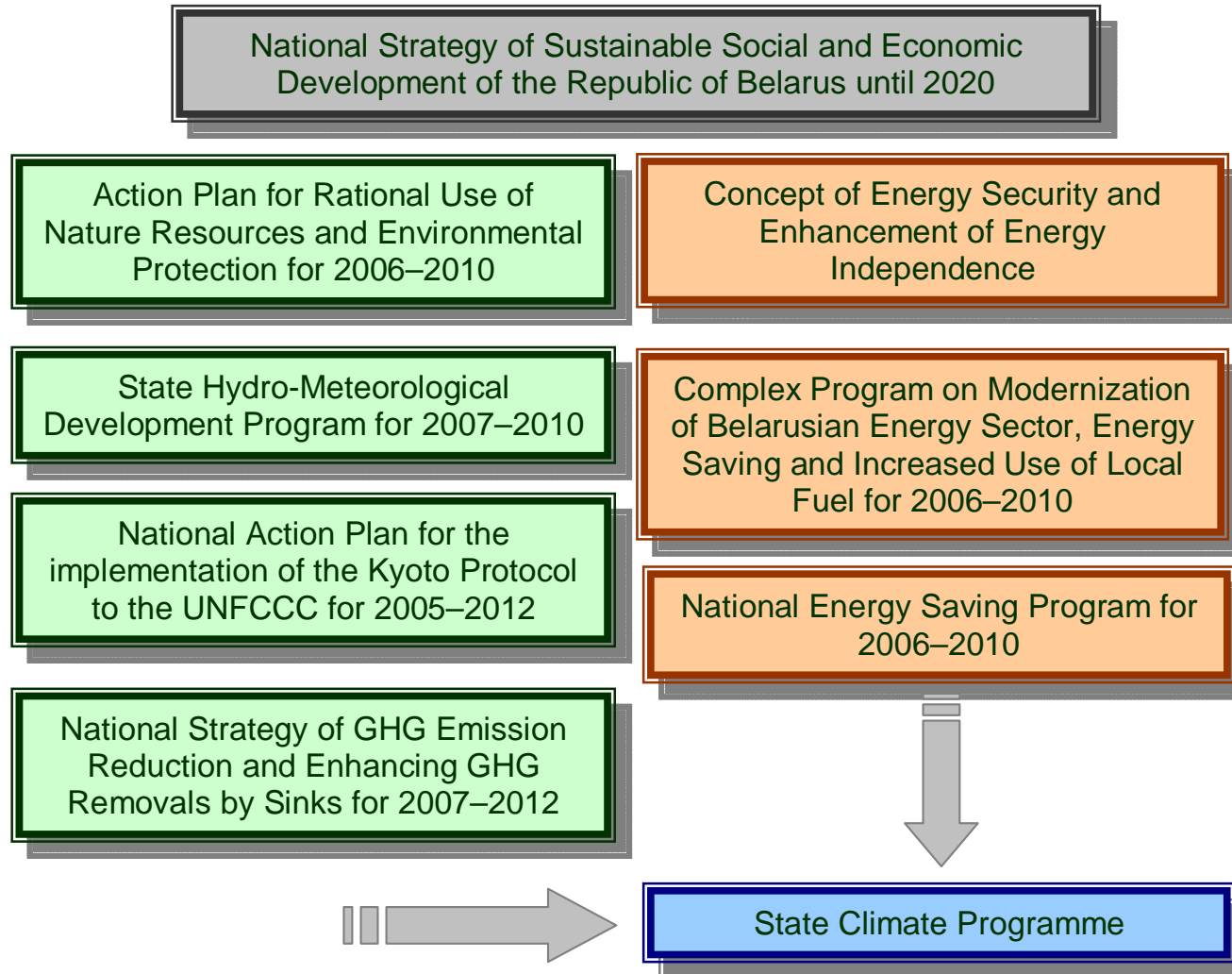
- Energy saving policy
- Change of fuel balance
- Overall effect



● Comparable with assigned amount surplus of 173 MtCO<sub>2</sub>eq

# Climate change policy and measures

## main development programs



# Climate change policy and measures

## State Climate Program

- **Overseeing the climate change**
  - system upgrade of meteorological survey and prognosis
  - informational network improvement
- **Climate change mitigation**
  - renewable energy
  - energy efficiency, energy saving
  - peat land preservation, mire formation, afforestation
- **Adaptation to climate change**
  - land degradation prevention
  - selection and introduction of new agriculture varieties
  - new crop protecting agent and soil protecting technologies
- **Adjustment of legal and institutional framework**
- **International cooperation**
- **Capacity building**

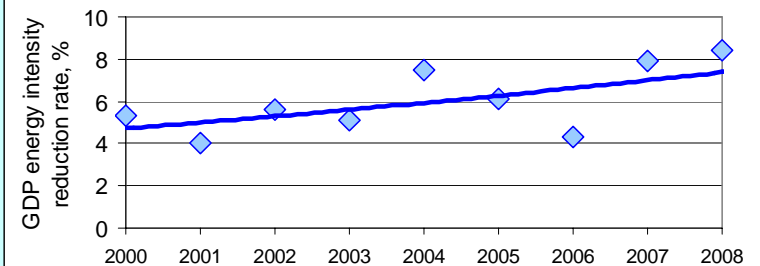
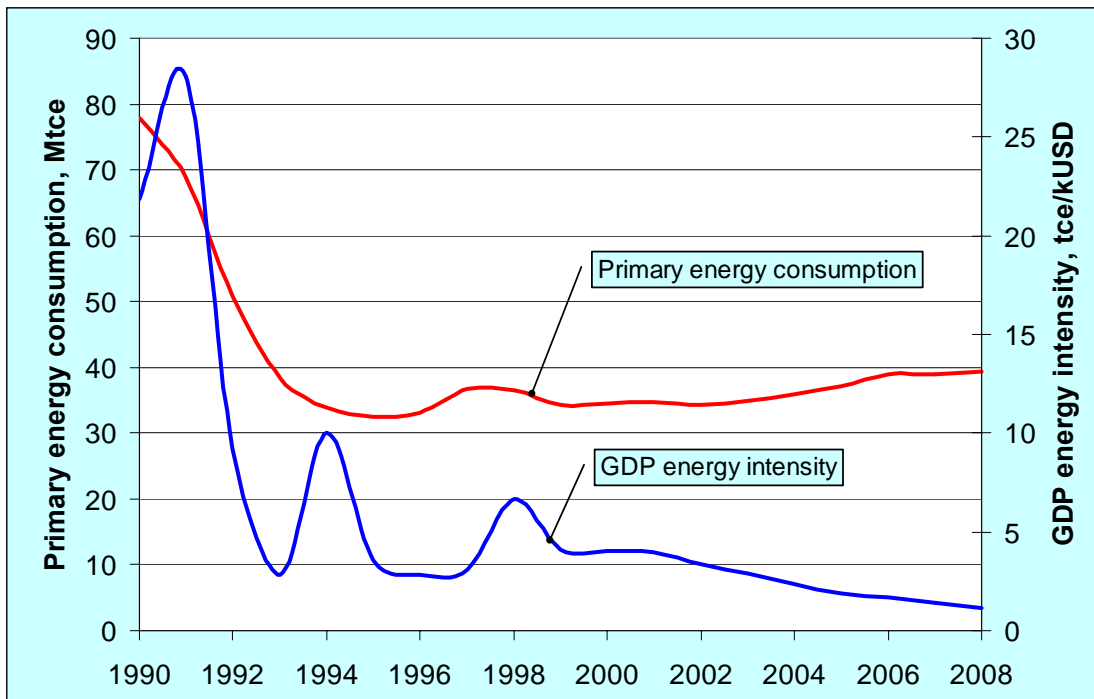
# Pathways to a low carbon economy

## Energy efficiency improvement

- Combine cycle and cogeneration scheme (1.3 GW<sub>e</sub>)
- Retrofit of municipal boilers into mini-CHPs (125 MW<sub>e</sub>)

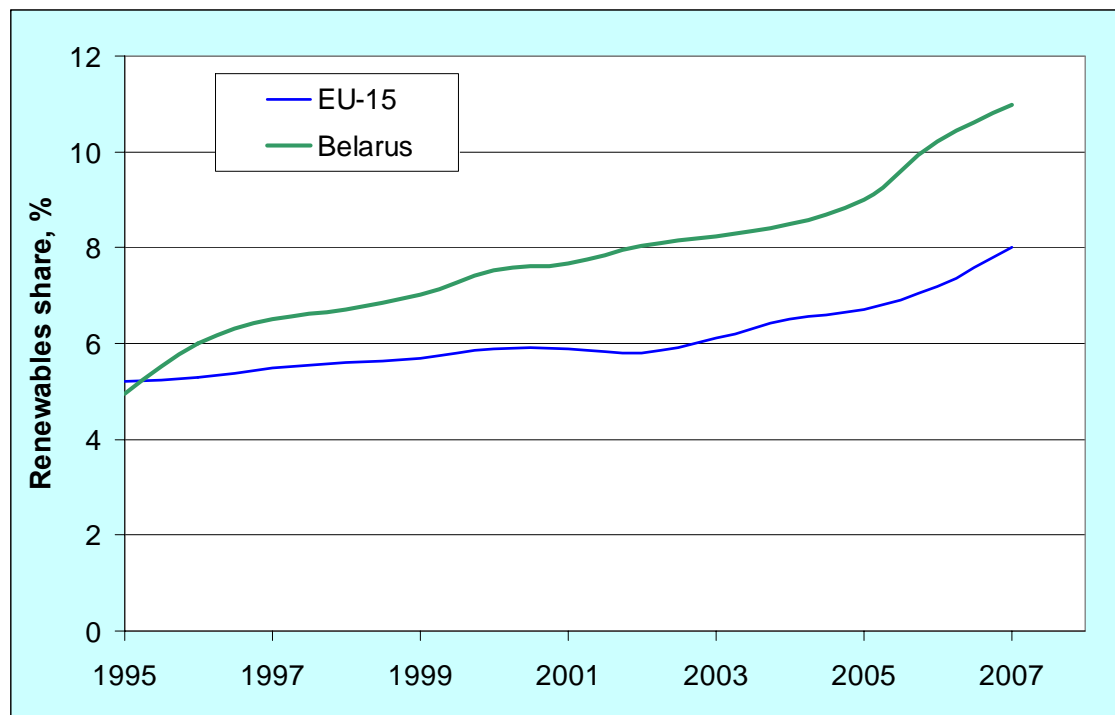
- Since 1996, annual GDP energy intensity drop was never less than 4% and currently shows sustainable growing

- Since 1996, energy saving was from 1.5 to 2.5 million tons of coal-equivalent per year, i.e. about 5-6% of primary energy consumption



# Pathways to a low carbon economy

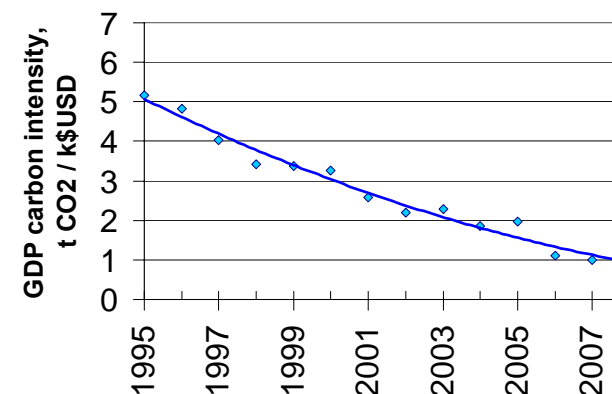
## Renewable energy share increasing



### RE potential (Mtce/a):

- wood fuel and wastes – 1.6
- phytomass – 0.7
- biogas – 2.1
- bioethanol and biodiesel – 1.0

### Hydro and wind energy – 4.7 billion kW-h

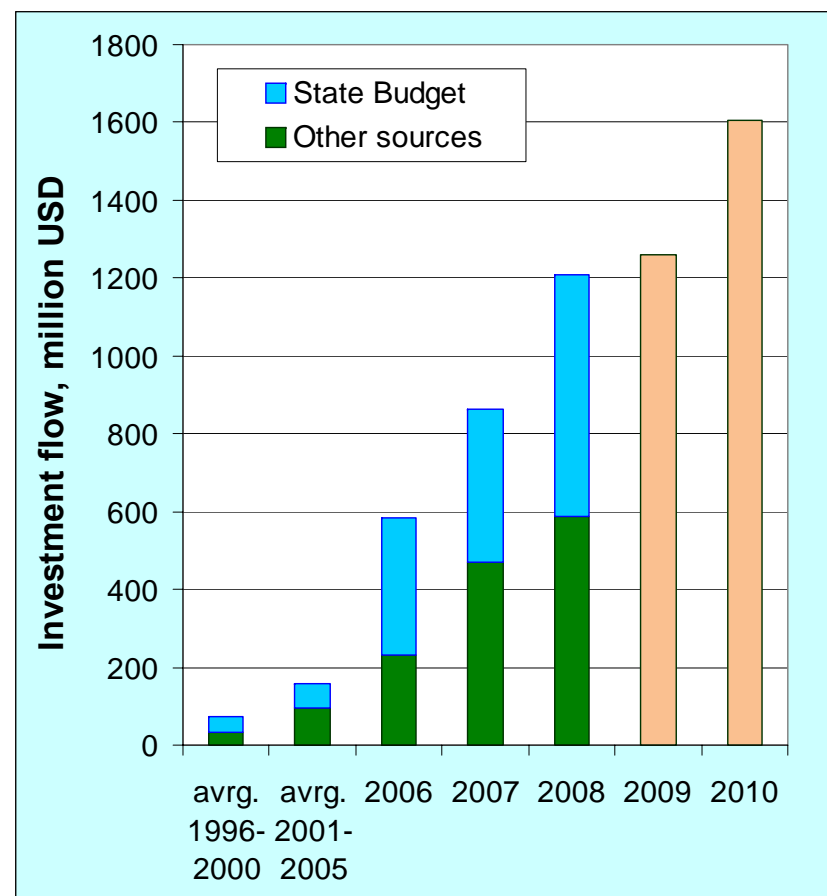


# Pathways to a low carbon economy

## GHG reduction after 1996 is not “business-as-usual”

- Since 1996 (the end of recession) through 2006 almost 4 billion dollars were spent for energy saving and energy efficiency improvement (1.6% of GDP)
- In 2006-2010 more than 5.3 billion dollars will be invested in energy saving measures (3.4% of GDP)
- Along with sufficient support to forest management, communal waste treatment, renewable energy the total investment in GHG emissions abatement in 2006-2010 will achieve about 5% of GDP
- State budget investment share has never been less than 30%

Investments in EE & RE



# GHG emission forecast

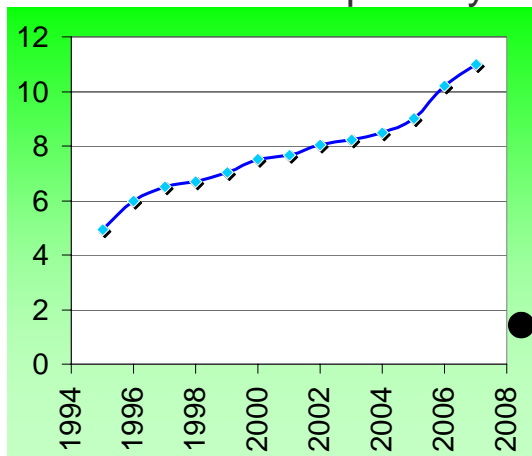
## methodological approach

- Assessment under “no measures” framework
  - 1995 is chosen as a starting point – no special policies and measures
  - GDP energy intensity is “frozen” at 1995 level
  - GDP is actual (1995-2008) then evolves as stipulated in national economy development programs (2009-2020)
- Assessment under “business as usual” framework
  - 2008 is chosen as a starting point – all policies and measures as proposed in national economy development programs
  - GDP and GDP energy intensity evolves as stipulated in national economy development programs
  - renewable energy and energy saving technologies are introduced where commercially viable
- Assessment under “additional measures” framework
  - 2008 is chosen as a starting point – all policies and measures as proposed in national economy development programs
  - GDP evolves as stipulated in national economy development programs
  - additional measures are applied in introduction of energy saving technologies, especially in construction industry
  - a set of incentives and additional financing are provided for renewable energy development to utilize almost all technically achievable potential (tax and tariff policy, Climate Protection Law, Renewable Energy Law)
- LEAP (Long-range Energy Alternatives Planning)
  - developed by the U.S. Center of Stockholm Environment Institute in Boston

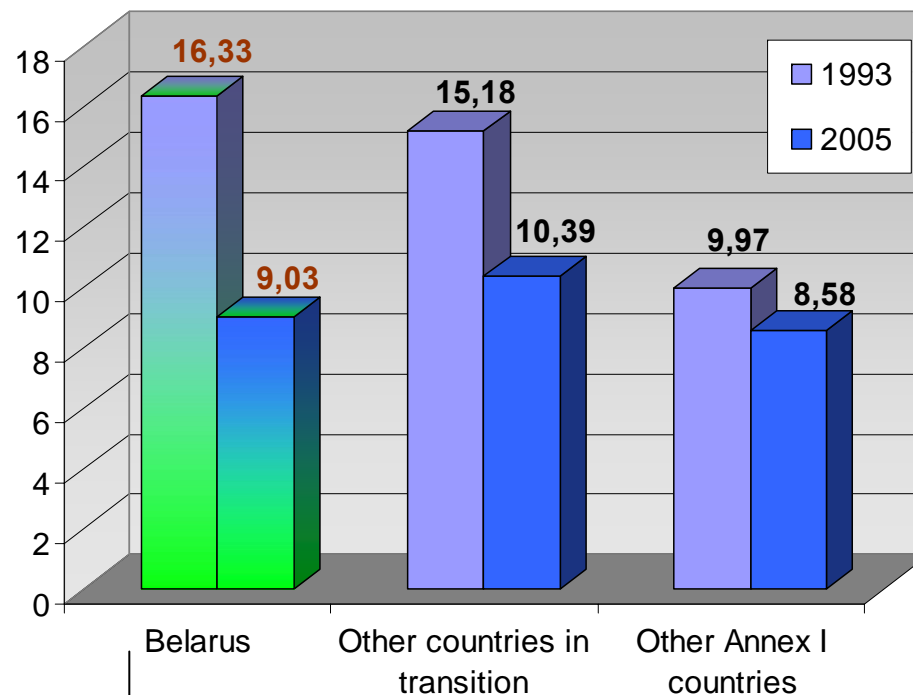
# GHG emission forecast

## do we have potential in energy intensity reduction?

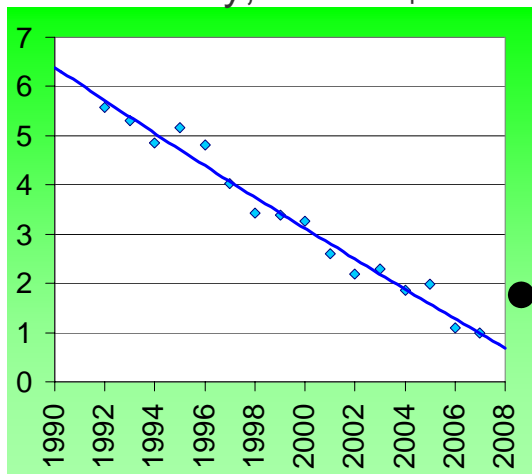
Renewables share in primary energy, %



GDP energy intensity, MJ/\$USD



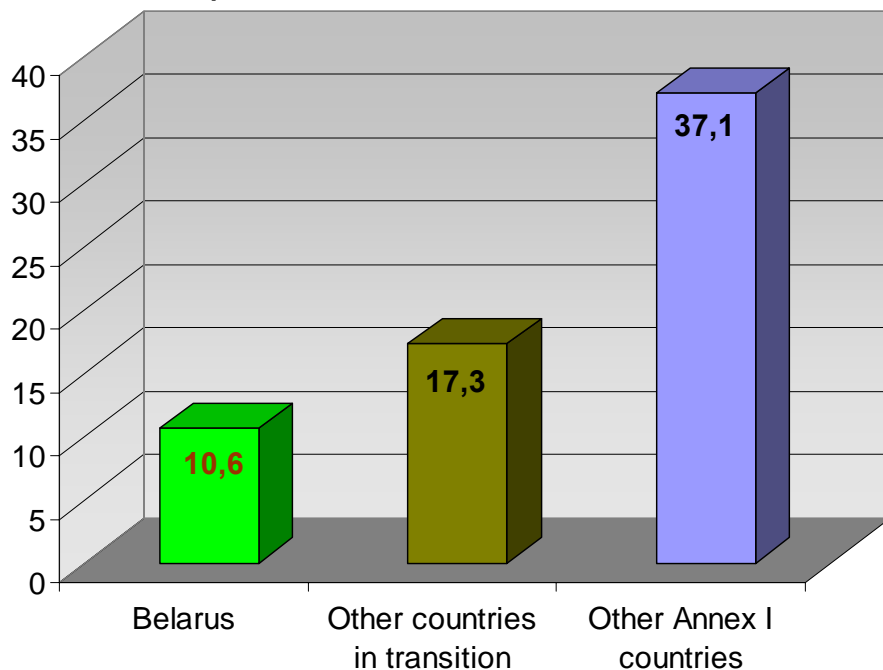
Carbon intensity, tCO<sub>2</sub>/k\$USD



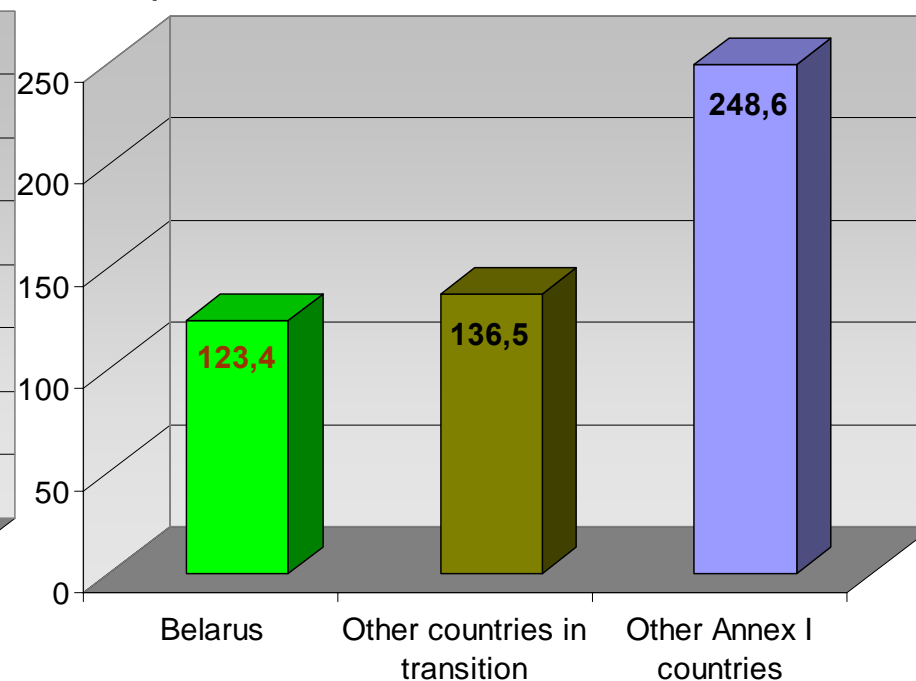
# GHG emission forecast

do we need boosting up energy supply ?

GDP(PPP),  
k\$USD/capita

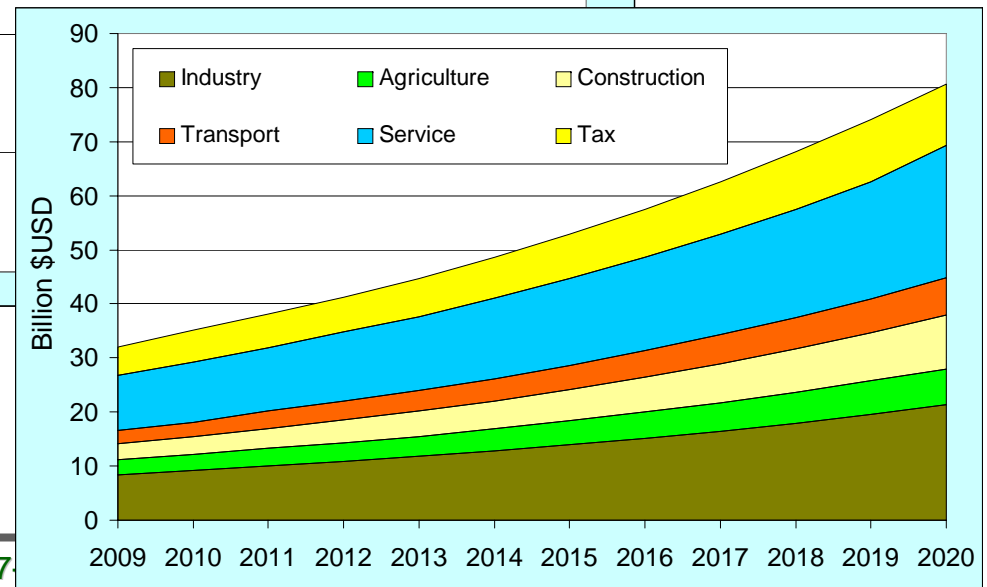
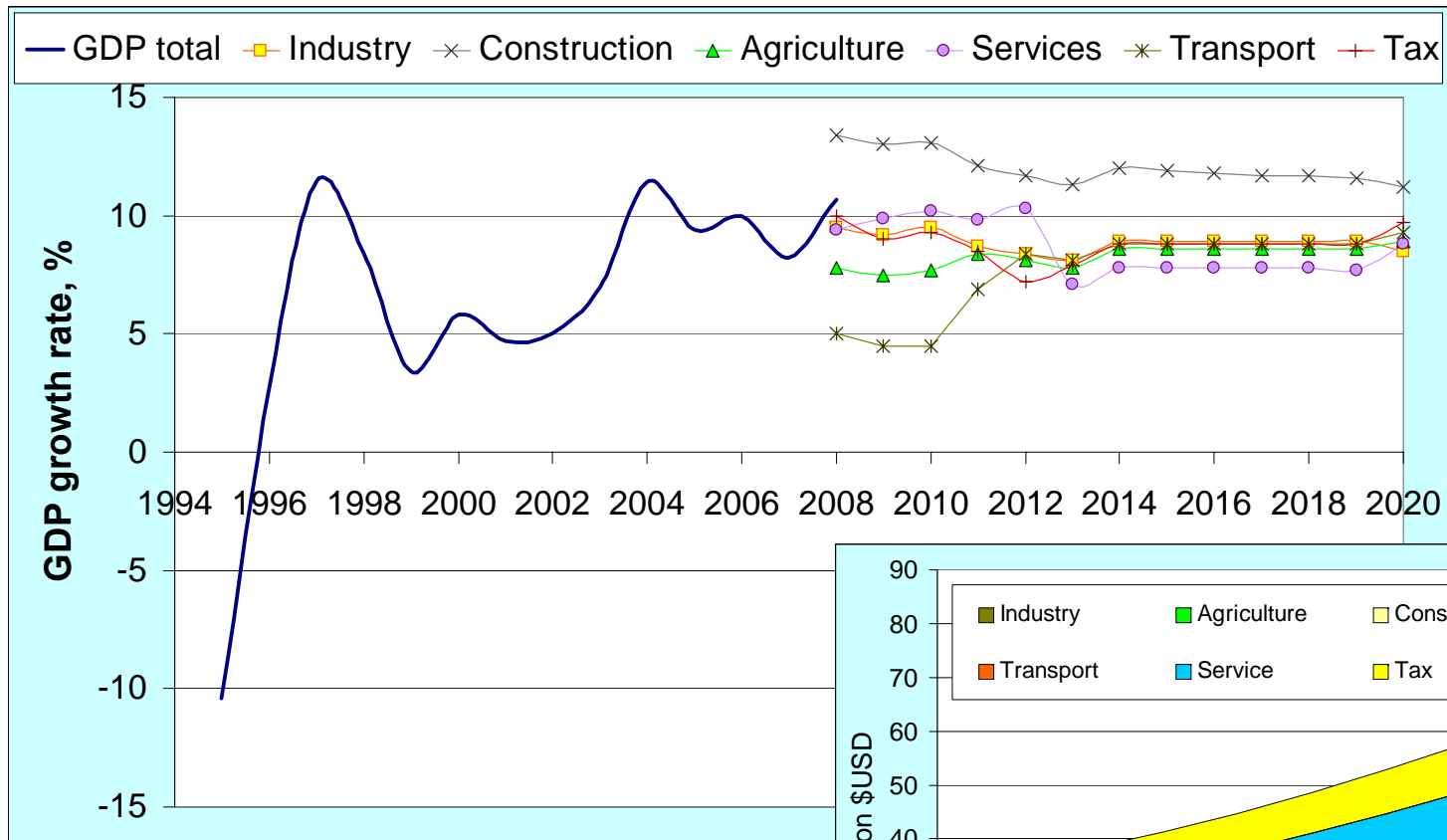


Primary energy consumption,  
GJ/capita



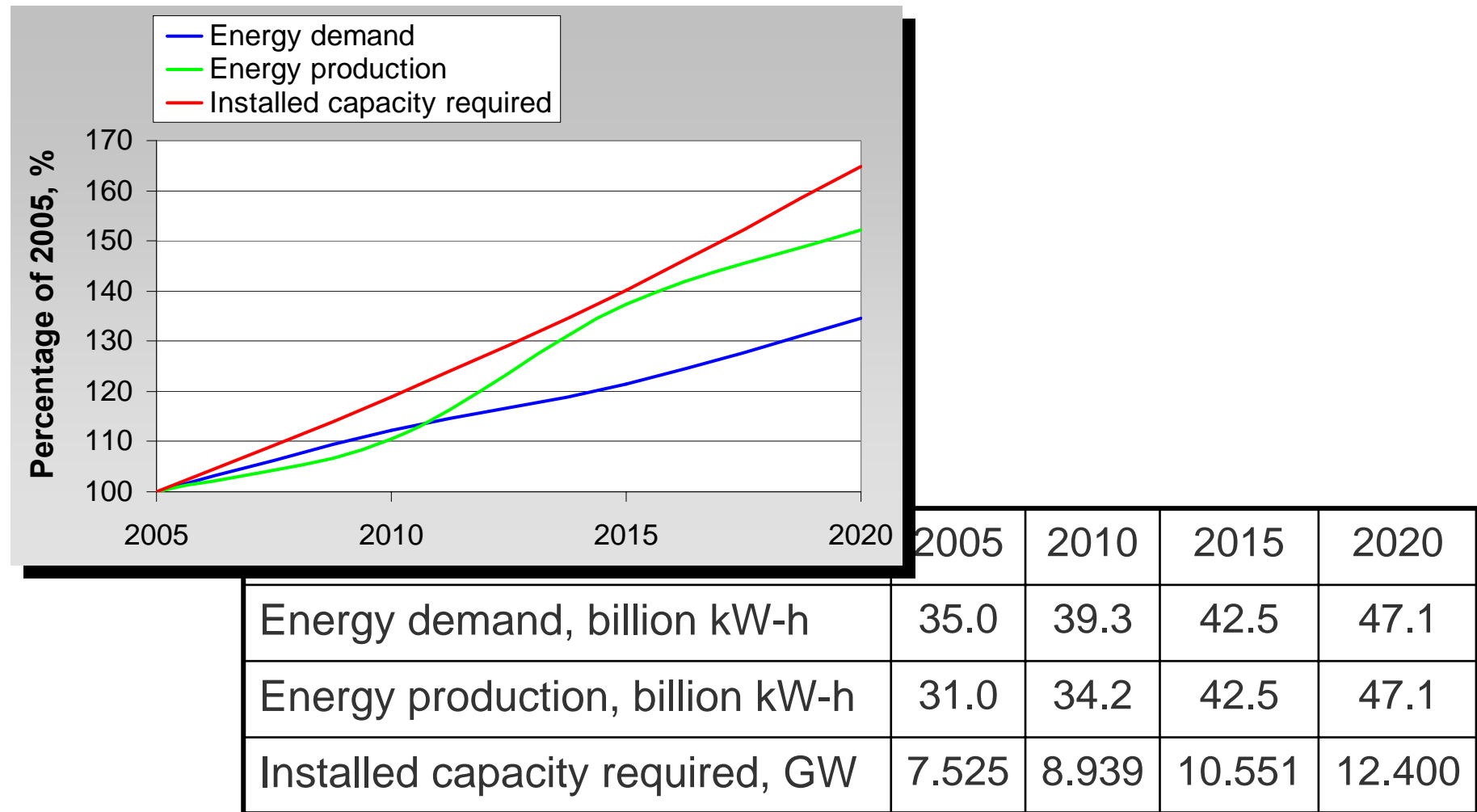
# GHG emission forecast

## trend and prognoses of GDP growth rate



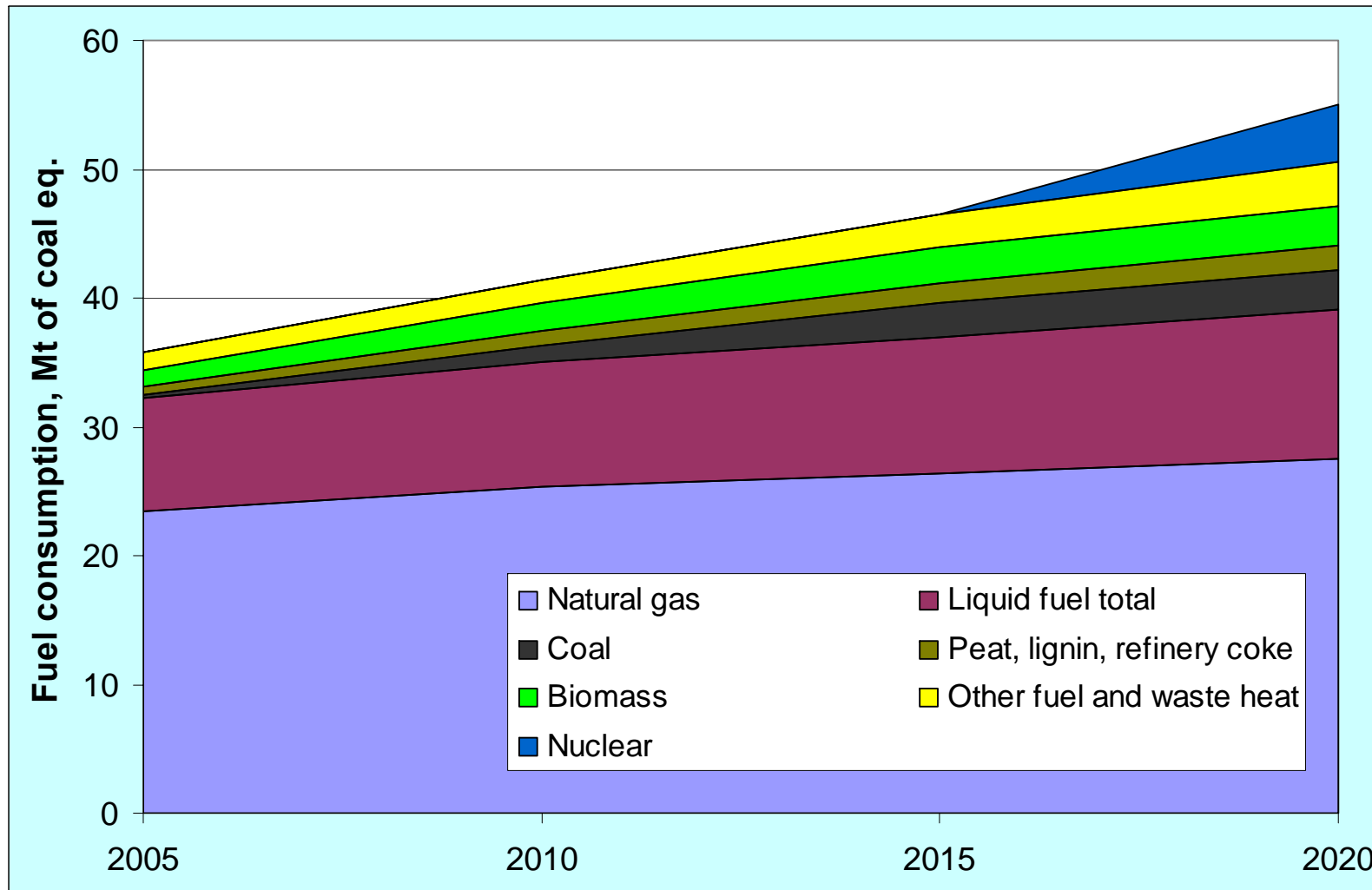
# GHG emission forecast

## prognoses of energy consumption



# GHG emission forecast

## dynamic of fuel balance



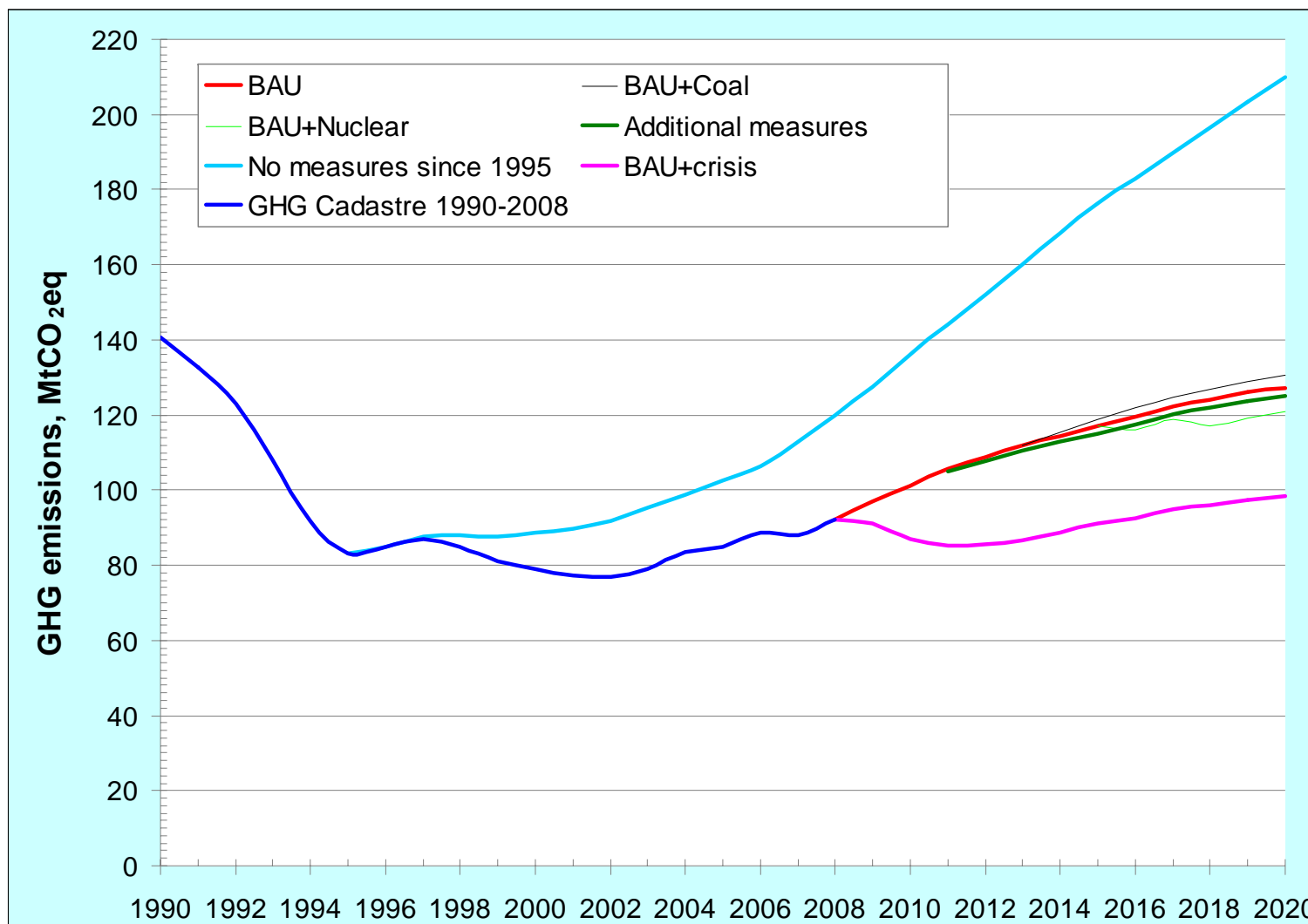
# GHG emission forecast

## scenarios in energy sector

- Scenario “BAU”
  - power and heat generating facilities are upgraded
  - gas turbine cycle and cogeneration scheme of 1.3 GW
  - renewable energy of moderate scale of 0.35 GW
- Scenario “BAU (Coal)”
  - the same as “BAU”
  - coal-fired CHP of 0.7 GW
- Scenario “BAU (Nuclear)”
  - the same as “BAU”
  - NPP of 2 GW
- Scenario “With additional measures”
  - renewable energy of full scale (approx. 20%)
  - energy saving measures in cement and construction industries
- Scenario “BAU (crisis 2009-2010)”
  - the same as “BAU”
  - GDP as predicted with due account of current crisis

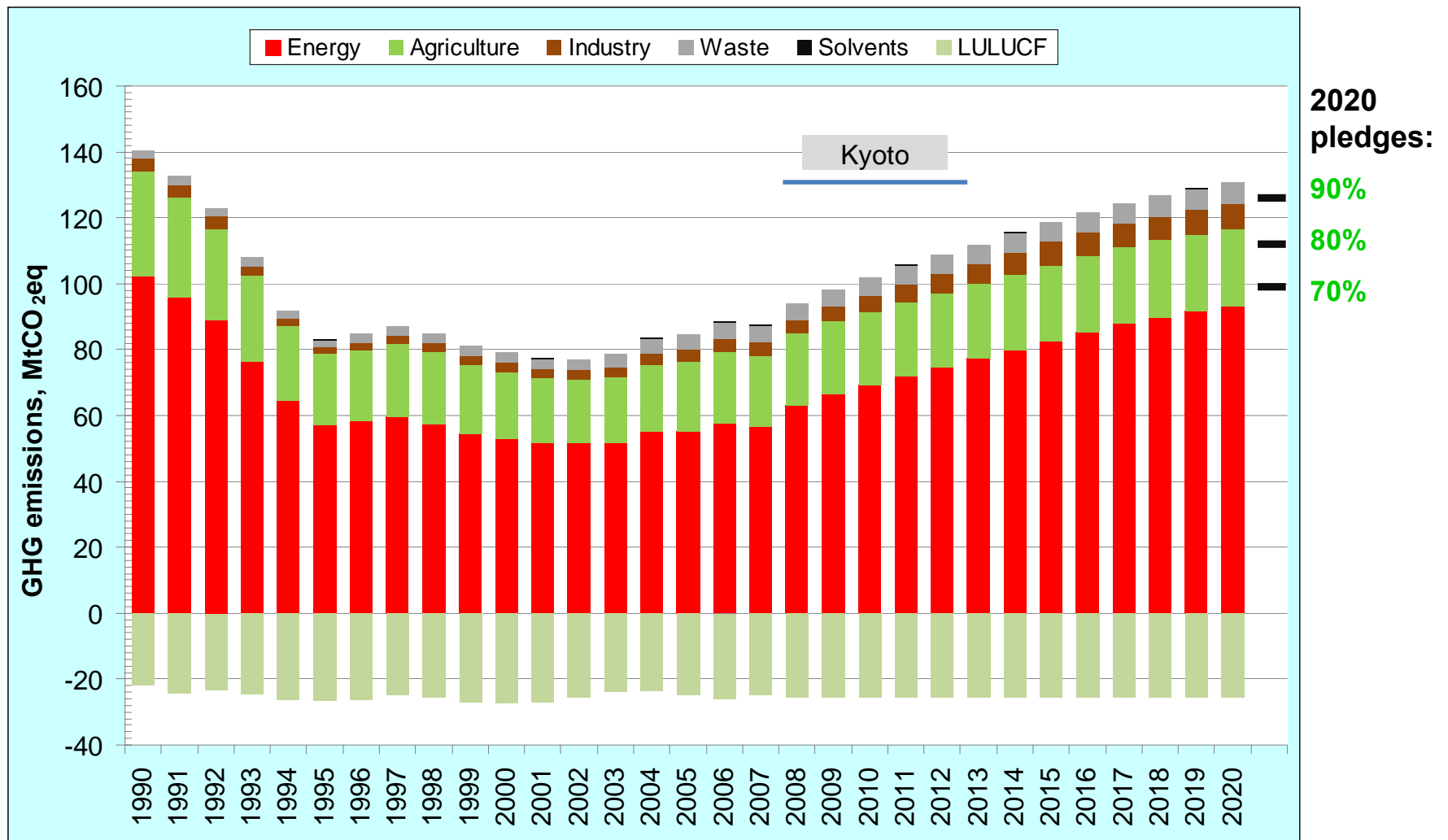
# GHG emission forecast

## total aggregated GHG emissions



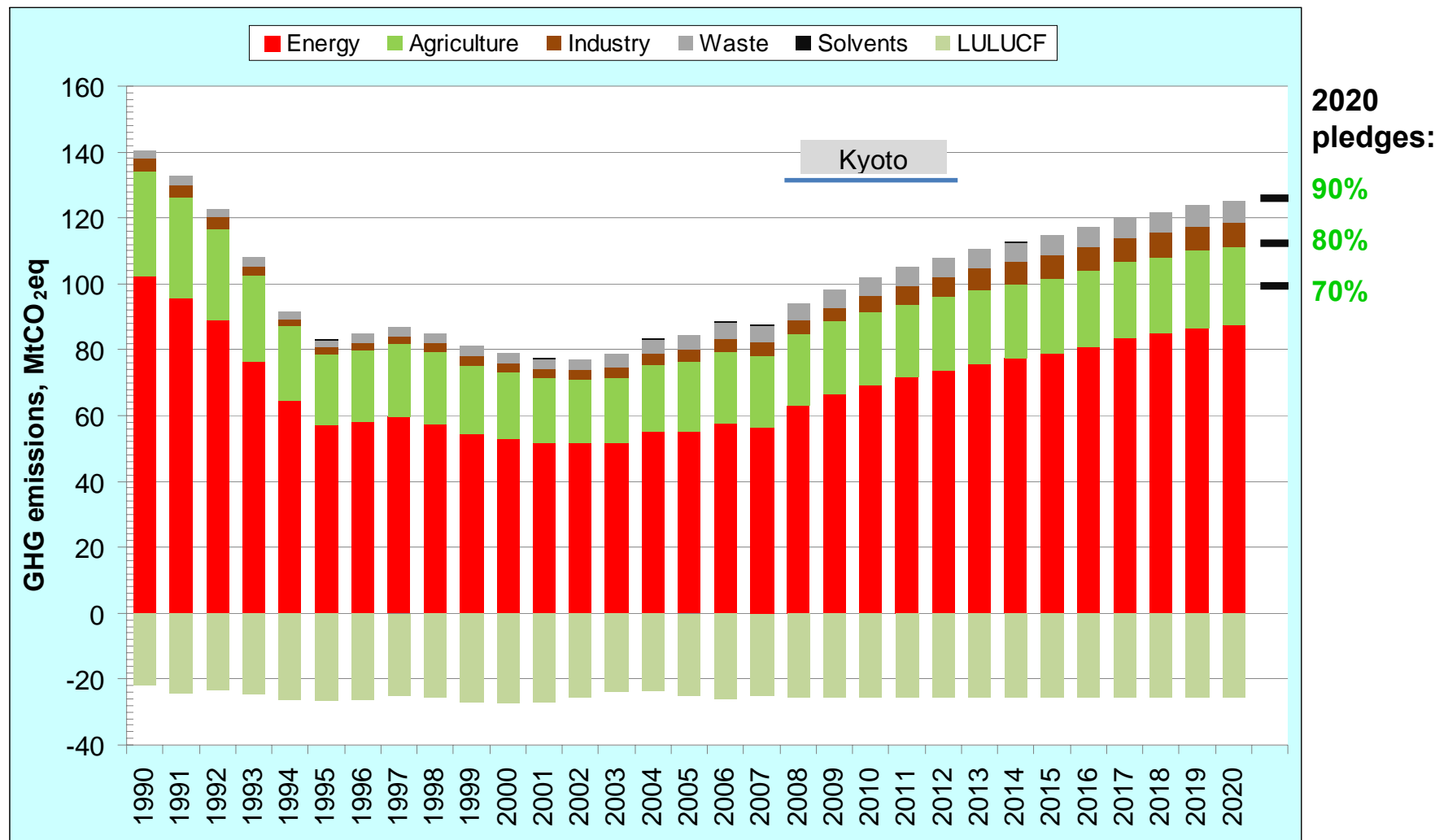
# Scenario BAU (Coal)

worst scenario for GHG emissions



# Scenario “With additional measures”

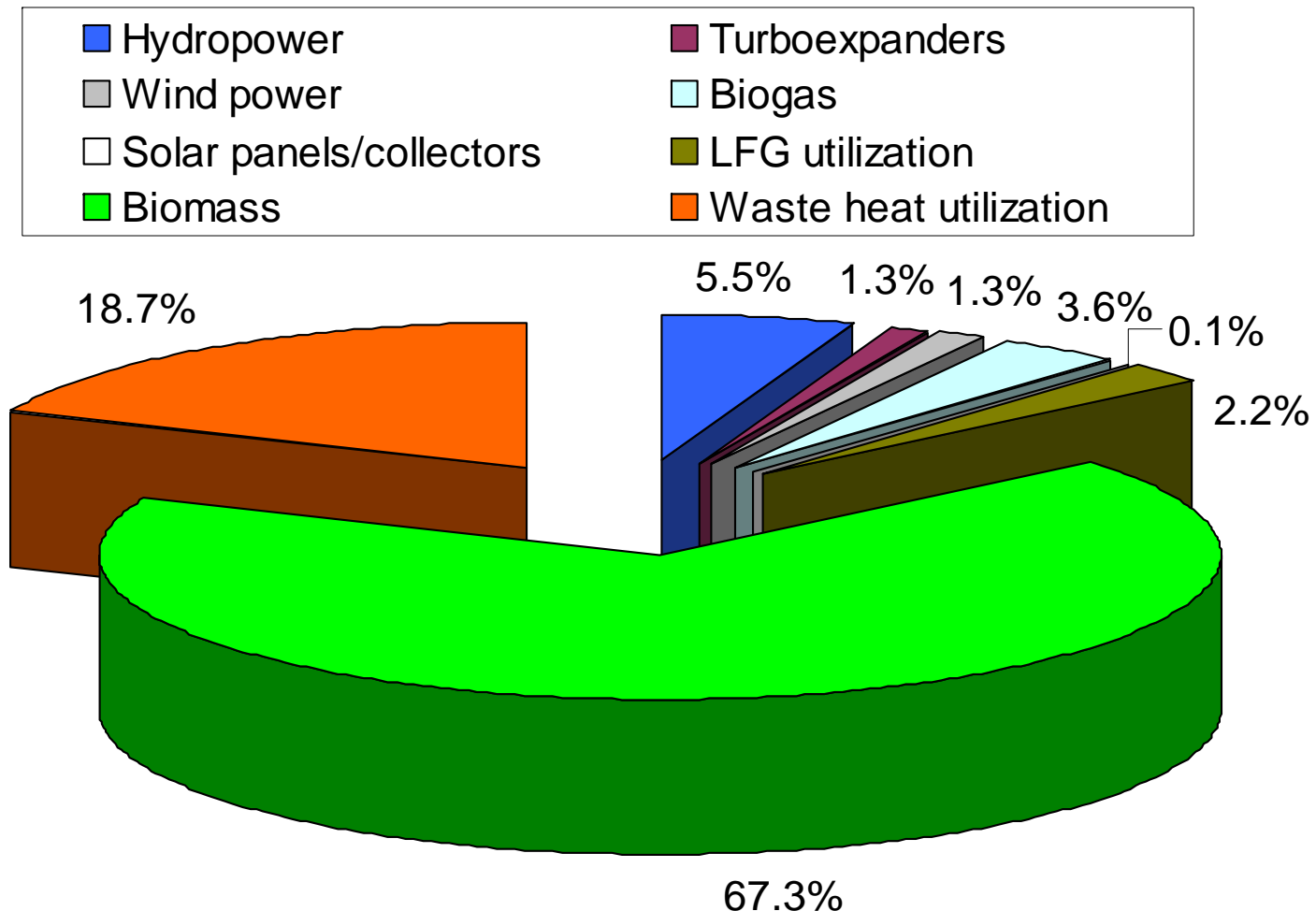
still some barriers; no eligibility for CER, AAU, ERU



# GHG emission forecast

## additional measures in renewable energy fields

- Mitigation potential of renewable energy = 15-30 MtCO<sub>2</sub>eq in 2005-2020



# GHG emission forecast

## barriers for additional measures

- The 1990-1996 economy recessions with sufficient financial losses
- Foreign investments are limited
  - its share is only **6.5%** of GDP, or about 0.68 k\$USD per capita (i.e. by a factor of **10 less** than for other countries in transition in average)
- Other priorities prevail
  - remediation of the Chernobyl affected regions
  - safeguarding of foodstuff supply and power supply security
  - increased use of local fuels, including peat and coal (diversification of fuel supply)
- Limited speed of BAT transfer due to underdeveloped infrastructure
- Additional financial resources are questionable:
  - Kyoto mechanisms may not be available until 2012

# GHG emission forecast

## business-as-usual vs. additional motivation

- Business in general is not directly interested in low carbon intensity
  - relatively high marginal cost for GHG emission reduction through energy efficiency improvement and use of renewable resources
  - in Belarus, saving of 1 ton of coal equivalent costs about 300 \$USD
- For a fast growing economy with lack of investments the specific incentives must be created to reduce carbon intensity
  - tax and tariff policy
  - Climate Protection Law
  - Renewable Energy Law
  - National Climate Change Mitigation Programme
  - special development programmes supporting modernization of energy sector, energy saving, renewable energy, etc.
- Voluntary carbon market
  - still available as long as retirement of AAU are not required
- National (and/or regional) carbon market

# Copenhagen and beyond

## view on allocation of efforts

- Achievable scale of reductions by Annex I Parties in aggregate:  
25-30% of 1990 level until 2020
- EIT countries have already experienced significant 50% emission reduction within 8-year period, and it was not easy (requires 50-60% GDP drop)
- All countries must assume responsibility and commitments based on UNFCCC principals
  - due account of different phases of national economy development
  - due account of national priorities and availability of resources
- Remove barriers and provide means for their removal (e.g. carbon financing)
- Increase diffusion rate of BAT
- Sufficient gap exists among EIT and other Annex I Parties
- EIT countries are **not capable** to provide for Non-Annex I countries:
  - additional financing; technology transfer; capacity building
- EIT countries need an access to BAT and capacity-building
- EIT countries need investments, but need no financial aid

# Copenhagen and beyond

## simplification of amendments to annexes

- Historical background – again the story about Belarusian amendment to Annex B:
  - in this amendment the country, an Annex I Party, assumes its voluntary commitment that is more stringent than any other Party's commitment: **92%** of 1990 emission level and **7%** of additional commitment reserve (in total about **85%** of 1990 emission level)
  - almost four years passed since this amendment was first initiated in 2005
  - only 14 countries (of 143) sent their acceptance instruments to the Depositary so far
- It becomes not only an unfair and unprecedented treatment of one of the Parties. It is also:
  - a failure of the construction of the Kyoto Protocol especially with regard to its Art. 20 and 21
  - quite a serious notice of potential failure of the post-Kyoto commitments acceptance procedure if it is based on the same principals
- Provide for a mechanism of easy correction of QELROs and acceptance of relevant amendment through a simple adjustment or “opt-out” procedure especially if:
  - the amendment stipulates for a Party's more stringent QELRO than it has been inscribed in Annex B [or C], or
  - the Party proposes an amendment to Annex B [or C] that stipulates for such Party's QELRO, which has not been inscribed in Annex B [or C]

# Belarusian Amendment

## acknowledgment

### ■ Ratified (16)

- Czech Republic
- The Republic of Belarus
- Uzbekistan
- Australia
- Russian Federation
- Vietnam
- Norway
- Turkmenistan
- The Republic of Moldova
- Armenia
- India
- Mexico
- Azerbaijan
- Syrian Arab Republic
- Serbia
- Mauritius
- Ukraine

### ■ Informed about upcoming completion of internal procedures :

- Egypt
- Cameroon
- South Africa

# Copenhagen and beyond

## other views and ideas

- General shape:
  - multiple base year, 1990 being one of reference year (to maintain integrity with Kyoto and subsequent decisions)
  - duration of the post-Kyoto commitment period – until 2020
  - pledges are expressed in percentage of base year emission level
  - starting year to come to QELROs should be 2010
  - other indices (e.g., carbon intensity) should be indicative
  - sectoral commitments should not replace national commitments
- Revision of Kyoto Protocol rules with regard to wetlands (peatlands)
  - definitions and references to Articles 3.3 and 3.4
- The carbon market and links between markets shall continue development
- Climate change mitigation actions are not less important and urgent than adaptation actions and require timely and adequate resources
  - share of proceeds from carbon credits might have negative consequences
- NAMAs in developing countries should be supported by Annex II Parties through strengthening sustainability of the best available technology transfer and capacity building

# Conclusion

welcome to Belarus



**Belarus continues to follow its climate change mitigation strategy and needs more active cooperation from other Annex I Parties.**

**Belarus can also help you to combat the climate change.**





# THANK YOU !

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