

# RBAP

## Regional Biomass Action Plan



*Wels, 25th February 2009*



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# Regional Biomass Action Plan in Pomerania

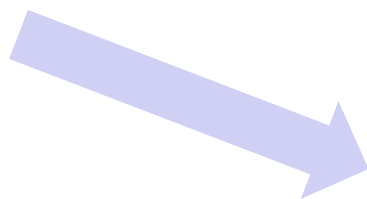


## Aim of the plan-

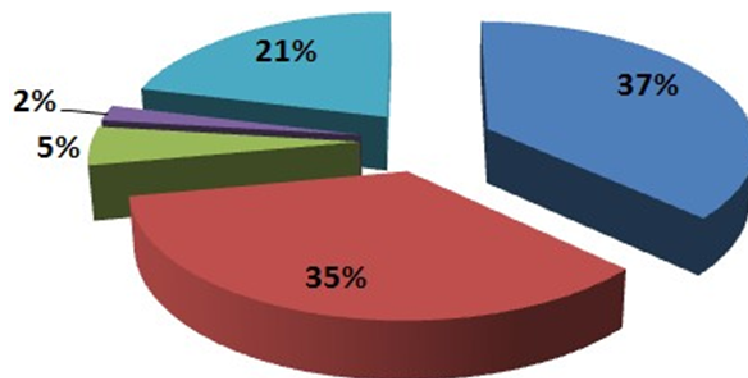
Implementation of actions regarding biomass promotion in Pomerania, included in the „Regional strategy for energy sector development, with the special focus on RES”.



# Pomerania Region



Voivodeship 's area	18 310,36 km <sup>2</sup>
Population	2 215 100
Aforestation	37 %
Rural land	42,6 %



- forrests
- rural land
- meadows
- pastures
- other



# Points of departure for RBAP

- well developed tourism- quality of the surrounding environment is very important
- conditions exist for biomass cultivation and for energy crops plantations
- biomass raw material and surpluses of „green” energy from biomass may be exported to other regions





## Energy balance in the Region

heat demand

**6 660 MW** and **61 520 TJ**.

Coal contributes over **70%** of heat production.



biomass share in the Region

➤ **ca 6%** of the total energy production in the region

❖ **Hydropower and biomass**  
have the biggest share in RES in the region.



## Biomass potentials

➤ Energy crops plantations potentials

**26 914 thous. GJ/a; 45 000 ha** of land available, that may be converted into energy crops plantations

➤ Straw surpluses

**710 000 t/a = 8 500 thous. GJ/a**

*(46% of the total volume of straw produced)*

➤ Wood potentials

Wood resources (GJ / year)					
forests	wood processing	orchards	roadsides	municipal green areas	TOTAL
1 973 832	2 619 475	9 472	90 592	13 912	<b>4 707 283</b>

# Biomass potentials

## Total biomass potentials



may meet **20% of heat demand** in the Region



## Driving forces

1. EU regulations
2. National economy and energy policy
3. Regional Strategy
4. Financial Support: RPO, OP, other
5. Promotion of technologies



# Regional Strategy

**Regional strategy** converts national energy policy regulations into regional ones.

with time horizon until 2025, it introduces sustainability rule to energy sector development, by promotion of thermomodernisation and energy saving measures

Strategic aims:

- ✓ **Reduction of primary energy consumption**
- ✓ **Increase of RES share in energy balance**
- ✓ **Increase of energy safety**

# Financing support

Operational Programme –  
Infrastructure &  
Environment

Regional Operational  
Programme

Rural Areas Development  
Programme



National Fund of  
Environmental Protection  
& Water Management

Voivodeship Fund of  
Environmental Protection  
& Water Management

## RBAP goals for POMERANIA

- Reduction of primary fuels consumption - **by 50%**
- Reduction of the heat demand - **by 23%**
- Reduction of the coal share  
in the energy balance - **by 48%**
- Increase of RES share  
in the energy balance
  - **by 8% in 2010**
  - **by 15% in 2020**
  - **by 20% in 2025**

# Expected outputs of RBAP implementation

- reduction of heat energy costs
- income from the production of biomass, biofuels and „green” energy
- improvement of air quality



## Barriers for RBAP implementation

- dispersed resources of biomass
- high prices of the processed biomass
- competition with cheap coal
- high consumption of energy, thermomodernisation necessary prior to fuel exchange
- high investment costs of modern installations
- lack of own financing sources for both municipal and individual users
- limited external sources of financing
- lack of environmental and energy awareness

# Measures to be taken

- technical, organisational and economic consultancy concerning RES
- R&D concerning RES
- education of the society about RES and promotion of the research concerning RES
- development of RES projects and their implementation
- RES development monitoring

# REGIONAL BIOMASS ACTION PLAN

## 1) STRENGTHEN CO-OPERATION BETWEEN BIOMASS MARKET ACTORS

- primary biomass producers
- processed biomass producers
- equipment manufactures
- installators
- design engineers
- municipal users
- individual users



# REGIONAL BIOMASS ACTION PLAN

## 2) ENERGY MANAGEMENT UNIT

*established at the Regional Selfgovernment*

- coordination of the measures included in the Regional Action Plan
- elaboration of necessary legal acts and by-law
- scheme for projects' financing
- supporting local undertakings
- cooperation with the Pomeranian Center for Renewable Energy
- creation and maintenance of biomass databases (biomass resources, available fuel sources, current biomass utilisation)
- supporting innovative projects
- monitoring and estimation of RBAP achievements



# REGIONAL BIOMASS ACTION PLAN

## 3) DEVELOPEMENT OF ENERGY PLANTATIONS

to incerease volume of biomass supplied to the energy market

## 4) DEVELOPEMENT OF CENTRES FOR BIOMASS FUEL PRODUCTION AND DISTRIBUTION IN EACH PROVINCE OF THE REGION

to stimulate development of biomass „industry” in provinces and to improve the logistics

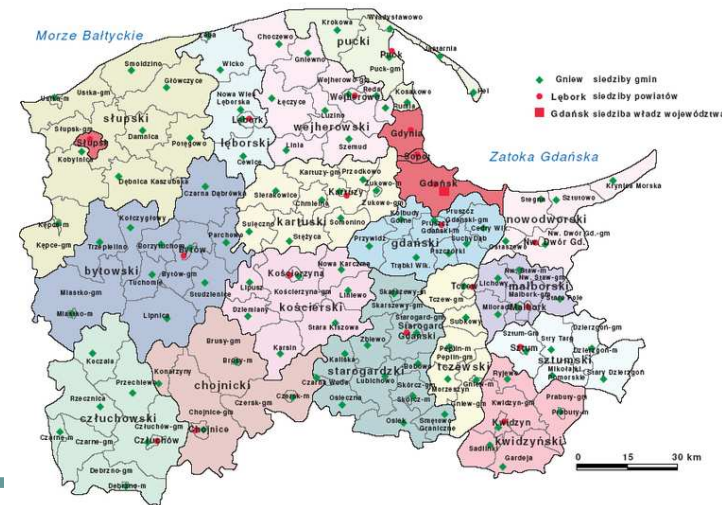


# REGIONAL BIOMASS ACTION PLAN

## 5) BIOGAS PLANTS IN EACH COMMUNE

Development of biogas plants is crucial for solving problems of Polish agriculture and reaching European goals for the increased share of RES in the energy balance.

Possibility of joint certificates of origin for both electricity and heat production by the biogas plants can constitute a significant supportive tool.



# REGIONAL BIOMASS ACTION PLAN

...and other measures for biomass promotion and development in the region

