The Polish National Energy Conservation Agency

Poland – How to optimise benefits when designing a new EEO scheme

Joint European Commission and eceee seminar on Energy Efficiency Obligations

Brussels, 30 September 2011

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Energy efficiency – basic legislation

Policy documents:

- Energy Policy for Poland until 2030

Bills:

- Energy Law Act– 1997
- Regulations on CHP (technical issues), energy efficiency requirements and labelling
- Energy Efficiency Law Act (2011)

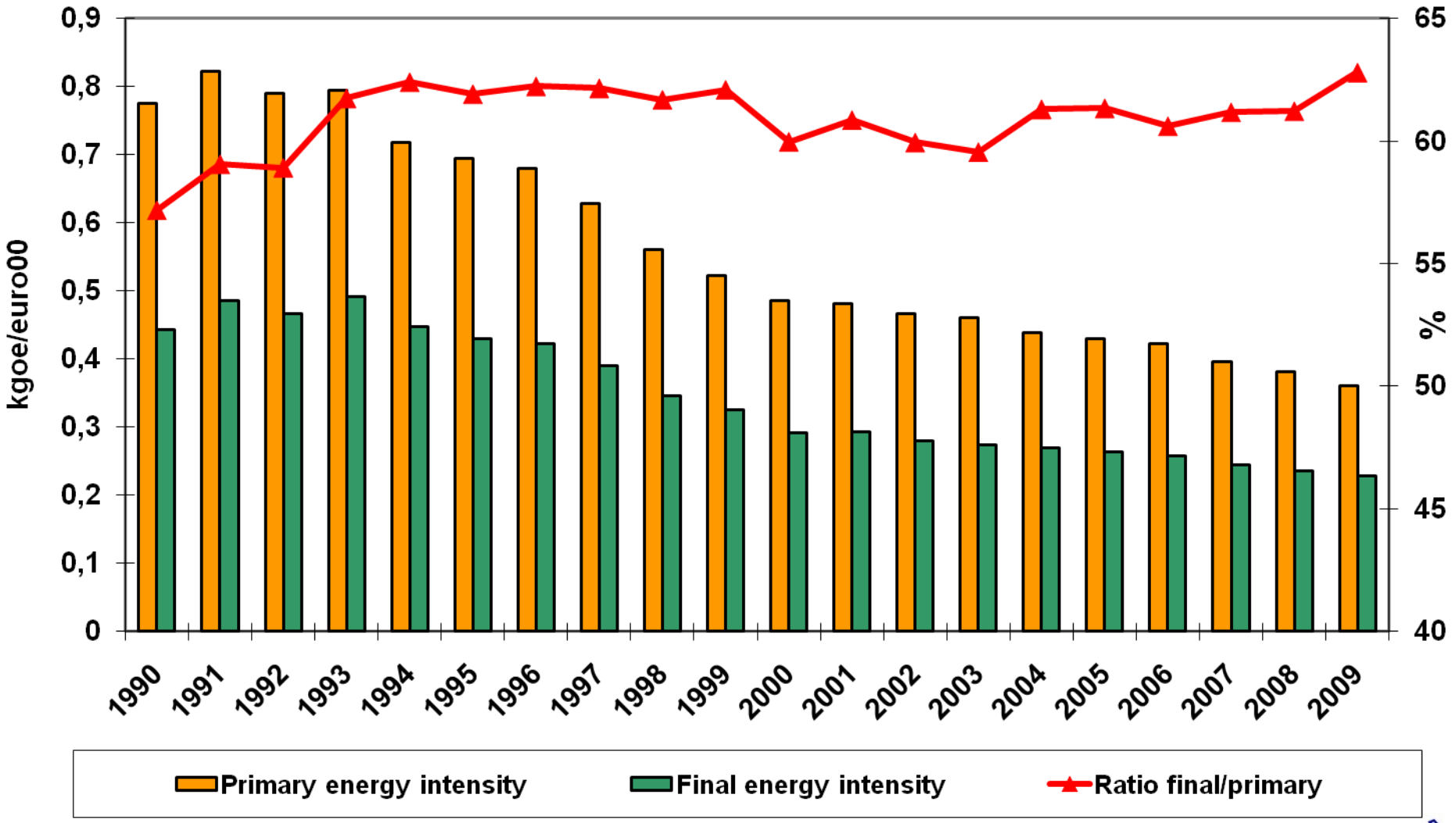
Other:

- National Energy Efficiency Action Plan 1, 2

The main targets:

- **To make efforts to achieve development of Polish economy without increase in primary energy demand**
- **Reducing the energy intensity of Polish economy to the EU-15 level (in 2005).**

Poland GDP energy intensity



Predicted energy savings results of different measures

(4,5 Mtoe in 2006 as indicative target)

Programmes of National Fund for Environmental Protection and Water Management (NFOŚiGW)	**app. 0,7 Mtoe**	According to NFOŚiGW evaluation
Thermomodernisation Law and Fund	**app. 0,2 Mtoe**	KAPE evaluation
Soft measures	**app. 1, 5 Mtoe**	Evaluation of Ministry of Finance
White certificate system	**app. 2 – 2,5 Mtoe**	Ministry of Economy evaluation

Energy Efficiency Act

- Defines national energy efficiency goal (9% in 2016);
- Imposes an obligation on public sector and promotion of its leading role;
- Introduces white certificate system as a market mechanism favouring enhancement of energy efficiency undertakings.

The certificates will be provided for:

- reduction of energy consumption by end users (at least 80%),
- reduction of energy used by energy producers for their own purposes and reduction of energy transmission and distribution losses

Energy Efficiency Act

- Exemplary role of public sector
  - The public sector entity (owner or manager) is obligated to undertake, at least once every ten years, an energy efficiency audit of working buildings with more than 250 m^2 as well as an energy efficiency audit of technical equipment and installations;
  - Public sector entities during the realization of these tasks, have to use at least one of the following measures:
    - concluding contracts with an entity pursuing a project for improve energy efficiency;
    - the purchase of new equipment, installation, or a vehicle with low energy consumption;
    - replacement or modernization of used equipment, installation or vehicle;
    - the purchase or rent energy efficient buildings or parts of their , or their modernization

White certificates system in Poland - the scope of system

White Certificates system

Production

Modernisation:
- Power plants
- CHP plants
- Municipal and industrial heating plants

if concerns own use equipement

Distribution and transmission

Modernization:
- Electricity networks
- Gas networks
- Heating networks

The scope of ESD

Final energy use

Modernization and investment:
- In households sector
- in the municipal sector
- In industry and services

Measures to improve energy efficiency

Energy efficiency improvement measures in accordance with Law are following :

1) Heat insulation of systems;

2) Buildings thermomodernisation;

3) Modernization of:

a) home use devices,

b) lighting,

c) own use equipment,

d) facilities and systems of industrial processes,

e) local heating networks and local heat sources;

4) Energy recovery in industrial processes;

5) Limitation of:

a) reactive power flows,

b) network losses, c) transformers losses.

Deatiled specification: Official Journal of the Republic of Poland, Polish Monitor

Energy Efficiency Act

- **Regulated entities:**
  - final customers, i.e. in accordance with Directive 2006/32/EC: natural or legal person purchasing energy for their own use, entities engaged in the transmission and distribution of electricity or heat and gas;
  - entities involved in the generation of electricity or heat;
  - companies which are suppliers of energy efficiency improvement measures;
- **The obligation imposed on entities engaged in selling electricity, heat and gas to final customers**

White certificate system (WhC)

- Enterprises that sell electricity, natural gas and heat will be obliged to gain a certain number of certificates in order to present them to the Energy Regulation Office and have them amortised.
- The companies which do not receive the certificates will need to pay compensatory fees of PLN 900-2700 per toe.
- White Certificates will be traded at Power Exchange.
- The cost of implementing the White Certificates scheme will result in increase of energy price ~ 1,5-2%.
- MoE will be responsible for monitoring and verifying the level of compliance with targeted savings.

Basic features of the system

- Beneficiary/investor without limits
- ESCO
- Obligation - 3% sale of energy via networks (gas, electricity, heat)
- Administrative costs in ‰ (3 mln PLN per year)
- Energy audit and ex-ante evaluation
- Tender issue – market mechanism for optimizing the cost of the system
- Three steps: promise – investment – certificates issue (emission)
- Monitoring of the system and the consequences – penalty, amortisation, etc.
- Certificates would be traded at Power Exchange

Time schedule of WhC system

The first step

2011 - empowerment for the professional energy auditor



The second step

2012 – preparation of a tender and call



The third step

2013 – imposing the obligation



The last step

2014 – settlement of the obligation (amortisation or obligation to pay the substitute fee in 2013)

Thank you for your attention!!!

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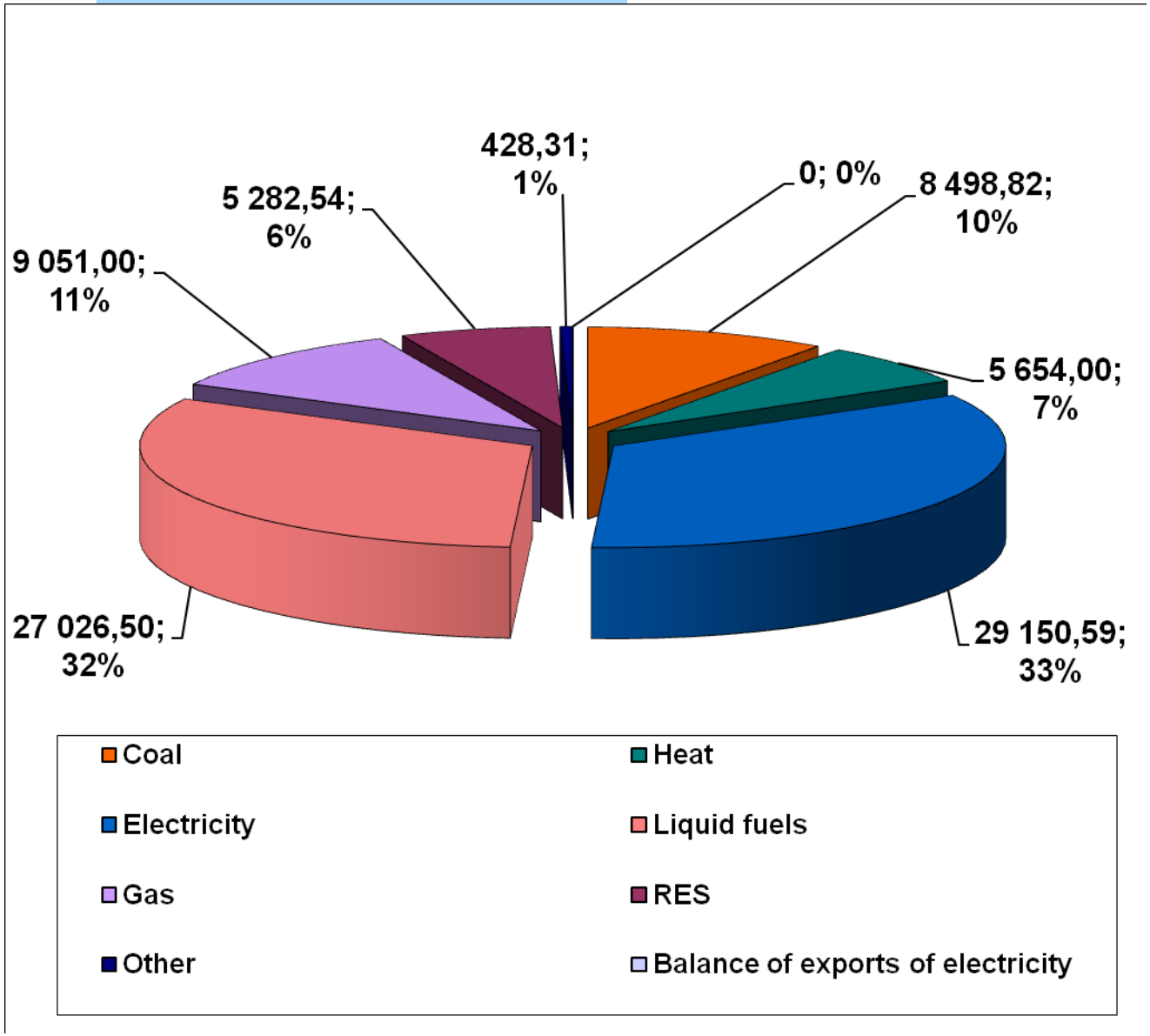
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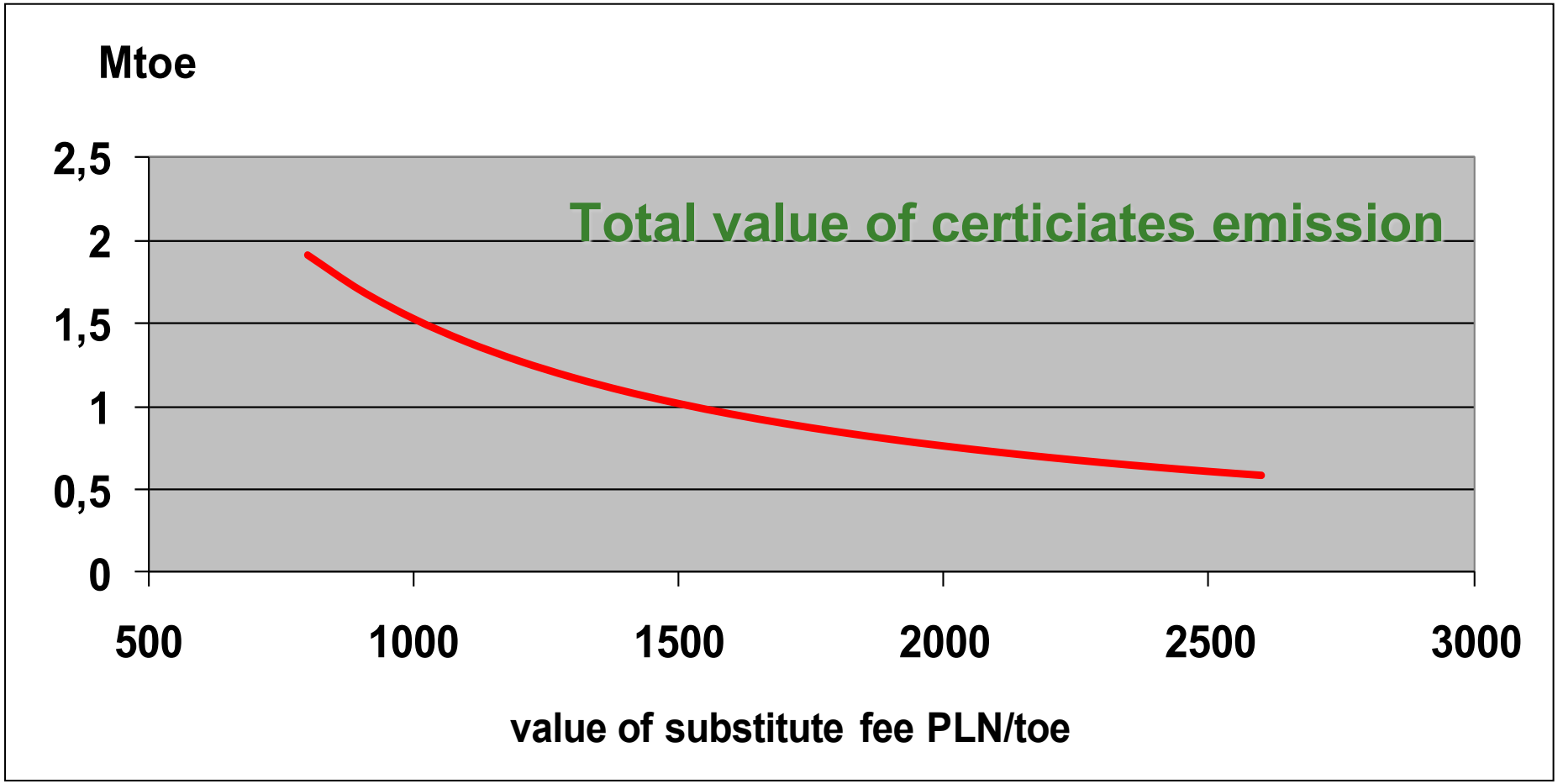
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Sales of energy sector 2007

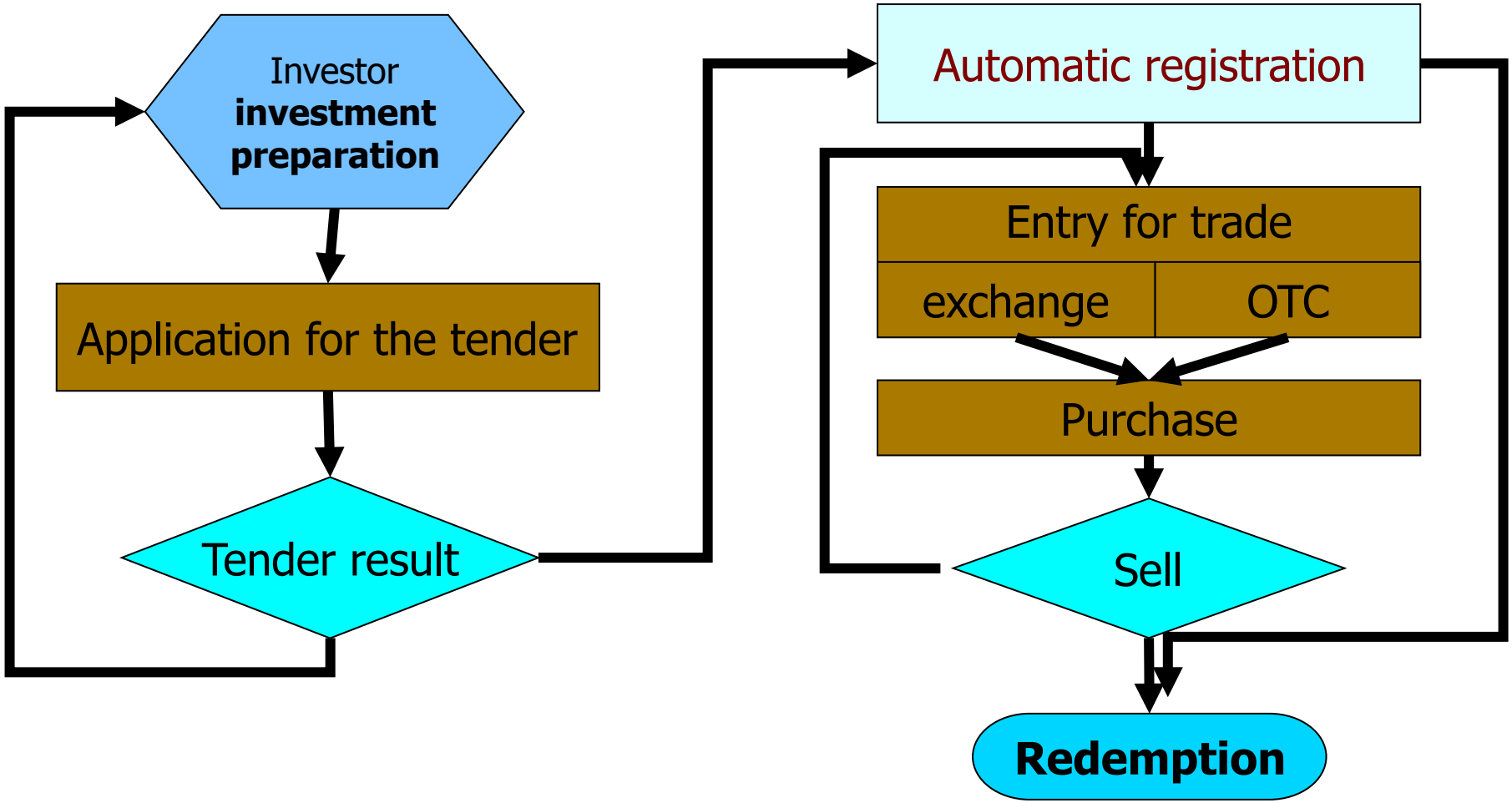
85 billions PLN



3 % - Sales of the energy sector is 1. 53 billion PLN (electricity, gas, heat)



System plan


Investor
investment preparation
Application for the tender
Tender result
Automatic registration
Entry for trade
exchange
OTC
Purchase
Sell
Redemption

Tender

- For each platform (generation, transmission, final use)
- The most effective investment choice
- Criterion:

  Ratio of amount of energy saved in relation to the amount of white certificates (WhC) for which investor claims - ω

To win – declared energy effect should achieve range

$$(t \times \omega_{av} \; ; \omega_{max})$$

- **t – coefficient of acceptance**