

GEF-funded
biomass projects:
experiences in bioenergy
market development in
Europe and CIS

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Project Development

Monitoring Evaluation

Knowledge Management

Slovakia

Latvia

Poland

Slovenia

Belarus

Bulgaria

Bosnia & Herzegovina

Key barriers

**Subsidies to
competitors**

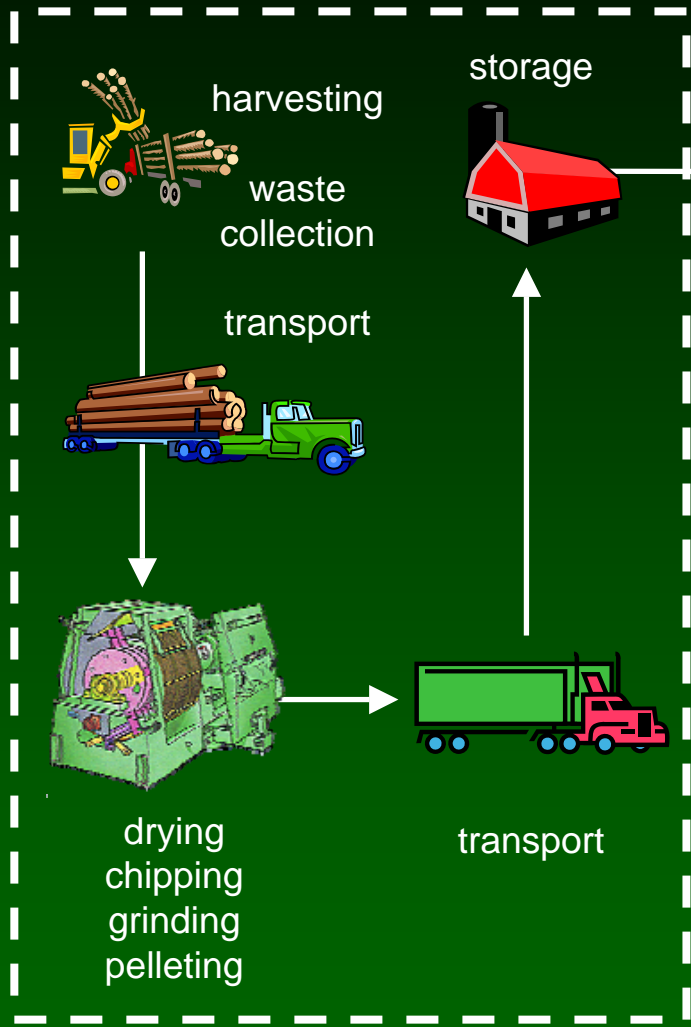
Awareness

**Policy gap
Uncertainty**

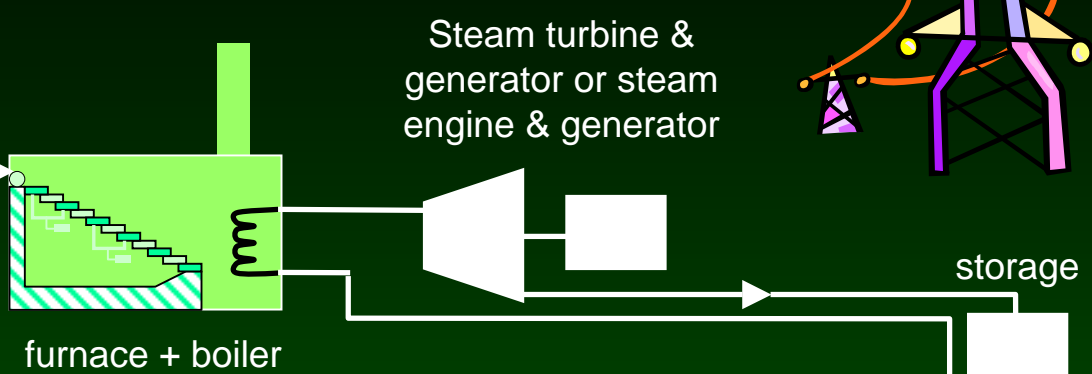
**Technology
costs**

Complexity

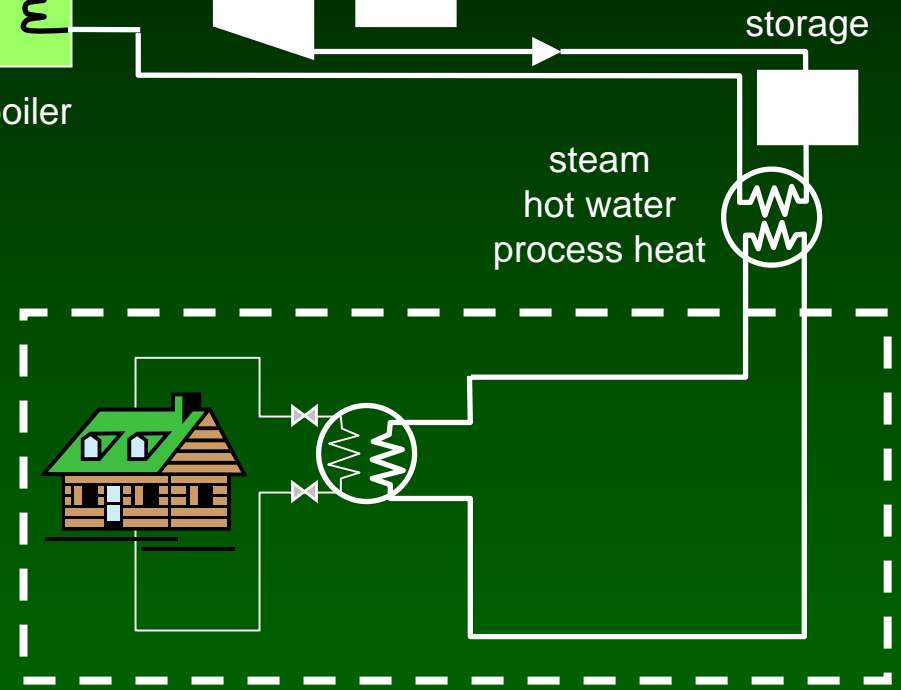
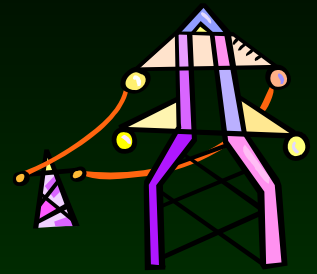
SUPPLY & PREPARATION



CONVERSION TECHNOLOGY



DEMAND

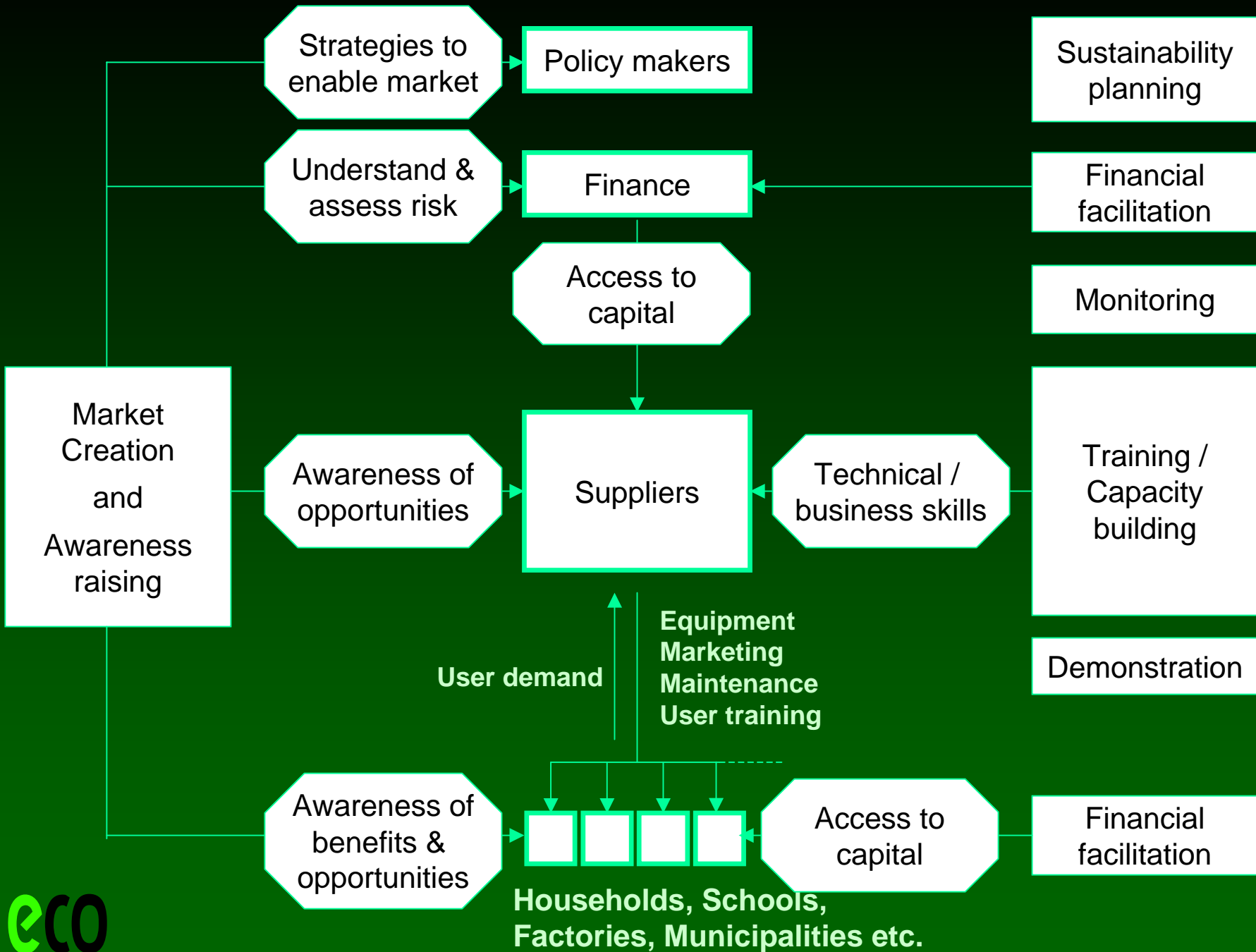


DISTRICT NETWORK (Secondary side)

**Biomass
Market
Creation**

Lessons Learned

**Project
Design**



What can be learned?

Technology learning

Policy, Government &
Administration

Private investors

Management

Financing mechanisms

Awareness

Technology learning

Standards and quality management can significantly reduce costs, and increase reliability of investments



A phased approach to demonstration projects allows the project to learn about costs and heat demand, etc.

Sufficient scale is required to stimulate the entire market (fuel supply, technology supply, support services) and result in significant cost reductions

Unless barriers to both biomass fuel supply and biomass use are addressed local markets will not be created

	2004	2005	2006	2007
Wet Sawdust (60 %) (Euro/bulk m³)	1.91	3.82	5.00	7.06
Pellets (Euro/t)	91	103	162	167

The scale of heat demand in feasibility studies is usually overestimated

Spring 2002

53 k GJ

Spring 2003

41 k GJ

August 2003

33 k GJ

September 2003

27 k GJ

Policy, Government & Administration

Administrative processes take longer to address in new markets than expected

Government bodies also need to learn about biomass energy. Getting licenses is frequently very time consuming with unknown technologies and processes

Implementation
of policies also requires
significant support

Governments frequently do not have sufficient specialist in-house legal expertise to support the development of innovative mechanisms.

External expertise, while frequently costly, is essential

Project Management based
within the Government has
unique opportunities to
provide policy support and
leadership

Private investors

It is challenging to find private partners that truly want to reduce investment or operating costs

When developers have vested interests in the project (raw material suppliers, equipment suppliers, etc.) the design may not be cost effective

The price of equipment in feasibility studies is usually overestimated when developed by equipment suppliers

Management

Building institutional capacity
is crucially important in new
markets

A significant risk for (bank) investors is the low level of management and business skills

Financing mechanisms

The banking sector is best placed to address financial barriers; the government is not sufficiently flexible and responsive to provide financial mechanisms effectively

Equity financing mechanisms can effectively address finance barriers (such as municipal limits on debt allocated to other priorities)

Effective provision of equity financing relies on flexibility for the fund manager and the investor

Perverse incentives can result
from poorly structured (equity)
instruments

Awareness

Promotion / awareness is highly important for the success of an innovative financial instrument

Scepticism about biomass energy as a clean and modern energy source must be persistently addressed in early markets

Local awareness raising in the locations where demonstration projects will take place are essential to maintaining community buy-in, and technology acceptance

Targeted awareness raising
should start from the outset,
before demonstration projects
are commissioned

The more focused & targeted training and skills-building activities, the more relevant

Overview

Technology learning
Policy, Government &
Administration
Private investors
Management
Financing mechanisms
Awareness

Opportunities for Biomass Energy Programmes – Experiences & Lessons Learned by UNDP in Europe & the CIS

Final Report

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