



***District Heating Network  
& Biomass Energy***

***Development & incentives  
In France***

*Tuesday 26th of May 2009  
Euroheat & Power Congress*

**Yannick LEBORGNE**



# Presentation outline

## *Euroheat & Power*

*Presentation of Dalkia*

*District Heating Network with Biomass*

*Examples in Lille*

*History and current situation*

*Drivers of the development*

*French context & current incentives*

*Future measures to promote development*

*Long term perspectives*

*Conclusion*

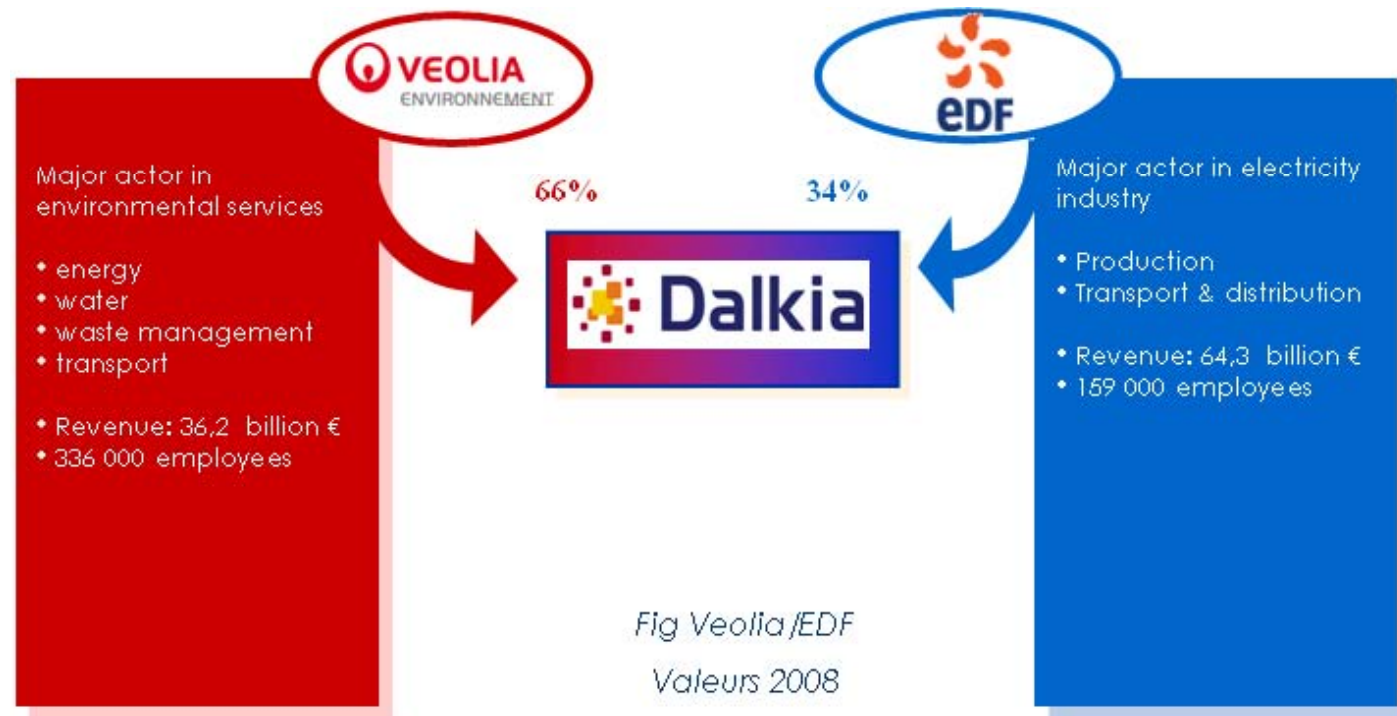
*Questions & Experience sharing*

# Company presentation

## Dalkia & Shareholders

### Presentation of Dalkia

Subsidiary of **Veolia Environnement** and **EDF**  
European leader in energy services



# Company presentation

## Dalkia & structure

### Presentation of Dalkia

- Major player in energy services
- 6.9 billion € of revenues
- 54 400 employees in 39 countries

Dalkia international comprises:

- Dalkia France
- Dalkia Nord which has:
  - 1 500 employees
  - 5 000 clients

#### Main locations :

- **Europe** : Germany, Austria, Belgium, Bulgaria, Estonia, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Norway, Netherlands, Poland, Portugal, Czech Republic, Slovakia, Romania, United Kingdom, Russia, Sweden, Switzerland
- **Amerique** : Argentina, Brazil, Canada, Chile, United States, Mexico
- **Asia Pacific**: China, South Korea, Malaysia, Singapore, Vietnam
- **Africa & Middle East**: United Arab Emirates, Israel, Morocco



# Company presentation

## *Dalkia & Activities*

Presentation of  
Dalkia



# District Heating with Biomass

## Cases in Lille



These two biomass power plants supply the District Heating network of Wattignies and Villeneuve d'Ascq

*District Heating  
with biomass  
Examples in Lille*



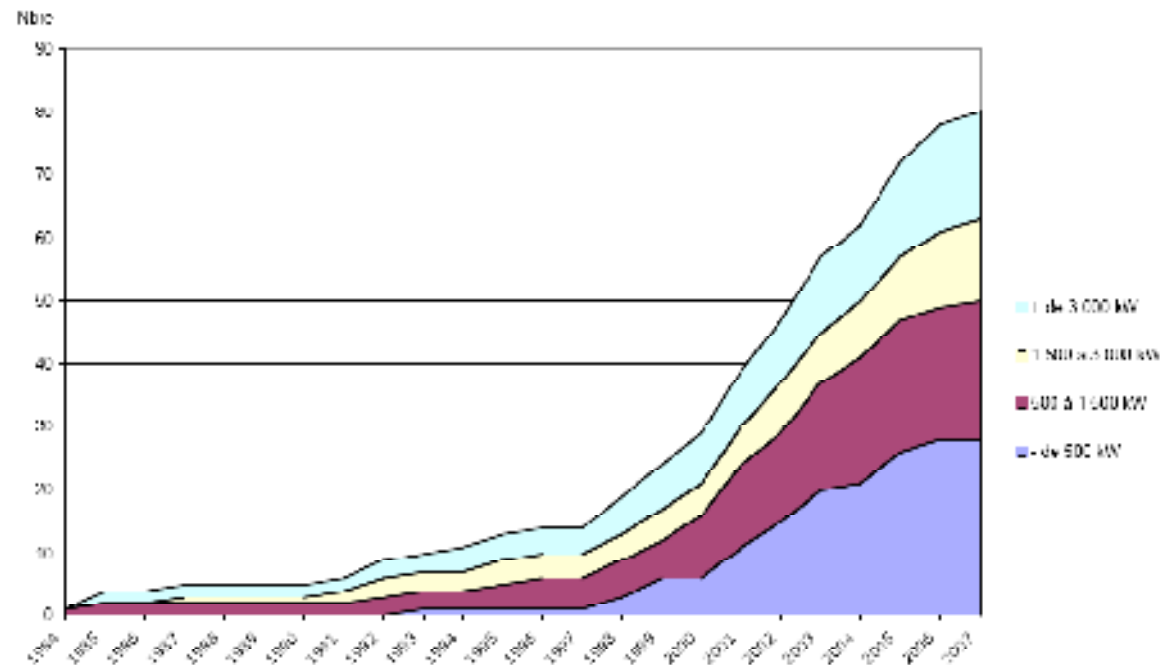
# District Heating with Biomass

## History & current situation

District Heating  
with biomass

History &  
Current situation

The history of District Heating with biomass began 25 years ago  
It took off 10 years ago but has slowed down in the last 3 years  
Around 80 networks are fed with biomass heating today



# District Heating with Biomass

## Motivations of development



District Heating  
with biomass

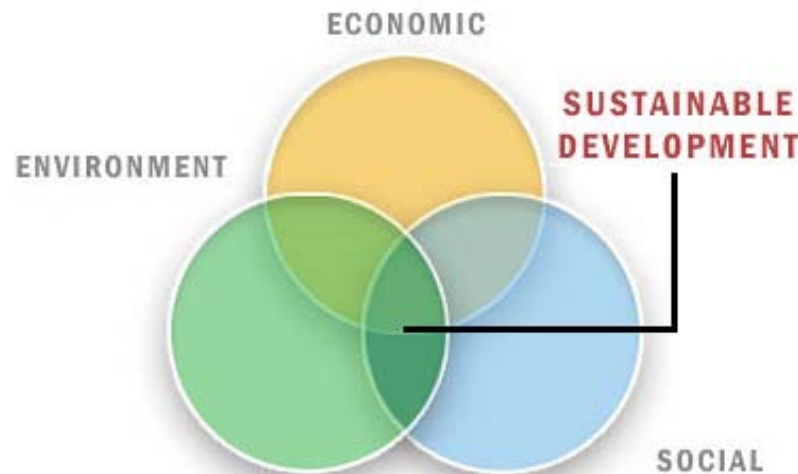
Drivers of the  
development

Main motivations\* of this development are:

\* From investigation « Amorce »

- **Cost Reduction and control** for the users
- **Local developments** (solidarity and social aspects)
- **Environment**

There are 3 axes of **Sustainable Development**



Whereas raising awareness for environmental and social issues is a question of communication, **the practical fundamentals are economic**



# District Heating with Biomass

## *Current incentive context*



*District Heating  
with biomass*

In the last 25 years of development, attractions have been:

- **Price of wood** (versus the increasing cost of fossil fuels)
- **Sale of carbon credits**
- **Public aid** (Subsidies from the State, Région, Europe...)
- Trading system with **Energy saving Certificate** (CEE)

Recently, projects are slowing down.

**A new impetus is necessary** to promote District Heating with biomass with a view **to respecting commitments to the environment.**

*Incentives  
& french context*



# District Heating with Biomass

## A new impetus

District Heating  
with biomass

Following the Kyoto summit, the European Union has started a framework convention for climate changes (called « **Paquet Energie-Climat** »)  
It consists of:

- **Reducing greenhouse gases by 20%**
- **Increasing energy efficiency by 20%**
- **Using a minimum of 20% of renewable energy** in European consumption

In France, after a big conference (« **Grenelle de l'environnement** »), concrete actions have been voted to promote:

- **Heating with renewable energy** to double by 2020
- Support of the **district heating network**

Future



# District Heating with Biomass

## New measures

District Heating  
with biomass

Future

A lot of economic measures should contribute to the success of projects

➤ The « **Fund for renewable heating** »

- 1 000 M€ / 3 years to begin, then around 800 M€ / year
- are included:
  - Power plants with renewable heating (biomass, solar energy, geothermics, heat pump)
  - Extension or new network feeding by a minimum of 50% of renewable energy
- Reduction of the cost (at least 5%) for the end users
- Can be combined with CO2 market and public aid
- Can't be combined with CEE (saving energy certificate)



# District Heating with Biomass

## New measures

*District Heating  
with biomass*

*Future*

➤ **Call for tender « BCIA »**, which is:

- National program to install big biomass power plants (> 1 000 toe/year of heating)
- 1st call for tender started the 5th of December 2008
- Selection will be according to the ratio of subsidies requested / annual output
- Can only be combined with CO2 market



# District Heating with Biomass

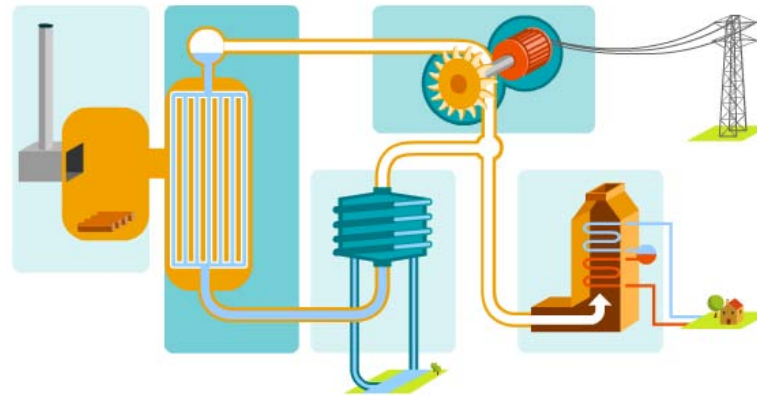
## New measures

*District Heating  
with biomass*

*Future*

➤ **Call for tender « CRE III »**, which is:

- National program to install 250 Mwe more
- 3rd call for tender started at the end of 2008
- Selection will be according to regional criteria, supply chain and the proposal of price of electricity
- Installation > 3MWe
- Annual efficiency > 55%
- Price of electricity resale is guaranteed for 20 years



# District Heating with Biomass

## New measures

*District Heating  
with biomass*

*Future*

### ➤ Tax

- VAT tax reduction (5,5% instead of 19,6%) for clients supplied with a minimum of 50% of renewable energy (through a network)



# District Heating with Biomass

## And after?

Economic aid measures are limited in time but they will allow for:

- **Improved reliability and efficiency of production and distribution**
  - Technical feedback, R&D...
- **Improved reliability and optimisation of the supply chain**
  - Number and position of wood storage facilities, transport, forestry...
- **New technologies**
  - Gasification of wood, Rankine cycle...



## Perspectives

**We believe in this future** and we are working to make biomass and district heating the best choices for sustainable development.

# District Heating with Biomass

## Conclusion

To sum up...

Over the next few years, France will promote district heating and biomass by making it economically attractive :

### Short Term

➤ **Direct subsidies**

Fund for renewable heating, public aid...

➤ **Call for tender**

« BCIA », « CRE 3 »...

➤ **Tax**

Reduction of VAT

### Long Term

➤ **Market mechanism**

Cost of wood combustible (compared to fossil fuels)

CO<sub>2</sub>, Energy saving certificates (CEE)

➤ **Technical evolutions**

Reliability and efficiency, R&D...



Conclusion



# District Heating with Biomass

*Questions and experience sharing*



Questions &  
Round table