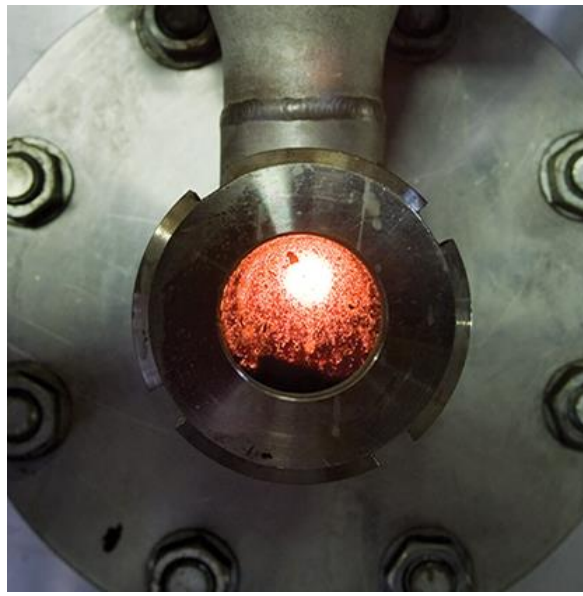




# Biomass to Energy

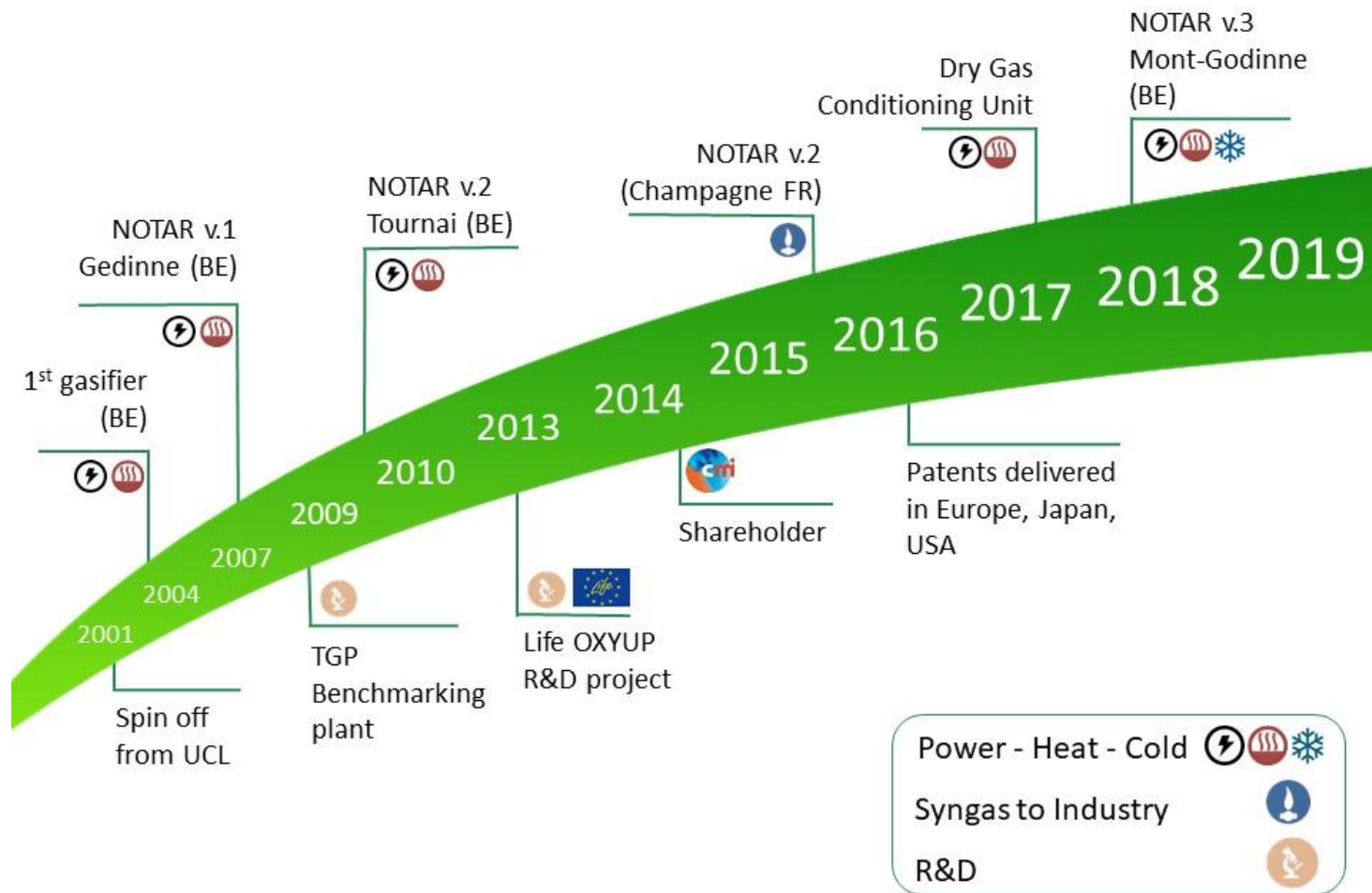
Transform local biomass into renewable energy with the **NOTAR®** technology



# NOTAR : Biomass to Energy

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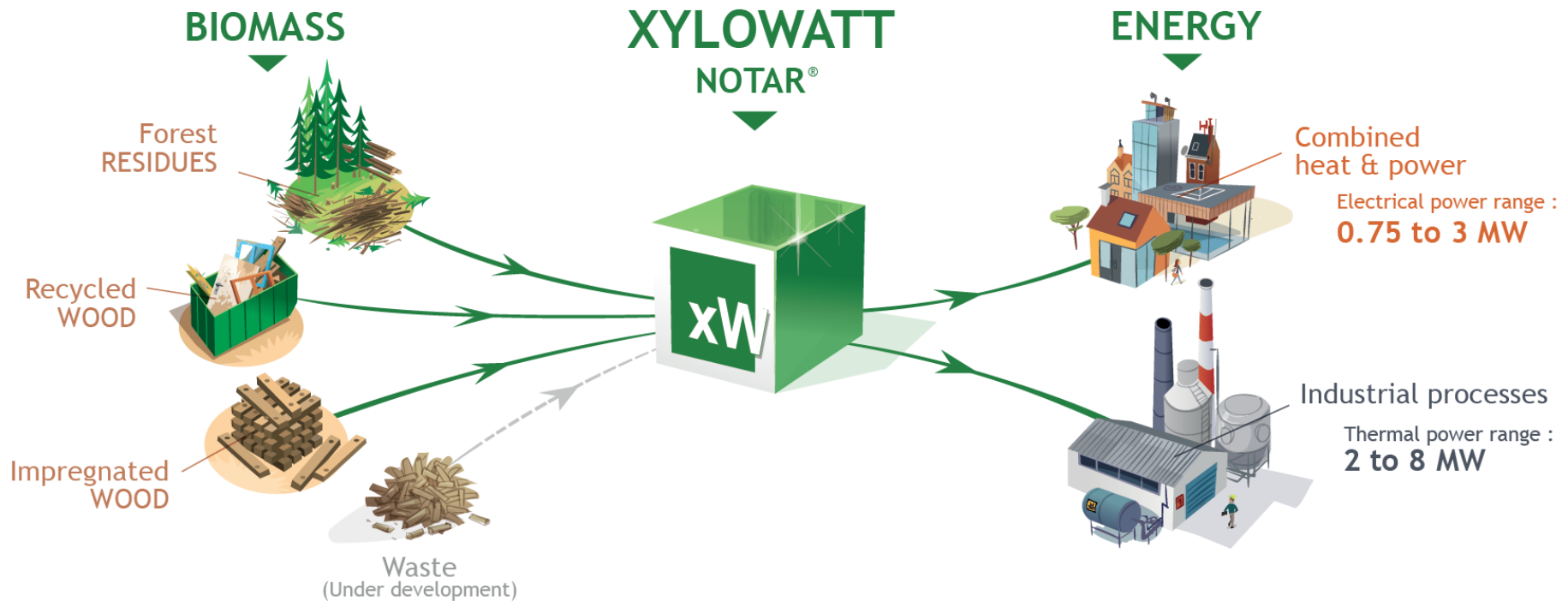
# NOTAR<sup>®</sup> story



# Ecosystem

Our Industrial partner:

- Engineering
- EPC

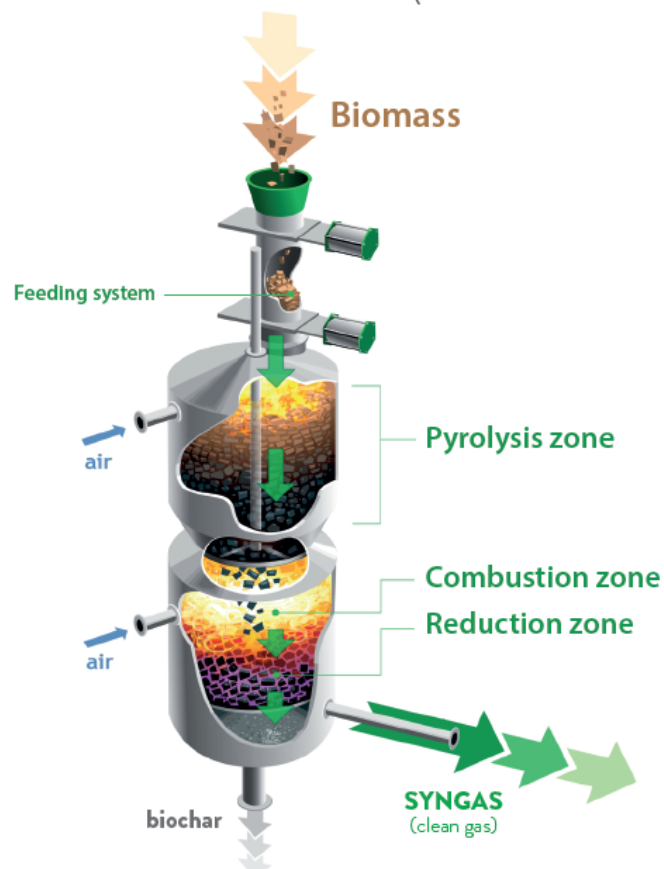


# NOTAR<sup>®</sup> Technology



**NOTAR<sup>®</sup>**

UNIQUE TECHNOLOGY FOR CLEAN GAS PRODUCTION



## A MULTI-STAGE DOWNDRAFT GASIFIER

### ADVANTAGES

- ✓ CLEAN GAS  
(99,95% TARS DESTROYED)
- ✓ COMPACT  
GASIFICATION UNIT
- ✓ SIMPLE AND  
COST EFFECTIVE GAS  
CONDITIONING UNIT

**SYNGAS** ✓ NO TAR  
NO HEAVY METAL  
NO POLLUTANT

# XYLOWATT CO<sub>2</sub> emissions

SAVE 3000 TONS CO<sub>2</sub>/YEAR WITH LOCAL & RENEWABLE BIOMASS

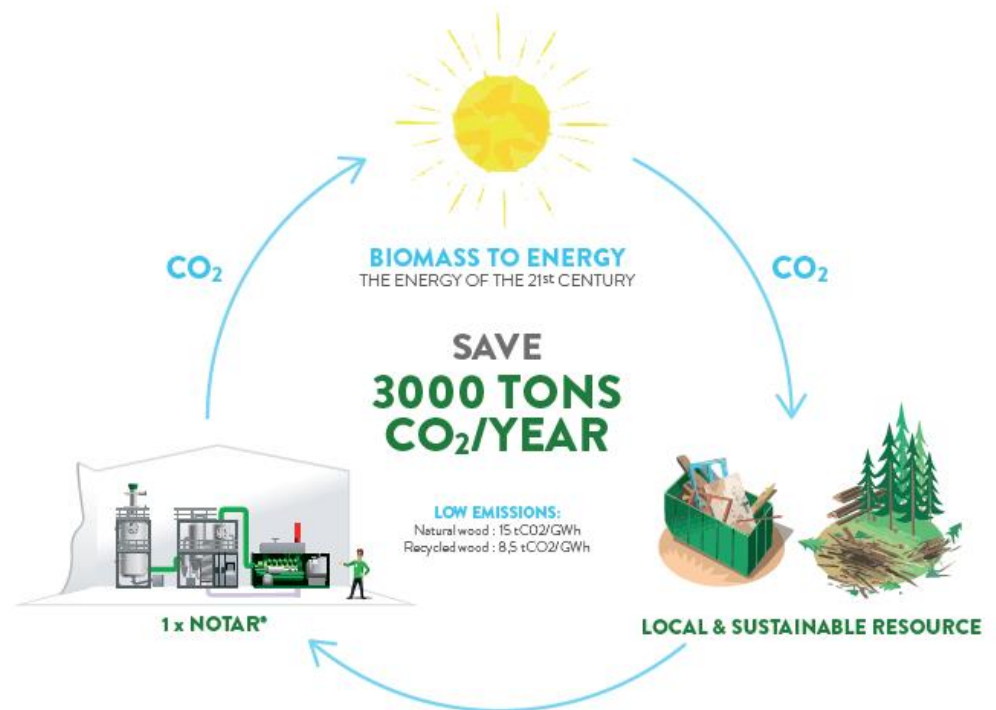


WOODCHIPS

FOREST  
RESIDUES

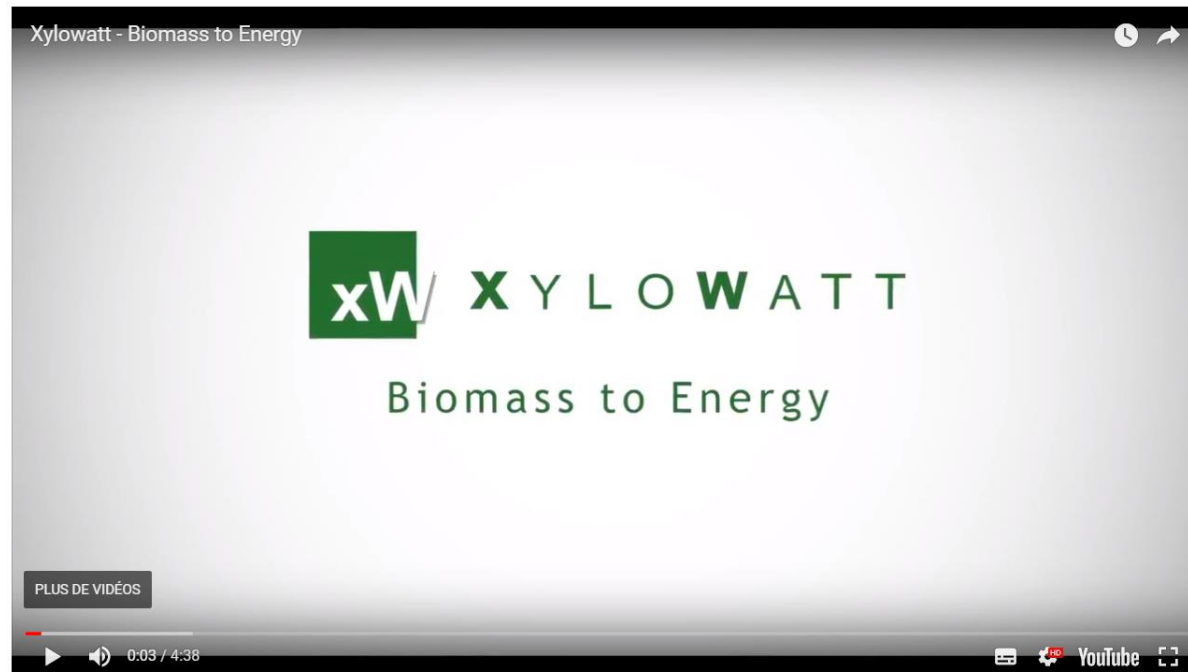


RECYCLED  
WOOD





# XYLOWATT Film



<https://www.youtube.com/watch?v=o-eCcHuArbg>





# REFERENCES



| Project Key Data |   |
|------------------|---|
| Location         | Mont-Godinne Hospital, Belgium  |
| Owner            | Special Purpose Vehicule (MGGE)   |
| Application      | Combined Heat & Power (Jenbacher J320S) for hospital energy consumption |
| Capacity         | 750kW <sub>e</sub> + 1200kW <sub>heat</sub> + 400kW <sub>Cold</sub>     |
| Technology       | NOTAR v.3   |
| Feedstock        | Natural and recycled woodchips  |
| Commissioning    | Q1-2018   |

| Project Key Data     |   |
|----------------------|---|
| Location             | University Catholic of Louvain-La-Neuve (UCL), Institute of Mechanics, Materials and Civil Engineering, Belgium   |
| Evaluation/R&D scope | <ul style="list-style-type: none"> <li>Optimizing operational parameters to various types of woodchips and biomasses</li> <li>Industrial benchmark for commercial purposes</li> </ul> |
| Capacity             | 150 kW <sub>th</sub> syngas power LHV   |
| Technology           | NOTAR   |
| Feedstock            | Various   |
| Commissioning        | Start operation in 2010   |



| Project Key Data |   |
|------------------|---|
| Location         | Champagne Area (France)   |
| Owner            | Glass bottles manufacturer  |
| Application      | Direct use of syngas for fossil fuel substitution in industrial process |
| Capacity         | 950 kW <sub>th</sub> syngas power                                       |
| Technology       | NOTAR v.2   |
| Feedstock        | Woodchips from vineyards pruning branches and obsolete vine stocks      |
| Commissioning    | Q1-2015   |

| Project Key Data |  |
|------------------|--|
| Location         | Tournai, Belgium   |
| Owner            | Tournai City   |
| Application      | Combined Heat & Power (MTU G12) for swimming-pool energy consumption |
| Capacity         | 260kW <sub>e</sub> + 475kW <sub>heat</sub>                           |
| Technology       | NOTAR v.2  |
| Feedstock        | Natural woodchips  |
| Commissioning    | Q4-2009  |



# Competitive advantages



**SYNGAS** 



- ✓ Biomass to energy by gasification
  - with **standard readily** available woodchips G50/G30 (Natural & Recycled wood)
  - using **30% less** biomass than incineration technology (steam cycle)
- ✓ Fully integrated **turnkey** project
- ✓ Clean syngas **proved**
- ✓ **Trigeneration** : electricity - heat - cold
- ✓ Zero waste plant
- ✓ Circular and Renewable **24/7** energy production