



**PYRODRY**  
creating value



# SMART SLUDGE SOLUTION

Energy self-sufficient drying and pyrolysis in **one system**

# BIO SLUDGE treatment process chain

## INPUT SOURCES

- sewage sludge
- digestate
- animal manure



## DEWATERING



## THERMAL DRYING & PELLETIZING



## PYROLYSIS



**PyroDry**<sup>®</sup>  
Process



# Application potential **CARBONISATE**

## Additive for soil production

- Soil conditioning/water retention
- Toxic adsorbent
- Phosphorous carrier

## Raw material for phosphorus recycling

- For leaching as well for thermal processes suitable

## Activated carbon substitute

- e.g. usable to 4<sup>th</sup> purification step at WTPs

## Additive for Biogas Plants

- e.g. for „H<sub>2</sub>S-Detoxing“ | Phosphorous booster

## CO<sub>2</sub> neutral fuel



## Advantages of **PYROLYSIS**

### BIOMASS



### PYROLYSIS



**HEAT**

Negative  
Emission  
Technology



**CARBONISATE**



Carbonisate containing mineralized carbon enables a sustainable CO<sub>2</sub> sink (>100 years) with a potential of 0.7 - 2.2 kg CO<sub>2</sub>/ kg carbonisate !

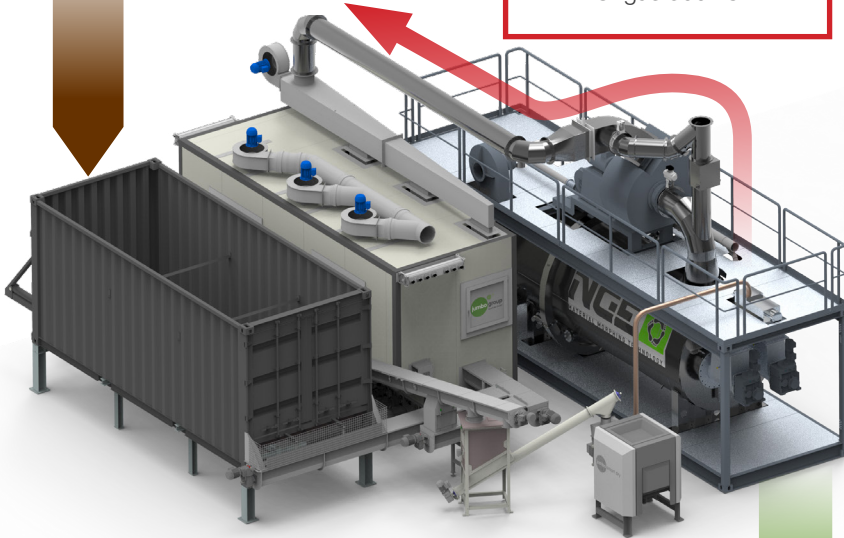
**PyCCS**

Pyrogenic Carbon Capture and Storage

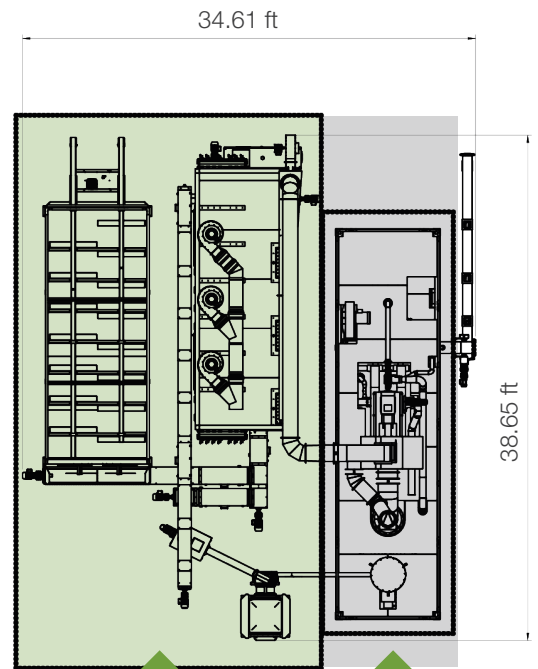
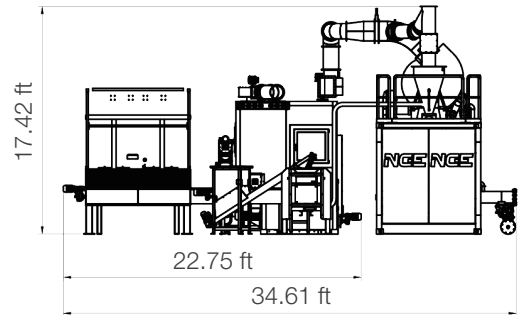
# PyroDry<sup>®</sup> 5000

**INPUT:**  
5000 t/a dewatered sludge  
with approx. 20-25% dry  
matter

Offgas 300 °C



**OUTPUT:**  
600-700 t/a carbonate ap-  
prox. 550 t/a stored CO<sub>2</sub>



Drying unit with pelletizer    Pyrolysis unit

## SIZES

PyroDry Sizes	Capacity (t/a)
5000	3000-5000
3000	1500-2500
1500	750-1400
Micro	150-400

# PyroDry<sup>®</sup> 5000





**PYRODRY**  
creating value



In Collaboration with



Next Generation Elements GmbH  
Gewerbepark 22  
A - 4101 Feldkirchen  
Mobile: +43 664 6211054  
E-Mail: info@nge.at

Jumbo group - smart dry GmbH  
Feldbach 25  
D - 86647 Buttenwiesen  
Mobile: +49 8274 1001  
E-Mail: info@jumbo-group.de