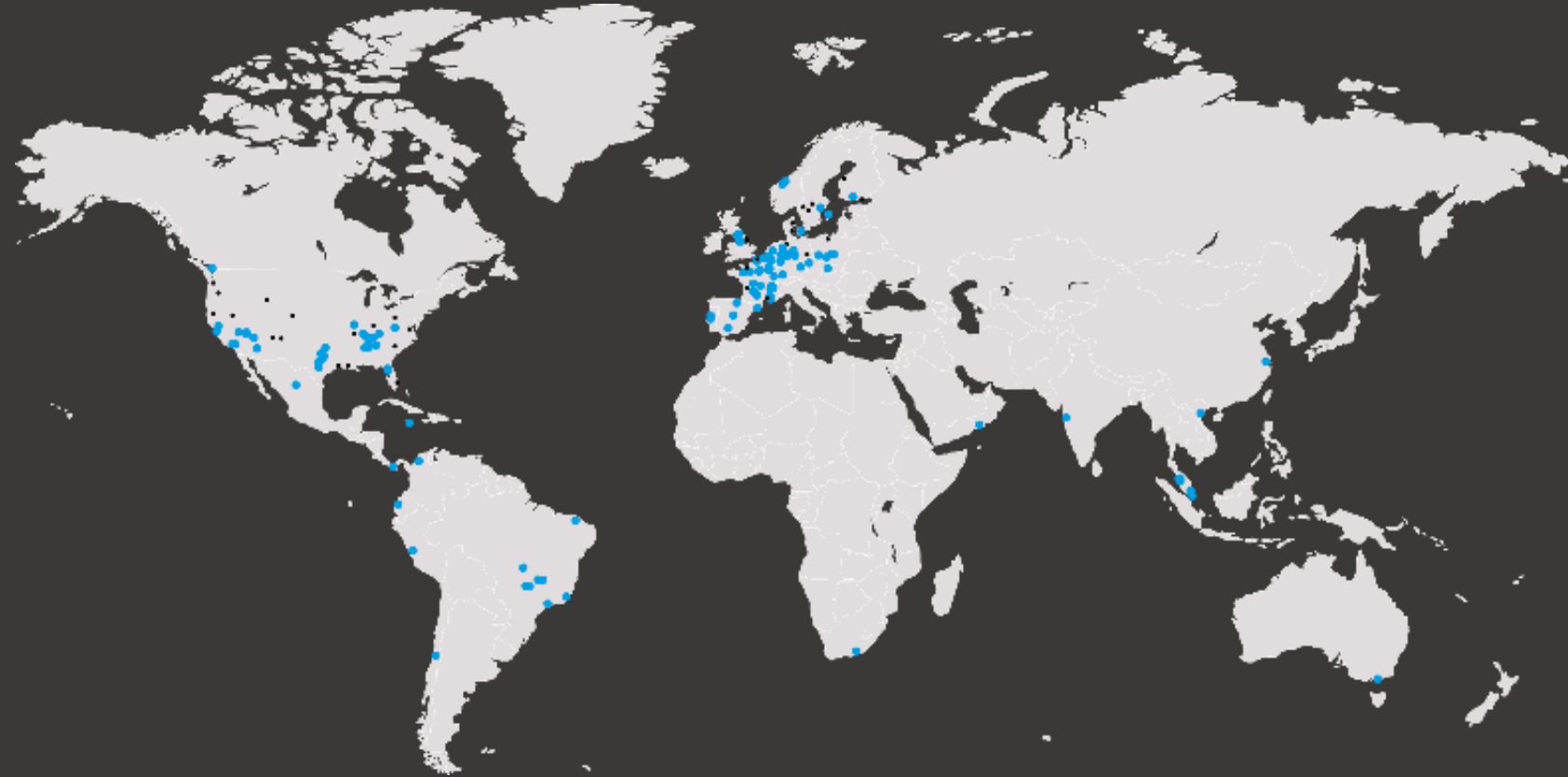
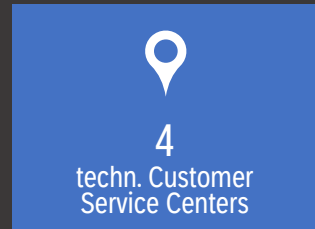
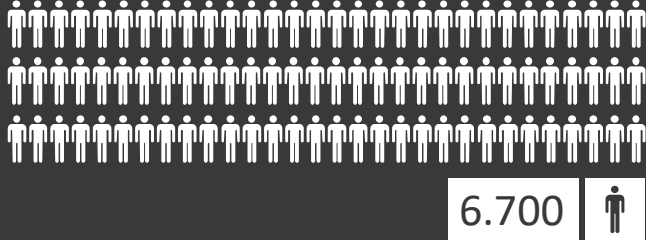




# The Lime Industry's challenging Ambitions to achieve a carbon-negative Footprint

# Lhoist at a Glance

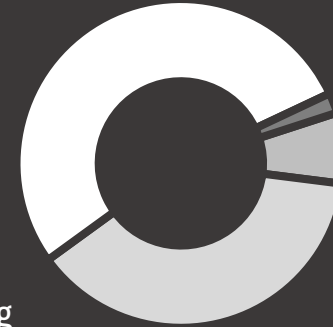


**2.2**  
bn €

Others 16%  
Pulp & Paper 6%  
Agriculture 7%



29% Steel  
23% Environment  
19% Building & Civil Engineering



53% Europe  
2% Others  
7% South America  
38% North America

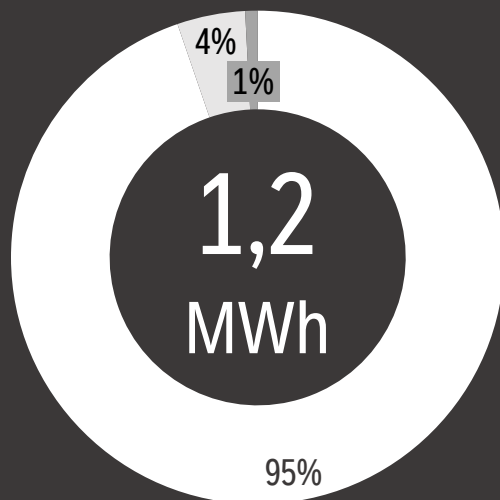
# Our Business: Burning Lime



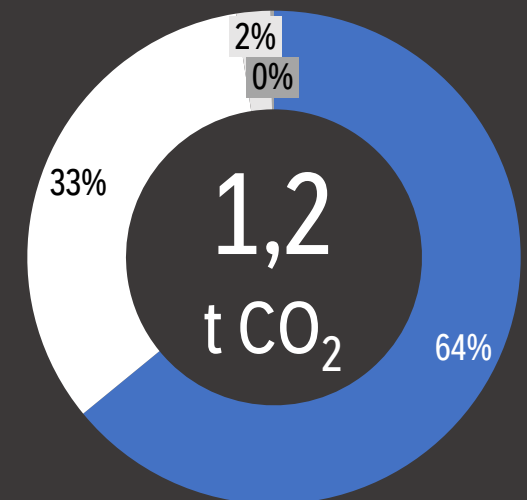
Calcination:  $>850\text{ }^\circ\text{C}$



Energy Demand per ton CaO



$\text{CO}_2$  Emission per ton CaO



- “Process  $\text{CO}_2$ ”
- Fuel for Calcination
- Electrical Power
- Fuel for mobile Equipment

Our Business: Burning Lime

# Transformation Roadmap

## Energy Input

## Calcination Process

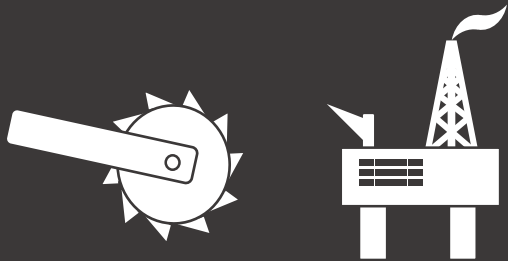
## End of Pipe

## CO<sub>2</sub> Footprint

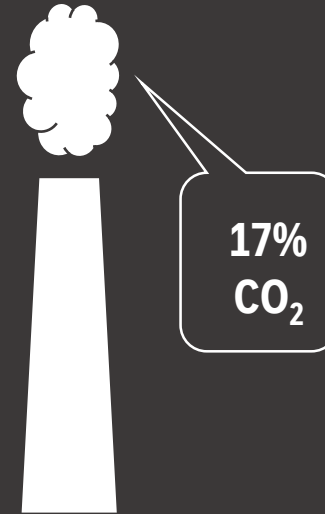
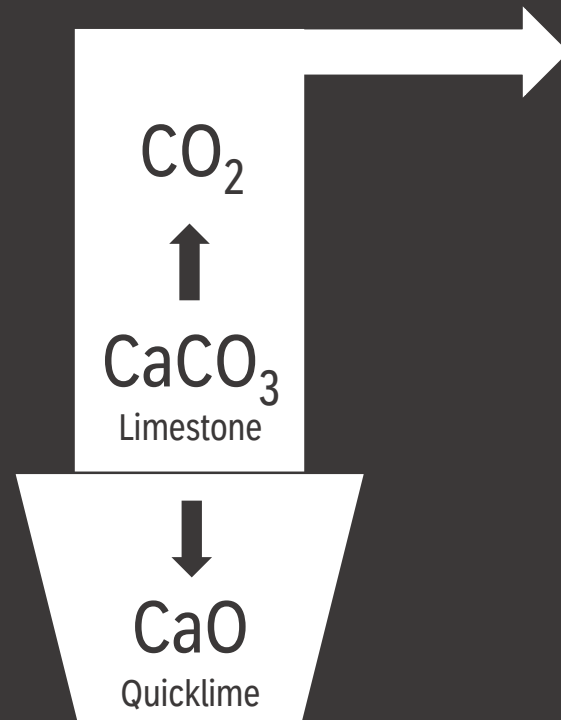
Fuel for mobile Equipment



Fuel for Calcination



Electrical Power



t CO<sub>2</sub> / t CaO



## Energy Input

## Calcination Process

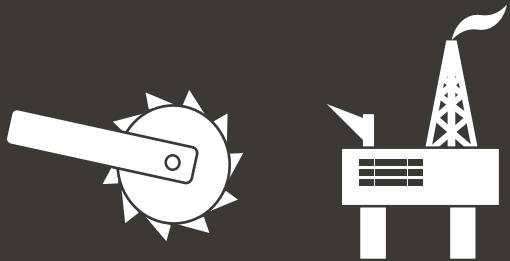
## End of Pipe

## CO<sub>2</sub> Footprint

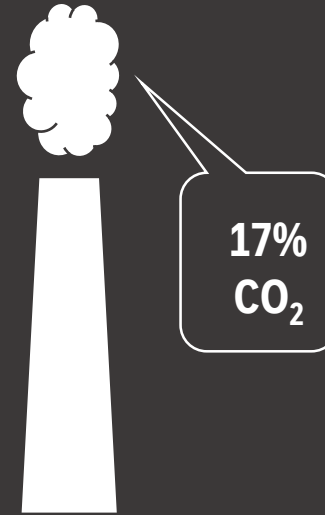
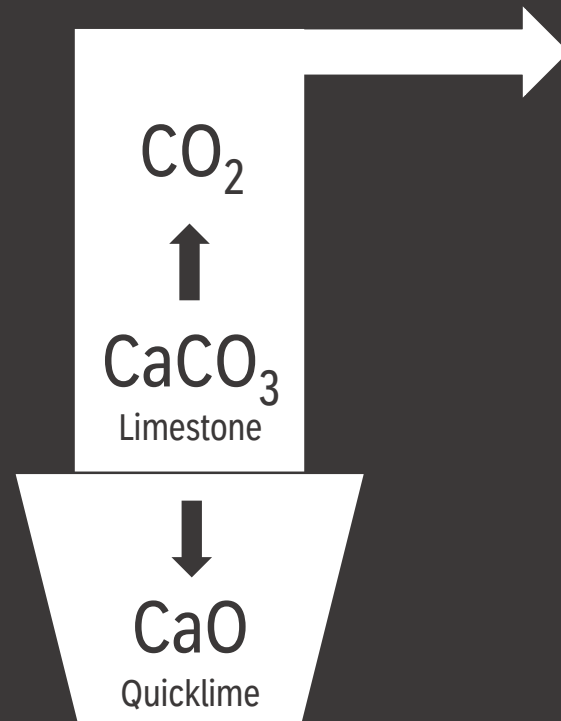
Fuel for mobile Equipment



Fuel for Calcination



Electrical Power



t CO<sub>2</sub> / t CaO



## Energy Input

## Calcination Process

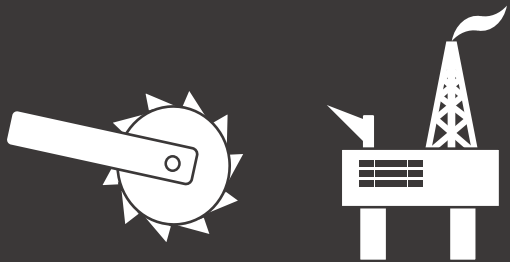
## End of Pipe

## CO<sub>2</sub> Footprint

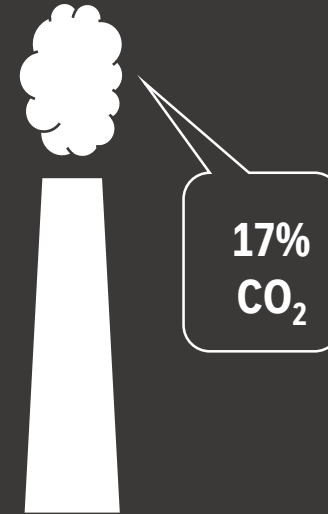
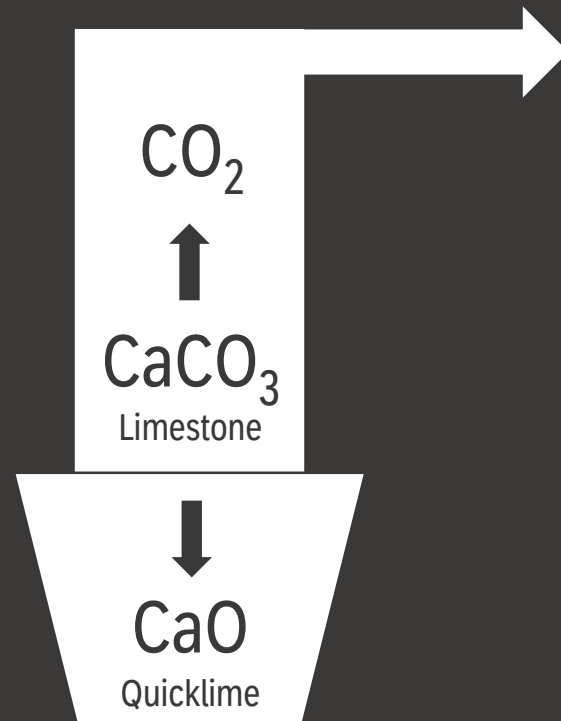
Fuel for mobile Equipment



Fuel for Calcination



Electrical Power



t CO<sub>2</sub> / t CaO



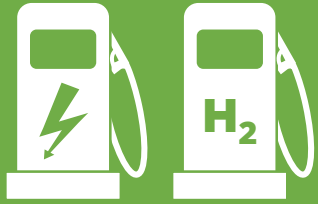
# Energy Input

# Calcination Process

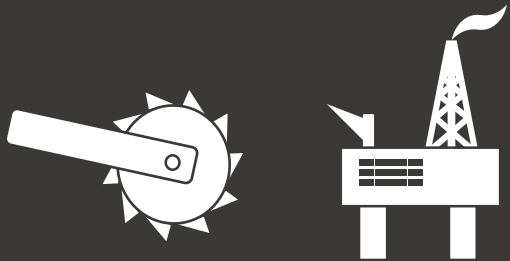
# End of Pipe

# CO<sub>2</sub> Footprint

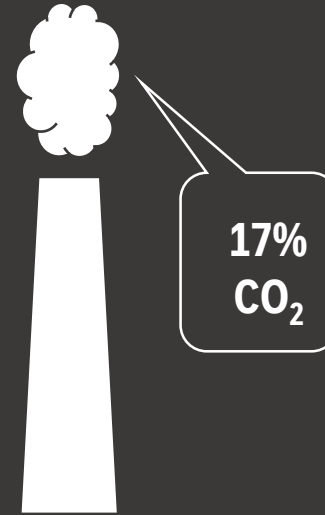
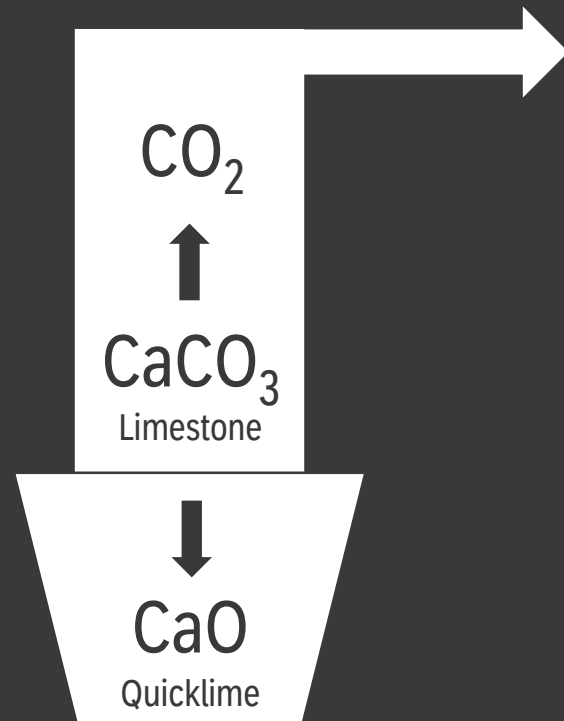
Fuel for mobile Equipment



Fuel for Calcination



Electrical Power



t CO<sub>2</sub> / t CaO





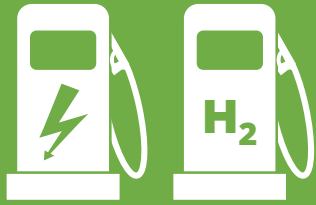
## Energy Input

## Calcination Process

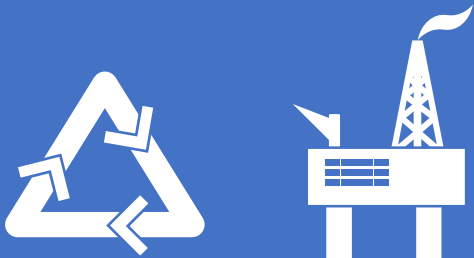
## End of Pipe

## CO<sub>2</sub> Footprint

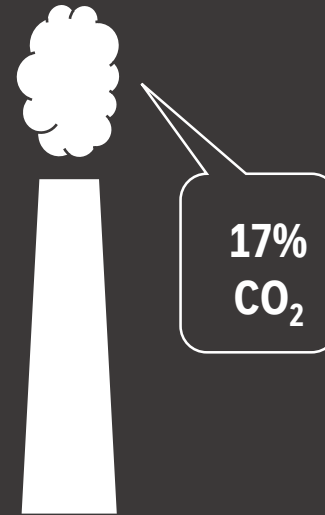
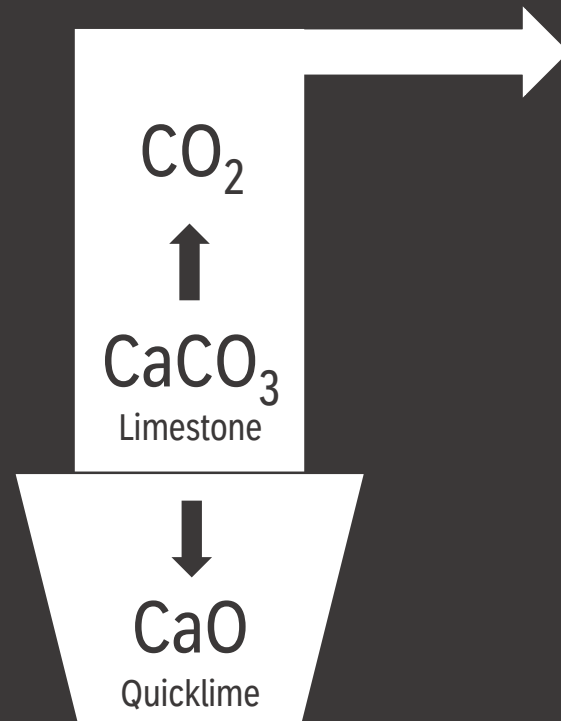
Fuel for mobile Equipment



Fuel for Calcination



Electrical Power



t CO<sub>2</sub> / t CaO



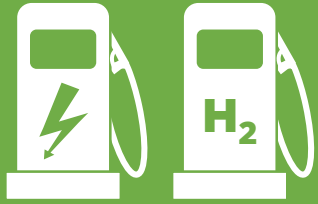
## Energy Input

## Calcination Process

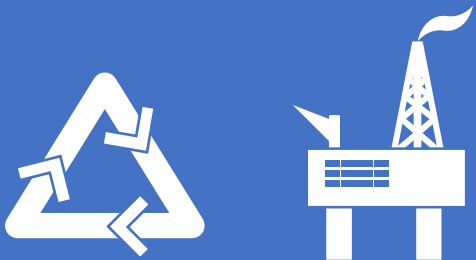
## End of Pipe

## CO<sub>2</sub> Footprint

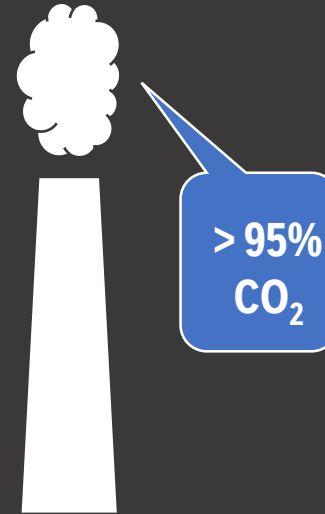
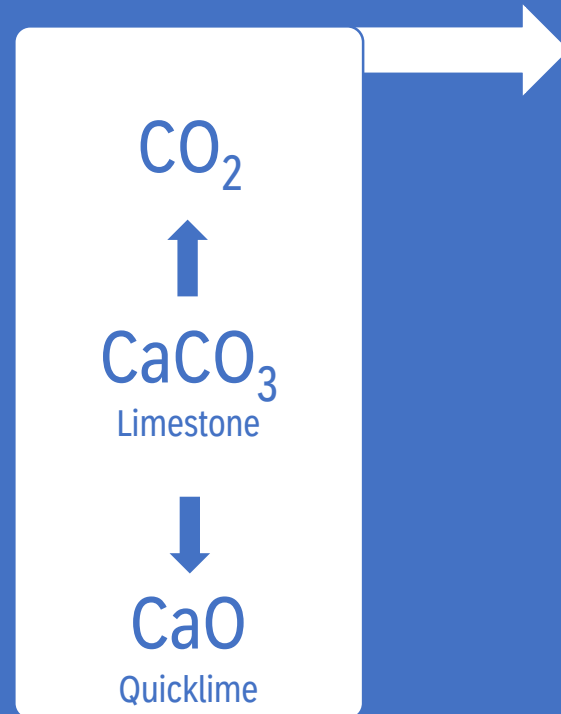
Fuel for mobile Equipment



Fuel for Calcination



Electrical Power



t CO<sub>2</sub> / t CaO



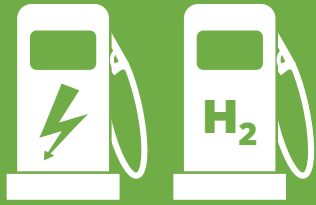
## Energy Input

## Calcination Process

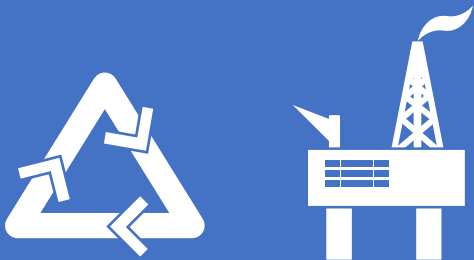
## End of Pipe

## CO<sub>2</sub> Footprint

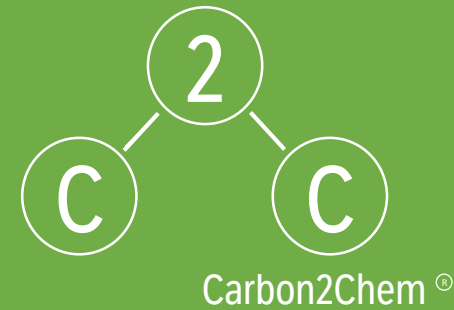
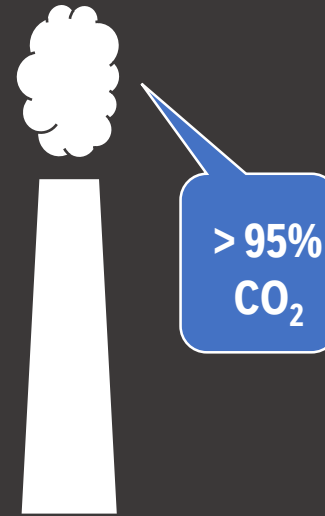
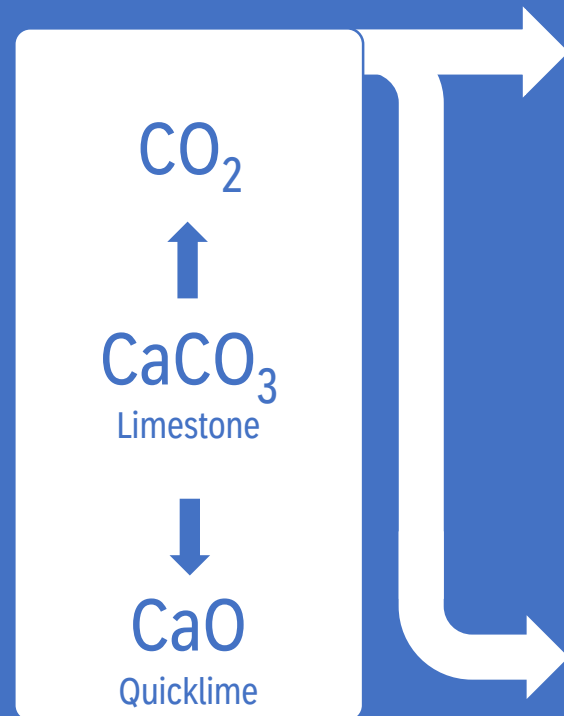
Fuel for mobile Equipment



Fuel for Calcination



Electrical Power



t CO<sub>2</sub> / t CaO



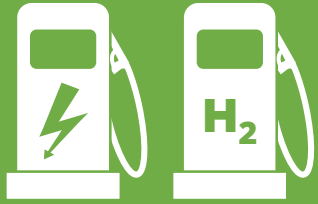
## Energy Input

## Calcination Process

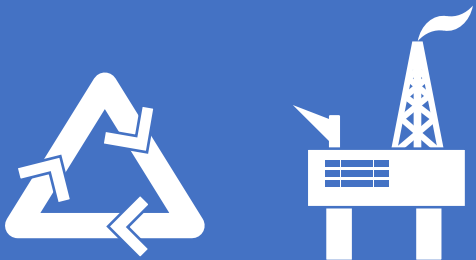
## End of Pipe

## CO<sub>2</sub> Footprint

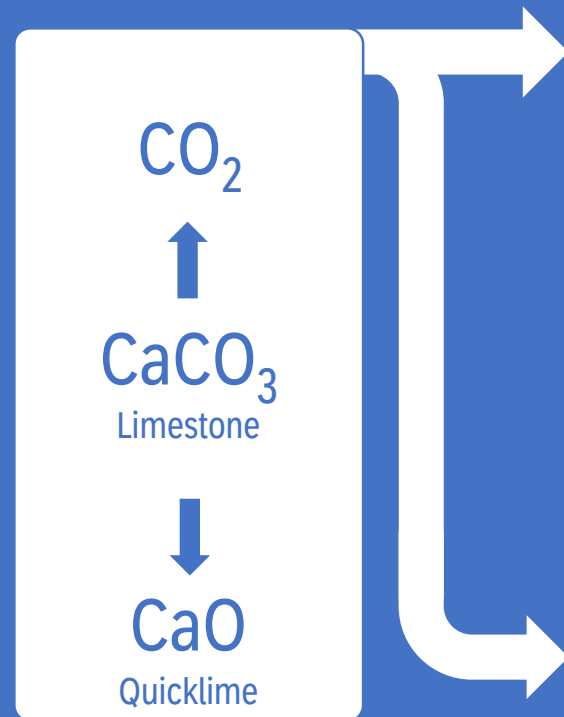
Fuel for mobile Equipment



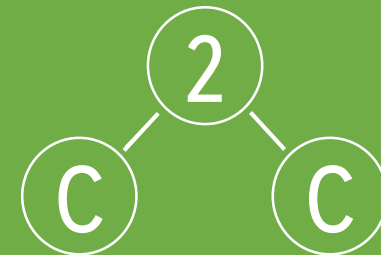
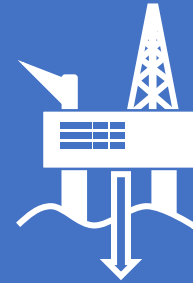
Fuel for Calcination



Electrical Power



CCS



Carbon2Chem<sup>®</sup>

t CO<sub>2</sub> / t CaO



ZERO EMISSIONS

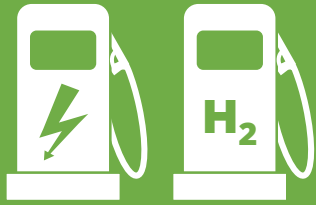
## Energy Input

## Calcination Process

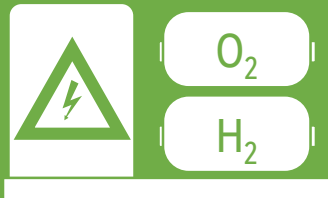
## End of Pipe

## CO<sub>2</sub> Footprint

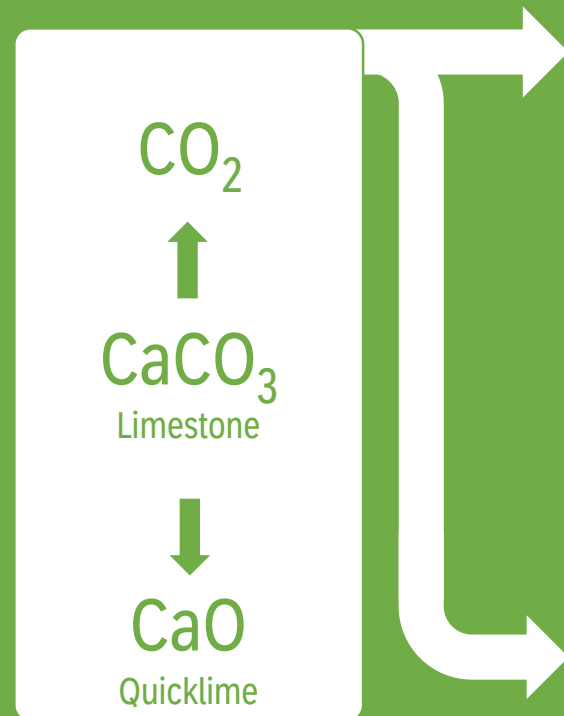
Fuel for mobile Equipment



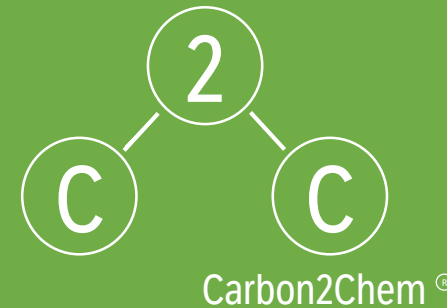
Fuel for Calcination



Electrical Power



CCS



t CO<sub>2</sub> / t CaO



ZERO EMISSIONS

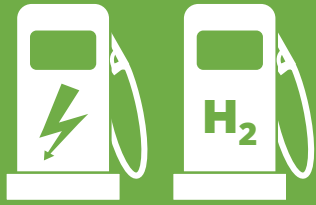
## Energy Input

## Calcination Process

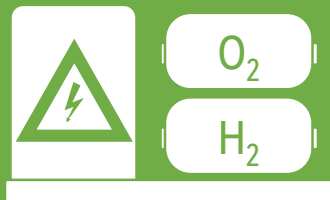
## End of Pipe

## CO<sub>2</sub> Footprint

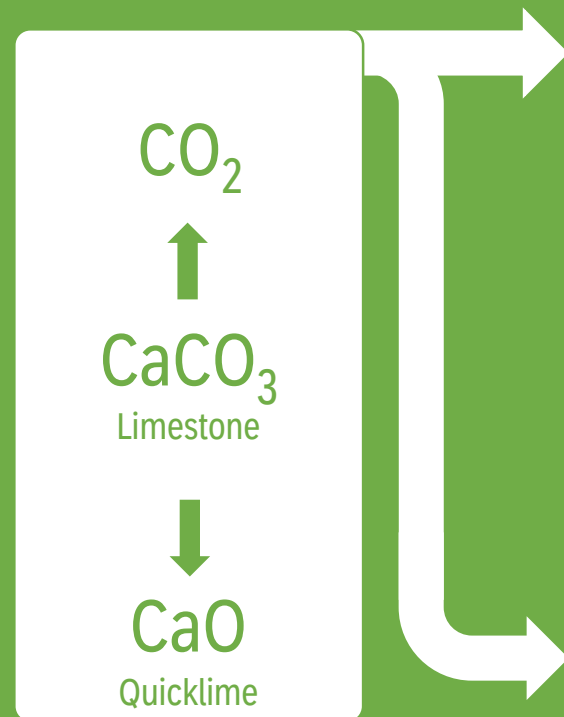
Fuel for mobile Equipment



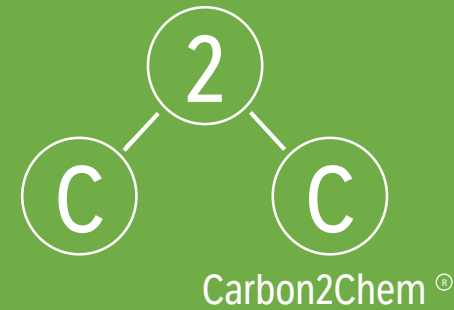
Fuel for Calcination



Electrical Power



Alternative CCU  
Technologies



t CO<sub>2</sub> / t CaO



Sustainable  
ZERO EMISSIONS

# The "Gold Standard": Becoming carbon-negative

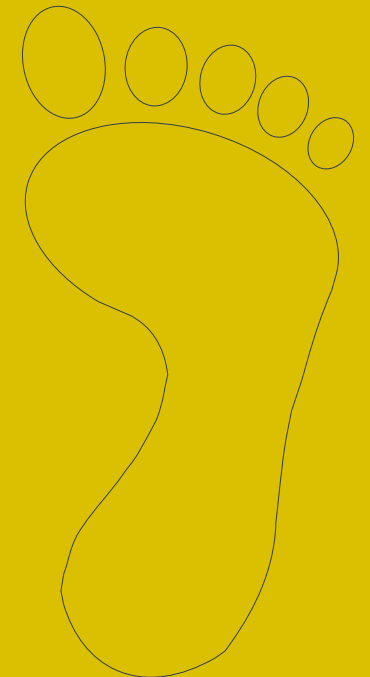
# CO<sub>2</sub> Footprint

## The "Lime-Cycle"

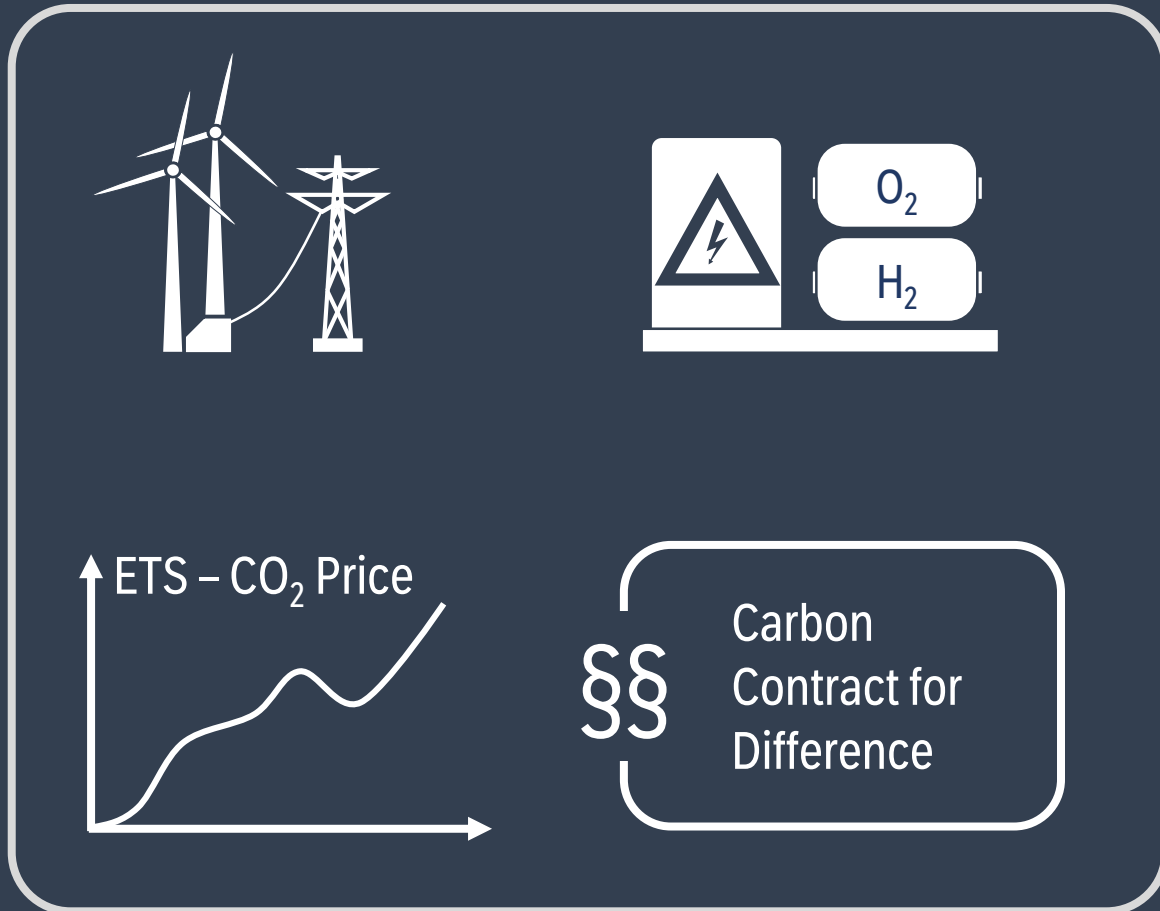


1,3 t +  = 2,3 t

t CO<sub>2</sub> / t CaO



We have already started our journey ...



ETS - CO<sub>2</sub> Price

§§ Carbon Contract for Difference

... and to accelerate on the next steps, we need a reliable framework of guidelines, regulations and political commitment to support the required investments in new assets and plant infrastructure.

*Thank You!*