

**The most economical energy  
is the one produced by yourself**



**MWM**

Energy. Efficiency. Environment.

A Caterpillar Company

# CHP Plus from MWM – a reliable supply that is economical and easy to integrate

## CHP power

- Various alternator voltages from 400V to 11 kV
- Emergency power operation, zero supply control or meeting internal demand
- Isolated and/or parallel operation
- Solutions for power requirements from 400 kW<sub>el</sub> to 40 MW<sub>el</sub>

## Heat

- Thermal heat, process heat and industrial water heating
- Integration into existing heating systems
- Power-controlled or heat-controlled operation

## Steam

- Utilization of exhaust-gas energy to generate steam
- Steam generation for industrial processes
- Simultaneous heat extraction for heating purposes from the cooling water

## Refrigeration

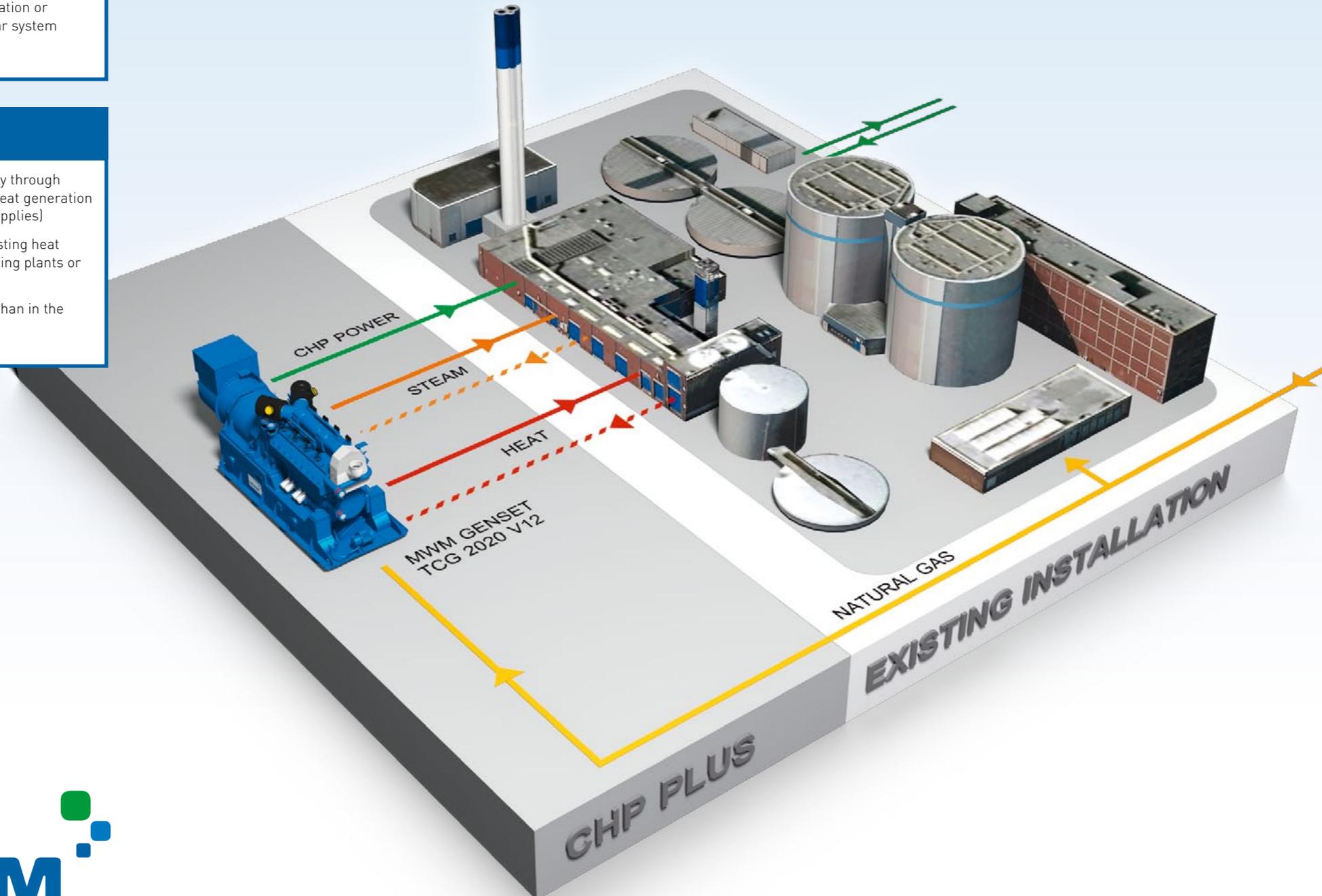
- Conversion of the generated heat into cooling energy
- Room air cooling and process refrigeration
- Longer operating time through summer/winter operation

## Integration

- Flexible integration into existing supply systems
- Machine room installation or containerized modular system design

## Reliability

- Reliable energy supply through local electricity and heat generation (emergency power supplies)
- Redundancy from existing heat generators, refrigerating plants or grid connection
- Better power quality than in the public grid



## Your return after 24 months

TCG 2020 V12		
1.2 MW <sub>el</sub> natural gas CHP plant		
Electrical efficiency	%	43.7
Thermal efficiency	%	43.5
Fuel consumption	kW	2,744
Electrical output	kW	1,200
Thermal output	kW	1,194

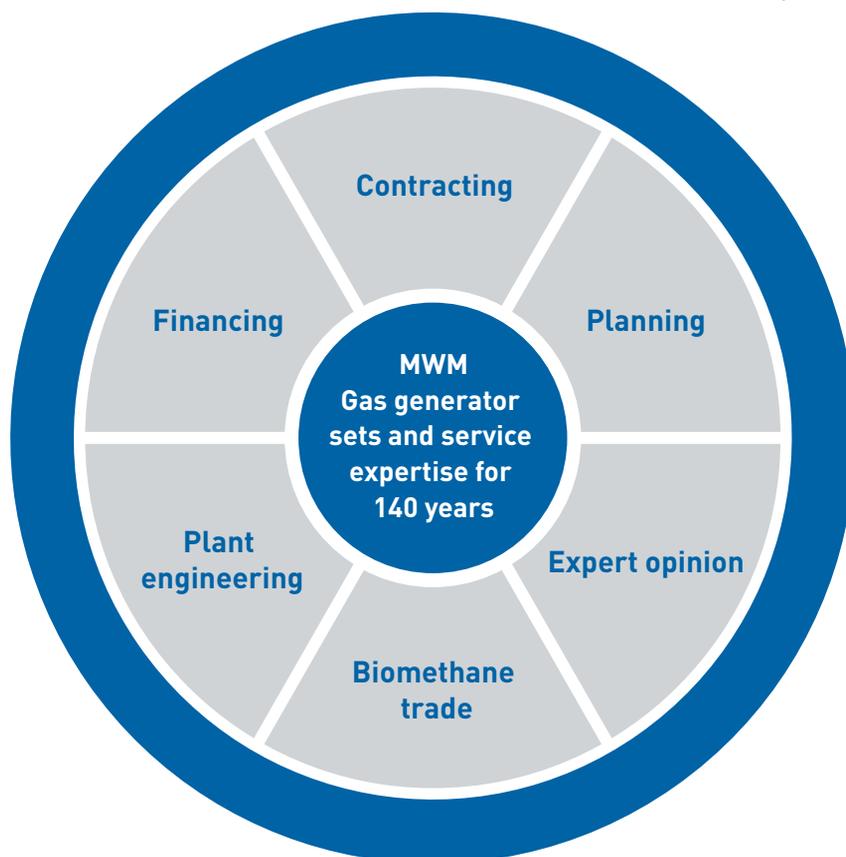
<b>Investment costs</b>	<b>€ 600,000</b>
Containerized CHP plant	

Example application		
8,000 operating hours per year (24/7)		
Price for natural gas (kWh)	€	0.035
Price for electricity (kWh)	€	0.090
Price for heat (kWh)	€	0.038

Possible revenues and savings		
Decrease in power consumption	k€	863
Decrease in heat consumption	k€	363

Net present value	k€	1,345
Annuity	k€	234
Internal rate of return	%	55
<b>Payback period</b>		<b>2 years</b>

# CHP Plus: Strong through partnerships



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