



EUROPEAN
RENTAL
ASSOCIATION

Reinventing On-Site Power

From Diesel to data-driven microgrids

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ERA Convention 2025

“Navigating Transitions In Rental”, Dublin, June 4-5



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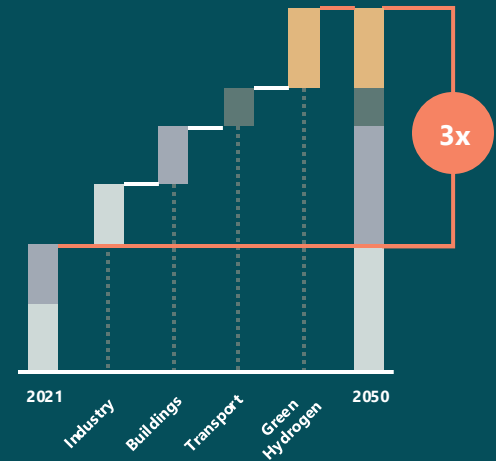


Let's connect!



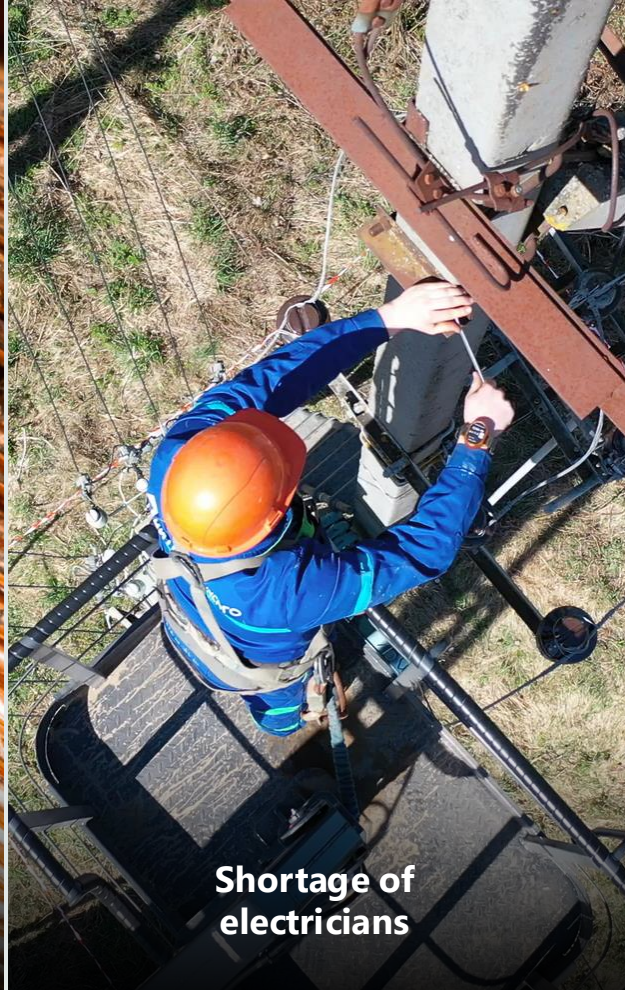


Electrification
will cause
demand to **triple**
by 2050





**Supply chains under
immense pressure**



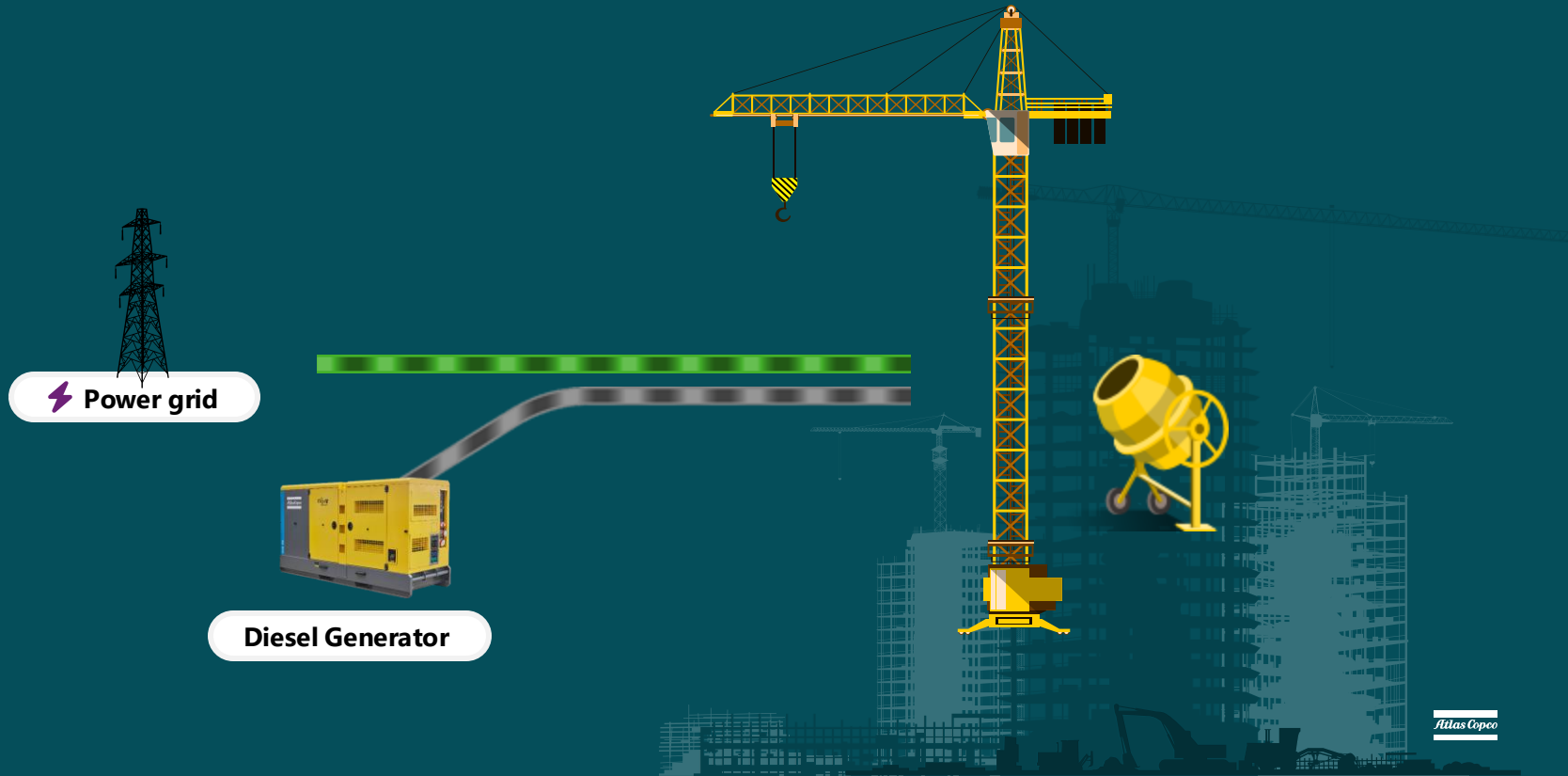
**Shortage of
electricians**



**Future systems will not
be perfect or fitting**

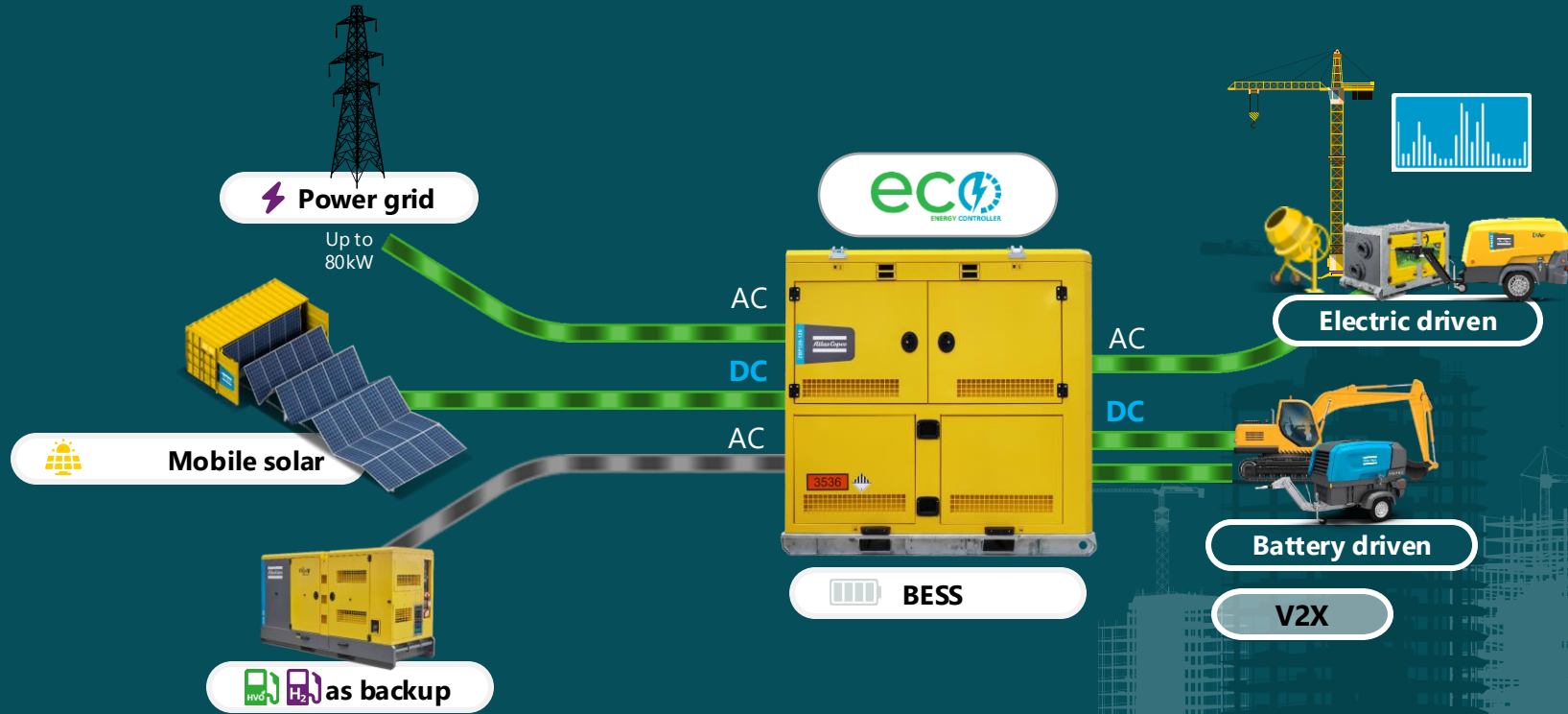
Huge opportunities for innovative and quick movers

On-site Power as we know it...



On-site Power changing to a microgrid (AC & DC)

Alternative to genset



Power Generation

Power Net

Power Management



A wide-angle, high-angle shot of a massive crowd at a night concert. The crowd fills the foreground and middle ground, extending towards a brightly lit stage in the distance. The stage features large video screens and is illuminated with blue and white lights. The background shows the dark silhouettes of stadium lights and structures. The overall atmosphere is vibrant and energetic.

Mobile and temporary
Rental

Why hybridization?



**Lower
Consumption**



**Less engine
hours**



**Less
maintenance**



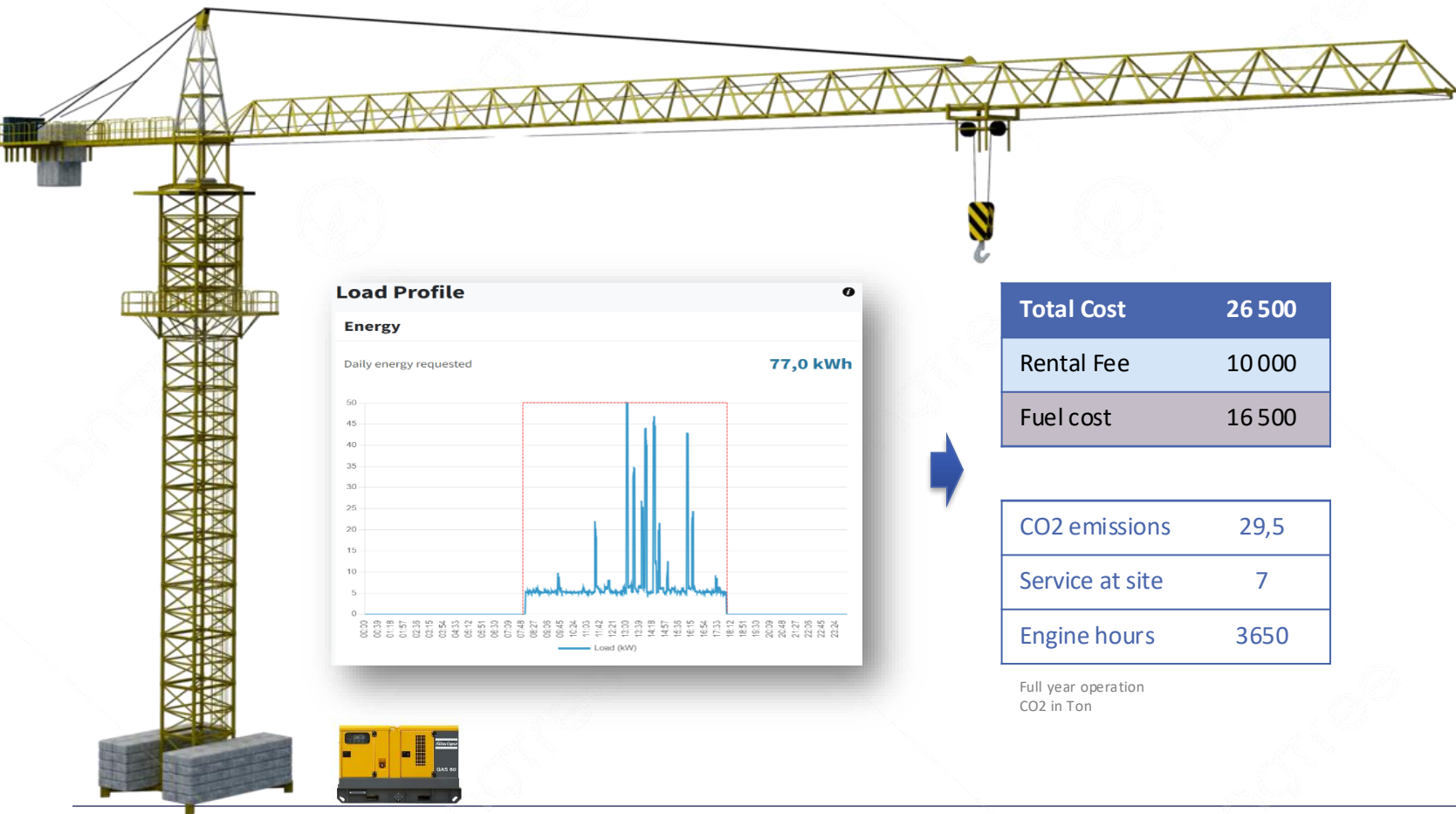
**Downtime
costs**

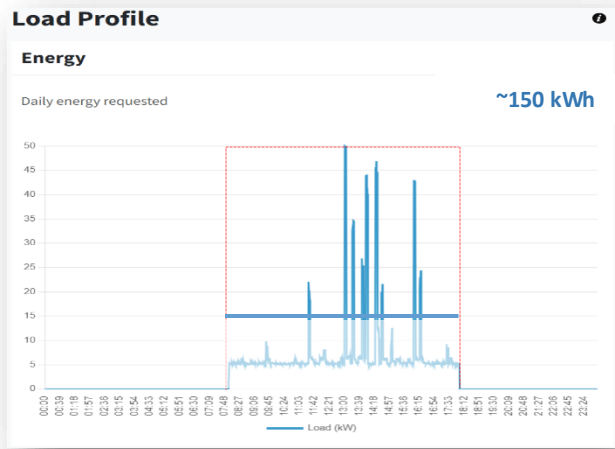
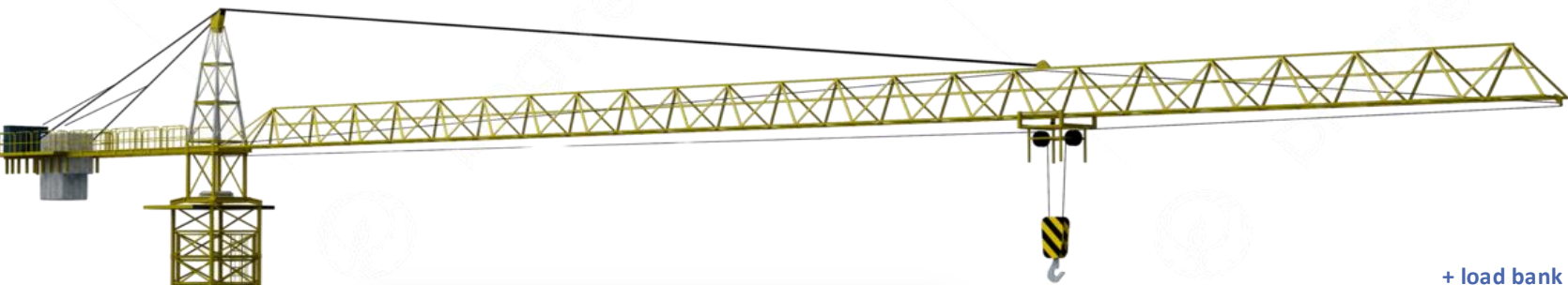


**CO2
reduction**

Challenges for Rental companies

- Construction sites typically with load profiles (<20% avrg)
- Stage 5 engines very sensitive to low loads
- Hybrid could be solution but...BESS units are expensive and complex
- Difficult to convince end customer to pay extra
- CO2 reductions not always relevant



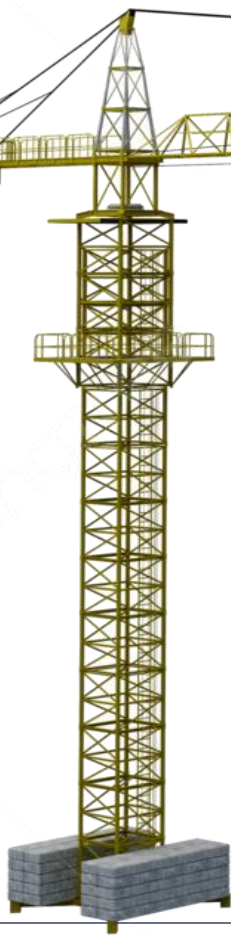


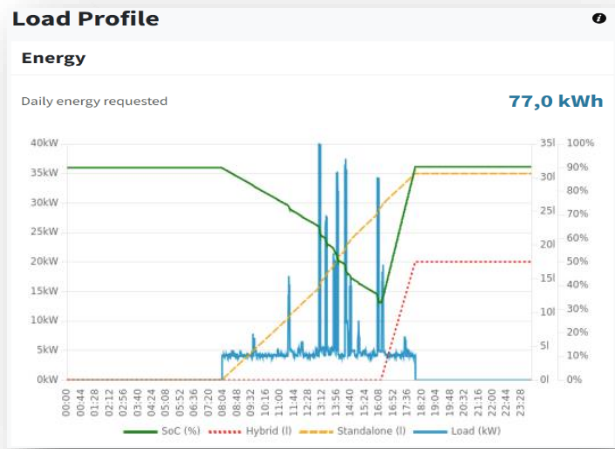
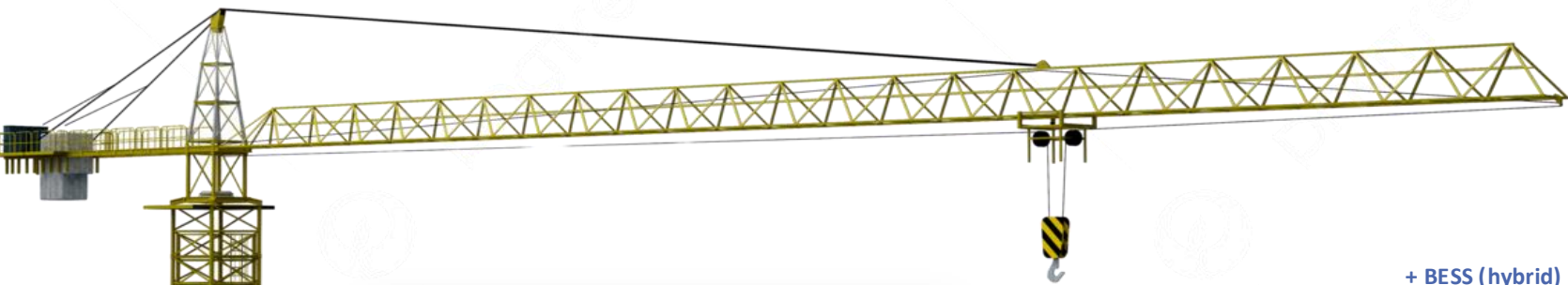
+ load bank

Total Cost	26 500	35 000	+8 500
Rental Fee	10 000	10 000	=
Fuel cost	16 500	25 000	+ 8 500

CO2 emissions	29,5	49	+20
Service at site	7	7	=
Engine hours	3650	3650	=

Full year operation
CO2 in Ton



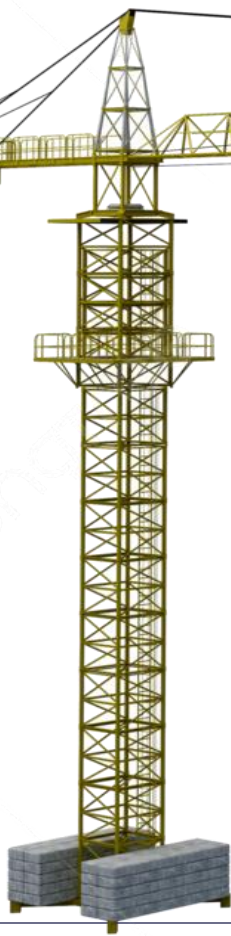


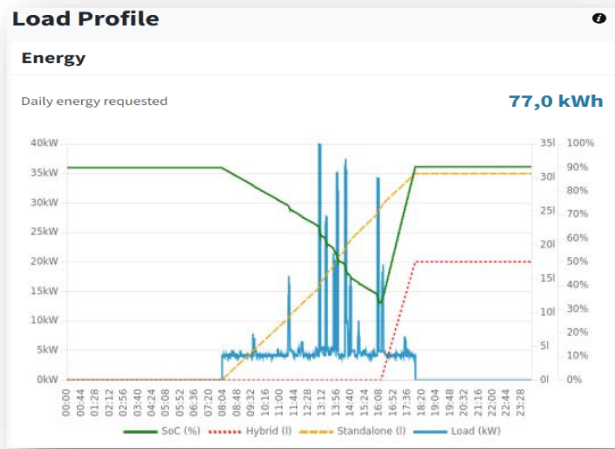
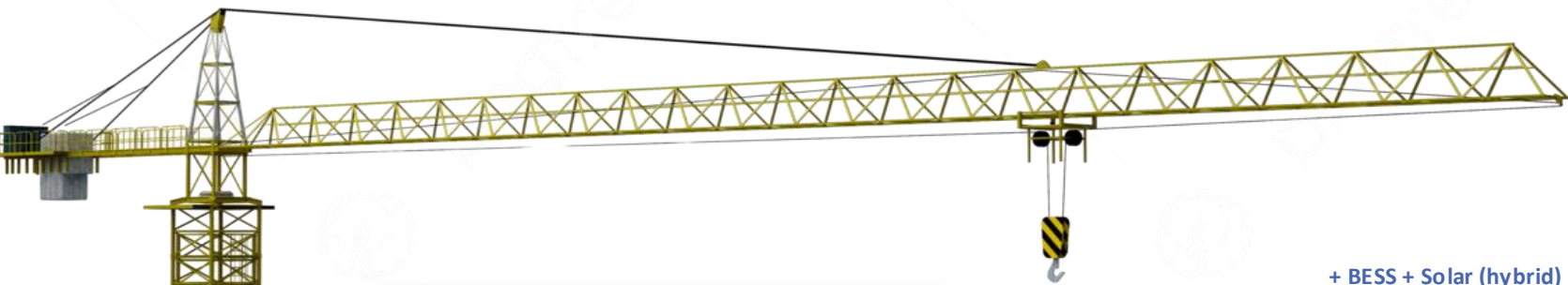
+ BESS (hybrid)

Total Cost	26 500	26 500	=
Rental Fee	10 000	17 000	+ 7 000
Fuel cost	16 500	9 500	- 7 000

CO2 emissions	29,5	17	-12,5
Service at site	7	1	-8
Engine hours	3650	650	-3 000

Full year operation
CO2 in Ton



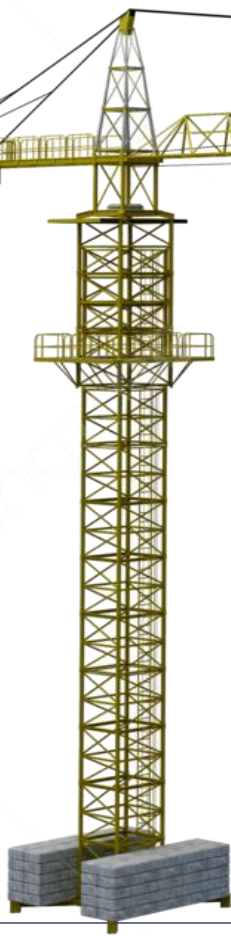


+ BESS + Solar (hybrid)

Total Cost	26 500	26 500	=
Rental Fee	10 000	26 000	+ 16 000
Fuel cost	16 500	500	- 16 000

CO2 emissions	29,5	1,2	-28,3
Service at site	7	0	-9
Engine hours	3650	50	-3 600

Full year operation
CO2 in Ton

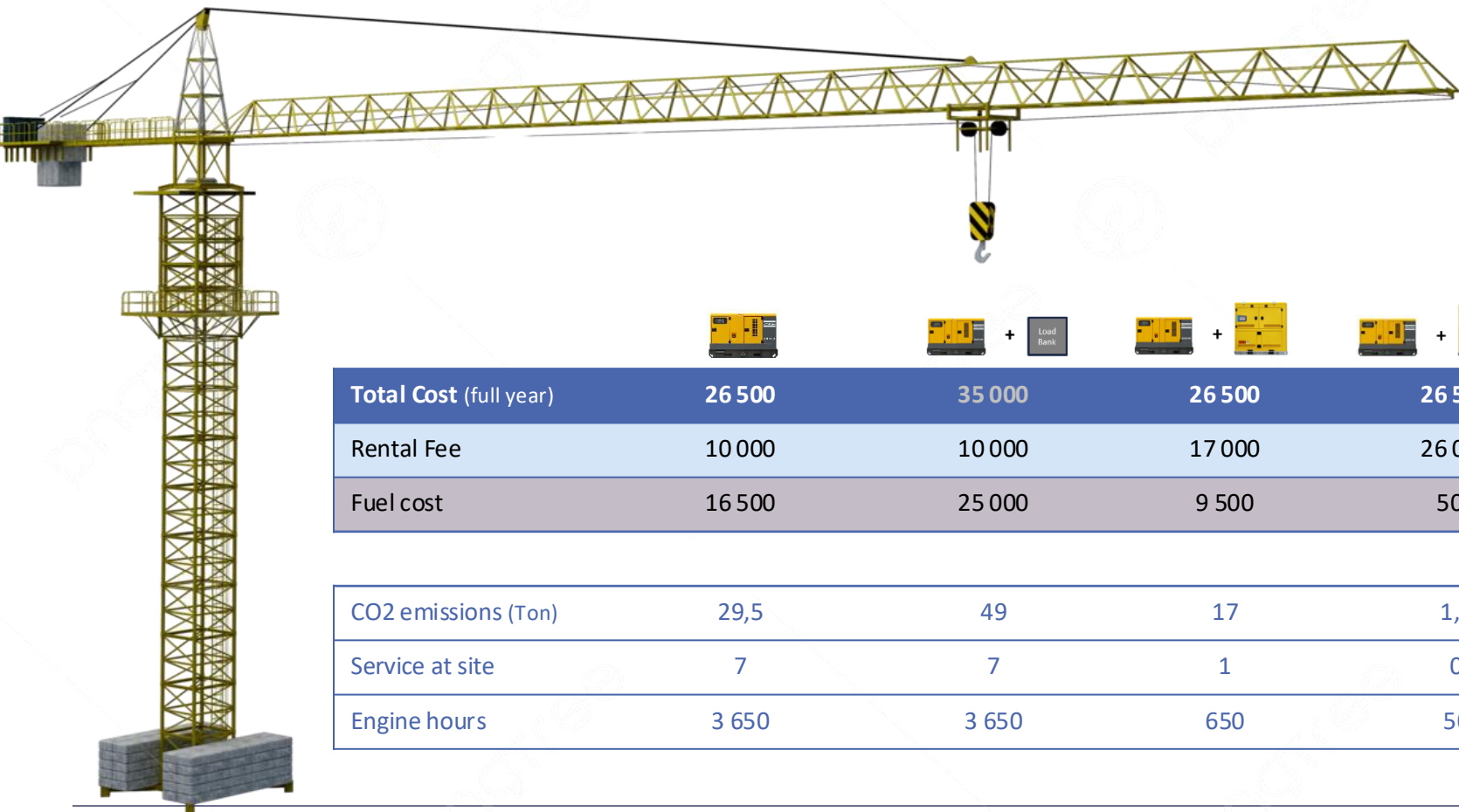


+



+





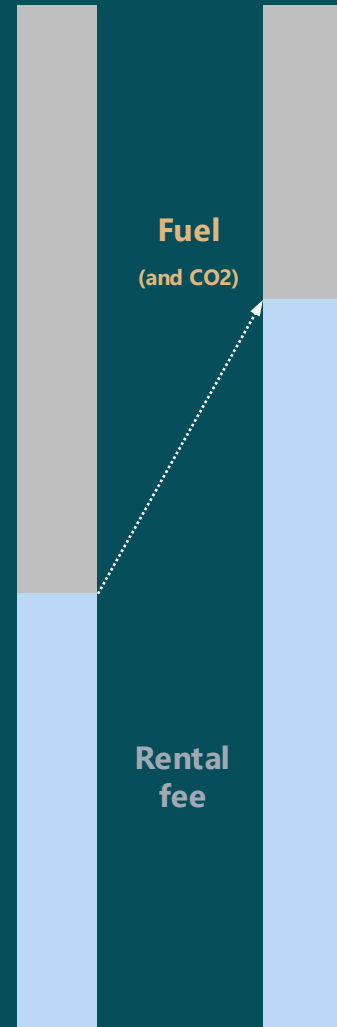
Total Cost (full year)	26 500	35 000	26 500	26 500
Rental Fee	10 000	10 000	17 000	26 000
Fuel cost	16 500	25 000	9 500	500

CO2 emissions (Ton)	29,5	49	17	1,2
Service at site	7	7	1	0
Engine hours	3 650	3 650	650	50



100% diesel

END CUSTOMER



**Fuel
(and CO2)**

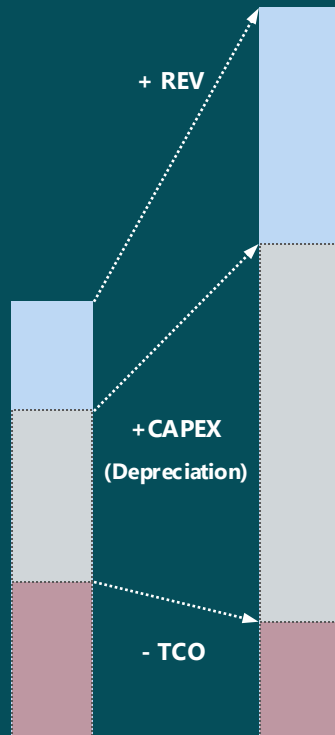
**Rental
fee**



Hybrid

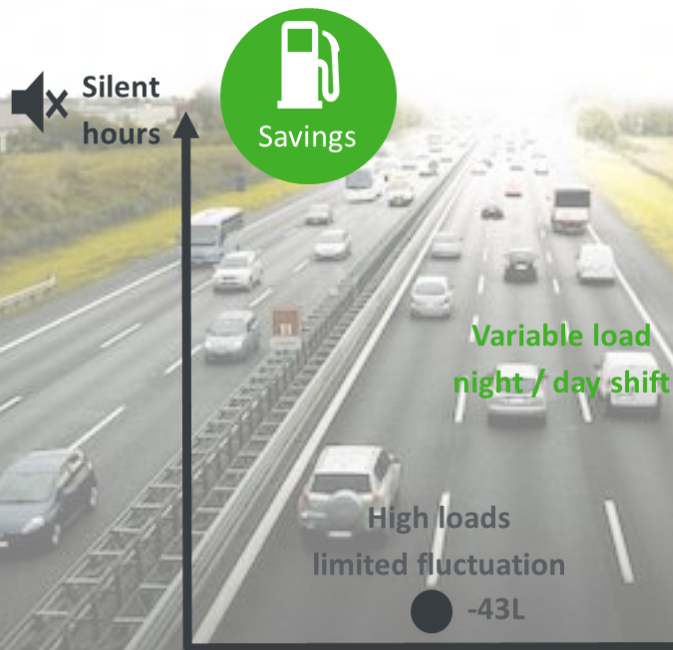


RENTAL COMPANY



Off-grid hybrid power solution (GEN + BATT)

Sweet spot for adoption



Sweet spot

Long periods low load
high peaks

-118L

-85L

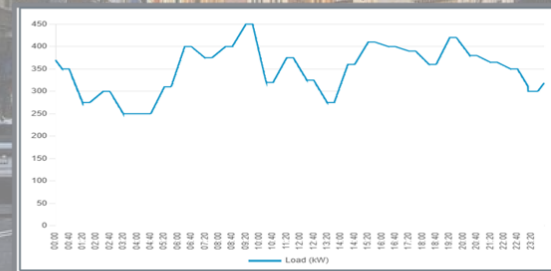
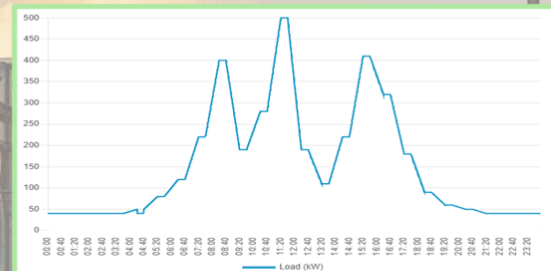
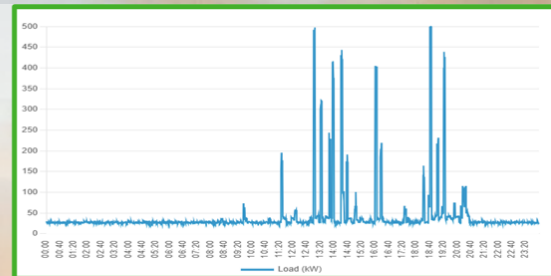
Variable load
night / day shift

High loads
limited fluctuation

-43L

CO2

CO2 reduction (kg)





Some references:

Telecom



Construction/ noise reduction



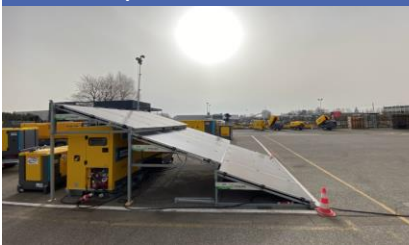
Tunneling/Mining



Construction/Electric motors



Hybrid with solar



Energy Booster



Metropolitan hybrid



Event / cold weather



Dewatering E-pump



Metropolitan Island



F1 event, hybrid lightning



Shipyard hybrid





Thank You