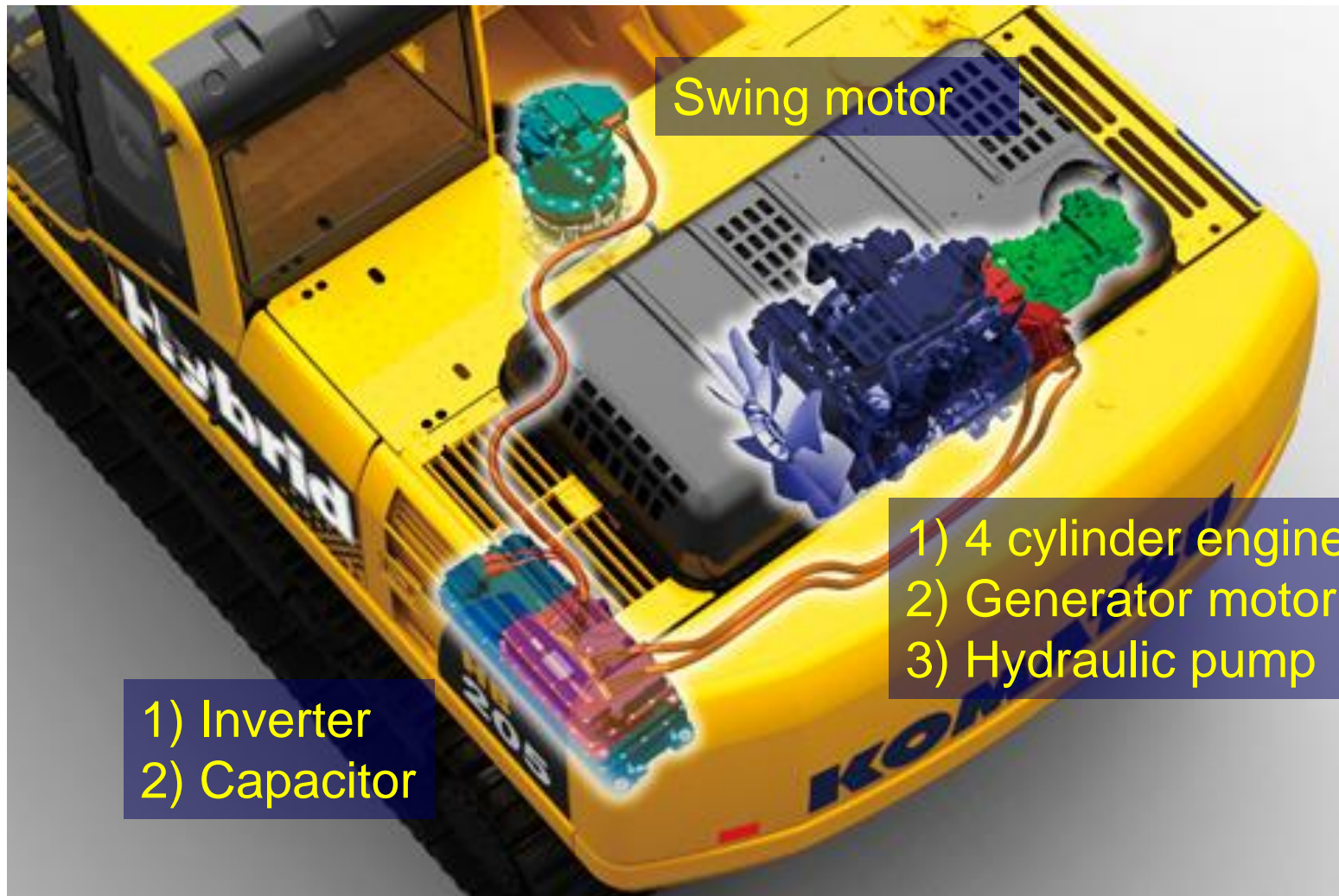


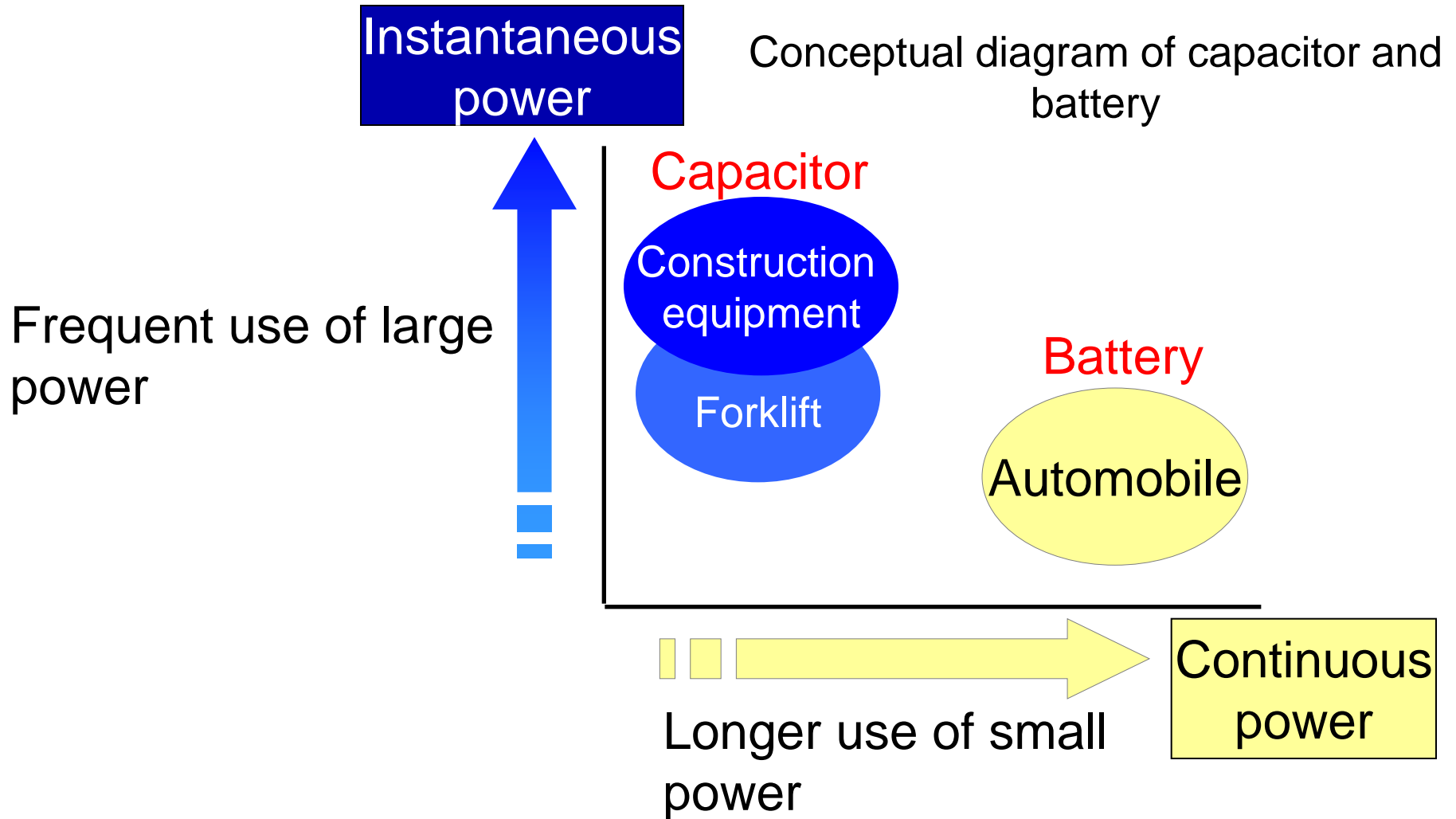
Komatsu HB205 & HB215LC



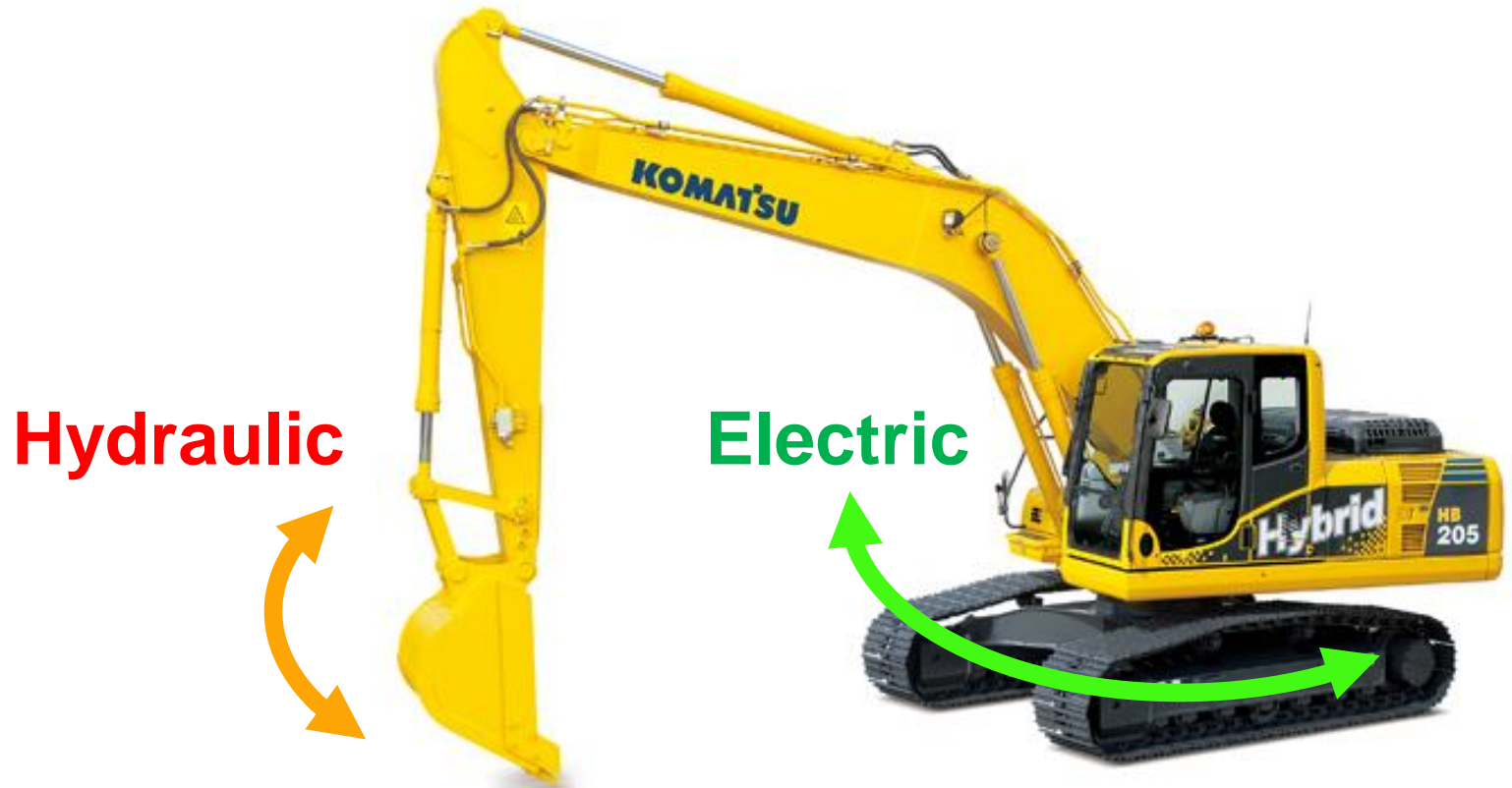
Overview of Komatsu Hybrid System



Hybrid Construction Equipment vs. Automobile

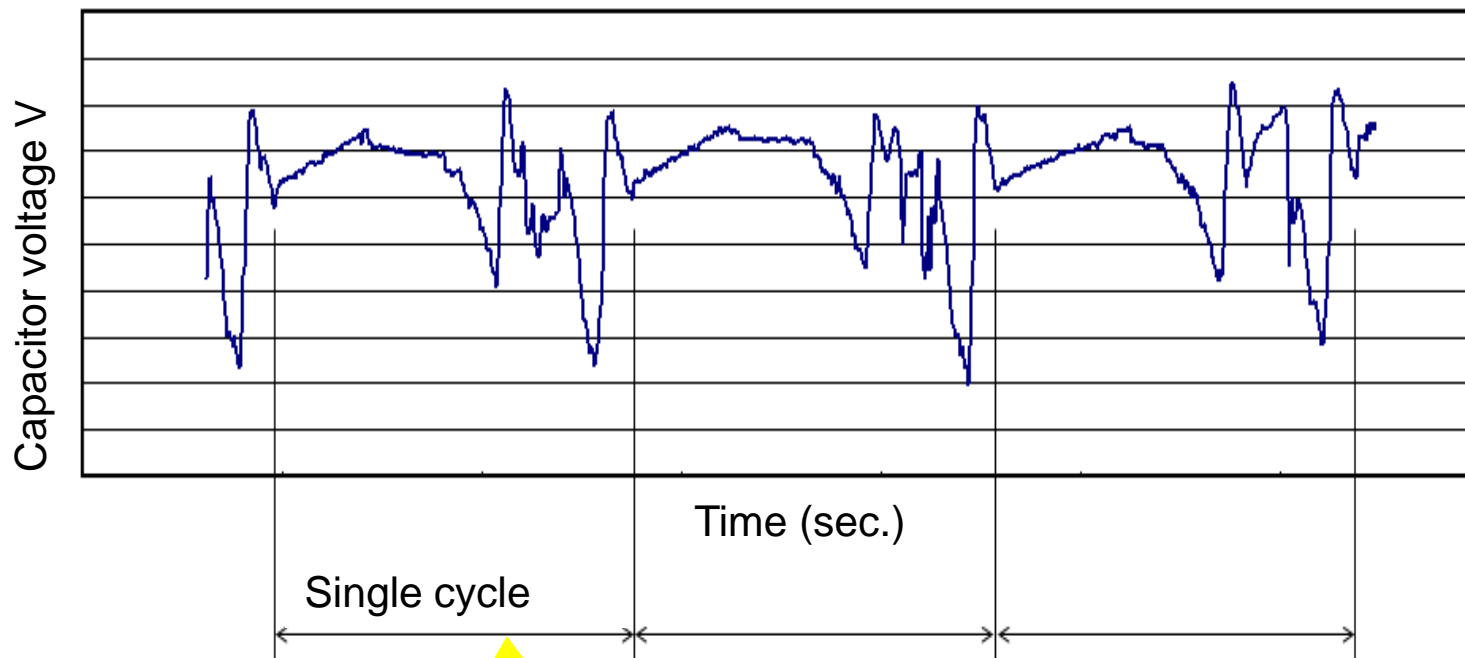


Komatsu Hybrid HB205-1



Hybrid Construction Equipment vs. Automobile

Capacitor charge/discharge pattern
(90 degree swing loading to dump truck)



Charge/discharge
balances in a single cycle


Fuel Efficiency of Hydraulic Excavators

(1) Due to the new electric-driven swing:

- ① Reduction of oil pressure loss
- ② Implementation of swing energy regeneration

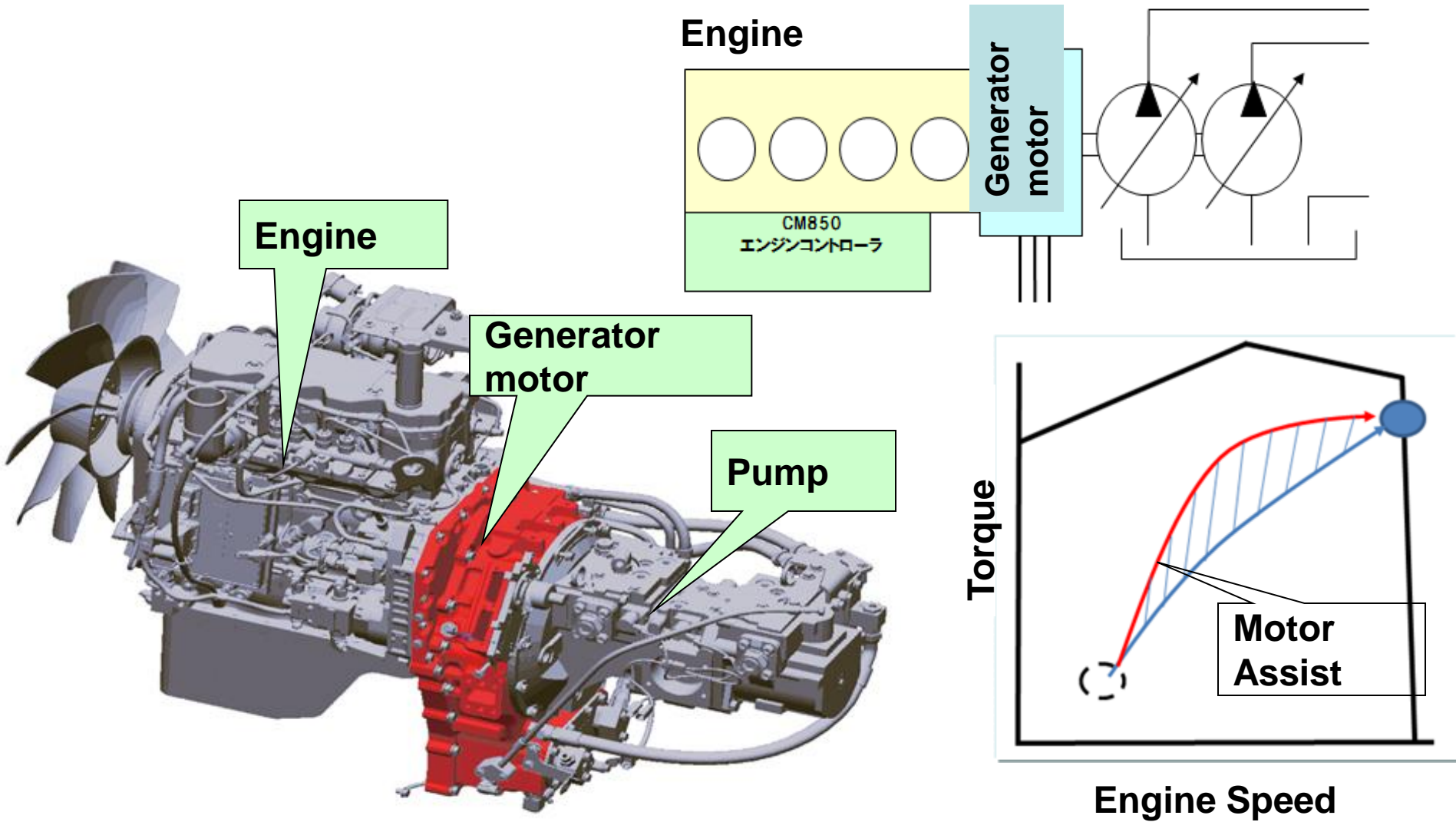
(2) Due to optimal control of engine and pump as well as engine assistance by generator motor:

- ① Low-speed engine matching
- ② Achieved super low-speed engine operation at deceleration (700rpm)



**25-41%
fuel
reduction**

Hybrid – Generator Motor



Components of the Hybrid System

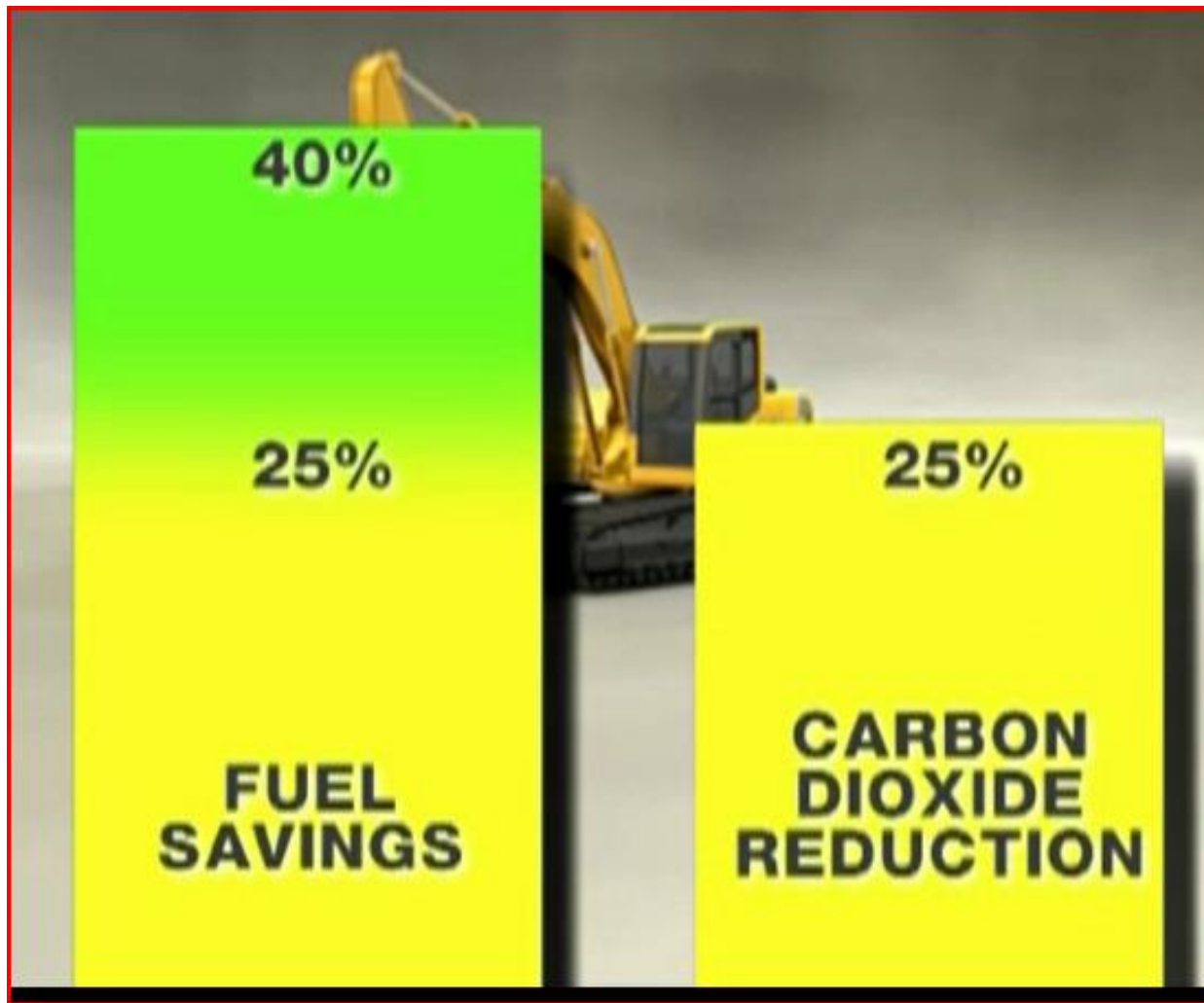


← Electric swing motor
& additional
decelerator

Inverter and Ultra
Capacitor



Fuel Efficiency and Reduction of CO₂



Fuel Consumption Rates by application

Flattening soil upon land development



Swing Angle
 $90^{\circ} \sim 180^{\circ}$
Fuel efficiency
ratio

25%

Drop sludge into hopper



Swing Angle
 $90^{\circ} \sim 180^{\circ}$
Fuel efficiency
ratio

30%

Flattening surplus soil



Swing Angle
 $120^{\circ} \sim 180$
Fuel efficiency
ratio

25%

Drop surplus soil into hopper



Swing Angle
 $90^{\circ} \sim 120^{\circ}$
Fuel efficiency
ratio

28%

Loading dirt and land shaping



Swing Angle
 90°
Fuel efficiency
ratio

32%

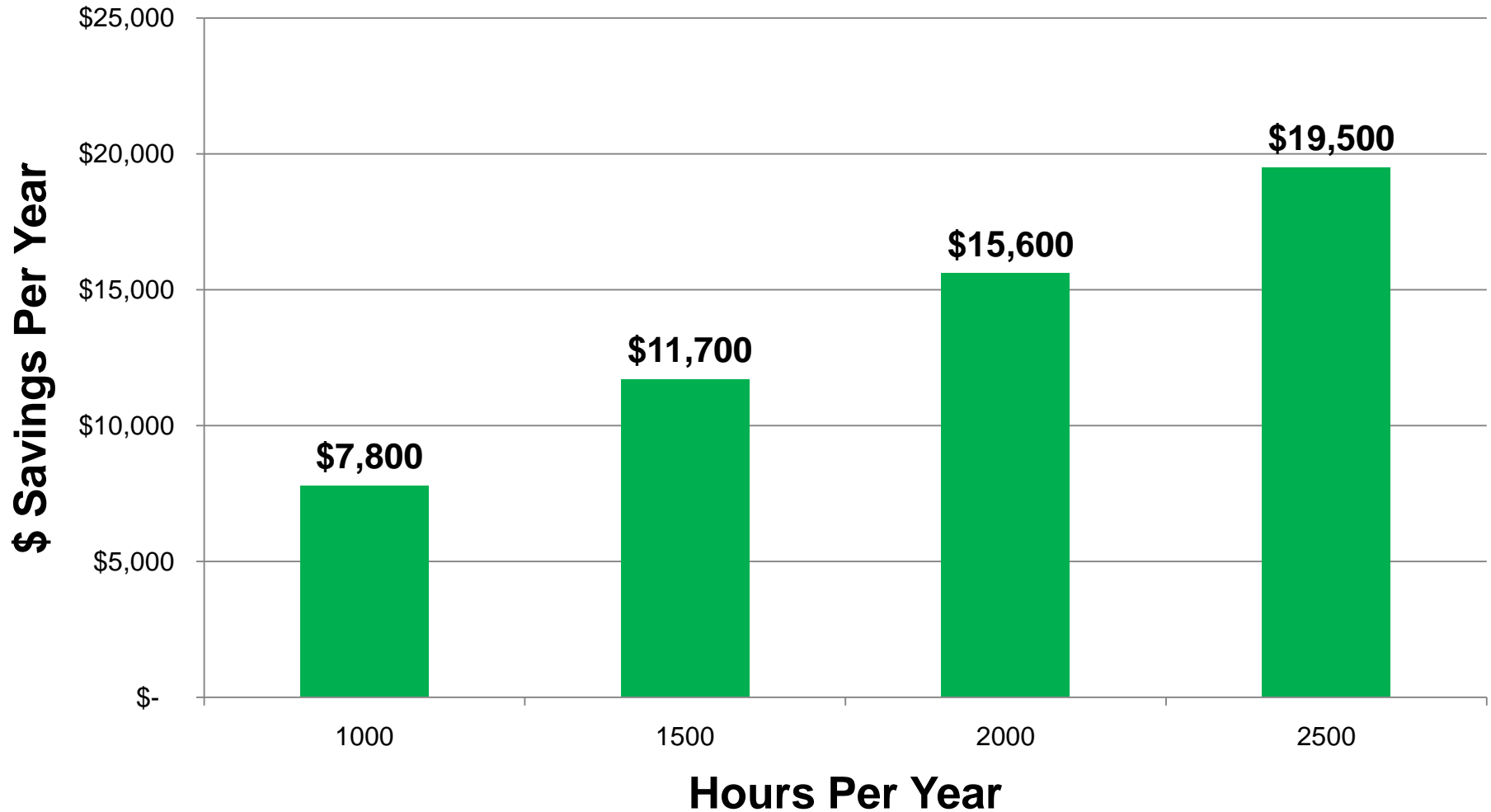
Drop slag into hopper



Swing Angle
 $45^{\circ} \sim 90^{\circ}$
Fuel efficiency
ratio

35%

Fuel Savings Payback Analysis



Diesel = \$1.30 /ltr

Comparison of Reduction in CO₂

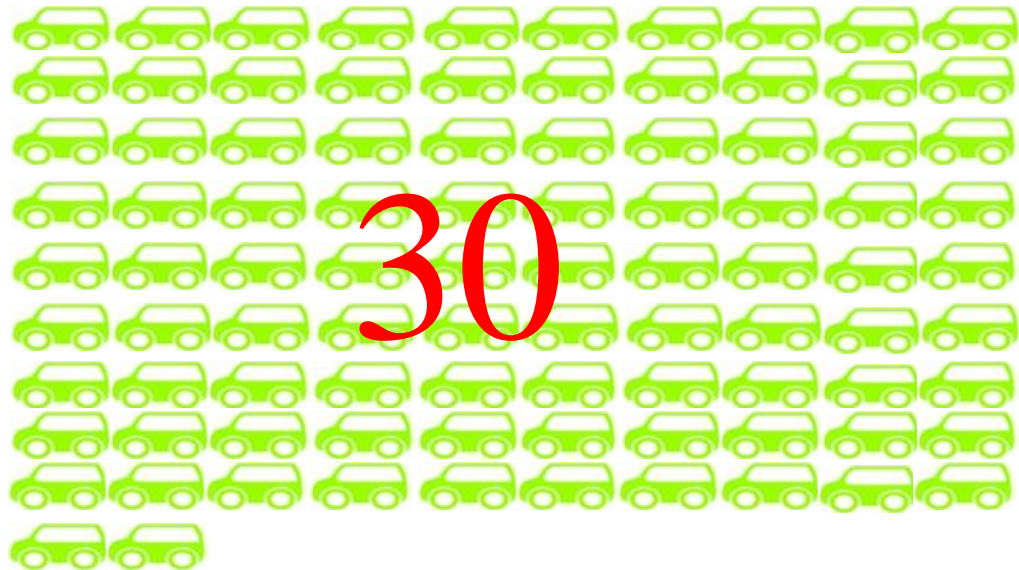
(Exhaust Emissions)

PC200 = 30 automobiles



1

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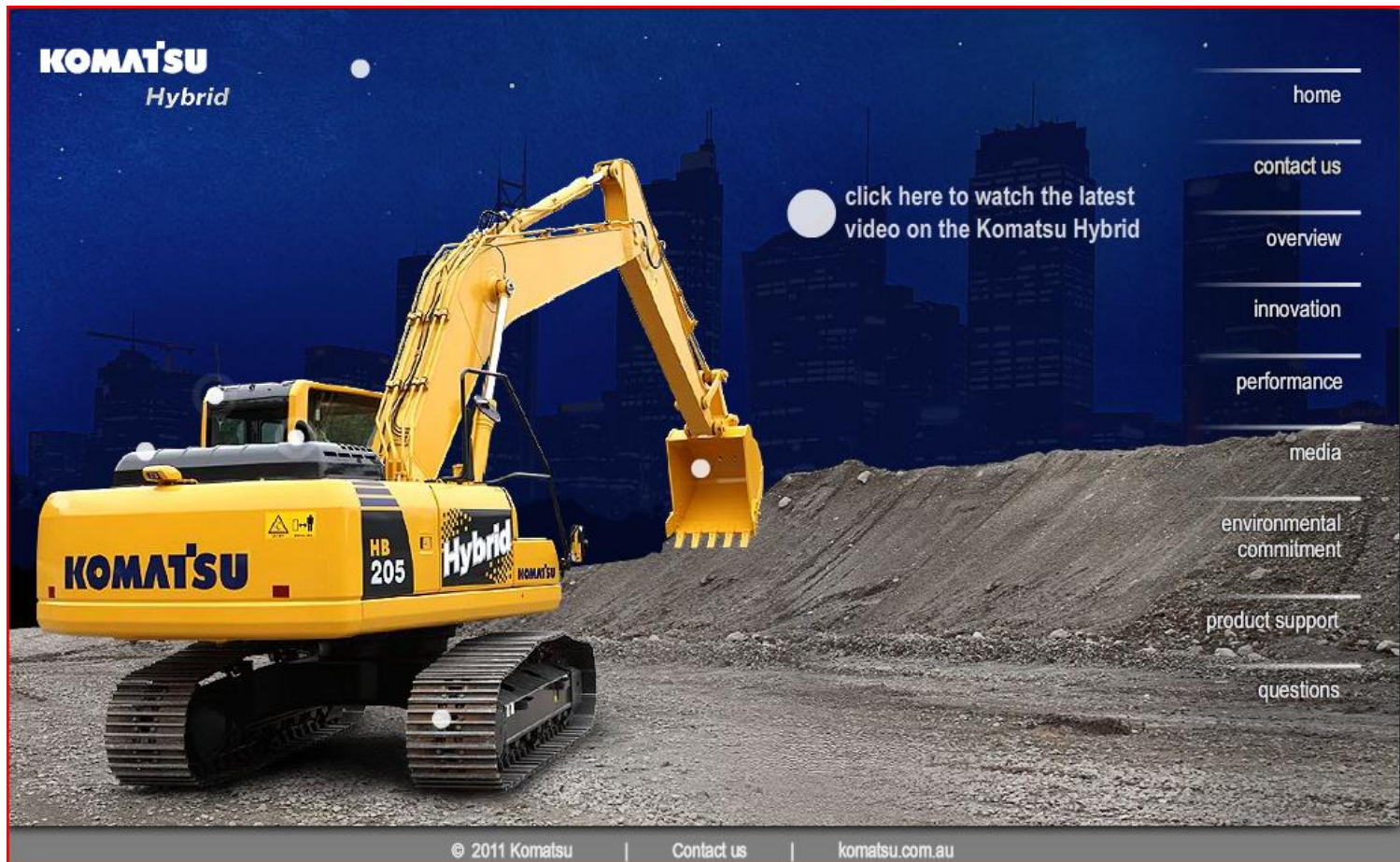


HB205-1 in Australia



Divall Earthmoving – Goulburn NSW

Komatsu HB205 & HB215LC



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click here to watch the latest video on the Komatsu Hybrid

overview

innovation

performance

media

environmental commitment

product support

questions

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