

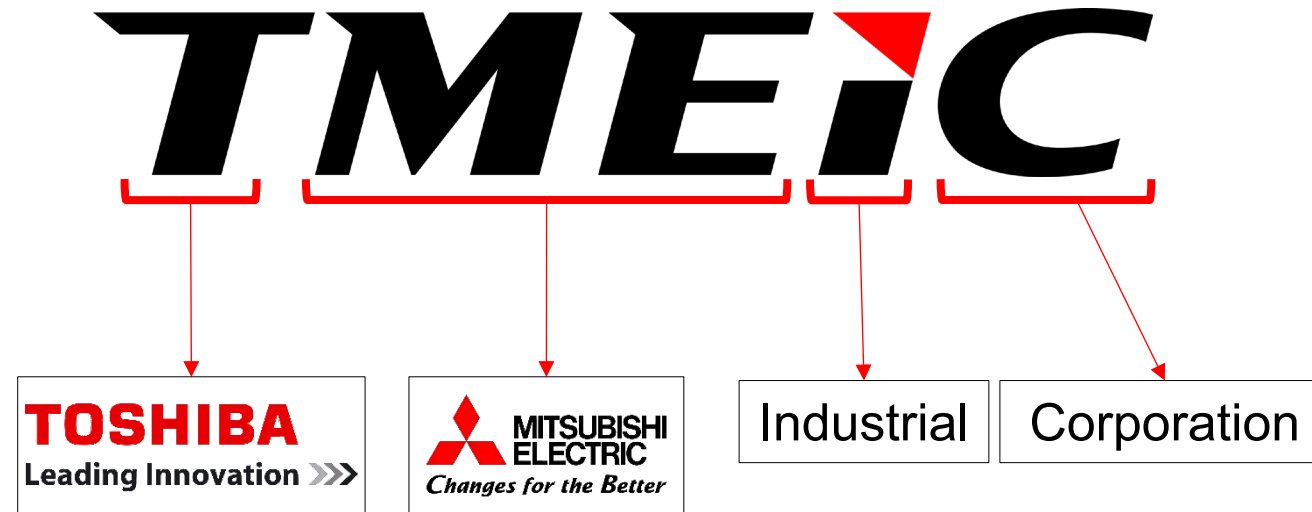


TMEIC at Transport Middle East 2026

Cairo

October 1st , 2026

Who is TMEiC?



TMEiC is a global drive and automation systems supplier with manufacturing, engineering, sales, and service facilities around the World.

TMEIC Business Secotrs



- Hot & Cold Mills
- Rolling Mills
- Process Lines
- Long Products
- Energy Saving
- Waste Heat Recovery

- Maxspeed Crane Systems
- Automated Crane Systems
- Maxview Smart Landing Systems
- Crane Modernizations

- Conveyors
- Grinding Mills
- Draglines
- Shovels

- Separators
- ID Fans
- Conveyors
- Kilns
- Testing

- LNG
- Offshore Production
- Refining
- Pipelines, Transportation & Storage
- Refining & Petrochemicals

- ID Fans
- FD Fans
- BFP's
- Pumps

- Renewable Energy
- Photovoltaic
- Energy Storage

TMEiC Global Footprint



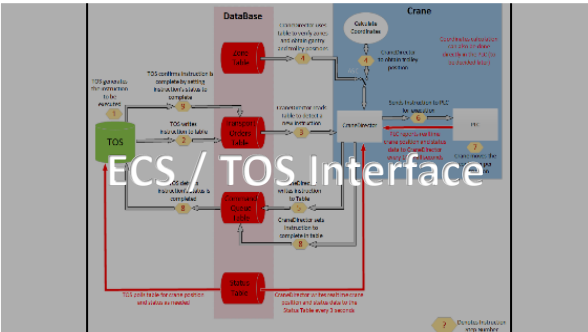
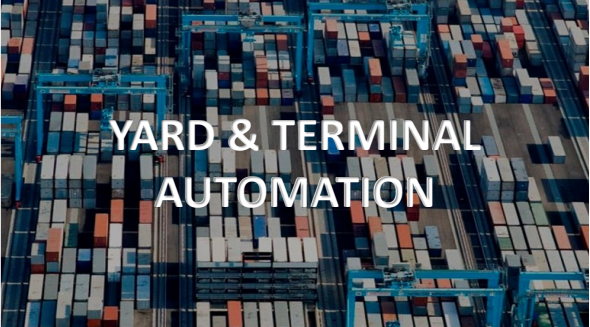
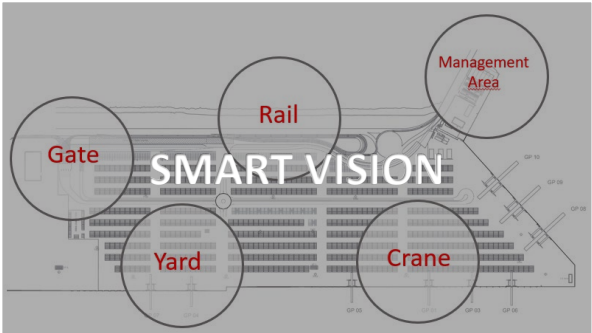
TMEiC footprint in Global:

- ▶ 16 offices across the world
- ▶ Engineering Technology Offices at Japan, USA, Italy, India, China, Spain
- ▶ 6 factories
- ▶ An extensive service network

TMEiC footprint in Japan:

- ▶ 13 sales offices In Japan
- ▶ 4 factories
- ▶ An extensive service network

TMEiC Portfolio – One Partner, one Team



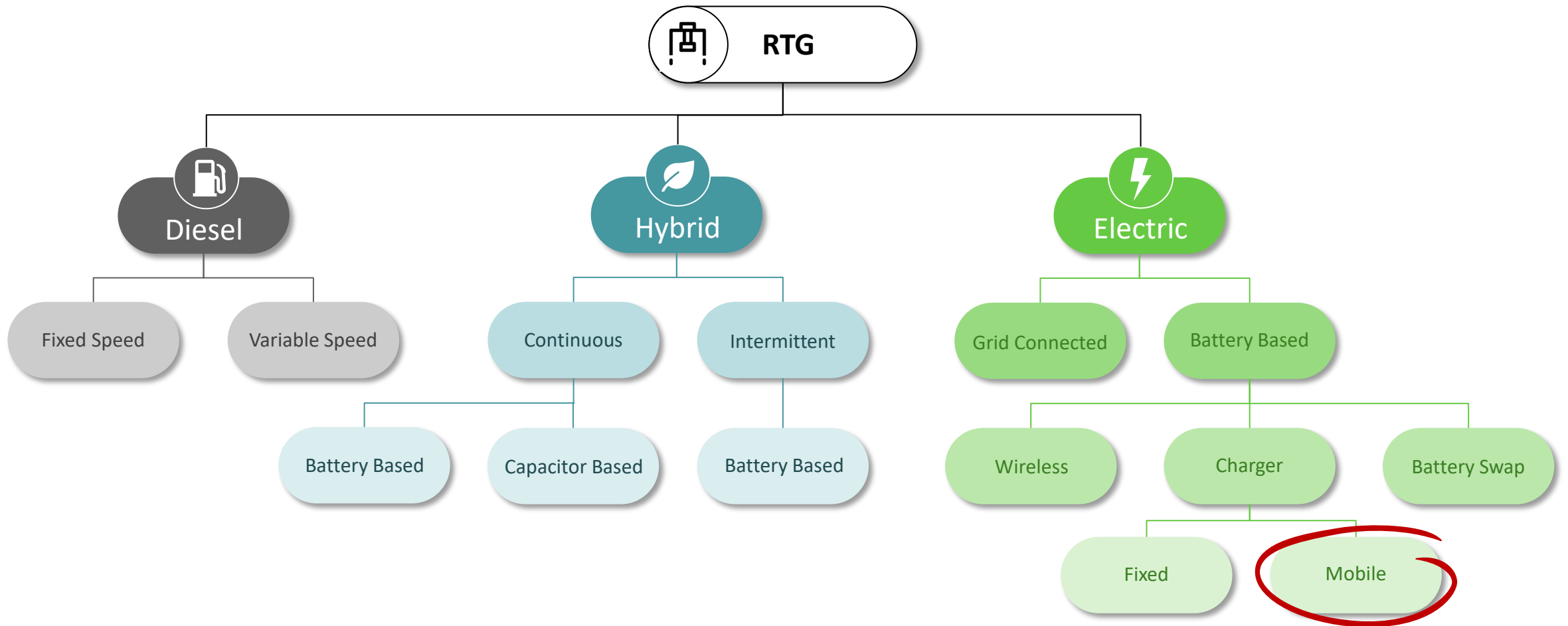
**When electrical power is delivered to the RTG –
the green terminal of the future.**

Cairo

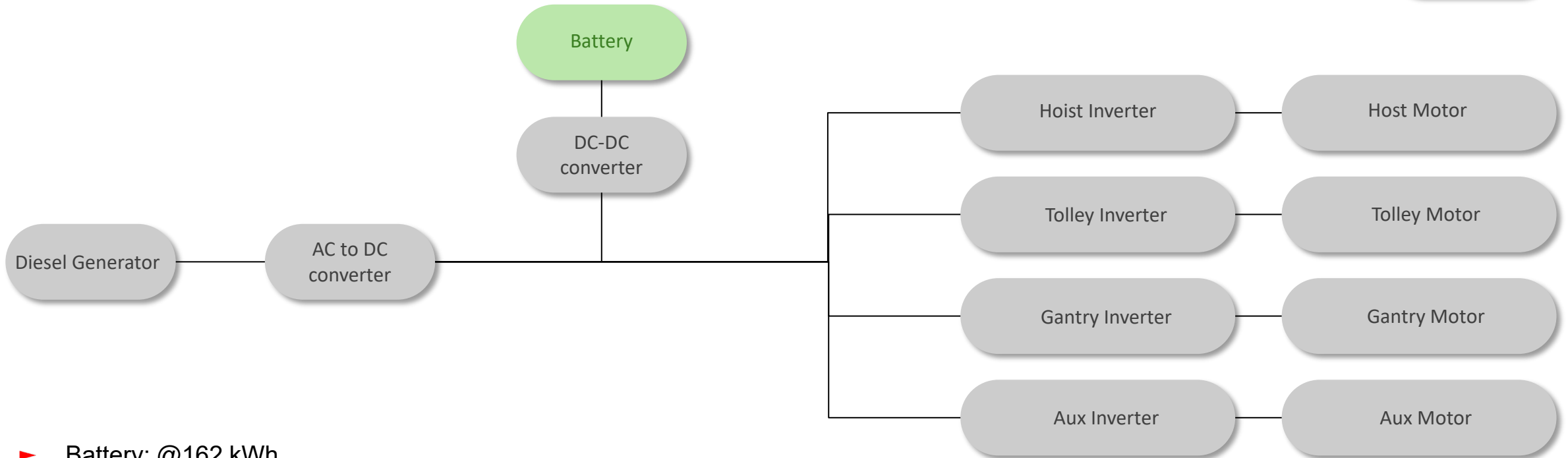
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Path to RTG Electrification

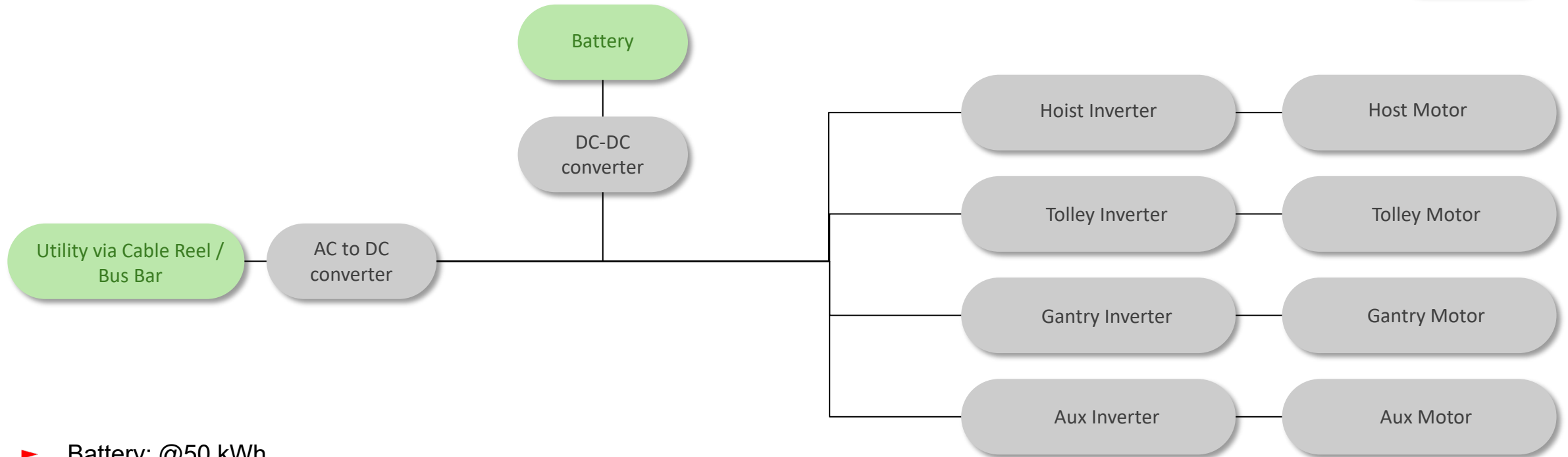


Battery + Intermittent DG



- ▶ Battery: @162 kWh
- ▶ DG: @60kW
- ▶ DG will operate at the highest efficiency point.
- ▶ Bigger battery allows several hours of operation without DG

Battery + Fixed continuous charger



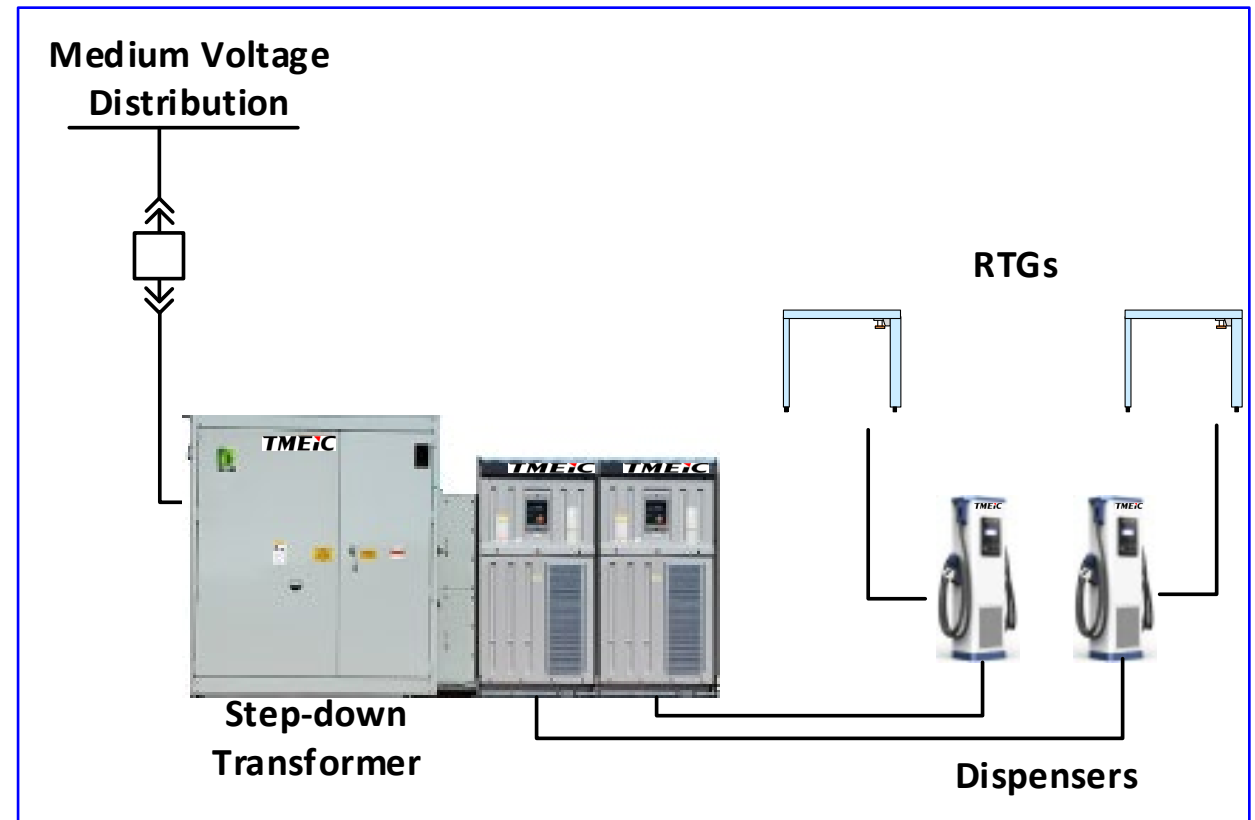
- ▶ Battery: @50 kWh
- ▶ Cable Reel: @75kVA
- ▶ Regenerative energy is captured and used locally resulting in smallest sized cable reel and batteries
- ▶ Cable reel also allows future automation of RTGs via fiber optic data link

Battery + DC Dispensers

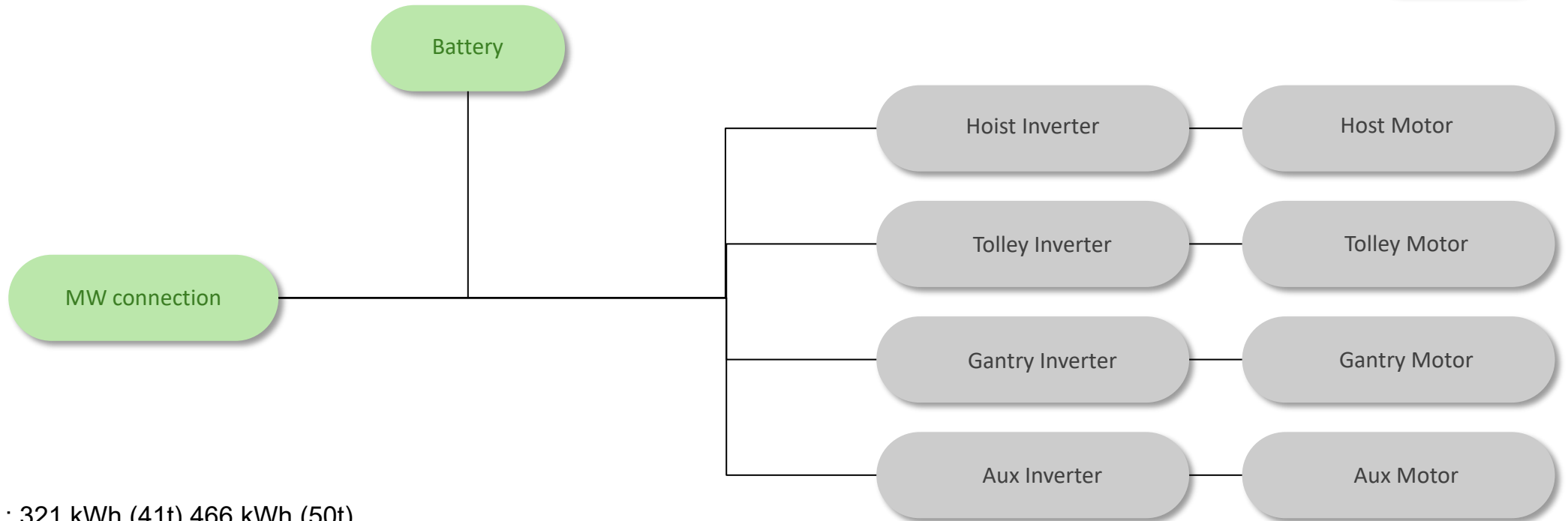


In-yard charging

- ▶ MV switchgear
- ▶ Charger Skid
 - ▶ Step-down transformer
 - ▶ AC-DC converter
 - ▶ DC-DC converter
- ▶ DC Dispensers



Battery + Mobile charger



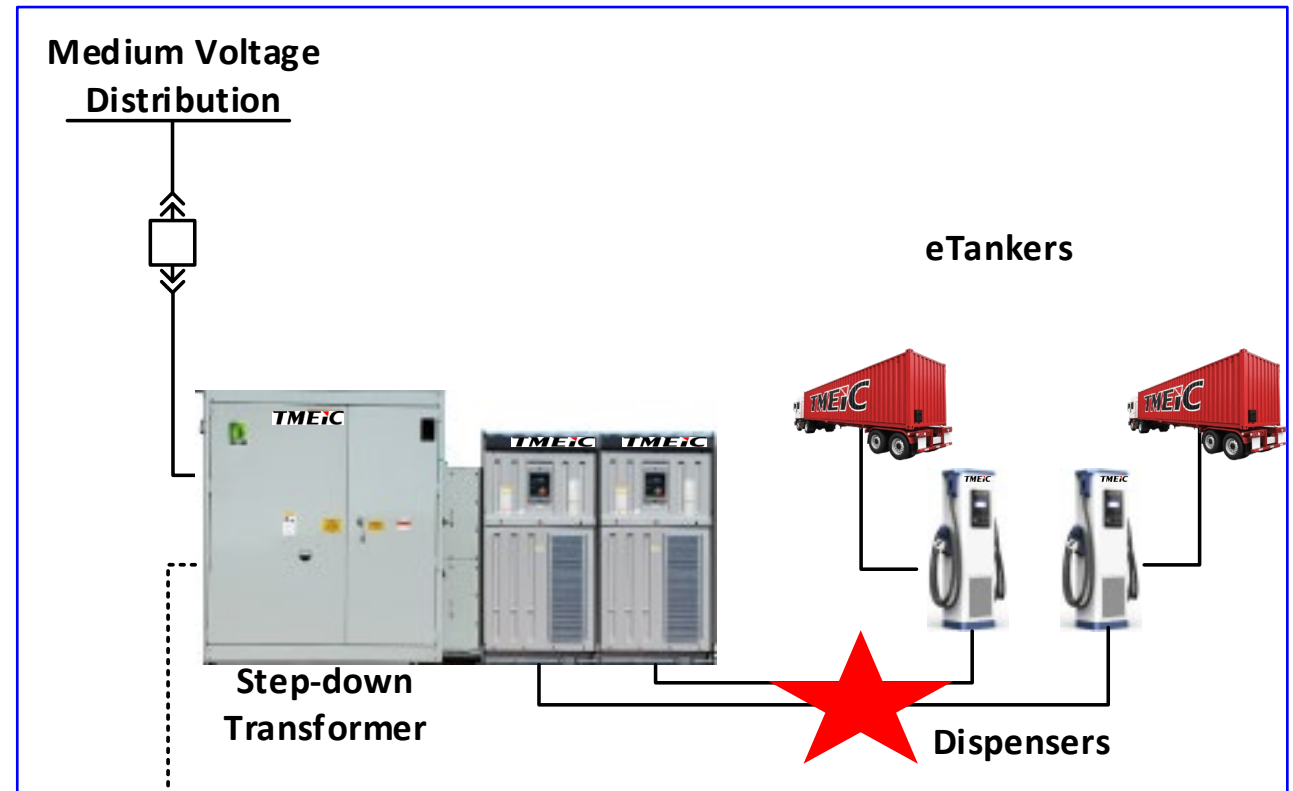
- ▶ Battery Size : 321 kWh (41t) 466 kWh (50t)
- ▶ Can be sized based on operational requirements – duration of a shift
- ▶ Highest system efficiency
- ▶ Estimated life of 15 years LTO batteries and 8 years with LFP batteries.
- ▶ Future automation possible based on wireless network, currently under study

Battery + Mobile charger



Off-yard/Off-site charging

- ▶ MV switchgear
- ▶ Charger Skid
 - ▶ Step-down transformer
 - ▶ AC-DC converter
 - ▶ DC-DC converter
- ▶ DC Dispensers



Crane parameters

eRTG system is sized considering the following crane parameters.

Crane parameters	Value	Units	Comments
Hoist rated load	41	t	
Hoist base speed	26	m/min	
Hoist top speed	52	m/min	
Trolley speed	70	m/min	
Gantry speed, w/o load	135	m/min	
Operating wind speed	25	m/s	
Min ambient temperature	-10	C	TM10e2/3 products require 0 C min. temperature
Max. ambient temperature	45	C	TM10e2/3 products require 40 C max. temperature. From 40 C to 50 C with derate.

System parameters

System parameters	Value	Units	Comments
Battery energy capacity	321	kWh	At BoL
Battery SoH at EoL	70	%	
Battery nominal voltage	598.9	Vdc	
Crane DC bus voltage	680	Vdc	
Auxiliary loads inverter peak power	100	kVA	Peak at sinewave filter terminal, 460 Vac
DC-DC converter nominal power	400	kW	At 598.9 V nominal battery voltage
Battery cooling system	liquid		Water and glycol, 50% / 50%
Battery chemistry	LFP		Requires periodic BMS recalibration by charging at 100 % SoC
Enclosure weight	6000	kg	Approximate

eTanker parameters

System parameters	Value	Units	Comments
Battery energy capacity	2.2	MWh	At BoL
Battery SoH at EoL	70	%	
Life	20	years	
Battery nominal voltage	832	Vdc	
eTanker charger inlet type	CCS2		Rated for 1000 V, 800 A
eTanker charging time	~2.5	h	From 20 % to 90 % SoC at BoL
eTanker to eRTG charger cable	CCS2		Rated for 1000 V, 800 A
eRTG charging time	~43	min	From 20 % to 90 % SoC at BoL
Auxiliary loads inverter peak power	119	kVA	Peak at sinewave filter terminal, 460 Vac
eRTG charger nominal power	400	kW	At 598.9 V nominal battery voltage
Battery cooling system	liquid		Water and glycol, 50% / 50%
Battery chemistry	LFP		
Enclosure size	40	ft	Container

TMEIC MW Charger



Power Converter

- ▶ AC to DC Converter - Ninja ESS
- ▶ DC to DC Converter - a MW outdoor type DC to DC converter under development

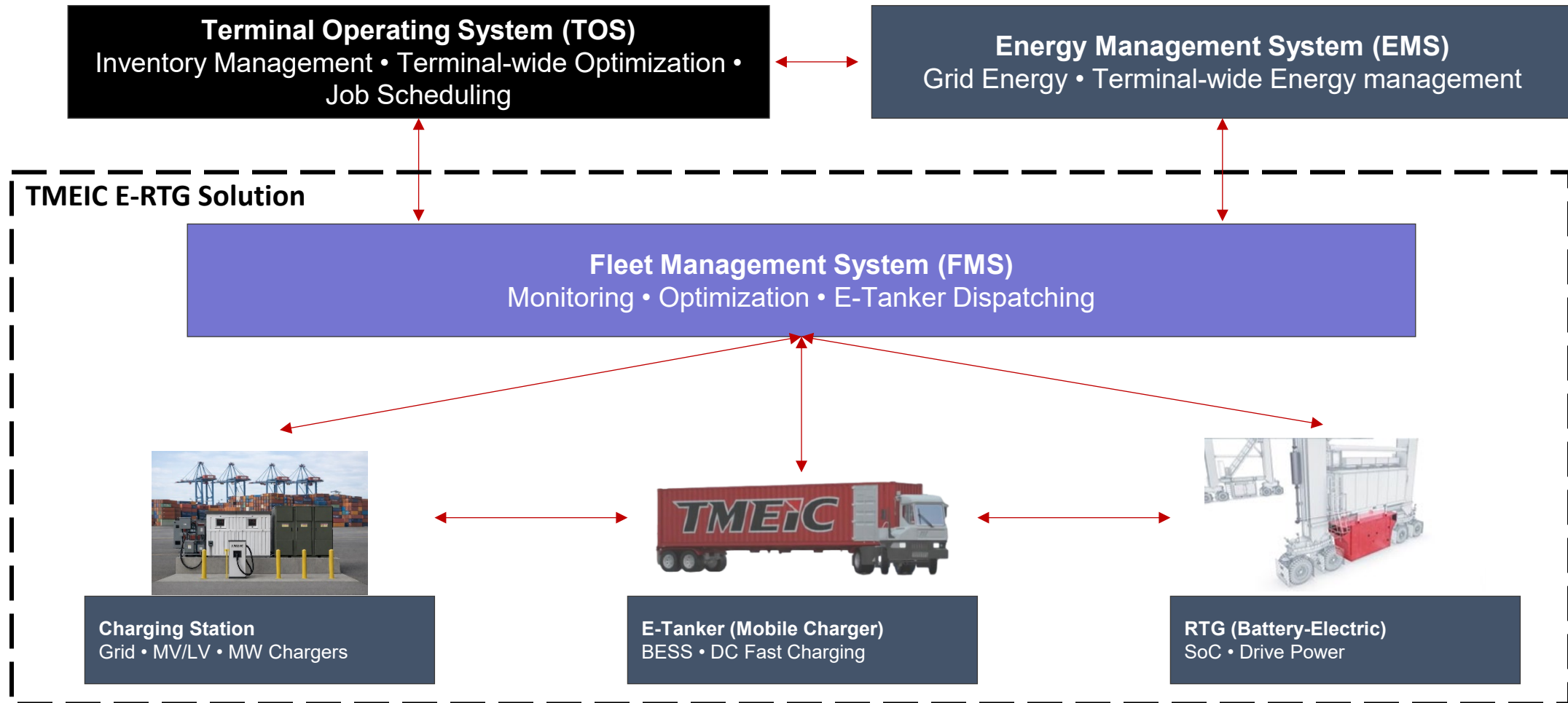
DC Dispenser

- ▶ Communication
- ▶ Cable Cooling
- ▶ Mechanical Enclosure
- ▶ Protection

Control Card

- ▶ a control card for the power converter is under development

High-level Solution Architecture of Mobile Charged ERTG



E-Tanker - The fastest and least disruptive path to RTG electrification



CIVIL WORK REQUIRED

NO Busbar

NO CableReels

LOSAGE OF STACKING AREA

NO Busbar

Dispensers and E-tanker parking can be anywhere in the terminal, even outside of the terminal

DOWNTIME OF WHOLE BLOCK FOR RETROFIT

Turnkey upgrade crane by crane

Parallel operation of Diesel-RTG and Battery-RTG possible

CHARGING DOWNTIME

Continue RTG operations while charging (gantry travel excluded)



Thank you



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