

# TM2500 & TM2500+

## Mobile Gas Turbine Generator



imagination at work



# Product Description

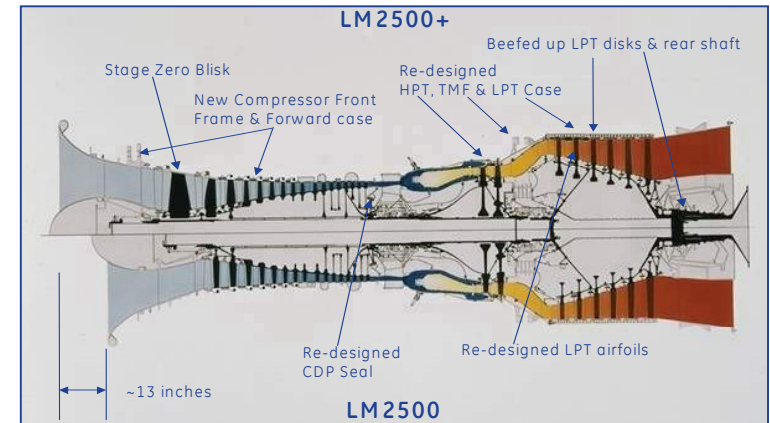
- 23-31 MW mobile gas turbine generator
- Easily transported by land, air, or sea
- 50 or 60 Hz flexibility
- Liquid or natural gas fuel
- Low emissions (25 ppm NOx)
- Low noise – 88 dBA



# What's Inside?

## GE LM2500/+ Gas Turbine

- 2,000+ engines worldwide
- More than 97M operating hrs
- Recognized as the industry leader in its size class

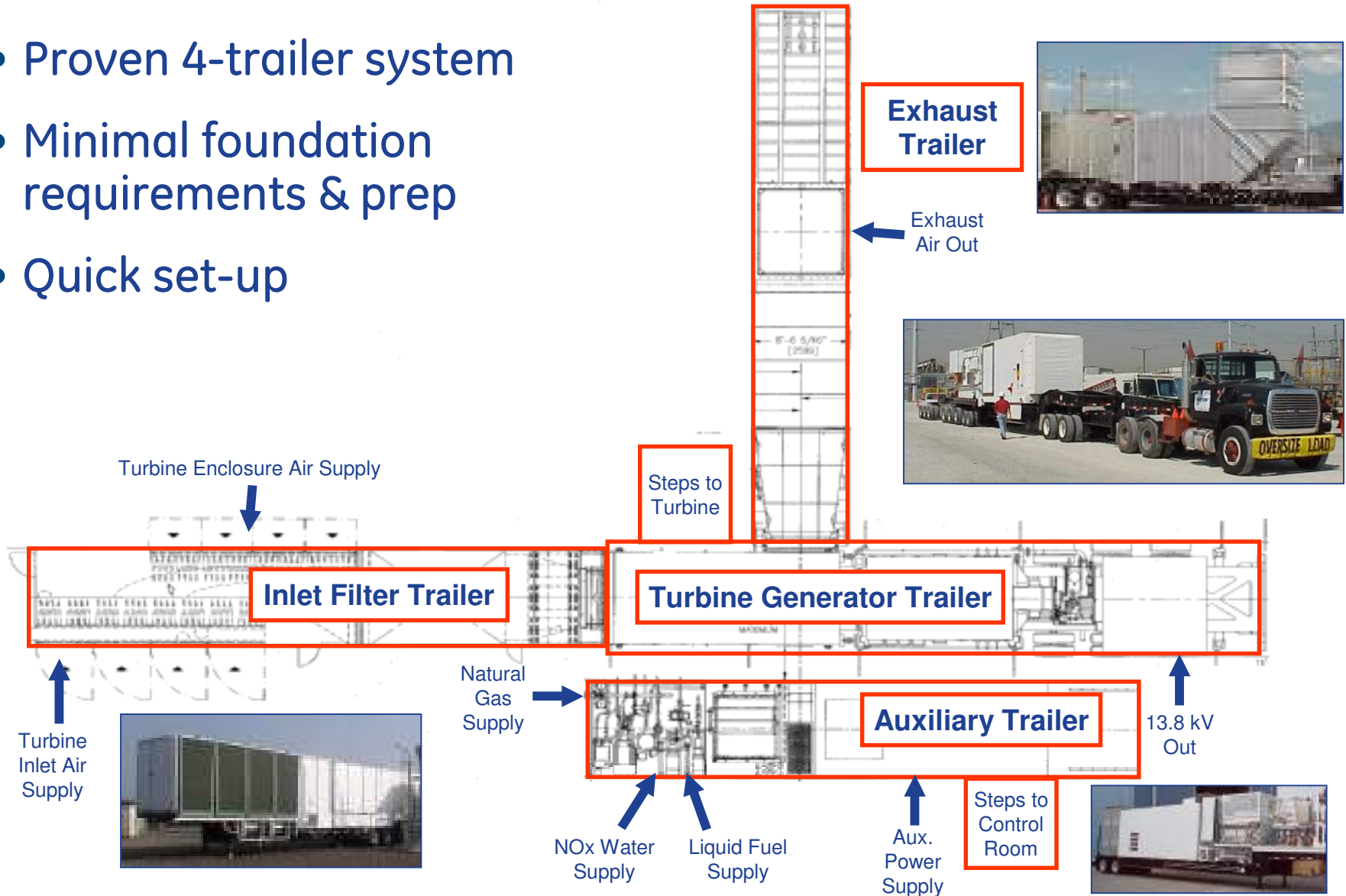


## Brush Electrical Generator

- Air-cooled generator w/ brushless excitation
- Suitable for Class 1, Group D, Div. 2 areas
- 60 and 50 Hz operation
- Rated at 32,550 KVA @ 0.90 pf, 59 deg. F cooling air, 13.8 kV, 60 Hz. (11.5 kV @ 50 Hz.)

# TM2500 General Arrangement

- Proven 4-trailer system
- Minimal foundation requirements & prep
- Quick set-up





# Proven Experience

Since 2000, 29 TM2500 rental projects in 12 countries

<u>Qty.</u>	<u>Year</u>	<u>City</u>	<u>Country</u>	<u>Fuel</u>	<u>Freq.</u>	<u>Term (mos)</u>
5	2000	Chicago, IL	USA	Gas	60	3
3	2000	Cork	Ireland	Liq	50	6
2	2000	Mayo	Ireland	Liq	50	6
5	2001	Tucson, AZ	USA	Gas	60	3
5	2001	Phoenix, AZ	USA	Gas	60	3
5	2001	Salt Lake City, UT	USA	Gas	60	3
1	2001	Crete	Greece	Liq	50	4
3	2001	San Nicolaas	Aruba	Liq	60	6
3	2001	Cork	Ireland	Liq	50	6
2	2001	Mayo	Ireland	Liq	50	6
7	2001	Tacoma, WA	USA	Dual	60	15
10	2002	Long Island, NY	USA	Liq	60	3
3	2002	Stamford, CT	USA	Liq	60	4
6	2003	Long Island, NY	USA	Liq	60	3
1	2003	Norwalk, CT	USA	Liq	60	5
6	2003	Guadalajara	Mexico	Liq	60	8
5	2003	Accra	Ghana	Liq	50	5
5	2003	Acapulco	Mexico	Liq	60	9
5	2003	Grafton, Ontario	Canada	Gas	60	5
2	2003	Long Island, NY	USA	Liq	60	3
5	2004	Athens	Greece	Liq	50	3
4	2004	Perth	Australia	Liq	50	5
1	2005	Port Fourchon, LA	USA	Liq	60	4
1	2005	Beaumont, TX	USA	Gas	60	3
1	2005	Ajaccio	Corsica	Liq	50	10
3	2006	Mossel Bay	S. Africa	Liq	50	7
3	2006	Stamford, CT	USA	Liq	60	28
4	2006	Barinas	Venezuela	Gas	50	24
7	2007	Lahore	Pakistan	Gas	50	36
4	2008	Buenos Aires	Argentina	Gas	60	36

- **Versatility**
- **Flexibility**
- **Reliability**



# TM2500 Installations



Venezuela



Arizona



Pakistan



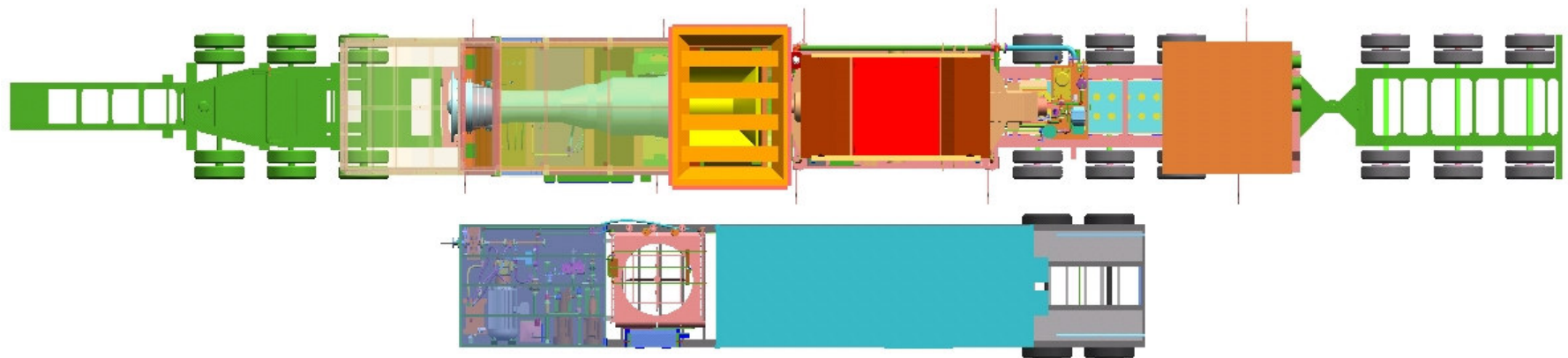
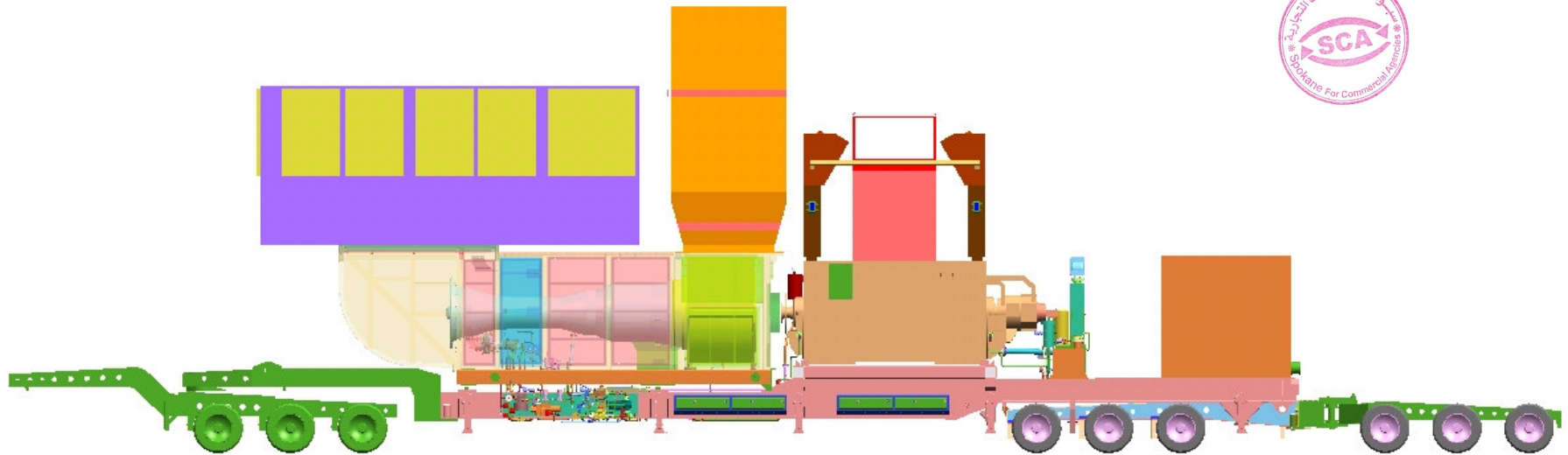
Arizona



Ireland



# Introducing the TM2500+

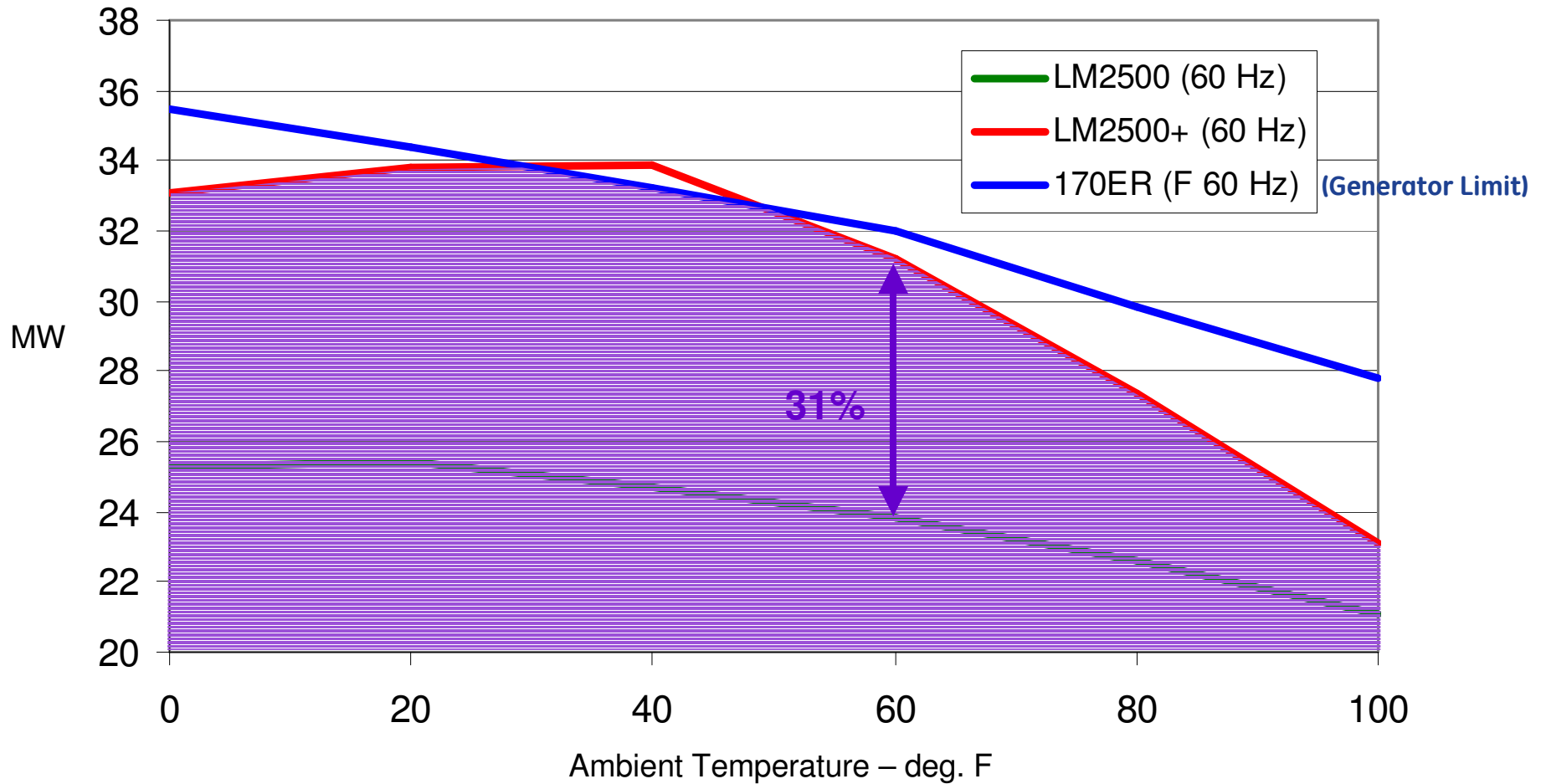


# What's New?

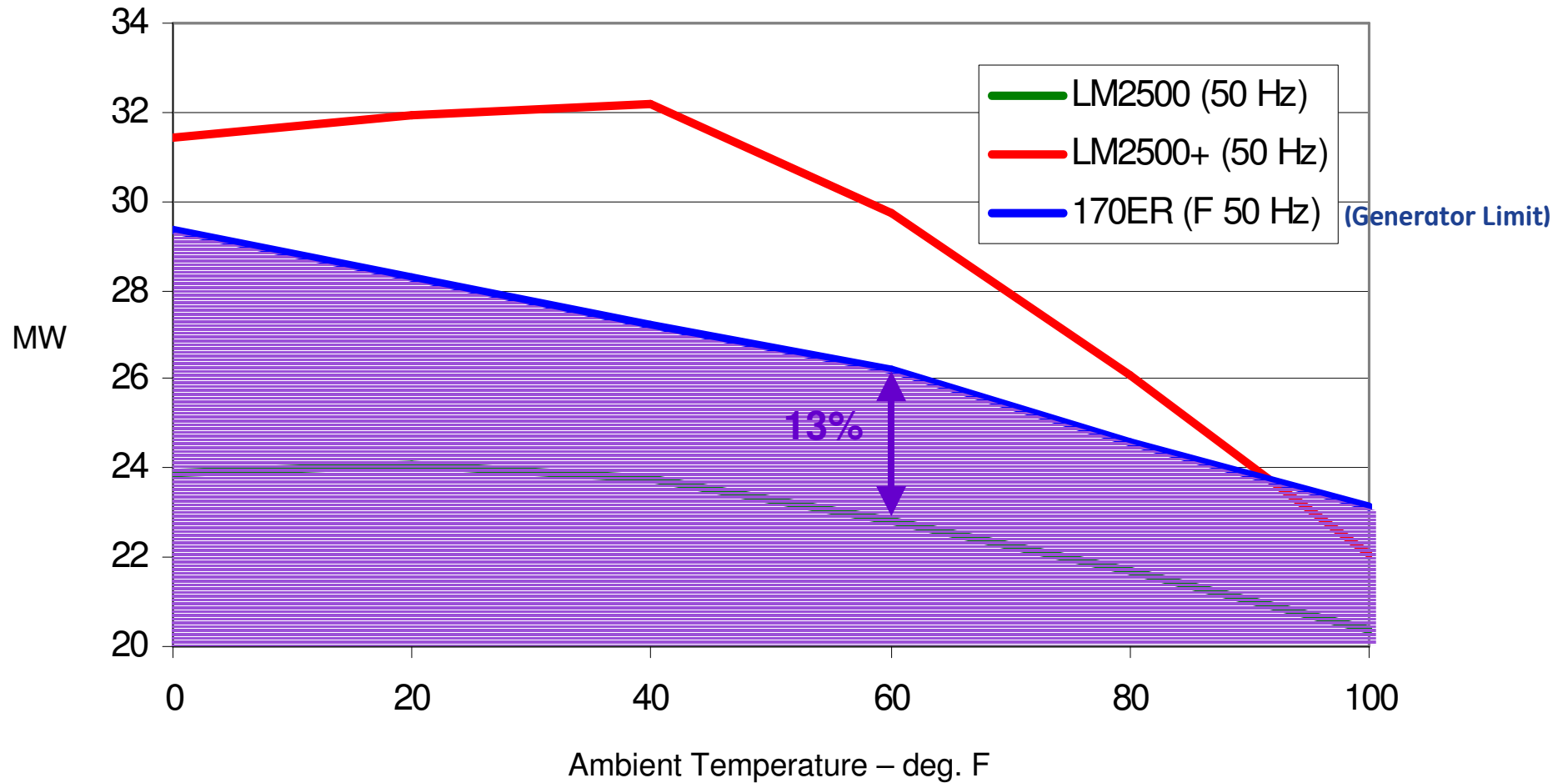
- **LM2500 PLUS gas turbine**
  - **Up to 30% more power!**
- **Two-trailer design**
  - 75% reduction in footprint
- **Improved interconnection design**
  - Faster installation and set-up



# 31% More Power at 60 Hz !



# 13% More Power at 50 Hz !



50 Hz Performance

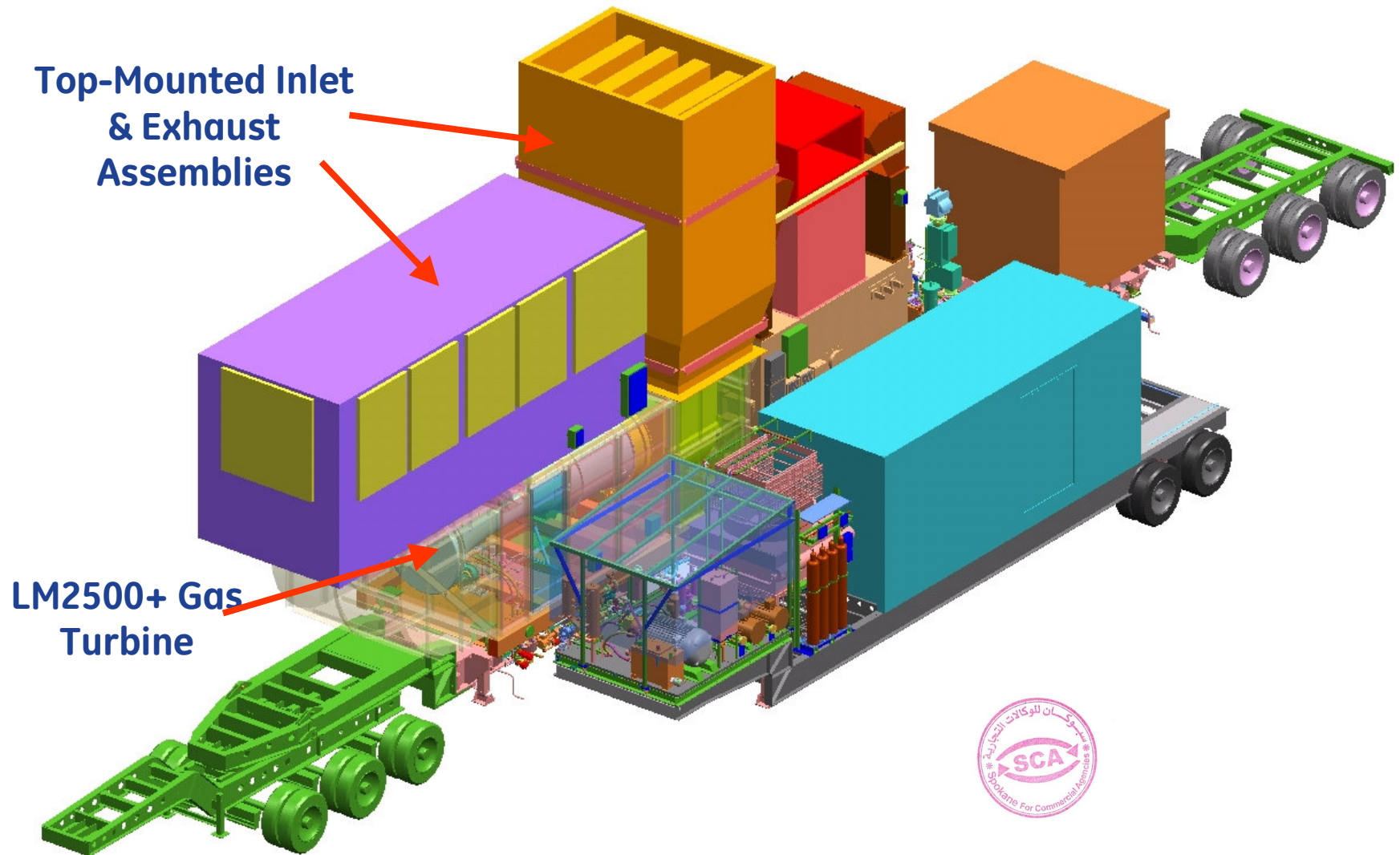


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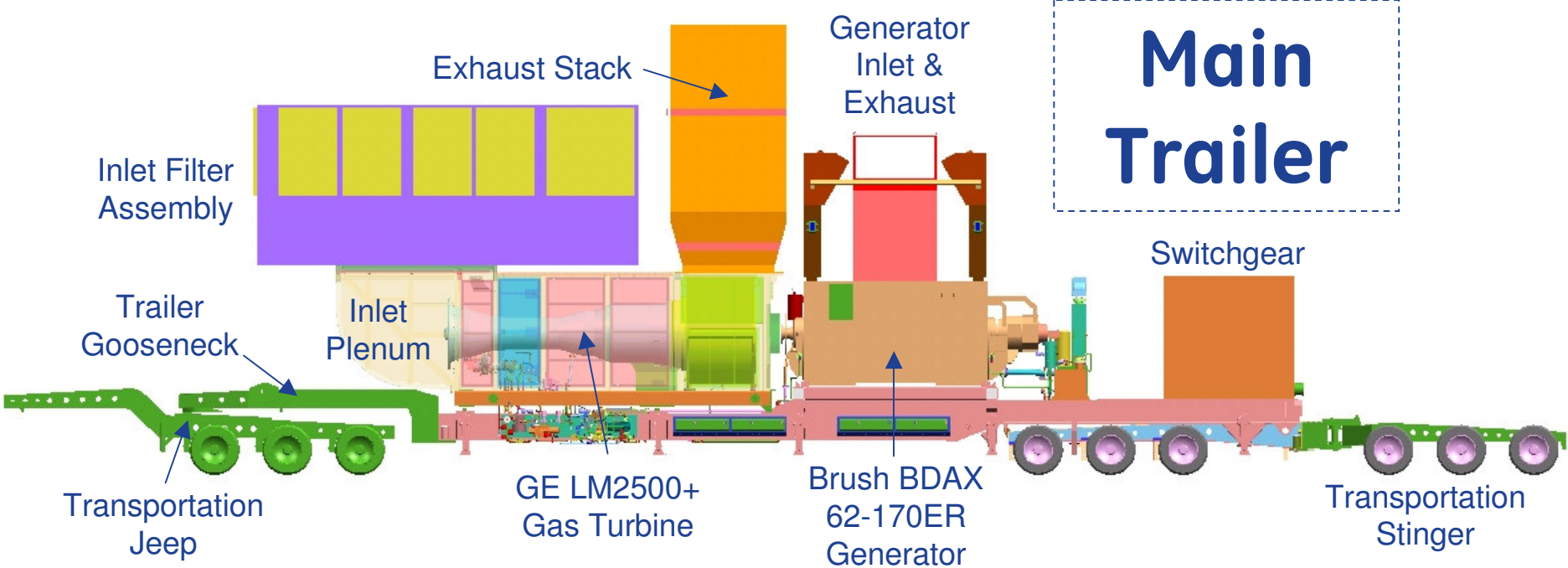
- LM2500 PLUS gas turbine
  - Up to 31% more power!
- **Two-trailer design**
  - **Smaller footprint**
- Improved interconnection design
  - Faster installation and set-up



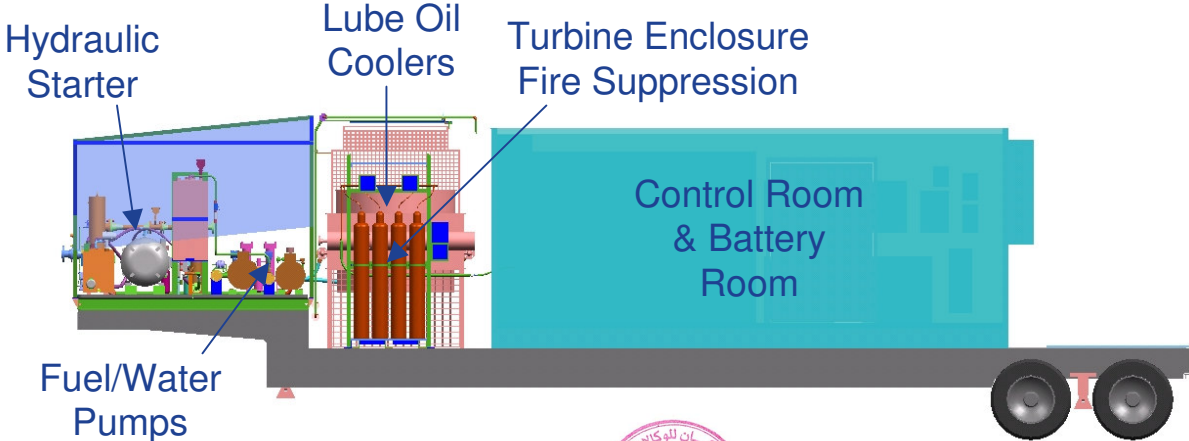
# New Two-Trailer Design



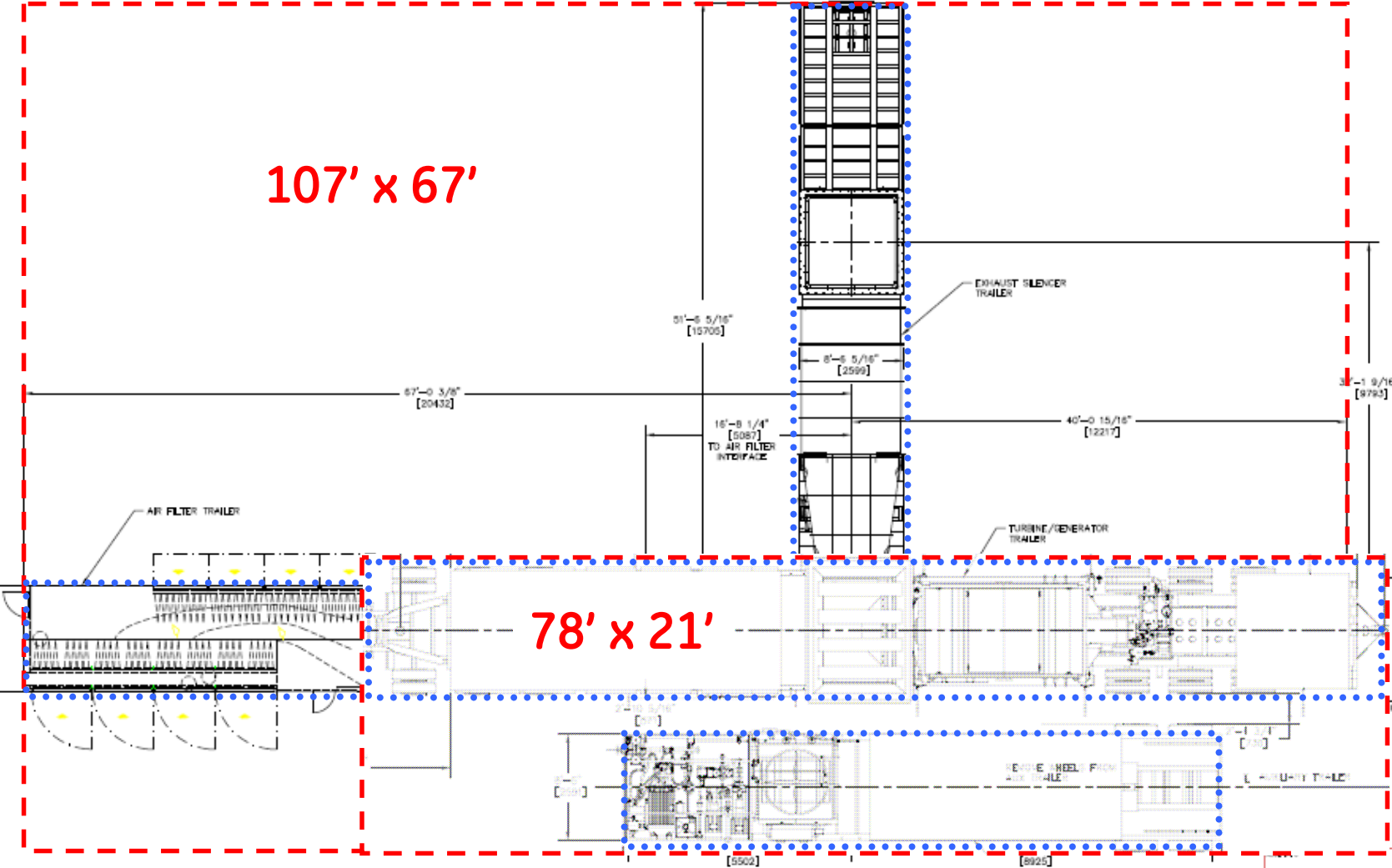
# TM2500+ General Arrangement



## Auxiliary Trailer



# TM2500/+ Footprint



77% Reduction in Installed Footprint



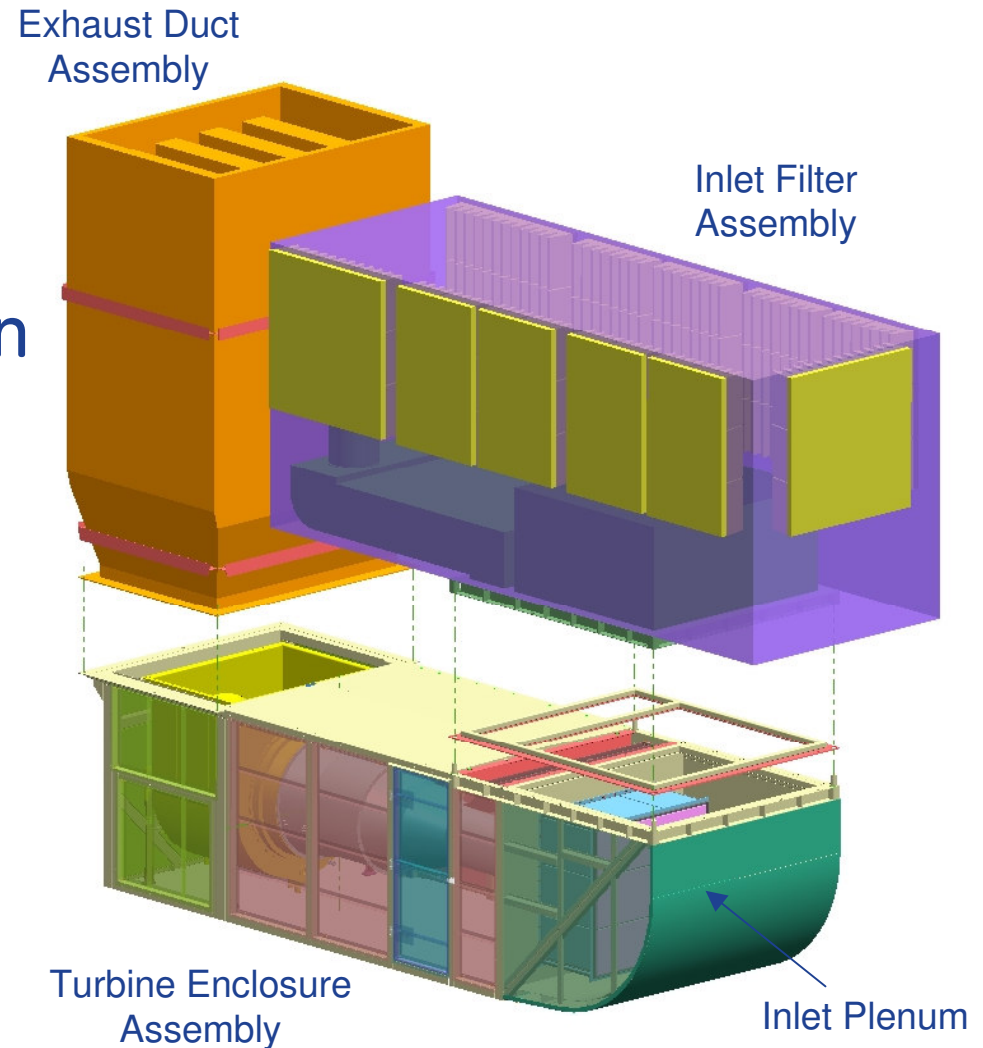
# What's New?

- LM2500 PLUS gas turbine
  - Up to 31% more power!
- Two-trailer design
  - Smaller footprint
- **Improved interconnection design**
  - **Faster installation and set-up**



# Interconnection Improvements for Faster Set-up

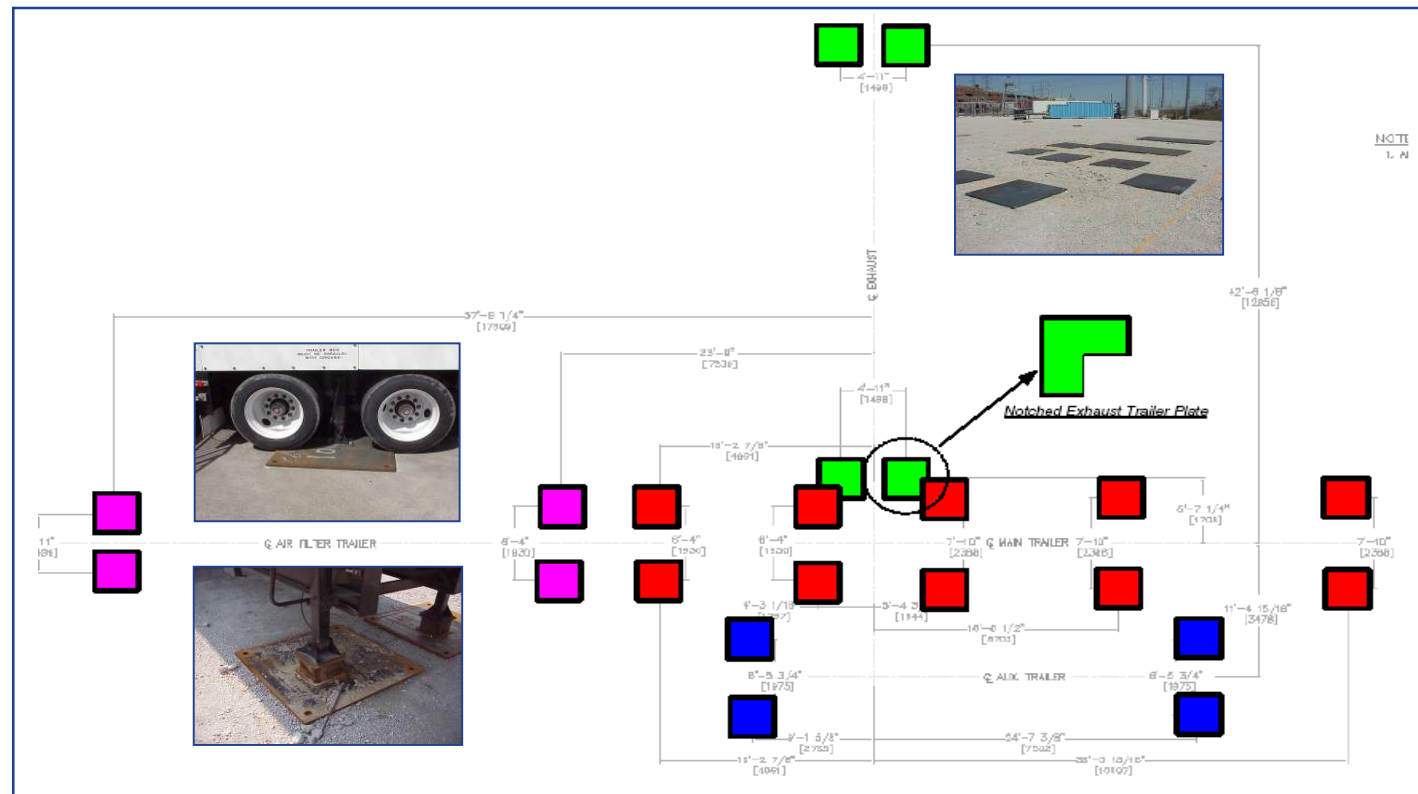
- Improved inlet & exhaust connections for quicker installation & set-up
- Can be set up in 24 hours



# Back-up

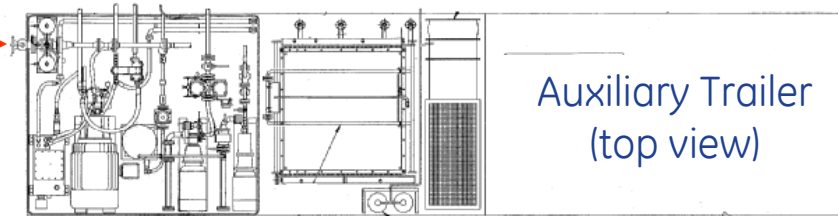
# Site Preparation / Foundation

- Level within 6 inches per 100 feet
- Solid crushed gravel with 1" steel plates
- Adequate access / space, well-lit, secure



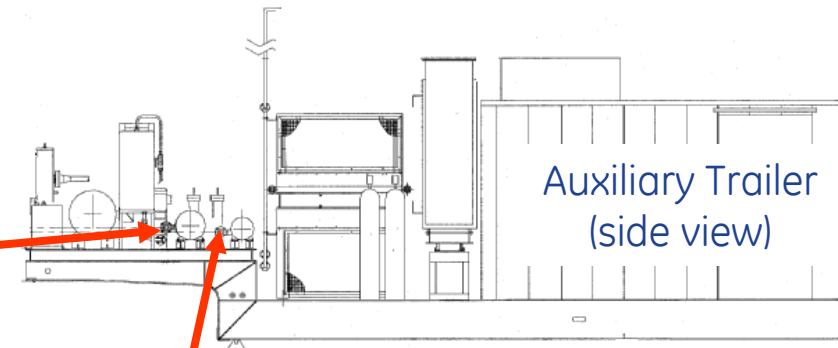
# Fuel / Water Connections

Natural Gas  
Supply (3" pipe)



Auxiliary Trailer  
(top view)

Liquid Fuel  
Supply (2" pipe)



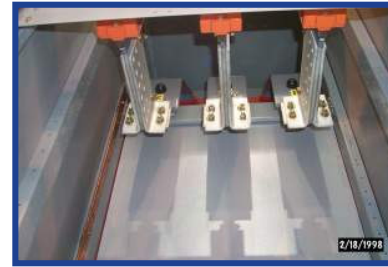
Auxiliary Trailer  
(side view)

NOx Water  
Supply  
(2" pipe)

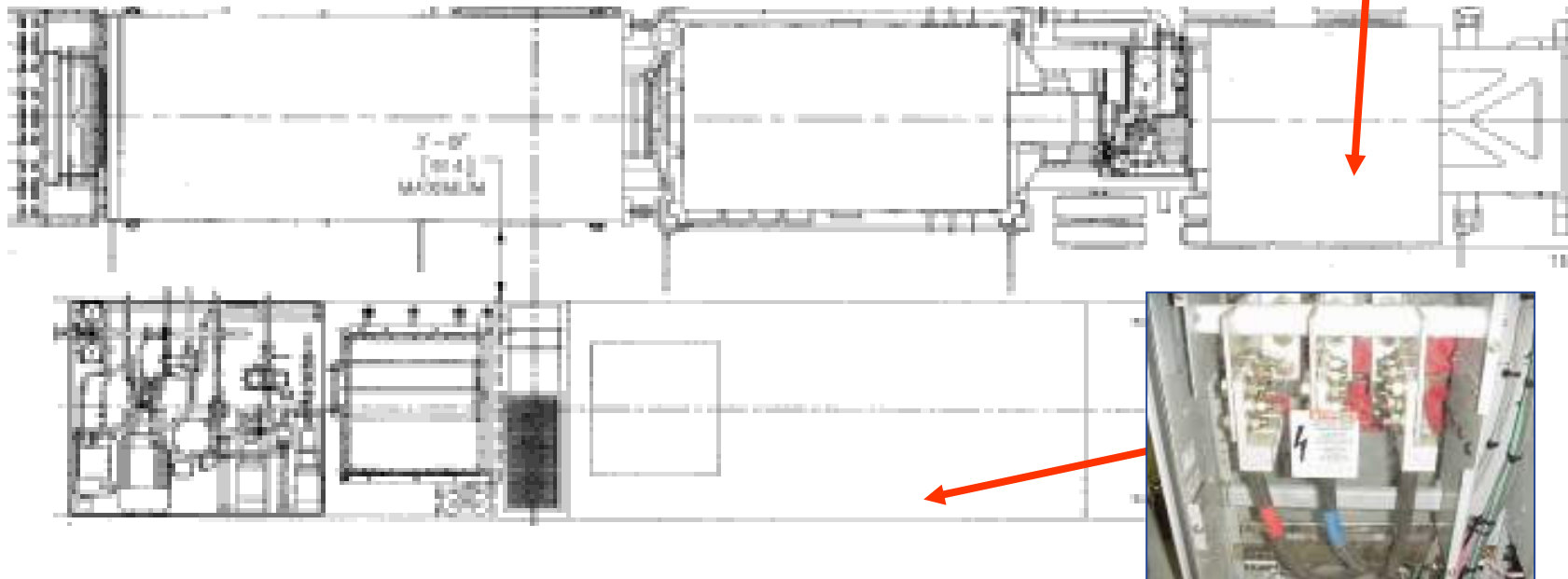


# Electrical Connections

- Generator output 13.8 kV @ 60 Hz (11.5 kV @ 50 Hz.)
- Auxiliary power requirement 480V, 60 Hz, to motor control center main circuit breaker (250 kW)



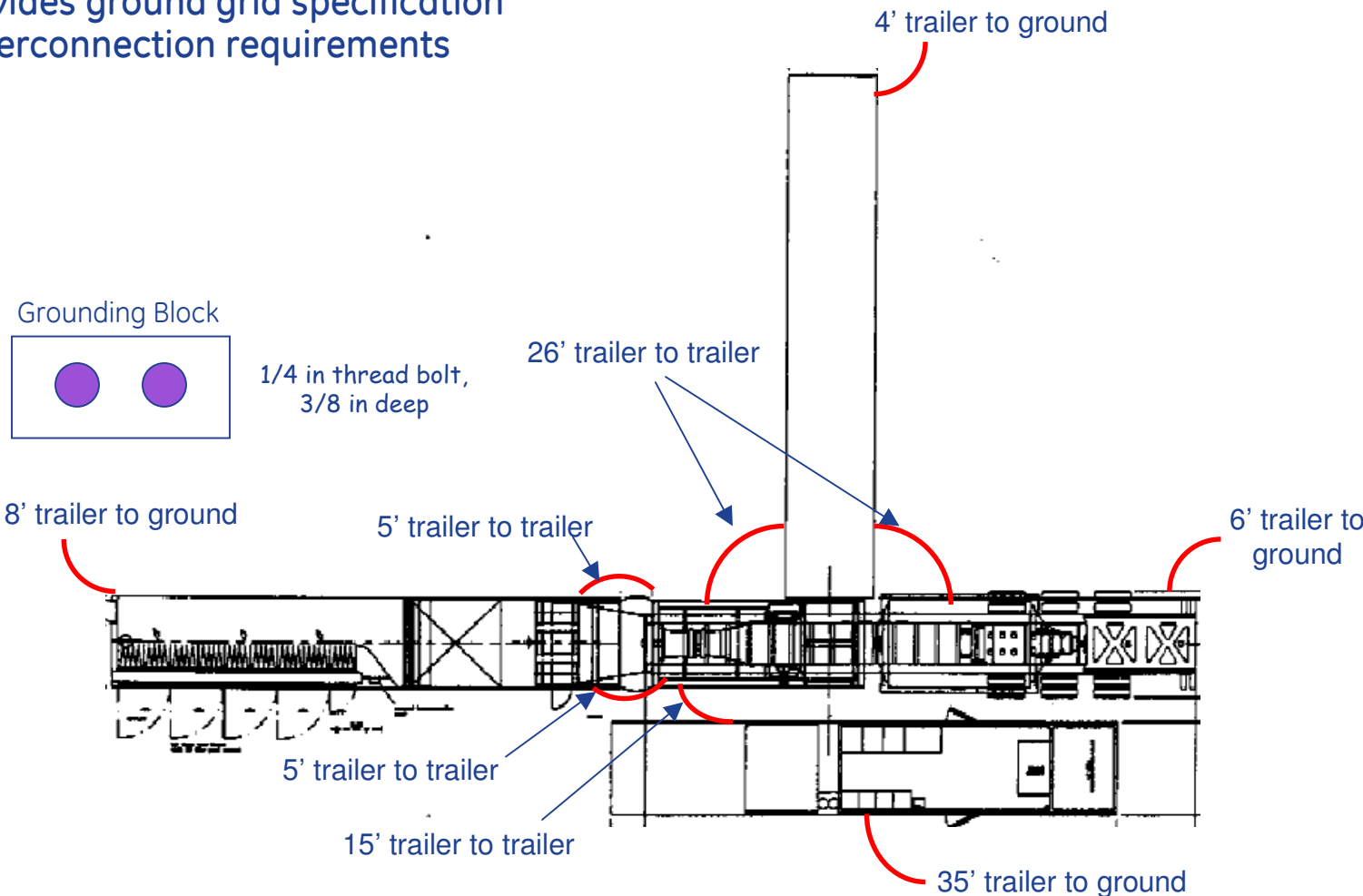
High Voltage Termination





# Grounding

- Customer furnished grounding system
- GE provides ground grid specification and interconnection requirements



# Customer Interface Details (TM2500)

## Fuel

- Gas supply pressure is 395 (+/- 20) PSIG at a rate of 12,000 pph (250 mmbtu/hr or 6 mscf/day)
- Liquid Fuel (diesel) supply pressure is 30 (+/- 10) PSIG, up to 40 GPM (max.)

## Water (for NOx suppression)

- Minimum supply pressure is 15 PSIG up to 28 GPM (max.)

## Inlet/Exhaust Air

- Nominal inlet air flow 150,000 CFM (120,000 turbine / 30,000 enclosure ventilation)
- Exhaust stack height is 20' when fully assembled
  - Flange dimensions 96" x 96"
  - Exhaust gas flow 490,000-550,000 lbs/hr

## Emissions

- Liquid Fuel: 42 ppm NOx with water injection
- Gas Fuel: 25 ppm NOx with water injection

## Noise

- Approximately 88 dBa

## Waste

- Lubricating oils (turbine & generator)
- Turbine wash detergent and rinse water



# TM2500 Unit Installation Equipment



Snorkel Lift (Telescopic Boom)



(Lull) 6,000 lb. Variable Reach Forklift



Front Loader w/forks to move sea containers



25-45 Ton Crane