



rely **on**

Transportation

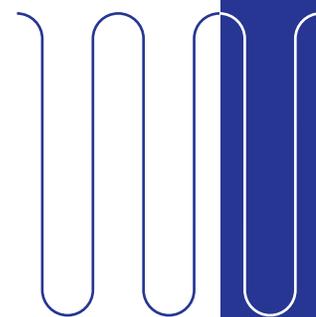
lin **on**

AN SNC-LAVALIN &  
HITACHI ENERGY COMPANY



## Global partner in rail for power supply

Linxon substations for rail ensure reliable power delivery to the line and vehicles so that trains, metros and mass transit networks stay on track and on time. Rail electrification solutions from Linxon ensure reliable supplies of AC and DC power with high performance and efficiency. Linxon provides latest and high-end technical solutions to our customers in order to reduce the life cycle cost and maintenance of the power supply system. With the turnkey approach for power supply scope Linxon provides innovative project scheduling and delivery thus enabling customer for an early completion.



# Linxon Capabilities



Leveraging the model information



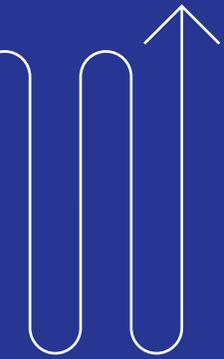
Resolving problems before construction

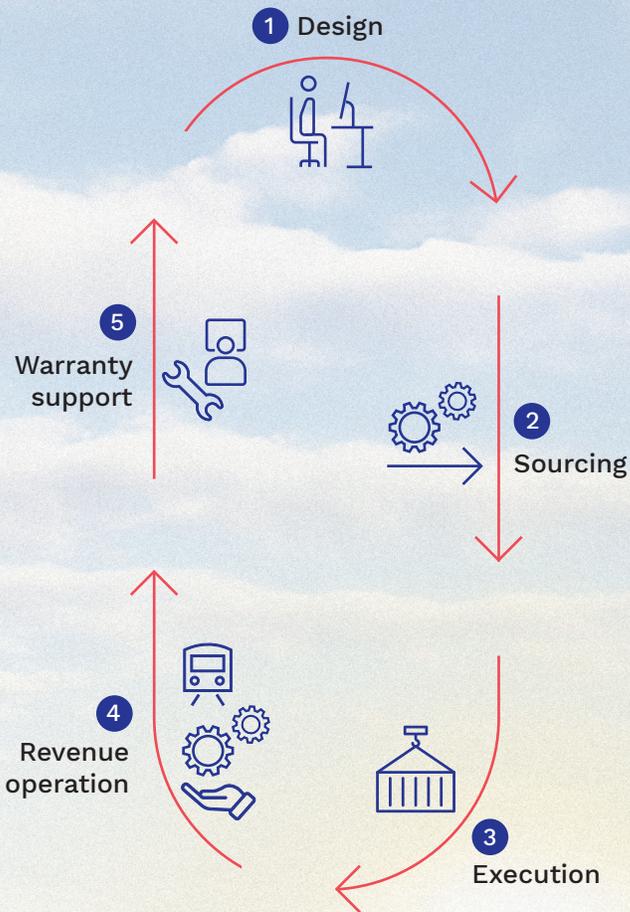


Enabling collaboration  
(time and cost saving through the projects)



Multi-disciplinary coordination





## Value addition

- A skilled, reliable and committed partner for the complete portfolio
- Predictable and cost-efficient solutions for sustainable business
- Grid-complaint solutions
- Compact and modular design with a high degree of integration
- Compliance to EMC and stray currents
- Compliance to RAMS requirements

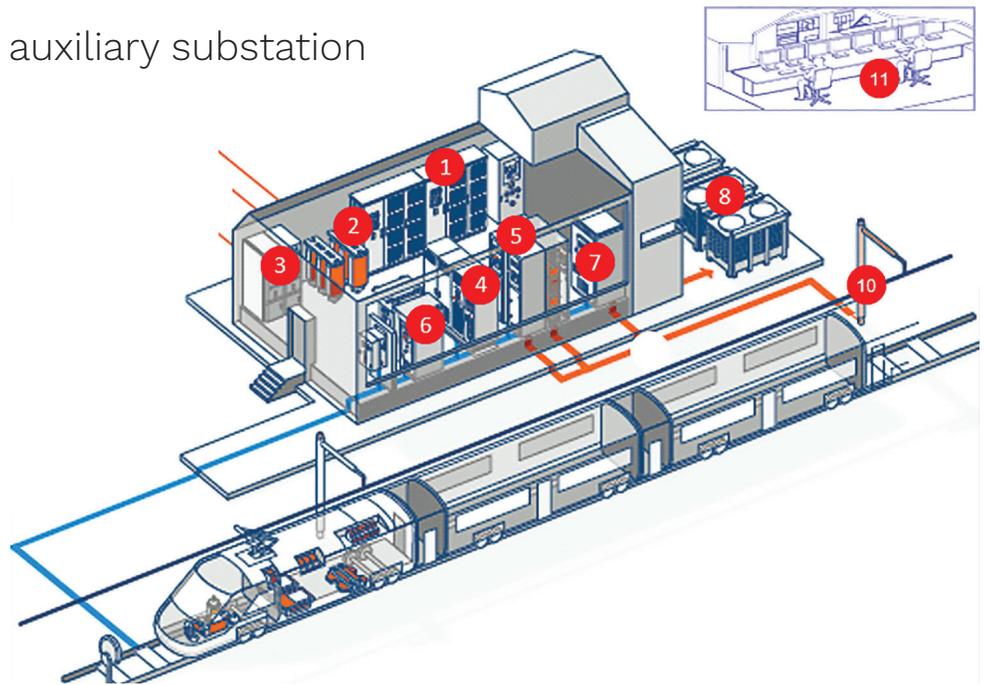
## Linxon portfolio for turnkey electrical infrastructure

- Traction power substations (built in place and containerized solutions)
- Switching and paralleling stations
- AC & DC applications
- Wayside energy storage systems
- Feasibility and reliability studies – RAMS
- System studies and traction power simulations
- SCADA systems for railway applications
- Design, erection, testing and commissioning of third rails and power rails from 750 V DC to 3000 V DC
- High speed, metro, light rail and monorail applications

# Complete solutions for DC rail applications

## DC traction system and auxiliary substation

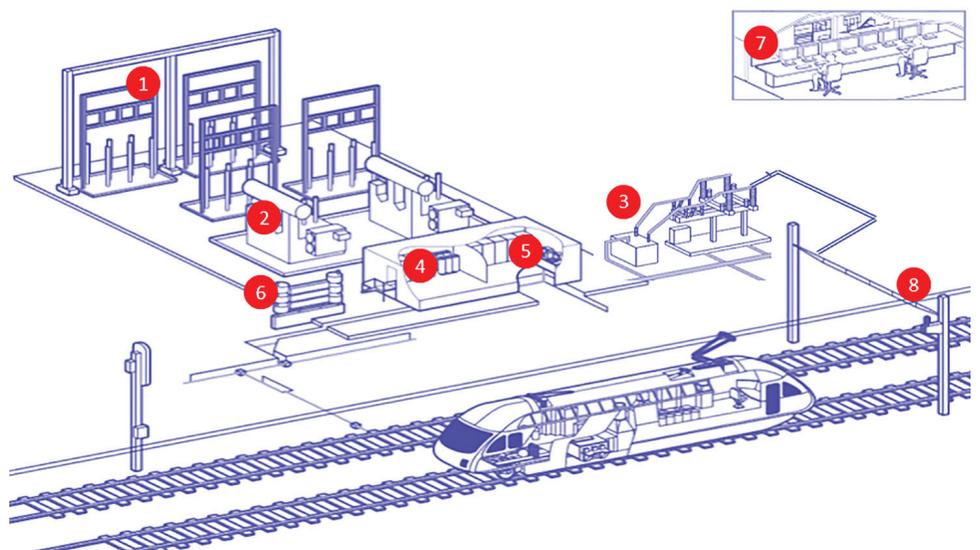
1. Indoor medium voltage
2. Traction transformer
3. Rectifier unit
4. DC switchgear
5. Negative return panel
6. Distribution and special transformers
7. Braking energy management systems
8. Resistor units
9. Power rail systems
10. SCADA systems



# Complete solutions for AC rail applications

## AC traction system and auxiliary substation

1. High voltage switchgear
2. Auto transformer
3. Traction transformer
4. Medium voltage switchgear
5. Substation automation and protection
6. SCADA system
7. Over head catenary system





## Power rails and cable systems. Bringing the power to the vehicle:

### Scope of supplies

- Design, erection, testing and commissioning of third rails and power rails from 750 V DC to 3000 V DC
- Design, erection, testing and commissioning of cable systems
- Securing interfaces and optimizing potential issues
- Power feed position and design adjusted to optimize the quantity and size of cables
- Positioning of conductor rail at station platforms/walkways
- Design is robust and safe considering stray current





# Maintenance

Optimizing connectivity, reliability, and efficiency of assets

- Time Based Maintenance (TBM)
- Importance Based Maintenance strategy (IBM)
- Condition Based Maintenance (CBM)
- Reliability Centered Maintenance strategy (RCM)

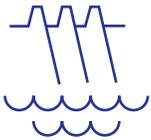


# About Linxon

We combine SNC-Lavalin's project management expertise and Hitachi Energy's industry leading technological knowledge **to create something new by leveraging the key strengths from both companies.**

We are building the infrastructure to power the world with carbon free energy.

Linxon is a joint venture company set up by SNC-Lavalin and ABB (currently Hitachi Energy) in September 2018, to deliver turnkey electrical Infrastructure projects. Linxon helps cities grow, industries expand, and communities thrive by building a crucial part of the power infrastructure. Linxon offers engineering, procurement, management and construction services for execution of large, complex AC power substations including expansions and electrification in six main segments.



## Renewable Generation

Substations that meet the demands of tomorrow



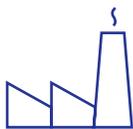
## Transportation

For all rail applications and mass transit solutions



## Utilities

Serving utilities with engineering and program efficiency



## Conventional Generation

Substation innovation connecting conventional generation



## Data Centers

Serving data center operators with specialized designs for reliable power

# Why work with Linxon?

## Safety by Design

- Proactive safety approach throughout the entire project life cycle
- Proven results validated by Linxon's safety record

## Risk Mitigation & Accountability

- Single source provider for managing the entire project from conception to commissioning
- Upfront risk identification and mitigation

## Flexible Innovation

- Integrating cutting-edge grid technology to ensure optimal project design and performance
- Innovative and flexible substation layouts

## Contact us:



**Yasir Shah**  
Global Sales Manager,  
Railways

Yasir.shah@linxon.com  
C +91 8105358294