



**HITACHI**  
Inspire the Next

**Hitachi Energy**

**Railway Industrial Clearance Association (Conference – 2023)**

**Indianapolis, IN**

# Hitachi Energy

## Who we are ?

Hitachi Energy serves customers in the utility, nuclear industry and infrastructure sectors with innovative solutions and services across the value chain. Together with customers and partners, we pioneer technologies and enable the digital transformation required to accelerate the energy transition towards a carbon- neutral future.

Hitachi Energy has a proven track record and unparalleled installed base in more than 140 countries. Headquartered in Switzerland



# Hitachi Energy

## North American Transformer Factories Overview

- 7 x Transformer Manufacturing locations in United States , 2 x Transformer Manufacturing locations in Canada (including a Large Power Transformer factory).
- Hitachi (Varenes, Canada) is a Large Power Transformer factory producing some of the largest transformers in the world, serving some of the major utilities, nuclear facilities within United States & Canada.
- With the increase in Energy demands within North American market and expectations from the customers, Hitachi units can be tall, wide with the Unit's weighting up until 850,000 lbs (during transport).
- Considering the size / weight of the Units build, these Large Power Transformers are considered under dimensional loads and Rail plays a vital role in moving these Units from the factory / Ports to the Site or to the closest Rail Siding.



# Hitachi Energy Transformers moving on Rail



# Hitachi Energy (Sustainability 2030)

## Our Plans & Targets



**Sustainability 2030** is our strategic plan for sustainability where we summarize the main commitments to act and drive business in a sustainable way. Based around four pillars: **Planet, People, Peace and Partnerships**, our strategy draws from the UN's Sustainable Development Goals (SDGs), where each pillar has corresponding targets that drive our business to contribute social value, environmental value and economic value.

### **Our 2030 Targets:**

#### **Planet:**

Carbon-neutral in our own operations

50% reduction of CO2 equivalent emissions along the value chain.

50% reduction of waste disposed

25% reduction of freshwater use

25% reduction of hazardous substances and chemicals.

#### **People**

Zero harm

Good health & well being

Life-long learning culture

Increase female diversity from 19% to 25% by 2025

#### **Peace**

Zero incidents of corruption and bribery

#### **Partnerships**

Increase involvement in multi-stakeholder partnerships

# Hitachi Energy

## Rail Challenges

- **North American Rail Infrastructure is old and is getting more and more complicated/ narrow day by day** - With Railroads infrastructure getting old, narrow in terms of allowable envelopes and with transformers getting bigger in design.. It is becoming difficult/ complicated to get the approvals from the Railroads.
- **Delays in getting the approvals and final issue of the Dimensional load Rail Pre-Clearance files (P-Files)**
- **Railroad clearance validity** - Railroad Clearances are now only valid for 6 months (previously this used to be 1 year of validity but from 2018 / 2019 onwards this has now been changed), Transformer design phase starts at least 2 years in advance based on the Initial clearances, with 6 x months validity if there are any changes within the Rail infrastructure and the Units are already in the production phase, this becomes complicated and challenging in terms of delivery.
- **Limited number of depressed deck Railcars** - H.V. Transformers transport require the usage of depressed deck Railcars for dimensional Rail Transport. These Railcars are limited in the NAM market, this requires booking of these Railcars at least a couple of months in advance and sometimes if the previous customer who is using this Railcar has not released the Railcar from their end, the arrival of the Railcar gets delayed.
- The Railcars can be anywhere in North America and are sometimes getting pulled from Houston, Louisiana, California etc. to move our Transformer Units from the factories, this takes time (before it gets loaded) which affects the overall supply chain of the factory.
- **Railcars arriving at the Shipper's facility requires proper cleaning before getting loaded** - The dimensional Depressed deck Railcars come from different sites. It is not easy to check the actual physical condition of Railcar until it arrives at the Origin for loading. If the railcars arrive dirty, this requires proper cleaning of the Railcars before loading OR if the Railcar is not in a good shape to load the transformer Units (this requires replacement), which delays the shipment.
- **Challenges with the Rail Siding owners** – Depending on the final site location if the Rail Sidings are limited in that area, sometimes Siding owners takes time with a lot of discussions / negotiations before signing the Rail Siding agreements, which delays the shipment delivery.
- **No commitments from the Railroads for transit times / pick up & delivery timings.** Dimensional loads are moved across the Rail network based on various considerations, and at the sole discretion of Railroad Operations, with no confirmation on the transit times, pick up and delivery timings this becomes an issue for the end customers.
- **Limited Space to keep Idlers / Spacers at Factory premises**– Due to the Old Railroad Infrastructure, almost 60-70% of the Large Power Transformer Units now require the usage of Idler / Spacer cars for the load distribution. The factories lack space In keeping more than 4-6 Idlers together with the loaded Railcars at the same time.

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