

Case study

Disconnecter retrofit solution

Gujarat State Electricity Corporation Limited, India

Tailor-made disconnector retrofit solution for ageing infrastructure.

Ageing power infrastructure is a key concern in the power industry. It can cause low operational efficiency, higher maintenance costs, and could also increase the number of outages.

Hitachi Energy offers retrofit solutions that can be easily integrated with the existing on-site infrastructure in an economical and speedy manner. A good example of this is the disconnector retrofit solution implemented at the power plant of Gujarat State Electricity Corporation Limited (GSECL).

Customer challenge

Gujarat State Electricity Corporation Limited (GSECL), is a leading power generation company in India having installed capacity of 5541 MW and owns 10 power generation plants in the state. The switchyard at one of their power plants was facing issues due to inefficient operation of the disconnectors. This was not only a maintenance concern but also meant a safety hazard for the personnel working on related operations.

Tailor-made retrofit solution

Hitachi Energy offered an easy-to-install retrofit solution for the disconnectors. The retrofit solution was provided for only the worn-out components such as the current path, insulator and mounted area of the disconnector, without any modifications for other well-functioning parts of the equipment.

The retrofit solution was implemented in just 3 days as compared to 15 days required for installing new equipment. The reduced downtime combined with savings in additional infrastructure investments translated into a cost-effective solution for the plant.

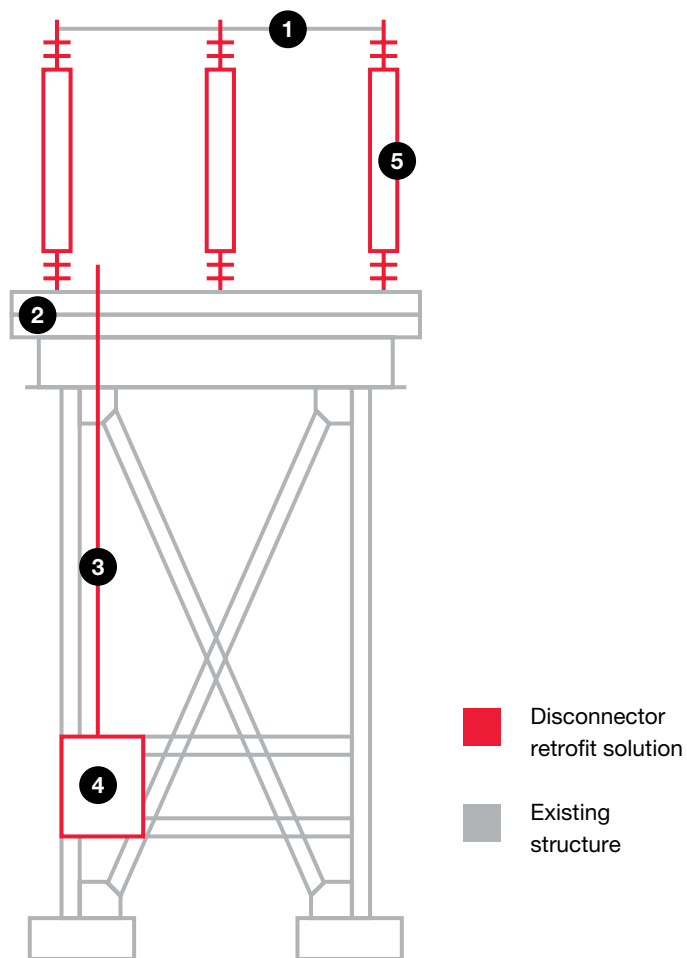
Hitachi Energy disconnector retrofit solution is robust, with in-built safety features and expected to deliver superior on-site performance.



Technical features and key advantages

- Reduced energy loss due to minimized contact resistance and large contact area
- High reliability from special design-dead center interlocking for reliability under extreme conditions
- Superior design of mechanical interlock
- Low friction design for smooth operation
- Easy and quick to install
- Suitable for wide range of environmental conditions

Section view of disconnector retrofit (exemplary illustration)



Retrofitted components on existing structure

- ❶ Current path
- ❷ Adapter base to mount Hitachi Energy disconnector
- ❸ Operating rod
- ❹ Old drive
- ❺ Supporting insulators

Technical data

Year of implementing retrofit	2019
Disconnector type	SDF245
Rated voltage	245kV AC
Rated current	1600/ 2500 Amp
Rated frequency	50 Hz
Short-circuit current	40 KA for 3 Seconds