

ABB powering sustainable transportation

A strong track record in delivering urban mobility



ABB's power and automation technologies for sustainable transportation are helping to deliver urban mobility to meet increasing demands faced by modern cities.

To deliver low-emission transport and fast, safe urban mobility, cities are developing their light rail, metro and tram systems for improved intercity connections and increasingly turning to electric mobility to alleviate urban congestion, reduce emissions and generally improve quality of life.

Transportation and Infrastructure is one of the three sectors served by ABB alongside utilities and industry and sustainable mobility is a key focus area in ABB's Next Level strategy.

ABB has grown its rail activities considerably, evolving into a major supplier to numerous train manufacturers and local network operators. Besides trains and metros, ABB plays a vital role in the development of sustainable mobility, providing innovative and efficient technologies for electric vehicle charging infrastructure.



ABB's broad rail offering

ABB's expertise in power and automation has proven decisive when it comes to providing clean and reliable power solutions for rail networks and vehicles.

It designs, engineers and commissions solutions to achieve its customers' objectives of safe, reliable and cost-effective passenger transportation.

ABB's traction systems for metro and light rail vehicles support the construction of clean, safe railway networks in cities. Its wayside energy management systems can reduce overall power consumption by 10–30 percent through recuperating energy normally lost when a train brakes.

The portfolio also includes critical infrastructure such as traction substations that increase energy efficiency, as well as high- and medium-voltage switchgear, converters and transformers necessary to power trains at a frequency they can use. ABB products improve power quality and protect the network that trains rely on as well as the surrounding grid from voltage disturbances.

ABB also offers complete service, maintenance and refurbishment solutions, which are becoming increasingly important as rail operators seek cost-effective solutions to update or retrofit fleets to meet the demands of the future.

ABB's offering for electric mobility

As the market and technology leader in electric-vehicle charging, ABB is developing fast-charging infrastructure for electric and battery-powered buses that allows them to charge in 15 seconds. This contributes to the reduction of atmospheric, visual and noise pollution in cities and provides real alternatives to trolleybus and diesel bus systems.

Reference projects and awards

– Maryland Transit Administration (MTA): As supplier of choice when it comes to rail upgrade projects, ABB is providing state-of-the-art traction converters associated with the modernized train control management system and new electrical control panels for the overhaul of Baltimore's entire fleet of light rail vehicles. This offers higher reliability and energy efficiency, as well as a more comfortable ride for the passengers.

- GoldLinQ: ABB will help optimize substation performance through a three-year contract to provide customized maintenance and service solution for six medium-voltage direct-current traction substations that are providing power for the Gold Coast Light Rail project in Australia.
- TOSA: ABB flash charging technology and traction equipment incorporated on TOSA, the first 100% electric articulated bus, was recognized at the German EBUS Award 2014.
- SEPTA: ABB's partnership with the Southeastern Pennsylvania Transit Authority (SEPTA) to transform their system into both a smart consumer and producer of energy won the prestigious award for "Innovation in Mobility" at the Energy Storage North America conference, the largest grid energy storage event in North America.

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