## 株式会社 総合車両製作所 JAPAN TRANSPORT ENGINEERING COMPANY

25th October, 2013

## Acceptance of design work orders for energy saving refurbishment

Japan Transport Engineering Company

J-TREC has been a railway vehicle manufacturer for 65 years.

We not only manufacture new vehicles, but also undertake large-scale refurbishment for our customers. Recently, we accepted the following two major vehicle refurbishment design works aiming to save energy.

## 1) Design work of equipment modernization for Ukraine Kiev Municipal Subway Enterprise (Kiev Metro) train

We received orders from Itochu Corporation on April, 2013 for under floor equipment layout design work, system design work and on site training for Kiev Metro staff related to exchange of main electrical equipment including main circuit, auxiliary circuit and brake equipment



1) Kiev Metro (Image)

## 2) Design work of propulsion system replacement project for SMRT Trains Ltd (SMRT: Singapore Mass Rapid Transit)

SMRT will replace the existing propulsion system of GTO Chopper-controlled motor with a new propulsion system of IGBT Inverter-controlled Permanent Magnet Synchronous Motor(PMSM) in SMRT C151 vehicles for the purpose of energy saving. We received orders from Toshiba Corporation on October, 2013 for under floor equipment layout design work, system design work and on-site coaching for staff related to equipment replacement.



2) Singapore SMRT Type C151 (Image)

