JCM Projects In Asia

Eco-Driving by Utilizing a Digital Tachograph System

Nippon Express Co., Ltd.
March 19, 2015
Tokyo, Japan
Contents

1. About Nippon Express
2. Digital Tachograph System
3. Why Promote Eco-Driving through the Use of Digital Tachograph System?
4. The Case of a CDM Project
5. Status of the Eco-Driving JCM Project in Viet Nam
6. JCM vs. CDM
7. Investment Cost Subsidy Scheme
About Nippon Express
Nippon Express Group’s Corporate Philosophy

**Our Mission**
Be a Driving Force for Social Development

**Our Challenge**
Create New Ideas and Value that Expand the Field of Logistics

**Our Pride**
Inspire Trust Every Step of the Way

Since our founding, the Nippon Express Group has employed our logistical strengths to connect people, businesses and regions throughout the world. In so doing, we have continuously supported social development.

While our mission never changes, we continuously advance to meet the world’s changing needs.

Making no compromise in safety and maintaining a deep focus on environmental issues, we continuously strive to deliver innovative solutions at the next frontier of logistics.

We will forever take pride in our ability to inspire trust and answer the call of society.

Every move we make is aimed at advancing society and bringing an enriched life to future generations.
## Nippon Express in Figures

<table>
<thead>
<tr>
<th>Name</th>
<th>NIPPON EXPRESS CO., LTD.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formal establishment</td>
<td>October 1, 1937</td>
</tr>
<tr>
<td>Paid-in Capital</td>
<td>70,175 million yen</td>
</tr>
<tr>
<td>Employees (Parent)</td>
<td>33,153</td>
</tr>
</tbody>
</table>

## Consolidated Financial Summary  (As of March 31, 2014)
Overseas Network

Present at 481 locations in 40 countries and 229 cities. (as of September 2014)

- Transport and Environmental Issues
  Growing congestion and pollution in emerging markets

- Japan as a Member of the International Society
  Global reductions of CO2 emissions are not possible only with domestic efforts in Japan.

- The Global Nippon Express and its Responsibilities
  Reduce CO2 emissions and traffic accidents through the promotion of eco-driving projects
Digital Tachograph System
~Data Collection and Processing System~
Digital Tachograph System II

SRnetwork (DataTec)

OP Supporting system (Nippon Express)

Movement data transmission

Movement management data
Operation management data

Web inspection

Manager

It uses it as an interim storage of the personal authentication and data.

※ In the screen, English and the report are Vietnamese.
Why Promote Eco-Driving through the Use of Digital Tachograph System?
Management Plan of the Nippon Express Group

- Increase of the Share of Overseas Business
- Establish Internationally Recognized Standards for Safety and Quality
- Promotion of Green Logistics

Sales
- Design of new products and services
- Add value to existing products

Operations
- Improved safety
- Improved quality
- Reduced accidents
- Improved fuel efficiency

CSR
- CO₂ emission reductions
- Environmental education
- Contribution to the global society
- Human rights

Address various social issues through project activities = CSV Management
Expansion in South & Southeast Asia and Oceania

SS7000
(Cross Border Trucking Service Linking East & South Asia)

Organization Scale And Total Warehouse Area
(as of September 2014)

<table>
<thead>
<tr>
<th>Organization Scale</th>
<th>Employees: 7,877, 30 companies, 2 offices, 142 locations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Warehouse Area</td>
<td>635,612 sq. m</td>
</tr>
</tbody>
</table>
Progress Situation
(as of March 2015)

- **Thailand**
- **Malaysia** CDM 2012
- **Indonesia**

Currently Underway

- **Shanghai**
- **Shanghai and other cities (China)**
- **Guangzhou (China)**
- **Viet Nam JCM 2014**

Under Consideration

- **Viet Nam JCM 2014**
- **Shanghai and other cities (China)**
- **Guangzhou (China)**
- **Indonesia**
- **Malaysia CDM 2012**
- **Thailand**

Introduction of Digital Tachograph System
How Does It Work?

Digital Tachograph + Training Centers

It is not just about hardware, but about training and education!!!
In the IZU Training Centre (Japan), Nippon Express provides safety and operational training to its employees and assists them in acquiring fundamental driving and vehicle maintenance skills.

### Outline of a facility

<table>
<thead>
<tr>
<th>Component</th>
<th>Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Site area</td>
<td>98,324㎡</td>
</tr>
<tr>
<td>Building Area</td>
<td>6,396㎡</td>
</tr>
<tr>
<td>Total floor area</td>
<td>13,104㎡</td>
</tr>
</tbody>
</table>

### Training Equipment

<table>
<thead>
<tr>
<th>Component</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Driver training course</td>
<td>Area 21,900㎡</td>
</tr>
<tr>
<td></td>
<td>Circumference 600m</td>
</tr>
<tr>
<td>For training units</td>
<td>Truck 43</td>
</tr>
<tr>
<td></td>
<td>Forklift 14</td>
</tr>
</tbody>
</table>

### Accommodation

<table>
<thead>
<tr>
<th>Component</th>
<th>Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total floor area</td>
<td>10,675㎡</td>
</tr>
<tr>
<td>Number of guests</td>
<td>174</td>
</tr>
</tbody>
</table>
Trainings Overseas (Examples)

① Lectures (Basics of Eco-Driving)
② Group Exercises
③ Trial Eco-Driving (accompanied by an instructor)

① Reduced speed
② No sudden acceleration
③ No idling
④ Appropriate tire pressure
⑤ Daily car inspection
Results of a CDM Project
Monitoring Period:
November 29, 2012 – April 30, 2013 (6 months)

Baseline Emissions
1,622 tCO₂

Project Emissions
1,550 tCO₂

Emission Reductions
72 tCO₂ (total)
1.6 tCO₂ (per truck)
Monthly Percentage “CO₂” Reductions for our Long Hauled Vehicles
(%) tage Reductions

![Graph showing monthly percentage reductions from January 2013 to December 2013. The reductions range from 0% to 8%, with a general trend of increase.]
ACCIDENTS / 1,000 TRIPS 2011-2013 (event-delimited)

- Pre-Installation of Digital Tachograph and GPS system: 0.67
- Since Installation the system: 0.27
- Since Providing Incentives: 0.07

Currently: 0.04
TRIPS AND ACCIDENTS / TRIPS (%) 2011-2013 (yearly)
1. Costs of digital tachograph on-board terminals vary between USD 1,000 – 3,000, but it is possible to pay back the investment within 3-4 years

2. In addition to improved fuel efficiency, accidents are also reduced, leading to reduced maintenance and insurance costs

A sustainable project with numerous co-benefits
Current Status of the JCM Project in Viet Nam
<table>
<thead>
<tr>
<th>Month</th>
<th>Event Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jul 2014</td>
<td>Draft JCM methodology is developed</td>
</tr>
<tr>
<td>Jan 2015</td>
<td>JCM methodology is approved/stakeholders’ meeting with drivers is conducted</td>
</tr>
<tr>
<td>Feb 2015</td>
<td>Reference emission data collection is completed</td>
</tr>
<tr>
<td>Mar 2015</td>
<td>Digital tachographs are imported in Viet Nam Draft PDD is prepared</td>
</tr>
</tbody>
</table>
CDM vs. JCM
### JCM and CDM: A Comparison

<table>
<thead>
<tr>
<th></th>
<th>JCM</th>
<th>CDM</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Advantages</strong></td>
<td>1. Simplified methodologies compared to the CDM</td>
<td>1. Locally-based DOEs</td>
</tr>
<tr>
<td></td>
<td>2. Smooth validation and verification process</td>
<td>2. Clear common rules with certain flexibility for localization</td>
</tr>
<tr>
<td></td>
<td>3. A subsidy-based mechanism (not market-dependent)</td>
<td>3. Tradable carbon credits (CERs)</td>
</tr>
<tr>
<td><strong>Disadvantages</strong></td>
<td>1. Limited number of TPEs (Third Party Entity (Only two available for the transport sector in Viet Nam)</td>
<td>1. Onerous process up to registration</td>
</tr>
<tr>
<td></td>
<td>2. Country-specific rules and methodologies</td>
<td>2. Onerous issuance process</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. Uncertainties related to constant regulation changes, including updates of methodologies</td>
</tr>
<tr>
<td><strong>Common Advantages of Project-Based Mechanisms</strong></td>
<td>1. Important mechanisms for improving the project economy</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2. Various monitoring and data collection requirements lead to overall improvement of the project management</td>
<td></td>
</tr>
<tr>
<td><strong>Areas with lack of clarity</strong></td>
<td>1. Are costs of Validation and Verification lower compared to the CDM?</td>
<td>1. Future development of the CDM market</td>
</tr>
<tr>
<td></td>
<td>2. What will happen with the JCM credits in the future?</td>
<td></td>
</tr>
</tbody>
</table>
Investment Costs Subsidy Scheme
1. The subsidy scheme managed by GEC has clearer standards for project selection and implementation

2. The system is flexible and user-friendly

3. A major disadvantage: the subsidy covers only equipment purchase costs and does not recognize software and IT system development as associated costs.
Thank you!