



**Christophe Tassin**

NMBS-SNCB

# Differences in driving style seen through the on-board energy meter

16 june 2011

# Energy Meter

**5 Traxx locomotives (D-B-F)**

**AC & DC**

**Manual download on-board**

**No complete compliance to TSI and EN**

**Freight traffic Belgium-France**

# Monceau - Fagnies

**13/1: 1968t, 1908 kWh, 1.1% recuperation**

**14/1: 1664t, 1935 kWh, 12% recuperation**

**4/4: 2023t, 2541 kWh, 3.6% recuperation**

**6/4: 1617t, 1624 kWh, 20.8% recuperation**



# Fargniers – La Louvière

**13/1: 455t, 1478 kWh, 2% recuperation**

**14/1: 454t, 1104 kWh, 5% recuperation**

**4/4: 452t, 1316 kWh, 0.6% recuperation**

**6/4: 455t, 1350 kWh, 7.8% recuperation**

# Installing energy meters?

**Even without compliant metering, data about:**

- **Driving style**
- **Consumption**
- **Recuperation levels AC/DC**