Asciano – Pacific National
Improving Loco Exhaust Emissions

Rod Finlay & Robyn Simpson
Efficient movement of goods vital to the economy - rail supports many of Australia’s most important industries

Australia is currently one of the most intensive users of road transport in the world

Rail has an important role to play:
- most efficient mode of freight transport;
- contributing to social amenity by reducing carbon emissions & congestion;
- improving road safety outcomes

Asset lifespan - age and number of Australian loco assets

National business model – with potentially state based regulation

It is important that we improve our emissions contribution without compromising rail transport’s many benefits
LOCO EXHAUST EMISSIONS TRIAL

Industry leadership

• Build data to support asset strategy
• Evidence based approach & the contribution from loco sources

Challenges:

• No dedicated / accredited test facility
• Total cost of testing technology
• Test setup – testing kit efficacy only, not rebuild benefits
• Quantification / Fuel & Power
• Duty Cycles

Further testing conducted in March 2016
OUTCOMES

↓ excellent emissions reductions for PM, NOx ‘regulated pollutants’

↑ alarming fuel increases, therefore

↑ CO₂ increases

• CHOICE: NOx ↓ or fuel-efficiency
• Priority pollutants: PM and CO₂
• Suppliers: certification of technology for both emissions and fuel efficiency impacts
• Assess upgrade solutions, case by case for engine class
OTHER LOCO EMISSIONS MANAGEMENT

We undertake:
Locomotive maintenance program
Fleet modernisation
Fuel efficiency programs

External influences on emissions:
• Rail network pathing
• Rail envelope
• Fuel standards
OUR LOCO EXHAUST EMISSIONS STRATEGY

1. Carbon emissions reduction alongside loco exhaust emissions improvement

2. Sustainable introduction of proven technology to existing and new fleet

3. Loco maintenance programs
YOUR QUESTIONS?