

# A bridge for the fuel gap

Next year, results from Dennis Eagle and BAE Systems' hybrid RCV trials should be available. **Andrea Lockerbie** looks at what the two companies hope to achieve

## ■ AS YOU MIGHT EXPECT, COST, EMISSIONS AND NOISE ARE OFTEN THE KEY CONCERNS

for waste and recycling fleet managers. So refuse collection vehicle (RCV) manufacturer Dennis Eagle has been seeking to address these. Its purpose-built municipal chassis with HybriDrive technology has been developed with BAE Systems, and is currently undergoing field trials, with results expected to be out early next year.

Dennis Eagle managing director Norman Thoday says: "We are looking at what customers are doing in five or 10 years' time. We are harnessing new technology so you can get more from the truck but use less fuel, which offsets the premium paid."

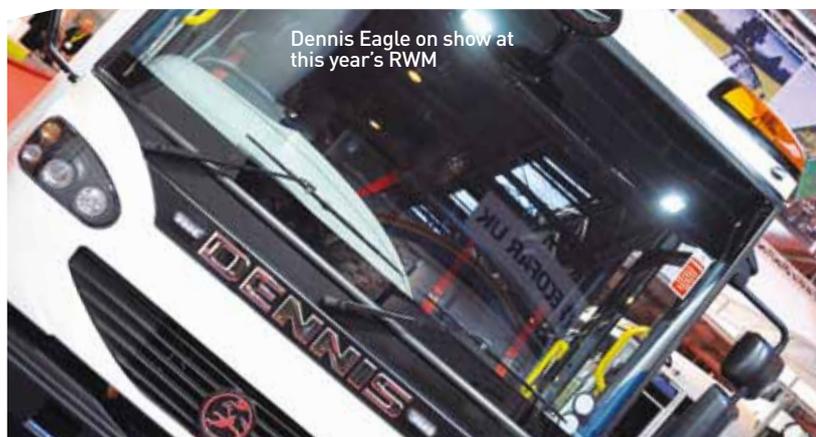
Thoday adds that while building fuel and emissions savings devices into vehicles comes at a cost, when the operational savings that the new technology can offer are factored across the lifespan of the vehicle, the payback periods are relatively short and offer customers long-term savings.

He adds that the manufacturer will not know until development work is complete if the hybrid "will be successful or not".

To compare directly the trial hybrid vehicle with an existing model, it put a standard Euro 5 engine RCV out on operation and collected data, then converted it into a hybrid model using the BAE Systems technology. Tests with the hybrid are now underway on the same rounds with the same crew, so that the impact of the heavy-duty hybrid electric propulsion system can be fully and directly monitored.

Although we live in cost-conscious times, Thoday says that price is often third or fourth on a customer's list, with reliability more of a priority as well as perhaps noise or payload.

BAE Systems director of programs for power and energy management electronic systems Mike Mekhiche adds that its work with Dennis Eagle is about "bringing value", and that it is "enthusiastic



Dennis Eagle on show at this year's RWM

about the potential this relationship brings to the market". BAE Systems has already had a successful relationship with bus and coach manufacturer Alexander Dennis and systems integration experience working with hybrid technology, but use of the technology within an RCV is unknown territory.

The system being tested with Dennis Eagle is based on parallel hybrid architecture. The key test will be how it performs with the stop/start nature of RCV collection rounds. But the main benefit, if it works, will be the on-board electrical system, which works in conjunction with a self-propelled diesel hybrid engine.

Mekhiche explains that the key benefits on offer will be lower emissions and fuel economy. From the driver and householder perspective, it should also mean a quieter environment when the vehicle is in electric mode.

Assuming all goes well with the trials, BAE is working towards a Q4 2012 production schedule for the system, and would look to develop a local base once the system is properly launched in the UK so that it "brings the components closer to the end user".

For Mekhiche, the use of its system in RCVs "has to lower the cost of the vehicle and give it improved performance, fuel economy and payback within five years", and he is confident that "all the advantages we demonstrated on transit vehicles, we can leverage with the truck market".

He sees hybrid as the technology which will manage the transition from where we are now to a world where predominately electric vehicles are used in 20-30 years' time: "By 2050, more than half the population will live in cities, which will be looking for sustainable transport systems. Hybrid technology responds to those needs and is the bridge technology to get to electric." ■

## AT A GLANCE

Trials that integrated a heavy-duty hybrid electric propulsion system into a low-entry Dennis Eagle cab are underway – with the hope that the fusion will result in lower emissions, reduced fuel consumption and less noise

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