

BWG-P-11-05

TfL hybrid bus monitoring

Bradley Ling and Gary Filbey from TfL will be attending the BWG to present the latest results of the TfL hybrid trials and to present the way data is collected. Gary Filbey has been appointed to take over from Mike Winters who has retired from TfL.

Hybrid bus evaluation report

Period 8 2010/11



Executive summary

In period 8, 46 hybrids were in operation in this period. At least six of these buses that were not in operation have been returned to the manufacturer for upgrade for return in April 2011. In the same period a total of 87 days were lost due to road traffic accidents. This is up from last period. In terms of manufacturer upgrade programmes, these are ongoing with at least one hybrid that would usually operate on route 141 returned to the manufacturer towards the end of period 8 for upgrade to final production standard. The continue upgrade programme for the hybrid buses on route 328 is ongoing with one bus returned to the manufacturer during period 8.

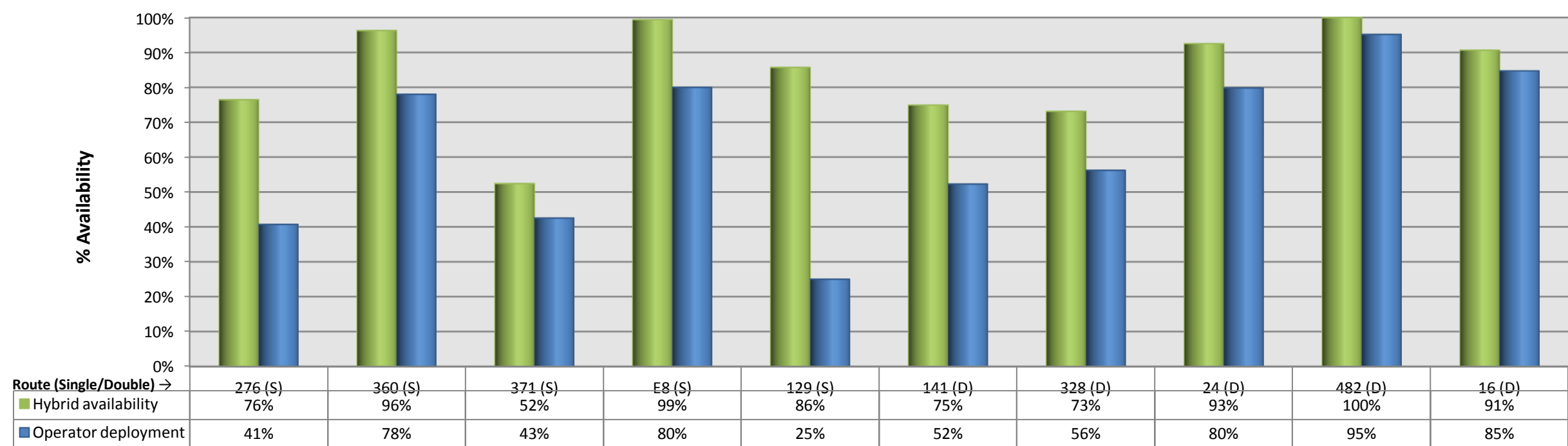
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Availability

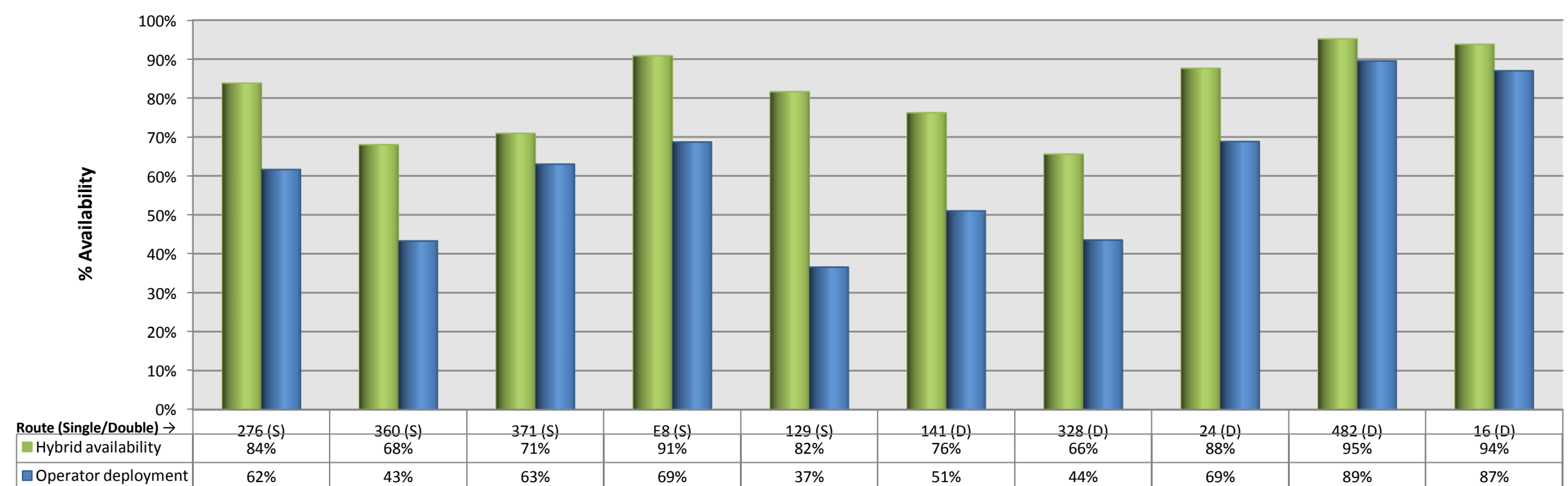


Hybrid availability:- based on total scheduled hours for period, should be interpreted as the total time the hybrid bus was available for service.
Operator deployment:- is the time the bus was actually used by the bus operator.

Commentary

Some much improved results have been reported in this period with one route achieving 100% hybrid availability and one other route obtaining 99%. Route 371 in contrast is still experiencing technical problems which have meant the hybrid technology was only available 52% of the time and only completed 43% of its scheduled hours. The 75% hybrid availability on route 141 reflects the ongoing OEM upgrade programme of one of the manufacturers. Group 7 availability is 68% compared to 83% for group 4 (see appendix).

Availability year to date



Hybrid availability:- based on total scheduled hours year to date, should be interpreted as the total time the hybrid bus was available for service.
Operator deployment:- is the time the bus was actually used by the bus operator.

Commentary

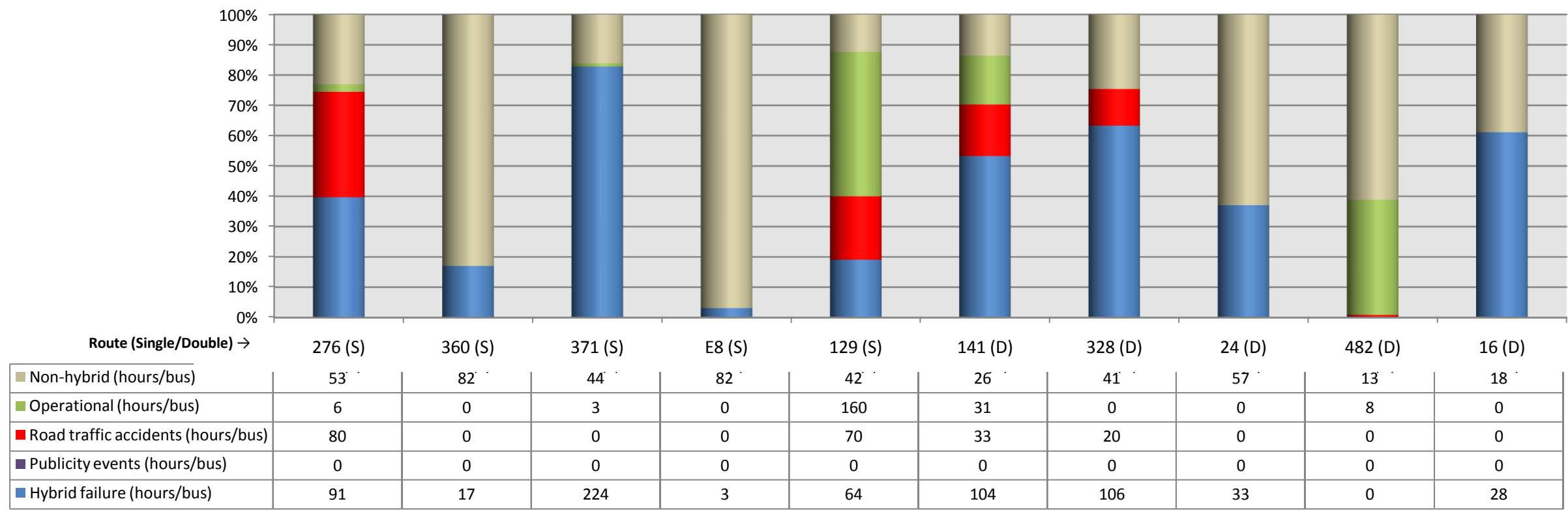
Five routes have performed very strongly. All other routes have performed lower availability than would be expected. These routes have experienced either underlying technical problems or extensive manufacturer withdrawals. Encouraging results are being reported on route E8 with strong hybrid availability results however body related concerns are ongoing and have limited the actual deployment availability of the buses.

Hybrid bus evaluation report

Period 8 2010/11



Period 8 reasons for bus not entering service

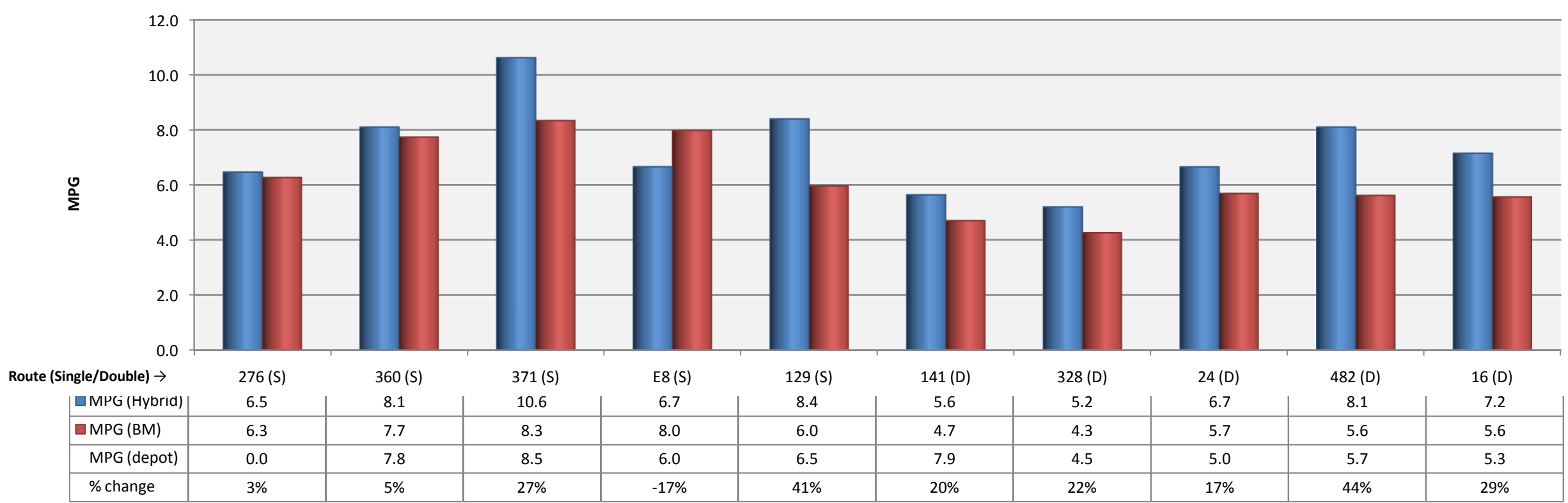


Non-hybrid:- relates to reasons for the bus not completing a full duty that is unconnected to the hybrid technology. Operational:- includes actions directly taken by the bus operator (i.e. driver training, bank holidays, etc). Hybrid failure:- reports the hours taken out of service relating to the hybrid bus.

Commentary

Route 371 hybrid buses have reported the largest number of lost hours with 224 hours lost per bus. The issue is being addressed by the manufacturer and will be monitored closely for improvements in hybrid availability. The number of hours lost due to road traffic accidents was higher this period than in the past. Route 328 is the only route with two separate RTAs occurring in the same period on two buses.

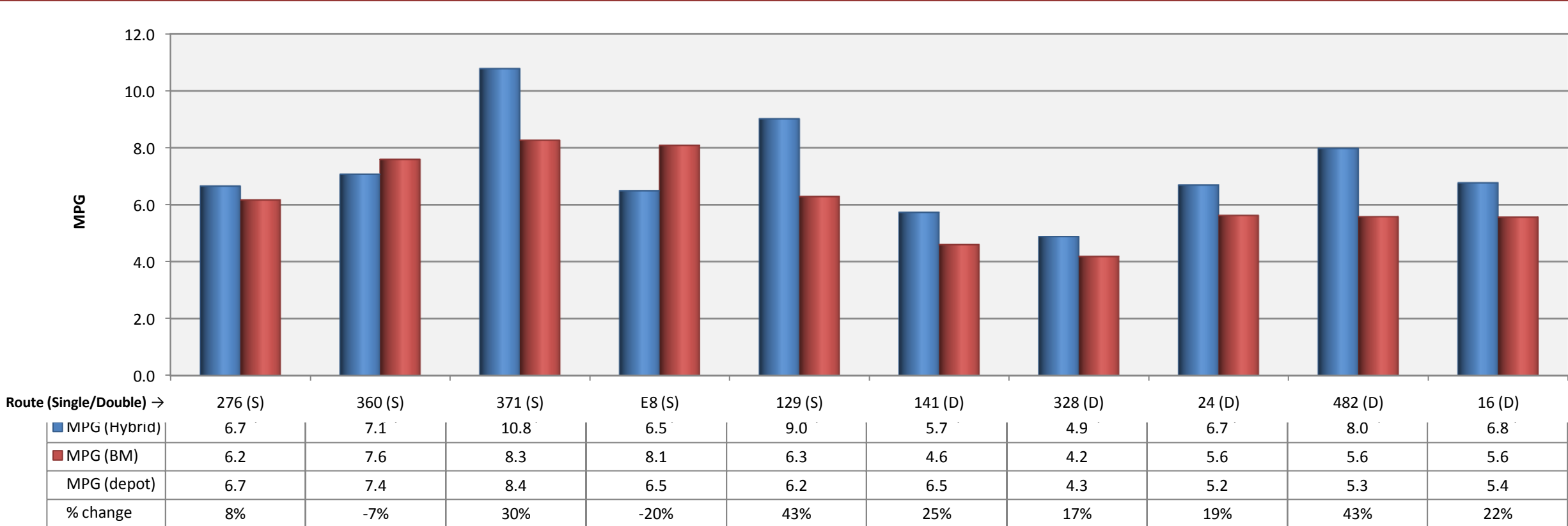
Miles Per Gallon (MPG)



Commentary

All routes except route E8 reports a positive improvement above diesel benchmark buses. Only one bus on route 360 operated in this period but did achieve a 5% improvement. Across all routes the target 30% was almost achieved. Routes 129 and 482 exceeded the target by a significant margin, while route 16 came within 1% of meeting the 30%.

Miles Per Gallon (MPG) year to date



Commentary

Over the last 13 periods only two routes reported negative improvements over the diesel benchmark. On some routes 30% improvement is met and even exceeded, however excessively large improvements will be as a result of limited operational service.

Hybrid bus evaluation report

Hybrid report Appendix

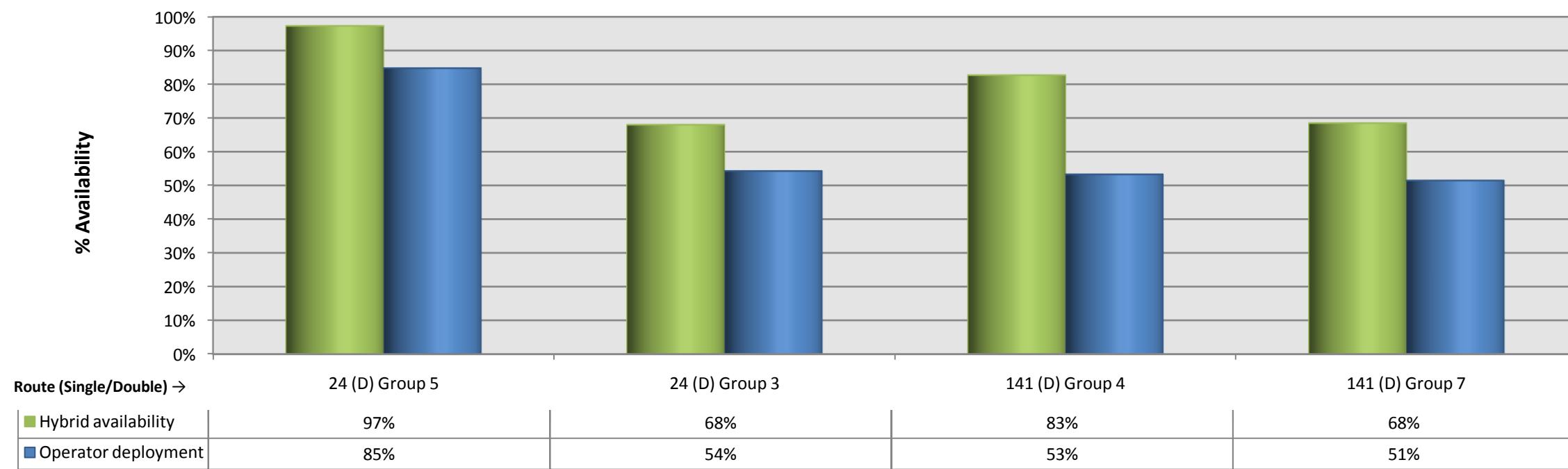


Operator status as of period 8

Route	Operator	Scheduled Hybrid	Route PVR	In service	RTA (days lost)
360	Go-Ahead	7	11	1	0
129	Abellio	5	5	4	22
24	Go-Ahead	6	29	6	0
328	First Group	5	29	5	8
16	Metroline	5	22	5	0
371	Trans Dev	5	14	5	0
482	Trans Dev	2	14	2	1
141	Arriva	11	25	9	28
276	Stagecoach London	5	19	4	28
E8	Metroline	5	11	5	0
TOTAL		56	179	46	(87)

Operators	7
Routes	10
DD types	3
SD types	3
OEM's	4
Battery types	5
Technology types	8

Dual route availability for the current period



Dual route period MPG

