

Table 2 – Advance Practice Energy Efficiency (APEE) demand

										Domestic Boiler efficiency		90%		carbon emissions factor (electricity)										0.517 kgCO ₂ /kWh		
										Non-domestic Boiler efficiency		85%														
										Non-domestic benchmark adjuster		75%														
Use Class	Sub Use	Description			GIA (m²)	assumed building type	% of GIA	basis of benchmark		good practice energy /FF benchmark (kWh/m²/yr)				good practice energy benchmark (kWh/m²/yr)		Energy Use (kWh/year)				total (kWh/yr)		total (kWh/yr)		carbon dioxide emission (kgCO ₂ /yr)		
									(m²)	space	water	L&A	cooking	Fossil Fuel	Electricity	space	water	L&A	cooking	Energy	Electricity	Fossil Fuel	Electricity	Fossil Fuel	Electricity	
5.1 Retail (Use Class A)					960																					
A1	(a)	Food Store			385	Small food store - Co-operative	100%	CIBSE TM46 (Small food store)	gross floor area	385	-	-	266	-	0	266	0	0	102506	0	0	102506	0	0	52996	
A1	(a)	Convenience Retail			385	Shops/stores: non-food stores (hairdressers)	100%	CIBSE TM46 (General retail)	gross floor area	385	-	-	124	-	0	124	0	0	47644	0	0	47644	0	0	24632	
A3		Restaurants & Café's			190	ECO-PUB Restaurants (with bar) and cafe	100%	CIBSE TM46 (Restaurant)	gross floor area	190	30	90	68	158	278	68	4845	14535	12825	29925	49305	12825	52725	12825	10440	6631
5.2 Business (Use Class B)					3,275																					
B1	(a)	ECO-Business Centre			1,800	Office, air conditioned (standard)	100%	CIBSE TM46 (General office)	gross floor area	1,800	53	38	71	-	90	71	80325	57375	128250	0	137700	128250	162000	128250	32076	66305
B1	(c)	Offices			1,100	Office, air conditioned (prestige)	100%	CIBSE TM46 (General office)	gross floor area	1,100	53	38	71	-	90	71	49088	35063	78375	0	84150	78375	99000	78375	19602	40520
B1	(c)	Light Industrial			-	Light manufacturing	100%	BSRIA Rules of Thumb	gross floor area	-	37	-	23	-	37	23	0	0	0	0	0	0	0	0	0	0
B1	(c)	Energy Centre			375	Workshops	100%	CIBSE TM46 (Workshop -electricity only)	gross floor area	375	-	-	26	-	0	26	0	0	9844	0	0	9844	0	9844	0	5089
5.3 Hotels & Residential Institutions (Use Class C)					-																			0		
C1		Mid-range Hotel			-	Hotels: small	100%	CIBSE TM46 (Hotel)	gross floor area	-	124	83	79	41	206	120	0	0	0	0	0	0	0	0	0	0
C1		Country Club (Golf) Hotel			-	Hotels: business/holiday	100%	CIBSE TM46 (Hotel)	gross floor area	-	124	83	79	41	206	120	0	0	0	0	0	0	0	0	0	0
C2		Assisted Living			-	Residential and nursing homes	100%	CIBSE TM46 (Long Term Resi)_	gross floor area	-	150	90	49	75	240	124	0	0	0	0	0	0	0	0	0	0
5.4 Residential Dwellings (Use Class C)					393	43,277																				
C3		4 bed, 7person house = 250m GIA	110.12	9	991		100%	Approved Document L1A 2006	gross floor area	991	15.45	14.70	23.85	2.68	30	27	15310	14566	23635	2651	29876	26287	33195	26287	6573	13590
		5 bed, 7person house = 250m GIA	110.12	42	4,625		100%	Approved Document L1A 2006	gross floor area	4,625	15.45	14.70	23.85	2.68	30	27	71446	67975	110298	12373	139421	122671	154912	122671	30673	63421
C3		3 bed, 5 person house = 85m GIA	110.12	99	10,902	Semi-detached	100%	Approved Document L1A 2006	gross floor area	10,902	15.45	14.70	23.85	2.68	30	27	168409	160226	259988	29165	328635	289152	365150	289152	72300	149492
		4 bed, 6 person house = 112m GIA	110.12	58	6,387	Detached Bungalows	100%	Approved Document L1A 2006	gross floor area	6,387	15.45	14.70	23.85	2.68	30	27	98664	93870	152316	17086	192534	169402	213926	169402	42357	87581
C3		1 bed, 2 person flat = 51m GIA	110.12	7	771	Top floor flat	100%	Approved Document L1A 2006	gross floor area	771	15.45	14.70	23.85	2.68	30	27	11908	11329	18383	2062	23237	20445	25819	20445	5112	10570
		2 bed, 4 person flat = 74m GIA	110.12	23	2,533	Top floor flat	100%	Approved Document L1A 2006	gross floor area	2,533	15.45	14.70	23.85	2.68	30	27	39125	37224	60401	6776	76350	67177	84833	67177	16797	34730
		3 bed, 5 person house = 85m GIA	110.12	99	10,902	Semi-detached	100%	Approved Document L1A 2006	gross floor area	10,902	15.45	14.70	23.85	2.68	30	27	168409	160226	259988	29165	328635	289152	365150	289152	72300	149492
		4 bed, 6 person house = 112m GIA	110.12	56	6,167	Detached	100%	Approved Document L1A 2006	gross floor area	6,167	15.45	14.70	23.85	2.68	30	27	95262	90633	147064	16497	185895	163561	206549	163561	40897	84561
5.5 Non Residential Institutions (Use Class D)					3,220																					
D1	(c)	Primary Schools			2,520	Primary school	100%	CIBSE F (Primary School)	gross floor area	2,520	68	45	24	6	113	30	144585	96390	60480	15120	240975	75600	283500	75600	56133	39085
D1	(c)	Secondary School			-		100%	CIBSE TM46	gross floor area	-	50	34	30	29	83	59	0	0	0	0	0	0	0	0	0	0
D1	(c)	Further Education Institution			-	Further & Higher Education - Teaching	100%	BSRIA Rules of Thumb	gross floor area	-	-	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
D1	(c)	Community Centre			350	Local authority buildings - community centres	100%	CIBSE TM46 (public buildings with light use)	net lettable items	350	64	15	15	-	79	15	18966	4463	5250	0	23428	5250	27563	5250	5457	2714
D1	(c)	Office			-	Emergency services	100%	CIBSE F	treated floor area	-	60	38	71	-	98	71	0	0	0	0	0	0	0	0	0	0
D1	(c)	Nursery			350	Primary health care (general practitioners' surgeries and dental practices)	100%	CIBSE TM46 Clinic	gross floor area	350	86	64	53	-	150	53	25659	18966	18375	0	44625	18375	52500	18375	10395	9500
D1	(c)	Private Hospital			-	Hospitals: acute	100%	CIBSE F	heated floor area	-	-	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
D1	(c)	Outdoor Market			-		100%	CIBSE F		-	-	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
D1	(c)																									
5.6 Assembly & Leisure Facilities (Use Class D)					-																					
D2		Equestrian Centre				Sports and recreation: dry sports centre	100%	CIBSE F	treated floor area	-	-	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
D2		Tennis Academy				Sports and recreation: dry sports centre	100%	CIBSE F	treated floor area	-	-	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0

Notes

- 1 good practice benchmarks can be assumed upper limits for new build
- 2 where no good practice benchmarks available, typical practice benchmarks used
- 3 fossil fuel taken to be gas (fossil thermal energy)
- 4 benchmark figures include cooling, as applicable to building type
- 5 calculations are for EXEMPLAR build