

A White Paper by WSP Environment & Energy
April 2013

SOLAR SUCCESS?

SPACE NOT CASH THE KEY FOR SOLAR

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If you live in Tiverton or Crediton in Devon, the chances are you know someone who's installed a solar panel on their roof. This is because –with nearly one in twelve households having installed solar panels, Mid Devon is the solar panel capital of the UK. Wrexham, and South Hams aren't far behind. At the other end of the scale, Westminster in London has an installation rate of a paltry one household in 2,500.

So why the difference? It was originally thought that solar panels – and the benefit of government subsidies to install them – would be mainly limited to the affluent rich. But this doesn't seem to be the case. There's other factors that have a much more significant impact.

The sunny areas of the UK have more solar panels, but not always. Live in Cornwall or south Wales and you receive much more sunshine than northern Scotland. The weather's better and also the sun's rays are stronger further south. So you'd expect these sunniest places to be the areas that have the highest number of installations. And this is the case for Devon, Cornwall and south Wales. Twelve out of the top 25 installations are in the South West. But by the same measures, Dumries & Galloway (246 panels / 10,000), The Borders (241/10,000) and Aberdeenshire (235/10,000) in Scotland have some of the lowest amounts of sunshine, but also have really high installation rates.

Figure 1 - Cornwall, Wales and the Borders install far more panels than London and the South East.
Source ONS April 2013

Feed In Tariffs in the UK
Number of domestic photovoltaic installations per 10,000 households by Local Authority, as at end of March 2013

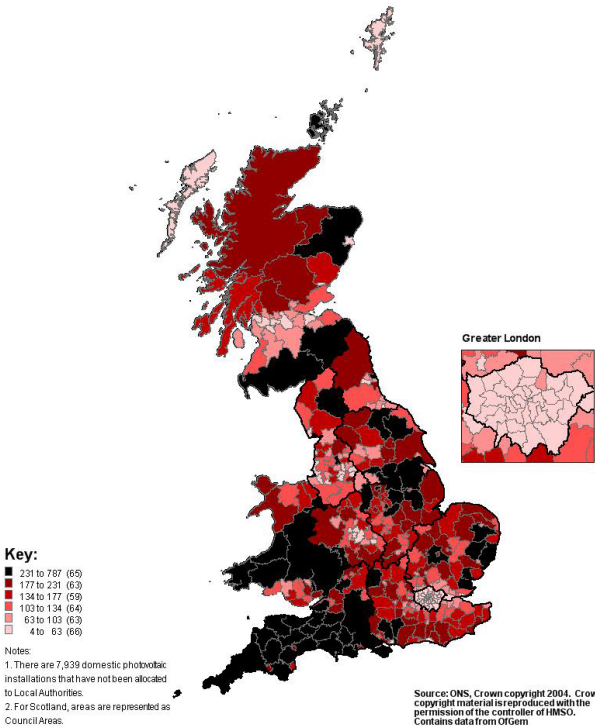


Table 1 - Not just about the sun – Local authority rankings for solar panel installation

(Installations per 10,000 households. Source ONS April 2013)

Top 10		
1	Mid Devon	787
2	Wrexham	552
3	South Hams	476
4	North Somerset	451
5	South Cambridgeshire	445
6	South Norfolk	430
7	West Oxfordshire	420
8	Isles of Scilly	413
9	Monmouthshire	409
10	Torridge	402

Bottom 10		
371	Hackney	20
372	Greenwich	18
373	Camden	17
374	Newham	17
375	Southwark	15
376	Hammersmith and Fulham	12
377	Kensington and Chelsea	11
378	City of London	8
379	Tower Hamlets	8
380	Westminster	4

Even The Orkneys at 232/10,000 houses comes 55th out of 760 on installation rates – higher than every local authority in Surrey, Kent and London – areas which receive much more sun than Scotland. To get most bang for buck, incentives should encourage the sunniest areas to get more panels than the furthest north. This, however, isn't the case – the reality of politics over good green policies.

There's greater installation in the country than in cities. Installation rates in London, the Welsh Valleys and in the West Midlands lag far behind more rural areas in mid Wales and Cornwall. London authorities fill 23 out of 25 of the bottom of the table – joined only by the Shetlands (26 installations per 10,000 households) and Inverclyde (28/10,000) While we might think that cities should be happy hunting grounds for solar sales, in reality houses in towns are smaller, their roofs are more likely to be obscured and there's also less owner occupation.

Figure 2 - South-west England and Wales receives much more sunshine than Scotland.

Source – European Commission

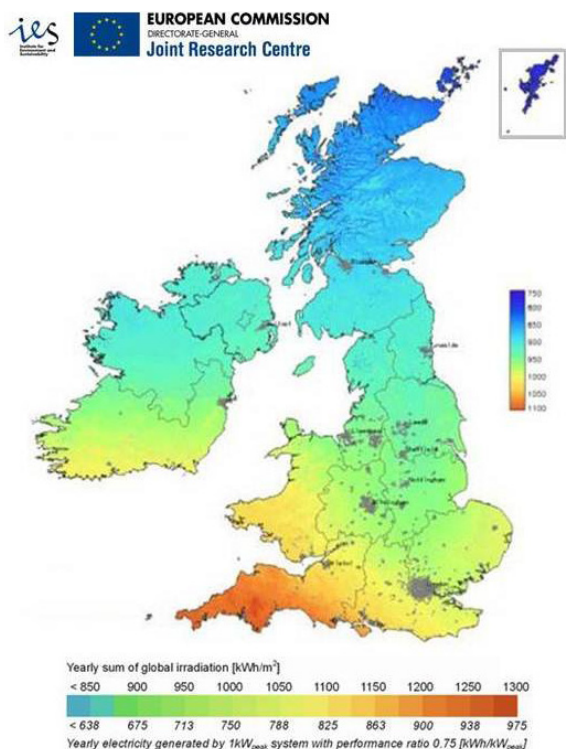
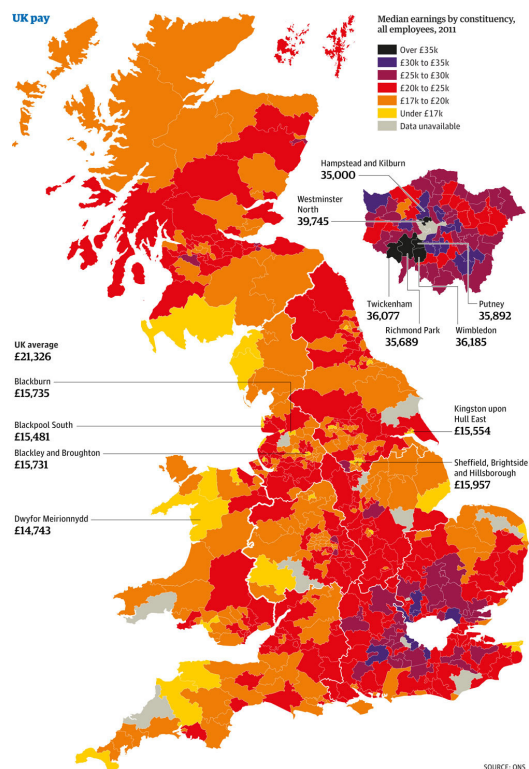


Figure 3 - Solar installation rates don't correlate closely with income

Source – ONS, The Guardian



Flats and appartments also have more than one household, but only one roof. In contrast, houses in the country tend to be larger and have more space. so it's more economic to put a panel on a roof in the country than in the city. What seems clear is that - when combined with biomass, anaerobic digestion facilities and wind -there's an increasing trend for the countryside to be the renewable power station of the city.

Home income seems to be less of an issue. Dumfries and Galloway (246/10,000 households) has one of the areas of lowest per capita incomes and yet it comes 55th on the rankings. Herefordshire, and parts of Devon also show large disparities. At the other end of the scale, Westminster (4/10,000), Kensington & Chelsea (11/10,000), Richmond (49/10,000), Brighton (62/10,000) and Epsom (66/10,000) all languish low down the table, and yet have high per capita incomes.

The reality has been that local authorities and housing associations have seized the initiative for their homes Wrexham Borough Council, for example, installed 3,000 solar panels on council owned properties – and this goes some of the way of explaining why Wrexham (552/10,000 households) comes second in the league table.

Hafod Housing Association in Cardiff (111/10,000 households) have installed panels on 1000 properties. And where income is tight, pure equity financial models also mean that installers will install the panels for free, paying for the installation out of the government incentive. Homeowners benefit from the lower bills.

There's still lots to do. Solar panels seem to have been a success story for green energy in the UK. But even in the most popular areas for installations, barely 7% of households have panels installed and in the lowest installation areas that figure drops to almost none. On average, just 1.5% of the UK's roofs have solar panels installed. If solar panels are going to be one of our green energies of the future then there's still plenty to do. Poorer performer housing associations have to be highlighted, there needs to be more trust in energy companies and installers and – ultimately – panels have to become more efficient and cheaper still.

Local Authority solar panel installations – Full list
(Installations per 10,000 households Source: ONS, April 2013)

Local Authority Name		Region	Installations per 10,000 households
1	Mid Devon	South West	787
2	Wrexham	Wales	552
3	South Hams	South West	476
4	North Somerset	South West	451
5	South Cambridgeshire	East of England	445
6	South Norfolk	East of England	430
7	West Oxfordshire	South East	420
8	Isles of Scilly	South West	413
9	Monmouthshire	Wales	409
10	Torridge	South West	402
11	Poole	South West	385
12	Cornwall	South West	353
13	West Devon	South West	352
14	West Dorset	South West	350
15	East Devon	South West	350
16	West Somerset	South West	339
17	Isle of Wight	South East	327
18	Mendip	South West	327
19	Powys	Wales	323
20	Suffolk Coastal	East of England	323
21	Torfaen	Wales	322
22	Teignbridge	South West	320
23	Newark and Sherwood	East Midlands	319
24	Ceredigion	Wales	317
25	North Dorset	South West	314
26	Sedgemoor	South West	311
27	Purbeck	South West	308
28	South Somerset	South West	300
29	North Devon	South West	297
30	West Lindsey	East Midlands	286
31	East Dorset	South West	283
32	Pembrokeshire	Wales	282
33	Bassetlaw	East Midlands	281
34	Herefordshire, County of	West Midlands	280
35	North Kesteven	East Midlands	278
36	Forest of Dean	South West	277
37	Eden	North West	274
38	Malvern Hills	West Midlands	274
39	Chesterfield	East Midlands	271
40	Ryedale	Yorkshire and The Humber	270
41	Hambleton	Yorkshire and The Humber	269
42	Taunton Deane	South West	266
43	Mid Suffolk	East of England	260
44	Derbyshire Dales	East Midlands	254
45	Nottingham	East Midlands	252
46	North Tyneside	North East	248
47	Cardiganshire	Wales	248
48	Dumfries & Galloway	Scotland	246
49	Stroud	South West	244
50	Barnsley	Yorkshire and The Humber	243
51	North Lincolnshire	Yorkshire and The Humber	243
52	Winchester	South East	242
53	East Hampshire	South East	242
54	Rushcliffe	East Midlands	242
55	Scottish Borders	Scotland	241
56	Colchester	East of England	240
57	Wiltshire	South West	239
58	New Forest	South East	239
59	Doncaster	Yorkshire and The Humber	237
60	Aberdeenshire	Scotland	235
61	Rotherham	Yorkshire and The Humber	234
62	Blackburn with Darwen	North West	233
63	Havant	South East	232
64	Orkney Islands	Scotland	232
65	Maldon	East of England	231
66	Wealden	South East	230
67	Babergh	East of England	230
68	Waverley	South East	230
69	Lewes	South East	228
70	Isle of Anglesey	Wales	227

Local Authority Name		Region	Installations per 10,000 households
71	Stockport	North West	227
72	South Kesteven	East Midlands	226
73	Bolsover	East Midlands	224
74	East Lindsey	East Midlands	223
75	Fareham	South East	222
76	Hart	South East	220
77	Wychavon	West Midlands	219
78	Breckland	East of England	216
79	Selby	Yorkshire and The Humber	216
80	Uttlesford	East of England	215
81	South Gloucestershire	South West	214
82	Test Valley	South East	213
83	South Holland	East Midlands	213
84	Rutland	East Midlands	213
85	Melton	East Midlands	211
86	Sunderland	North East	211
87	Fenland	East of England	210
88	Stratford-on-Avon	West Midlands	209
89	Stafford	West Midlands	209
90	Ribble Valley	North West	208
91	North Norfolk	East of England	208
92	Exeter	South West	208
93	East Cambridgeshire	East of England	207
94	Chichester	South East	207
95	Shropshire	West Midlands	204
96	Broadland	East of England	204
97	Horsham	South East	200
98	Chiltern	South East	200
99	Bath and North East Somerset	South West	198
100	Highland	Scotland	198
101	Welwyn Hatfield	East of England	197
102	Bournemouth	South West	196
103	Weymouth and Portland	South West	195
104	Mid Sussex	South East	193
105	Derby	East Midlands	192
106	Perth & Kinross	Scotland	192
107	Eastbourne	South East	191
108	Stirling	Scotland	191
109	North East Derbyshire	East Midlands	190
110	Tewkesbury	South West	189
111	Gwynedd	Wales	189
112	Vale of White Horse	South East	187
113	Northumberland	North East	187
114	Daventry	East Midlands	186
115	South Northamptonshire	East Midlands	185
116	Christchurch	South West	184
117	Richmondshire	Yorkshire and The Humber	184
118	North Hertfordshire	East of England	182
119	South Oxfordshire	South East	181
120	Huntingdonshire	East of England	180
121	East Riding of Yorkshire	Yorkshire and The Humber	180
122	Shepway	South East	179
123	Moray	Scotland	179
124	York	Yorkshire and The Humber	178
125	Plymouth	South West	178
126	Caerphilly	Wales	178
127	Craven	Yorkshire and The Humber	178
128	Newport	Wales	177
129	King's Lynn and West Norfolk	East of England	176
130	Cotswold	South West	176
131	The Vale of Glamorgan	Wales	175
132	Harborough	East Midlands	175
133	Flintshire	Wales	175
134	Denbighshire	Wales	174
135	Basingstoke and Deane	South East	174
136	Rossendale	North West	174
137	Ashford	South East	170

Local Authority solar panel installations – Full list continued
(Installations per 10,000 households Source: ONS,April 2013)

Local Authority Name		Region	Installations per 10,000 households
138	South Derbyshire	East Midlands	169
139	Newcastle-under-Lyme	West Midlands	168
140	Rother	South East	167
141	Tendring	East of England	167
142	Aylesbury Vale	South East	166
143	Mole Valley	South East	166
144	Torbay	South West	165
145	South Lakeland	North West	165
146	Wigan	North West	164
147	East Northamptonshire	East Midlands	162
148	Eastleigh	South East	159
149	Argyll & Bute	Scotland	159
150	Staffordshire Moorlands	West Midlands	158
151	Arun	South East	158
152	Mansfield	East Midlands	157
153	Allerdale	North West	157
154	Waveney	East of England	156
155	Angus	Scotland	156
156	Wokingham	South East	154
157	Wyre	North West	153
158	Ashfield	East Midlands	152
159	West Berkshire	South East	152
160	Erewash	East Midlands	151
161	Central Bedfordshire	East of England	151
162	Windsor and Maidenhead	South East	150
163	Wakefield	Yorkshire and The Humber	149
164	Boston	East Midlands	148
165	Warrington	North West	147
166	Stoke-on-Trent	West Midlands	146
167	Harrogate	Yorkshire and The Humber	146
168	Oadby and Wigston	East Midlands	146
169	Canterbury	South East	146
170	Bromsgrove	West Midlands	145
171	Guildford	South East	144
172	Lichfield	West Midlands	143
173	Kirklees	Yorkshire and The Humber	143
174	Cambridge	East of England	143
175	Tandridge	South East	143
176	Hinckley and Bosworth	East Midlands	142
177	Amber Valley	East Midlands	141
178	Fylde	North West	140
179	Tunbridge Wells	South East	140
180	Bridgend	Wales	140
181	Gedling	East Midlands	137
182	Dover	South East	136
183	Cherwell	South East	135
184	Braintree	East of England	135
185	Warwick	West Midlands	135
186	Chelmsford	East of England	135
187	Maidstone	South East	134
188	St Edmundsbury	East of England	134
189	Milton Keynes	South East	134
190	North West Leicestershire	East Midlands	133
191	Great Yarmouth	East of England	133
192	Bedford	East of England	132
193	Corby	East Midlands	132
194	Leicester	East Midlands	132
195	Rugby	West Midlands	131
196	Charnwood	East Midlands	131
197	Broxtowe	East Midlands	130
198	Scarborough	Yorkshire and The Humber	129
199	Copeland	North West	128
200	Gosport	South East	128
201	Blaby	East Midlands	127
202	Gloucester	South West	126

Local Authority Name		Region	Installations per 10,000 households
203	Cheltenham	South West	126
204	Swindon	South West	126
205	Rhondda, Cynon, Taff	Wales	125
206	Fife	Scotland	124
207	Southampton	South East	124
208	South Bucks	South East	124
209	Cheshire East	North West	124
210	Wellingborough	East Midlands	123
211	Sevenoaks	South East	123
212	Carlisle	North West	122
213	Forest Heath	East of England	122
214	Adur	South East	122
215	Wyre Forest	West Midlands	121
216	Peterborough	East of England	121
217	Kettering	East Midlands	120
218	East Staffordshire	West Midlands	120
219	Tonbridge and Malling	South East	119
220	South Ribble	North West	118
221	Chorley	North West	118
222	Bristol, City of	South West	117
223	Swale	South East	116
224	Pendle	North West	116
225	North Warwickshire	West Midlands	116
226	St Albans	East of England	114
227	Dacorum	East of England	114
228	East Hertfordshire	East of England	113
229	Swansea	Wales	113
230	Calderdale	Yorkshire and The Humber	113
231	South Staffordshire	West Midlands	112
232	Knowsley	North West	112
233	Wycombe	South East	112
234	Redditch	West Midlands	112
235	Surrey Heath	South East	112
236	East Lothian	Scotland	111
237	County Durham	North East	111
238	Rochford	East of England	111
239	Cardiff	Wales	111
240	West Lancashire	North West	111
241	Woking	South East	110
242	Merthyr Tydfil	Wales	108
243	Manchester	North West	108
244	Conwy	Wales	107
245	Worcester	West Midlands	106
246	Castle Point	East of England	106
247	Worthing	South East	106
248	Cheshire West and Chester	North West	106
249	Reigate and Banstead	South East	105
250	South Ayrshire	Scotland	105
251	Lincoln	East Midlands	104
252	Harlow	East of England	103
253	High Peak	East Midlands	103
254	Sheffield	Yorkshire and The Humber	102
255	Dartford	South East	102
256	Telford and Wrekin	West Midlands	102
257	Neath Port Talbot	Wales	101
258	Brentwood	East of England	101
259	Crawley	South East	101
260	Bracknell Forest	South East	99
261	Waltham Forest	London	96
262	Three Rivers	East of England	95
263	Hertsmere	East of England	95
264	Lancaster	North West	94
265	North East Lincolnshire	Yorkshire and The Humber	94
266	West Lothian	Scotland	93
267	Basildon	East of England	93
268	Solihull	West Midlands	92

Local Authority solar panel installations – Full list continued
(Installations per 10,000 households Source: ONS, April 2013)

Local Authority Name		Region	Installations per 10,000 households
269	Ipswich	East of England	92
270	Rochdale	North West	91
271	Preston	North West	91
272	Tamworth	West Midlands	89
273	Thanet	South East	87
274	Clackmannanshire	Scotland	86
275	Nuneaton and Bedworth	West Midlands	84
276	Stockton-on-Tees	North East	84
277	Hastings	South East	84
278	Oxford	South East	84
279	Kingston upon Hull, City of	Yorkshire and The Humber	83
280	Blaenau Gwent	Wales	83
281	Reading	South East	83
282	East Dunbartonshire	Scotland	82
283	Northampton	East Midlands	82
284	East Ayrshire	Scotland	82
285	Hartlepool	North East	81
286	St. Helens	North West	81
287	West Dunbartonshire	Scotland	81
288	Runnymede	South East	81
289	Cannock Chase	West Midlands	80
290	Epping Forest	East of England	79
291	Newcastle upon Tyne	North East	78
292	Norwich	East of England	78
293	Gravesham	South East	78
294	North Ayrshire	Scotland	78
295	South Lanarkshire	Scotland	77
296	Rushmoor	South East	76
297	Leeds	Yorkshire and The Humber	76
298	South Tyneside	North East	75
299	Elmbridge	South East	75
300	Bolton	North West	74
301	Bradford	Yorkshire and The Humber	74
302	Broxbourne	East of England	73
303	Midlothian	Scotland	73
304	Burnley	North West	69
305	Redcar and Cleveland	North East	68
306	Hyndburn	North West	68
307	Wirral	North West	67
308	Epsom and Ewell	South East	66
309	Luton	East of England	65
310	Darlington	North East	65
311	Medway	South East	65
312	Falkirk	Scotland	64
313	Dudley	West Midlands	63
314	Stevenage	East of England	63
315	Spelthorne	South East	63
316	Brighton and Hove	South East	62
317	Middlesbrough	North East	62
318	Sefton	North West	62
319	East Renfrewshire	Scotland	62
320	Thurrock	East of England	61
321	Walsall	West Midlands	61
322	Coventry	West Midlands	61
323	Birmingham	West Midlands	61
324	Eilean Siar	Scotland	61

Local Authority Name		Region	Installations per 10,000 households
325	Trafford	North West	60
326	Southend-on-Sea	East of England	57
327	Salford	North West	57
328	Bury	North West	57
329	Bromley	London	55
330	Halton	North West	53
331	Portsmouth	South East	53
332	Blackpool	North West	51
333	Tameside	North West	51
334	Gateshead	North East	50
335	Havering	London	49
336	Richmond upon Thames	London	49
337	Sandwell	West Midlands	48
338	Aberdeen City	Scotland	48
339	Wolverhampton	West Midlands	48
340	Kingston upon Thames	London	46
341	Oldham	North West	46
342	North Lanarkshire	Scotland	44
343	Watford	East of England	43
344	Slough	South East	43
345	Barrow-in-Furness	North West	42
346	Croydon	London	41
347	Dundee City	Scotland	40
348	Renfrewshire	Scotland	39
349	Sutton	London	38
350	Edinburgh, City of	Scotland	37
351	Bexley	London	36
352	Harrow	London	34
353	Redbridge	London	34
354	Liverpool	North West	33
355	Ealing	London	31
356	Glasgow City	Scotland	31
357	Merton	London	30
358	Barnet	London	29
359	Hillingdon	London	29
360	Brent	London	28
361	Inverclyde	Scotland	28
362	Lewisham	London	27
363	Barking and Dagenham	London	26
364	Hounslow	London	26
365	Haringey	London	26
366	Shetland Islands	Scotland	26
367	Islington	London	25
368	Enfield	London	22
369	Lambeth	London	21
370	Wandsworth	London	20
371	Hackney	London	20
372	Greenwich	London	18
373	Camden	London	17
374	Newham	London	17
375	Southwark	London	15
376	Hammersmith and Fulham	London	12
377	Kensington and Chelsea	London	11
378	City of London	London	8
379	Tower Hamlets	London	8
380	Westminster	London	4

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FURTHER INFORMATION



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