

On 22 Apr 2014, at 15:37, Cath Hassell <cath.hassell@ech2o.co.uk> wrote:

Hi Dominic

Hope all good. Do you know number of Solar thermal systems installed in the UK? Guardian in 2010 estimated 100,000. Do you reckon that's about right even now? Can't find answer with a quick google search not even on STA website. Thanks for any leads you can give me.

Cheers

Cath

20 minutes later he replied...

Hi Cath

Numbers of solar thermal systems installed, that's quite tricky.

I think the best place to start is with the latest ESTIF (European Solar Thermal Industry Fed) annual report on the solar thermal market in Europe. Copy attached.

The stats are from 2012, there should be one for 2013 available some time probably in the next month, and you could possibly contact them for provisional figures in the meantime. Or see my guesstimate workings below.

The ESTIF info does not state the number of installations, but instead gives annual & cumulative totals of collector area & kW heat "capacity" ("kWth" = aperture area x 0.7, according to standardised procedure, devised by ESTIF & others in 2004, really only to be able to compare solar thermal to other renewables, otherwise not necessarily that meaningful)

The chart on P.13 has the stats, with the UK at the bottom (alphabetically, not actually in league table - we're not great, but not the worst!)

The total installed area / capacity in 2012: 59,275 m² / 41,493 kW

Cumulative total installed area / capacity: 709,673 m² / 496,771 kWth

You can also see the relative splits of flat plate vs evacuated tubes - FP dominate, more than 80% by absorber area.

As (at least the better quality) tubes will give more output per m² absorber area, it helps us estimate the number of systems to know that.

We can also see that the annual totals of installed area for previous years were:

2010: 105,200 m²

2011: 91,778 m²

With 2012 at 59,275 m², you can see why us solar thermal-o-philes are in ever decreasing supply..!

A few questions:

1. We know what ESTIF state as the cumulative total installed, we don't know how much of that is still installed & (more importantly) actually still working. As they exist to talk up the solar thermal industry, even without getting too cynical, it's possible to imagine some optimism creeping into their assumptions

2. We can sort-of guess at how much more was installed last year, and for the first third of this year (bearing in mind probably more done outside winter, so probably not all that much done so far this year)

3. We don't know what impact the RHI being on hold for so long has had, or what difference it will make now it is up & running. My suspicion is it will make some difference, but not so big; on the other hand I've seen an increase in enquiries & orders coming through, and the enquiries that do come move to orders that bit more easily - phew!

So, by my guesstimate:

Let's assume that between Jan 2013 and now another 60,000 m² went in (around 2012 annual total). That would give a total of around 770,000 m²

then, as this includes commercial scale systems (such as the 230 m² system we've got repaired in Highbury - did 2500 kWh last week), but there are very few registered with the non-domestic RHI (but also not that many solar thermal installations of any kind), let's guess at around 10% of collector area being in larger systems - approx 77,000 m², let's guess at 20m² per system, e.g. around 3800 commercial systems. Sounds a lot, but let's stick with it for now.

Then of the remaining let's assume the average system collector area is 4m² - lots are, there are bigger ones, then some smaller ones, and most evac tube systems will be smaller, but guessing at 4m²: $690,000 / 4 = 172,500$

$172,500 + 3800 = 176,300$ systems installed.

That's my guess at how many have been installed, let's be conservative (with a small c) about ESTIF's criteria for installed area, and say that 15 to 20% are no longer working, that would mean between 140,000 and 150,000 systems out there and working. Or if you trust the ESTIF methodology, up to 170,000 systems.

That would fit more or less with the Guardian's 2010 estimate.
The ESTIF figures are nice & quotable, at least.

Interesting to see that, once again, the annual installed total in Germany is larger than the UK's cumulative installed total!

They do have a larger population, (roughly 20% bigger), are relatively more wealthy, at least less disproportionate imbalance between richest & poorest, and they have more land area, and more solar-friendly roofs (though most of them are carpeted in PV!), but that only explains a little bit of the difference.

Oh well, perhaps time to move to Deutschland. If we're going to do it, might as well be before the world cup! One to ponder

Cheers Dom