

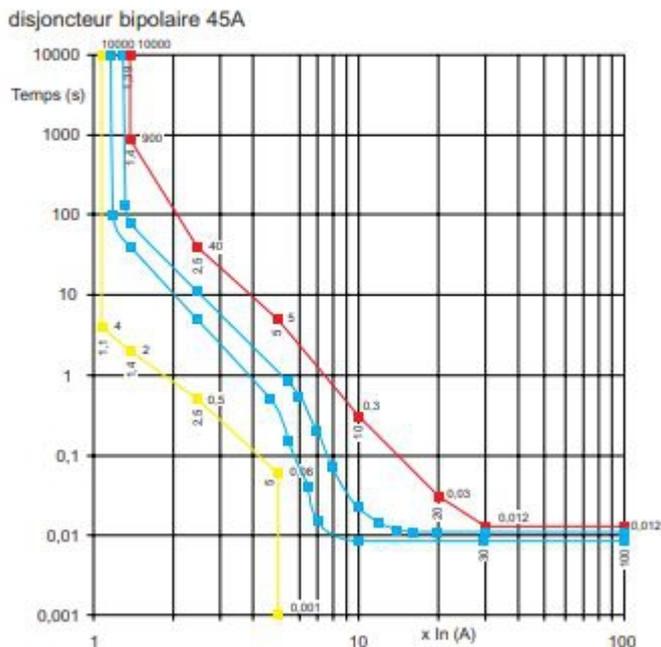
Re: Linky, electricity tariffs and disjoncteurs

By **RobertArthur**» Sat Jun 23, 2018 1:44 pm

Smart meters, part of the smart grid concept, an ongoing discussion. Started in the early nineties, introduction of the first smart meters in Italy around 2000. A few additional remarks.

1/ Department technicalities and the old main switch, the *disjoncteur de branchement*. It is an electromechanical device with production tolerances. To be on the safe side for the customers the "bandwidth" of intervention in the case of an overload is situated above the nominal current values. For a 9kVA device this is 45 A. At the time of introduction the EDF tried to sell as much as possible of the (over)production of their nuclear power plants, nobody complained. Electric heating and electric *chauffe-eaux*. See picture below as published by Legrand for more details:

3.1. Temps de déclenchement en surintensité :



Most of these old main switches have an average overload tolerance of 30%, some even higher, some a little bit lower. But always a minimum level of 115 % of I_{nominal} as laid down in the design regulations. For Elsie's 6 kVA example of a nominal current of 30 amps you would get 39 amps effectively, much more than the 26.09 amps for Linky. A tolerant behaviour of these old *disjoncteurs* also for surge currents, switch on of an electrical motor or heater (washing machine). The new Linky smart meters are electronic sharp shooters: do not pass your nominal current limit or....trespassers not allowed.

2/ Department history: the engineers living downstairs in the EDF building were fully aware of all this and even discussed it during international meetings. Upstairs where the management lives and their servants of the PR department there was some hesitation to take this on board of the publicity efforts: the smart meter is green, is going to save electricity, good for the planet, and save money for the *cher*

client. Everybody happy?

No, during the first field experiments this policy of zero tolerance didn't go unnoticed. Once again [this timeline of the introduction of Linky in France](#).

3/ Department French resistance: several local authorities and individual consumers try to say "no" to the introduction of Linky. Indeed, many letter templates circulating on the internet, [an example](#). Any success? Yes and no. The EDF/ERDF/ENEDIS being a state within a state focusses its attention to get rid off the bigger pockets of resistance during the roll out. [One of the many villages](#) scared by the prospect of bankruptcy. It's not easy to counter attack a busload of clever ENEDIS lawyers. The others will follow in due time I'm afraid.

4/ Department technicalities continued: [interesting studies around](#) about the supposed precision of smart meters. Not all electric loads are equal these days, not the simple linear behaviour of an incandescent lamp or a piece of wire in an electric heater any more.

5/ Department practicalities (at last): an English manual for the [single-phase Linky](#) and its [three-phase brother](#).
