SOLAR PANELS IN FRANCE

Translation from the Dutch website “InfoFrankrijk”, published February 18, 2018.

It is not possible to summarise the French information on installing solar panels in just a few pages. To make a start the following information tries to have a look at the origins of the roll-out of solar panels in France, the complicated procedures, the many scandals in the past, the high prices compared with neighbouring countries and last but not least a collection of useful links to illustrate the several issues addressed, at the same time road signs in the maze of regulations.

Enough has already been written about the hesitant start of this sector in France, including the policy mistakes. As for the price level, it is almost three times higher in France than in the Netherlands or Germany. While the number of mainly Chinese manufacturers of panels and inverters (*onduleurs*) is limited and almost everyone in Europe nowadays gets their panels from

there. After the explosive growth of eight years ago, many American and European producers have gone bankrupt or made a slimmed-down new start. Partly due to the high subsidies in Europe, it became very attractive to produce for this market in increasing numbers. Even with the protection of the special import tariffs (anti-dumping) for Chinese solar panels that the European Commission put up as a protective umbrella over the European producers, most factories in the EU could no longer cope. Even though the quality was usually a little better, in the end the price often turns out to be the deciding factor in purchase decisions. The gradual dismantling of import duties - actually the "minimum import price (MIP)" - in quarterly steps from October 2017 onwards is an example of this. - in quarterly steps from October 2017 to July 2018 will bring prices down further remains to be seen. And with the looming trade war between the US and China on the horizon, it becomes guesswork what will happen to prices. The European Commission ended import duties sooner than expected. On August 31, 2018, the Commission decided to end these anti-dumping measures with effect from midnight Monday, September three. One of the factors that will have contributed to not continuing these import levies, according to commentators, is the European Commission's goal of obtaining at least 27 percent of total energy consumption from renewable sources by 2030. The continuation of these tariffs could get in the way of that target. The consequences are felt in more than one way: prices are falling, the industry as a whole has nothing to complain about, but European solar panel manufacturers are not doing well, the German “Handelsblatt” reported on 27 August 2019.

These Chinese companies really do not differentiate between individual Member States in their exports to the countries of the European Union, even though I recently heard that a French installer claimed that those PRC panels are only suitable for the Chinese sun, so cannot be used in France. You have to cite something to explain the sky-high prices. A counter-question could have been: can the Chinese tolerate wine made from French grapes? Seems to be a successful French export product.

In the past, you could still get a hefty amount back through (income) tax, but since January 2014, that is a thing of the past, according to the French tax authorities. However, since May 2017, only the *autoconsommation avec vente en surplus* has been facilitated again. The EDF ENR reports the following about this *arrêté tarifaire*. The consumer organisation QueChoisir is not entirely reassured that this kind of new arrangement will be spared by all kinds of at first sight respectable organisations or perhaps somewhat suspicious, rogue firms, that want to abuse the credulity of unsuspecting citizens. And when do you yourself use the most electricity? In the early morning hours and in the evening when the solar panels are delivering little or nothing....An extra point of attention when considering this option.

The emphasis in the new subsidy schemes has shifted to improving the insulation of homes and more environmentally friendly ways of heating. The complete list of what does and does not fall under the umbrella of the new "*Crédit d'impôt pour la transition énergétique*" (CITE) is given in this explanation from the French tax authorities: Dépenses éligibles au CITE. Solar panels for hot water are also included.

The French themselves are still a bit hesitant due to the still high price level, while prices on the world market have been dropping firmly for years, due to the bureaucratic hurdle that has been thrown up and the many scandals in this industry. The arrival of IKEA on the French market, announced in August 2017, might get the prices for *panneaux solaires* installations moving, but it hadn't got much further than that press release in the autumn of 2018. Belgium will be ready in early 2019, judging by the subscription form on the IKEA website there.

France still has to make do with the earlier announcements of intentions. But things should be moving now, reading this information last year by Phonadroid and other websites.

Moreover, the EDF is paying less and less per kWh, so the heyday of around 60 euro cents is far behind us. For a standard mounted installation (*intégration simplifié au bâti*), it is about 12 cents from 9 May 2017. The prices of today as published by this website.

Reading the many comments on the websites of French consumer organisations such as QueChoisir and 60 Millions de Consommateurs and the constant stream of reports in the French press at least gives an impression of pitfalls that are best avoided. Especially the constructions whereby the installation is financed via a loan from a third organisation - don't worry, we'll take care of everything - have already saddled many people with sky-high debts and sometimes a non-functioning installation. An article in a well respected French newspaper. Lemonde.

On the national French TV news on May 10, 2018 (again) a special on the "*arnaque aux panneaux photovoltaïques*". Companies that have gone under the radar, *gérants* who can't be found or who are elusive, legal procedures that drag on for years. Something similar in “Le Parisien” two weeks earlier.

To remain practical as a kick-off to a more detailed article, here are some useful links.

1/ On the website of the ERDF / ENEDIS there is a neat step-by-step plan. These are the application procedures. When electricity is to be supplied to the public grid, a contract with the grid operator ERDF/ENEDIS is always required: *Le contrat de raccordement, d'accès au réseau et d'exploitation est obligatoire pour avoir le droit d'injecter du courant sur le réseau électrique français, que ce courant soit vendu ou non, et quelle que soit la source d'énergie utilisée*. What is also needed in this case: two meters for consumption and supply because there are two different tariffs in France. Or the French smart meter LINKY. In the Netherlands there is (so far) a simple balancing regime.

2/ ENEDIS also describes in detail the inspection requirements of the CONSUEL. On the website of the CONSUEL an explanation is given on how to apply for the so-called *attestation de conformité pour une installation de production*. Private individuals may also install anything themselves and then apply for the inspection. There is always an on-site visit. Professional fitters also pay for each inspection, but they are subject to random checks.

3/ Please note: there is a new simplified procedure for the so called autoconsumption - no (un)paid supply to the grid. But then the old rotary dial meter must be replaced by an electronic successor (Sagem, Siemens) or the new smart meter LINKY. However attractive it may be to some to have such an old meter - which allows two-way traffic of electrons - turn the other way. Prohibited and dangerous if installed improperly.

Promotelec wrote this about it:

Le professionnel pourra ensuite mettre en service l'installation 15 jours calendaires après la date d'envoi de la CAC signée à ERDF (sous réserve que le compteur soit électronique). Aucun frais de branchement ne sera facturé au client (sauf en cas de mise aux normes exceptionnelle ou de changement de compteur aux frais du particulier).

The renewed legal framework of 2017 also offers opportunities for the "*autoconsommation collective*". In this article dated 15 May 2018, Promotelec describes the experiences after a first year of experimentation with this type of collective pilot project.

For a detailed explanation of the advantages and disadvantages, you could read this report by the French Institut National de la Consommation. Promotelec, too, of course, as an authoritative

information organisation, summed things up again at the end of 2017 in a document entitled: "Solaire photovoltaïque: sécurité et performance".

La piste autoconso is getting more and more emphasis in the energy policy of the French government, you can read here. A special calculation module has been developed (AutoCalSol) to carry out a preliminary study for a project. For the time being, the software only runs on a personal computer.

The ENEDIS has summarised the various modalities and application procedures for *autoconsumption.*

The EDF ENR (Energie renouvelable) has also written a clear story.

4/ If the French language poses problems in understanding the rules and installation techniques, then once again we would like to draw your attention to "L'Installation électrique" (7th edition already) by these two guys, Thierry Gallauziaux & David Fedullo. Many drawings and diagrams that make it a lot easier. The solar panels are discussed from page 117 to 144 (in the 5th edition). . You will understand: you cannot summarise this in a few paragraphs as an answer to a forum question. And when it comes to making an investment, the 40 euros are well spent. Prevents expensive mistakes

You will understand: you cannot summarise that in a few paragraphs as an answer to a forum question. And when it comes to investing, the 35 euros are well spent. It prevents expensive mistakes during installation and is otherwise very useful for everything to do with the electrical installation.

5/ Yet more reading material, now pages 378 to 460 in "L'OFFICIEL DE L'ÉLECTRICITÉ". Follows the standards closely and provides more technical explanations, for the professional installer and/or advanced *bricoleur.*

6/ The Photovoltaic website remains a treasure trove of information that cannot be beaten, where the latest regulations are closely monitored. On the website of "ÏN SUN WE TRUST" an attempt is made to unravel the Gordian knot of (fiscal) rules in understandable language. Also some nice calculation examples.

7/ Battery technology is not standing still. But whether this also contributes to energy savings remains to be seen, according to research published in the Scientific American. Moreover, in the event of a power cut - the ERDF/ENEDIS network is hit hard by a storm or thunderstorm - the solar panel installation is automatically switched off. So the energy stored in the batteries cannot be used at that time as a back-up or as a variant to an emergency generator. After all, a *groupe-électrogène* can be connected to the house installation via an *inverseur de source*. Safety first. To prevent ERDF/ENEDIS mechanics who after removing trees and fallen branches with their Stihl or Husqvarna chainsaws climb up a ladder to reconnect cables, supposed to be without current....

This is the most up-to-date overview (in Dutch) of the quality and service life of home batteries with brand names that we see all over Europe.

8/ Taxes: below 3 kWc you are exempt from taxes. I quote:

"*Les revenus provenant d'une installation photovoltaïque dont la puissance est inférieure ou égale à 3 kWc sont exonérés d'impôts sur le revenu et de prélèvements sociaux (à condition que ces revenus ne soient pas affectés à une activité professionnelle). Pour les installations de puissance supérieure,*

les produits de la vente de l'électricité sont à déclaration en bénéfices industriels et commerciaux non professionnels. Si les revenus ne dépassent pas 81 500 € par an (selon le Bulletin officiel des finances publiques Impôts - BOFIP), il est possible de bénéficier du régime fiscal des micro-entreprises." Changes have been announced for 2018, so keep an eye on current events.

Tax information on e.g. this website. For more details see here for the tax exemption (provided it is not related to a professional activity) for small installations of up to 3 kilowatts crête (kWc). For installations with more power, the taxman knocks on your door as part of the income tax: *les produits de la vente de l'électricité sont imposables au titre de l'impôt sur le revenu*. A short explanation can be found here.

9/ When the French language poses too many problems, this British information (2014) comes to the rescue. This article concludes with a "serious health warning". This time, not about harmful radiation or hazardous substances, but about the need to be very careful in choosing the company you want to work with. Unfortunately, there is every reason to do so.

Check references, try to find sample projects and look up the company's details in the French trade register. Just a nice website and a mobile phone number is not a very solid basis. And when they come by for an exploratory talk or to receive a quotation: do not trust anyone's blue or brown eyes, not even the many partners of EDF. Many French people think: it's all right when that name is attached to something. Unfortunately, the same applies here: with every proposal that is presented, every offer, keep asking the simple questions. What exactly will the hardware be delivered and installed, how will it be fed into the grid, warranty conditions, service, how much do I estimate I will have saved on energy costs by the end of the contract period. In other words: will it benefit you, the environment if you are idealistic or will it be a subsidy to the EDF or one of its many subsidiaries.

The installation of solar panels is a new trade requiring specialist knowledge. When someone starts work on your roof, you want the solar panels to be properly mounted and the whole thing to remain watertight. And that everything is fitted according to the rules and, if necessary, approved by the CONSUEL. And that it is finally connected to the grid in working order when you feed back your production surplus. In the past, this is where things went wrong more often than you might have expected. The RGE (Reconnus Grenelle de l'Environnement) label is something to look out for when installers offer their services. For that matter, it is also necessary to look out for a number of smaller subsidy opportunities that have reappeared sporadically over the past year, sometimes also depending on the region. It is therefore not entirely surprising that the installation sector has welcomed these amended rules with open arms.

As an aid to the evaluation of tenders in general, I would like to make this reference. On the various forums for the English-speaking community in France you can find more information about this type of application procedure. From the point of view of a foreigner and that can sometimes help you find your way in not always clear and not very intuitively arranged information on French websites.

10/ Further: the changed rules for connecting solar panels according to the Dutch NEN 1010 electrical code are briefly explained here. Just in case you are inspired by the French example and would like to install something in the Netherlands.

11/ The French publisher Eyrolles published a practical guide (126 pages, April 2019)) for the installation of solar panels. The two authors are employed by the authoritative French Scientific and Technical Center for Building (CSTB).

12/ Are you interested in the quality of the solar panels you buy or have installed? European consumer organisations are collaborating with research in this area: which solar panel brands are good? In Germany, where the 'Energiewende' has been vigorously pursued, a great deal of research has been carried out. From one of the many reviews a word of warning: "With other unknown brands you run a big risk. In particular, many unknown Chinese brands have emerged, which have only been around recently and whose quality varies greatly. And also in terms of guarantee, the question is whether these companies will still exist in the future."

13/ The incentive measures on the part of the French central government and regional authorities change almost monthly. It is difficult to keep track of it all, a summary.

14/ Those who mirror others: avoid these twelve mistakes when connecting solar panels to a distribution board. Although these are experiences from Dutch practice, they are nevertheless instructive for installation elsewhere.

15/ Although the sharpest cowboy edges in this market, which is very lucrative for French entrepreneurs, have gradually been eroded, partly as a result of relentless campaigns by French consumer organisations, one must still be careful. In a market where no one will go too far below the frighteningly high average prices, the French business model. About eight years ago my family in the province of Sealand (Netherlands) paid an all-in price of € 3176 for a 2 kW set-up. Eight 245 wp solar panels, a wifi equipped inverter, including an excellently executed installation and without endless bureaucratic hassle. A few days after the technical delivery, the system was already connected to the grid. And all that starting with a signature under an understandable contract. No further worries, except for making sure someone is present at home on the day of installation. It still runs like a dream. Even with much further reduced world market prices in 2021: *l'exception française* is paid dearly.

There are reasonably neutral information organisations in France such as the ADEME, the ANAH and for building technology the already mentioned CSTB. It should be borne in mind that even these organisations will not readily criticise what are in fact still government organisations, the EDF and the ENEDIS, which have now suddenly also seen the green light, a little less nuclear energy. Characterised by many as a state within the state. From their headquarters, they see ministers come and go and have the honour to explain every four years energy policies to a new audience: *l'éducation permanente*.

The website ParlonsPV, with clearly arranged information, was set up specifically to bring about an improvement in the solar panel sector in France.

Finally, a nice overview of the various connection options.

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Translated for the website NewFrenchForum by: