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Get electricity with solar panels (photovoltaic panels)

Verified 07 décembre 2021 - Legal and Administrative Information Directorate (Prime Minister)

It is possible to obtain electricity from solar panels (or *photovoltaic panels*) settled on the roof of your house. The electricity obtained may be used for your personal use or sold, in whole or in part, to an electricity supplier. This choice will depend in particular on the technical and administrative obligations to be complied with.

Use

What's that about?

You can generate electricity and consume it completely by settling the following:

- **Multiple solar panels (photovoltaics)**
These panels capture the solar energy to turn it into electricity. They can be attached to your original roof (non-integrated equipment) or integrated in place of the original roof (built-in equipment). In some geographical areas, they can also be settled on a facade or in a garden.
- **One or multiple inverters**
The inverter is a small case that is attached to a wall as close as the photovoltaic panels. It converts the resulting direct current into AC, which is identical to that of the public electricity network and usable at home.
- **Batteries** [application/pdf - 656.0 KB]  (<https://www.ademe.fr/sites/default/files/assets/documents/guide-pratique-electricite-solaire.pdf>), if you want to be able to store the resulting electricity
- Device **bridging** optionally, because your equipment must be sized so that the resulting electricity never exceeds your needs

It is recommended that you use a recognised environmental professional (RGE) to install your solar panels.

For a list of professionals, you can help yourself from a directory:

 Find an RGE professional or an architect

Ecological Transition Agency (Ademe)

Go to
online service 
(<https://www.faire.fr/trouvez-un-professionnel>)

How can I be helped in the development of your project?

An advisor *Make* can help you define **your project** [application/pdf - 656.0 KB]  (<https://www.ademe.fr/sites/default/files/assets/documents/guide-pratique-electricite-solaire.pdf>), and assess **costs and benefits**  (<https://www.photovoltaique.info/fr/preparer-un-projet/quelles-demarches-realiser/choisir-son-modele-economique/>) :

Who shall I contact

- **Faire.gov.fr (energy retrofit works)**  (<https://www.faire.gouv.fr/>)

What are the prior permissions?

Before you settle your solar panels, you have to make a **prior declaration of work** (<https://www.service-public.fr/particuliers/vosdroits/F17578?lang=en>) to your town hall.

If you are building a house, the installation of your solar panels must be included on the **building permit** (<https://www.service-public.fr/particuliers/vosdroits/F1986?lang=en>).

👉 **FYI** : it is recommended to contact your town hall to find out if there are special rules in force in your town (example: roof colour).

What are the costs?

Installation costs

The price of the equipment (solar panels, inverters, ...) and their installation varies. It depends on:

- Materials Used
- Installation method (integrated or simply installed panels)
- and Installer

Operating costs

Once the solar panels have been settled, you are required to purchase third-party liability insurance for this equipment. To do this, you can request that your [home insurance contract](https://www.service-public.fr/particuliers/vosdroits/F2123?lang=en) (<https://www.service-public.fr/particuliers/vosdroits/F2123?lang=en>). Your contribution amount will be reassessed.

👉 **FYI** : you should regularly maintain your solar panels because their materials degrade with the weather. In addition, the UPS must be changed approximately every 10 years.

How do I get your installation up and running?

You must sign *self-consumption convention without injection (CACSI)* with the public electricity system operator present in your municipality (in general, Enedis)



Convention on self-consumption without injection for an electricity generating facility

ENEDIS (ex ERDF)

Go to
document template(pdf - 415.3 KB) [↗](https://www.enedis.fr/sites/default/files/documents/pdf/2020-08/Enedis-FOR-RAC_43E.pdf)
(https://www.enedis.fr/sites/default/files/documents/pdf/2020-08/Enedis-FOR-RAC_43E.pdf)

Your equipment will be placed in service after your signed agreement has been received by the network manager.

To use it and sell the surplus

What's that about?

You can produce electricity for your own use and sell what you do not consume by settling the following devices:

- Multiple **solar panels (photovoltaics)**
These panels capture the solar energy to turn it into electricity. They can be attached to your original roof (non-integrated equipment) or integrated in place of the original roof (built-in equipment).
- One or more **inverters**
The inverter is a small case that is attached to a wall as close as the photovoltaic panels. It converts the resulting direct current to the same alternating current as the public electricity network.

It is recommended that you use a recognised environmental professional (RGE) to install your solar panels.

For a list of professionals, you can help yourself from a directory:



Find an RGE professional or an architect

Ecological Transition Agency (Ademe)

Go to
online service [↗](https://www.faire.fr/trouvez-un-professionnel)
(<https://www.faire.fr/trouvez-un-professionnel>)

What are the prior permissions?

Before you settle your solar panels, you have to make a [prior declaration of work \(https://www.service-public.fr/particuliers/vosdroits/F17578?lang=en\)](https://www.service-public.fr/particuliers/vosdroits/F17578?lang=en) to your town hall.

If you are building a house, the installation of your solar panels must be included on the [building permit \(https://www.service-public.fr/particuliers/vosdroits/F1986?lang=en\)](https://www.service-public.fr/particuliers/vosdroits/F1986?lang=en).

👉 **FYI** : it is recommended to contact your town hall to find out if there are special rules in force in your town (example: roof colour).

How can I be helped in the development of your project?

An advisor *Make* can help you define [your project \[application/pdf - 656.0 KB\]](https://www.ademe.fr/sites/default/files/assets/documents/guide-pratique-electricite-solaire.pdf) (https://www.ademe.fr/sites/default/files/assets/documents/guide-pratique-electricite-solaire.pdf) , and assess [costs and benefits](https://www.photovoltaique.info/fr/preparer-un-projet/quelles-demarches-realiser/choisir-son-modele-economique/) (https://www.photovoltaique.info/fr/preparer-un-projet/quelles-demarches-realiser/choisir-son-modele-economique/) :

Who shall I contact

- [Faire.gov.fr \(energy retrofit works\)](https://www.faire.gouv.fr/) (https://www.faire.gouv.fr/)

What are the costs?

Installation costs

The price of the equipment (solar panels and inverters) and their installation varies. It depends on the following:

- Materials Used
- Installation method (integrated or simply installed panels)
- and Installer

Operating costs

Once the solar panels have been settled, you are required to purchase third-party liability insurance for this equipment. To do this, you can request that your [home insurance contract \(https://www.service-public.fr/particuliers/vosdroits/F2123?lang=en\)](https://www.service-public.fr/particuliers/vosdroits/F2123?lang=en). Your contribution amount will be reassessed.

For the sale of the remaining electricity, you must pay a [tax](https://www.enedis.fr/producteurs-et-tarif-dacheminement/) (https://www.enedis.fr/producteurs-et-tarif-dacheminement/) every year.

👉 **FYI** : you should regularly maintain your solar panels because their materials degrade with the weather. In addition, the UPS must be changed approximately every 10 years.

Revenue from the sale of electricity

You do not pay income tax for selling electricity if your equipment meets the following 3 conditions:

- Electricity does not exceed 3 kilowatts peak (kWc)
- Electricity shall be connected to the public network in not more than 2 points
- Electricity is not used for the exercise of a professional activity

If one of the 3 conditions is not met, you must pay income tax. These revenues must be included on your tax return as [industrial and commercial profits \(BIC\) \(https://www.service-public.fr/professionnels-entreprises/vosdroits/F32919?lang=en\)](https://www.service-public.fr/professionnels-entreprises/vosdroits/F32919?lang=en).

👉 **FYI** : For equipment with a power of less than 3 kWc, the electricity obtained may be given free of charge.

Investment premium

By deciding to sell the surplus of your electricity, you can benefit from *investment premium*. To do this, your solar panels must have been settled by an RGE installer.

The amount of the premium depends on the power of your equipment.

Investment premium in euro per peak kilowatts (kWc)

Equipment power in peak kilowatts (kWc)	Investment premium amount
Less than or equal to 3 kWc	€380/kWc
Between 3 and 9 kWc	€280/kWc
Between 9 and 36 kWc	€160/kWc
Between 36 and 100 kWc	€80/kWc

The premium is paid over the first 5 years of operation of your equipment.

How do I get your installation up and running?

You must apply for a connection to the electricity system operator in your municipality (in general, Enedis) to be connected to the public network and be able to inject the surplus of your electricity production and sell it:

 Enedis: apply for connection to the public electricity network

ENEDIS (ex ERDF)

Go to
online service 
(<https://connect-racco.enedis.fr/prac-internet/login/>)

There is a charge for these services. Costs vary depending on the characteristics of your equipment.

This request can be made by yourself or by the installer of your solar panels.

The Network Manager sends you a connection proposal (PDR.) and a network access and operating contract number (CAE).

The network manager will connect and put your equipment into service once you have accepted the RDP and signed the EAC.

When you make your connection request you sign a *obligation to purchase contract* with the network manager. This contract obliges the network manager to buy your electricity.

The contract term is 20 years. It applies from the date of entry into service of your equipment (effective connection to the network).

The rate for the purchase of electricity produced is set by law.

The rate that applies to your contract is the one in effect on the date of your equipment connection request.

You must send your invoice to your network manager every year on the anniversary date of the contract.

To sell

What's that about?

You can generate electricity to sell it in full by settling the following:

- **Multiple solar panels (photovoltaics).**
These panels capture the solar energy to turn it into electricity. They can be attached to your original roof (non-integrated equipment) or integrated in place of the original roof (built-in equipment). In some geographical areas, they can also be settled on a facade or in a garden.
- **One or multiple inverters.**
The inverter is a small case that is attached to a wall as close as the photovoltaic panels. It converts the resulting direct current into AC, which is identical to that of the public electricity network and usable at home.

It is recommended that you use a recognised environmental professional (RGE) to install your solar panels.

For a list of professionals, you can help yourself from a directory:

↔ Find an RGE professional or an architect

Ecological Transition Agency (Ademe)

Go to
online service ↗
(<https://www.faire.fr/trouvez-un-professionnel>)

In order to sell the electricity obtained, your device must be connected to the public electricity network. In total, 2 communicating metres must be settled at your home.

How to prepare your project?

An advisor *Make* can help you define [your project \[application/pdf - 656.0 KB\]](#) ↘
(<https://www.ademe.fr/sites/default/files/assets/documents/guide-pratique-electricite-solaire.pdf>), and assess [costs and benefits](#) ↗
(<https://www.photovoltaique.info/fr/preparer-un-projet/quelles-demarches-realiser/choisir-son-modele-economique/>):

Who shall I contact

- [Faire.gov.fr \(energy retrofit works\)](#) ↗ (<https://www.faire.gouv.fr/>)

What are the prior permissions?

Before you settle your solar panels, you have to make a [prior declaration of work](#) (<https://www.service-public.fr/particuliers/vosdroits/F17578?lang=en>) to your town hall.

If you are building a house, the installation of your solar panels must be included on the [building permit](#) (<https://www.service-public.fr/particuliers/vosdroits/F1986?lang=en>).

➡ **FYI**: it is recommended to contact your town hall to find out if there are special rules in force in your town (example: roof colour).

What are the costs?

Installation costs

The price of the equipment (solar panels and inverters) and their installation varies. It depends on:

- Materials Used
- Installation method (integrated or simply installed panels)
- and Installer

Operating costs

Once the solar panels have been settled, you are required to purchase third-party liability insurance for this equipment. To do this, you can request that your [home insurance contract](#) (<https://www.service-public.fr/particuliers/vosdroits/F2123?lang=en>). Your contribution amount will be reassessed.

➡ **FYI**: you should regularly maintain your solar panels because their materials degrade with the weather. In addition, the UPS must be changed approximately every 10 years.

Revenue from the sale of electricity

You do not pay income tax for selling electricity if your equipment meets the following 3 conditions:

- Electricity does not exceed 3 kilowatts peak (kWc)
- Electricity shall be connected to the public network in not more than 2 points
- Electricity is not used for the exercise of a professional activity

If one of the 3 conditions is not met, you must pay income tax. These revenues must be included on your tax return as [industrial and commercial profits \(BIC\)](#) (<https://www.service-public.fr/professionnels-entreprises/vosdroits/F32919?lang=en>).

➡ **FYI**: For equipment with a power of less than 3 kWc, the electricity obtained may be given free of charge.

How do I get your installation up and running?

You must make a connection request to the electricity system operator present in your municipality (in general, Enedis) to be connected to the public network and be able to sell electricity:

 [Enedis: apply for connection to the public electricity network](#)

ENEDIS (ex ERDF)

Go to
online service 
(<https://connect-racco.enedis.fr/prac-internet/login/>)

This request can be made by yourself or your solar panel installer.

The Network Manager sends you a connection proposal (PDR.) and a network access and operating contract number (CAE).

The network manager will connect and put your equipment into service once you have accepted the RDP and signed the EAC.

When you make your connection request you sign a *obligation to purchase contract* with the network manager. This contract obliges the network manager to buy your electricity.

The contract term is 20 years. It applies from the date of entry into service of your equipment (effective connection to the network).

The rate for the purchase of electricity produced is set by law.

The rate that applies to your contract is the one in effect on the date of your equipment connection request.

You must send your invoice to your network manager every year on the anniversary date of the contract.

Statute and miscellaneous references

- [Energy Code: Articles L315-1 to L315-8](https://www.legifrance.gouv.fr/affichCode.do?idSectionTA=LEGISCTA000032939883&cidTexte=LEGITEXT000023983208)  (https://www.legifrance.gouv.fr/affichCode.do?idSectionTA=LEGISCTA000032939883&cidTexte=LEGITEXT000023983208)
Self
- [Order of 7 January 2013 increasing electricity tariffs](https://www.legifrance.gouv.fr/affichTexte.do?cidTexte=JORFTEXT000027008908&dateTexte=&categorieLien=id)  (https://www.legifrance.gouv.fr/affichTexte.do?cidTexte=JORFTEXT000027008908&dateTexte=&categorieLien=id)
Purchase price
- [Energy Code: Article L342-3](https://www.legifrance.gouv.fr/affichCodeArticle.do?cidTexte=LEGITEXT000023983208&idArticle=LEGIARTI000031068218)  (https://www.legifrance.gouv.fr/affichCodeArticle.do?cidTexte=LEGITEXT000023983208&idArticle=LEGIARTI000031068218)
Connection times
- [Energy Code: Articles L314-1 to L314-13](https://www.legifrance.gouv.fr/affichCode.do?idSectionTA=LEGISCTA000023986398&cidTexte=LEGITEXT000023983208)  (https://www.legifrance.gouv.fr/affichCode.do?idSectionTA=LEGISCTA000023986398&cidTexte=LEGITEXT000023983208)
Purchase obligation
- [Energy Code: Articles D314-15 to D314-16](https://www.legifrance.gouv.fr/affichCode.do?idSectionTA=LEGISCTA000032597615&cidTexte=LEGITEXT000023983208)  (https://www.legifrance.gouv.fr/affichCode.do?idSectionTA=LEGISCTA000032597615&cidTexte=LEGITEXT000023983208)
Purchase obligation
- [Decree of 9 May 2017 on the purchase of electricity from solar panels \(mainland France\)](https://www.legifrance.gouv.fr/affichTexte.do?cidTexte=JORFTEXT000034631446)  (https://www.legifrance.gouv.fr/affichTexte.do?cidTexte=JORFTEXT000034631446)
Investment premium
- [Order of 4 May 2017 on the purchase of electricity from solar panels \(Corsica, Guadeloupe, French Guiana, Martinique, Mayotte, Reunion\)](https://www.legifrance.gouv.fr/affichTexte.do?cidTexte=JORFTEXT000034600911)  (https://www.legifrance.gouv.fr/affichTexte.do?cidTexte=JORFTEXT000034600911)
- [Bofip-taxes n°BOI-BIC-CHAMP-80-30-20130325](http://bofip.impots.gouv.fr/bofip/8123-PGP.html?ftsq=puissance+cr%C3%AAt&identifiant=BOI-BIC-CHAMP-80-30)  (http://bofip.impots.gouv.fr/bofip/8123-PGP.html?ftsq=puissance+cr%C3%AAt&identifiant=BOI-BIC-CHAMP-80-30)
Conditions for exemption of income from the sale of electricity

Online services and forms

- [Enedis: apply for connection to the public electricity network](https://www.service-public.fr/particuliers/vosdroits/R49471?lang=en) (https://www.service-public.fr/particuliers/vosdroits/R49471?lang=en)
Online service
- [Convention on self-consumption without injection for an electricity generating facility](https://www.service-public.fr/particuliers/vosdroits/R49476?lang=en) (https://www.service-public.fr/particuliers/vosdroits/R49476?lang=en)
Document template

For more information, please contact

- [Guide for the realisation of a photovoltaic project \(PDF - 656.0 KB\)](https://www.ademe.fr/sites/default/files/assets/documents/guide-pratique-electricite-solaire.pdf)  (https://www.ademe.fr/sites/default/files/assets/documents/guide-pratique-electricite-solaire.pdf)
Ecological Transition Agency (Ademe)
- [Information on photovoltaics](http://www.photovoltaique.info/)  (http://www.photovoltaique.info/)
Ecological Transition Agency (Ademe)
- [Solar panels: know costs and assess cost effectiveness](https://www.photovoltaique.info/fr/preparer-un-projet/quelles-demarches-realiser/choisir-son-modele-economique/)  (https://www.photovoltaique.info/fr/preparer-un-projet/quelles-demarches-realiser/choisir-son-modele-economique/)
Ecological Transition Agency (Ademe)
- [Transmission rate \(Turpe\) for electricity producers](https://www.enedis.fr/producteurs-et-tarif-dacheminement)  (https://www.enedis.fr/producteurs-et-tarif-dacheminement)
ENEDIS (ex ERDF)

- **Solar panels: financial aid** [↗](https://www.economie.gouv.fr/particuliers/aides-installation-photovoltaiques) (<https://www.economie.gouv.fr/particuliers/aides-installation-photovoltaiques>)
Ministry of Economy
 - **Solar panels: choose its installer** [↗](http://www.photovoltaique.info/Choisir-son-installateur.html) (<http://www.photovoltaique.info/Choisir-son-installateur.html>)
Ecological Transition Agency (Ademe)
 - **Advance steps to generate electricity** [↗](https://www.enedis.fr/les-demarches-prealables-pour-produire-son-electricite) (<https://www.enedis.fr/les-demarches-prealables-pour-produire-son-electricite>)
ENEDIS (ex ERDF)
 - **Connect your power generation equipment** [↗](http://www.enedis.fr/produire-de-lelectricite) (<http://www.enedis.fr/produire-de-lelectricite>)
ENEDIS (ex ERDF)
 - **Photovoltaic: how to choose your installer? (PDF - 1.4 MB)** [↗](https://www.inc-conso.fr/sites/default/files/guide-aqc-gp-photovoltaique.pdf) (<https://www.inc-conso.fr/sites/default/files/guide-aqc-gp-photovoltaique.pdf>)
National Institute of Consumer Affairs (INC)
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