

PV Financing Guidelines

PV Financing Project

Deliverable 3.5

Austria



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Country PV Environment

Renewable energy sources play a vital role in Austria's energy mix. While hydropower takes the most dominant position (around 60%) other sources, amongst them solar power, have reached important shares. Additionally, the idea of becoming energy self-sufficient by producing solar energy has boosted the installation of PV plants in the residential sector.

For all application segments (residential, commercial, public, industrial) self-consumption is the most viable business model. Since subsidized feed-in tariffs (available for roof-mounted PV plants of 5 kWp to 200 kWp) have been constantly reduced during the past years, the model of 100% feed-in is no longer as attractive as it used to be (FiT 2016: 8.24 EUR cents/kWh; FiT 2015: 11.5 EUR cents/kWh; FiT 2010: 38 EUR cents/kWh for PV systems of 5 – 20 kWp; above 20 kWp: 33 EUR cents/kWh).

A national law that regulates the electricity sector ("Elektrizitätswirtschafts- und organisationsgesetz 2010") limits the use of photovoltaics, reducing investment and the number of installations to some extent. According to this law, supplying more than one consumer with PV electricity requires a special grid license that is currently only held by energy supply companies. This requirement prevents the economically viable use of PV plants in cases with several consumers such as in the cases of multi-family residential buildings, shopping centres or shared office buildings. For instance, a shopping centre operator who has invested in a PV system can only use the PV electricity to power common services such as corridor lighting or elevators, but is prohibited from selling the electricity to the individual tenants.

As this legal requirement seriously restricts the future development of photovoltaics in Austria, several interested parties and pressure groups have entered into dialogue with the responsible ministry to achieve a respective amendment.

Financing sector

The Austrian financing sector in general is still marked by traditional financing instruments. For private persons the most common form of financing is self-funding, though bank loans have also become an attractive option due to the low level of interest rates. Larger commercial PV projects are mostly realized through project financing. For utility companies contracting has also developed into a financing model of choice. In recent years various financial models of citizen participation as well as crowdfunding have become increasingly popular.

In the following, the most common and the most innovative financing models will be described in detail:

1. Loan as the most common form of financing PV plants
2. “Sale and lease back” as an innovative form of involving smaller investors or citizens

Alongside these two financing models, a number of equity and debt financing schemes exists:

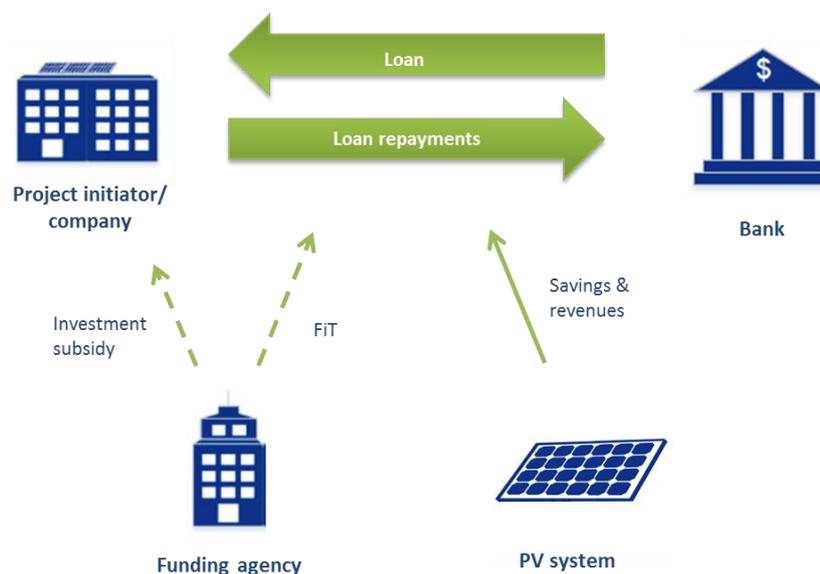
Equity financing schemes	Debt financing schemes
Leasing	Project finance
Crowdfunding	
Contracting	

Financing Schemes

Financing Scheme 1: Loan

Funding PV systems via loans is most common with larger corporate projects. The conditions at which a loan can be obtained vary and depend on a variety of factors such as: cash flow of the project, company’s creditworthiness, company’s financial statements, quality of the PV system components (and potentially equipment guarantee), and the availability of grants or supported feed-in-tariff (FiT). Some banks require minimum loan amounts per project (e.g. 25,000 EUR, some banks even 1 million EUR).

Diagram: Bank loan



Savings and revenues through the PV-system and – where available – a supported FiT contribute towards the repayment of the loan. Additionally, an investment subsidy reduces the overall financing needs.

Application Segments

Financing PV systems via loans is most common for corporate projects, as commercial customers with sufficient securities are generally offered good conditions by banks. Additionally, the current interest level is very low, making loans an attractive source of finance.

The specific terms and conditions for large investments are negotiated on a case-by-case basis between the bank and the corporate project developer.

Related Business Models

With decreasing feed-in-tariffs the economically most attractive business model is generally based on a high level of self-consumption. When taking out a loan, this business model offers the advantage of a high level of planning reliability for the debtor: stable loan repayments throughout the tenor and savings through the consumption of own electricity. If the investment is designed accordingly, the debt service should be covered through these savings and the earnings from selling excess electricity.

Generally, for a financing scheme to be attractive, the debt service should be covered by the achieved earnings on electricity. Therefore it is advisable to tailor the financing terms as much as possible to fit the cashflow structure. For instance, if the project initiator is granted a subsidized FiT, the tenor is often chosen at 13 years because the FiT is also valid for this period, but can also be shorter.

Implementation

This section gives an exemplary and simplified overview of the process of obtaining a loan and various aspects that could be taken into consideration. However, these vary on a case by-case basis and should not be taken as universally applicable.

Finding the best offer

Generally, it can be advisable to collect several loan offers from various banks and to compare these. However, especially in the case of larger and established companies it is to be expected

that the bank with which the company has a long-standing working relationship makes an attractive offer that is tailored to the project's requirements.

The required loan amount can also be an important factor when searching for the best-suited offer. Most banks require a minimum loan amount of 25,000 EUR for companies, while some banks might also set much higher minimum amounts (even at 1 million EUR). The maximum loan amount that can be issued by a single bank is 4 million EUR. However, it must be noted that PV projects of that size are currently not implemented in Austria.

Other important loan terms are the required equity share (at least 15%, but it can also be considerably higher), the tenor, and of course the interest rate.

Preparing bankable project documentation

Especially when large loan amounts are required, the administrative effort of preparing bankable project documentation can be rather substantial. Necessary documentation may include, but is not limited to the following:

- Financial statements
- Cash flow forecast
- Technical plans for the PV system (including type, country of origin, quality of the components)
- Documentation of collateral
- Business plan
- Funding approval by support scheme (if available; especially supported FiT for larger PV systems, application is possible before having received financing confirmation from the bank and is often even necessary to obtain a bank loan)

The bank then thoroughly assesses all submitted documents and undertakes a risk assessment. Provided it finds all documents satisfactory, it then sets the loan conditions (i.e. interest rate, tenor), issues its financing approval and finally disburses the funds.

External Conditions

The conditions under which bank loans are granted are of course subject to macroeconomic parameters that influence the key interest rate. As a conservative and well established financing instrument, loans are generally not at risk of being hit by unexpected changes in regulation.

Additionally, the availability of a supported FiT is often a prerequisite for larger PV projects to obtain loans, as it serves as a source of income that is guaranteed for the duration of 13 years. However, there is a clear trend towards decreasing FiTs, meaning that in time banks will also have to adapt this requirement with shorter tenors or lower loan amounts.

Example of key players and sources of information

The following is an exemplary list of bank institutions offering loans for PV investments:

Umweltcenter Raiffeisen Gunskirchen

<http://www.umweltcenter.at/sparen-finanzieren/finanzierungs-moeglichkeiten/>

Kommunalkredit

<https://www.kommunalkredit.at/DE/Leistungsspektrum/Energie%20%20Umwelt/EnergieUmwelt.aspx>

Volksbank Niederösterreich Süd

http://www.noee-sued.volksbank.at/m101/volksbank/m058_44430/de/index.jsp

BKS Bank

https://www.bks.at/BKSWebp/BKS/bks_at/FIRMENKUNDEN/index.jsp

Erste Bank AG

<https://www.sparkasse.at/erstebank/Ueber-uns/Erneuerbare-Energie>

Sparkasse

<https://www.s-bausparkasse.at/portal/?page=pv.schritt1>

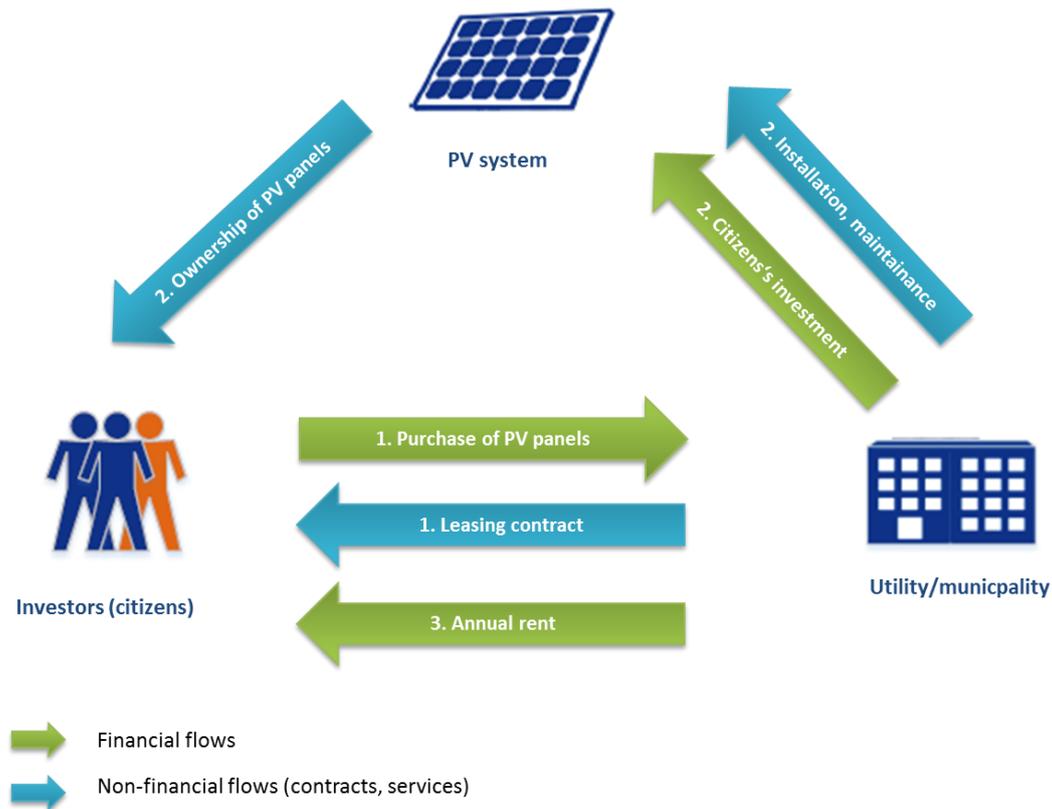
Financing Scheme 2: Sale and lease back

“Sale and lease back” is a newer form of financing PV projects that enables smaller investors who might not have the necessary funds or roof space for a PV system of their own, to acquire a share of a larger plant whilst also benefiting from a regular income in the form of rent. The project developer on the other hand, gains unbureaucratic access to finance.

The “sale and lease back” model is basically a bundle of a number of purchase and rent contracts. The project developer, typically a municipality or (energy supply) company, concludes a sale and lease back contract with several small investors before installing the PV system. The investors then buy a number of their choice of panels (usually one panel is the minimum and there is a maximum of how much a single person can invest) and in return receive rent from the project developer. The period during which rent is received is in many cases limited to 13 years, as this corresponds with the timespan of the guaranteed feed-in-tariff. At the end of the contract period or the PV system’s lifespan, the project developer buys back the panels from the investors at a residual price that is usually already stipulated in the “sale and lease back” agreement. Since the investors attain ownership of the PV panels and all risks and revenues are allocated to the utility/municipality (in this case the lessee) who also buys back the panels at the end of the lease, the “sale and lease back” model is basically a finance lease. Therefore, contrary to an operating lease, the assets (=the PV system) appears on the utility’s/municipality’s balance sheet.

“Sale and lease back” is a newer form of financing that became popular in the context of financial citizen participation. Nowadays it is not uncommon for municipalities or energy supply companies to use this financing model. So far, “sale and lease back” with citizen participation has been applied for large PV systems with capacities of 130 kWp up to 500 kWp.

Diagram: “Sale and lease back” model:



Several flows take place at the same time which explains the numbering of the arrows.

Application Segments

This financing scheme is used in segments where a direct participation of citizens is desirable. So far, projects by municipalities for PV systems on public buildings such as schools and by energy supply companies have been realized in Austria. A number of soft factors play an important role when deciding on “sale and lease back” as the financing scheme of choice. Renewable energy sources have an excellent reputation and a considerable part of the population is interested in contributing towards their expansion even if they do not have the means to acquire an entire PV system of their own. Especially in the case of municipalities, direct citizen involvement and a feeling of ownership are also important factors to obtain financing for PV projects that might otherwise not be possible to realize. For project developers “sale and lease back” is a preferred option where attractive bank loans cannot be obtained or where citizen participation is desirable for the Corporate Social Responsibility strategy or other reasons.

Generally, “sale and lease back” is a simple and unbureaucratic financing scheme. All financial terms including the yearly rent and buy-back price at the end of the period have to be stipulated in the various contracts. However, standard contracts providing legal certainty exist.

Related Business Models

“Sale and lease back” was a highly attractive form of financing a couple of years ago for business models based on full-feed in, as the feed-in-tariff was very attractive. However, the guaranteed feed-in-tariff is constantly decreasing (2016: 8.24 EUR cents/kWh; 2015: 11.5 EUR cents/kWh; 2010: 38 EUR cents/kWh for PV systems of 5 - 20 kWp; above 20 kWp: 33 EUR cents). The feed-in-tariff has to be negotiated annually between the three responsible ministries and is guaranteed for a period of 13 years. In the case that no agreement is reached, the feed-in-tariff is automatically reduced by 8% compared to the previous year. The support scheme for the feed-in-tariff ends in 2023 and no successor scheme is foreseen.

Due to this development, business models based on 100% feed-in are becoming less economically viable and “sale and lease back” has become more attractive for cases with a high level of self-consumption (e.g. schools, public buildings). Nonetheless the existence of a supported feed-in-tariff has beneficial implications for revenue streams as they imply continued and guaranteed income.

Implementation

The following gives an exemplary and simplified overview of various aspects that should be taken into consideration when implementing a “sale and lease back” financing model. However, these vary on a case-by-case basis and should not be taken as universally applicable.

Searching for suitable rooftops

As the typical project developers using this financing model are municipalities or energy supply companies, the PV plants are mostly installed on the roofs of public buildings (which in some cases also use the produced PV electricity). Where rooftops have to be rented, appropriate rental contracts have to be concluded.

Determining the target group

Who is most likely to invest in the PV plant and how can this group of potential investors be best reached? In the case of municipalities wishing to install a PV system on a public building

for self-consumption the target group is typically the local population. In the case of other project developers such as energy supply companies, the target group might be broader and might often also be found in environment-conscious city-dwellers who do not have the possibilities of realizing their own PV system.

Based on the analysis of the target group an appropriate PR strategy has to be developed. Possible elements to consider could be: corporate design, communication channels (print, online, face-to-face), providing live information on the PV system's performance, etc.

Contract design

“Sale and lease back“ contracts are rather flexible in their design. They should however stipulate certain key aspects:

- **Contract duration:** Stipulation of a minimum term, often the contract duration is equivalent to the term of the FiT (13 years), sometimes also to the system's lifespan.
- **Division into shares:** The price of the panels has to be stated, usually there is an upper limit of how many panels a single person can purchase (e.g. max. ten panels).
- **Lease/earnings:** The lease that the investors receive must be determined in the contract (e.g. 1-5% of the panel purchase price per year).
- **Buy-back price:** The price at which the project developer buys back the panels at the end of the contract period should be stipulated in the contract.
- **Risk:** The lessee carries all risks and is responsible for operation and maintenance and usually takes out an insurance. The lessor only faces the risk that the company could go bankrupt. However, since “sale and lease back” with citizen participation is in most cases offered by well-established utilities or municipalities, this risk is rather low.
- **Co-determination:** Even though the investor owns his panels, he has no right of co-determination.
- **Indication on payment of tax:** The investor must pay taxes on the lease payments he receives as they are classified as ancillary income (tax allowance: 750 EUR).

Contract conclusion

The agreement is effective as soon as the contract is signed and the payments have been made.

External Conditions

“Sale and lease back” remains relatively unaffected by external conditions, as the conditions can be implemented quite flexibly. Companies will of course compare the “sale and lease back” model with other financing options and possibly adapt the leasing rates according to current interest rates. However, recent experience has shown that despite low interest rates, utilities and municipalities still offer attractive “sale and lease back” opportunities that are met by strong demand. Additionally, the currently low interest rates on savings work in favour of “sale and lease back” as an attractive option for private individuals looking for low-risk investment opportunities.

For business models that are built on a supported feed-in-tariff, the continuing trend of decreasing subsidies is of importance. As this development will continue further, business models based on self-consumption will gain importance.

Example of key players and sources of information

Wien Energie (Viennese energy supply company)

<https://www.buergerkraftwerke.at/eportal2/ep/programView.do/pageTypeId/67349/programId/68018/channelId/-47864>

Helios (public company)

<http://www.helios-sonnenstrom.at/pages/index.php?mid=5>

EVN (energy supply company)

<https://www.evn.at/EVN-Group/Medien/Importiere-Meldungen/Spatenstich-Sonnenkraftwerk-Schonkirchen-I-%E2%80%93Ab-1.aspx>

Bad Vöslau (municipality)

<http://www.10hoch4.at/buergerbeteiligungsmodelle/badvoeslau/buergerbeteiligung.html>