

OFATE / DFBEW – Online conference on large rooftop PV systems

## Keynote

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# Development and outlook of costs for large rooftop PV systems in Germany

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# ▶ EUPD RESEARCH | Market Research, Certification, Exclusive Consulting

## EUPD Research

### Market research

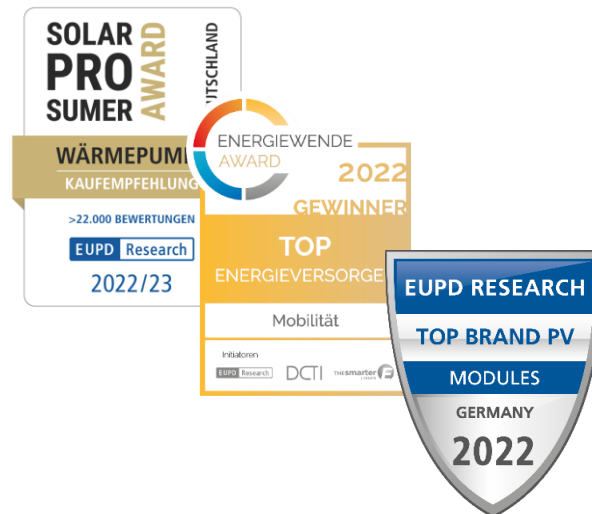
- Market analyses
- Competition analyses
- Product analyses
- Price analyses



## EUPD Cert

### Certification

- SolarProsumerAward©
- Top Brand PV© | Top PV Supplier©
- Energiewende Award©
- Customer satisfaction



## EUPD Consult

### Exclusive consulting

- Within the scope of strategic consulting projects, we focus on the review, further development or redevelopment of the companies' orientation, we rethink concepts, measures or the positioning within the competitive environment and shape growth paths and business models
- Our future-oriented consulting services analyze both the corporate environment and the fundamental objectives of the client

# ▶ Development and outlook of costs for large rooftop PV systems

- The analysis of PV system prices and its components are decisive when looking at the costs of large PV systems

Questions:

- How did PV system prices develop in the past years?
  - What are the main components of the system prices?
  - How did module prices develop in the past years?
  - What are the main reasons for evolving system prices?
  - How might PV system prices develop in the next years?
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- Answers will given by the data of an EUPD Research survey of PV installers: the German PV ModulePriceMonitor<sup>©</sup>

# ▶ German PV ModulePriceMonitor<sup>©</sup> | Methodology

## ➤ German PV ModulePriceMonitor<sup>©</sup>

- Pricing policy plays an important role for the future development of PV in Germany
- This study provides reference prices for PV systems and modules

## ➤ Approach

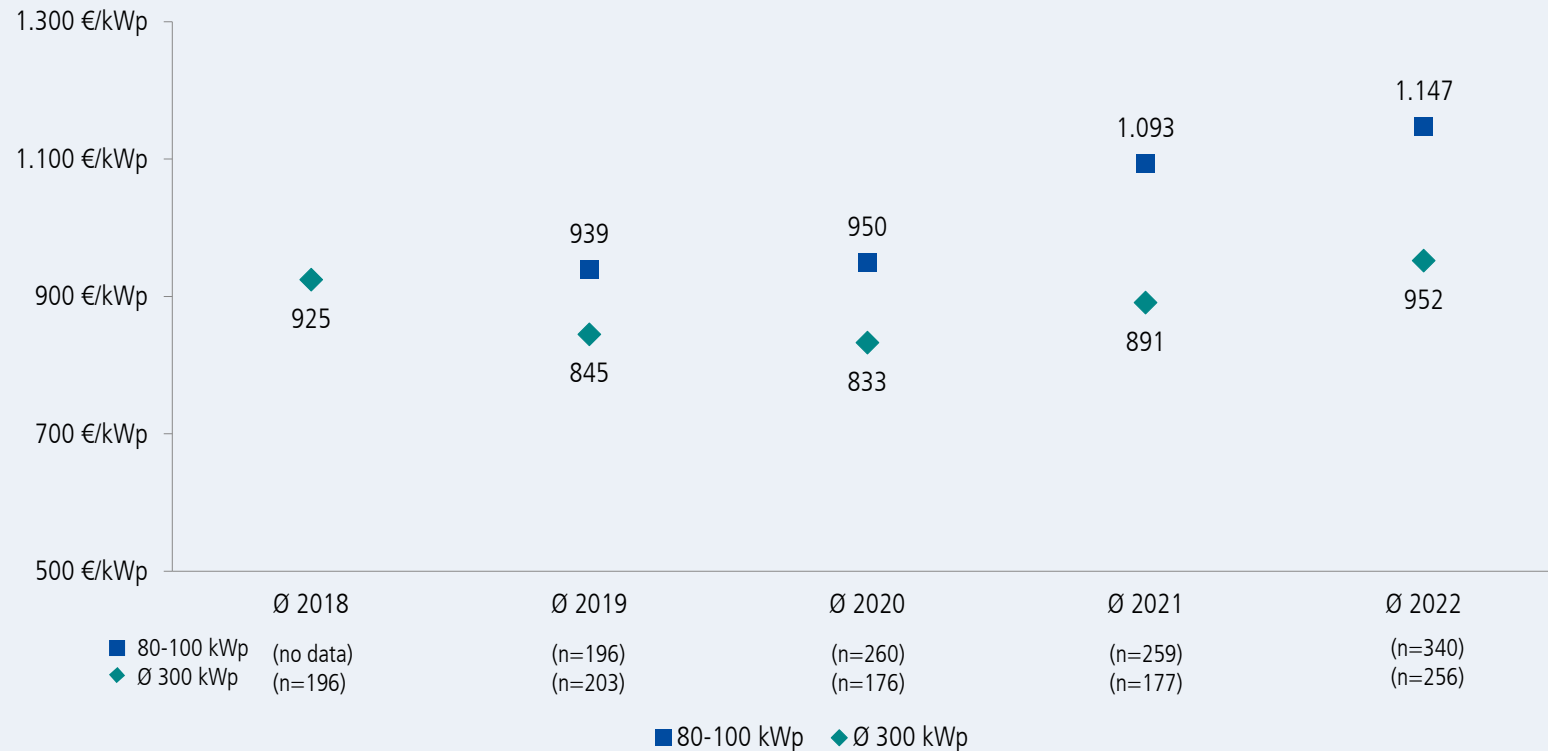
- At the middle of each quarter, a regular group of PV installers is surveyed about the current net purchase prices
- These prices can be compared with the previous quarters, which results in a price trend
- Additionally, the companies are also asked about, e.g. the current average system price for a rooftop PV system

## ➤ Participants (panel)

- The participants are decision makers from PV installation companies (100 respondents for each survey)
- It is as a periodical survey that is repeated every quarter
- The selected companies are able to make reliable statements on price developments based on their product portfolio and sales volumes
- A time lag in the price development (e.g. compared to analyses of the spot market) cannot be excluded due to the design of the survey.

# How did PV system prices develop in the past years?

System prices\* for rooftop PV | 2018 to 2022



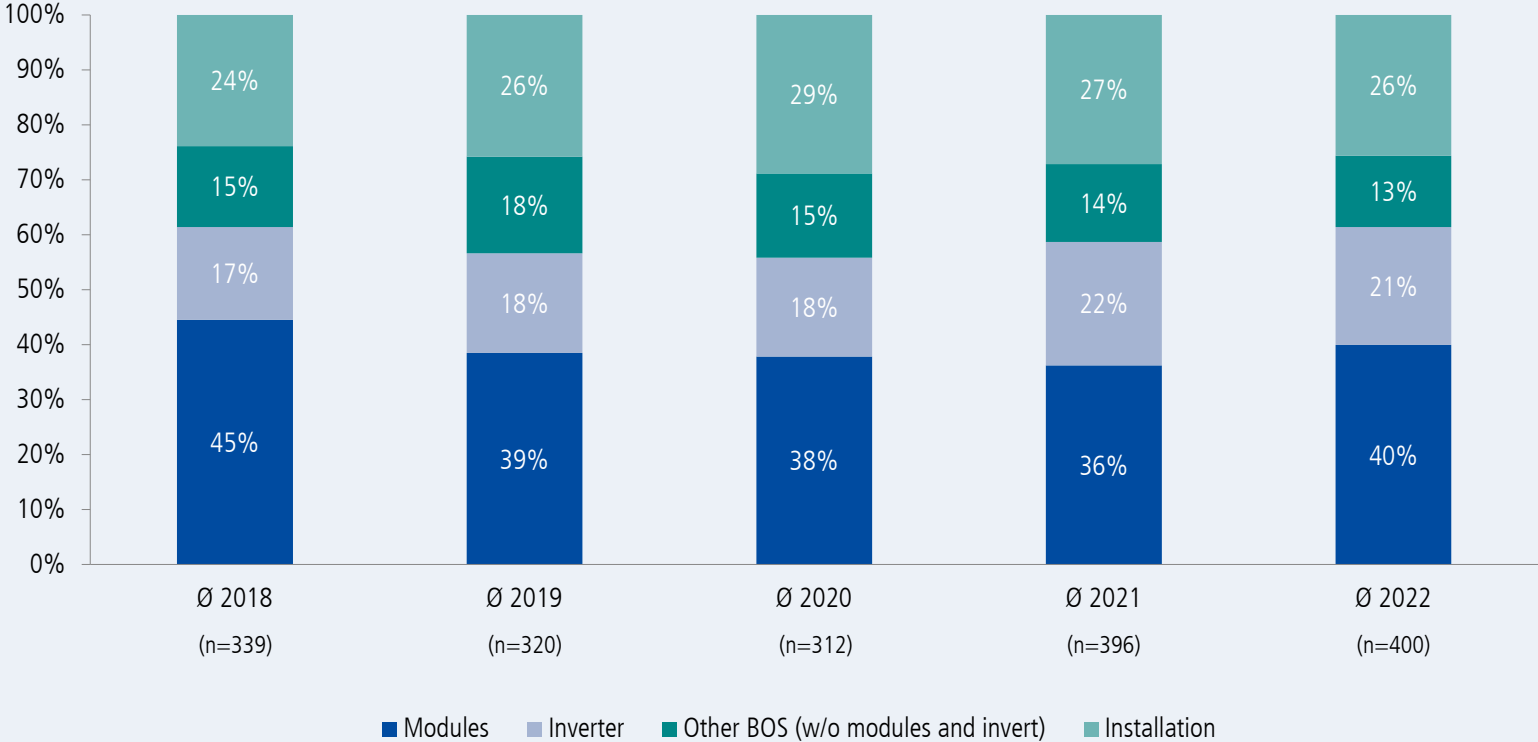
The graph shows the average system prices of rooftop PV installations with a size of 80 to 100 kWp and 300 kWp.

According to the surveyed installers, the average system price of a 300 kWp rooftop PV system in 2022 is 952 euros/kWp, and has thus increased by around 7 percent compared to the previous year.

\*net prices incl. mounting and delivery  
Source: EUPD Research 2022

# What are the main components of the system prices?

Main components of system prices for rooftop PV | <30 kWp System | 2018 to 2022



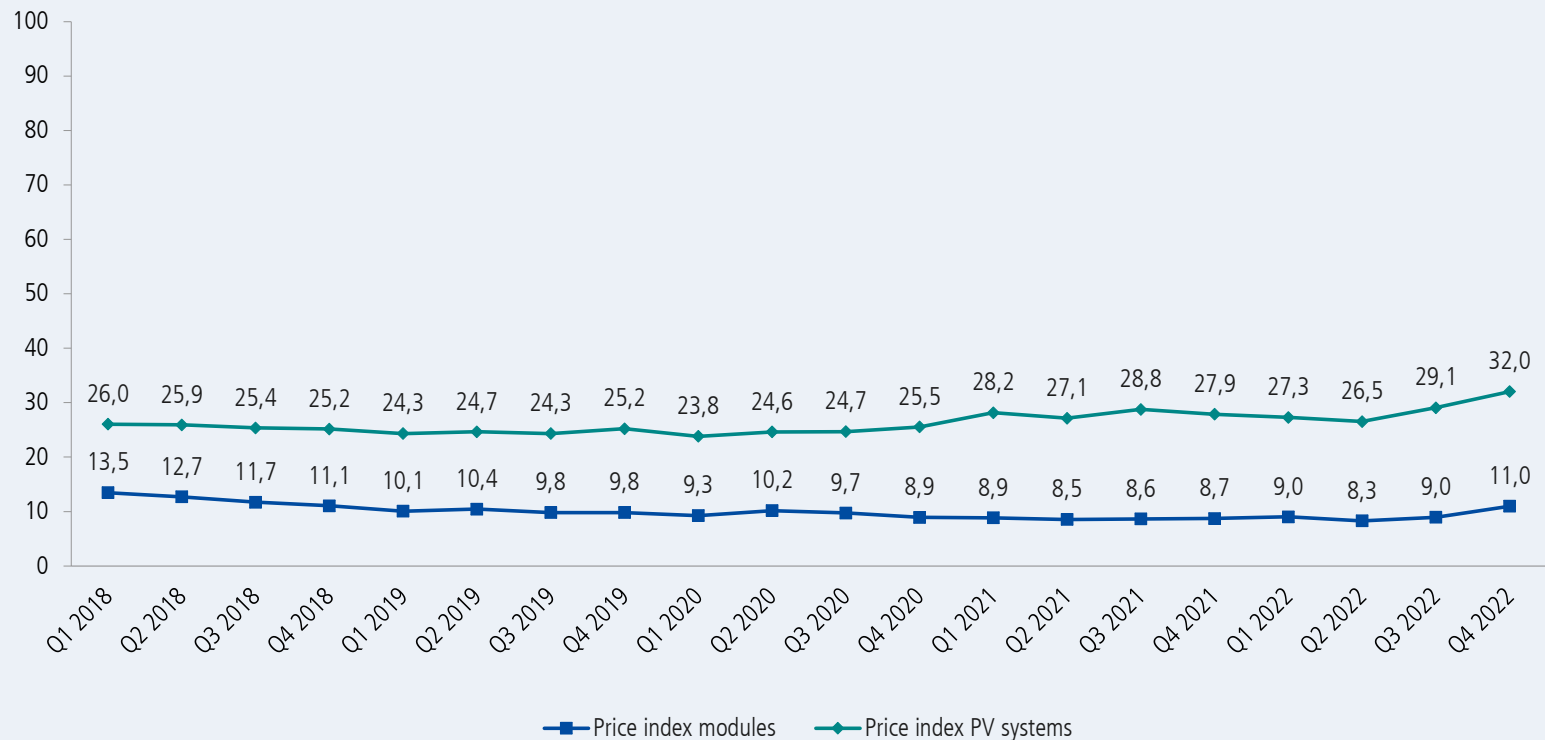
The graph shows the system price of a <30 kWp PV system by average share of cost components.

According to the surveyed installers, around 40 percent of the system costs are accounted for by the PV modules in 2022.

Source: EUPD Research 2022

# How did module prices develop in the past years?

Module prices\* for rooftop PV | 2019 to 2022



Compared with the first survey in 2006, system prices fell by around 71 percent and module prices by an average of around 91 percent.

The price index for PV systems (system prices) increases by 2.9 points to 32.0 index points in the current quarter.

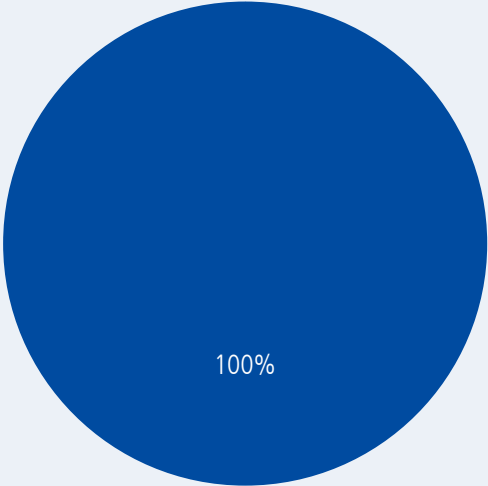
The price index for PV modules rises by 2 index points to 11 points.

\*starting in Q2 2006 = 100%  
Source: EUPD Research 2022

# What are the main reasons for changing system prices?

How did the system prices change and what are the reasons? | Rooftop PV | Q4 2022

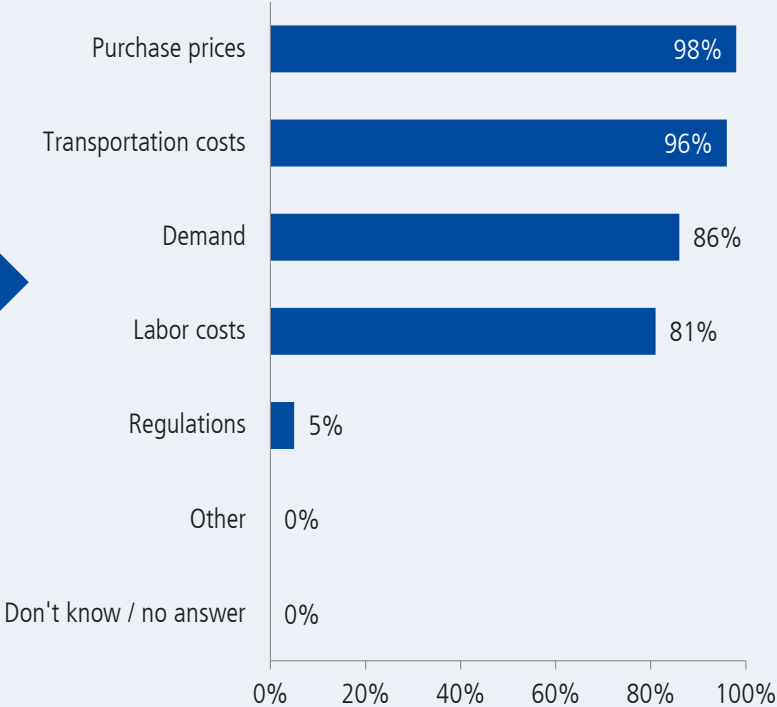
Compared to the last quarter, the system prices...



- ... have increased
- ... have decreased
- ... remained the same
- Don't know / no answer



Reasons for increased system prices | Multiple answers



All surveyed installers report increased system prices (Q4 2022).

According to EUPD, the increased purchase prices can also refer to components other than modules. This proportion has increased significantly.

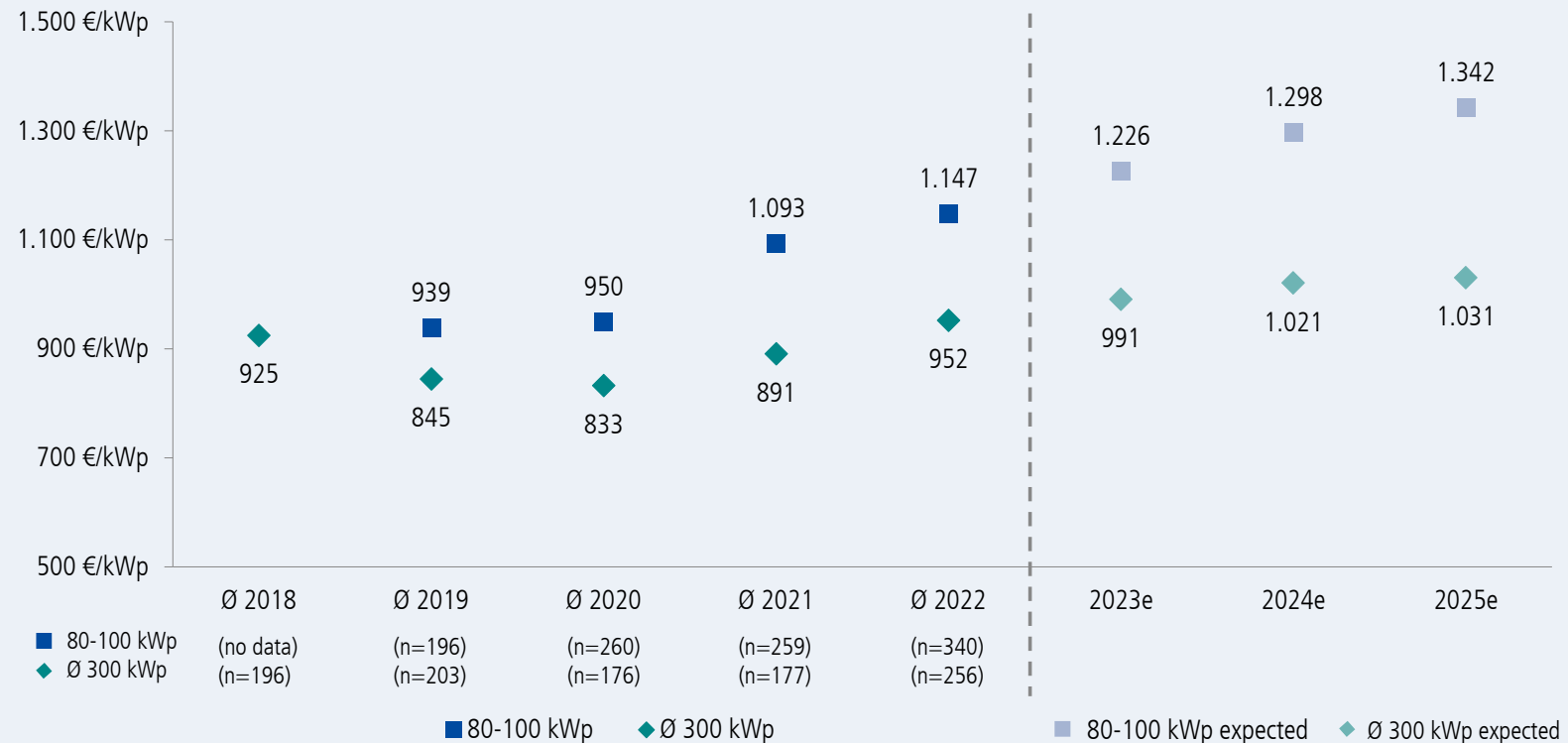
Clearly, not only the development of components has an effect on the system price, but also installation costs.

n=100  
Source: EUPD Research 2022



# How might PV system prices develop in the next years?

System prices\* for rooftop PV | 2018 to 2022 and forecast



Assuming a similar price increase as in recent years, a possible scenario for the next few years might be as follows.

For example, it can be assumed that demand will remain high or that installation costs will rise.

On the other hand, it is possible that the system prices might decline again, e.g. if module prices fall or availability improves.

\*net prices incl. mounting and delivery  
Source: EUPD Research 2022

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Thank you very much for your attention!

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