



# Webinar „Market Potential of Commercial and Industrial Solar in Europe“

EuPD Research  
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# Introduction

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There are various business models for investors of solar in the commercial and industrial segment:

- Self-consumption
- Grid-feed
- Direct marketing (Power Purchasing Agreements)
- Rent model

The choice of a particular business model depends therefore mainly on:

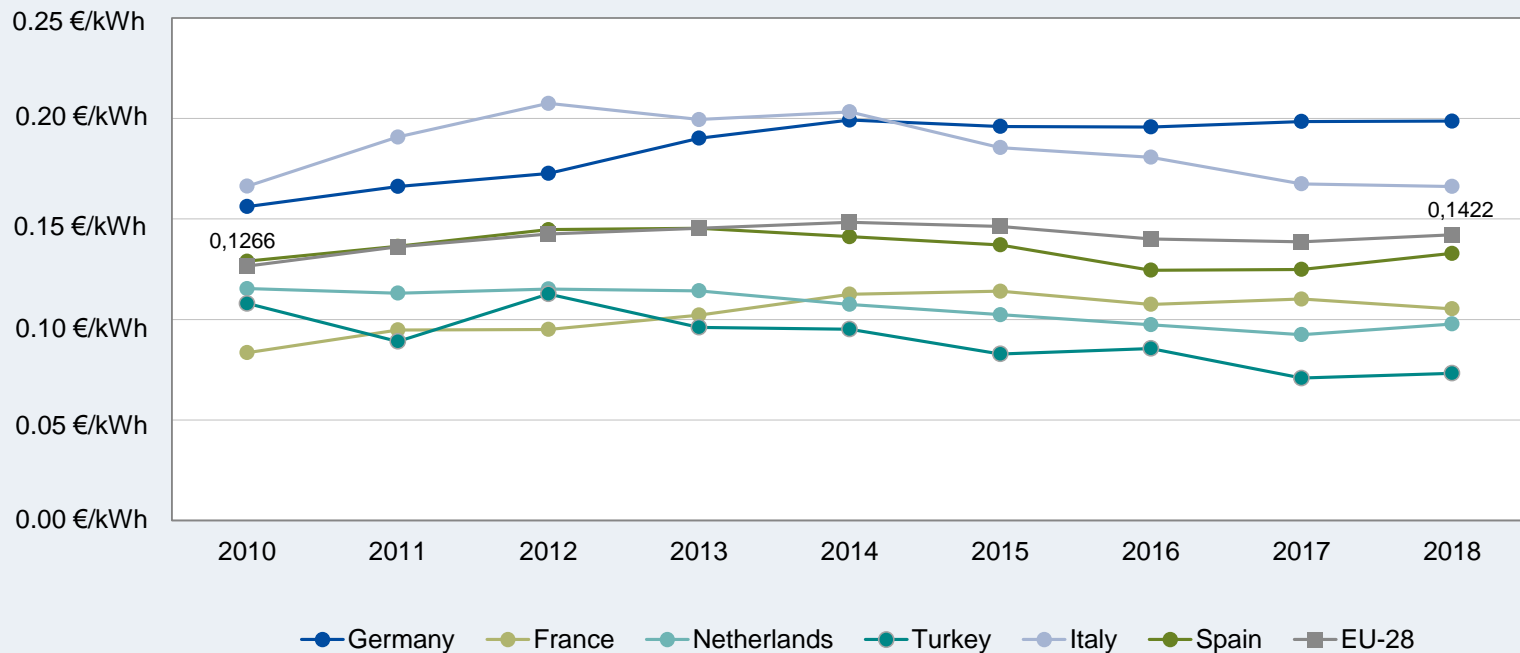
- the political regulation of the country
- the domestic electricity prices for C&I

# Commercial electricity prices

Electricity prices for commercial customers have shown a slight increase in 2018 in EU-28, as for example in Germany and the Netherlands.

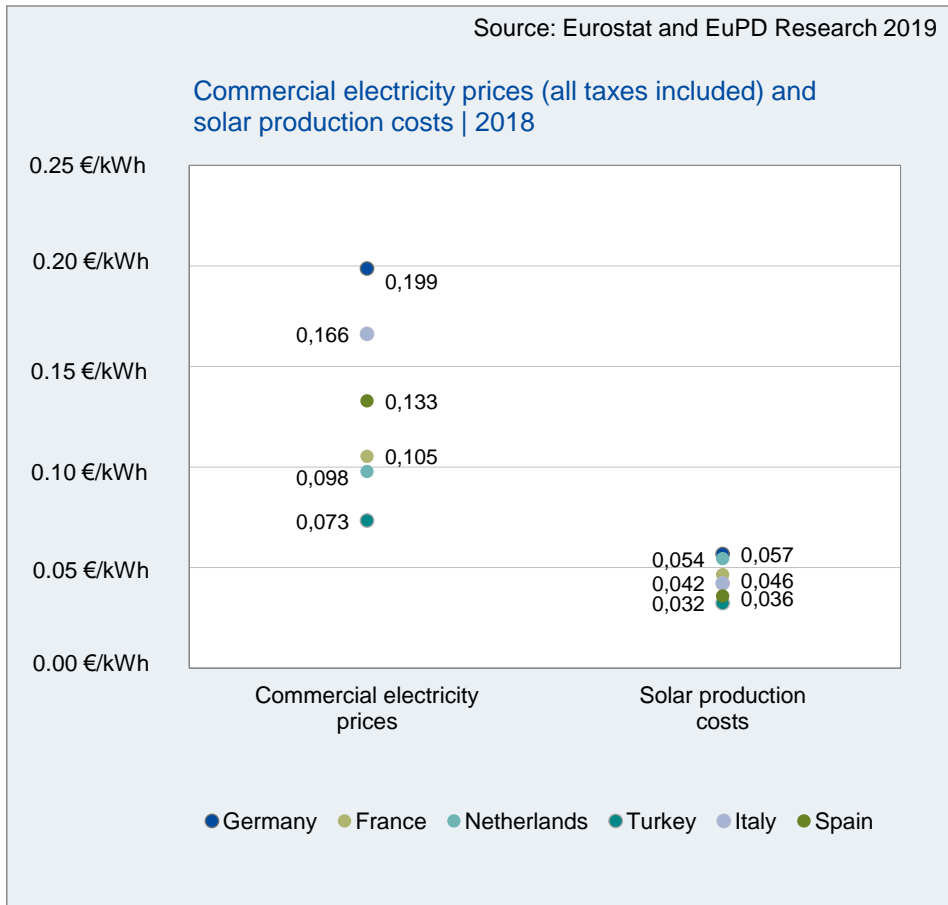
Source: Eurostat 2019

Commercial electricity prices (500MWh - 2,000 MWh) | All taxes included | EU-28 and several European markets



# Commercial electricity prices vs. Solar production costs

The solar production costs in all of the six considered countries are below the commercial electricity prices.



Assumptions for the calculation of the solar production costs	
Investment costs*	1077 €/kWp
Duration	25 years
Annual operating costs	1% of the investment costs

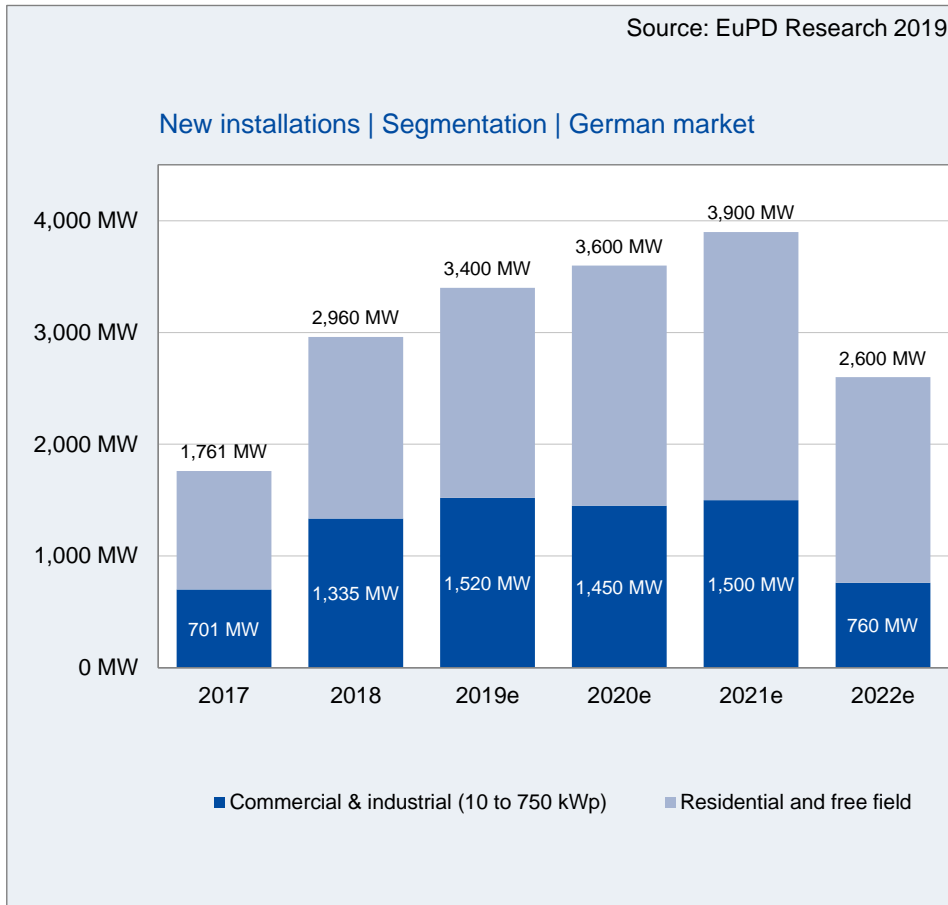
Ø Solar radiation (in kWh/m <sup>2</sup> a)	
Germany	950
France	1160
Netherlands	990
Turkey	1500
Italy	1280
Spain	1500

\*In Turkey the investment costs amounts to 969 €/kWp.

# Germany – PV Installations

## Status quo & Forecast 2017 – 2022

More than half of the installed capacity in 2018 is recorded in the commercial and industrial segment and is expected to grow steadily over the next years.



### Business model:

- Due to high electricity prices and decreasing feed-in tariffs, self consumption is the most lucrative
- Beginning in 2021, PPAs could be attractive for PV-systems which are older than 20 years

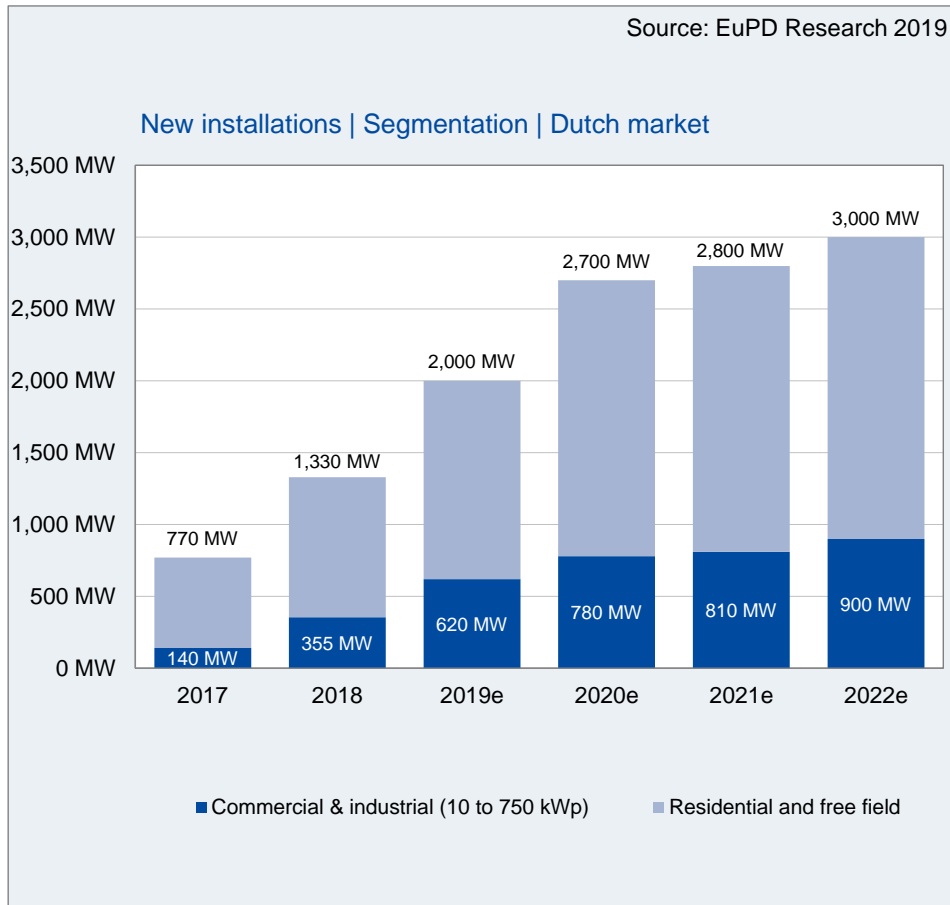
### Potentials for the C&I segment:

- Feed-in tariff system for PV systems below 750 kW
- Exit from coal-based power by 2038
- One of the highest electricity prices in the commercial segment within Europe

# The Netherlands – PV Installations

## Status quo & Forecast 2017 – 2022

The Netherlands focused on rooftop PV systems in the past; however, this has changed to a higher concentration on commercial and large-scale systems. The C&I segment will see a strong growth due to the new subsidy scheme.



### Business model:

- The SDE+ subsidy guarantees a feed-in tariff for 8, 12 or 15 years.
- Therefore, grid-feed is most important.

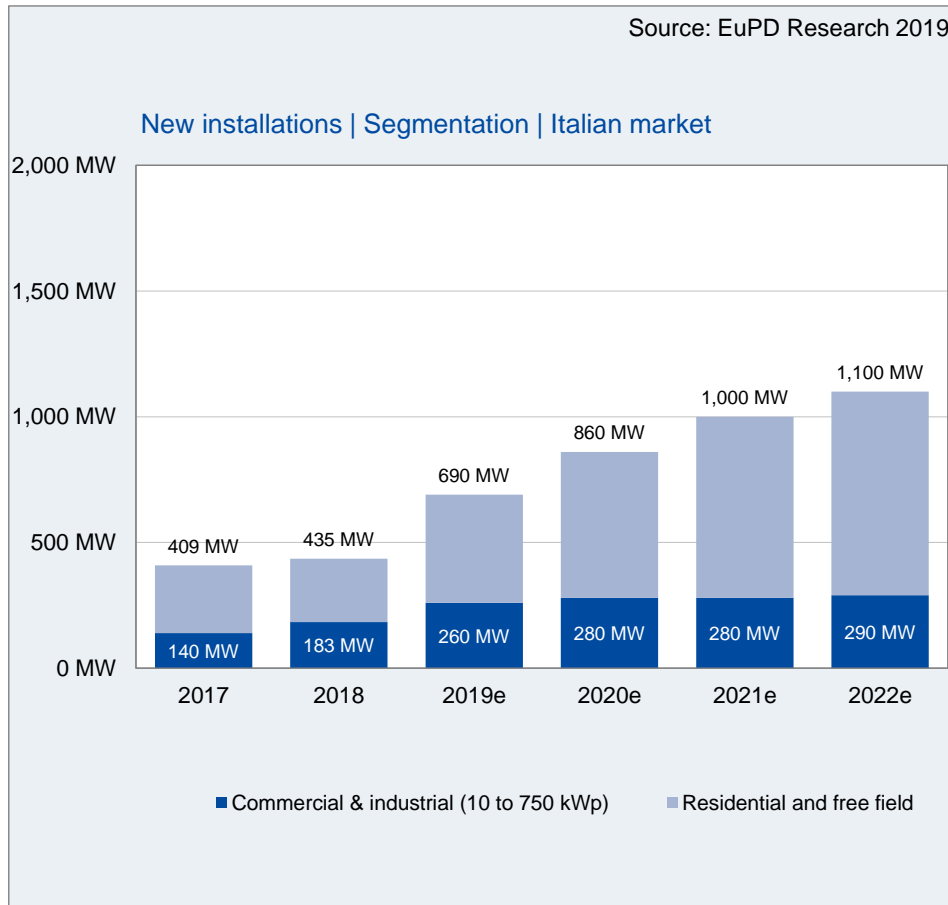
### Potentials for the C&I segment:

- Rising electricity prices for commercial customers
- Concentration of the SDE+ subsidy on solar power especially on commercial and large-scale systems (granted feed-in tariff)

# Italy – PV Installations

## Status quo & Forecast 2017 – 2022

Installations in Italy are expected to grow steadily in all the three segments.



### Business model:

- Due to high electricity prices and tax reductions, self-consumption of the self-generated electricity is most profitable.

### Potentials for the C&I segment:

- FER-decree: distribution of funding through technology-neutral tendering procedures
- Shut down of coal-fired plants by 2025
- Renewable proportion should increase to 55 percent of the electricity mix by 2030.
- The “solar duty” was adopted in Italy for new buildings and basic building renovations.
- Solar self-consumption is promoted indirectly through tax incentives and net-metering.

## Further potential markets in Europe

	Further potential markets in Europe
Turkey	<ul style="list-style-type: none"><li>▪ Financial benefits and a power purchasing guarantee for solar power.</li></ul>
France	<ul style="list-style-type: none"><li>▪ Governmental efforts push renewable energies to reduce the reliance on nuclear power</li><li>▪ The main element of the French energy policy, the "multiannual energy plan" (MEP) energy plan provides goals for different renewable energy technologies</li><li>▪ According to the MEP, photovoltaic energy should increase fivefold by 2030.</li><li>▪ Therefore, annual installations have to exceed 1.5 GW to achieve this goal.</li></ul>
Ukraine	<ul style="list-style-type: none"><li>▪ Feed-in tariff scheme for large-scale projects between 2017 and 2019 (0.1502€/kWh for ground-mounted facilities connected to the grid);</li><li>▪ FIT system will be changed to an auction system in 2020</li></ul>
Hungary	<ul style="list-style-type: none"><li>▪ Due to the new incentive scheme for PV installations (METÁR) a record growth over the next years is expected.</li></ul>
Spain	<ul style="list-style-type: none"><li>▪ The "sun tax" was eliminated by the Spanish government in October 2018 – a law that punished self-generated electricity systems, which were connected to the national grid.</li><li>▪ This elimination makes self-generated solar power lucrative. Furthermore, the Spanish government is planning to add a financial compensation for feeding electricity into the grid. This will make PV more profitable.</li></ul>



# Conclusion

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- There is a high potential for solar in the commercial and industrial segment in several European countries, especially in Germany, the Netherlands and Italy.
- Nevertheless, the commercial and industrial solar investments carry risks in case of a modification in political measures (e.g. concerning the feed-in tariff) and in case economic stability of a country can no longer be guaranteed.