



**BE  MART**

**Together for Active and Efficient Buildings**



The BE-Smart project has received funding from The European Union's  
Horizon 2020 research and innovation programme under grant agreement  
No 818009.



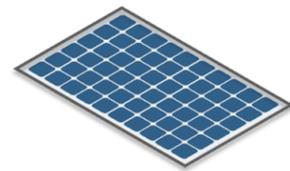
# **Economic evaluation of EPOG systems**

**How much will my system cost?**





# What influences cost?



Modules



System components



Labor, installation



Operations, maintenance

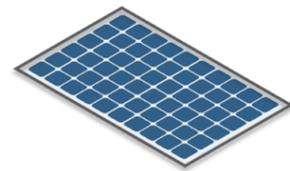


Financing, insurance





# What influences cost?



**Modules**



**System components**



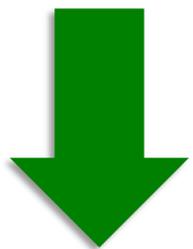
**Labor, installation**



**Operations, maintenance**



**Financing, insurance**



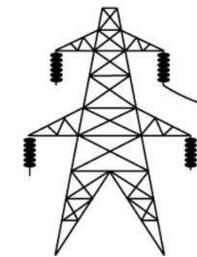
**Subsidies, tax deductions**



**Self consumption**



**Feed-in tariffs**



**Off-set construction costs**





# Some rough estimates (Switzerland)

• Costs per m <sup>2</sup>	CHF 440
• Costs for Solar System	CHF 11,000* <b>≈10 000 EUR</b>
• Household	Small family

**25 m<sup>2</sup>  
roof**

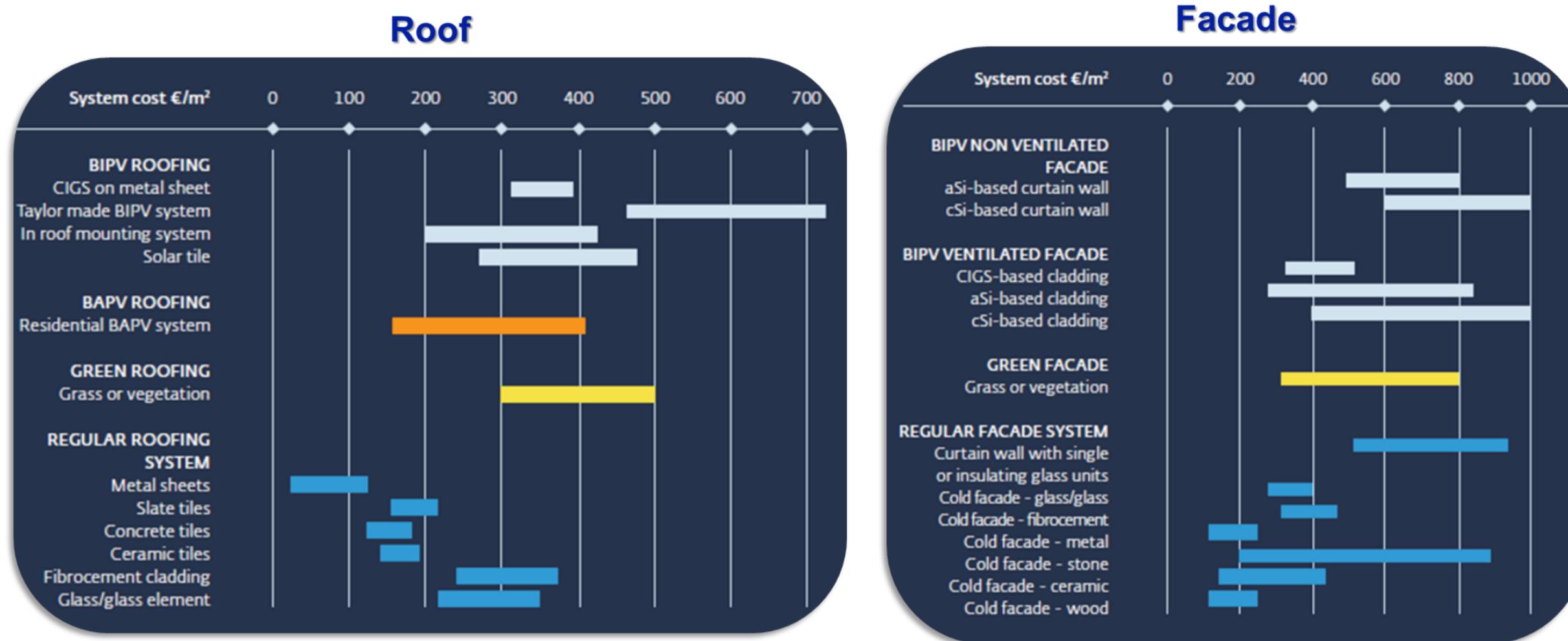
• Costs per m <sup>2</sup>	CHF 267
• Costs for solar system In CHF	CHF 16,000* <b>≈14 500 EUR</b>
• Household	Large/multi-family (~X residents)

**60 m<sup>2</sup>  
roof**





# System cost by area





# Cost reduction factors

## Subsidies, tax deductions



Schweizerische Eidgenossenschaft  
Confédération suisse  
Confederazione Svizzera  
Confederaziun svizra

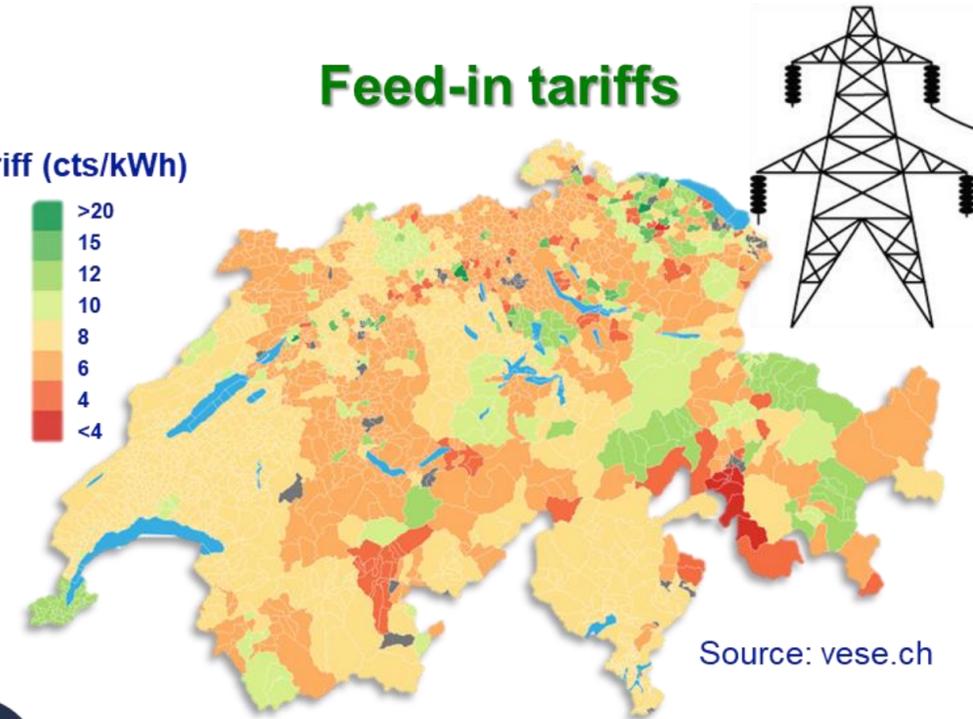
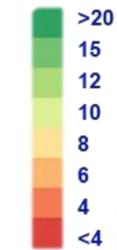
**Ordinance on the promotion of the production of electricity from renewable energies**

## Off-set construction costs



## Feed-in tariffs

Tariff (cts/kWh)

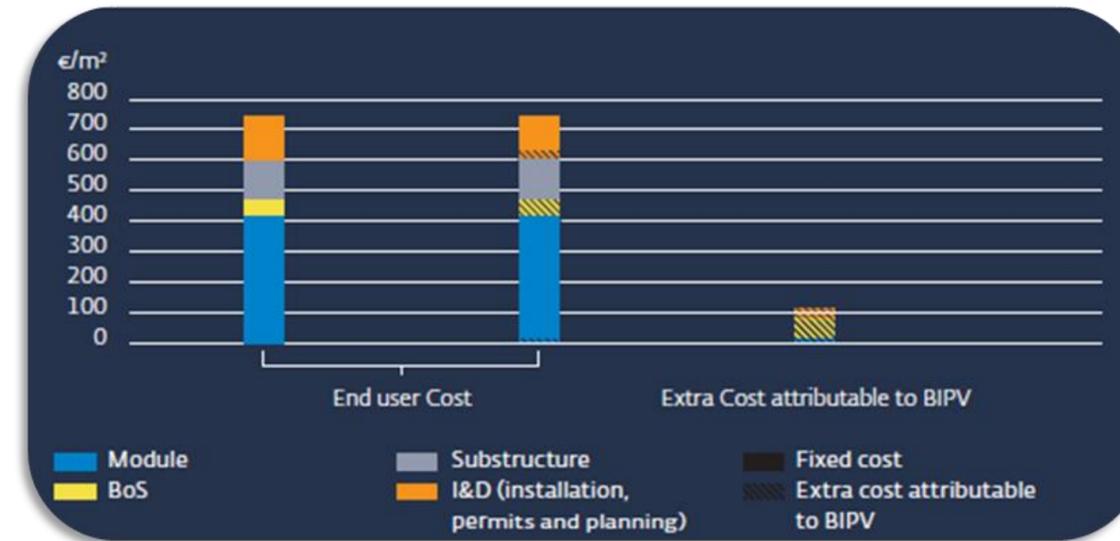


Source: vese.ch





# An example of a pioneering EPOG system



<b>Subsidies</b>	€	<b>131 600</b>
<b>Value self-consumed electricity</b>	€/kWh	<b>0.19</b>
<b>Value injected electricity</b>	€/kWh	<b>0.10</b>
<b>Extra cost</b>	€/m²	<b>145</b>
<b>System lifetime</b>	years	<b>30</b>
<b>Payback period</b>	years	<b>-</b>





# Getting quotations

**Installing:**

EPC (Engineering, Procurement, and Commissioning)

**Maintaining:**

O&M (Operations and Maintenance)

**What are your requirements?**

- Size
- Aesthetics
- Budget
- Time frame
- ...



Zum Beispiel:  
[swissolar.ch](http://swissolar.ch)

[solarwirtschaft.de](http://solarwirtschaft.de)



Por ejemplo:  
[solarplus.es](http://solarplus.es)

Par exemple:  
[photovoltaique.info](http://photovoltaique.info)



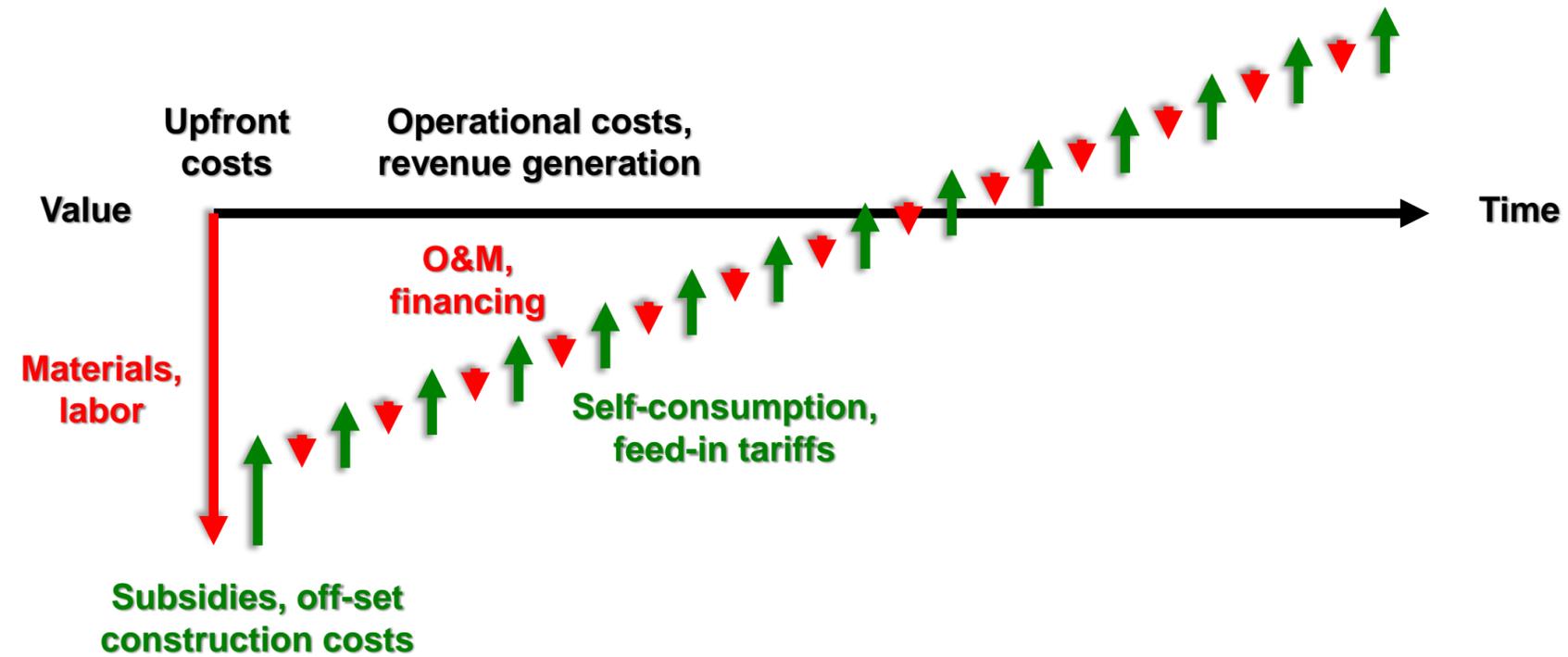
... where do you live?





# Summary

Expensive at first glance... but EPoG is an active, revenue generating building element!





**Thank you  
for your attention.**