



**volte**

# Volte

## = Energy Optimists

use smart – use less – use Volte AS

EnergyLab 22.11.2022, Anne Jordal og Runar Stranden

Tech and Energy Competence.  
Aiming for smarter energy usage.

Owned by Eviny and soon also  
Hafslund



volte



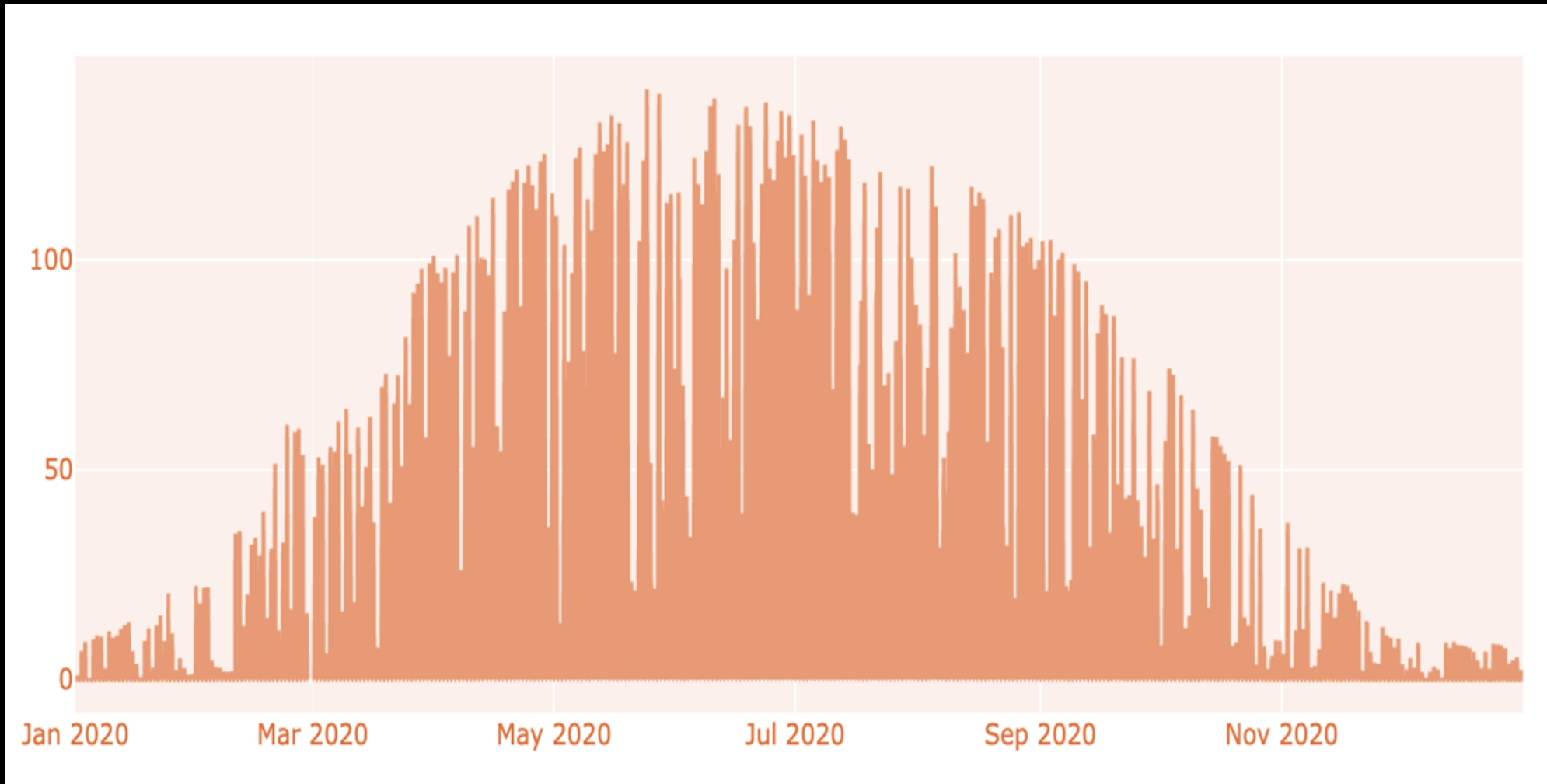


# How to optimize an investment in solar?





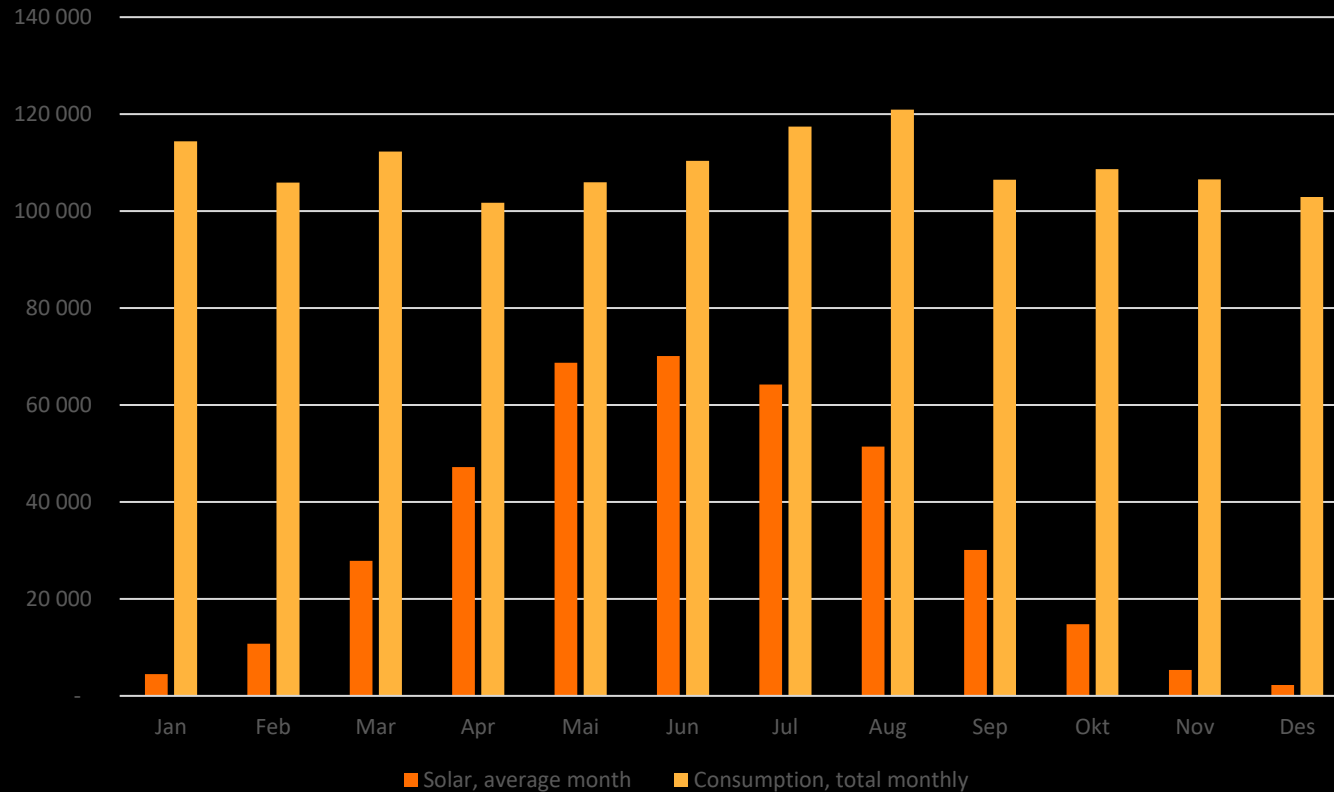
# How does solar energy production «behave»?





# Traditional way of illustrating

Accumulated consumption vs. solar production,  
average per month

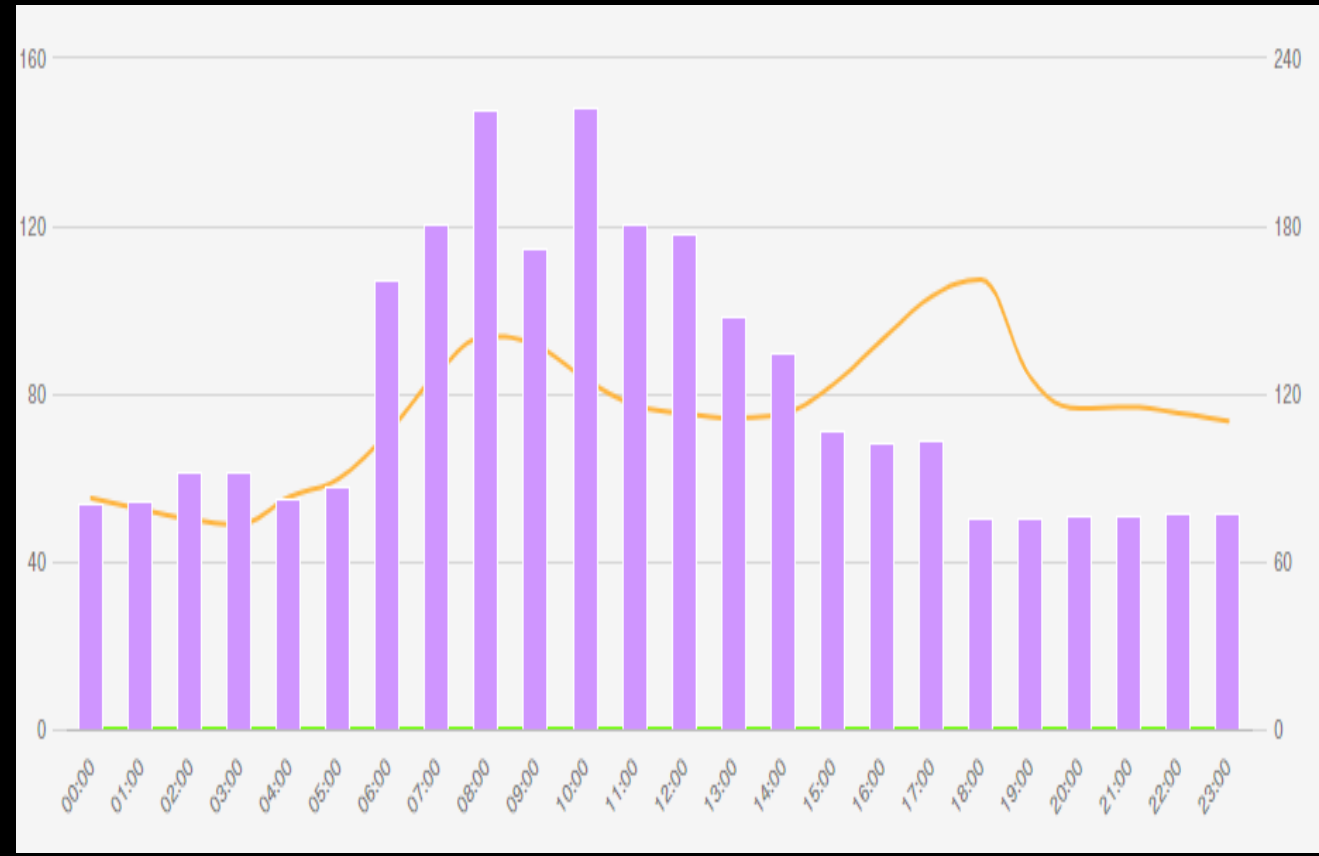
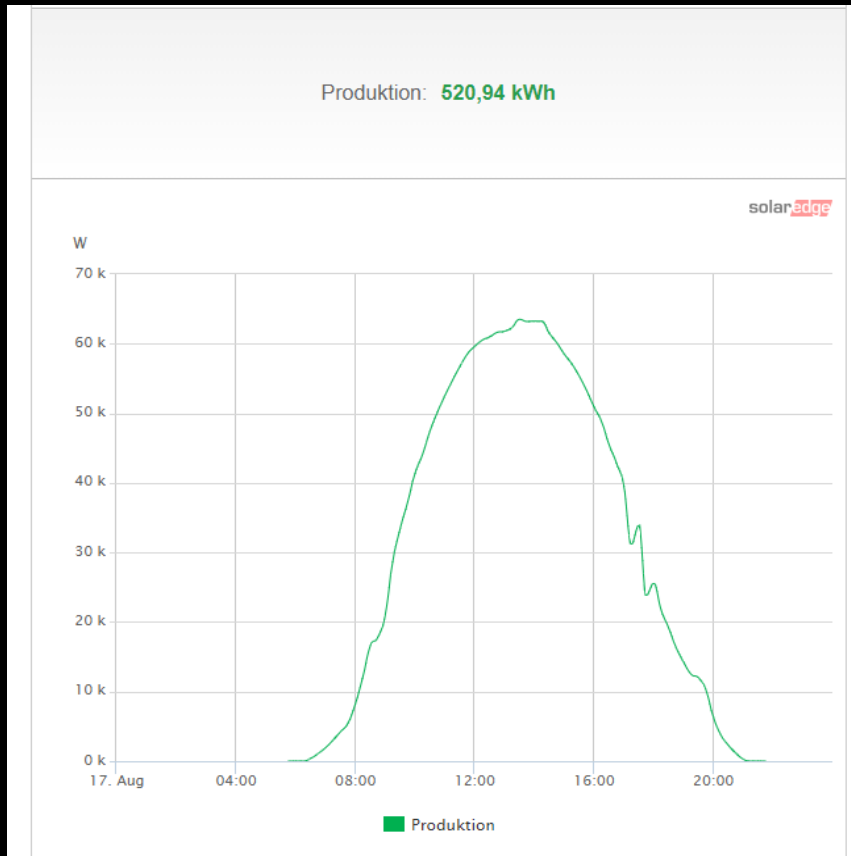


Production: 398 000 kWh  
Consumption: 1 315 000 kWh

Self supplied appr. 30 % ?



# Solar and consumption, per hour





# What are the essentials in understanding the economy of solar?

Find consumption per hour through the year

Estimate production from solar, hourly

- Usage of local solar radiation/resources combined with observed weather data

Investment costs

- Support schemes

Value production in øre/kWh – prognosis in a 30 years lifetime

- Forward prices, Nasdaq and long term analysis
- Grid costs, estimated/expected
- Taxes, estimated/expected
- Regulations, estimated/expected



If finances count the most,  
how to achieve shortest possible repayment period?

From:

How much space on the roof? Max number of  
solar panels/kWp?

To:

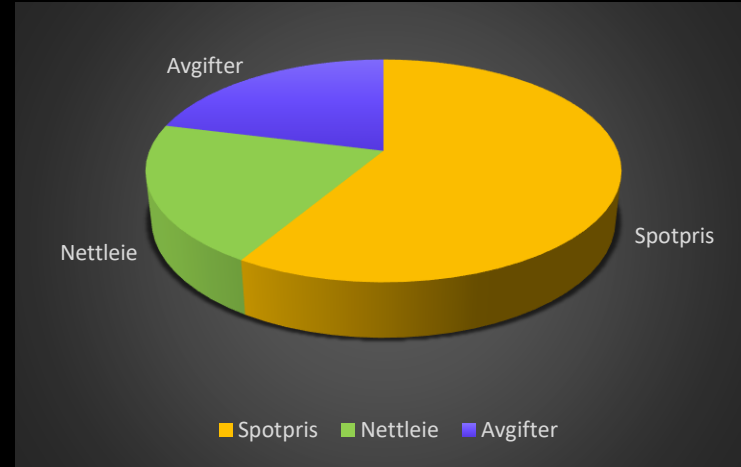
How many kWp is needed to best match own  
energy need and optimize economy?



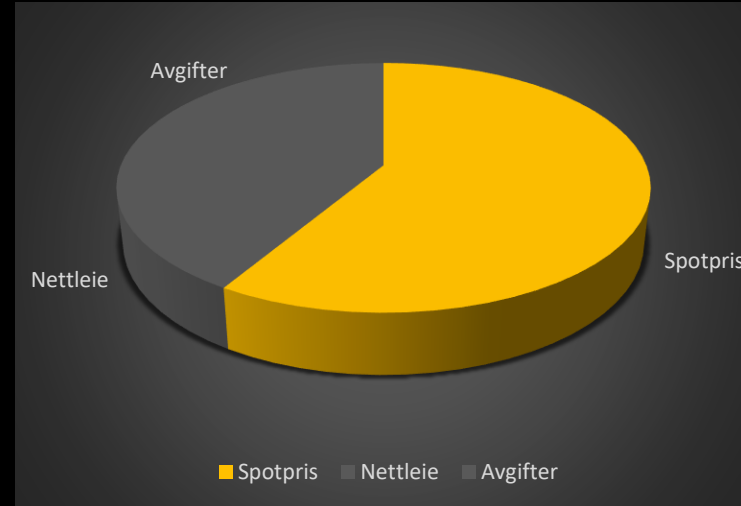


Most  
profitable  
to use  
kWh on  
site

Value of 1 kWh produced and used on site:



Value of 1 kWh produced and sold externally (plusskunde) :





# Illustration:

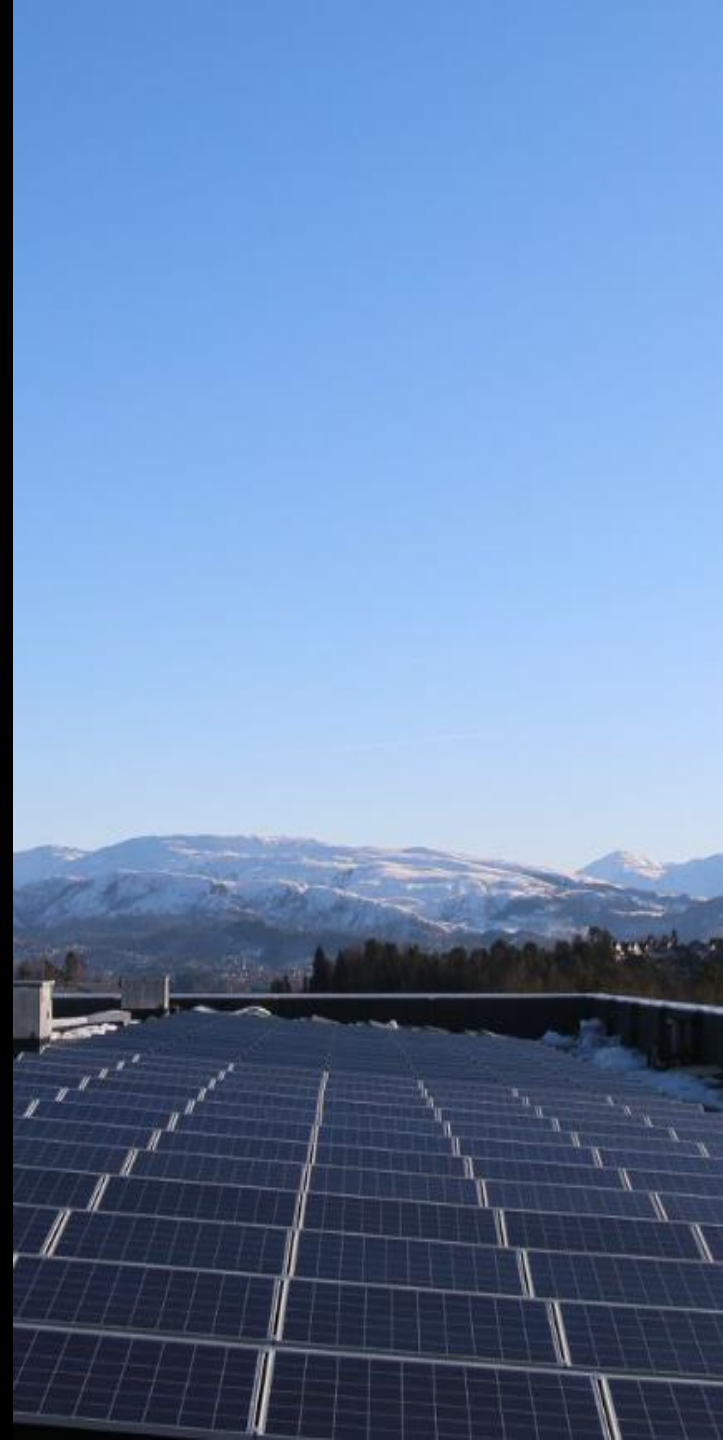
Value own production, saved buyings – May:

$$11\ 000\ \text{kWh} * \text{NOK } 1,35 = \text{NOK } 14\ 840$$

Earnings if sold to market – May:

$$11\ 000\ \text{kWh} * \text{NOK } 0,65 = \text{NOK } 7\ 150$$

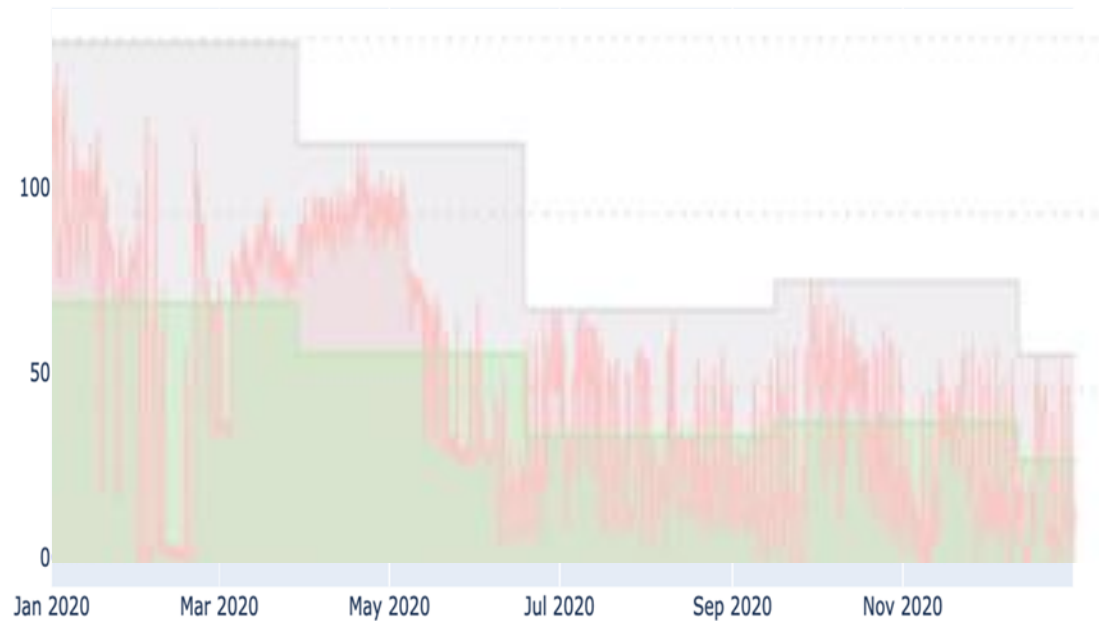
Own usage - shortest possible repayment



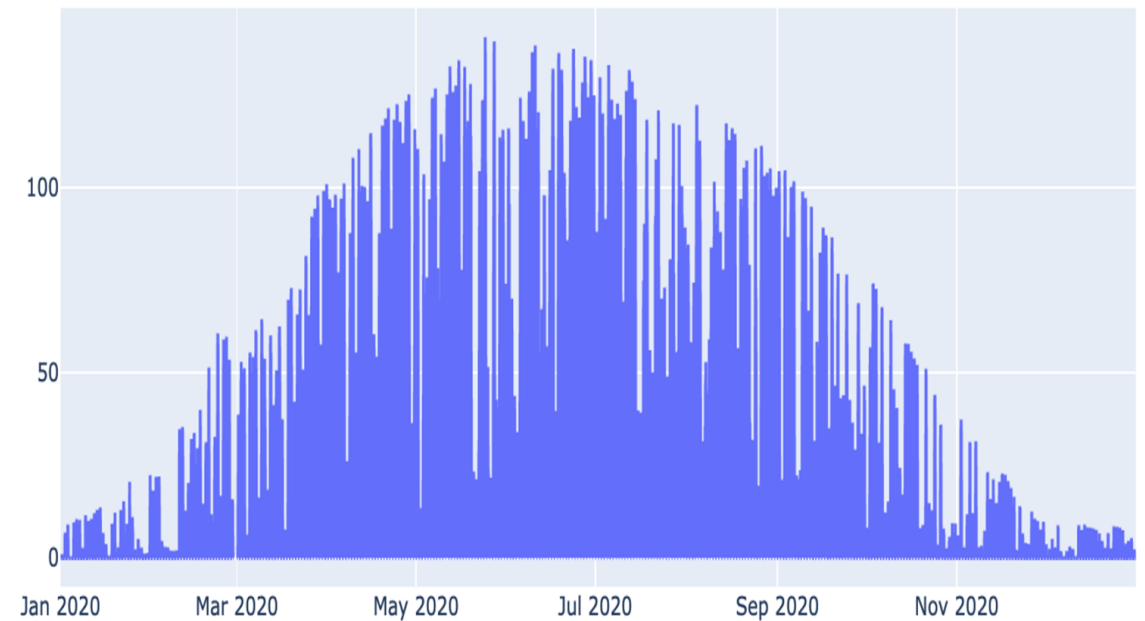


# Consumption profile decides size of solar

Consumption over a year



Solar production over a year





[www.volte.no](http://www.volte.no)