# Enercoop Haut de France

## 100 % renewable & cooperative Electricity Provider

SOLARISE – 2018 october 18th

Pierre Gouëllo - Production & Purchase

100% COOPÉRATIF
FOURNISSEUR D'ÉLECTRICITÉ
100% RENOUVELABLE

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L'énergie militante

# Le projet Enercoop

## Created in 2005 by :

biocoop

HESPUL

WWF

la Nef
société coopérative
de finances solidaires

CLER

Les Amis
de la Terre

GREENPEACE

- **Activity : 100% Renewable** electricity provider
- **Vision** : to allow citizen to act  concretely

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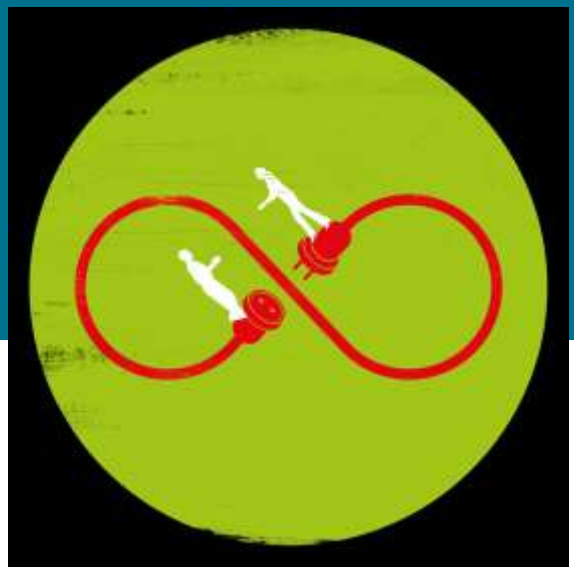
# Enercoop project

## The objectives :

To Promote renewable energies

- To Decentralise the production
- To reduce consummation
- To allow citizen to re-appropriate the production

# Status : SCIC

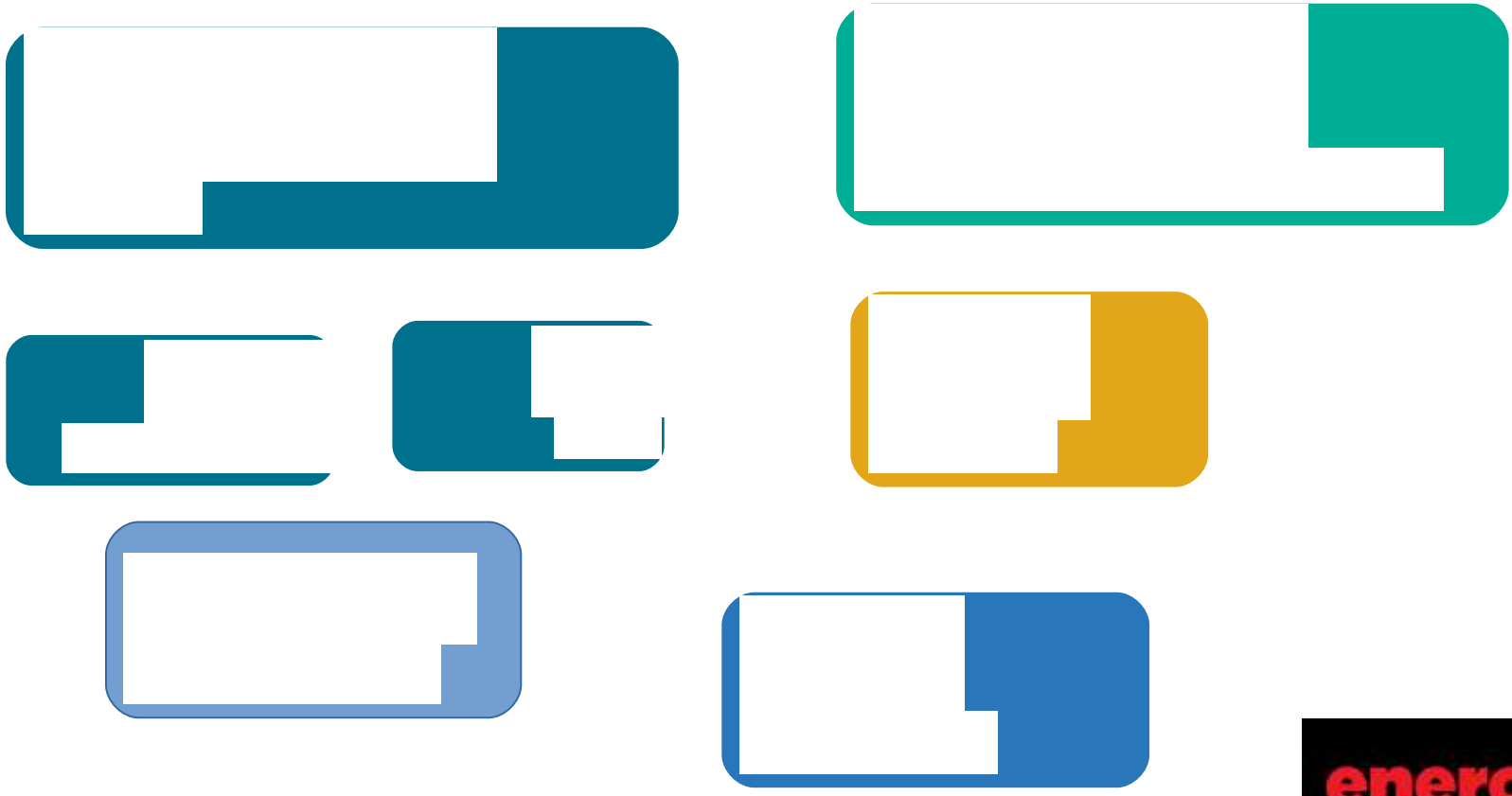


## Cooperative Society of Collective Interest :

- Transparency and democracy :
    - One people = one voice
- 6 colleges : producers, consumers, salaries, project promoters, municipalities, partners
- 57 % of the benefits are reinvested

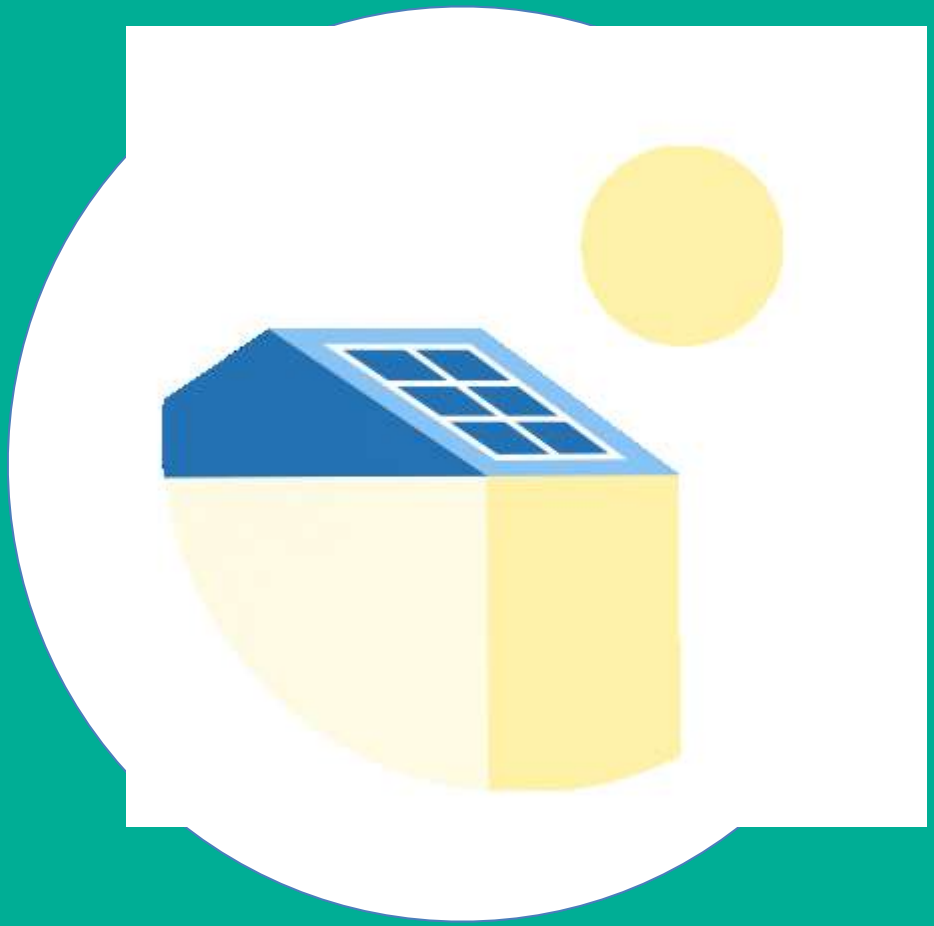
# National figures

2018:



# Photovoltaïque

## Case Study : Sérifontaine



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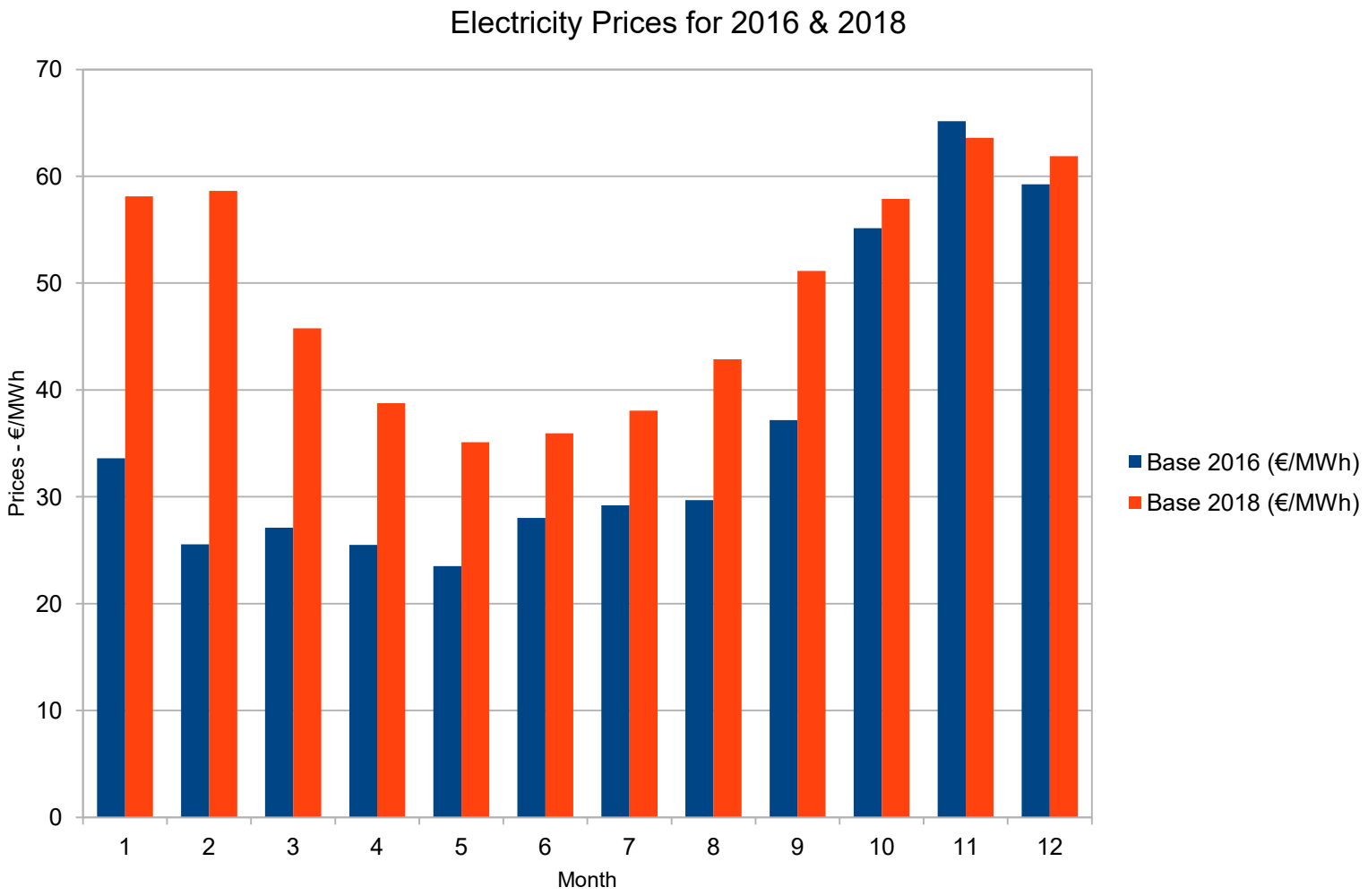
# Electricity French Market – EPEX SPOT

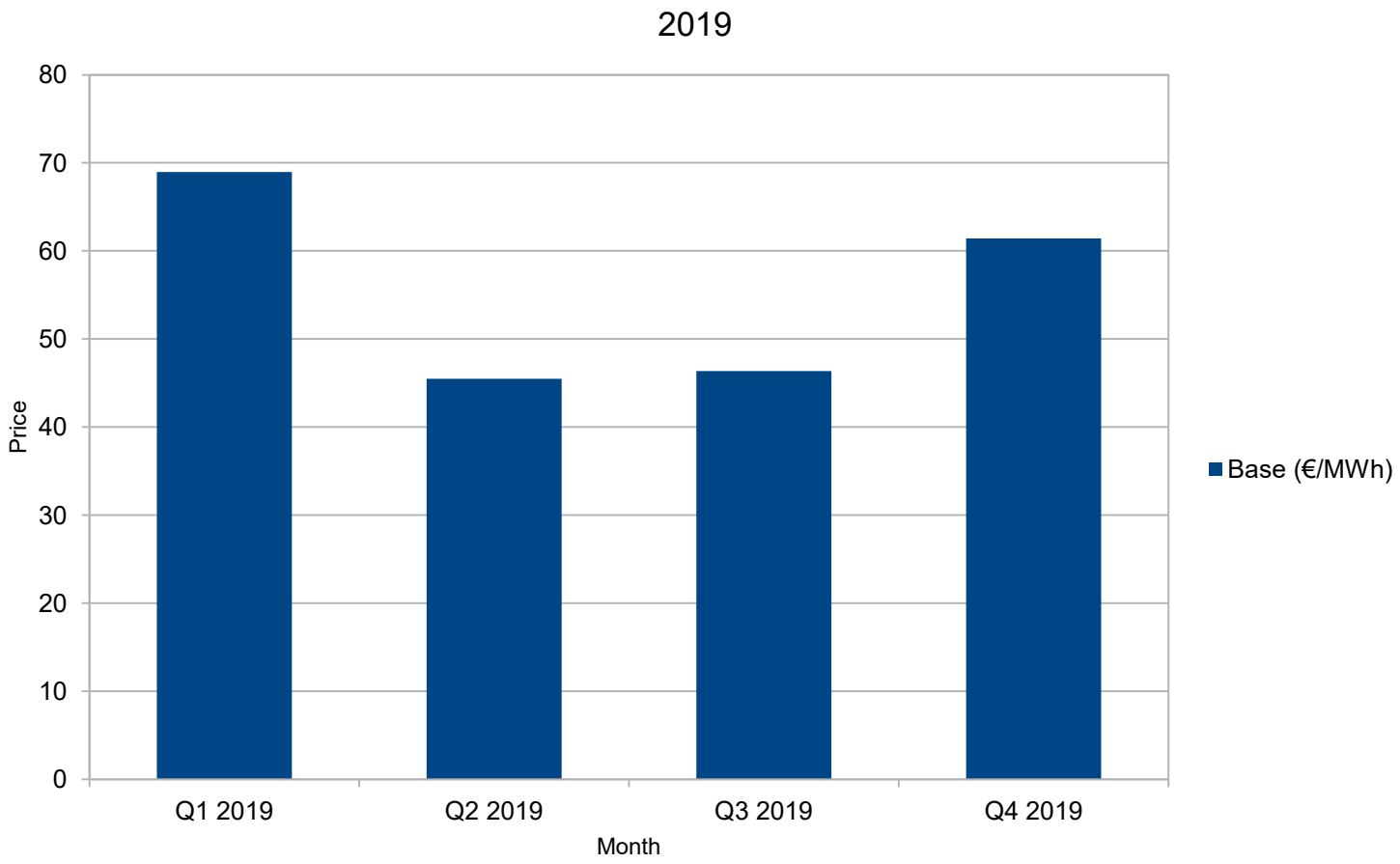



Min : 35€/MWh
in Mai 2018
23,5€/MWh
in Mai 2016

Max : 63€/MWh
in November 2018
65€/MWh
In November 2016

Setteld price the 30th
Of

# Electricity French Market – EPEX SPOT

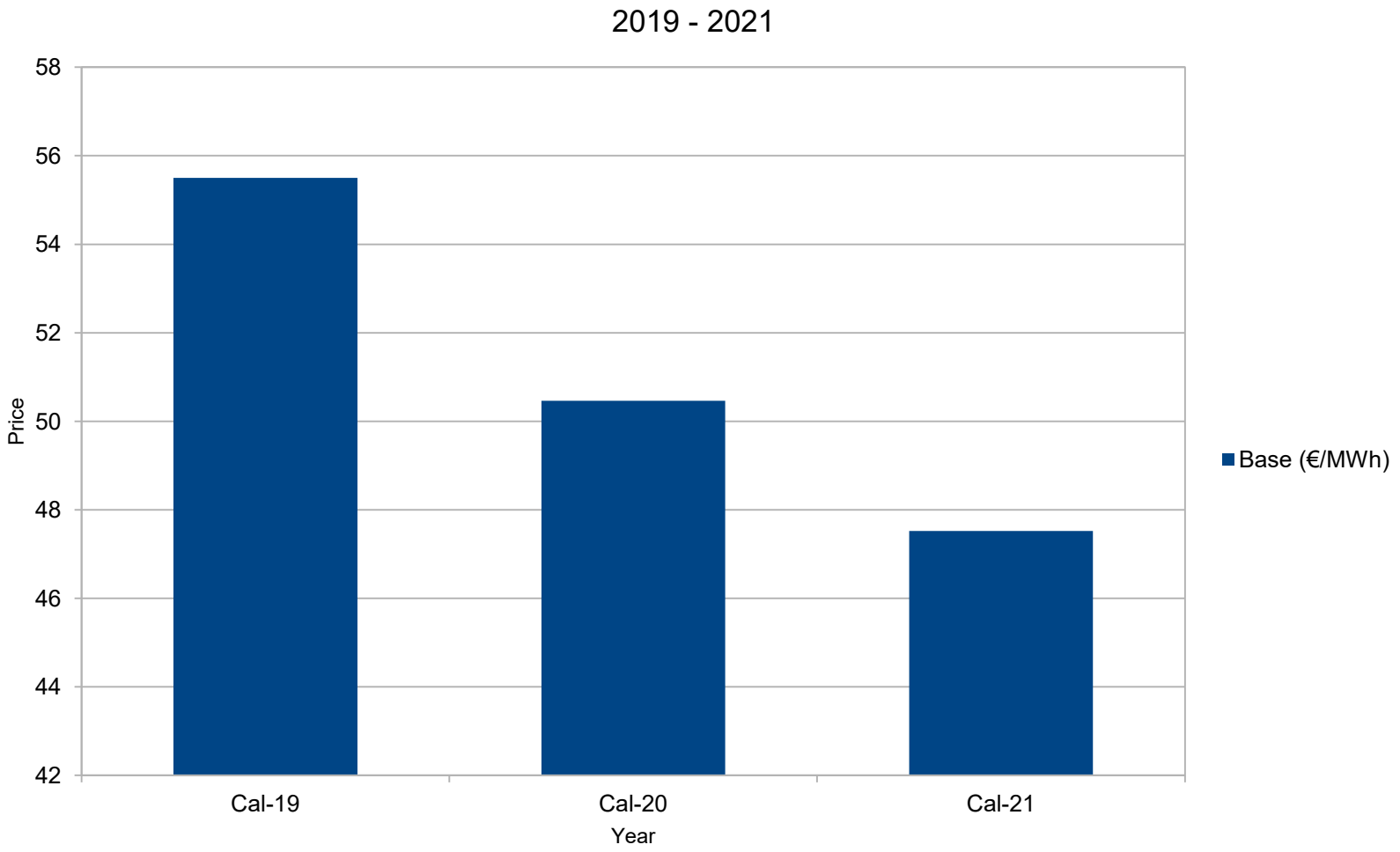



Min : 45 in Summer

Max : 69 in Winter

<u>Settled price the 30th Of August. It will vary.</u>

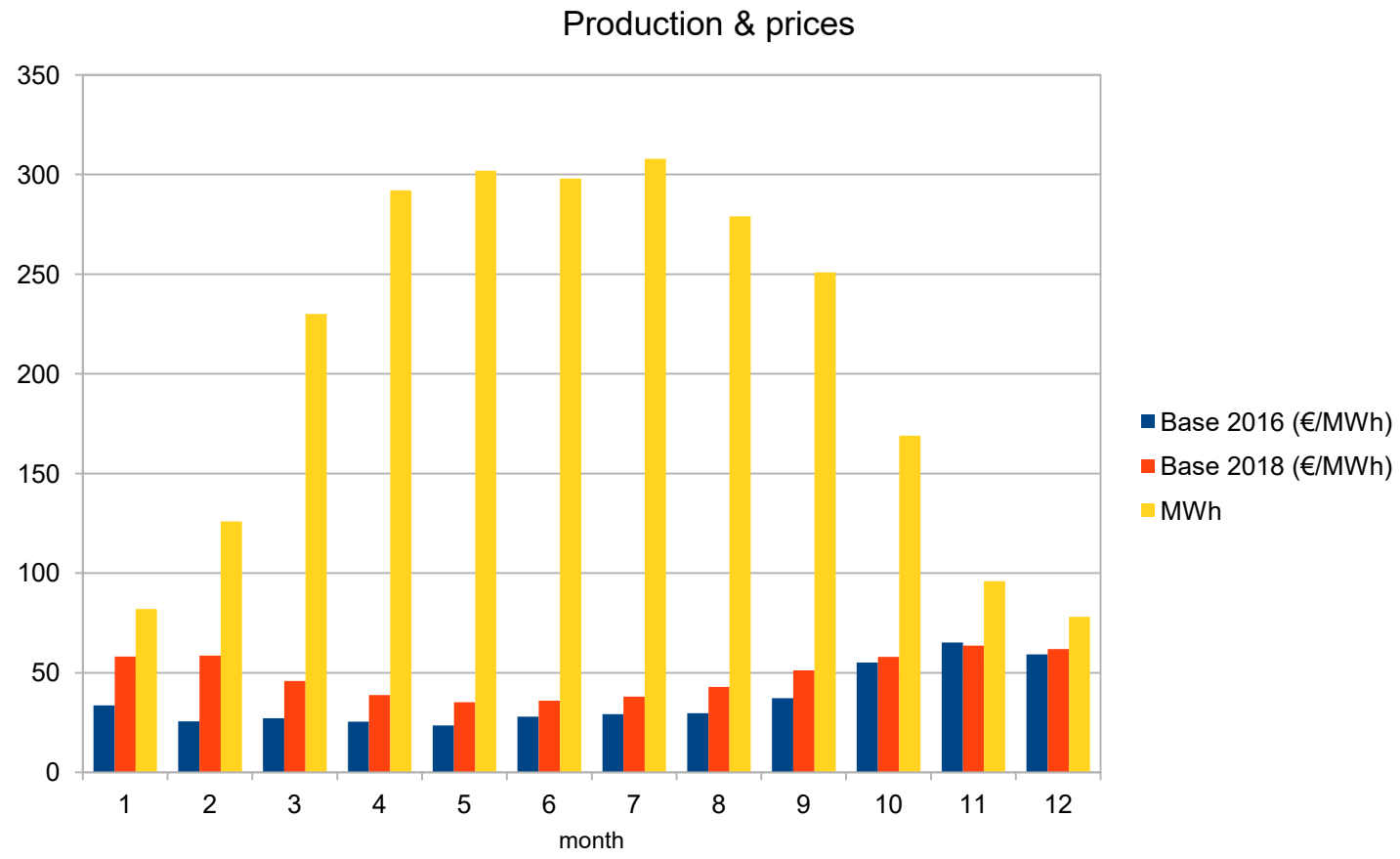
# Electricity French Market – EPEX SPOT




Setteld price the 30th Of August. It will vary.

No setteld prices above 2021

# Production of a 2.5 MWp PV plant based in Sérifontaine (Hauts de France)




Incomes :

112 k€ in 2018

82 K€ in 2016

# Development costs for a 2.5 MWp plant 1/2

**Total Development Costs** **125 k€**

Feasability Study

4 k€

Citizen Mobilisation

4 k€

Business Model

10 k€

Connection first study (ENEDIS)

Request for proposal

Commitment to lease

# Development costs for a 2.5MWp plant 2/2

## Development

80k€

- Company incorporation
- Environment diagnostic & impacts study
- Construction permit (architect)
- Public consultation
- Lease Agreement

## Project Ownership 21 k€

- Installer consultation
- Connection contract

# Investment Costs

**TOTAL INVESTMENT**

**2500 k€**

Development

125 k€

Modules

1 000 k€

Inverters

225 k€

Structures & Installation

625 k€

# Operating costs

Maintenance

23 k€

Insurance

5 k€

Rent

10 k€

Grid access

7 k€

Taxes

20 k€

# Production costs

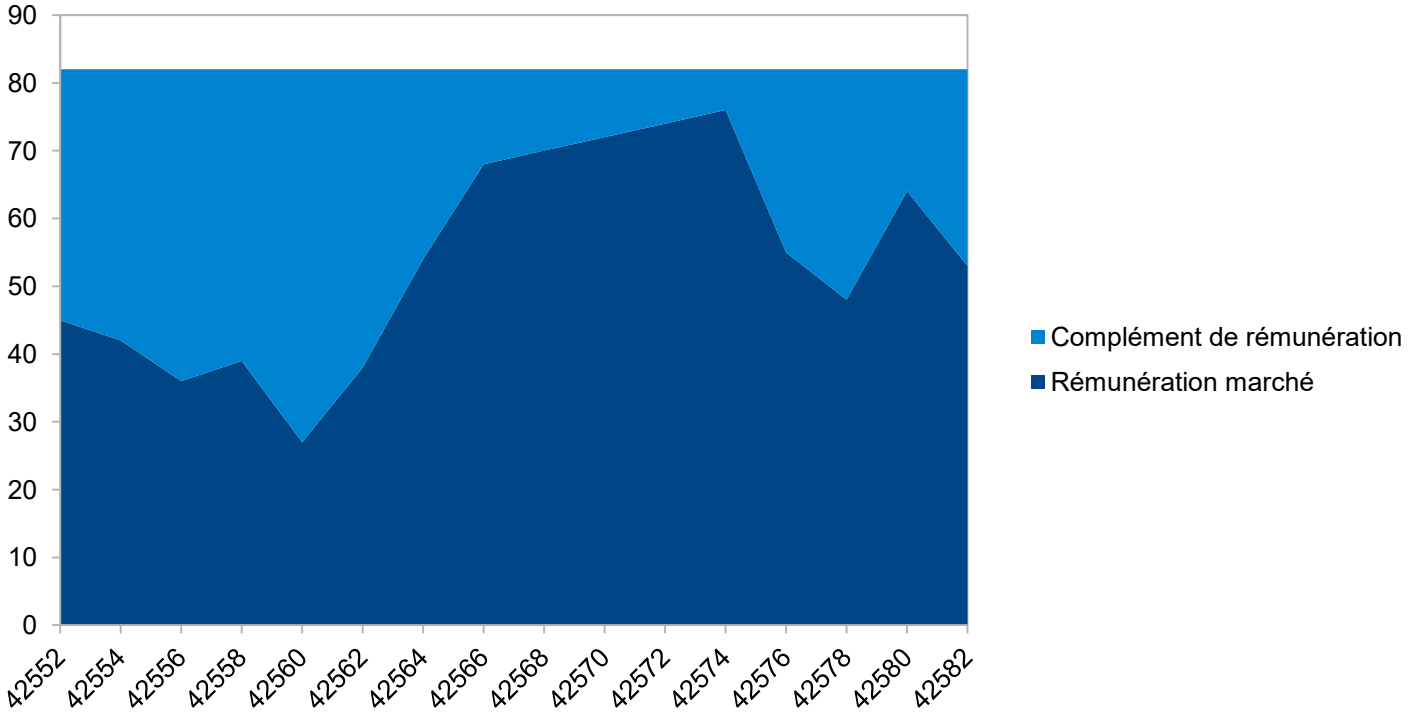
| | |
|---|---|
| 20 years amortization : | 92€/Mwh |
| => Incomes for 20years : | 231 k€/year |
| 30 years amortization : | 82€/Mwh |
| => Incomes for 30years : | 206k€/year |
| Market projection for 2016 : | 82k€ |
| Market projection for 2018 : | 112k€ |

# French electricity price breakdown

Production
Aggregation & balancing
Transport & distribution (Grid access)
Internal Tax on the Final Electricity Consumtion (TICFE)
Local Taxes (TCFE)
Providing
Value Added Taxe (VAT)

# Solar electricity call for bids

TICFE, paid by each consumer, finance **remuneration complement** for renewable electricity through **call for bids** :

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# Solar electricity call for bids

CRITERIA :

21% : CO2 impact

70% : price

9% : Environment

500 to 850 MWp called every 6 Month for France

30% more production in South of France

2 Families : 500kWp to 5MWp  &  5 to 30 MWp

# Solar electricity call for bids responses

Last Call responses in July 2018 :

0,5 to 5MWp : 62,5€/MWh

5 to 30 Mwp : 55€/Mwh

+ 3€/Mwh for cytizen crowdfunding

# Solar Plant elements & duration

Solar Modules : 30 to 40 years

Since 2018/09/03 : no european barriers for chinese modules

Chinese Solar Modules : 200€/kWp – bad CO2 impact

Inverters : 10 to 15 years

Cables

Structures

# How to improve the economic model ?

Reduce Investments

Increase Amortization

Reduce Operating costs

Subsidies and PPA

# Questions ?

# Thanks !

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