



COMMISSION
DE RÉGULATION
DE L'ÉNERGIE

5 MAI 2021

Regulatory framework for tenders and price evolution of photovoltaics in France

Direction du Développement des Marchés et de la Transition
Énergétique

1. SUPPORT SCHEMES FOR PHOTOVOLTAIC PLANTS IN FRANCE IN SHORT AND MID TERMS

CRE'S MAIN MISSIONS ON RENEWABLES

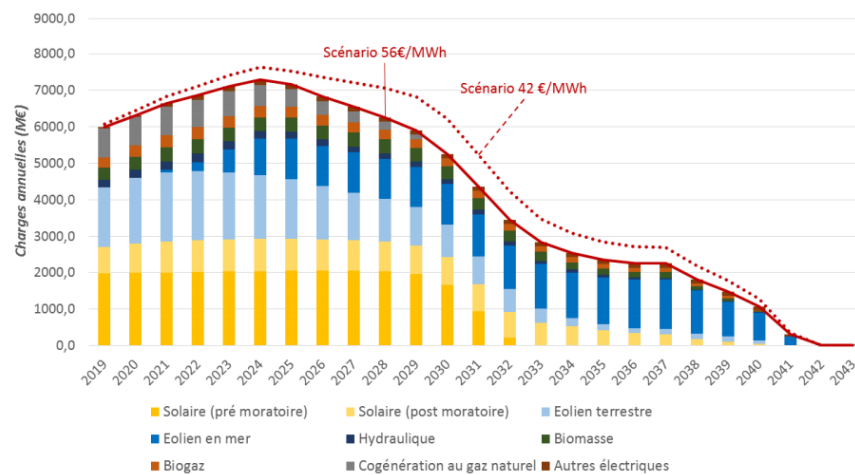
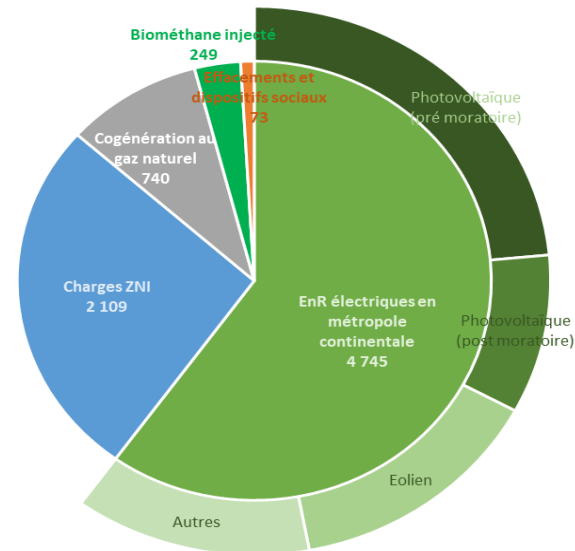
Support schemes

- ⇒ Give an opinion on the FIT and on the tenders specifications [R314-12 & R311-15/16]
- ⇒ Carry out audits of costs and revenues for monitoring [R314-14]
- ⇒ Monitor the tendering process (analyse the bids, publish the results...) [R311-22]

« Charges de service public de l'énergie »

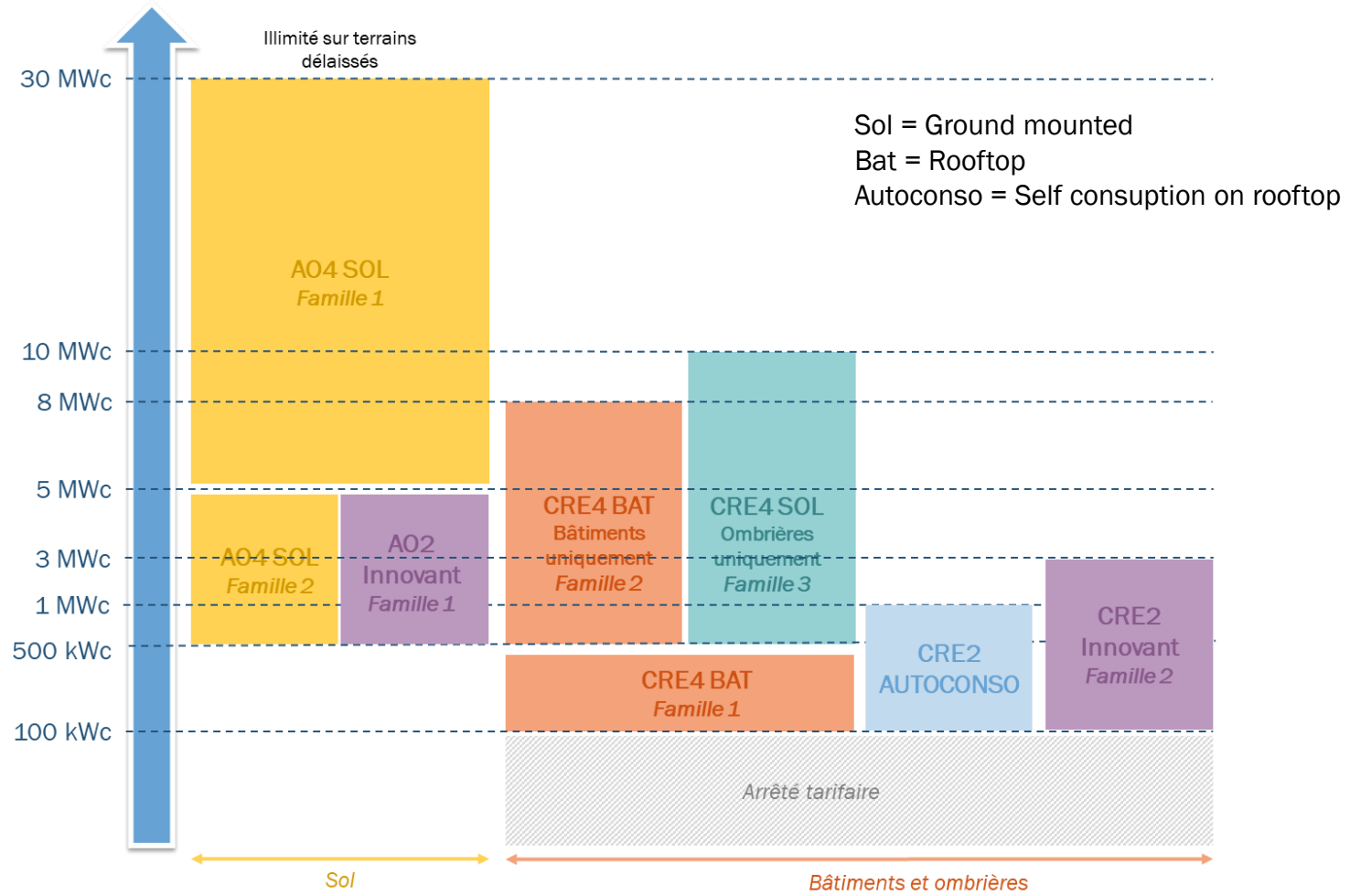
- ⇒ Control and calculate the annual cost of incentives paid as the result of national support schemes. Specifically for renewables, the operators bearing the related public service mission are compensated [R121-30 à 32]
- ⇒ CRE is part of the « Comité de gestion des charges de service public de l'énergie ». Its mission is to monitor and calculate the multi-year financial commitment taken as the result of national past and future support schemes [D121-39]

Charges de service public de l'énergie prévisionnelles au titre de 2020
(total 7 916 M€)



WELL IMPLANTED SUPPORT SCHEMES...

- Different types of support schemes in continental France



EVALUATION OF THE BIDS RECEIVED FOR ROOFTOP AND UTILITY SCALE PV PLANTS

Rating of bids:

- Price : 70 %

NB : for each application period, there is a ceiling bid price

- Carbon footprint : 30 % (21 % for utility scale PV)
- Field location type : 9 % (utility scale PV only)

Rating of Carbon footprint:

It is a « simplified carbon evaluation » of photovoltaic modules, which is delivered by a certified organization in accordance with the methodology defined in the tenders specifications.

This evaluation takes into account the CO2 emissions induced by the various industrial processes, from the extraction of silicon to the assembly of photovoltaic cells into modules.

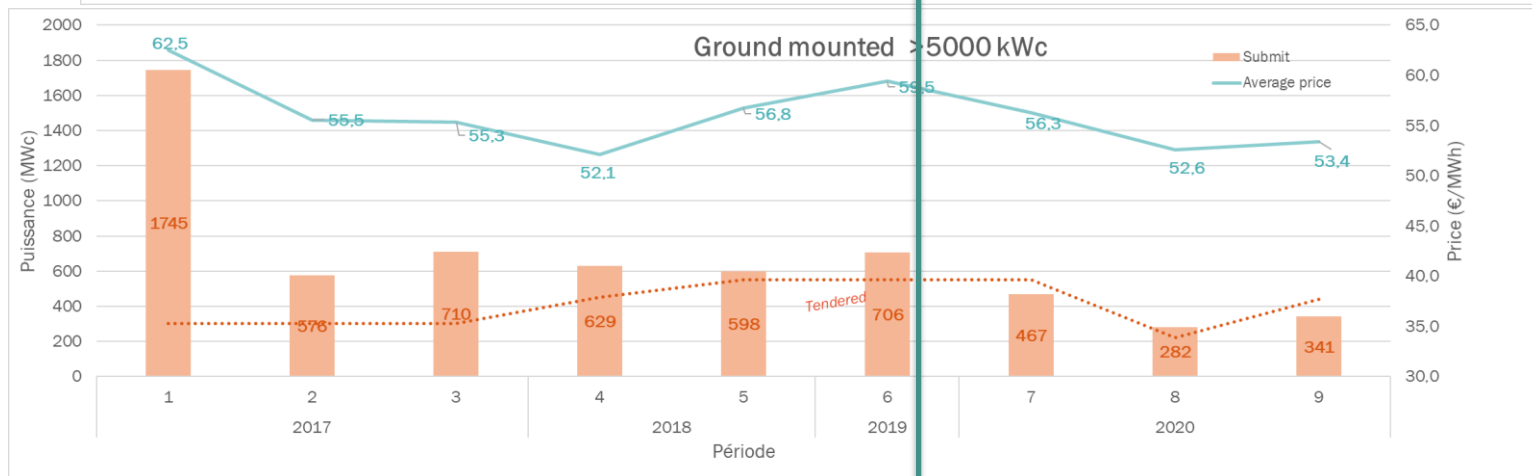
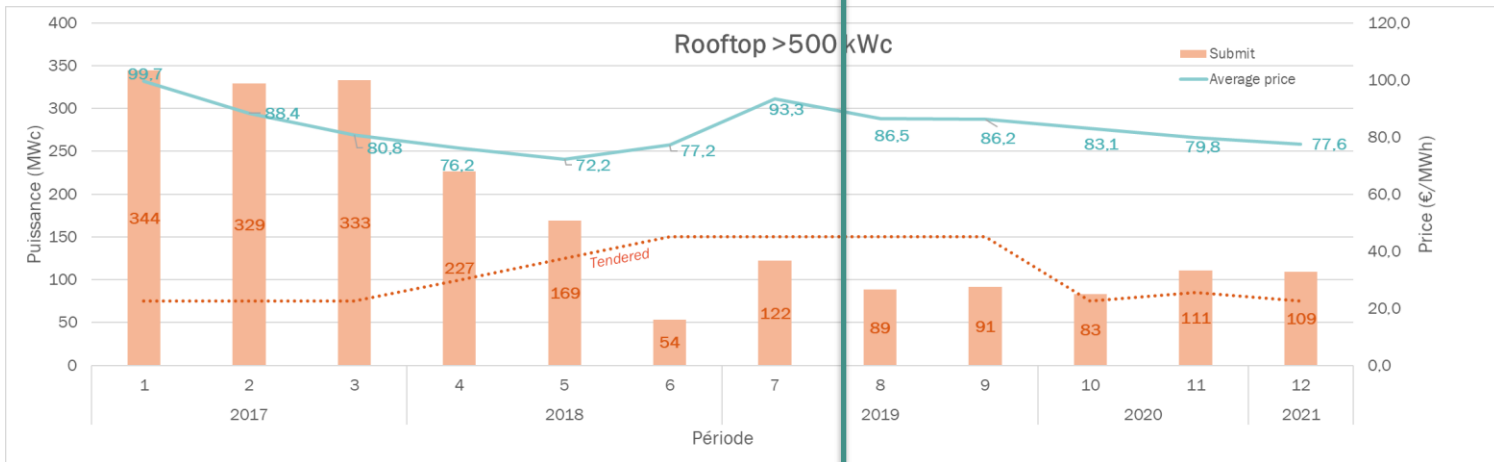
Applicants must provide some documents including:

- A valid building permit
- A business plan
- A certification from the local administrative authority that the area is eligible [only for utility scale tenders]
- A certificate of supply from the module suppliers [recently added on the utility scale PV tenders]

At the end of each application period, CRE sends the results of the bids evaluation to the Minister in charge of energy who announces the winners.

The results are published on the CRE website (official deliberation and summary report).

INTRODUCTION OF A CLAUSE TO MAINTAIN THE LEVEL OF COMPETITION IN TENDERS



Mise en application de la clause de compétitivité

➤ Clause to maintain the level of competition: if the cumulative volume of the compliant bids represents less than the tendered volume, the bids with the lower rates are eliminated within the limit of 20% of the volume of the compliant bids.

NEXT DEVELOPMENT OF THE FRAMEWORK

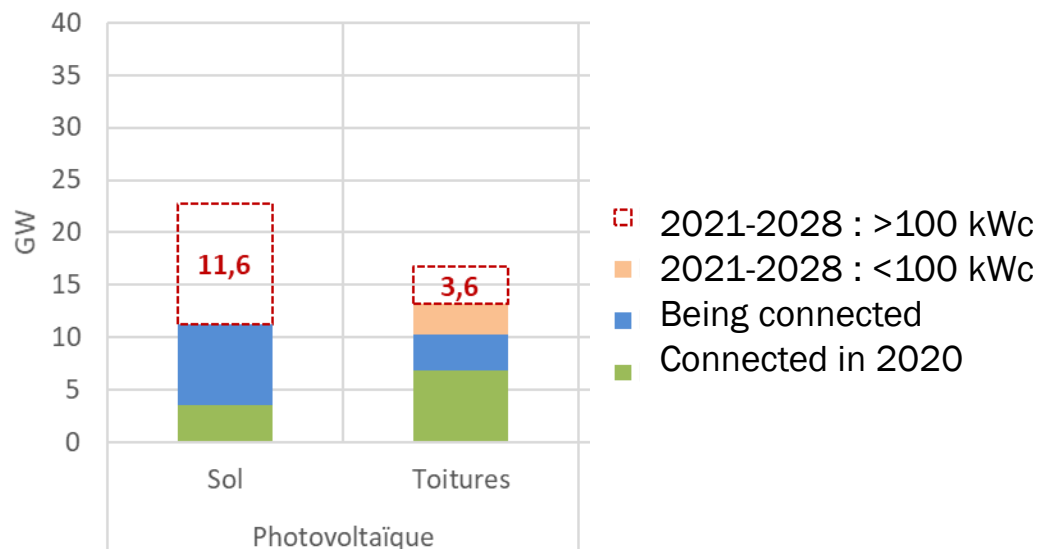
The purposes of the new support schemes are:

- to boost the small and medium photovoltaic segments with a new FIT for plants below 500 kWp
- to maximize the level of competition by reducing the number of families, while maintaining a sufficiently strong segmentation to develop each segment [building, ground] [large and small PV] [sale in full, self-consumption]



REACHING PPE TARGETS

The new tenders are designed to achieve the ambitious objectives of renewable energy production taken by the French law PPE



Total volume tendered in the new tenders:

- Ground mounted PV: **12,6 GW** (AO PV sol + AO PV innovant F1 + 80% AO neutre)
- Rooftop PV: **6,6 GW** (AO PV bat + AO PV innovant F2 + 100% AO autoconso)

Installations **without public support (self-consumption, PPA)** will also participate in achieving the objectives of the PPE

➤ The tenders are one of the responses provided by the Government to promote the development of renewable energies. However, they must be accompanied by additional reflections on land use issues or administrative constraints encountered by developers.

IMPORTANT ISSUES FOR CRE TO COVER IN THE NEW TENDER

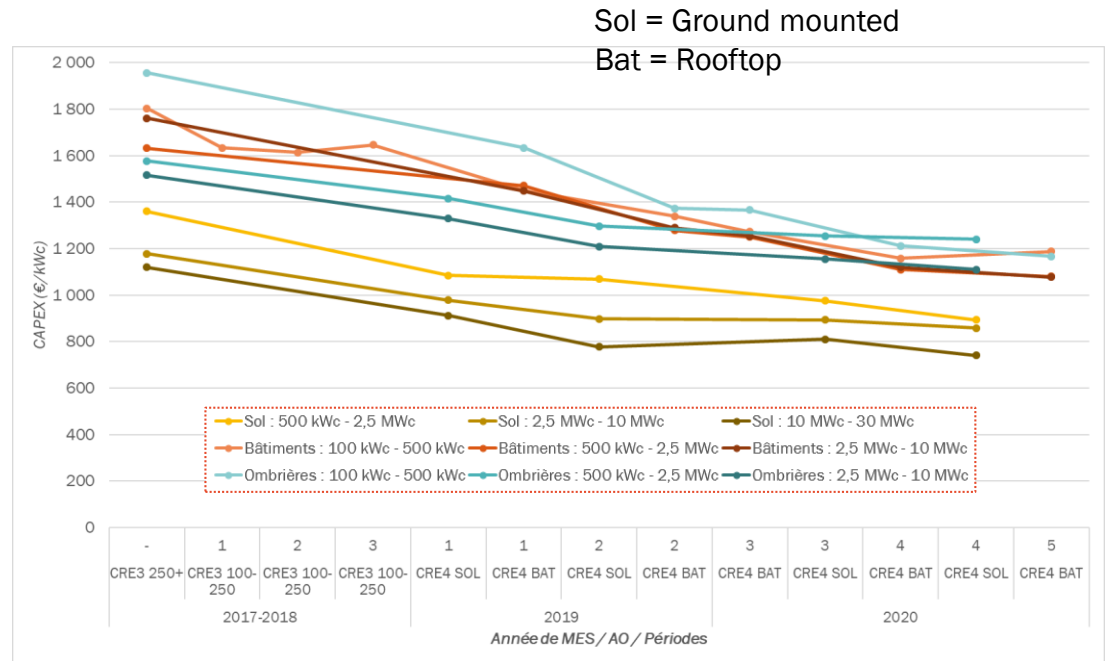
- Reach the volume tendered:
 - Land use issues and administrative constraints
 - Maintain a strong incentive for the use of degraded ground
- Control public spending:
 - Maintain an important / preponderant price impact on the rating
 - Size the tendered volumes according to the industrial capacity of the sector
 - Keep a clause to maintain the level of competition
- Fight against the drop rate of power plants:
 - Establish a more effective financial prequalification
- Simplify the tendering procedures:
 - Ask the applicants for less documents in order to simplify their applications and to reduce the risk of unconformity
- **Other possibilities:** Calibration of the duration of the support over the lifetime of the power plants ? Increase the frequency of calls for tenders ? Evolution of the “carbon footprint” criterion ? Integration of agrivoltaicism into traditional calls for tenders ?

2. COSTS AND PROFITABILITY OF LARGE PHOTOVOLTAIC PLANTS

INVESTMENT COSTS

□ Average CAPEX have fallen on average of **32 %** between 2016 and 2019:

- Ground mounted PV: around 750 €/kWp in 2021
- Rooftop PV: around 1,000 €/kWp
- For the most competitive projects (large PV on the ground), CAPEX are around 600 €/kWp

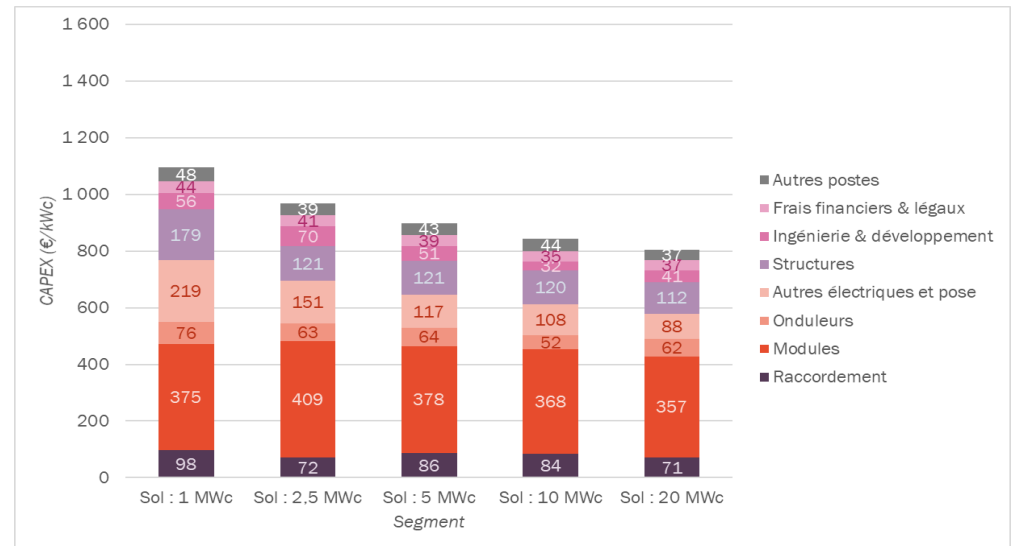


□ Main expenditure items (in 2019):

- Modules (30 to 44 %)
- Structures (14% for ground mounted PV, 22 to 27 % for rooftop PV)
- Electrical item (~ 13 %)
- Connection (~ 10 %)

□ Impact of the size of plants:

- Differences between small and large installations are about 17 to 25 %



ANALYSIS: EVOLUTION OF COSTS

- ❑ Analyse of the decrease of the purchase prices:
 - A favorable global economic context (lower module prices, emergence of optimized maintenance solutions)
 - A massification and industrialization of the players which allowed a reduction of the CAPEX / OPEX
 - Larger unit power projects which is favorable for reduction of public spending
 - An adapted national support scheme (multi-year tenders)
 - Lower financing costs play an important role in lowering the prices charged by producers. The gap with the risk-free rate is narrowing: **greater bank faith**

- ❑ While a decrease is generally expected for the next few years, it could be less than before at short term:
 - The recent increases of the module cost on the wholesale markets may raise fears of an impact in the long term
 - Tensions on land, including degraded land, could cause an increase in rental costs or the search for land less suitable for the development of photovoltaics (connection, generation capacity, etc.)
 - Financing conditions are already almost optimal

➤ The French photovoltaic sector is competitive compared to comparable countries. Some projects can already be built without public support and developers should prepare the future by gaining skills in concluding PPA.

➤ At this stage, in order to achieve the ambitious objectives of the PPE, we should not oppose PPA and Feed-in Premium.



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