

Ground-mounted PV plants: regulatory framework in France

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MINISTÈRE
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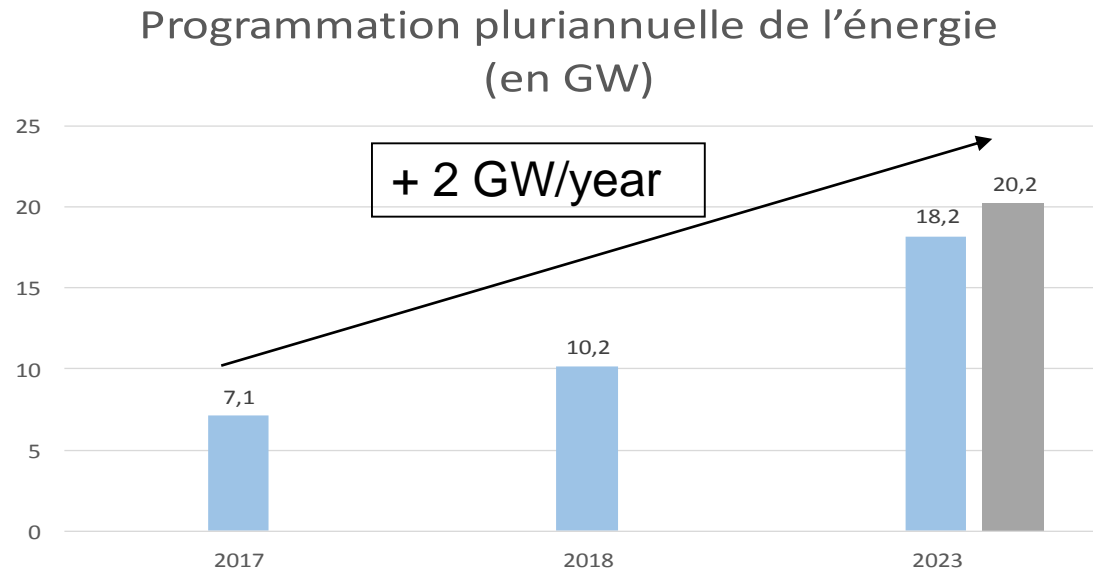
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Solar PV: legal framework

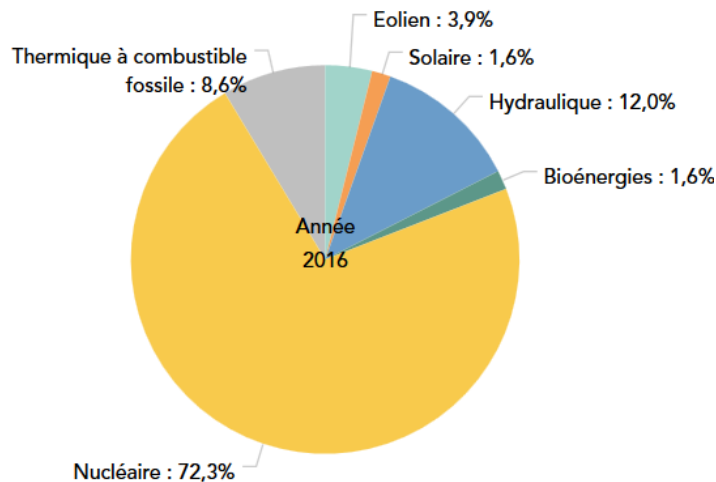


Solar PV in French electricity mix

- Solar PV development objectives set by the PPE at different horizons:



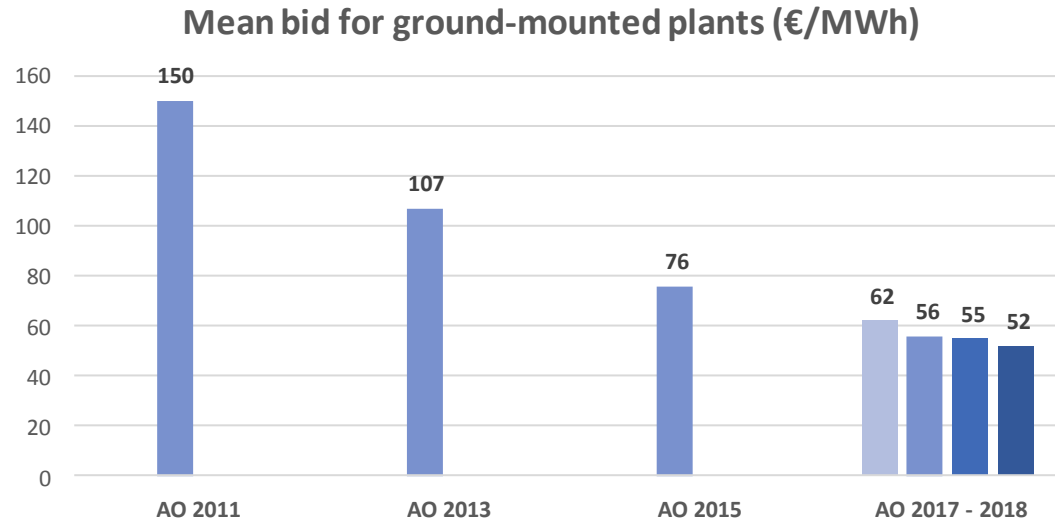
- Electricity production in 2016:



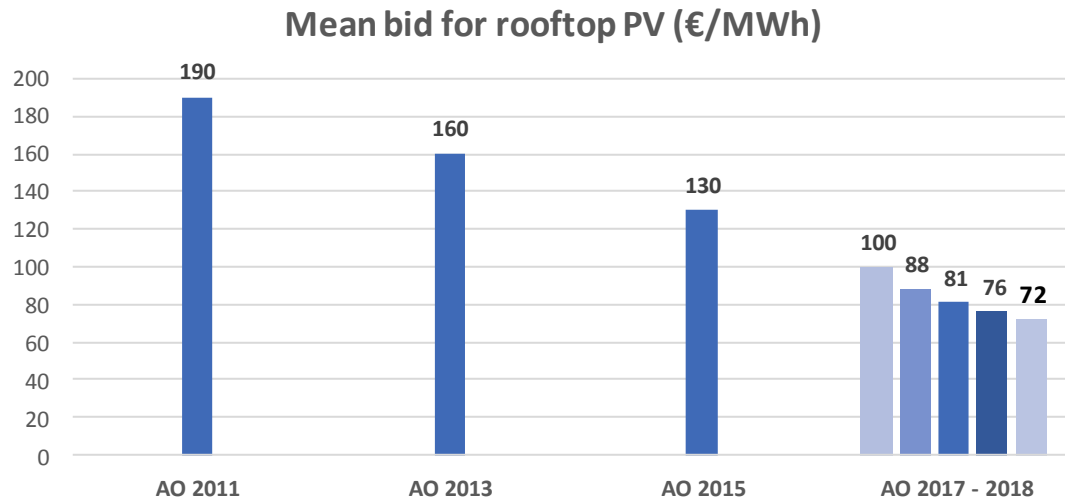
Solar PV might account for about 5% of national electricity production by 2023.

Solar PV: more and more competitive

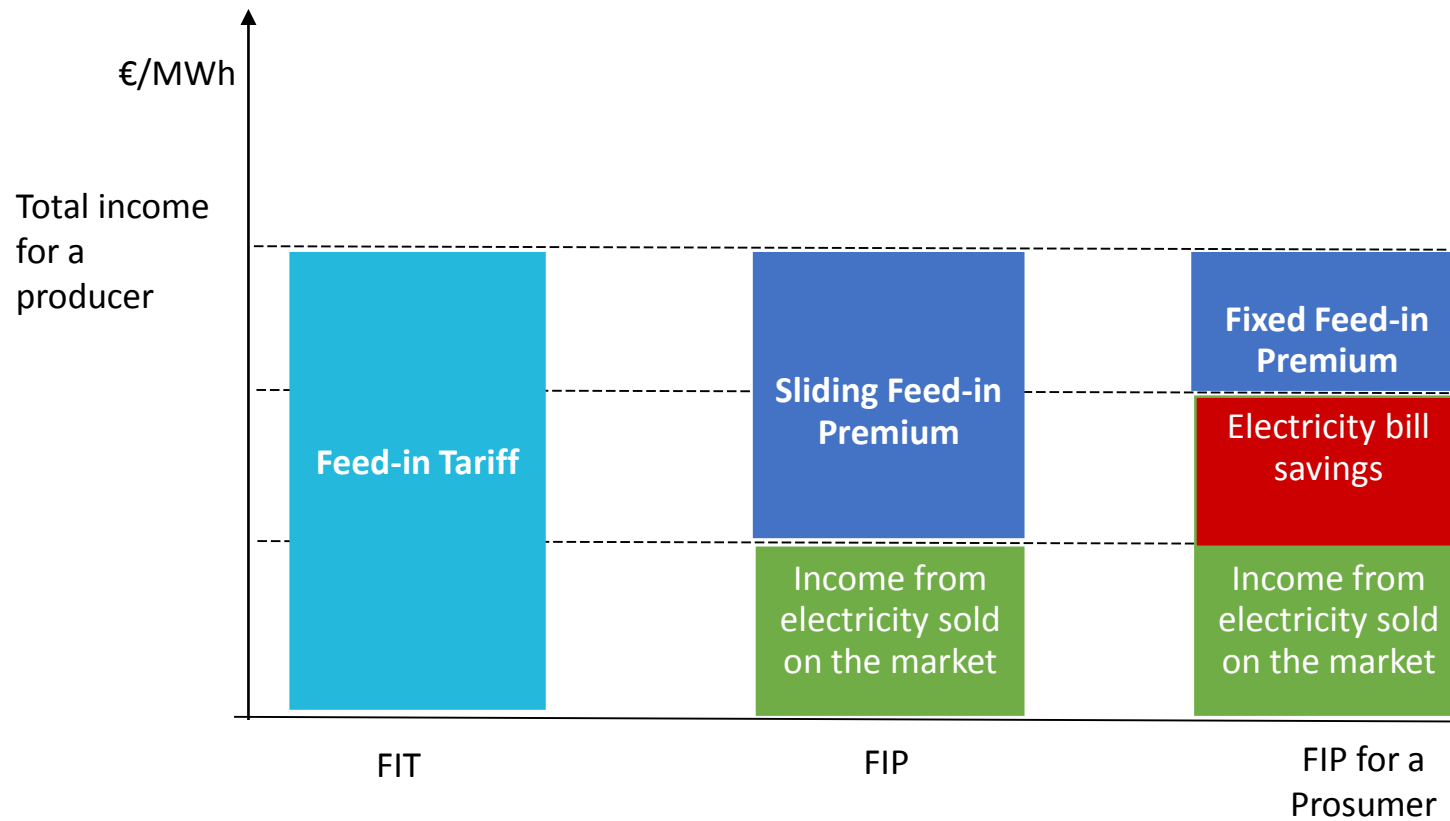
- **Price divided by 3 for ground-mounted installations since first tender in 2011:**



- **Strong price decrease also for rooftop PV:**



Photovoltaic tenders: new financial support



Solar PV: support mechanism



Support mechanism design

Support mechanism			
	Rooftop installations	Ground-mounted plants	Self-consumption
0 – 100 kWc	Open tariff FIT		Open tariff FIT + premium
100 – 500 kWc	Tender (450 MW/y) FIT		Tender (150 MW/y) FIP
500 kWc – 8 MWc	FIP	Tender (1000 MW/y)	
8 – 30 MWc		FIP	

Since One Planet Summit:

- 750 MW/year for rooftop tenders.
- 1700 MW/year for ground tenders.

Ground-mounted PV plants: permitting and eligibility criteria

- **Ground-mounted plants above 250 kWc are subject to an environmental impact assessment.** Permits on rural or forestry land are delivered only if the rural or forestry activity can perdure.
- **For entering the tenders, ground-mounted plants must comply with stronger implantation conditions to limit environmental impacts and preserve rural, agricultural, pastoral and wooded areas:**

1st case: field registered as « urbanized » or « to urbanize ».

2nd case: field registered in a natural zone where renewable energies can be developed, without deforestation.

3rd case (environmental bonus): degraded land (landfills, industrial brownfield, polluted area, etc.)

Photovoltaic tenders: Projects ranking

Criteria	Maximum score		
	Ground tender	Rooftop tender	Self-consumption tender
Price	70	70	100
Carbon impact	21	30	-
Environmental bonus	9	-	-
TOTAL	100	100	100

Eligibility criteria for the « self-consumption » tender :
→ Carbon impact < 750 kgCO₂/kWc.

Photovoltaic tenders: Crowdfunding

- **Equity investment (3 €/MWh bonus) :**

40 % of equity (voting members)

Held by at least a territorial authority or 20 different people

Living in the State Department (or in a bordering Department) of implantation of the project

- **Participatory financing (1 €/MWh bonus) :**

10 % of project finance

Held by at least a territorial authority or 20 different people

Living in the State Department (or in a bordering Department) of implantation of the project

Feedbacks from first rounds



Ground-mounted PV tenders – results of 1st rounds

	Category	Capacity	Mean price (€/MWh)
1st period	5 – 17 MWc	300	62,5 €/MWh
	500 kWc – 5 MWc	135	68,1 €/MWh
	Parking shelters	65	105,6 €/MWh
4th period	5 – 30 MWc	450	52,1 €/MWh
	500 kWc – 5 MWc	200	62,7 €/MWh
	Parking shelters	70	83,8 €/MWh

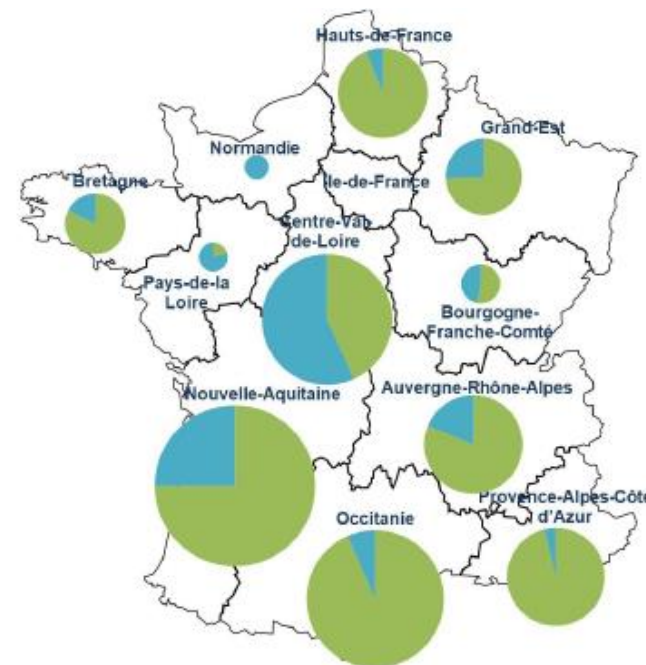
Ground-mounted PV tenders – results of 1st rounds

	1st period	4 th period
Crowdfunding	67% of the projects	68% of the projects
Degraded land 5 – 30 MWc	75% of the projects	40% of the projects
Degraded land 500 kWc – 5 MWc	79% of the projects	71% of the projects
Carbon impact	361 kgCO ₂ /kWc	295 kgCO ₂ /kWc

Ground-mounted PV tenders - Geographic distribution

- **Most of projects situated in southern regions:**
 - Occitanie
 - Nouvelle Aquitaine
 - Provence-Alpes-Côte d'Azur
- **More and more projects in northern part of France :**
 - 2nd period: 74 MW in Grand Est (3rd region of the tender) ;
 - 3rd period: 61 MW in Hauts-de-France (4th region of the tender).

Geographic distribution for 4th period
(source : rapport de synthèse CRE)



Future outlook for ground-mounted PV plants

- Solar PV shows strong potential in France with an **increasing competitiveness**.
- The Programmation Pluriannuelle de l'Energie set ambitious targets, requiring an **increase in annual solar new capacity**.
- PV development depends on **both ground-mounted plants and rooftop installations**:
 - **Ground-mounted plants subject to environmental impact assessment** and permits on rural/forestry land delivered only if rural/forestry activity perdure.
 - **Stronger implantation conditions to enter tenders**: urbanized field, natural zones without deforestation, degraded lands.
- **Pluriannual tenders to reach targets and give visibility**:
 - Next rounds in November 2018 and June 2019.
 - Increase of capacity to 1700 MW/y during One Planet Summit.

Thanks for your attention

