



M&A Advisory



Project Finance



Strategic Advisory

Programmation Pluriannuelle de l'Énergie 2019

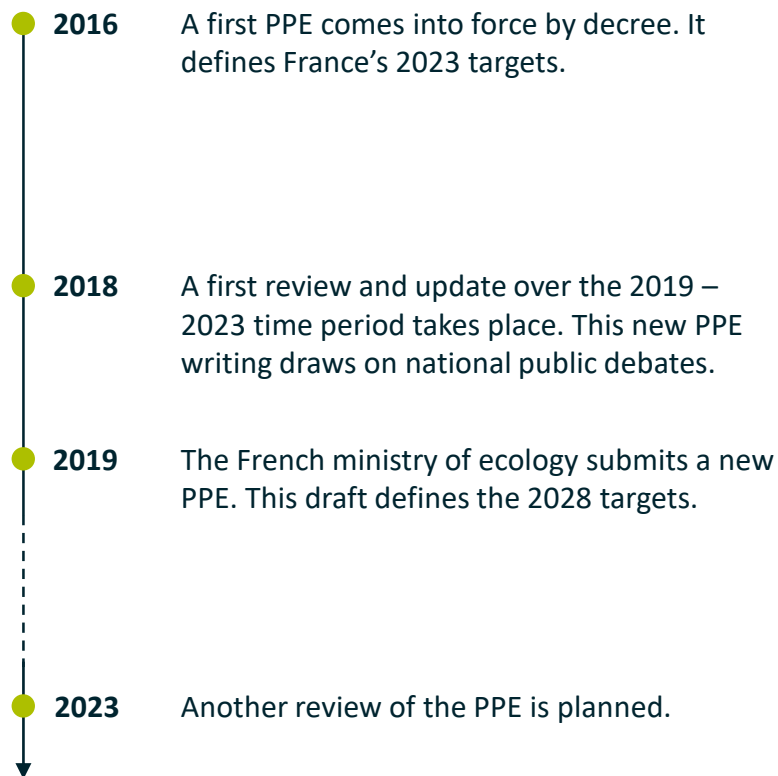
*Analysis of suggested tender calendars
for each technology*

January 30th, 2019

THE PROGRAMMATION PLURIANNUELLE DE L'ENERGIE

The *Programmation Pluriannuelle de l'Energie* (PPE) – the multiyear energy planning – is a **steering tool for the French energy policy** framed by the law for energy transition and green growth (LTECV – *loi de transition énergétique et de croissance verte*). It provides the **basis on which French's energy future is defined**. On January 25th, 2019, the *Ministère de la Transition écologique et solidaire* – French ministry of ecology – published the latest PPE project. **This draft will now be discussed** among several instances that will issue an opinion on the matter later on.

Calendar



Scope of work

The PPE covers the following :

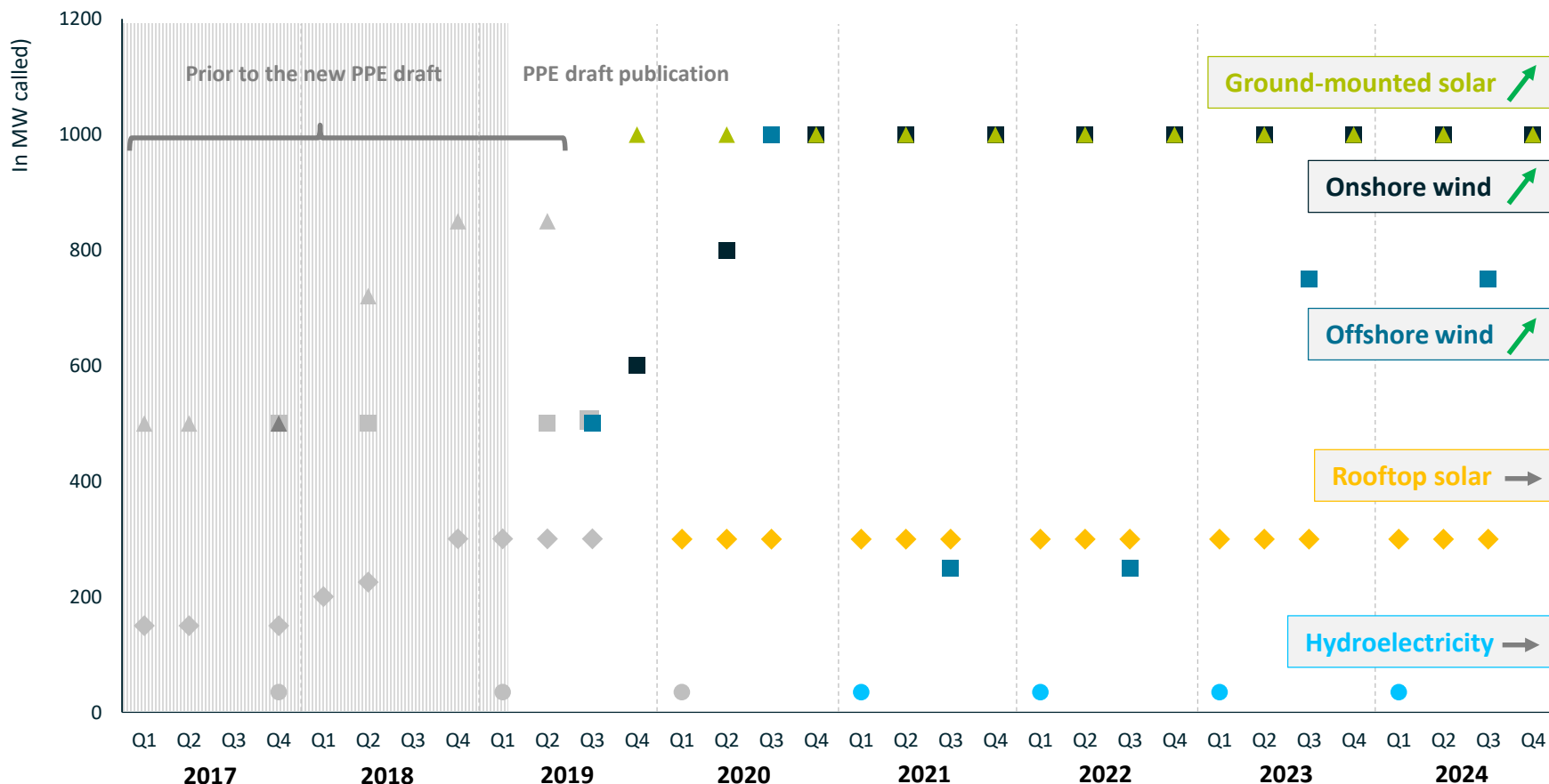
- ▶ **Security of energy supply ;**
- ▶ Improvement of **energy efficiency ;**
- ▶ **Renewables** development ;
- ▶ **Grid, storage and energy transformation** expansion as well as **energy demand management ;**
- ▶ **Clean mobility** development ;
- ▶ **Consumer's purchasing power and energy competitive prices** protection ;
- ▶ Assessment of the **professional resources needed** in the energy field.



RENEWABLE CAPACITY CALLED BY THE PPE

The French government unveiled, on January 25th, the latest PPE that defines, among other things, the **French renewables targets**. On this occasion, **new tender calendars were suggested** for each technology to reach the **2028 target of 32% in the French energy mix**.

New tender calendars suggested with the PPE



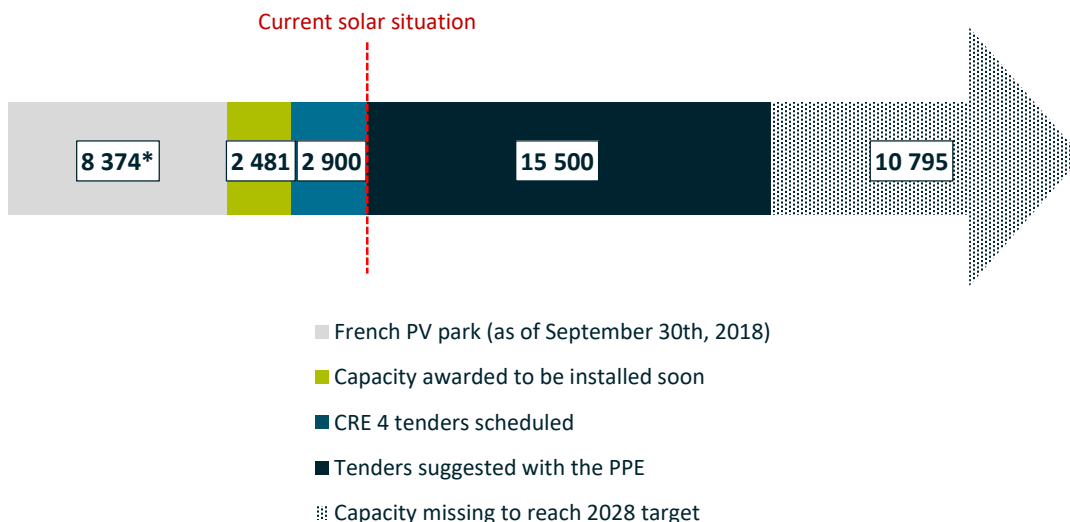
NB: Considering offshore wind tenders take place on Q3 and 750 MW offshore tenders for 2023 and 2024 (as the PPE calls for 1250 – 2000 MW over these two years)



CAPACITY CALLED – FOCUS ON SOLAR

The new PPE aims to **foster ground-mounted solar growth** that appears more cost-efficient than rooftop solar today. It plans to **push further the development of self-consuming units** with the enlargement of the self-consumption tenders' scope to 1 MWp installations – as opposed to 500 kWp before – and the easing of the self-consumption qualifications.

French solar park evolution (in MWp)



NB: Considering a 24 months development time for ground-mounted and 20 months for rooftop solar

* Panorama de l'électricité renouvelable au 30 septembre 2018, RTE/Enedis

Comments

- ▶ **Ground-mounted solar appears as a clear winner** in this PPE. After 2019, **biannual tenders of 1 GWp** will take place (twice the capacity called in 2017). It should not be forgotten that the capacities called in ground-mounted tenders were already increased (to 720 then 850 MWp) for the last 3 sessions of the CRE 4 tender.
- ▶ **The capacity called for rooftop solar tenders remains the same** as what it was for the last CRE 4 sessions. The **frequency of these tenders is also left untouched**.
- ▶ France targets a solar capacity ranging from **35.6 to 44.5 GWp by 2028**, more than 4 times its current solar park.

New tender calendar suggested with the PPE (in MWp)

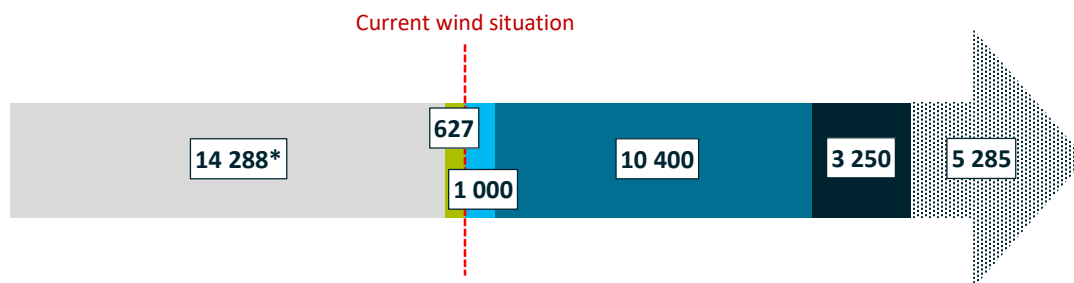
	2017				2018				2019				2020				2021				2022				2023				2024			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Ground-mounted solar	500	500	-	500	-	720	-	850	-	850	-	1000	-	1000	-	1000	-	1000	-	1000	-	1000	-	1000	-	1000	-	1000	-	1000	-	1000
Rooftop solar	150	150	-	150	200	225	-	300	300	300	300	-	300	300	300	-	300	300	300	-	300	300	300	-	300	300	300	-	300	300	300	-



CAPACITY CALLED – FOCUS ON WIND

As planned, the 2019 PPE draft introduces **recurring tenders for offshore wind**, calling a total capacity reaching **more than 3 GW by the end of 2024**. The PPE also suggests a new tender calendar for onshore wind. From the last quarter of 2020, **onshore wind tenders will be launched twice a year for 1 GW per session**.

French wind park evolution (in MW)



- French wind park (as of September 30th, 2018)
- Capacity awarded to be installed soon
- CRE 4 onshore wind tenders scheduled
- Onshore wind tenders suggested with the PPE
- Offshore wind tenders suggested with the PPE
- ⋮ Capacity missing to reach 2028 target

NB: Considering a 36 months development time

* Panorama de l'électricité renouvelable au 30 septembre 2018, RTE/Enedis

Comments

- ▶ From 2020, **biannual onshore tenders of 1 GW – 2 GW p.a.** – will take place.
- ▶ After 2025, **offshore wind will benefit from annual tenders of 500 MW**, either for floating or fixed installations depending on the price and the tender geography.
- ▶ **Offshore wind tenders have a geography restriction**. For the Dunkirk 2019 tender (fixed offshore wind), the maximum bidding price is set at 70€/MWh while it is 120€/MWh for the first floating offshore wind tender planned in 2021 in Britain.
- ▶ France targets a wind capacity ranging from **34.1 to 35.6 GWp by 2028**, more than twice its current wind park. In the meantime, **offshore wind capacity should reach 4.7 GW to 5.7 GW**.

New tender calendar suggested with the PPE (in MW)

	2017				2018				2019				2020				2021				2022				2023				2024			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Eolien onshore	-	-	-	500	-	500	-	-	-	500	500	600	-	800	-	1000	-	1000	-	1000	-	1000	-	1000	-	1000	-	1000	-	1000	-	1000
Floating offshore wind	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	250	-	-	-	250	-	-	-	-	-	-	-	250-500
Fixed offshore wind	-	-	-	-	-	-	-	-	-	-	-	500	-	-	-	1000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1000-1500



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