

# Self-consumption framework in France

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# Self-consumption in France before 2016 (1/2)

- **Before 2016, there were no specific framework for self-consumption in France**
  - Self consumption was possible in the RES support schemes (but only the surplus fed into the grid was remunerated)
  - RES producers often chose to sell all the energy produced
- **Since 2016, we observed an increasing interest for self-consumption in France :**
  - In 2016, 36% of the grid connection applications or the declarations at the distribution level were self-consumption projects (with and without surpluses)
  - In 2017, it concerned 50% of the applications or declarations (15 000 projects and about 5 000 without any surpluses)
  - It concerns mainly **roof-top PV of less than 3 kWp**

# Self-consumption in France before 2016 (2/2)

- **The Energy Transition for Green Growth Act (2015)** enabled the government to design and implement a framework that would allow for the development of self-consumption :
  - Design of this framework through an **ordinance** (ratified by the Parliament in February 2017) and a **decree** (n° 2017-676)
- In parallel of this legislative and regulatory package, support schemes were also modified :
  - A **specific tender** was created
  - **Roof-top PV support scheme (feed-in-tariff)** was adapted for installations below 100 kWp (9 may 2017)

# The legislative and regulatory framework

- **Self-consumption is now defined in the law :**
  - **Individual self-consumption** : electricity is produced and consumed simultaneously in a given location by one person
  - **Collective self-consumption** : it concerns electricity produced and consumed by several consumers and producer(s) located on the same low-voltage grid and linked together through a legal entity
- **DSO shall ensure transparent and non-discriminatory conditions for the implementation of self-consumption projects**
  - They must equip each participant of a collective project with a smart meter
- **For collective self-consumption projects, a contract** must be established between the DSO and the legal entity which allow :
  - To identify the different participants : consumers, producers, storage installation if any
  - To determine how the electricity generated is shared between the different consumers (default option : consumption pro rata)

# The legislative and regulatory framework

The other main features of this package are the following :

- **Net-metering is not allowed** in self-consumption projects (individual and collective)
  - To that end, a consumer cannot be granted more energy (from the generation unit) than the energy consumed instantly
- **The national regulatory authority (CRE) shall elaborate a specific grid tariff for self-consumption** with an installed capacity of less than 100 kW per producer
  - The CRE considers that there is currently no need to change the grid tariff structure for individual self consumer
  - For collective self consumers, a specific grid tariff is about to be released
- **Small self-consumers (< 3kW) can be exonerated from balancing responsibility for the surplus fed into the grid:**
  - The surpluses fed into the grid are accounted in the grid losses (it lessens the losses)
  - In that case, these surpluses are not remunerated

# Self-consumption tenders

- **Since 2016, tenders for self-consumption projects have been organized**
- **Main features of the last tender :**
  - **Volume of 50 MW per period** : 150 MW per year since 2017
  - **Project capacity between 100 and 500 kW** : small industrial site, shopping malls, offices, etc.
  - **Open to all RES technologies** : roof-top PV, onshore wind, small hydro, etc.
  - **Support granted through a fixed premium (€/MWh) during 10 years:** level defined by the applicant in its bid and premium applicable to both electricity self-consumed and fed into the grid
  - **The aim is to maximize self-consumption :**
    - **Premium lowered** if the self-consumption rate falls below 50%
    - **Premium 10€/MWh** for self consumed electricity (10 €/MWh for the first periods and now 5 €/MWh)

# Self-consumption tenders (2/2)

- The scheme targets installations where production and consumption are likely to match (industrial and commercial activities mainly)
- It encourages a producer to consume its production rather than export it to the grid
- Results of tenders show :
  - That **almost no direct support is needed** : average premium (without the bonus for self-consumption) has decreased over time → 41€/MWh, 19 €/MWh, 8 €/MWh
  - **Forecast of the self-consumption rate is very high** : around 98% -> need to be proven in practice

# Feed-in tariffs for roof-top PV (<100 kWp)

- Before the revision of the support scheme, a producer has 2 options :
  - **Option without self consumption : feed-in-tariff for the whole quantity of electricity produced** during a 20-year contract
  - **Option with self-consumption : feed-in-tariff only for the surplus fed into the grid** during a 20-year contract
- The scheme with self-consumption has been adapted :
  - **Capacity premium (€/MW)** paid during the first 5 years of the contract
  - The premium level depends on the capacity of the generation unit
  - **In case surpluses are fed into the grid, they benefit from a feed-in-tariff** (100€/MWh for capacity below  $\leq 9$  kWp et 60€/MWh for a capacity below  $\leq 100$  kWc)



# Feedback and food for thought

- **Collective self-consumption :**
  - 1 project in operation, 2 projects likely to start in the next 3 months, 40 projects in preparation
  - Perimeter of collective self-consumption : some stakeholders want to broaden the scope so that entire district could be eligible
- **Support schemes for self consumption :**
  - When assessing the financial framework of projects, it is crucial to assess simultaneously the explicit support schemes and the fiscal exemptions (from electricity levies)
  - Only individual self consumption benefit from an exemption from electricity taxes for self-consumed electricity
  - **Priority is to give visibility and stability to the stakeholders**
- **Third-party investor model**
  - In the legislation and regulation, third-party investor models are not always considered as individual self-consumption
- **The working group on solar (that started last month) will address these issues**

# Thank you for your attention

