New photovoltaic tenders, sales on the market and prosumer development

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Direction générale de l’énergie et du climat
### Photovoltaic tenders: what’s new?

**Former Mechanism**

<table>
<thead>
<tr>
<th></th>
<th>Rooftop</th>
<th>Ground</th>
</tr>
</thead>
<tbody>
<tr>
<td>100 – 250 kWe</td>
<td>Simplified Tender (120 MW and 240 MW) FIT</td>
<td></td>
</tr>
<tr>
<td>250 – 500 kWe</td>
<td>Ordinary Tender – Families 1 and 3 (200 MW) FIT</td>
<td></td>
</tr>
<tr>
<td>500 kWe – 3.5 MWc</td>
<td>Ordinary Tender – Family 2 (200 and 600 MW) FIT</td>
<td></td>
</tr>
<tr>
<td>3.5 – 12 MWc</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**New Mechanism**

<table>
<thead>
<tr>
<th></th>
<th>Rooftop</th>
<th>Ground</th>
<th>Self-Consumption</th>
</tr>
</thead>
<tbody>
<tr>
<td>100 – 250 kWe</td>
<td>« Rooftop » Tender (450 MW)</td>
<td></td>
<td>« Self-Consumption » Tender (150 MW) FIT</td>
</tr>
<tr>
<td>250 – 500 kWe</td>
<td>FIT</td>
<td></td>
<td>FIP</td>
</tr>
<tr>
<td>500 kWe – 8 MWc</td>
<td>FIP</td>
<td>« Ground » Tender (1000 MW)</td>
<td>FIP</td>
</tr>
<tr>
<td>8 – 17 MWc</td>
<td></td>
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</tbody>
</table>

FIT: Feed-in Tariff
FIP: Feed-in Premium
Photovoltaic tenders: new financial support

- Feed-in Tariff
- Sliding Feed-in Premium
- Fixed Feed-in Premium

Income from electricity sold on the market
Electricity bill savings
Income from electricity sold on the market

Total income for a producer

€/MWh
Specificities of the PV Tenders
Photovoltaic tenders: multi-annual scope

- December 2016: new objectives for PV adopted in the PPE.
- 2016/2017: launch of series of tenders, spanning 3 years each.
- Multi-annual tenders help meeting goals and provide visibility.

![Graph showing installed capacity and targets for 2016, 2018, and 2023.](image-url)
Photovoltaic tenders: eligibility criteria

➢ **Power limitations:** depending on each family.

➢ **Installation’s novelty:** work on the project has not started yet prior to the tender (European guidelines, incentive effect).

➢ **Implantation conditions** (only for « ground » tender):

<table>
<thead>
<tr>
<th>Case</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1st case:</strong></td>
<td>Field registered as « urbanized » or « to urbanize ».</td>
</tr>
<tr>
<td><strong>2nd case:</strong></td>
<td>Field registered in a natural zone where renewable energies can be developed.</td>
</tr>
<tr>
<td><strong>3rd case (environmental bonus):</strong></td>
<td>Degraded land (landfills, industrial brownfield, polluted area, water body, etc.)</td>
</tr>
</tbody>
</table>
## Photovoltaic tenders: ranking

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Ground Tender</th>
<th>Rooftop Tender</th>
<th>Self-consumption Tender</th>
</tr>
</thead>
<tbody>
<tr>
<td>Price</td>
<td>70</td>
<td>70</td>
<td>100</td>
</tr>
<tr>
<td>Carbon impact</td>
<td>21</td>
<td>30</td>
<td>-</td>
</tr>
<tr>
<td>Environmental Bonus</td>
<td>9</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>TOTAL</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

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

➢ Price:

\[ NP = NP_0 \times \frac{P_{sup} - P}{P_{sup} - P_{inf}} \]

With \( NP_0 = 70 \)

\( P_{sup} = [110 – 150] \, \text{€/MWh} \)

\( P_{inf} = [50 – 95] \, \text{€/MWh} \)

➢ Carbon Impact:

\[ NC = NC_0 \times \left[ \frac{ECS_{sup} - ECS}{ECS_{sup} - ECS_{inf}} \right] \]

With \( NC_0 = 30 \)

\( ECS_{sup} = 700 \, \text{kgCO}_2/\text{kWc} \)

\( ECS_{inf} = 100 \, \text{kgCO}_2/\text{kWc} \)

ECS stands for « Simplified Carbon Evaluation ». The method is described in the tender documentation. It has to be delivered by an accredited organism.
Photovoltaic tenders: crowdfunding

- A 3 €/MWh bonus is available for candidates engaged in crowdfunding:
  - 40% of the capital
  - 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

- If the commitment is not fulfilled (3 conditions), a penalty of -3 €/MWh is applied.
How to calculate a Feed-in Premium for a Prosumer?
Feed-in Premium – the prosumer case

Income from electricity market sales

Prosumer Income

Total income

€
Feed-in Premium – the prosumer case

- Total income
- Electricity bill savings
- Income from electricity market sales
- Prosumer Income

€
Feed-in Premium – the prosumer case

- Income from electricity market sales
- Electricity bill savings
- Sold energy premium

Prosumer Income

Total income

€
Feed-in Premium – the prosumer case

- Income from electricity market sales
- Electricity bill savings
- Self-consumed energy premium
- Sold energy premium

Total income
Feed-in Premium – the prosumer case

Income from electricity market sales

Electricity bill savings

Income from electricity market sales

Sold energy premium

Self-consumed energy premium

Feed-in Premium

Financial support

Total income
**Feed-in Premium – the prosumer case**

- The FIP is obtained by adding an « **energy premium for electricity sold on the market (or to a tierce person)** » and an « **energy premium for self-consumed electricity** » with a greater valorisation (incentive to self-consume).
**Feed-in Premium – the prosumer case**

- Potential deductions on the FIP:
  - Malus proportional to Pmax injected on the grid.
  - Malus if self-consumption < 50%
Feedbacks from first rounds
Photovoltaic tenders 1st rounds

✓ « Ground » tender: 1st round

<table>
<thead>
<tr>
<th></th>
<th>Family 1 5 – 17 MWc</th>
<th>Family 2 &lt; 5 MWc</th>
<th>Family 3 Parking shelters</th>
</tr>
</thead>
<tbody>
<tr>
<td>Price (€/MWh)</td>
<td>62,5</td>
<td>68,1</td>
<td>105,6</td>
</tr>
<tr>
<td>Crowdfunding</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Degraded land</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>60 % of the projects</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>90 % of the projects</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

✓ « Self-consumption » tender: 1st and 2nd rounds

<table>
<thead>
<tr>
<th></th>
<th>1st round</th>
<th>2nd round</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prime (€/MWh)</td>
<td>40,88</td>
<td>19,35</td>
</tr>
<tr>
<td>Self-Consumption Rate</td>
<td></td>
<td>97 %</td>
</tr>
</tbody>
</table>
Any Questions?