

# T9 : Net metering and PV development in emerging countries






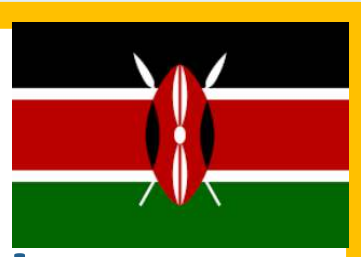


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**What is net metering ?** Net metering is a **type of contract** that binds (i) a self-generating customer (ii) and its energy distributor. In this contract, the customer consumes its electricity in real time and surplus electricity is injected into the grid. **For each injected kWh, the consumer gets compensation in the form of credit.**

Feed-In-Tariff	Net Metering	Green Certificates
For each kWh injected, the customer is paid according to the current feed-in tariff, regardless of the electricity bill that he may have	On his monthly bill, the customer can deduct the value of the kWh injected the previous month	The customer can sell the green certificates he acquires when he injects renewable energy into the grid

**This study focuses on emerging countries** through literature review and interviews

 <p><b>India</b> Credit value depends on State's regulations.</p>	 <p><b>South Africa</b> Credit value depends on Municipalities' regulations.</p>	 <p><b>Cabo Verde</b> Came into law in 2011 but no concrete achievement yet.</p>	 <p><b>Benin</b> Net metering is not the core of current energy policy concerns.</p>
 <p><b>Philippines</b> Credits value is equal to average supply cost of distribution company.</p>	 <p><b>Kenya</b> Credit value is still under discussion (2015 Energy Bill).</p>	 <p><b>Ghana</b> Came into law but no concrete achievement yet, a pilot study is on going.</p>	 <p><b>Burkina-Faso</b> Is setting up a framework for feed-in-tariff.</p>

 Net metering is allowed although no national framework as yet

 Net metering is allowed but no concrete installations exist

 Net metering is allowed and some concrete installations exist

 Net metering is not enforced and not a priority



**The driving forces should be the ambition to increase (i) the share of renewable energy and (ii) the quality and resilience of the electrical service rather than reducing the cost of distribution.**



PVPS

Strengths	Weaknesses
<ul style="list-style-type: none"> <li>Increased generation capacity</li> <li>Diversification of the energy mix on the long term (increase of network stability)</li> <li>Promotion of small scale private investment</li> <li>Increase in building value</li> <li>Strengthening the solar sector / job creation</li> </ul>	<ul style="list-style-type: none"> <li>Reduced profit for the distribution company (but: depends on their own generation cost and tariff level)</li> <li>Associated administrative costs (adaptation of customer management)</li> <li>Possible technical constraints</li> </ul>
Opportunities	Threats
<ul style="list-style-type: none"> <li>Urban growth</li> <li>Strong sunshine</li> <li>Reduced dependency on imports and price fluctuation</li> <li>Inability to invest in new large scale power plants</li> <li>Service improvement</li> <li>Political objectives</li> <li>Decrease of PV equipment cost</li> <li>Capitalization of lessons learned</li> </ul>	<ul style="list-style-type: none"> <li>Political instability</li> <li>Inappropriate regulation</li> <li>Lobbying of distribution companies</li> <li>Inefficient data management system</li> <li>Poor coordination / lack of skills</li> <li>Inability of clients to invest</li> <li>Availability of new low-cost fossil energy sources</li> </ul>

## Results

**1** In-depth analyses are necessary to setting up appropriate compensation schemes (i.e. the value of one credit) otherwise distribution companies fear revenue losses.

**2** A strong political will and user-friendly procedures are necessary to turn the law into concrete achievements.

**3** Net metering development in emerging countries can be split into two phases : First phase where industrial and commercial users with investment capacities are addressed and a standard product and procedure developed ; second phase where net metering becomes interesting to every type of user.