Rooftop Solar PV Market Development in Indonesia

Workshop Summary and Way Forward

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A Programmatic Approach to Opening the Rooftop Solar PV Market in Indonesia

No.	Program Elements	Proposed Action
1.	Set the target for rooftop solar PV installations	Government has set an overall target of 6,000 MW of solar PV by 2025. What percent of this is expected to come from rooftops: Residential, Commercial, Industrial, Total?
2.	Identify barriers to widespread adoption	Some market barriers identified include: customer awareness, licensing for service providers, local content requirements, financing options for customers, insurance coverage, quality control of systems, companies and individuals making installations.
3.	Modeling the possible impacts of different policies	What level of market penetration can be expected based on the relative attractiveness of investments in rooftop solar PV? How will rooftop solar PV market growth in different PLN customer classes affect overall sales and revenues? Are there technical challenges that will be created or exasperated due to rapid growth in rooftop solar PV installations?

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No.	Program Elements	Proposed Action
4.	Develop new and/or modify existing regulations	Provide clarity in the regulatory treatment of rooftop solar PV installations for self consumption, export or both. Remove discriminatory charges for industrial/commercial parallel generation.
5.	Introduce incentives to “kick-start” the market	Most countries with significant market growth had introduced a variety of incentives to improve the attractiveness of rooftop solar PV investments. While they may not be needed over the long term, Indonesia should consider tax incentives, grants or rebates, adders to the export purchase price are possible incentives.
6.	Promote Implementation of the Rooftop Solar PV Program	Facilitate the adoption of customer “behind the meter” rooftop solar PV systems by removing barriers (see #2) and allow for new business models (e.g., Private PPA, system leasing, mortgages that value of additional assets and reduced monthly energy costs).

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No.	Program Elements	Proposed Action
7.	Analyze the actual impact /results of the Rooftop Solar PV Program	Has the market responded as expected, and if not why not? Does the program create “winners” (those who have installed systems) and “losers” (those who have not)? What is the actual and projected impact on electricity load growth in different customer classes? Has it changed the shape of the daily load profile? How has the loss of sales and revenues affected the electricity production costs and PLN profitability? Has PLN experienced changes (+ or -) in power quality and distribution system operations?
8.	Compensate PLN and/or customers to minimize the negative impact of the Program	Allow PLN to recover any additional costs associated with the Program. Consider “time of use” rates that provide customers with solar PV systems the correct price signals when sizing their system. Make sure that customers without solar PV systems are not burdened with additional cost associated with fixed costs and declining sales.
9.	Adjust Program based on implementation experience	Discontinue or reduce incentives as market matures and the costs to customers declines.

Notes:

- Indonesia can benefit from the extensive experience in other countries with successful rooftop solar PV programs.
- Indonesian customers can benefit from declining costs and increasing performance of solar PV systems.
- Program design should seek input from all stakeholders: solar PV industry, system users, ordinary customers, PLN, financial service companies, training and quality control providers.
- Genuine concerns regarding the negative impacts of the Program should be addressed with appropriate, transparent analyses.
- This “Program” focuses on PLN customers. Other potential users are tenants in industrial estates and off-grid applications where the grid is not used as back-up.