



Frankfurt School
FS-UNEP Collaborating Centre
for Climate & Sustainable Energy Finance

Solar PV Opportunities: Banking Sector Perspective

Takeaways from the GIZ Sponsored “Establishing Solar PV through Quality in Pakistan”

Berlin

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Banking sector capacity constraints identified

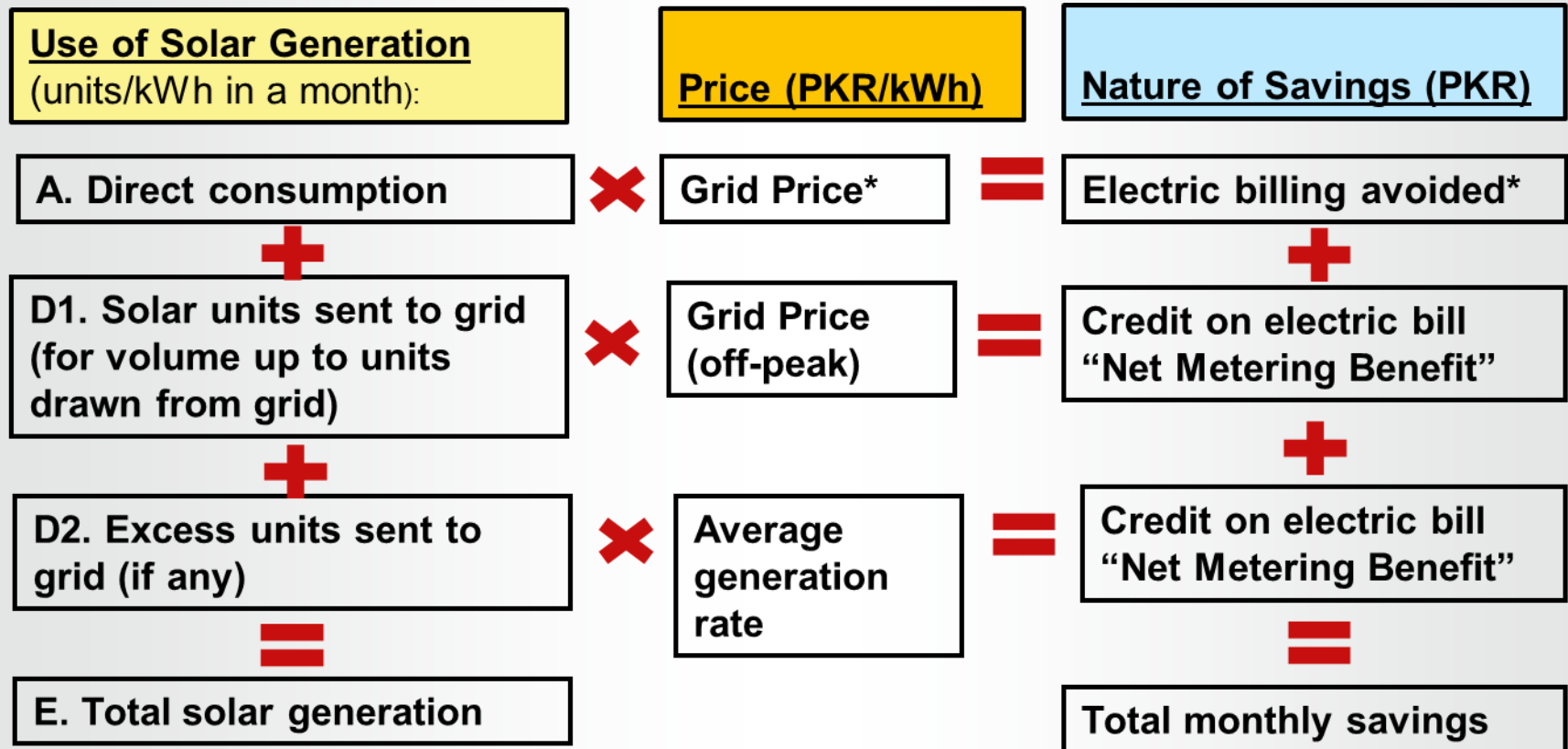
- ❖ A number of existing and potential bank clients represent prime candidates for PV systems including power intensive manufacturers, textiles industry, and other companies in the commercial and industrial (C&I) space that operate mostly during the day for both on-grid connection and off-grid.
- ❖ Generally, knowledge of PV systems, quality, and financing solutions were at a nascent stage across the banking sector in Pakistan.
- ❖ Among main constraints identified were:
 - ❑ **Collateral:** valuation and recourse actions
 - ❑ **Borrower awareness:** clients are unable to see the benefits and factor them into their business decision making
 - ❑ **Front office awareness:** Inability to talk to client about actual benefits
 - ❑ **Risk Monitoring:** Quality checks, risk management, and understanding of tech specs
 - ❑ **Middle-office capacity:** credit analysis and due diligence departments lack assessment methodologies for solar PV clients

State Bank of Pakistan (SBP) RE Financing Scheme

	Description	Maximum Loan Amount	Refinancing
Category I	Sponsors 1MW to 50MW	PKR 6Billion/project	100% up to 20MW project 50% for >20MW
Category II	For sponsors up to 1MW	PKR 400MM/Borrower	Up-to 100% financing
Category III	For AEDB approved vendors wanting to lease or sell electricity to end consumers	PKR 1Billion/Vendor	Up-to 100% financing

	Service Charges / Refinance Rate	Maximum Bank/DFI Spread	Maximum End User Rate	Max Tenor
Category I	3%	3%	6%	12 years + 2 year grace period
Category II	2%	4%	6%	10 years + 3 months grace period
Category III	3%	3%	6%	10 years

Modeling Concept utilized (simple grid-tied system)



* With direct consumption, the user also avoids GST and other taxes

Risk management focus points (managing customer expectations)

- Most vendors and their sales agents over sell solar to create unmanageable expectations
- It is advised that all customers that want solar financing should sign a customer consent form:
- Grid Tied Solar will not work during load-shedding / power outages
- All utility related compliances for getting net-metering is the responsibility of the customer
(Name change on the bill, sanctioned load)
- Charges for meter replacement (for net-metering) will be borne by the customer and paid directly to the utility
- All regulatory compliances such as Generation License is the domain of Utility/NEPRA and takes around 1-3 months.

Risk management focus points (managing customer expectations) cont.

- Any increase in solar capacity after getting generation license will need to be intimated to the local utility for enhancement of the license, else it will be breach of contract
- Savings are dependent on Grid Tariffs and solar system's production. Savings should be measured in units saved. Any future increase in consumption or additional appliances should be factored in
- It will be at-least 3 months after solar installation that customer will see net-metering benefit. This is a 25 year solar power plant; initial administration/installation process needs to be done patiently.
- The actual maximum power production will usually be around 80% of the rated/nameplate capacity at peak times. For example, a 10KW system will usually go to 8KW at peak times on average.

Banks should be on the lookout for:

- There is potential for customer to even avoid the initial down-payment required by the banks.
- Vendors may collude with customers to increase the contract price by 20-25% (the down-payment amount) which is then passed back to the customer through other channels.
 - This way the customer gets the installation without having to put up any money upfront
 - This is the risk for the bank as the client is not invested in the project
- It is important to know the indicative prices and see if there is any out-of-the-ordinary price numbers
 - A 20-25% increased price may be visible; for example if it's a 100KW project with a standard structure costing 100-120/watt it may raise suspicion. Bank can call a few competing vendors, provide an indicative location, size of project, inverter brand to get a quick competing quote.

Checklist for Managing Risks

- **Vendor Checklist (new vendor):**
 - Total installed capacity / track record
 - CV of senior management
 - Registrations (Pakistan Engineering Council, AEDB)
 - Buy-back guarantees for Panels & Inverters
 - Reference checks with clients
- **Project Design**
 - Site survey, design, PV analysis
 - Brand of equipment (known/unknown)
 - Project completion report to be given to bank
- **Customer Expectation**
 - Customer consent form (regarding solar limitations, performance factors)
- **Monitoring & Control**
 - Online monitoring should be enabled and bank to be given access

Salient Points of the trainings

- ❖ Both grid-tied and off-grid situations can offer compelling business cases
- ❖ Speak to client needs – if it is good for the client it is good for the bank. Think holistically – solar PV and energy efficiency measures can unlock value and returns
- ❖ Understand the connection between solar PV and the underlying business. Use the models!
- ❖ Target energy intensive companies in C&I with solid balance sheets
- ❖ Safeguard the investment – risk management techniques
- ❖ Understand the market trajectory and position yourself for it

Results and Impacts from the Project

- ❖ In most cases, the projected attractive benefits and payback periods for borrowers, were striking and surprising to many participants
- ❖ **Allied Bank:** indicated that they have developed a pipeline of 25MW from the time our engagement started with them on this initiative. Product developers are reportedly close to completing new Allied Bank loan products for residential rooftop systems
- ❖ **Habib Bank** have indicated a pipeline of 18MW and they are very confident about increasing it after receiving the trainings. Also, they plan to replicate these trainings in-house with the sustainability department leading the organization.
- ❖ **JS Bank** has already shown signs and strong indications that the trainings and tools would be further elaborated in-house and applied to existing and new deals. They have already begun utilizing the models to enhance their portfolio and will continue to incorporate outputs in their decision-making framework.
- ❖ The **financial models** - all indicated that they have applied or will apply the model in customer interactions and credit appraisal



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Thank you!