



# ACTIVITY 3 – IMPROVEMENT OF FINANCING OPPORTUNITIES FOR SMALL-SCALE SOLAR/PV PROJECTS

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# Key Finance Related Activities under KESS

## Financial Model

- Identify impacts of financing support and fiscal mechanisms and financial instruments for household and business prosumers

## Economic Model

- Analyze economic benefits and costs to Kosovo of financial support and fiscal mechanisms and evaluate policy options

## Coordination with KCGF and Kosovo Banking Association

- Support development of financial instruments for prosumers
- Guarantee fund to expand prosumer lending
- Capacity building and training to banks

# Financial Modeling and Analysis

## Structure of the financial model

### Customer profiles

Eight (8) customer profiles are modeled

- Industrial – 35kV
- Industrial – 10kV
- Household 0.4kV Category I
- Household 0.4kV Category II
- Household 0.4kV 1-rate meter
- Household 0.4kV 2-rate meter
- Household 0.4kV
- Public lighting

### Financing mechanisms modeled

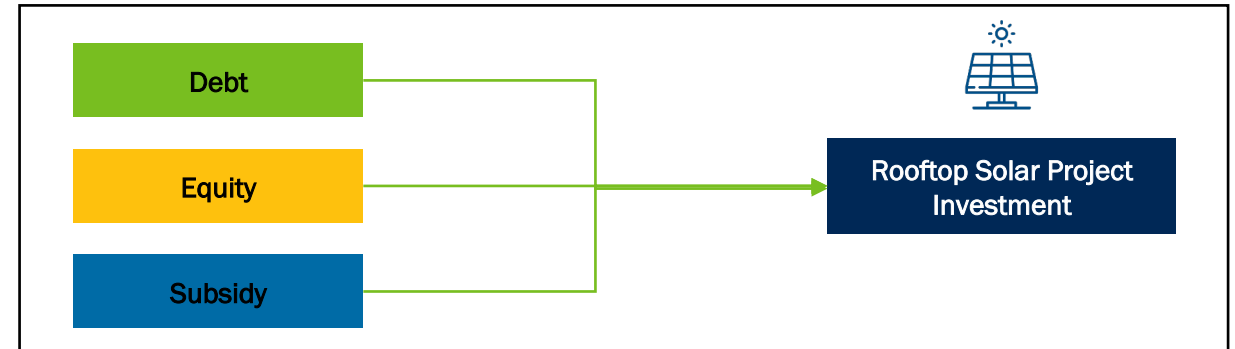
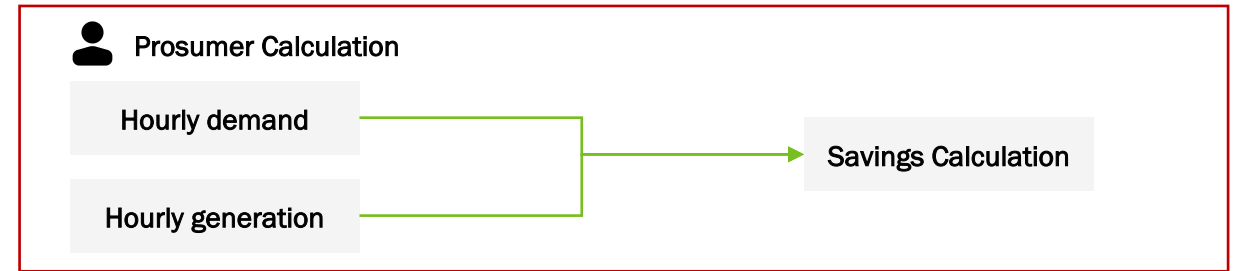
- Tariff
- VAT
- Subsidies

### Revenue calculation basis

- Net metering – monthly reconciliation
- Net metering – yearly reconciliation
- Behind the meter

### Outputs

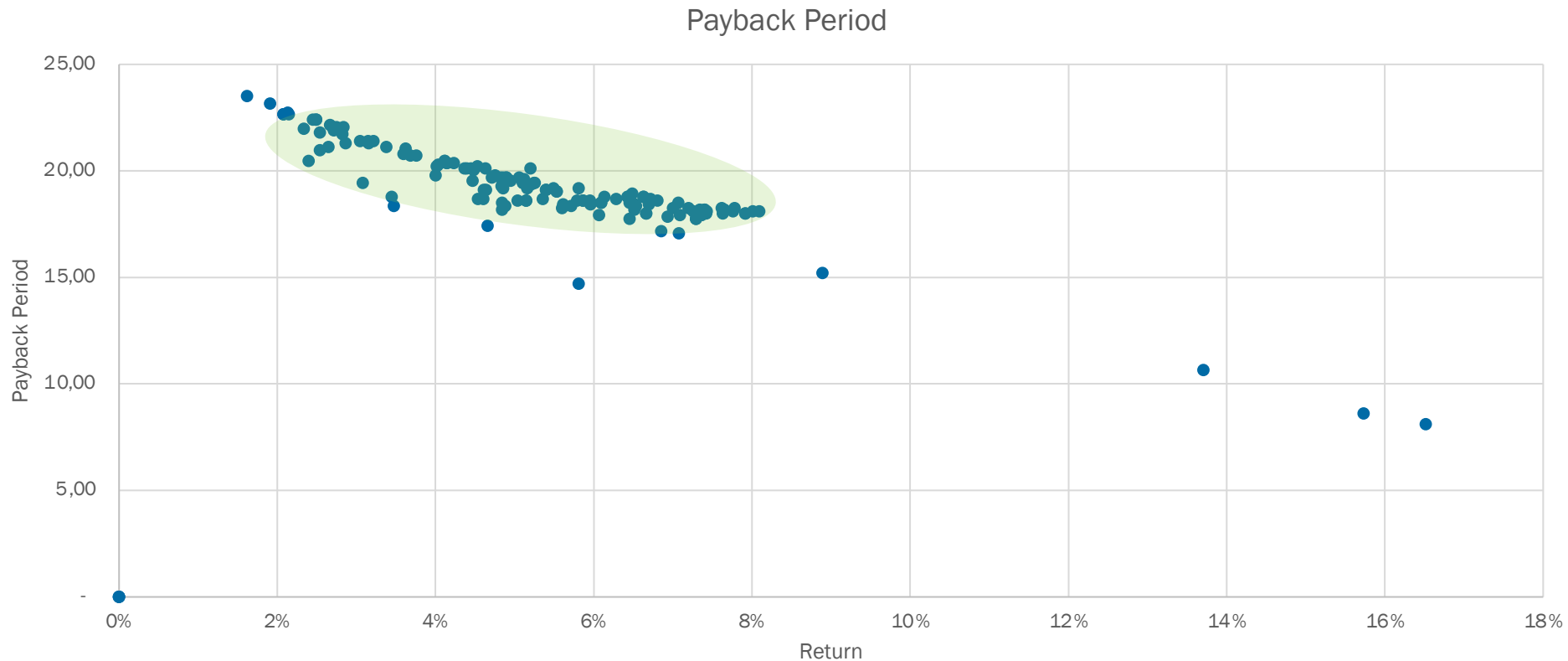
- Internal rate of return
- Leverage
- Payback Period



# Scenario Analysis – Households (KESS Prelez surveys)

## Assumptions

- 25% Grant on the EPC Price
- 100% VAT subsidy on the EPC Price



## Key Outputs

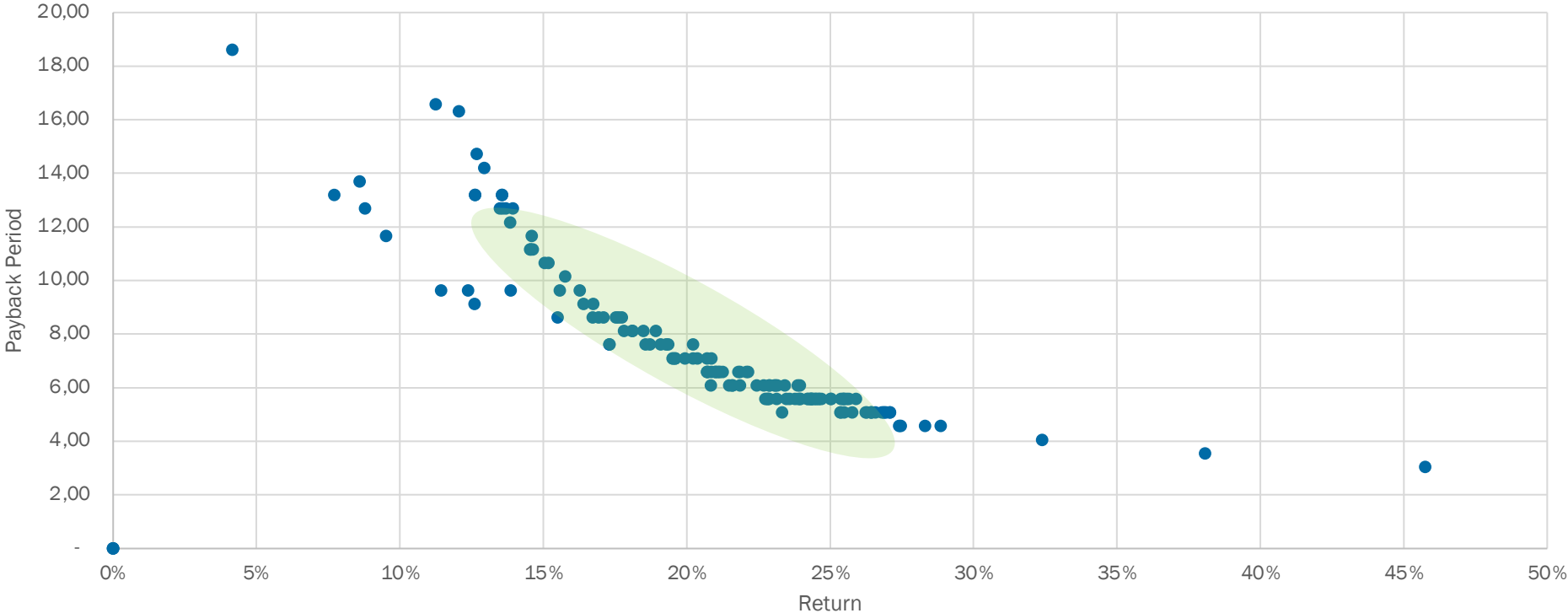
Indicator	Unit	Value
Median Return	%	5.1%
Median Payback Period	Years	18.8
Average Return	%	5.3%
Average Payback Period	Years	18.8

# Scenario Analysis – Households (KESS Prelez surveys)

## Assumptions

- 60% Grant on the EPC Price
- 100% VAT subsidy on the EPC Price

Payback Period



## Key Outputs

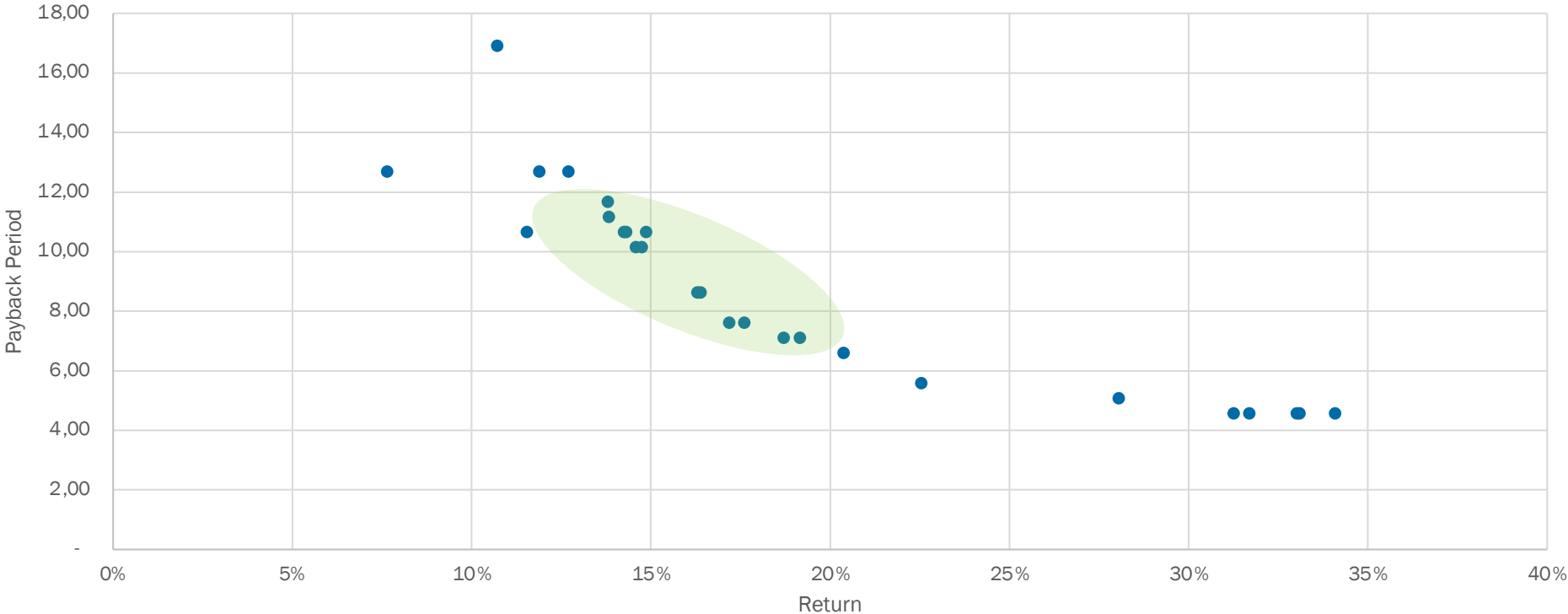
Indicator	Unit	Value
Median Return	%	21.3%
Median Payback Period	Years	6.6
Average Return	%	20.4%
Average Payback Period	Years	7.3

# Scenario Analysis – Businesses (KESS surveys)

## Assumptions

- 0% Grant on the EPC Price
- 0% VAT subsidy on the EPC Price

Payback Period



## Key Outputs

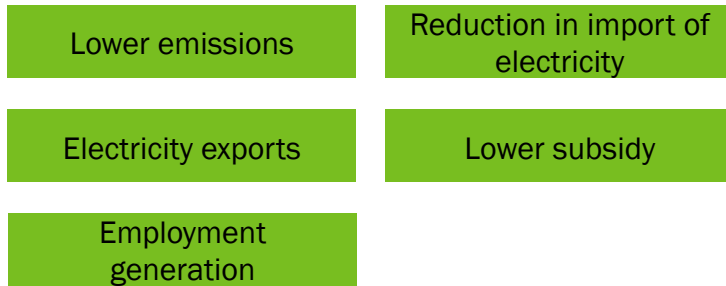
Indicator	Unit	Value
Median Return	%	16.3%
Median Payback Period	Years	8.6
Average Return	%	19.0%
Average Payback Period	Years	8.7

# Economic Benefit Cost Analysis – Households & Businesses

- Cost-Benefit Analysis is used to evaluate policy options to provide financial incentives to prosumers

$$\text{Cost Benefit Ratio} = \frac{\text{Net Present Value of Economic Benefits}}{\text{Net Present Value of Economic Costs}}$$

## Key Benefits Assumed



## Key Costs Assumed



## Key Output - Households

EPC Subsidy	VAT exemption	Benefit-Cost Ratio
20%	100%	1.63
30%	100%	1.27
40%	100%	1.04

## Key Output - Businesses

EPC Subsidy	VAT exemption	Benefit-Cost Ratio
0	100%	1.96
5%	100%	1.47
10%	100%	1.18

*Note: Benefit – Cost ratio is based on conservative estimates*

# Households: Outcome of Analysis

## Household Prosumers

- Motivation to invest in prosumer installation based on payback period and not ROI
- Debt financing is not a preferred option since savings are low based on present tariffs
- Upfront capital subsidies and fiscal incentives may be required



## Financial Analysis

- Upfront subsidies on EPC and VAT exemption are preferable to concessional financing terms
- 50% grant on EPC and 100% VAT exemption may be required to incentivize households (will vary based on household consumption and income)
- Changing the credit cycle for net metering to March-April will lower the payback period



## Economic Analysis

- Provision of capital subsidies and VAT exemption may be justified based on B-C ratio for Kosovo
- Incentives may be justified as price of imported power increases
- Helps Kosovo meet RE targets and lower emissions



# Businesses : Outcome of Analysis

## Business Prosumers

- Motivation to invest in prosumer installation based more on ROI than payback period
- Debt financing is the preferred option for businesses
- Upfront capital subsidies and fiscal incentives may not be required



## Financial Analysis

- Concessional financing coupled with loan guarantees are preferable
- Fiscal incentives could help accelerate prosumer installations
- Changing the credit cycle for net metering to March-April will improve financial benefits



## Economic Analysis

- Provision of fiscal incentives may be justified based on B-C ratio for Kosovo
- Incentives may be justified as price of imported power increases
- Helps Kosovo meet RE targets and lower emissions

**Thank You.**

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