



**Public Utilities Commission of Sri Lanka**

**Consultation Document**

# **Renewable Energy Feed in Tariff Review**

**July 2026**

## List of Acronyms

AWPR	Average Weighted Prime Lending Rate
BESS	Battery Energy Storage System
CAPEX	Capital Expenditure
CBSL	Central Bank of Sri Lanka
CCPI	Colombo Consumer Price Index
COE	Cost of Equity
DL	Distribution Licensee
EDL	Electricity Distribution Lanka Private Limited
EIRR	Equity Internal Rate of Return
FIT	Feed in Tariff
IPP	Independent Power Producers
IRR	Internal Rate of Return
LECO	Lanka Electricity Company Private Limited
MLKR	Million Sri Lankan Rupees
MW	Mega Watt
RE	Renewable Energy
SLSEA	Sri Lanka Sustainable Energy Authority
NSO	National System Operator (Pvt) Ltd.
O&M	Operation and Maintenance
OPEX	Operational Expenditure
SPPA	Standard Power Purchase Agreement
ROA	Return on Assets
ROE	Return on Equity
TL	Transmission Licensee
ToU	Time of Use

## Table of Contents

<b>List of Acronyms .....</b>	<b>1</b>
<b>1. Background.....</b>	<b>3</b>
<b>2. Summary of Proposed Feed in Tariffs .....</b>	<b>3</b>
<b>2.1. Proposed Feed in Tariffs for Power Plants.....</b>	<b>3</b>
<b>2.2. Proposed Feed in Tariffs for Prosumers.....</b>	<b>3</b>
<b>2.3. Feed in Tariffs for Power Plants with BESS .....</b>	<b>5</b>
<b>3. Parameters .....</b>	<b>5</b>
<b>4. Annexures .....</b>	<b>5</b>

## 1. Background

In terms of Section 29 (3) of the Sri Lanka Electricity Act No. 36 of 2024 (Amended), the Commission is required to set feed in tariffs to be included within the Standard Power Purchase Agreements (SPPA). Accordingly, a methodology was developed to establish the basis of the calculation of these tariffs. The methodology has been finalized and approved through a consultative process. The approved methodology is published on the Commission's website ([www.pucsl.gov.lk](http://www.pucsl.gov.lk)).

The Feed in tariffs are calculated based on the above methodology and considering the information submissions by the stakeholders. The proposed Feed in tariffs are opened for stakeholder consultation, in terms of Section 17 (b) of PUCSL Act No. 35 of 2002. Accordingly, the stakeholders are hereby requested to provide their views strictly on the proposed rates and the relevant parameters used in the calculation. Any disagreement with the proposed rates/parameters shall be submitted with credible proofs.

All written stakeholder comments shall be sent to the Commission on or before July 22, 2026, via email, fax or post. The oral consultation session on the tariff review will be conducted on July 22, 2026, at BMICH, Colombo.

## 2. Summary of Proposed Feed in Tariffs

### 2.1. Proposed Feed in Tariffs for Power Plants

The proposed Feed in Tariffs for the category identified as 'Power plants', in the methodology, are provided in the table below.

Table 1: Proposed FIT for Power Plants

Type of Power Plant	Feed in Tariff Components (LKR/kWh)			Feed in Tariff for Base Year (LKR/kWh)
	Non-escalable component	Escalable components		
		Base O&M component	Fuel Price component for year 2026	
Mini hydro	28.39	3.91	-	32.30
Wind	22.36	4.93	-	27.29
Biomass - Dendro	15.36	3.39	31.20	49.94
Biomass - Agricultural/Industrial Waste	15.36	3.39	17.80	36.54
Municipal Solid Waste	44.84	9.89	-	54.73
Waste Heat Recovery	15.36	3.39	-	18.74
Ground Mounted Solar PV	18.84	2.74	-	21.58
Floating Solar PV	25.27	3.95	-	29.22

### 2.2. Proposed Feed in Tariffs for Prosumers

The proposed Feed in Tariffs for the category identified as 'Prosumers', in the methodology, are provided in the table below.

Renewable Energy Feed in Tariff Review

Table 2: Proposed FIT for Prosumers

Capacity Band	Prosumer Applicant Type		Feed-in Tariff (LKR/kWh)	
			At Prioritized Feed-in Time	At Other Periods
Up to 10kW	New Rooftop Solar PV		23.53	23.53
	New Rooftop Solar PV and BESS	For first 15 years	61.12	17.64
		For remainder of the SPPA period	23.53	
	New BESS only		$39.80 + (R_{\text{Charging}}/0.9)$	0.00
	Existing Rooftop Solar PV prosumer applying for BESS	For first 15 years	$39.80 + (R_1'/0.9)$	$0.75R_1'$
For remainder of the SPPA period		$R_1'$		
Above 10kW and up to 40kW	New Rooftop Solar PV		19.50	19.50
	New Rooftop Solar PV and BESS	For first 15 years	66.53	14.62
		For remainder of the SPPA period	19.50	
	New BESS only		$50.01 + (R_{\text{Charging}}/0.95)$	0.00
	Existing Rooftop Solar PV prosumer applying for BESS	For first 15 years	$50.01 + (R_1'/0.95)$	$0.75R_1'$
For remainder of the SPPA period		$R_1'$		
Above 40kW and up to 250kW	New Rooftop Solar PV		17.42	17.42
	New Rooftop Solar PV and BESS	For first 15 years	62.96	13.06
		For remainder of the SPPA period	17.42	
	New BESS only		$46.08 + (R_{\text{Charging}}/0.95)$	0.00
	Existing Rooftop Solar PV prosumer applying for BESS	For first 15 years	$46.08 + (R_1'/0.95)$	$0.75R_1'$
For remainder of the SPPA period		$R_1'$		
Above 250kW and up to 1000kW	New Rooftop Solar PV		14.45	14.45
	New Rooftop Solar PV and BESS	For first 15 years	56.62	10.84
		For remainder of the SPPA period	14.45	
	New BESS only		$45.89 + (R_{\text{Charging}}/0.95)$	0.00
	Existing Rooftop Solar PV prosumer applying for BESS	For first 15 years	$45.89 + (R_1'/0.95)$	$0.75R_1'$
For remainder of the SPPA period		$R_1'$		
Above 1000kW	New Rooftop Solar PV		14.45	14.45
	New Rooftop Solar PV and BESS	For first 15 years	41.56	10.84
		For remainder of the SPPA period	14.45	
	New BESS only		$30.83 + (R_{\text{Charging}}/0.95)$	0.00
	Existing Rooftop Solar PV prosumer applying for BESS	For first 15 years	$30.83 + (R_1'/0.95)$	$0.75R_1'$
For remainder of the SPPA period		$R_1'$		

\*Note:

[1] Prioritized Feed in Time (PFT) - 1730h to 2130h

[2] All tariffs calculated above are capped at a maximum rate of LKR 66.53/kWh. This cap may be adjusted by the Commission, considering the uptake of BESS.

[3]  $R_1'$  is the Feed in tariff rate from the existing SPPA

[4]  $R_{\text{Charging}}$  is the applicable 'Day Time' consumption tariff

[5] BESS inclusive prosumers would be connected under "Net Plus" scheme

### 2.3. Feed in Tariffs for Power Plants with BESS

The proposed Feed in Tariffs for the category identified as ‘Power plants with Battery Energy Storage Systems (BESS)’, in the methodology, are provided in the table below.

Table 3: Proposed FIT for Power Plants with BESS

Type of Power Plant		Feed-in Tariff (LKR/kWh)	
		At Prioritized Feed in Time*	At Other Periods
Non-Dispatchable Plants	Ground Mounted Solar	51.55	21.58
	Floating Solar	60.26	29.42

\*Note: Prioritized Feed in Time (PFT) - 1730h to 2130h

Considering the uncertainty surrounding the readiness of the utility in connecting BESS based dispatchable power plants, the Feed in tariffs for these plants are not proposed in this review.

### 3. Parameters

The technical and financial parameters have been set based on information submissions by the stakeholders. The details of these parameters are provided as Annex – 2 to this document, along with the calculated output.

Further, the Commission is in the process of developing a standard methodology for determining the ‘Cost of Capital’ for renewable energy power plant projects. However, for the calculation of the proposed tariffs, the ‘Cost of Capital’ parameters have been considered on the following basis.

- Cost of Equity = 12 Year Treasury Bond Rate + 3%
- Cost of Debt = 12 month average AWPR + 2%

### 4. Annexures

Annex 1 – Details of Feed in Tariff Calculations

## Details of Calculations

### 1. Power Plants

#### 1.1. Mini-hydro

##### Inputs

Plant Capacity (MW)	1.00
Capital Cost (MLKR/MW)	521.00
Construction Period (Years)	2
Equity (%)	40%
Cost of Debt (%)	10.92%
Cost of Equity (%)	14.19%
Loan Repayment Period (Years)	6
Annual O&M Cost as a Percentage of Capital Cost (%)	2.5%
Income Tax Rate (%)	30%
Plant Factor (%)	38.0%
Annual Capacity Degradation Factor (%)	0.0%
Specific Fuel Consumption (kg/kWh)	-
Fuel Price (LKR/kg)	-
Exchange Rate (LKR/USD)	341.09
Colombo Consumer Price Index (CCPI)	207.70
Depreciation Rate (%)	5%
Capital Allowance (%)	20%
Salvage Value (MLKR/MW)	-
Inverter Replacement Cost on Year No. 11 (MLKR/MW)	-

##### Calculated Parameters

Interest During Construction (MLKR)	39.83
Capitalized Total Project Cost (MLKR)	560.83
Weighted Average Cost of Capital (WACC)	10.3%
First Year Electricity Generation (GWh)	3.33
Annual O&M Cost (MLKR)	13.03
First Year Fuel Cost (MLKR)	-

##### Outputs

###### Feed-in Tariff

Non-Escalable Tariff Component (LKR/kWh)	28.39
Escalable O&M Tariff Component (LKR/kWh)	3.91
Escalable Fuel Tariff Component (LKR/kWh)	-
Total Feed-in Tariff (LKR/kWh)	32.30

###### Financial Indicators

Project Equity IRR (%)	14.19%
Project NPV (MLKR)	93.59
Return on Equity (%)	24%

\*Sources: Information submissions by Sri Lanka Sustainable Energy Authority & Federation of Renewable Energy Developers

## 1.2. Wind

### Inputs

Plant Capacity (MW)	1.00
Capital Cost (MLKR/MW)	399.55
Construction Period (Years)	2
Equity (%)	40%
Cost of Debt (%)	10.92%
Cost of Equity (%)	14.19%
Loan Repayment Period (Years)	6
Annual O&M Cost as a Percentage of Capital Cost (%)	4.0%
Income Tax Rate (%)	30%
Plant Factor (%)	37.0%
Annual Capacity Degradation Factor (%)	0.0%
Specific Fuel Consumption (kg/kWh)	-
Fuel Price (LKR/kg)	-
Exchange Rate (LKR/USD)	341.09
Colombo Consumer Price Index (CCPI)	207.70
Depreciation Rate (%)	5%
Capital Allowance (%)	20%
Salvage Value (MLKR/MW)	-
Inverter Replacement Cost on Year No. 11 (MLKR/MW)	-

### Calculated Parameters

Interest During Construction (MLKR)	30.54
Capitalized Total Project Cost (MLKR)	430.09
Weighted Average Cost of Capital (WACC)	10.3%
First Year Electricity Generation (GWh)	3.24
Annual O&M Cost (MLKR)	15.98
First Year Fuel Cost (MLKR)	-

### Outputs

#### Feed-in Tariff

Non-Escalable Tariff Component (LKR/kWh)	22.36
Escalable O&M Tariff Component (LKR/kWh)	4.93
Escalable Fuel Tariff Component (LKR/kWh)	-
Total Feed-in Tariff (LKR/kWh)	27.29

#### Financial Indicators

Project Equity IRR (%)	14.19%
Project NPV (MLKR)	71.78
Return on Equity (%)	24%

\*Sources: Information submissions by Sri Lanka Sustainable Energy Authority & Federation of Renewable Energy Developers

### 1.3. Biomass – Dendro

#### Inputs

Plant Capacity (MW)	1.00
Capital Cost (MLKR/MW)	593.33
Construction Period (Years)	2
Equity (%)	40%
Cost of Debt (%)	10.92%
Cost of Equity (%)	14.19%
Loan Repayment Period (Years)	6
Annual O&M Cost as a Percentage of Capital Cost (%)	4.0%
Income Tax Rate (%)	30%
Plant Factor (%)	80.0%
Annual Capacity Degradation Factor (%)	0.0%
Specific Fuel Consumption (kg/kWh)	2.0
Fuel Price (LKR/kg)	15.60
Exchange Rate (LKR/USD)	341.09
Colombo Consumer Price Index (CCPI)	207.70
Depreciation Rate (%)	5%
Capital Allowance (%)	20%
Salvage Value (MLKR/MW)	-
Inverter Replacement Cost on Year No. 11 (MLKR/MW)	-

#### Calculated Parameters

Interest During Construction (MLKR)	45.35
Capitalized Total Project Cost (MLKR)	638.68
Weighted Average Cost of Capital (WACC)	10.3%
First Year Electricity Generation (GWh)	7.01
Annual O&M Cost (MLKR)	23.73
First Year Fuel Cost (MLKR)	218.65

#### Outputs

##### Feed-in Tariff

Non-Escalable Tariff Component (LKR/kWh)	15.36
Escalable O&M Tariff Component (LKR/kWh)	3.39
Escalable Fuel Tariff Component (LKR/kWh)	31.20
Total Feed-in Tariff (LKR/kWh)	49.94

##### Financial Indicators

Project Equity IRR (%)	14.19%
Project NPV (MLKR)	106.59
Return on Equity (%)	24%

\*Sources: Information submissions by Sri Lanka Sustainable Energy Authority, Federation of Renewable Energy Developers, Grid Connected Biomass Association & Consumer Consultative Committee

## 1.4. Biomass – Agricultural/Industrial Waste

### Inputs

Plant Capacity (MW)	1.00
Capital Cost (MLKR/MW)	593.33
Construction Period (Years)	2
Equity (%)	40%
Cost of Debt (%)	10.92%
Cost of Equity (%)	14.19%
Loan Repayment Period (Years)	6
Annual O&M Cost as a Percentage of Capital Cost (%)	4.0%
Income Tax Rate (%)	30%
Plant Factor (%)	80.0%
Annual Capacity Degradation Factor (%)	0.0%
Specific Fuel Consumption (kg/kWh)	2.0
Fuel Price (LKR/kg)	8.90
Exchange Rate (LKR/USD)	341.09
Colombo Consumer Price Index (CCPI)	207.70
Depreciation Rate (%)	5%
Capital Allowance (%)	20%
Salvage Value (MLKR/MW)	-
Inverter Replacement Cost on Year No. 11 (MLKR/MW)	-

\*Sources: Information submissions by Sri Lanka Sustainable Energy Authority

### Calculated Parameters

Interest During Construction (MLKR)	45.35
Capitalized Total Project Cost (MLKR)	638.68
Weighted Average Cost of Capital (WACC)	10.3%
First Year Electricity Generation (GWh)	7.01
Annual O&M Cost (MLKR)	29.67
First Year Fuel Cost (MLKR)	124.74

### Outputs

#### Feed-in Tariff

Non-Escalable Tariff Component (LKR/kWh)	15.36
Escalable O&M Tariff Component (LKR/kWh)	3.39
Escalable Fuel Tariff Component (LKR/kWh)	17.80
Total Feed-in Tariff (LKR/kWh)	36.54

#### Financial Indicators

Project Equity IRR (%)	14.19%
Project NPV (MLKR)	106.59
Return on Equity (%)	24%

## 1.5. Municipal Solid Waste

### Inputs

Plant Capacity (MW)	1.00
Capital Cost (MLKR/MW)	1,732.50
Construction Period (Years)	2
Equity (%)	40%
Cost of Debt (%)	10.92%
Cost of Equity (%)	14.19%
Loan Repayment Period (Years)	6
Annual O&M Cost as a Percentage of Capital Cost (%)	4.0%
Income Tax Rate (%)	30%
Plant Factor (%)	80.0%
Annual Capacity Degradation Factor (%)	0.0%
Specific Fuel Consumption (kg/kWh)	2.0
Fuel Price (LKR/kg)	-
Exchange Rate (LKR/USD)	341.09
Colombo Consumer Price Index (CCPI)	207.70
Depreciation Rate (%)	5%
Capital Allowance (%)	20%
Salvage Value (MLKR/MW)	-
Inverter Replacement Cost on Year No. 11 (MLKR/MW)	-

\*Sources: Information submissions by Sri Lanka Sustainable Energy Authority

### Calculated Parameters

Interest During Construction (MLKR)	132.43
Capitalized Total Project Cost (MLKR)	1,864.93
Weighted Average Cost of Capital (WACC)	10.3%
First Year Electricity Generation (GWh)	7.01
Annual O&M Cost (MLKR)	69.30
First Year Fuel Cost (MLKR)	-

### Outputs

#### Feed-in Tariff

Non-Escalable Tariff Component (LKR/kWh)	44.84
Escalable O&M Tariff Component (LKR/kWh)	9.89
Escalable Fuel Tariff Component (LKR/kWh)	-
Total Feed-in Tariff (LKR/kWh)	54.73

#### Financial Indicators

Project Equity IRR (%)	14.19%
Project NPV (MLKR)	311.23
Return on Equity (%)	24%

## 1.6. Waste Heat Recovery

### Inputs

Plant Capacity (MW)	1.00
Capital Cost (MLKR/MW)	593.33
Construction Period (Years)	2
Equity (%)	40%
Cost of Debt (%)	10.92%
Cost of Equity (%)	14.19%
Loan Repayment Period (Years)	6
Annual O&M Cost as a Percentage of Capital Cost (%)	4.0%
Income Tax Rate (%)	30%
Plant Factor (%)	80.0%
Annual Capacity Degradation Factor (%)	0.0%
Specific Fuel Consumption (kg/kWh)	-
Fuel Price (LKR/kg)	-
Exchange Rate (LKR/USD)	341.09
Colombo Consumer Price Index (CCPI)	207.70
Depreciation Rate (%)	5%
Capital Allowance (%)	20%
Salvage Value (MLKR/MW)	-
Inverter Replacement Cost on Year No. 11 (MLKR/MW)	-

### Calculated Parameters

Interest During Construction (MLKR)	45.35
Capitalized Total Project Cost (MLKR)	638.68
Weighted Average Cost of Capital (WACC)	10.3%
First Year Electricity Generation (GWh)	7.01
Annual O&M Cost (MLKR)	23.73
First Year Fuel Cost (MLKR)	-

### Outputs

#### Feed-in Tariff

Non-Escalable Tariff Component (LKR/kWh)	15.36
Escalable O&M Tariff Component (LKR/kWh)	3.39
Escalable Fuel Tariff Component (LKR/kWh)	-
Total Feed-in Tariff (LKR/kWh)	18.74

#### Financial Indicators

Project Equity IRR (%)	14.19%
Project NPV (MLKR)	106.59
Return on Equity (%)	24%

\*Sources: Information submissions by Sri Lanka Sustainable Energy Authority, Federation of Renewable Energy Developers, Grid Connected Biomass Association & Consumer Consultative Committee under 'Biomass - Dendro' category

## 1.7. Ground Mounted Solar PV

### Inputs

Plant Capacity (MW)	1.00
Capital Cost (MLKR/MW)	188.31
Construction Period (Years)	1
Equity (%)	40%
Cost of Debt (%)	10.92%
Cost of Equity (%)	14.19%
Loan Repayment Period (Years)	6
Annual O&M Cost as a Percentage of Capital Cost (%)	2.0%
Income Tax Rate (%)	30%
Plant Factor (%)	19.0%
Annual Capacity Degradation Factor (%)	0.5%
Specific Fuel Consumption (kg/kWh)	-
Fuel Price (LKR/kg)	-
Exchange Rate (LKR/USD)	341.09
Colombo Consumer Price Index (CCPI)	207.70
Depreciation Rate (%)	5%
Capital Allowance (%)	20%
Salvage Value (MLKR/MW)	-
Inverter Replacement Cost on Year No. 11 (MLKR/MW)	16.00

### Calculated Parameters

Interest During Construction (MLKR)	2.06
Capitalized Total Project Cost (MLKR)	190.37
Weighted Average Cost of Capital (WACC)	10.3%
First Year Electricity Generation (GWh)	1.66
Annual O&M Cost (MLKR)	3.77
First Year Fuel Cost (MLKR)	-

### Outputs

#### Feed-in Tariff

Non-Escalable Tariff Component (LKR/kWh)	18.84
Escalable O&M Tariff Component (LKR/kWh)	2.74
Escalable Fuel Tariff Component (LKR/kWh)	-
Total Feed-in Tariff (LKR/kWh)	21.58

#### Financial Indicators

Project Equity IRR (%)	14.19%
Project NPV (MLKR)	28.80
Return on Equity (%)	22%

\*Sources: Information submissions by Sri Lanka Sustainable Energy Authority & Federation of Renewable Energy Developers

## 1.8. Floating Solar PV

### Inputs

Plant Capacity (MW)	1.00
Capital Cost (MLKR/MW)	234.93
Construction Period (Years)	2
Equity (%)	40%
Cost of Debt (%)	10.92%
Cost of Equity (%)	14.19%
Loan Repayment Period (Years)	6
Annual O&M Cost as a Percentage of Capital Cost (%)	2.5%
Income Tax Rate (%)	30%
Plant Factor (%)	19.5%
Annual Capacity Degradation Factor (%)	0.5%
Specific Fuel Consumption (kg/kWh)	-
Fuel Price (LKR/kg)	-
Exchange Rate (LKR/USD)	341.09
Colombo Consumer Price Index (CCPI)	207.70
Depreciation Rate (%)	5%
Capital Allowance (%)	20%
Salvage Value (MLKR/MW)	-
Inverter Replacement Cost on Year No. 11 (MLKR/MW)	16.00

### Calculated Parameters

Interest During Construction (MLKR)	17.96
Capitalized Total Project Cost (MLKR)	252.89
Weighted Average Cost of Capital (WACC)	10.3%
First Year Electricity Generation (GWh)	1.71
Annual O&M Cost (MLKR)	5.87
First Year Fuel Cost (MLKR)	-

### Outputs

#### Feed-in Tariff

Non-Escalable Tariff Component (LKR/kWh)	25.48
Escalable O&M Tariff Component (LKR/kWh)	3.94
Escalable Fuel Tariff Component (LKR/kWh)	-
Total Feed-in Tariff (LKR/kWh)	29.42

#### Financial Indicators

Project Equity IRR (%)	14.19%
Project NPV (MLKR)	40.31
Return on Equity (%)	23%

\*Sources: Information submissions by Sri Lanka Sustainable Energy Authority & Federation of Renewable Energy Developers

## 2. Prosumers

As outlined in the methodology, the prosumer tariff calculations are performed considering each of the following cashflow scenarios separately.

S/N	Cashflow Scenario	Feed in tariff component [LKR/kWh]
1	Rooftop Solar PV system with grid tied inverter	$R_1$
2	Rooftop Solar PV system with hybrid inverter	$R_2$
3	BESS with hybrid inverter	$R_3$
4	BESS excluding inverter	$R_4$

The relevant feed in tariffs are calculated as follows.

Prosumer Applicant Type		Feed-in Tariff (LKR/kWh)	
		At Prioritized Feed in Time	At Other Periods
New Rooftop Solar PV		$R_1$	$R_1$
New Rooftop Solar PV and BESS	For first 15 years	$R_4 + (R_2/\text{Round Trip Efficiency})$	$0.75R_1$
	For remainder of the SPPA period		$R_1$
Existing Rooftop Solar PV prosumer applying for BESS	For first 15 years	$R_3 + (R_1/\text{Round Trip Efficiency})$	$0.75R_1'$
	For remainder of the SPPA period		$R_1'$

The details of these calculations are given below.

## 2.1. Up to 5kW

### 2.1.1. Rooftop Solar PV system with grid tied inverter

#### Inputs

Plant Capacity (kW)	5.00
Capital Cost (LKR/kW)	178,000.00
Equity (%)	40%
Cost of Debt (%)	10.92%
Cost of Equity (%)	14.19%
Loan Repayment Period (Years)	6
Annual O&M Cost as a Percentage of Capital Cost (%)	2.0%
Income Tax Rate (%)	30%
Plant Factor (%)	17.0%
Annual Capacity Degradation Factor - Solar PV (%)	0.4%
Annual O&M Cost Escalation (%)	3.85%
Exchange Rate (LKR/USD)	341.09
Colombo Consumer Price Index (CCPI)	207.70
Depreciation Rate (%)	5%
Capital Allowance (%)	20%
Salvage Value (LKR/kW)	-
Inverter Replacement Cost on Year No. 11 (LKR/kW)	30,000.00

#### Calculated Parameters

Total Capital Cost (LKR)	<b>890,000.00</b>
Weighted Average Cost of Capital (WACC)	<b>10.3%</b>
First Year Electricity Generation (kWh)	<b>7,446.00</b>
Annual O&M Cost (LKR)	<b>17,800.00</b>

#### Outputs

##### Feed-in Tariff

Tariff Component (LKR/kWh)	<b>23.53</b>
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##### Financial Indicators

Project Equity IRR (%)	<b>14.19%</b>
Project NPV (LKR)	<b>124,163.91</b>
Return on Equity (%)	<b>21%</b>

\*Sources: Information submissions by Sri Lanka Sustainable Energy Authority, Solar Industries Association & Solar EPC Association

### 2.1.2. Rooftop Solar PV system with hybrid inverter

#### Inputs

Plant Capacity (kW)	5.00
Capital Cost (LKR/kW)	219,000.00
Equity (%)	40%
Cost of Debt (%)	10.92%
Cost of Equity (%)	14.19%
Loan Repayment Period (Years)	6
Annual O&M Cost as a Percentage of Capital Cost (%)	2.0%
Income Tax Rate (%)	30%
Plant Factor (%)	17%
Annual Capacity Degradation Factor - Solar PV (%)	0.4%
Annual O&M Cost Escalation (%)	3.85%
Exchange Rate (LKR/USD)	341.09
Colombo Consumer Price Index (CCPI)	207.70
Depreciation Rate (%)	5%
Capital Allowance (%)	20%
Salvage Value (LKR/kW)	-
Inverter Replacement Cost on Year No. 11 (LKR/kW)	71,000.00

#### Calculated Parameters

Total Capital Cost (LKR)	1,095,000.00
Weighted Average Cost of Capital (WACC)	10.3%
First Year Electricity Generation (kWh)	7,446.00
Annual O&M Cost (LKR)	21,900.00

#### Outputs

##### Feed-in Tariff

Tariff Component (LKR/kWh)	29.79
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##### Financial Indicators

Project Equity IRR (%)	14.19%
Project NPV (LKR)	147,882.95
Return on Equity (%)	21%

\*Sources: Information submissions by Sri Lanka Sustainable Energy Authority, Solar Industries Association & Solar EPC Association

### 2.1.3. BESS with hybrid inverter

#### Inputs

BESS Capacity (kW)	5.00
BESS Nominal Discharge Duration (hours)	4.00
Capital Cost (LKR/kW)	267,000.00
Equity (%)	40%
Cost of Debt (%)	10.92%
Cost of Equity (%)	14.19%
Loan Repayment Period (Years)	6
Annual O&M Cost as a Percentage of Capital Cost (%)	2.0%
Income Tax Rate (%)	30%
Standard Depth of Discharge (DoD) of BESS (%)	100%
Annual Capacity Degradation Factor - BESS (%)	1.6%
Annual No. of Discharging Cycles	365
BESS Round Trip Efficiency	90.0%
Annual O&M Cost Escalation (%)	3.85%
Exchange Rate (LKR/USD)	341.09
Colombo Consumer Price Index (CCPI)	207.70
Depreciation Rate (%)	6.67%
Capital Allowance (%)	20%
Salvage Value (LKR/kW)	-
Inverter Replacement Cost on Year No. 11 (LKR/kW)	71,000.00

#### Calculated Parameters

Total Capital Cost (LKR)	1,335,000.00
Weighted Average Cost of Capital (WACC)	10.3%
First Year Electricity Discharge (kWh)	7,300.00
Annual O&M Cost (LKR)	26,700.00

#### Outputs

##### Feed-in Tariff

Tariff Component (LKR/kWh)	39.80
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##### Financial Indicators

Project Equity IRR (%)	14.19%
Project NPV (LKR)	145,930.25
Return on Equity (%)	19%

\*Sources: Information submissions by Sri Lanka Sustainable Energy Authority, Solar Industries Association & Solar EPC Association

## 2.1.4. BESS excluding inverter

### Inputs

BESS Capacity (kW)	5.00
BESS Nominal Discharge Duration (hours)	4.00
Capital Cost (LKR/kW)	196,000.00
Equity (%)	40%
Cost of Debt (%)	10.92%
Cost of Equity (%)	14.19%
Loan Repayment Period (Years)	6
Annual O&M Cost as a Percentage of Capital Cost (%)	2.0%
Income Tax Rate (%)	30%
Standard Depth of Discharge (DoD) of BESS (%)	100%
Annual Capacity Degradation Factor - BESS (%)	1.6%
Annual No. of Discharging Cycles	365
BESS Round Trip Efficiency	90.0%
Annual O&M Cost Escalation (%)	3.85%
Exchange Rate (LKR/USD)	341.09
Colombo Consumer Price Index (CCPI)	207.70
Depreciation Rate (%)	6.67%
Capital Allowance (%)	20%
Salvage Value (LKR/kW)	-
Inverter Replacement Cost on Year No. 11 (LKR/kW)	-

### Calculated Parameters

Total Capital Cost (LKR)	980,000.00
Weighted Average Cost of Capital (WACC)	10.3%
First Year Electricity Discharge (kWh)	7,300.00
Annual O&M Cost (LKR)	19,600.00

### Outputs

#### Feed-in Tariff

Tariff Component (LKR/kWh)	28.02
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#### Financial Indicators

Project Equity IRR (%)	14.19%
Project NPV (LKR)	111,004.88
Return on Equity (%)	22%

\*Sources: Information submissions by Sri Lanka Sustainable Energy Authority, Solar Industries Association & Solar EPC Association

## 2.2. Above 5kW and up to 10kW

### 2.2.1. Rooftop Solar PV system with grid tied inverter

#### Inputs

Plant Capacity (kW)	10.00
Capital Cost (LKR/kW)	178,000.00
Equity (%)	40%
Cost of Debt (%)	10.92%
Cost of Equity (%)	14.19%
Loan Repayment Period (Years)	6
Annual O&M Cost as a Percentage of Capital Cost (%)	2.0%
Income Tax Rate (%)	30%
Plant Factor (%)	17.0%
Annual Capacity Degradation Factor - Solar PV (%)	0.4%
Annual O&M Cost Escalation (%)	3.85%
Exchange Rate (LKR/USD)	341.09
Colombo Consumer Price Index (CCPI)	207.70
Depreciation Rate (%)	5%
Capital Allowance (%)	20%
Salvage Value (LKR/kW)	-
Inverter Replacement Cost on Year No. 11 (LKR/kW)	30,000.00

#### Calculated Parameters

Total Capital Cost (LKR)	1,780,000.00
Weighted Average Cost of Capital (WACC)	10.3%
First Year Electricity Generation (kWh)	14,892.00
Annual O&M Cost (LKR)	35,600.00

#### Outputs

##### Feed-in Tariff

Tariff Component (LKR/kWh)	23.53
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##### Financial Indicators

Project Equity IRR (%)	14.19%
Project NPV (LKR)	248,327.82
Return on Equity (%)	21%

\*Sources: Information submissions by Sri Lanka Sustainable Energy Authority, Solar Industries Association & Solar EPC Association

## 2.2.2. Rooftop Solar PV system with hybrid inverter

### Inputs

Plant Capacity (kW)	10.00
Capital Cost (LKR/kW)	219,000.00
Equity (%)	40%
Cost of Debt (%)	10.92%
Cost of Equity (%)	14.19%
Loan Repayment Period (Years)	6
Annual O&M Cost as a Percentage of Capital Cost (%)	2.0%
Income Tax Rate (%)	30%
Plant Factor (%)	17%
Annual Capacity Degradation Factor - Solar PV (%)	0.4%
Annual O&M Cost Escalation (%)	3.85%
Exchange Rate (LKR/USD)	341.09
Colombo Consumer Price Index (CCPI)	207.70
Depreciation Rate (%)	5%
Capital Allowance (%)	20%
Salvage Value (LKR/kW)	-
Inverter Replacement Cost on Year No. 11 (LKR/kW)	71,000.00

### Calculated Parameters

Total Capital Cost (LKR)	2,190,000.00
Weighted Average Cost of Capital (WACC)	10.3%
First Year Electricity Generation (kWh)	14,892.00
Annual O&M Cost (LKR)	43,800.00

### Outputs

#### Feed-in Tariff

Tariff Component (LKR/kWh)	29.79
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#### Financial Indicators

Project Equity IRR (%)	14.19%
Project NPV (LKR)	295,765.90
Return on Equity (%)	21%

\*Sources: Information submissions by Sri Lanka Sustainable Energy Authority, Solar Industries Association & Solar EPC Association

### 2.2.3. BESS with hybrid inverter

#### Inputs

BESS Capacity (kW)	10.00
BESS Nominal Discharge Duration (hours)	4.00
Capital Cost (LKR/kW)	267,000.00
Equity (%)	40%
Cost of Debt (%)	10.92%
Cost of Equity (%)	14.19%
Loan Repayment Period (Years)	6
Annual O&M Cost as a Percentage of Capital Cost (%)	2.0%
Income Tax Rate (%)	30%
Standard Depth of Discharge (DoD) of BESS (%)	100%
Annual Capacity Degradation Factor - BESS (%)	1.6%
Annual No. of Discharging Cycles	365
BESS Round Trip Efficiency	90.0%
Annual O&M Cost Escalation (%)	3.85%
Exchange Rate (LKR/USD)	341.09
Colombo Consumer Price Index (CCPI)	207.70
Depreciation Rate (%)	6.67%
Capital Allowance (%)	20%
Salvage Value (LKR/kW)	-
Inverter Replacement Cost on Year No. 11 (LKR/kW)	71,000.00

#### Calculated Parameters

Total Capital Cost (LKR)	2,670,000.00
Weighted Average Cost of Capital (WACC)	10.3%
First Year Electricity Discharge (kWh)	14,600.00
Annual O&M Cost (LKR)	53,400.00

#### Outputs

##### Feed-in Tariff

Tariff Component (LKR/kWh)	39.80
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##### Financial Indicators

Project Equity IRR (%)	14.19%
Project NPV (LKR)	291,860.50
Return on Equity (%)	19%

\*Sources: Information submissions by Sri Lanka Sustainable Energy Authority, Solar Industries Association & Solar EPC Association

## 2.2.4. BESS excluding inverter

### Inputs

BESS Capacity (kW)	10.00
BESS Nominal Discharge Duration (hours)	4.00
Capital Cost (LKR/kW)	196,000.00
Equity (%)	40%
Cost of Debt (%)	10.92%
Cost of Equity (%)	14.19%
Loan Repayment Period (Years)	6
Annual O&M Cost as a Percentage of Capital Cost (%)	2.0%
Income Tax Rate (%)	30%
Standard Depth of Discharge (DoD) of BESS (%)	100%
Annual Capacity Degradation Factor - BESS (%)	1.6%
Annual No. of Discharging Cycles	365
BESS Round Trip Efficiency	90.0%
Annual O&M Cost Escalation (%)	3.85%
Exchange Rate (LKR/USD)	341.09
Colombo Consumer Price Index (CCPI)	207.70
Depreciation Rate (%)	6.67%
Capital Allowance (%)	20%
Salvage Value (LKR/kW)	-
Inverter Replacement Cost on Year No. 11 (LKR/kW)	-

### Calculated Parameters

Total Capital Cost (LKR)	1,960,000.00
Weighted Average Cost of Capital (WACC)	10.3%
First Year Electricity Discharge (kWh)	14,600.00
Annual O&M Cost (LKR)	39,200.00

### Outputs

#### Feed-in Tariff

Tariff Component (LKR/kWh)	28.02
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#### Financial Indicators

Project Equity IRR (%)	14.19%
Project NPV (LKR)	222,009.76
Return on Equity (%)	22%

\*Sources: Information submissions by Sri Lanka Sustainable Energy Authority, Solar Industries Association & Solar EPC Association

## 2.3. Above 10kW and up to 40kW

### 2.3.1. Rooftop Solar PV system with grid tied inverter

#### Inputs

Plant Capacity (kW)	40.00
Capital Cost (LKR/kW)	146,250.00
Equity (%)	40%
Cost of Debt (%)	10.92%
Cost of Equity (%)	14.19%
Loan Repayment Period (Years)	6
Annual O&M Cost as a Percentage of Capital Cost (%)	2.0%
Income Tax Rate (%)	30%
Plant Factor (%)	17.0%
Annual Capacity Degradation Factor - Solar PV (%)	0.4%
Annual O&M Cost Escalation (%)	3.85%
Exchange Rate (LKR/USD)	341.09
Colombo Consumer Price Index (CCPI)	207.70
Depreciation Rate (%)	5%
Capital Allowance (%)	20%
Salvage Value (LKR/kW)	-
Inverter Replacement Cost on Year No. 11 (LKR/kW)	29,750.00

#### Calculated Parameters

Total Capital Cost (LKR)	5,850,000.00
Weighted Average Cost of Capital (WACC)	10.3%
First Year Electricity Generation (kWh)	59,568.00
Annual O&M Cost (LKR)	117,000.00

#### Outputs

##### Feed-in Tariff

Tariff Component (LKR/kWh)	19.50
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##### Financial Indicators

Project Equity IRR (%)	14.19%
Project NPV (LKR)	805,874.33
Return on Equity (%)	21%

\*Sources: Information submissions by Sri Lanka Sustainable Energy Authority & Solar Industries Association

### 2.3.2. Rooftop Solar PV system with hybrid inverter

#### Inputs

Plant Capacity (kW)	40.00
Capital Cost (LKR/kW)	178,204.69
Equity (%)	40%
Cost of Debt (%)	10.92%
Cost of Equity (%)	14.19%
Loan Repayment Period (Years)	6
Annual O&M Cost as a Percentage of Capital Cost (%)	2.0%
Income Tax Rate (%)	30%
Plant Factor (%)	17%
Annual Capacity Degradation Factor - Solar PV (%)	0.4%
Annual O&M Cost Escalation (%)	3.85%
Exchange Rate (LKR/USD)	341.09
Colombo Consumer Price Index (CCPI)	207.70
Depreciation Rate (%)	5%
Capital Allowance (%)	20%
Salvage Value (LKR/kW)	-
Inverter Replacement Cost on Year No. 11 (LKR/kW)	53,625.00

#### Calculated Parameters

Total Capital Cost (LKR)	7,128,187.57
Weighted Average Cost of Capital (WACC)	10.3%
First Year Electricity Generation (kWh)	59,568.00
Annual O&M Cost (LKR)	142,563.75

#### Outputs

##### Feed-in Tariff

Tariff Component (LKR/kWh)	24.10
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##### Financial Indicators

Project Equity IRR (%)	14.19%
Project NPV (LKR)	970,533.64
Return on Equity (%)	21%

\*Sources: Information submissions by Sri Lanka Sustainable Energy Authority & Solar Industries Association

### 2.3.3. BESS with hybrid inverter

#### Inputs

BESS Capacity (kW)	40.00
BESS Nominal Discharge Duration (hours)	4.00
Capital Cost (LKR/kW)	341,561.00
Equity (%)	40%
Cost of Debt (%)	10.92%
Cost of Equity (%)	14.19%
Loan Repayment Period (Years)	6
Annual O&M Cost as a Percentage of Capital Cost (%)	2.0%
Income Tax Rate (%)	30%
Standard Depth of Discharge (DoD) of BESS (%)	100%
Annual Capacity Degradation Factor - BESS (%)	1.6%
Annual No. of Discharging Cycles	365
BESS Round Trip Efficiency	95.0%
Annual O&M Cost Escalation (%)	3.85%
Exchange Rate (LKR/USD)	341.09
Colombo Consumer Price Index (CCPI)	207.70
Depreciation Rate (%)	6.67%
Capital Allowance (%)	20%
Salvage Value (LKR/kW)	-
Inverter Replacement Cost on Year No. 11 (LKR/kW)	53,625.00

#### Calculated Parameters

Total Capital Cost (LKR)	13,662,440.00
Weighted Average Cost of Capital (WACC)	10.3%
First Year Electricity Discharge (kWh)	58,400.00
Annual O&M Cost (LKR)	273,248.80

#### Outputs

##### Feed-in Tariff

Tariff Component (LKR/kWh)	50.01
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##### Financial Indicators

Project Equity IRR (%)	14.19%
Project NPV (LKR)	1,514,863.73
Return on Equity (%)	20%

\*Sources: Information submissions by Sri Lanka Sustainable Energy Authority & Solar Industries Association

### 2.3.4. BESS excluding inverter

#### Inputs

BESS Capacity (kW)	40.00
BESS Nominal Discharge Duration (hours)	4.00
Capital Cost (LKR/kW)	287,936.00
Equity (%)	40%
Cost of Debt (%)	10.92%
Cost of Equity (%)	14.19%
Loan Repayment Period (Years)	6
Annual O&M Cost as a Percentage of Capital Cost (%)	2.0%
Income Tax Rate (%)	30%
Standard Depth of Discharge (DoD) of BESS (%)	100%
Annual Capacity Degradation Factor - BESS (%)	1.6%
Annual No. of Discharging Cycles	365
BESS Round Trip Efficiency	95.0%
Annual O&M Cost Escalation (%)	3.85%
Exchange Rate (LKR/USD)	341.09
Colombo Consumer Price Index (CCPI)	207.70
Depreciation Rate (%)	6.67%
Capital Allowance (%)	20%
Salvage Value (LKR/kW)	-
Inverter Replacement Cost on Year No. 11 (LKR/kW)	-

#### Calculated Parameters

Total Capital Cost (LKR)	11,517,440.00
Weighted Average Cost of Capital (WACC)	10.3%
First Year Electricity Discharge (kWh)	58,400.00
Annual O&M Cost (LKR)	230,348.80

#### Outputs

##### Feed-in Tariff

Tariff Component (LKR/kWh)	41.16
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##### Financial Indicators

Project Equity IRR (%)	14.19%
Project NPV (LKR)	1,304,583.74
Return on Equity (%)	22%

\*Sources: Information submissions by Sri Lanka Sustainable Energy Authority & Solar Industries Association

## 2.4. Above 40kW and up to 250kW

### 2.4.1. Rooftop Solar PV system with grid tied inverter

#### Inputs

Plant Capacity (kW)	100.00
Capital Cost (LKR/kW)	131,799.94
Equity (%)	40%
Cost of Debt (%)	10.92%
Cost of Equity (%)	14.19%
Loan Repayment Period (Years)	6
Annual O&M Cost as a Percentage of Capital Cost (%)	2.0%
Income Tax Rate (%)	30%
Plant Factor (%)	17.0%
Annual Capacity Degradation Factor - Solar PV (%)	0.4%
Annual O&M Cost Escalation (%)	3.85%
Exchange Rate (LKR/USD)	341.09
Colombo Consumer Price Index (CCPI)	207.70
Depreciation Rate (%)	5%
Capital Allowance (%)	20%
Salvage Value (LKR/kW)	-
Inverter Replacement Cost on Year No. 11 (LKR/kW)	22,200.00

#### Calculated Parameters

Total Capital Cost (LKR)	13,179,993.94
Weighted Average Cost of Capital (WACC)	10.3%
First Year Electricity Generation (kWh)	148,920.00
Annual O&M Cost (LKR)	263,599.88

#### Outputs

##### Feed-in Tariff

Tariff Component (LKR/kWh)	17.42
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##### Financial Indicators

Project Equity IRR (%)	14.19%
Project NPV (LKR)	1,838,808.82
Return on Equity (%)	21%

\*Sources: Information submissions by Sri Lanka Sustainable Energy Authority & Solar Industries Association

## 2.4.2. Rooftop Solar PV system with hybrid inverter

### Inputs

Plant Capacity (kW)	100.00
Capital Cost (LKR/kW)	157,500.00
Equity (%)	40%
Cost of Debt (%)	10.92%
Cost of Equity (%)	14.19%
Loan Repayment Period (Years)	6
Annual O&M Cost as a Percentage of Capital Cost (%)	2.0%
Income Tax Rate (%)	30%
Plant Factor (%)	17%
Annual Capacity Degradation Factor - Solar PV (%)	0.4%
Annual O&M Cost Escalation (%)	3.85%
Exchange Rate (LKR/USD)	341.09
Colombo Consumer Price Index (CCPI)	207.70
Depreciation Rate (%)	5%
Capital Allowance (%)	20%
Salvage Value (LKR/kW)	-
Inverter Replacement Cost on Year No. 11 (LKR/kW)	30,000.00

### Calculated Parameters

Total Capital Cost (LKR)	15,750,000.00
Weighted Average Cost of Capital (WACC)	10.3%
First Year Electricity Generation (kWh)	148,920.00
Annual O&M Cost (LKR)	315,000.00

### Outputs

#### Feed-in Tariff

Tariff Component (LKR/kWh)	20.71
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#### Financial Indicators

Project Equity IRR (%)	14.19%
Project NPV (LKR)	2,228,820.57
Return on Equity (%)	21%

\*Sources: Information submissions by Sri Lanka Sustainable Energy Authority & Solar Industries Association

### 2.4.3. BESS with hybrid inverter

#### Inputs

BESS Capacity (kW)	100.00
BESS Nominal Discharge Duration (hours)	4.00
Capital Cost (LKR/kW)	317,861.00
Equity (%)	40%
Cost of Debt (%)	10.92%
Cost of Equity (%)	14.19%
Loan Repayment Period (Years)	6
Annual O&M Cost as a Percentage of Capital Cost (%)	2.0%
Income Tax Rate (%)	30%
Standard Depth of Discharge (DoD) of BESS (%)	100%
Annual Capacity Degradation Factor - BESS (%)	1.6%
Annual No. of Discharging Cycles	365
BESS Round Trip Efficiency	95.0%
Annual O&M Cost Escalation (%)	3.85%
Exchange Rate (LKR/USD)	341.09
Colombo Consumer Price Index (CCPI)	207.70
Depreciation Rate (%)	6.67%
Capital Allowance (%)	20%
Salvage Value (LKR/kW)	-
Inverter Replacement Cost on Year No. 11 (LKR/kW)	29,925.00

#### Calculated Parameters

Total Capital Cost (LKR)	31,786,100.00
Weighted Average Cost of Capital (WACC)	10.3%
First Year Electricity Discharge (kWh)	146,000.00
Annual O&M Cost (LKR)	635,722.00

#### Outputs

##### Feed-in Tariff

Tariff Component (LKR/kWh)	46.08
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##### Financial Indicators

Project Equity IRR (%)	14.19%
Project NPV (LKR)	3,553,859.43
Return on Equity (%)	21%

\*Sources: Information submissions by Sri Lanka Sustainable Energy Authority & Solar Industries Association

#### 2.4.4. BESS excluding inverter

##### Inputs

BESS Capacity (kW)	100.00
BESS Nominal Discharge Duration (hours)	4.00
Capital Cost (LKR/kW)	287,936.00
Equity (%)	40%
Cost of Debt (%)	10.92%
Cost of Equity (%)	14.19%
Loan Repayment Period (Years)	6
Annual O&M Cost as a Percentage of Capital Cost (%)	2.0%
Income Tax Rate (%)	30%
Standard Depth of Discharge (DoD) of BESS (%)	100%
Annual Capacity Degradation Factor - BESS (%)	1.6%
Annual No. of Discharging Cycles	365
BESS Round Trip Efficiency	95.0%
Annual O&M Cost Escalation (%)	3.85%
Exchange Rate (LKR/USD)	341.09
Colombo Consumer Price Index (CCPI)	207.70
Depreciation Rate (%)	6.67%
Capital Allowance (%)	20%
Salvage Value (LKR/kW)	-
Inverter Replacement Cost on Year No. 11 (LKR/kW)	-

##### Calculated Parameters

Total Capital Cost (LKR)	28,793,600.00
Weighted Average Cost of Capital (WACC)	10.3%
First Year Electricity Discharge (kWh)	146,000.00
Annual O&M Cost (LKR)	575,872.00

##### Outputs

###### Feed-in Tariff

Tariff Component (LKR/kWh)	41.16
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###### Financial Indicators

Project Equity IRR (%)	14%
Project NPV (LKR)	3,261,459.35
Return on Equity (%)	22%

\*Sources: Information submissions by Sri Lanka Sustainable Energy Authority & Solar Industries Association

## 2.5. Above 250kW and up to 1000kW

### 2.5.1. Rooftop Solar PV system with grid tied inverter

#### Inputs

Plant Capacity (kW)	250.00
Capital Cost (LKR/kW)	108,000.00
Equity (%)	40%
Cost of Debt (%)	10.92%
Cost of Equity (%)	14.19%
Loan Repayment Period (Years)	6
Annual O&M Cost as a Percentage of Capital Cost (%)	2.0%
Income Tax Rate (%)	30%
Plant Factor (%)	17.0%
Annual Capacity Degradation Factor - Solar PV (%)	0.4%
Annual O&M Cost Escalation (%)	3.85%
Exchange Rate (LKR/USD)	341.09
Colombo Consumer Price Index (CCPI)	207.70
Depreciation Rate (%)	5%
Capital Allowance (%)	20%
Salvage Value (LKR/kW)	-
Inverter Replacement Cost on Year No. 11 (LKR/kW)	23,600.00

\*Sources: Information submissions by Sri Lanka Sustainable Energy Authority

#### Calculated Parameters

Total Capital Cost (LKR)	27,000,000.00
Weighted Average Cost of Capital (WACC)	10.3%
First Year Electricity Generation (kWh)	372,300.00
Annual O&M Cost (LKR)	540,000.00

#### Outputs

##### Feed-in Tariff

Tariff Component (LKR/kWh)	14.45
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##### Financial Indicators

Project Equity IRR (%)	14.19%
Project NPV (LKR)	3,698,921.52
Return on Equity (%)	21%

## 2.5.2. Rooftop Solar PV system with hybrid inverter

### Inputs

Plant Capacity (kW)	250.00
Capital Cost (LKR/kW)	109,400.00
Equity (%)	40%
Cost of Debt (%)	10.92%
Cost of Equity (%)	14.19%
Loan Repayment Period (Years)	6
Annual O&M Cost as a Percentage of Capital Cost (%)	2.0%
Income Tax Rate (%)	30%
Plant Factor (%)	17%
Annual Capacity Degradation Factor - Solar PV (%)	0.4%
Annual O&M Cost Escalation (%)	3.85%
Exchange Rate (LKR/USD)	341.09
Colombo Consumer Price Index (CCPI)	207.70
Depreciation Rate (%)	5%
Capital Allowance (%)	20%
Salvage Value (LKR/kW)	-
Inverter Replacement Cost on Year No. 11 (LKR/kW)	30,000.00

\*Sources: Information submissions by Sri Lanka Sustainable Energy Authority

### Calculated Parameters

Total Capital Cost (LKR)	27,350,000.00
Weighted Average Cost of Capital (WACC)	10.3%
First Year Electricity Generation (kWh)	372,300.00
Annual O&M Cost (LKR)	547,000.00

### Outputs

#### Feed-in Tariff

Tariff Component (LKR/kWh)	14.69
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#### Financial Indicators

Project Equity IRR (%)	14.19%
Project NPV (LKR)	3,758,359.28
Return on Equity (%)	21%

### 2.5.3. BESS with hybrid inverter

#### Inputs

BESS Capacity (kW)	250.00
BESS Nominal Discharge Duration (hours)	4.00
Capital Cost (LKR/kW)	316,720.00
Equity (%)	40%
Cost of Debt (%)	10.92%
Cost of Equity (%)	14.19%
Loan Repayment Period (Years)	6
Annual O&M Cost as a Percentage of Capital Cost (%)	2.0%
Income Tax Rate (%)	30%
Standard Depth of Discharge (DoD) of BESS (%)	100%
Annual Capacity Degradation Factor - BESS (%)	1.6%
Annual No. of Discharging Cycles	365
BESS Round Trip Efficiency	95.0%
Annual O&M Cost Escalation (%)	3.85%
Exchange Rate (LKR/USD)	341.09
Colombo Consumer Price Index (CCPI)	207.70
Depreciation Rate (%)	6.67%
Capital Allowance (%)	20%
Salvage Value (LKR/kW)	-
Inverter Replacement Cost on Year No. 11 (LKR/kW)	28,784.00

\*Sources: Information submissions by Sri Lanka Sustainable Energy Authority

#### Calculated Parameters

Total Capital Cost (LKR)	79,180,000.00
Weighted Average Cost of Capital (WACC)	10.3%
First Year Electricity Discharge (kWh)	365,000.00
Annual O&M Cost (LKR)	1,583,600.00

#### Outputs

##### Feed-in Tariff

Tariff Component (LKR/kWh)	45.89
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##### Financial Indicators

Project Equity IRR (%)	14.19%
Project NPV (LKR)	8,856,776.52
Return on Equity (%)	21%

## 2.5.4. BESS excluding inverter

### Inputs

BESS Capacity (kW)	250.00
BESS Nominal Discharge Duration (hours)	4.00
Capital Cost (LKR/kW)	287,936.00
Equity (%)	40%
Cost of Debt (%)	10.92%
Cost of Equity (%)	14.19%
Loan Repayment Period (Years)	6
Annual O&M Cost as a Percentage of Capital Cost (%)	2.0%
Income Tax Rate (%)	30%
Standard Depth of Discharge (DoD) of BESS (%)	100%
Annual Capacity Degradation Factor - BESS (%)	1.6%
Annual No. of Discharging Cycles	365
BESS Round Trip Efficiency	95.0%
Annual O&M Cost Escalation (%)	3.85%
Exchange Rate (LKR/USD)	341.09
Colombo Consumer Price Index (CCPI)	207.70
Depreciation Rate (%)	6.67%
Capital Allowance (%)	20%
Salvage Value (LKR/kW)	-
Inverter Replacement Cost on Year No. 11 (LKR/kW)	-

\*Sources: Information submissions by Sri Lanka Sustainable Energy Authority

### Calculated Parameters

Total Capital Cost (LKR)	71,984,000.00
Weighted Average Cost of Capital (WACC)	10.3%
First Year Electricity Discharge (kWh)	365,000.00
Annual O&M Cost (LKR)	1,439,680.00

### Outputs

#### Feed-in Tariff

Tariff Component (LKR/kWh)	41.16
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#### Financial Indicators

Project Equity IRR (%)	14.19%
Project NPV (LKR)	8,153,648.37
Return on Equity (%)	22%

## 2.6. Above 1000kW

### 2.6.1. Rooftop Solar PV system with grid tied inverter

#### Inputs

Plant Capacity (kW)	1,000.00
Capital Cost (LKR/kW)	108,000.00
Equity (%)	40%
Cost of Debt (%)	10.92%
Cost of Equity (%)	14.19%
Loan Repayment Period (Years)	6
Annual O&M Cost as a Percentage of Capital Cost (%)	2.0%
Income Tax Rate (%)	30%
Plant Factor (%)	17.0%
Annual Capacity Degradation Factor - Solar PV (%)	0.4%
Annual O&M Cost Escalation (%)	3.85%
Exchange Rate (LKR/USD)	341.09
Colombo Consumer Price Index (CCPI)	207.70
Depreciation Rate (%)	5%
Capital Allowance (%)	20%
Salvage Value (LKR/kW)	-
Inverter Replacement Cost on Year No. 11 (LKR/kW)	23,600.00

\*Sources: Information submissions by Sri Lanka Sustainable Energy Authority

#### Calculated Parameters

Total Capital Cost (LKR)	108,000,000.00
Weighted Average Cost of Capital (WACC)	10.3%
First Year Electricity Generation (kWh)	1,489,200.00
Annual O&M Cost (LKR)	2,160,000.00

#### Outputs

##### Feed-in Tariff

Tariff Component (LKR/kWh)	14.45
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##### Financial Indicators

Project Equity IRR (%)	14.19%
Project NPV (LKR)	14,795,686.08
Return on Equity (%)	21%

## 2.6.2. Rooftop Solar PV system with hybrid inverter

### Inputs

Plant Capacity (kW)	1,000.00
Capital Cost (LKR/kW)	109,400.00
Equity (%)	40%
Cost of Debt (%)	10.92%
Cost of Equity (%)	14.19%
Loan Repayment Period (Years)	6
Annual O&M Cost as a Percentage of Capital Cost (%)	2.0%
Income Tax Rate (%)	30%
Plant Factor (%)	17%
Annual Capacity Degradation Factor - Solar PV (%)	0.4%
Annual O&M Cost Escalation (%)	3.85%
Exchange Rate (LKR/USD)	341.09
Colombo Consumer Price Index (CCPI)	207.70
Depreciation Rate (%)	5%
Capital Allowance (%)	20%
Salvage Value (LKR/kW)	-
Inverter Replacement Cost on Year No. 11 (LKR/kW)	30,000.00

\*Sources: Information submissions by Sri Lanka Sustainable Energy Authority

### Calculated Parameters

Total Capital Cost (LKR)	109,400,000.00
Weighted Average Cost of Capital (WACC)	10.3%
First Year Electricity Generation (kWh)	1,489,200.00
Annual O&M Cost (LKR)	2,188,000.00

### Outputs

#### Feed-in Tariff

Tariff Component (LKR/kWh)	14.69
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#### Financial Indicators

Project Equity IRR (%)	14.19%
Project NPV (LKR)	15,033,437.12
Return on Equity (%)	21%

### 2.6.3. BESS with hybrid inverter

#### Inputs

BESS Capacity (kW)	1,000.00
BESS Nominal Discharge Duration (hours)	4.00
Capital Cost (LKR/kW)	211,304.00
Equity (%)	40%
Cost of Debt (%)	10.92%
Cost of Equity (%)	14.19%
Loan Repayment Period (Years)	6
Annual O&M Cost as a Percentage of Capital Cost (%)	2.0%
Income Tax Rate (%)	30%
Standard Depth of Discharge (DoD) of BESS (%)	100%
Annual Capacity Degradation Factor - BESS (%)	1.6%
Annual No. of Discharging Cycles	365
BESS Round Trip Efficiency	95.0%
Annual O&M Cost Escalation (%)	3.85%
Exchange Rate (LKR/USD)	341.09
Colombo Consumer Price Index (CCPI)	207.70
Depreciation Rate (%)	6.67%
Capital Allowance (%)	20%
Salvage Value (LKR/kW)	-
Inverter Replacement Cost on Year No. 11 (LKR/kW)	28,784.00

#### Calculated Parameters

Total Capital Cost (LKR)	211,304,000.00
Weighted Average Cost of Capital (WACC)	10.3%
First Year Electricity Discharge (kWh)	1,460,000.00
Annual O&M Cost (LKR)	4,226,080.00

#### Outputs

##### Feed-in Tariff

Tariff Component (LKR/kWh)	30.83
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##### Financial Indicators

Project Equity IRR (%)	14.19%
Project NPV (LKR)	23,493,122.29
Return on Equity (%)	20%

\*Sources: Information submissions by Sri Lanka Sustainable Energy Authority & Federation of Renewable Energy Developers

## 2.6.4. BESS excluding inverter

### Inputs

BESS Capacity (kW)	1,000.00
BESS Nominal Discharge Duration (hours)	4.00
Capital Cost (LKR/kW)	182,520.00
Equity (%)	40%
Cost of Debt (%)	10.92%
Cost of Equity (%)	14.19%
Loan Repayment Period (Years)	6
Annual O&M Cost as a Percentage of Capital Cost (%)	2.0%
Income Tax Rate (%)	30%
Standard Depth of Discharge (DoD) of BESS (%)	100%
Annual Capacity Degradation Factor - BESS (%)	1.6%
Annual No. of Discharging Cycles	365
BESS Round Trip Efficiency	95.0%
Annual O&M Cost Escalation (%)	3.85%
Exchange Rate (LKR/USD)	341.09
Colombo Consumer Price Index (CCPI)	207.70
Depreciation Rate (%)	6.67%
Capital Allowance (%)	20%
Salvage Value (LKR/kW)	-
Inverter Replacement Cost on Year No. 11 (LKR/kW)	-

### Calculated Parameters

Total Capital Cost (LKR)	182,520,000.00
Weighted Average Cost of Capital (WACC)	10.3%
First Year Electricity Discharge (kWh)	1,460,000.00
Annual O&M Cost (LKR)	3,650,400.00

### Outputs

#### Feed-in Tariff

Tariff Component (LKR/kWh)	26.09
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#### Financial Indicators

Project Equity IRR (%)	14.19%
Project NPV (LKR)	20,674,092.85
Return on Equity (%)	22%

\*Sources: Information submissions by Sri Lanka Sustainable Energy Authority & Federation of Renewable Energy Developers

## 3. Power Plants with BESS

### 3.1. Non-dispatchable BESS

As per the methodology,

$$\text{Feed in Tariff during prioritized feed in time} = \frac{\text{Standalone Plant Tariff}}{\text{BESS Round Trip Efficiency}} + \text{BESS Tariff}$$

$$\text{Feed in Tariff during other periods} = \text{Standalone Plant Tariff}$$

The details of BESS tariff related calculations are given below.

### Inputs

BESS Capacity (MW)	1.00
BESS Nominal Discharge Duration (hours)	4.00
Capital Cost (MLKR/MW)	182.52
Equity (%)	40%
Cost of Debt (%)	10.92%
Cost of Equity (%)	14.19%
Loan Repayment Period (Years)	6
Annual O&M Cost as a Percentage of Capital Cost (%)	3.0%
Income Tax Rate (%)	30%
Standard Depth of Discharge (DoD) of BESS (%)	100%
Annual Capacity Degradation Factor - BESS (%)	1.5%
Annual No. of Discharging Cycles	365
BESS Round Trip Efficiency	90.0%
Annual O&M Cost Escalation (%)	3.85%
Exchange Rate (LKR/USD)	341.09
Colombo Consumer Price Index (CCPI)	207.70
Depreciation Rate (%)	6.67%
Capital Allowance (%)	20%
Salvage Value (MLKR/MW)	-
Inverter Replacement Cost on Year No. 11 (MKR/kW)	-

\*Sources: Information submissions by Federation of Renewable Energy Developers

### Calculated Parameters

Total Capital Cost (MLKR)	182.52
Weighted Average Cost of Capital (WACC)	10.3%
First Year Electricity Discharge (GWh)	1.46
Annual O&M Cost (MLKR)	5.48

### Outputs

#### Feed-in Tariff

Tariff Component (LKR/kWh)	27.57
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#### Financial Indicators

Project Equity IRR (%)	14.19%
Project NPV (MLKR)	20.41
Return on Equity (%)	21%