

SAFE SOLAR POWER (Pvt)Ltd

SSPL/CEO/NEPRA/05/19
19 Dec 2019

The Registrar
National Electric Power Regulatory Authority
NEPRA Building,
G-5/2,
Islamabad

Subject: **TARIFF PETITION FOR SAFE SOLAR POWER LIMITED'S 10 MW SOLAR POWER PROJECT AT DHARANWALA, DISTRICT BHAWALNAGAR, PUNJAB.**

Dear Sir,

We herewith submit the Company's Tariff Petition along with the fee as determined by the National Electric Power Regulatory Authority ("NEPRA") or the Authority for kind consideration and favorable approval by the Authority in accordance, inter alia, with section 31 of the Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997 read with Rule 3 of the NEPRA tariff Standards and Procedures Rules, 1998 and other applicable provisions of NEPRA law.

The Tariff Petition (including its Annexures) is submitted in triplicate together with:

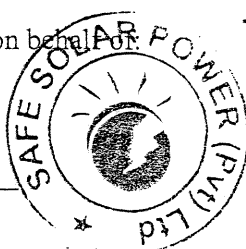
- The Bank Draft No.02692410 dated 10 December 2019, amounting to PKR 549,000 (Pakistan Rupees Five hundred forty nine thousand only) as requisite fee for the Tariff Petition
- Board Resolution of Safe Solar Pakistan Limited
- Affidavit of Ms. Afshan Hamid Mir

We submit our tariff application and look forward to the tariff hearing to present our case for the cost-plus tariff for our 10 MW ^{Solar} Wind power project at Dharanwala, Bhawalnagar, Punjab.

Additionally, we would like to inform you that as per your direction we are in process of preparing the modification of our Generation License to bring the generation parameters in-line with our tariff Petition and will be submitting the license modification shortly.

Respectfully submitted for and on behalf of
Safe Solar Power Limited

Afshan Mir
Ms. Afshan Mir
CEO
Safe Solar Power Limited



For information only
— DRO/DRG-I
Gp. 10: 201219
— SA(Reg) — SAH-I chairman
— DG(m&D) — ADG(Ln) VC
— LA(RIP) — MF m(t)
m(cu)
m(ac)

REGISTRAR
Dy. No. 13695
Date: 20/12/19

Received along with decision of No. 549,000/-

BEFORE
NATIONAL ELECTRIC POWER REGULATORY AUTHORITY
(NEPRA)

TARIFF PETITION

ON BEHALF OF

SAFE SOLAR (PRIVATE) LIMITED ("SAFE SOLAR")

FOR NEPRA'S APPROVAL OF REFERENCE GENERATION TARIFF FOR SAFE SOLAR'S
10 MW SOLAR POWER PROJECT TO BE SET-UP

AT

BHAWALNAGAR.

DATED: 19TH DECEMBER 2019

ADDRESS: 8, Street 24, Sector F-8/2, Islamabad.

PHONE: +92 51 2099251

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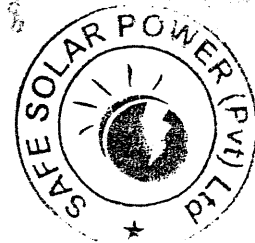
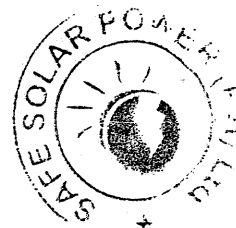


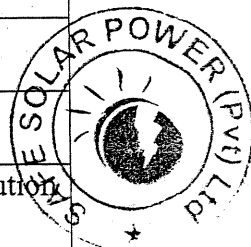
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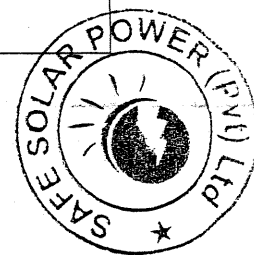


GLOSSARY

AEDB	Alternate Energy Development Board
COD	Commercial Operations Date
CPI	Consumer Price Index
DISCO	Power Distribution Company
DSRA	Debt Service Reserve Account
ECC	Economic Coordination Committee
EPA	Energy Purchase Agreement
EPC	Engineering Procurement and Construction
GOP	Government of Pakistan
GST	General Sales Tax
IA	Implementation Agreement
IPP	Independent Power Producer
IRR	Internal Rate of Return
ISO	International Standards Organization
KIBOR	Karachi Inter Bank Offered Rate
KWh	Kilowatt hour
L/C	Letter of Credit
MW	Megawatt, i.e., 1,000,000 Watts
NEPRA	National Electric Power Regulatory Authority
NEPRA ACT	Regulation for Generation, Transmission and Distribution of Electric Power Act (XL of) 1997
NTDC	National Transmission & Dispatch Company
O&M	Operation & Maintenance
PKR	Pakistani Rupees, the legal currency of Pakistan



PKR	Pakistani Rupees, the legal currency of Pakistan
RENEWABLE ENERGY POLICY 2006	Policy For Renewable Power Generation Projects issued by the Federal Government of Pakistan in 2006
US CPI	United States Consumer Price Index
USD	United States Dollar, the legal currency of the United States of America



DETAILS OF THE PETITIONER

NAME AND ADDRESS

SAFE SOLAR (Private) Limited

ADDRESS: 8, Street 24, Sector F-8/2, Islamabad.

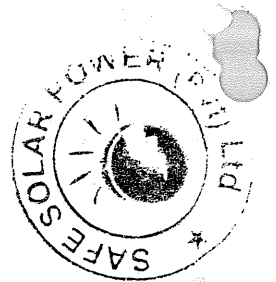
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AUTHORIZED REPRESENTATIVES OF SAFE SOLAR POWER LIMITED

NAME: MS AFSHAN MIR

DESIGNATION: CEO



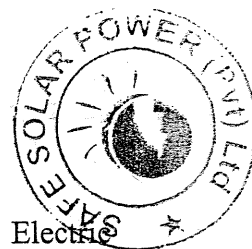
REGULATORY FRAMEWORK & PROJECT

BACKGROUND

2.1 NATIONAL ELECTRIC POWER REGULATORY AUTHORITY – THE COMPETENT AUTHORITY FOR DETERMINATION OF TARIFF

2.1.1 NEPRA Act & NEPRA Rules

Under the Regulation for Generation, Transmission and Distribution of Electric Power Act (XL of) 1997 (the “**NEPRA Act**”), the National Electric Power Regulatory Authority (“**NEPRA**”) is responsible, *inter alia*, for determining tariffs and other terms and conditions for the supply of electricity through generation, transmission and distribution. NEPRA is also responsible for determining the process and procedures for reviewing tariffs and recommending tariff adjustments. Further, pursuant to the enabling provisions of the NEPRA Act, the procedure for tariff determination has been prescribed in the NEPRA (Tariff Standards and Procedure) Rules, 1998 (the “**NEPRA Rules**”).



2.1.2 Power Policy 2015

In accordance with the NEPRA Rules, read with the enabling provisions of the NEPRA Act and the Power Policy issued by the GOP in 2015 (the “**Power Policy 2015**”), Safe Solar (Private) Limited (“**Safe Solar**” or “**Petitioner**”) submits its petition for tariff approval before NEPRA, the competent regulatory authority lawfully authorized to determine tariff for power generation companies.

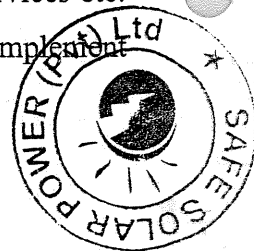
2.2 PROJECT

Safe Solar is developing a 10 MW solar power generation facility at Jhimpir, Pakistan (the “**Project**”). This facility will sell power to CPPA-G. This Tariff Petition is for the determination of the Tariff for the Project.

2.2.1 Renewable Energy Pakistan

To further diversify its energy portfolio, Pakistan is also considering alternative energy solutions such as wind, Solar, Bio-fuels and Waste to Energy. Due to its sustainability and environmental friendliness, the Government is encouraging alternative energy development in the country. To meet the growing demand of energy and to achieve the target of 9700 MW generation by the year 2030, the AEDB has taken various initiatives. AEDB under its mandate serves as a One-window facility to process all Alternative and Renewable Energy (ARE) projects both in the Public and the Private Sectors. It assists and facilitates development and generation of ARE, encourages transfer to technology, helps develop indigenous manufacturing bases for ARE equipment and promotes provision of ARE based energy services etc.

Under AEDB Act, enacted on May 2010, AEDB now has the mandate to implement projects in addition to its authorizations under the AEDB Ordinance.



Solar Energy- International Snapshot

The global market for solar power has been expanding faster than any other source of renewable energy. As noted in the Wood Mackenzie 'Global solar PV market outlook update: Q2 2019', the market is now back on a strong growth trajectory after a slowdown in 2018. Annual installations are expected to rise to around 125 GW per year by the early 2020s. It is expected that Global growth will continue despite a gradual slow-down in China, the world's largest PV market. The Chinese market peaked at 53 GW in 2017, driven by generous feed-in tariffs. A move towards more competitive procurement of solar PV will lead to more sustainable annual additions of 30-40 GW. In a number of countries, the proportion of electricity generated by Solar power is now challenging conventional fuels. Solar power is now established as an energy source in over 50 countries around the world. The global Solar markets have grown by an average 28% per year in terms of total installed capacity during the last decade.

Solar Energy -Pakistan's Potential

Pakistan has a huge solar potential which can be effectively and efficiently utilized for the economical generation of Power. Pakistan has huge Solar energy Potential. In

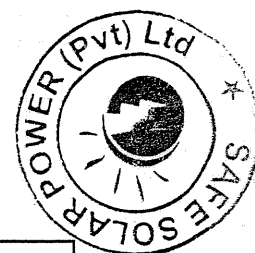
addition to this, there have been other solar sites that can be exploited in the areas of Baluchistan. Currently six solar energy projects having a combined capacity of 450 MW are working and there are several projects, including Safe Solar, at different stages of production of development.

1. SITE:

The project site is located in Dharanwala. The nearest settlement to the proposed site is Bhawalnagar, Punjab. The geographical location of the site on the map is given below. The size of the whole solar farm is 50 acres. The company has purchased the land for the said purpose. This land consists primarily of flat ground and sand dunes. Construction of the solar farm will be focused on the flat areas. Scant vegetation (shrubs and bushes) is found in these areas causing no troubles regarding shading. The geodetic coordinates of proposed solar farm site are given under:

Table 1.1: Land Coordinates

50 Acres		
Point No.	Geodetic Coordinates	
	Latitude (N)	Longitude (E)
SAFE SOLAR 1	N 29.604100	E 72.785223
SAFE SOLAR 2	N 29.604100	E 72.787998
SAFE SOLAR 3	N 29.601762	E 72.788472
SAFE SOLAR 4	N 29.601931	E 72.785095



2.3 PROJECT PROGRESS

2.3.1 Letter of Intent (LOI)

AEDB issued the Letter of Intent (the “LOI”) to Safe Solar for the Project in Jan 2014, and issued an LOS on 1st May 2015 which was extended in 25th March 2016. Safe Solar had received its LOS from AEDB on 01st July 2015 after successfully getting the Tariff from NEPRA on 22nd April 2015 vide Determination No. NEPRA/TRF-261/SSPL-2014/3993-3995. Copies of the LOI and LOS its amendment are

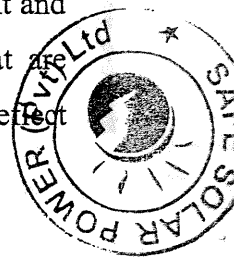
attached as **Schedule A**. Notwithstanding the fact that SSPL had achieved all its milestones, CPPA refused to sign Energy Purchase Agreement with Safe Solar and as a result Safe Solar could not achieve Financial Close. Meanwhile we have been working with AEDB, NEPRA, CPPA, NTDC and MEPCO to bring all sides to an agreement.

Safe Solar received a letter from AEDB dated 27th September 2019 reprising us of the CCoE decision and allowing Safe Solar to attain Financial Close and directing Safe Solar to get its Tariff reviewed by NEPRA.

2.3.2 **Generation License**

Safe Solar submitted an application for grant of generation license along with relevant documents to NEPRA and was awarded Generation License # SPGL/07/2014 on 12th September 2014 which was later modified on 24th Feb 2016 due to change of venue from Quaid-e-Azam Solar park, due to a policy decision by the government, to present location in Bhawalnagar. A copy of the GL is attached as Schedule B.

In view of the direction in the CCoE decision to make use of the latest equipment and technology and as the newer versions of equipment with better capacity that are available, Safe Solar intends to apply for a Generation License modification to reflect newer equipment.



2.4 **BACKGROUND & SUBMISSION**

2.4.1 **PROJECT BACKGROUND**

M/S Safe Solar (Pvt) Limited received its LOI, reference No. B/3/2/SPV/SSP/28, from Alternate Energy development Board ("AEDB") in January 2014. Pursuant to conditions laid out in the LOI Safe Solar achieved all its milestones well within time and was awarded tariff by the Authority. Subsequent to receiving the tariff determination from the Authority and Letter of Support ("LOS") from AEDB on 01 July 2015, we started negotiations with the lenders on indicative terms and also requested the Central Power Purchasing Authority ("CPPA") to sign Energy Purchase agreement with the company and achieve Financial Close for the project after which the construction could start. CPPA refused to sign an EPA with us and even though we have gone back and forth between NEPRA, AEDB and CPPA. Safe Solar has had

continued with the project, had to keep working for the last four years incurring office and HR costs for the staff and deposited bank guarantees of US Dollars seventy seven thousands and had to keep them renewed in order to meet our obligation through LOI & LOS.

CCoE decision on 4th April 2019 recognised the stance taken by Safe Solar and placed us in the first phase of the projects to be completed. Safe Solar is at No.4 in the first category. The decision said:

"All those projects which have been granted LOS by AEDB will be permitted to proceed towards the achievement of their requisite milestones as per RE Policy 2006. However, if more than one year has elapsed since determination of tariff by NEPRA, the said tariffs will be reviewed by NEPRA to bring them in line with the prevailing market conditions and rationalization of cost keeping in view of the consumer interest as well as subsequent determinations on the same technologies given by NEPRA".

Furthermore, as the decision said that projects whose Tariff was announced more than a year ago they had to get their Tariffs reviewed by the Authority a result we are going back for Tariff review and submitting this application based on latest technology and technology related factors.

2.4.2 SUBMISSION

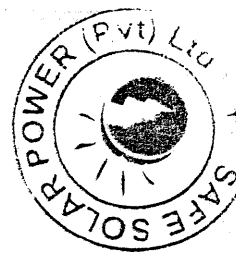
In light of the CCoE decision of 4th April 2019, AND pursuant to the relevant provisions of the NEPRA Rules, read with the provisions of the NEPRA Act and the Rules and Regulations made thereunder; AND in accordance with the Power Policy 2015; AND in light of the LOI pursuant to which Federal Government has approved the establishment of the Project, THE PETITIONER SUBMITS HEREWITH TO NEPRA, the competent regulatory authority lawfully authorized to determine tariff for power generation companies, for its determination, a tariff petition (the **Tariff Petition**) for approval of the reference generation tariff for Operation (the **Reference Generation Tariff**) for the Petitioner's Project.

We would like to differentiate our application on following basis:

- One is that we have had valid LOS from government of Pakistan so any delay that was due to a public entity should be counted toward ROE for the project for the portion of Equity that had been committed by that time (and time allowed for achieving the Financial Close may be deducted from such time).

- Second, we continued working as a company during the said delay and any expenses that the company had during the time should be allowed as 'Post LOS Expenses'.

Any benefit/concession/incentives given, previously or in future, to any other IPP/power projects may also be given to the Petitioner.

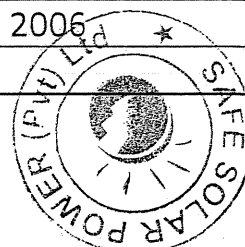


2.5 PROJECT SUMMARY

Company Name	SAFE SOLAR (PVT) LIMITED
Sponsor	Mr. Hamid Mir
Location	Bhawalnagar, Pakistan
Land Area	50 Acres
Project Size	10.2 MW
Concession Period	25 Years from COD
Power Purchaser	Central Power Purchasing Agency
Solar Panels	Bi-facial Trina Solar or Equivalent
Inverters	Sungrow 110KW or larger
Annual Energy Production	18.7 GWh/Year
Capacity Factor	20.5%
Construction Period	6 Months
EPC Contractor	Reon Energy Ltd

Project Capital Cost	
EPC Cost	than \$7,500,750
Offshore EPC Cost	\$5,625,563
Onshore EPC Cost	\$1,875,188
Non-EPC Cost	
Project Development Cost	\$615,600
Operating Fixed Assets & Land	\$513,000
Capitalized Degradation	\$271,527
Insurance During Construction	\$34,371
Additional Project Costs (Post LOS)	\$200,000
Financial Fees & Charges	\$59,918
Interest During Construction	\$79,891
Total Project Cost	\$9,275,057

Debt Equity Structure	75 / 35
Equity (US \$ millions)	2,318,764
Long-term Debt (US \$ millions)	6,956,293
Lenders	Silk Bank Ltd (Pakistan)
Terms of Long-term Debt	SBP RE (3% + spread of 3%) Payable semi-annually
O&M Contractor	Reon Energy (Pvt) Limited
Project O&M Costs	\$12,000/MW
Levelized Tariff - US cents	5.48/KWh
Applicable Policy	Renewable Energy Policy 2006
Technical Advisors	Aleph Systems



PROJECT DETAILS

3.1 PROJECT COMPANY

Safe Solar (Pvt) Limited is an entity incorporated under the Companies Ordinance, 1984 to act as a Special Purpose Vehicle and develop a solar power project, a copy of its incorporation certificate is attached as **Schedule C**.

3.2 PROJECT SPONSOR

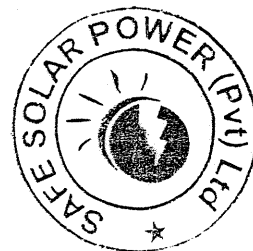
Safe Solar is a wholly owned by Mr Hamid Mir, an Entrepreneur with vast experience in setting up businesses in Pakistan and abroad. Mr Mir runs a leading investment firm in varied business concerns in Islamabad for last twenty five years and having extensive experience in Entrepreneurship, business formation, operation, and finance and management principles.

3.3 POWER OFF-TAKER

Safe Solar will be signing 25-years Energy Purchase Agreement ("EPA") with Central Power Purchasing Authority.

3.4 PROJECT CONSTRUCTION PERIOD

The Project is anticipated to have a construction period of 6 months from financial close.



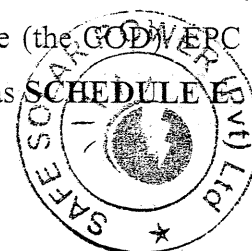
3.5 TECHNOLOGY SELECTION

3.5.1 TECHNOLOGY & EPC CONTRACTOR SELECTION PROCESS

The objective of Safe Solar is to select the right technology and EPC contractor. This meant setting up its project in compliance with the highest standards and inter alia, and to select the most efficient and reliable solar panels, inverters, supplier and engineering, procurement & construction (the EPC) contractors. With the assistance of their technical advisors Safe Solar reviewed various technologies and invited several vendors to participate in this project. Various factors were considered in the selection of the Solar Panel manufacturer and the EPC contractors, such as:

- i. Technology, efficiency of equipment,
- ii. Suitability of the proposed equipment with site conditions
- iii. Commitment of applicants to work in Pakistan
- iv. Background of Panel supplier and EPC contractors under similar environment (references and experiences)
- v. Track record of the equipment
- vi. Cost/price and payment terms
- vii. Performance warranties and guarantees of facility
- viii. Contractual and commercial terms for entering into the contractual arrangements
- ix. Completion timeline and schedule
- x. Grid compatibility
- xi. Suitability of operation and maintenance concept for the size and location of projects with suitable availability of spare parts, consumables and main components.

The project company, based on its thorough due diligence and following an intense negotiations process with the various nominees', Safe Solar selected **Bi-facial Mono-crystalline PV Panels** as solar modules to be installed on single axis tracker mounting structure. Reon Energy (Ltd) being country's largest EPC company has been selected EPC contractor. Based on such Terms and Arrangements, the engineering, procurement and construction of the project will be undertaken by the Reon with a fixed price and fixed commercial operation date (the EPC term sheet signed with M/s Reon and is attached with this petition as



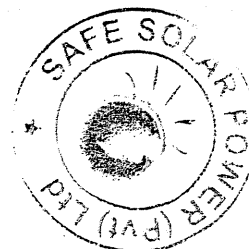
3.6 POWER EVACUATION

The plant will be connected to nearest MEPCO grid in Dahrnawala, Bahawalnagar via 11KV line. Grid interconnection study has been done and is submitted in Generation License.

KEY ASSUMPTIONS

TARIFF PERIOD	25 years
EXCHANGE RATES	Rs.156/US\$ US\$ 1.14 / Euro
SBP-RE-FINANCING	SBP RE (3% + spread of 3%)
US CPI	257.346
PAKISTAN CPI	263. 59
DEBT-EQUITY RATIO	75%: 25%
DISCOUNT RATE FOR TARIFF	10%

- Any additional costs incurred to cater for any modifications or additions required by NTDC will form part of the Project Cost at the COD.
- Impact of foreign currency fluctuations relating to project cost payments to be made post construction period such as retention money are also assumed to be compensated.
- Grid connection shall be the responsibility of MEPCO



PROJECT COSTS

5.1 PROJECT COST SUMMARY

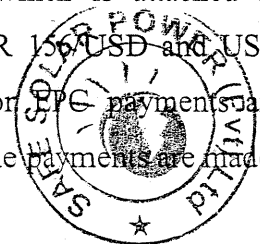
Project cost has been calculated after detailed analysis, evaluation and understanding of parameters that affect the development and operation of solar project. Selection of technology plays a key role in determining the cost of project. However, major emphasize has been put to get the best levelized cost of energy while selecting the equipment.

EPC Cost	\$7,500,750
<i>Offshore EPC Cost</i>	<i>\$5,625,563</i>
<i>Onshore EPC Cost</i>	<i>\$1,875,188</i>
Non-EPC Cost	
Project Development Cost	\$615,600
Operating Fixed Assets & Land	\$513,000
Capitalized Degradation	\$271,527
Insurance During Construction	\$34,371
Additional Project Costs (Post-LOS)	\$200,000
Financial Fees & Charges	\$59,918
Interest During Construction	\$79,891
Total Project Cost	\$9,275,057

5.2 PROJECT COST EXPLANATION

5.2.1 EPC Costs

EPC cost is the turnkey price for the engineering, procurement and construction of the complex. The scope includes construction of civil works, temporary roads, substation, installation and testing of the equipment. Details of the scope and commercial terms are further elaborated in the EPC term sheet, a copy of which is attached as **SCHEDULE E**. The petition assumes exchange rates of PKR 156/USD and USD 1.1/EUR and Safe Solar requests that the exchange rates for EPC payments are actualized as per actual exchange rates prevailing on the dates the payments are made.



Items	Price (USD)	Price (USD/MW)
Module	3,082,500	0.300
Inverters	411,000	0.040
Structures	1,541,250	0.150
Balance of Plant	2,466,000	0.240
Total EPC cost	7,500,750	0.730

5.2.1.1 Solar Panels

We have selected Bifacial mono crystalline modules as they provide the maximum efficiency and output. SPPL will be using bi-facial panels from Tier-1 manufacturer. Panel price has been targeted at US (\$) million 0.30 per MWp as opposed to recent tariff petitions by HNDS at (US (\$) million 0.31 per MWp) and P&G at (US (\$) million 0.33 per MWp). Although it is a very aggressive target, but we are positive to achieve it.

5.2.1.2 Solar Inverter

We have used same price of inverter which has been benchmarked by NEPRA. Despite the increasing trend, Safe Power is focused on achieving this cost.

5.2.1.3 Mounting Structure

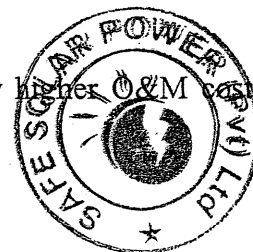
Safe Power will be developing this project on single axis mounting structure, which is based on latest technology and help achieve best output from bi-facial panels. In recent tariff petitions, P&G and HNDS have asked for price of \$ 0.15 ~0.17 M/MWp. However, in line with SPPL's strategy for cost optimization, we have target cost of \$ 0.15 M/MWp has been set. Reason for higher cost of single axis structure than normal fixed tilt structure is because it is a complex and higher than normal mounting structure and requires increased cable layout to avoid backside shading, hence structure and BOS cost.

5.2.1.4 O&M Cost

Bifacial panels on single axis structure tend to have a relatively higher O&M cost because of following reasons:

1. Higher and complex structure
2. More cleanging effort because of backside cleaning

If we look at recent tariff petitions on similar panels and mounting structure configuration, O&M cost filed by P&G is at \$ 18,000/MWp, HNDS at \$14,000/MWp, Gharo Solar approved at \$15,180/ MWp. However, SPPL has



requested for O&M cost of \$12,000/MWp which is significantly lower than large IPPs are asking for.

5.2.2 Project Development Costs

This includes costs incurred in developing the project and in taking it to financial close like costs of project studies, costs of setting up the company and issuing shares, rent, utilities, salaries & wages and travel. Also, includes advisory and consultancy fees (Legal, HSE, Audit, Tax, Insurance etc.).

Project Development & Advisors' Costs (\$ Million)		615,600
Project Studies		
Company Formation Costs & Regulatory Fees		
Rent and Utilities		
Advisors & Consultants (Technical, Legal, HSE, Audit, Tax, Insurance, etc.)		
Salaries and Wages		
Travelling, Communication and Other Miscellaneous Office Expense		

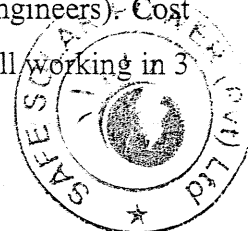
This includes cost of EPC management team overseeing the project during construction based on quote received from service provider. This head also covers miscellaneous administrative costs that are expected to be incurred during construction like annual rent & maintenance fees, purchase of cars, vehicles and porta cabins, head office rent & utilities, computers & software, food & meals, communication and stationary costs.

5.2.3 Land Cost

As opposed to other IPPs, SPPL had to purchase land of 50 Acres for the project. This includes the cost of 50 acres of land and associated taxes, stamp duties and Government charges required for setting up the project. Land cost for this project can't be compared to other IPPs where land is provided by government as initial land was allocated in QASPL, however, due to changes in policy, SPPL had to purchase its own land and same is reflected in tariff calculation and project cost breakup.

5.2.4 Security and Surveillance Costs

This includes cost of security in owner's scope related to Head Office security and escort security services (especially for foreign consultants and OEM engineers). Cost calculation assumes 120 private security personnel on permanent payroll working in 3 shifts and four security vehicles.



5.2.5 Additional Development cost

This project was delayed four years after getting its LOS certificate and without getting into the nitty-gritty, the delay, we feel, was due to public entities reluctance to follow the Authority's determination and Government of Pakistan's Letter of support. As mentioned in our prayer also we strongly believe that we have been wronged and would like Authority to allow this additional cost that we incurred during the delay as an allowable cost and also reprimand the entities that showed insubordination and resulted in loss to the company,

5.2.6 Insurance During Construction

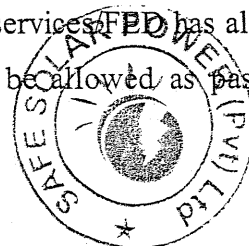
Insurance cover includes construction and marine insurance. The insurance cost has been calculated after considering risk exposure at 0.70% of the EPC cost.

5.2.7 Custom Duties and Cess

Customs duties and Sindh Infrastructure Cess on the import of plant, equipment, material and spare parts are not assumed to be part of calculations at this time. However, any imposition or any change in the customs duties, or any other cess, duty or tax on import of equipment and material imposed is requested to be pass-through. Similarly, any change in custom duties on spare parts after COD are also requested to be a pass-through item.

No provincial taxes on import of plant, equipment, material and spare parts have been considered and if applicable in the future it is requested to be allowed as pass-through items.

Sindh sales tax on services or any other provincial sales tax on services ~~FED~~ has also not been considered and if applicable, they are requested to be allowed as pass-through items.



5.2.8 Financing Fees and Charges

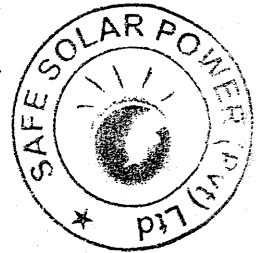
The tariff model has been run on State Bank of Pakistan RE Policy. This financing is available at SBP RE (3% + spread of 3%). The Petitioner requests the Authority that Financing Fees and Charges are actualized at COD based on actual debt levels.

5.2.9 Interest During Construction (IDC)

The Petitioner requests that IDC cost is actualized at COD as per actual debt drawdown profile, LIBOR rate, KIBOR rate and local and foreign debt split. Details of debt arrangements are given in Section F of Tariff Break-Up below.

5.2.10 Capacity Factor

As a result of change in technology (bi-facial panel with single axis structure), Capacity factor of plant will be 20.5% with energy output of 18,431 MWhs. Major reason for relatively lower CUF is lower irradiation as opposed to SUKKUR and Gawader.



TARIFF BREAK-UP

5.3 O&M

Operations and Maintenance of the power plant will be managed by in-house team with related services outsourced to the EPC Contractor (Reon).

5.3.1 Variable O&M Cost:

It consists of some replacement cost of imported spare parts on completion of their service life or in case of premature failure (unscheduled maintenance) and technical services obtained from local and foreign experts during maintenance. This component is requested to be indexed on a quarterly basis with US\$ to Pak Rupee exchange rate and US CPI.

5.3.2 Local Fixed O&M Cost

It includes O&M staff costs and administrative cost of the project including remuneration to non-technical employees, rents and utilities. It also includes security, transportation, professional fees (audit, tax and legal) and contract services. This component is requested to be indexed with Pakistan CPI on a quarterly basis.

5.3.3 Foreign Fixed O&M Cost

It includes fixed costs for obtaining technical services and costs of major overhauls including spares, consumables and miscellaneous administration expense. This component is requested to be indexed on a quarterly basis with US\$ to Pak Rupee exchange rate and US CPI.

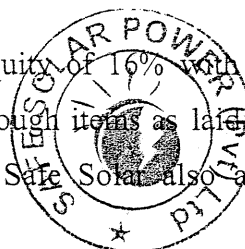
O&M Cost Breakup	USD (\$) MN/MWp
Fixed O&M – Local	\$ 7,200
Fixed O&M – Foreign	\$ 4,800

5.4 INSURANCE

This consists of all-risk insurance/reinsurance for the Project, as well as business-interruption insurance. The insurance cost component has been calculated after considering risk exposure at 1% of the EPC cost during construction period.

5.5 RETURN ON EQUITY

The Petitioner requests an internal return (IRR) on equity of 16% with any taxes payable on revenues, income and dividends as pass-through items as laid out in the Renewable Energy Policy 2006 and amended since. Safe Solar also approached



insurance market to understand if any of these risks could be insured. Initial feedback suggests that insuring some of these risks like foreign exchange, expropriation/nationalisation and war & civil disturbance (excluding change in law and power purchaser default etc.) would cost over 1% of the amount insured.

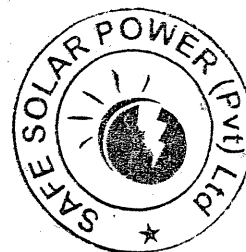
The Petitioner requests that this tariff component is indexed to the USD/PKR exchange rate and adjusted for actual equity drawdown during construction.

5.6 OTHER PASS THROUGH ITEMS

No provision has been made for income tax, worker's profit participation fund, workers' welfare fund and any provincial or federal taxes on revenues, income and dividends. If any of these are incurred at any time during the term of the PPA, then the Authority is requested to allow these as pass through items to the consumers.

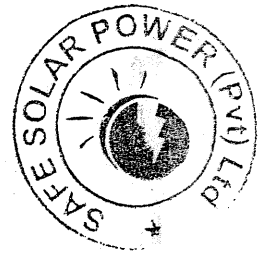
5.7 SUMMARY OF TARIFF INDEXATION

COMPONENT	INDEXATION	FREQUENCY
Fixed O&M (Local)	Pakistan CPI (General)	Quarterly
Fixed O&M (Foreign)	US\$ to Pak Rupee rate and US CPI	Quarterly
Return On Equity	US\$ to Pak Rupee rate	Quarterly
Principal Repayment	US\$ to Pak Rupee rate for Foreign Loans	Semi-Annual
Interest Payment	6-Month LIBOR, 3-Month KIBOR US\$ to Pak Rupee rate for Foreign Loans	Semi-Annual
Variable O&M (Local)	Pakistan CPI (General)	Quarterly
Variable O&M (Foreign)	US\$ to Pak Rupee rate and US CPI	Quarterly



TARIFF TABLES

Period	Operations & Maintenance		Insurance cost per KWh	Return on Equity		Principal per KWh	Interest per KWh	Total \$c / KWh
	Local	Foreign		RoE per KWh	Tax			
Year 1	0.40	0.27	0.10	1.38	0.00	4.09	1.43	7.56
Year 2	0.40	0.27	0.10	1.38	0.00	4.11	1.28	7.44
Year 3	0.40	0.27	0.10	1.38	0.00	4.13	1.13	7.32
Year 4	0.40	0.27	0.10	1.38	0.00	4.15	0.98	7.20
Year 5	0.40	0.27	0.10	1.38	0.00	4.17	0.83	7.07
Year 6	0.40	0.27	0.10	1.38	0.00	4.20	0.68	6.95
Year 7	0.40	0.27	0.10	1.38	0.00	4.22	0.53	6.82
Year 8	0.40	0.27	0.10	1.38	0.00	4.24	0.38	6.69
Year 9	0.40	0.27	0.10	1.38	0.00	4.26	0.23	6.56
Year 10	0.40	0.27	0.10	1.38	0.00	3.77	0.15	2.24
Year 11	0.40	0.27	0.10	1.38	0.00	0.00	0.00	2.26
Year 12	0.40	0.27	0.10	1.38	0.00	0.00	0.00	2.27
Year 13	0.40	0.27	0.10	1.38	0.00	0.00	0.00	2.29
Year 14	0.40	0.27	0.10	1.38	0.00	0.00	0.00	2.31
Year 15	0.40	0.27	0.10	1.38	0.00	0.00	0.00	2.33
Year 16	0.40	0.27	0.10	1.38	0.00	0.00	0.00	2.35
Year 17	0.40	0.27	0.10	1.38	0.00	0.00	0.00	2.37
Year 18	0.40	0.27	0.10	1.38	0.00	0.00	0.00	2.39
Year 19	0.40	0.27	0.10	1.38	0.00	0.00	0.00	2.41
Year 20	0.40	0.27	0.10	1.38	0.00	0.00	0.00	2.43
Year 21	0.40	0.27	0.10	1.38	0.00	0.00	0.00	2.45
Year 22	0.40	0.27	0.10	1.38	0.00	0.00	0.00	2.47
Year 23	0.40	0.27	0.10	1.38	0.00	0.00	0.00	2.49
Year 24	0.40	0.27	0.10	1.38	0.00	0.00	0.00	2.51
Year 25	0.40	0.27	0.10	1.38	0.00	0.00	0.00	2.51
						Levelling - PKR /KWh		5.40



PRAYER

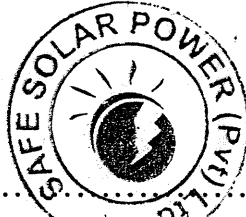
It is prayed that a new Tariff is given to the company based on new technology and current environment.

It is further prayed that our submission regarding the incurring of the additional cost is accepted and that cost is allowed as a pass through for the Tariff. Authority is also requested to approve the Tariff table based on assumptions as requested in the petition.

Any benefit/concession/incentives given, previously or in future, to any other IPP/power projects may also be given to the Petitioner.

Safe Solar Power (Pvt) Ltd
Dated: 19th Dec'2019

Akshan Singh



CHIEF EXECUTIVE OFFICER AND AUTHORIZED REPRESENTATIVE