

Introduction to

SUPPLY AGREEMENT WITH RENEWABLE ENERGY (SARE)

Information for Registered PV Investor

WELCOME MESSAGE



Mr. Nirinder Singh Johl

Managing Director

TNBX Sdn. Bhd.

A wholly owned subsidiary of TNB

“In a single hour, the amount of power from the sun that strikes the Earth is more than the entire world consumes in a year” - US DOE

Humanity, and with it all life on earth, stands at a crossroad. Unprecedented growth of the human population and the world economy since the Industrial Revolution have put pressure on our planet. Series of environmental crises reach into every corner of the globe. Together, we must join our hearts, minds and efforts to be the hero our planet needs.

SARE is aimed to be the pebble that will create ripples of change in the energy landscape to be greener. I strongly believe we can create a better and greener future together. This is our responsibility and legacy for future generations.



Your trusted energy partner 

Description

Our Strategy

We believe in building strong **trust & relationship** among industry players to effectively change energy landscape in Malaysia

Partnership

Establish strong partnership leveraging on each others' strengths

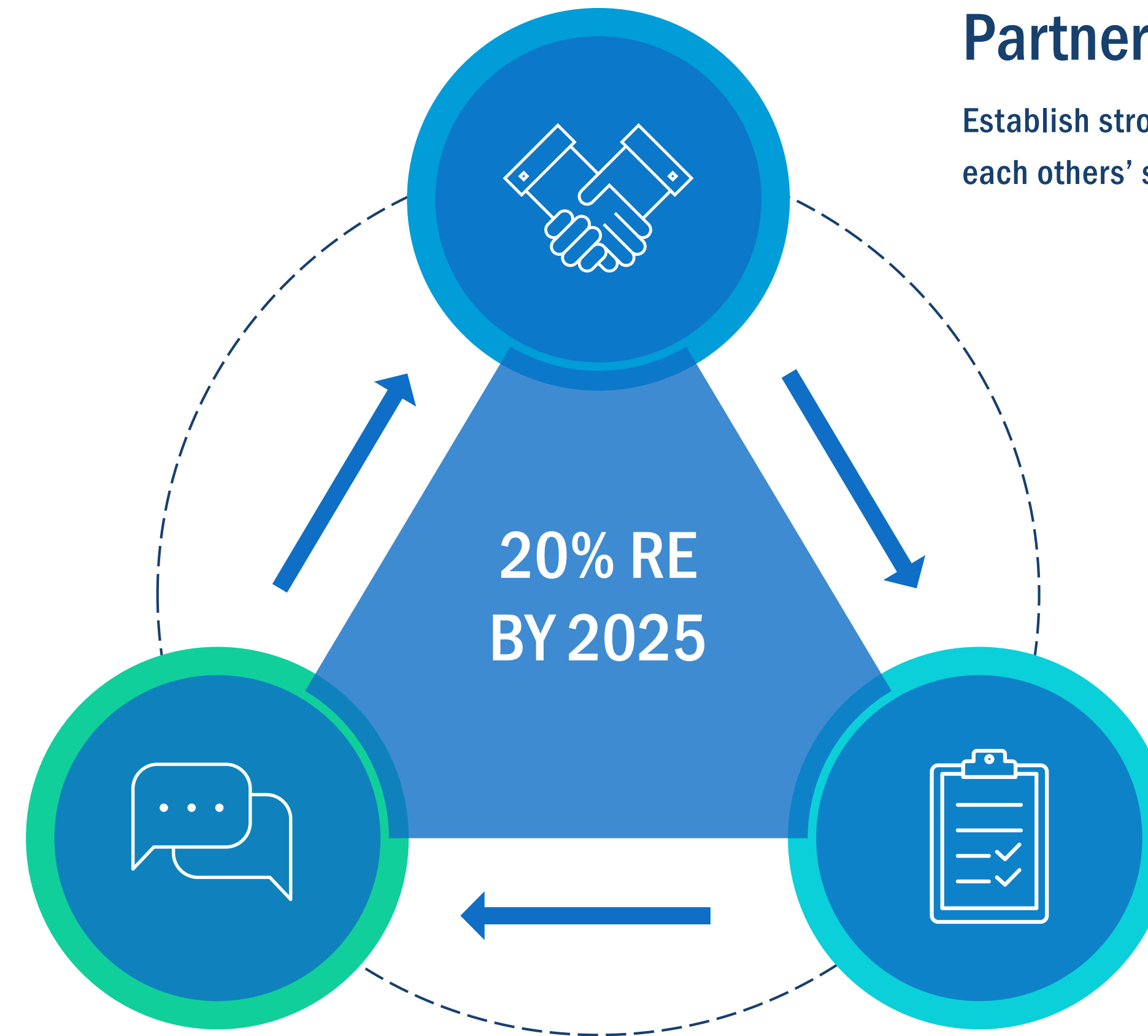
Together we can make the difference

Integrity

Professional relationship among partners

Effectiveness

Deliver strong results



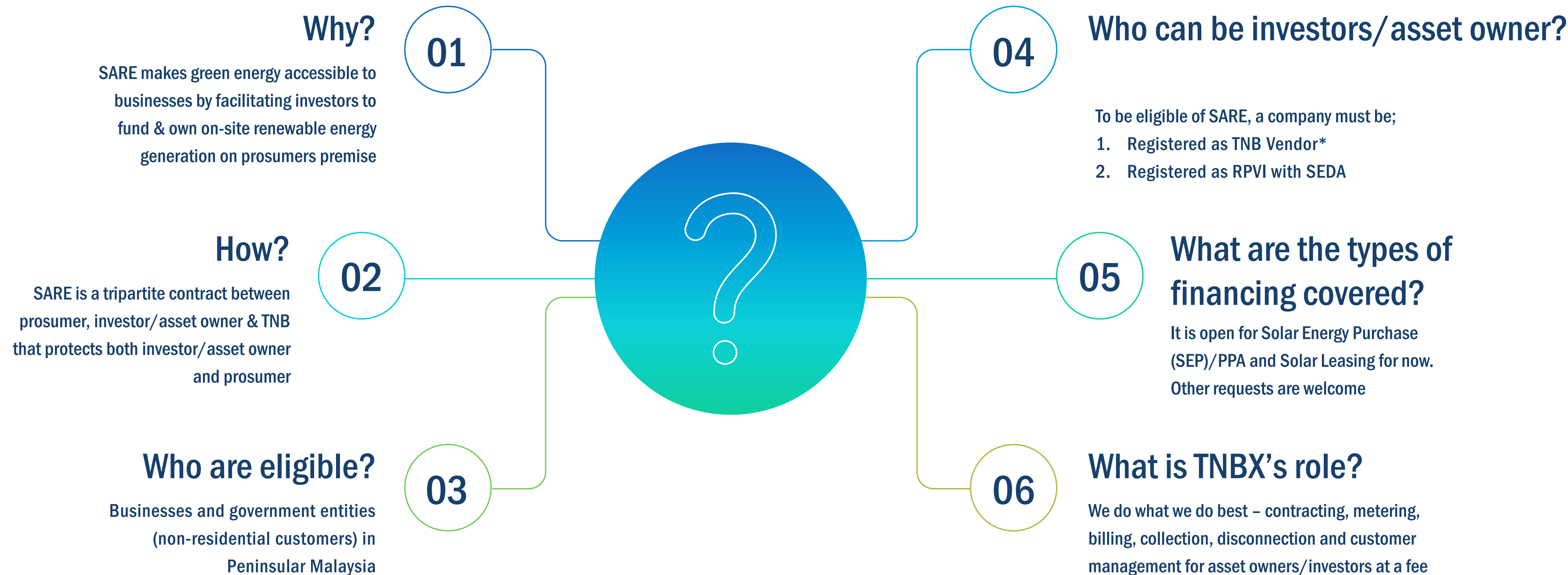
TNBX Services

Your Trusted Energy Partner



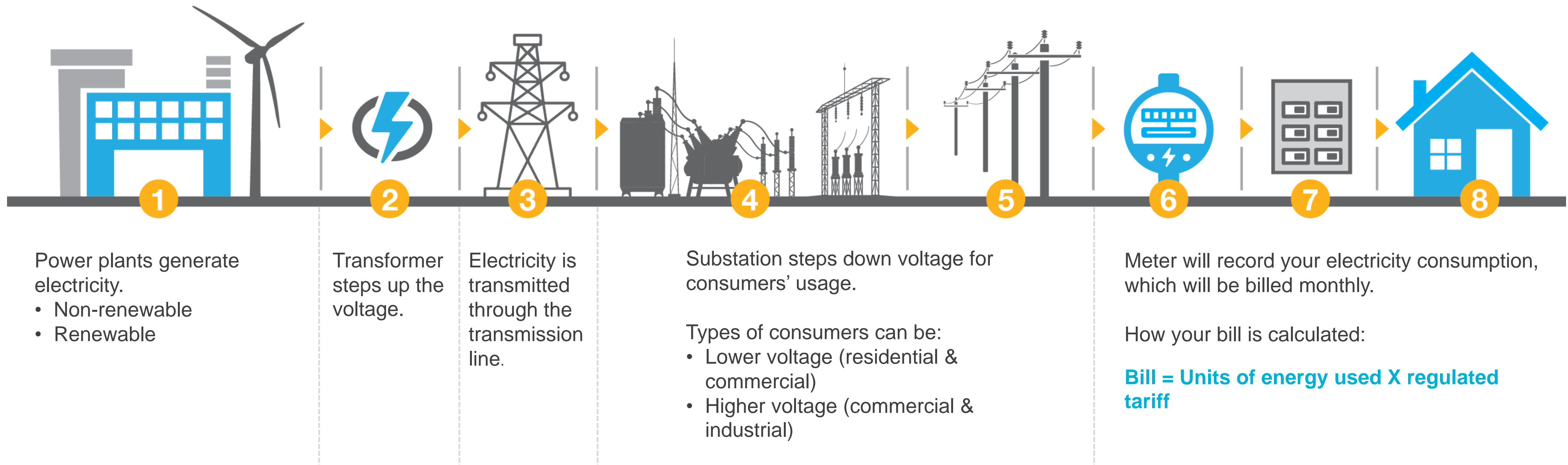
Understanding SARE

SARE with TNBX



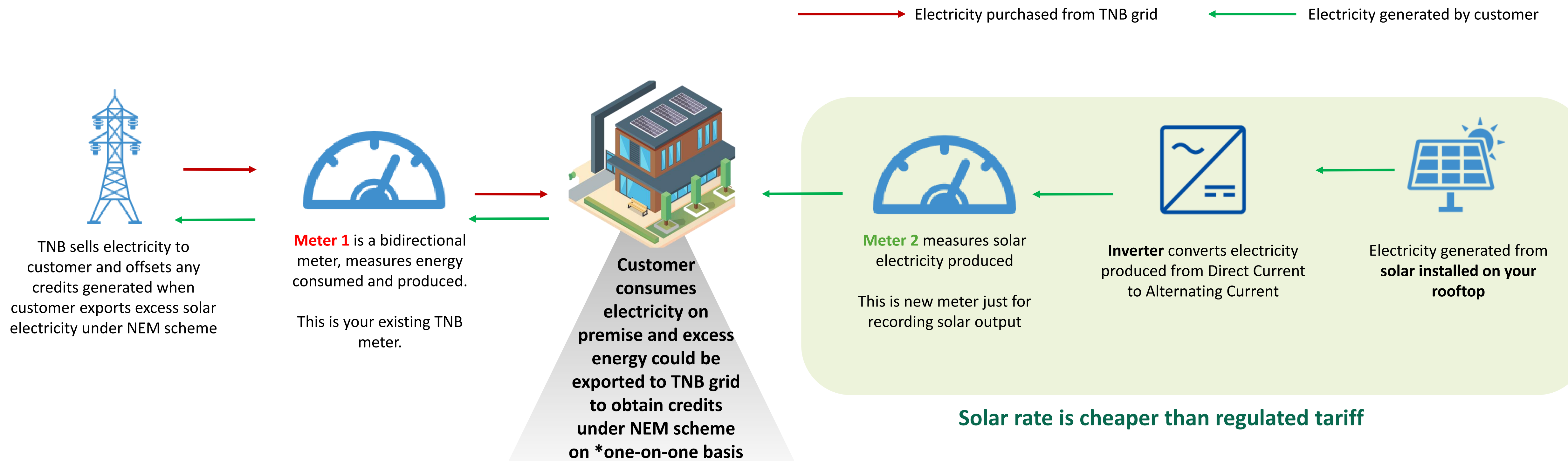
How conventional electricity is made and delivered to you

In Malaysia, 98% of electricity is generated from fossil fuel source such as coal and gas through thousands of kilometers of cables and wires maintain and operated by TNB



We have a brighter idea. Why don't we generate **clean electricity** by installing solar PV right on customers' rooftop! Here is how **Solar Energy Purchase (SEP)** works..

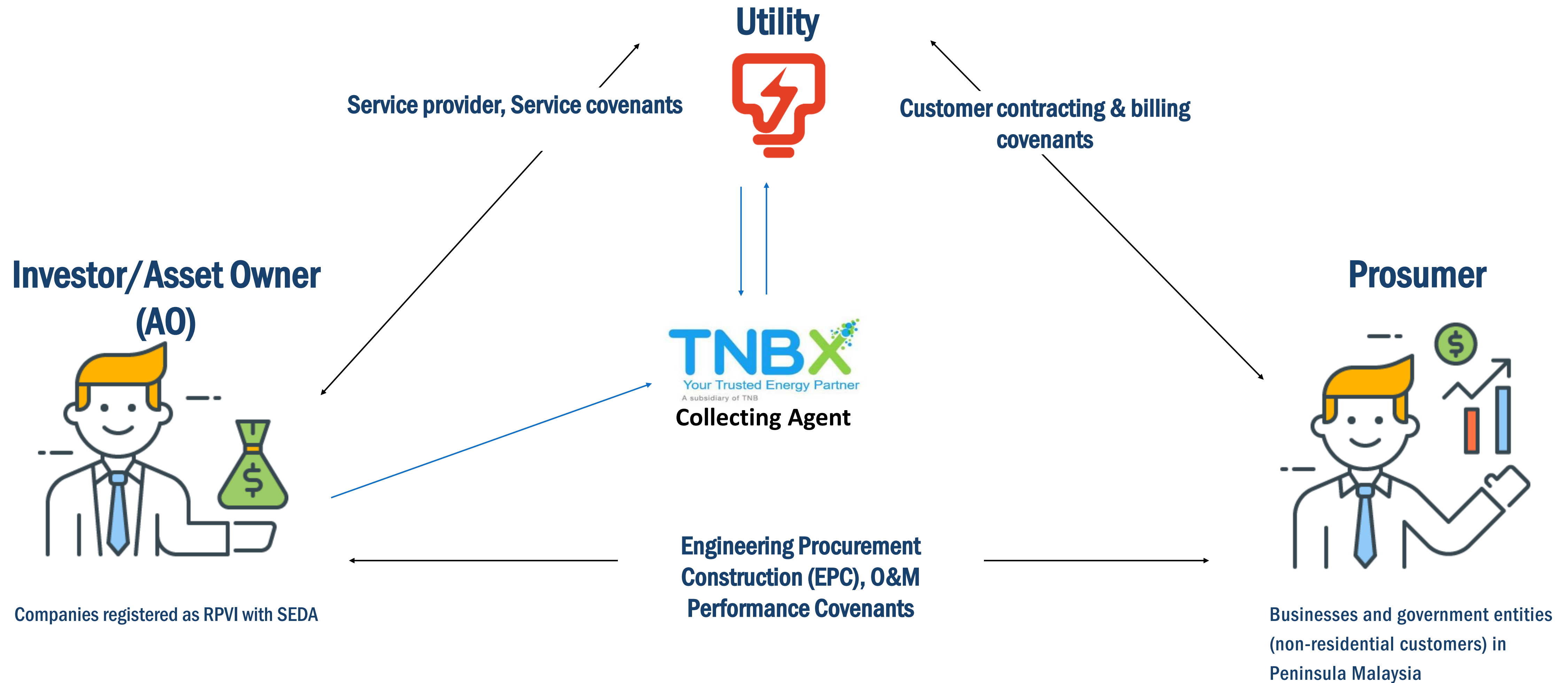
Investor/asset owner will generate solar energy and sell to prosumer at an agreed solar rate per kWh generated throughout **SARE contract** period. Prosumer can sell excess energy to TNB under NEM scheme.



$$\text{New TNB bill with SEP} = (\text{Net Energy recorded by M1}) \times \text{Regulated Tariff} + (\text{Solar Energy Generated recorded by M2}) \times \text{Solar Rate}$$

Understanding SARE for SEP

All parties' interests are protected by SARE



Understanding SARE for SEP

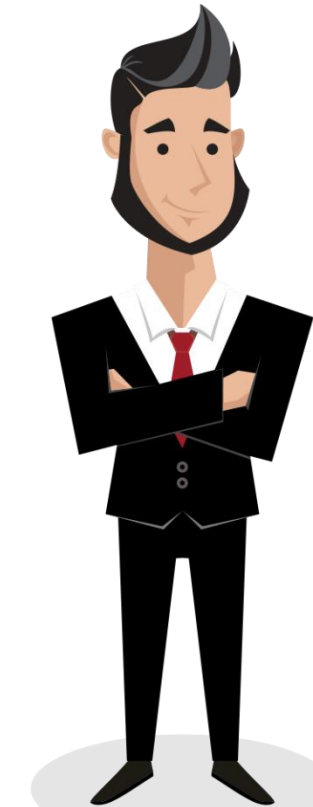
All parties' interests are protected by SARE



Utility



Building Owner



Letter of Consent

Service provider, Service covenants

Customer contracting & billing covenants

Deed of Assignment

Investor/Asset Owner
(AO)



Prosumer



TNBX
Your Trusted Energy Partner
A subsidiary of TNB
Collecting Agent

Engineering Procurement
Construction (EPC), O&M
Performance Covenants

Companies registered as RPVI with SEDA

Businesses and government entities
(non-residential customers) in
Peninsula Malaysia

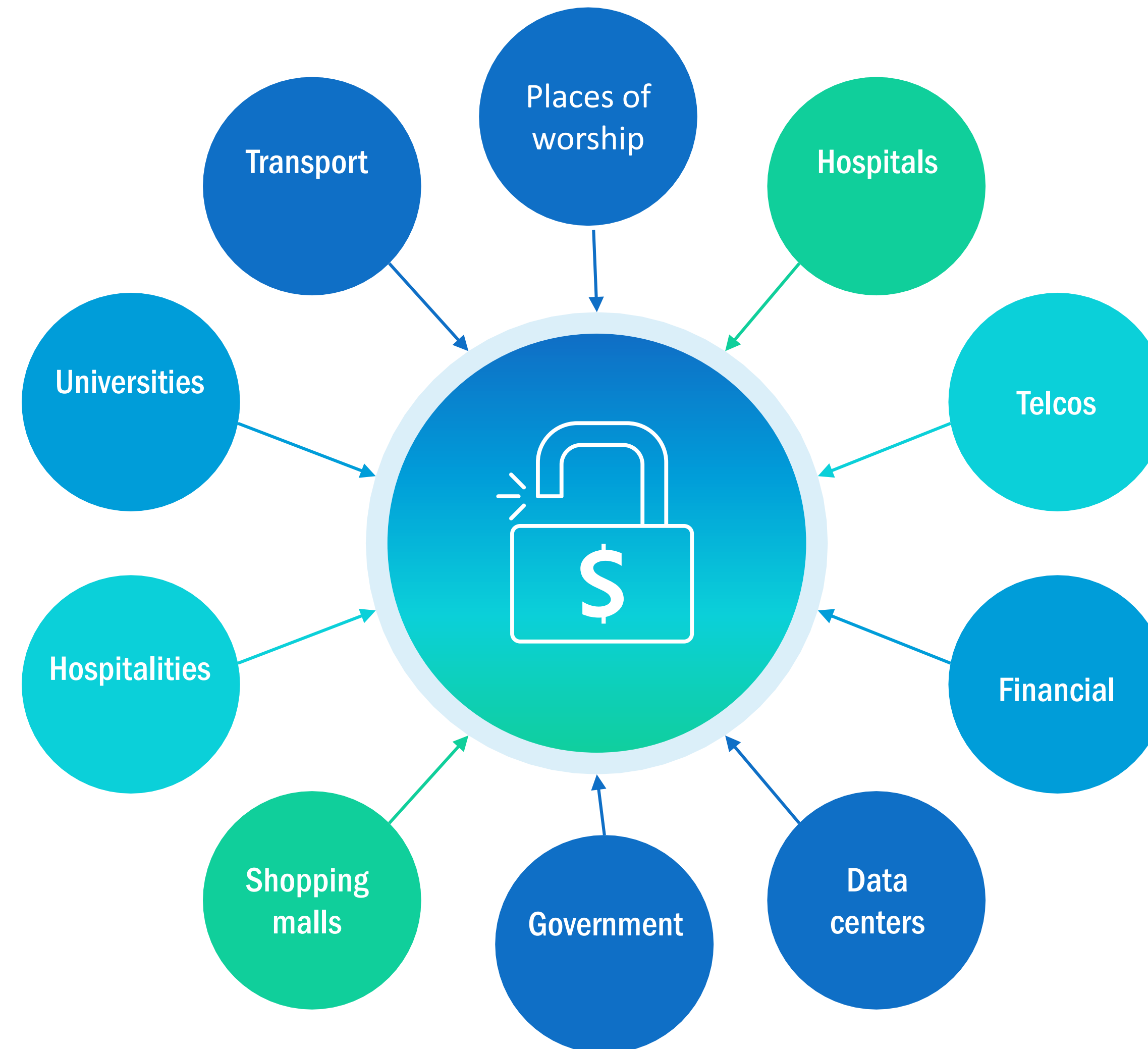
Understanding SARE for SEP

Roles & Responsibilities

- Investor and/or Asset Owner (RPVI) will conduct energy audit, design and propose the optimum solar PV system for installation.
- Investor and/or Asset Owner (RPVI) will invest, own and operate the solar system.
- Customer will sign a tripartite agreement called Supply Agreement with Renewable Energy (SARE) with the Investor and/or Asset Owner (RPVI) and Tenaga Nasional Berhad.
- Customer will be invoiced based on agreement reached and financial understanding as documented in Appendix C of the SARE agreement.
- Customer's solar energy purchase will be billed on the same TNB email bill (e-bill) and subjected to terms & conditions as stipulated in SARE.
- After the contract period ends, customer will own the solar PV system unless explicitly stated otherwise.
- Investor and/or Asset Owner (RPVI) will be bound via a contract with TNBX on agreed service covenants.
- SARE is independent of the Net Energy Metering scheme. The Investor/Asset Owner will ideally recommend NEM scheme only if there is possibility of export to the grid from the customer

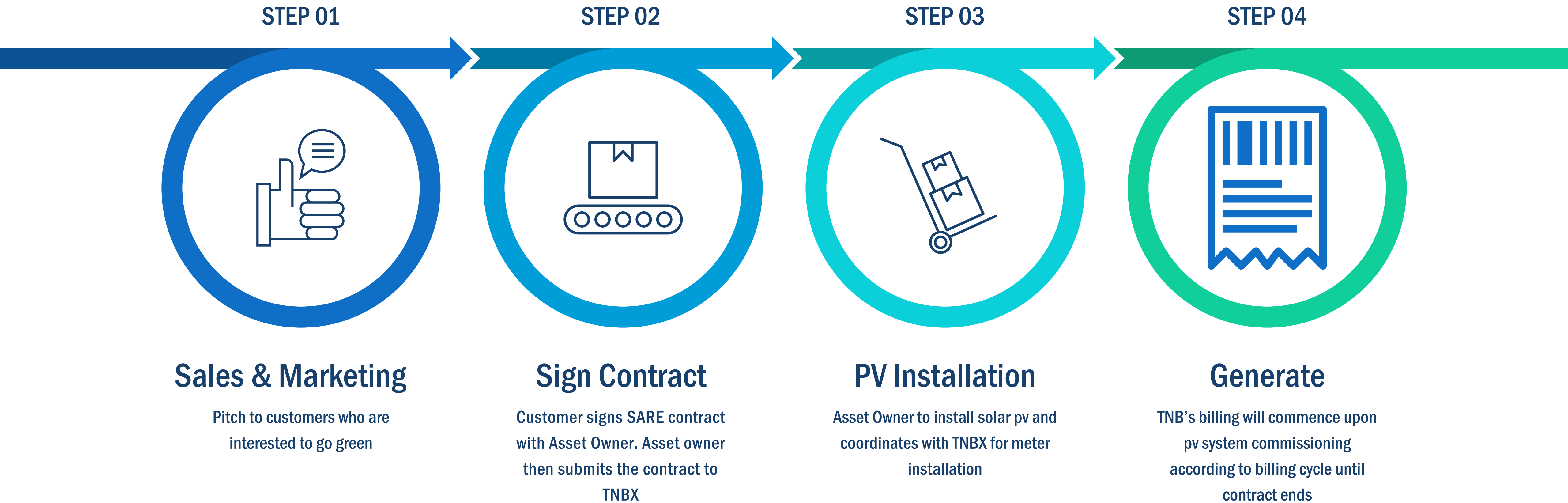
Customer Identification

Market potential for SEP > 18,000 MW solar rooftop potential within Peninsular Malaysia as per recent study by SEDA conducted in 2018



SARE Workflow

High level workflow



Pricing for SARE SEP

We provide competitive pricing for all RPVI to enjoy the benefits of SARE SEP designed to protect your solar investment

Pricing type	Tier 1	Tier 2	Tier
	< 500 kWp per site	500 – 1000 kWp per site	> 1000 kWp per site
Tier pricing	maximum of 2 sen/kWh	1.5 sen/kWh	1 sen/kWh

General Terms in SARE

Solar solution	Business			Non-business		
	via SARE contract			Outright Purchase		
	Solar PPA	Solar (Hybrid)	Solar Lease	Solar Cash	Solar via Loan	Solar via 0% (Credit Card)
Upfront cost	0%	Approx. 20%	0%	100%	Approx. 30%	0%
System owner	Investor/Owner	Investor/Owner	Investor/Owner	Customer	Financier	Customer
Contract term	21 to 25 years	21 to 25 years or lower @kWh rate	3 to 10 years	Nil	Loan term	Credit Card Payments
Installment	Based on units generated monthly	Based on units generated monthly + Monthly Fixed	Monthly (Fixed)	One-off	Monthly (Fixed)	Monthly (min 5 %)
Solar tariff rate	35 to 45 cents	25 to 34 cents	0	0	0	0
Solar Segment	Commercial/ Industrial	Commercial/ Industrial	Residential/ Commercial/ Industrial	Residential	Residential	Residential
Metering Requirement	Yes	Yes	No	No	No	No
Carbon Credits	Investor/Owner	Investor/Owner	Investor/Owner	Asset Owner	Asset Owner	Asset Owner
Billing & Contracting Cost	Investor/Owner	Investor/Owner	Investor/Owner	Nil	By Financier	Nil
PIA (Power Impact Assessment)	As per SEDA Guideline					
Cost of PIA	As per SEDA Guideline					
Units Exportable to Grid	By applying NEMS Quota					
NEMs Quota	Up to 500 MW					

Registration and Regulation

	Self Consumption	NEM	LSS (> 30MW)
TNB Registration	√	√	√
SEDA Registration		√	Provision of information
PSS Study	√ (> 425kW)	√ (> 72kW)	√
EC Licensing	√ (> 24kW for single phase and > 72kW for 3-phase)	√ (> 24kW for single phase and > 72kW for 3-phase)	√ (award by bidding process)
Maximum capacity	75% of MD	Medium/High Voltage: 75% of Maximum Demand (MD) Consumer > 1 year: Average of recorded MD for 1 year Consumer < 1 year: Declared MD Low Voltage: 60% fuse rating @ CT rating	LSS1 – 50MWp LSS2 – 30MWp

BIL ELEKTRIK DAN INVOIS CUKAI



No. Akaun : 220137442900
No. Kontrak : 242321
Deposit : RM 510.42
No. Invois Cukai: 1200277841

SITI JAMILAH BINTI ABU RAZAK
39, JALAN SS68/2,
46800, SUBANG JAYA, SELANGOR

TERIMA KASIH
Kerana Membayar
Dalam Tempoh 30 Hari

TNB Caroline
1300 88 5454

Jumlah Perlu Dibayar RM 99.55

Tarikh Bil

15 Okt 2017

	Amaun
Tunggakan	RM 0.00
Caj Semasa	RM 99.55
Penggenapan	RM 0.00
Jumlah Bil	RM 99.55

Bayar Sebelum
Terima Kasih

14.11.2017

Tarikh

* Bill is for illustration
purposes only

Revenue Management


We design **billing features** ensuring Asset Owners' investments are protected whilst providing good experience to customers

Invoicing & Collection Features:

Elements	Features
Type of bill	Online email bill
Frequency	Monthly
Solar rate	<ul style="list-style-type: none"> ✓ Fixed ✓ Increasing ✓ Decreasing
Contract tenure	As per Asset Owner's contract with customers
Minimum monthly charge	As per Asset Owner's contract with customers
Payment reminder	Automated payment reminder on bill
Customer interface	Coming soon: <ul style="list-style-type: none"> ✓ myTNB ✓ Self Service Portal (SSP)
Customer payment scheme	<ul style="list-style-type: none"> ✓ Zero upfront + monthly bill on energy generated ✓ Upfront capex instalment on bill + monthly bill on energy generated

We design **billing features** ensuring Asset Owners' investments are protected whilst providing good experience to customers

INTEGRATED BILL





ENERGY STATEMENT
<http://www.mytnb.com.my>


No. Akaun : 210116213202
Tarikh Penyata : 26.03.2019
No. Invois : 102349957


KOH WOEI PHING
A-4-10, PANGSAPURI KASTURI
JALAN SEMABOK
TAMAN KASTURI
75050 MELAKA

Ringkasan Akaun Anda
Bayaran Akhir RM250.00 Terima Kasih:
Tunggakan RM6.00 Bayaran Segera.
Caj Semasa RM147.48
Pengenapan RM0.02
Jumlah Bil RM153.50 Bayar sebelum 25.04.2019

Ringkasan Caj Semasa
Perihal Perkhidmatan **Caj (RM)**


 Utility	Import	175.00 kWh	RM38.15
 Solar Energy		169 kWh	RM109.33
			Service Tax (6%) RM0.00
			Jumlah Caj Semasa RM147.48


210116213202001023499570000000015350

 **Bill** Code: 5454
Ref-1: 210116213202

JomPAY online di Perbankan Internet dan Telefon Mudah
Alih dengan akaun semasa, simpanan atau kad kredit

Aras 13, Wisma TNB, No 19, Jalan Timur, 46200 Petaling Jaya, Selangor
Nombor Pendaftaran ST W10-1808-31022372



BIL ELEKTRIK DAN INVOIS CUKAI

No. Kontrak : 6001123940
Deposit : RM250.00

Jenis Bacaan : **Bacaan Sebenar**

Tempoh Bil : 24.02.2019 - 23.03.2019 (28 Hari)
Tarif : A:Kediaman

Blok Tarif (kWh)	Blok Prorata (kWh)	Kadar (RM)	Amaun (RM)
200	175.00	0.2180	38.15
Jumlah	175.00		38.15

Keterangan	Tidak Kena ST	Kena ST	Jumlah	
Kegunaan (kWh)	kWh	175.00	0.00	175.00
Kegunaan RM	RM	38.15	0.00	38.15
Kegunaan Bulan Semasa	RM	38.15	0.00	38.15
Service Tax (6%)	RM			0.00
Caj Semasa	RM			38.15

No. Meter	Faktor Meter	Bacaan Meter	Kegunaan	Unit
		Dahulu	Semasa	
M EDM105180101554	1.00000	0.00	175.00	kWh
2				
M EDM105180101554	1.00000	0.00	0.00	kW
2				
M EDM105180101554	1.00000	0.00	100.00	KVARh
2				

KOH WOEI PHING
A-4-10, PANGSAPURI KASTURI
JALAN SEMABOK
TAMAN KASTURI
75050 MELAKA

Aras 13, Wisma TNB, No 19, Jalan Timur, 46200 Petaling Jaya, Selangor
Nombor Pendaftaran ST W10-1808-31022372

TERIMA KASIH
Kerana
Membayar Dalam
Tempoh 30 Hari
TNB Caroline
1-300-88-5454

Bil: OPC

Untuk maklumat bil dan bayaran terdahulu, sila layari -
<http://www.mytnb.com.my>
atau hubungi Hotline TNB
1 300 88 5454

Untuk gangguan bekalan atau kerosakan lampu jalan TNB sila hubungi melalui telefon/SMS: 15454

Untuk pertanyaan, sila hubungi: TNB MELAKA BARAT
ARAS G, JLN BANDA KABA
75000 MELAKA
Tel : 06-2828544
Fax : 06-2835010

Subsidi Bahan Api Dibiayai Kerajaan Persekutuan RM 2.36

KWTBB - Kumpulan Wang Tenaga Boleh Baharu


ICPT - Pelepasan Imbangan Kos Penjualan

Maklumat Tambahan:
Angkadar Kuasa : 0.87

Bayaran melalui cek sah setelah penjelasan cek oleh bank

Service Tax (ST) 6% bagi penggunaan Domestik melebihi 600 kWh.

TENAGA NASIONAL BERHAD (200865-W)



BIL TENAGA BOLEH BAHARU

No. Kontrak : 7009162447

BIL TENAGA BOLEH BAHARU SEMASA

Tempoh Bil : 01.01.2019 - 23.03.2019
Bilangan Hari : 82 Hari
Jenis Bacaan : Bacaan Sebenar

TERIMA KASIH
Kerana
Membayar Dalam
Tempoh 30 Hari
TNB Caroline
1-300-88-5454

Bil: OPC SEP

Untuk maklumat bil dan bayaran terdahulu, sila layari -
<http://www.mytnb.com.my>
atau hubungi Hotline TNB
1 300 88 5454

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Sebarang pertanyaan, sila hubungi: TNB MELAKA BARAT
ARAS G, JLN BANDA KABA
75000 MELAKA
Tel : 06-2828544
Fax : 06-2835010

KETERANGAN JUMLAH TENAGA BOLEH BAHARU SEMASA

Keterangan	Kegunaan(kWh)	Kadar(RM)	Jumlah(RM)
Kadar Penjanaaan Tenaga Boleh Baharu	169.00	0.3100	52.39
Pembayaran Minimum Tenaga Boleh Baharu			56.94
Ansuran (Modal Pendahuluan)			0.00
JUMLAH (RM)			109.33

MAKLUMAT PEMBELIAN TENAGA SOLAR

Nama SP/Pelabur : GSPARKS	Tempoh Baki Kontrak : 2 Tahun & 9 Bulan
No. Tel. Pengguna : 0167220123	Kod Tarif : SEP
Emel Pengguna : jurutypist@gmail.com	Kadar Tarif : RM0.3100
Kapasiti : 200kW	Tarikh Mulatugas : 01.01.2019
Penyambungan : 230 V	Baki Ansuran (RM) :
Teknologi : SOLAR	Baki Ansuran (Bulan) :

BACAAN PEMBELIAN TENAGA SOLAR SEMASA

No. Meter	Faktor Meter	Bacaan Meter	Kegunaan	Unit
		Dahulu	Semasa	
M 6004102123	1.00000	0.00	169.00	kWh
Jumlah Pembelian Tenaga Solar			169.00	kWh

KOH WOEI PHING
A-4-10, PANGSAPURI KASTURI
JALAN SEMABOK
TAMAN KASTURI
75050 MELAKA

Aras 13, Wisma TNB, No 19, Jalan Timur, 46200 Petaling Jaya, Selangor
Nombor Pendaftaran ST W10-1808-31022372

SUMMARY OF ENERGY STATEMENT

UTILITY ENERGY BILL

SOLAR ENERGY BILL

Business Plan

19

ENERGY STATEMENT

<http://www.mytnb.com.my>

No. Akaun	:	222233334444
Tarikh Penyata	:	01.01.2020
No. Invois	:	123456789

MYWI TERBANG SDN BHD



NO 1, JALAN 2
TAMAN AREA 51
00000 JITRA
KEDAH

Ringkasan Akaun Anda

Bayaran Akhir	RM	4,127.00	Terima Kasih.
Tunggakan	RM	0.00	
Caj Semasa	RM	7,620.26	
Penggenapan	RM	0.01-	
Jumlah Bil	RM	7,620.25	Bayar sebelum 01.12.2019

Ringkasan Caj Semasa

Perihal Perkhidmatan

			Caj (RM)
	NEM Charges	Import 9,888.00 kWh Eksport 385.00 kWh Net Usage 9,503.00 kWh	RM5,154.66
	Solar Energy	6,164 kWh	RM2,465.60
		Service Tax (6%)	RM0.00
		Jumlah Caj Semasa	RM7,620.26

BIL ELEKTRIK DAN INVOIS CUKAI

No. Kontrak : 12345
 Deposit : RM125,076.85
 No. Sijil NEM : COM12345678
 Jenis Bacaan : **Bacaan Sebenar**

Tempoh Bil : 01.10.2019 - 31.10.2019 (31 Hari)
 Tarif : B:Perdagangan

Blok Tarif (kWh)	Blok Prorata (kWh)	Kadar (RM)	Amaun (RM)
200	200.00	0.4350	87.00
>200	9,688.00	0.5090	4,931.19

Jumlah Import (kWh) : 9,888.00 Jumlah Import (RM) : 5,018.19

Blok Tarif (kWh)	Blok Prorata (kWh)	Kadar (RM)	Amaun (RM)
200	0.00	0.4350	0.00
>200	385.00	0.5090	195.96

Jumlah Eksport (kWh) : 385.00 Jumlah Eksport (RM) : 195.96

Keterangan		Tidak Kena ST	Kena ST	Jumlah
Kegunaan (kWh Import)	kWh	9,888.00	0.00	9,888.00
Kegunaan RM	RM	5,018.19	0.00	5,018.19
ICPT (RM0.0255)	RM	252.14	0.00	252.14
Kegunaan Bulan Semasa	RM	5,270.33	0.00	5,270.33
KWTBB (1.6%)	RM			80.29
Caj Semasa (Import)	RM			5,350.62
kWh Eksport: 385.00	RM	195.96-		195.96-
Caj Semasa (Eksport)	RM			195.96-
Jumlah Caj Bersih	RM			5,154.66

Muatan Tertinggi Dicatat : 415.00 kW

No. Meter	Faktor Meter	Bacaan Meter		Kegunaan	Unit
		Dahulu	Semasa		
M 219556492	1.00000	25.00	410.00	385.00	kWh (E)
M 219556492	1.00000	45,732.00	55,620.00	9,888.00	kWh (I)
M 219556492	1.00000	210.00	269.00	59.00	kW
M 219556492	1.00000	17,742.00	23,677.00	5,935.00	kVARh



TERIMA KASIH
 Kerana
 Membayar Dalam
 Tempoh 30 Hari
 TNB Careline
 1-300-88-5454

Bil: LPC NEM

Untuk maklumat bil dan bayaran terdahulu, sila layari - <http://www.mytnb.com.my> atau hubungi Hotline TNB 1 300 88 5454
 Untuk gangguan bekalan atau kerosakan lampu jalan TNB sila hubungi melalui telefon/SMS: 15454

Untuk pertanyaan, sila hubungi:

Surcaj 1% dikenakan bagi pembayaran selepas 30 hari dari tarikh bil selaras dengan Peraturan-Peraturan Bekalan Pemegang Lesen 1990

Maklumat Tambahan:
 Angkadar Kuasa : 0.86
 Faktor Beban : 0.23

Bayaran melalui cek sah setelah penjelasan cek oleh bank

Baki NEM: 0 kWh
 Baki NEM: RM0.00

Tarikh lupus Baki NEM:
 31/12/2020

BIL TENAGA BOLEH BAHARU

No. Kontrak : 222233334444

BIL TENAGA BOLEH BAHARU SEMASA

Tempoh Bil : 11.10.2019 - 31.10.2019
Bilangan Hari : 21 Hari
Jenis Bacaan : Bacaan Sebenar

KETERANGAN JUMLAH TENAGA BOLEH BAHARU SEMASA

Keterangan	Penjanaan(kWh)	Kadar(RM)	Jumlah(RM)
Kadar Penjanaan Tenaga Boleh Baharu	6,164.00	0.4000	2,465.60
Pembayaran Minimum Tenaga Boleh Baharu			0.00
Ansuran (Modal Pendahuluan)			0.00
JUMLAH (RM) :			2,465.60

MAKLUMAT PEMBELIAN TENAGA SOLAR

Nama SP/Pelabur	: Free Bills Sdn Bhd	Tempoh Baki Kontrak	: 24 Tahun & 2 Bulan
No. Tel. Pengguna	: 0123456789	Kod Tarif	: SEP
Emel Pengguna	: mywidrift@yahoo.com	Kadar Tarif	: RM0.4000
Kapasiti	: 44.2 kW	Tarikh Mulatugas	: 11.10.2019
Penyambungan	: 400 V OPC	Baki Ansuran (RM)	:
Teknologi	: SOLAR	Baki Ansuran (Bulan)	:

BACAAN PEMBELIAN TENAGA SOLAR SEMASA

No. Meter	Faktor Meter	Bacaan Meter		Penjanaan	Unit
		Dahulu	Semasa		
M 123456789	1.00000	0.00	6,164.00	6,164.00	kWh
Jumlah Pembelian Tenaga Solar				6,164.00	kWh



TERIMA KASIH
Kerana
Membayar Dalam
Tempoh 30 Hari

TNB Careline
1-300-88-5454

BIL: OPC SEP

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Untuk gangguan bekalan atau kerosakan lampu jalan TNB sila hubungi melalui telefon/SMS: 15454

Sebarang pertanyaan, sila hubungi:

Revenue **collection settlement** can be done according to Asset Owners investment strategy

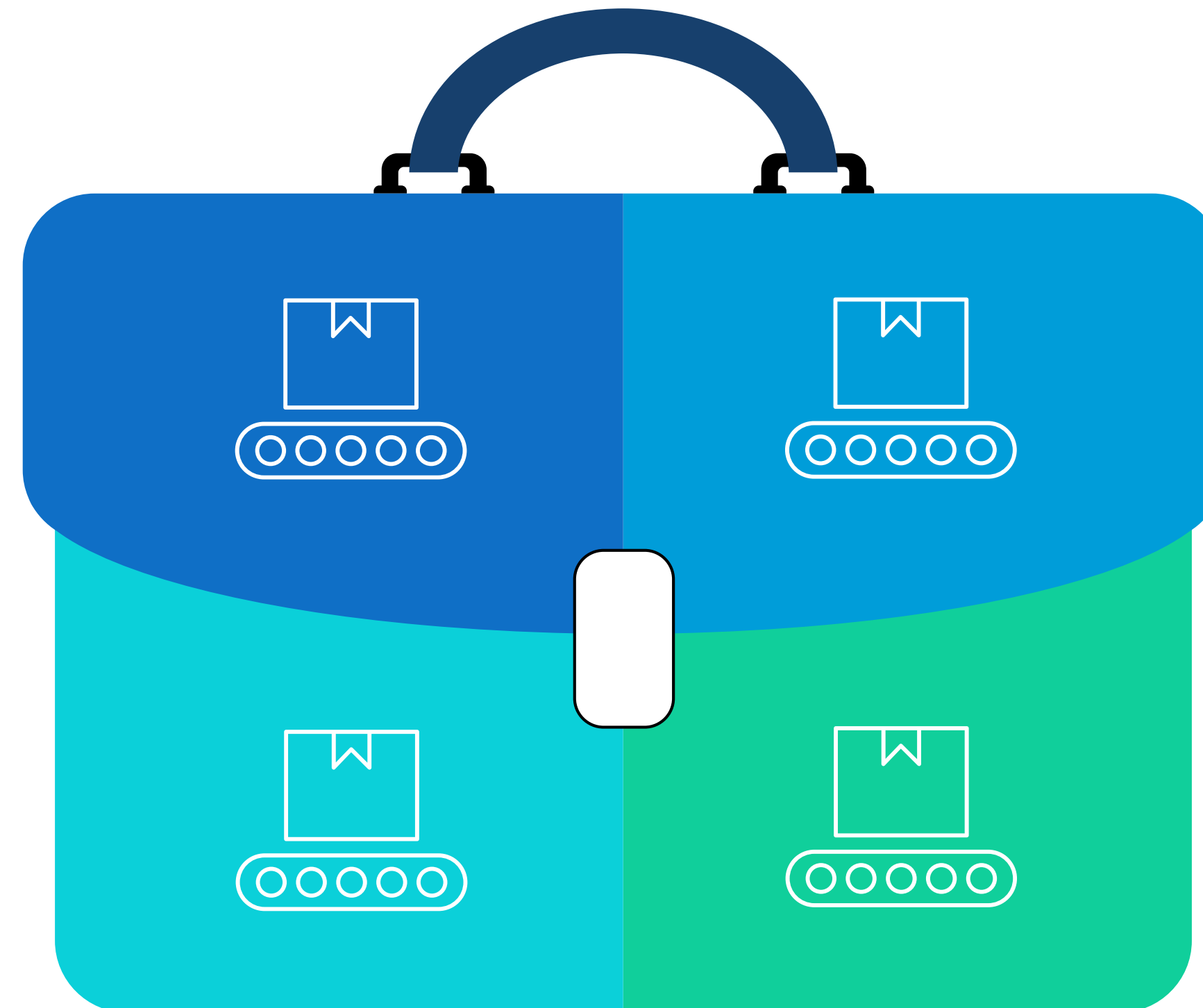
Example of customizable settlement between TNBX and Asset Owners

TNBX to Asset Owner

All revenue collected from customer will be transferred to Asset Owner

TNBX to Bank

All revenue collected from customer will be transferred to Bank who has Deed of Assignment with Asset Owner



TNBX to Asset Owner & Bank

Revenue collected will be transferred according amount specified in the contract between bank and Asset Owner

TNBX to Asset Owner and its Funder

Revenue collected will be transferred according amount specified in the contract between Asset Owner and its funder

SARE - Cost to serve

These are the costs by TNBX to RPVI for cost to serve

One-off Charge (per contract)

Item	Kos (RM)
Contract Processing	100.00

By Request (per event basis)

Item	Kos (RM)
Disconnection	150.00
Reconnection	150.00
Contact Center	10.00

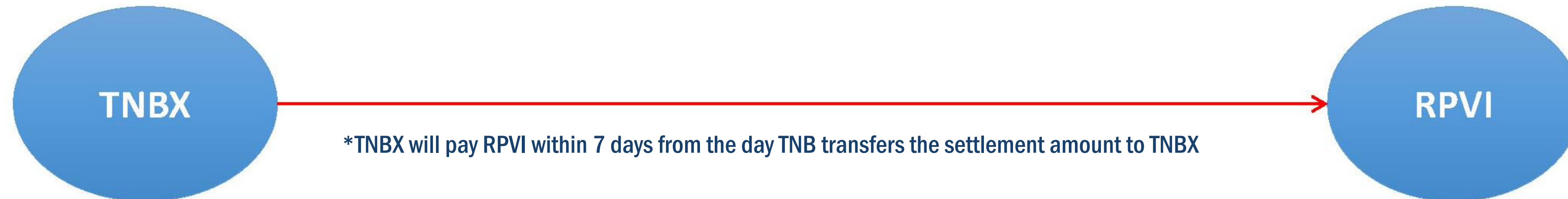
Payment charge by financial institution

1% from SARE payment collected from any channel

SEP Payment Flow

SARE with TNBX

Statement of Income = (Contract Rate_{solar} x kWh_{solar}) – (Services provided by TNBX)





SEP METERING

SEP Meter Cost

SEP meter cost uses NEM meter cost as guideline

Metering Scheme	Three Phase Meter	LVCT (main)	LVCT (Main & Check)	HVMV (1 Feeder)	HVMV (2 Feeders)
NEM	RM 1,570	RM 2,600	RM 3,600	RM 6,500	RM 9,700

Note:

- Service charge RM 1,960 applies only if no meter is changed.
- OPC is Ordinary Power Consumer.
- LPC is Large Power Consumer.
- OPC exempted from service charge.

SEP Meter Cost

Scenario 1: Only SEP meter needs to be installed and M1 is OPC

Meter	Type	Need to be replaced?	Need to be installed?	RM
M1 (Utility)	OPC	No	-	0
M2 (SEP)	OPC	-	Yes	1570

Scenario 2: Utility & SEP meters need to be installed

Meter	Type	Need to be replaced?	Need to be installed?	RM
M1 (Utility)	OPC	Yes	-	1570
M2 (SEP)	OPC	-	Yes	Cost price

Scenario 3: Only SEP meter needs to be installed and M1 is LPC

Meter	Type	Need to be replaced?	Need to be installed?	RM
M1 (Utility)	LVCT (Main meter)	No	-	1960
M2 (SEP)	OPC	-	Yes	Cost price

Scenario 4: Utility and SEP meter needs to be installed and M1 is LPC

Meter	Type	Need to be replaced?	Need to be installed?	RM
M1 (Utility)	LVCT (Main meter)	-	Yes	2600
M2 (SEP)	OPC	-	Yes	Cost price

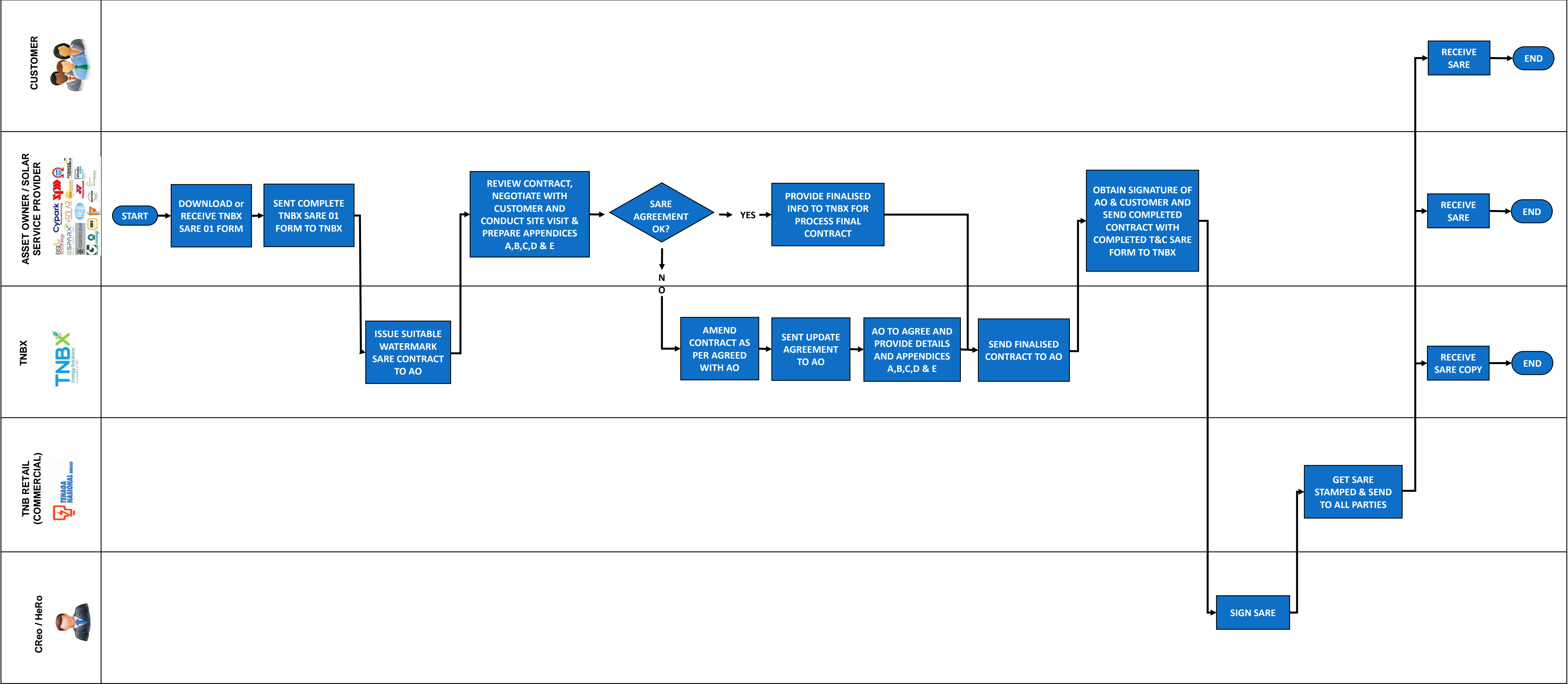
Scenario 5: Only SEP meter & CT need to be installed and M1 is LPC

Meter	Type	Need to be replaced?	Need to be installed?	RM
M1 (Utility)	LVCT (Main meter)	No	-	1960
M2 (SEP)	LVCT (Main meter)	-	Yes	Meter cost + CT cost



SARE Contract

Flow Chart for SARE Contract



Types of SARE Contract

<div>Type</div> <div>Code</div>		1	2	3	4
		Solar Energy Purchase (SEP)		Solar Lease	
		Building Owner	Not Building Owner	Building Owner	Not Building Owner
A	(Sendirian Berhad, Berhad)	/	/	Under Development	
B	(Government, ROS, Cooperative Agency)	/	/		
C	(Individual)	/	/		
D	(Partnership)	/	/		

Download and submit SARE 01 Form via email



TNBX SARE 01 v1.5

PART 1: SOLAR ASSET OWNER INFORMATION

Company Name _____
Company Registration No. _____
Registered Address _____
TNB Vendor No. _____
Contact Person Name _____
Contact No. (H/P) _____
Office No. _____ Fax No. _____
Email _____

PART 2: TNB REGISTERED CUSTOMER INFORMATION

a) TNB Customer Account No. _____
Company Registration No.
(IC No. for Individual) _____
Registered Customer Name* _____
Registered Customer Address* _____

Installation Location Address _____
Contact Person Name _____
Contact No. (H/P) _____
Office No. _____ Fax No. _____
Email _____

b) Is the building owner same with registered TNB Account holder?
☐ Yes
☐ No, please fill in the following:-
Name of Building Owner _____
Company Registration No.
(IC No. for Individual) _____
TNB Account No. _____
Address _____
Contact Person Name _____
Contact No. (H/P) _____
Office No. _____ Fax No. _____

*Customer's registered name and address in TNB Customer Account



TNBX SARE 01 v1.5

c) Estimated Solar PV System Size _____ kWp
d) Proposed Solar Tariff (RM/kWh) _____
e) Estimated COD (dd/mm/yyyy) _____
f) Does the installation require NEM scheme? ☐ Yes ☐ No
g) Please tick one of the following category of company:
☐ Individual ☐ Private Limited / Public Limited/ Limited Liability Company
☐ Partnership ☐ Government / ROS / Cooperative Society
Please state the Partnership No: _____
Please state the Statutory Act of the agency establishment: _____

PART 3: DECLARATION OF CUSTOMER'S INTENT FOR SARE

☐ I, as the customer intend to go into Supply Agreement with Renewable Energy (SARE) on the Solar Energy Purchase (SEP) solution. I hereby declare that the information provided above is true to the best of my knowledge and belief. In case any of the above is found to be false, I am aware that TNBX has the right to reject/terminate/cancel this registration of request. I further agree to comply with the specifications, terms and conditions stipulated in the applicable guidelines and related regulations by TNB and EC, as amended from time to time. I also accept that TNB may modify/amend/add subject to further information gathered for the purpose of preparation of the final SARE proposal. I will provide all the information and assistance required by TNB for development of the SARE proposal.

Customer Signature
Name: _____
IC No: _____
Contact Number: _____

Executive's Signature
Name: _____
IC No: _____
Contact Number: _____

Information Required for SARE Contracting (Main)

Page		Information Required
Front page	Contract cover	<ol style="list-style-type: none"> 1. Date of Agreement 2. Investor/Owner Company Name and Registration No 3. Customer* Name and Registration No (for Sdn Bhd)
1	General	<ol style="list-style-type: none"> 1. TNB Bills (Customer Name, Contract No and Contract Date) 2. Solar DC size
3	System location	<ol style="list-style-type: none"> 1. Solar system location address
25	Attention	<ol style="list-style-type: none"> 1. Investor/Owner name, phone and fax nos 2. Customer name, phone and fax nos
30	Signing	<ol style="list-style-type: none"> 1. Investor/Owner signee and witness 2. Customer signee and witness

***Note that the customer name must be the same as the existing TNB supply contract name**

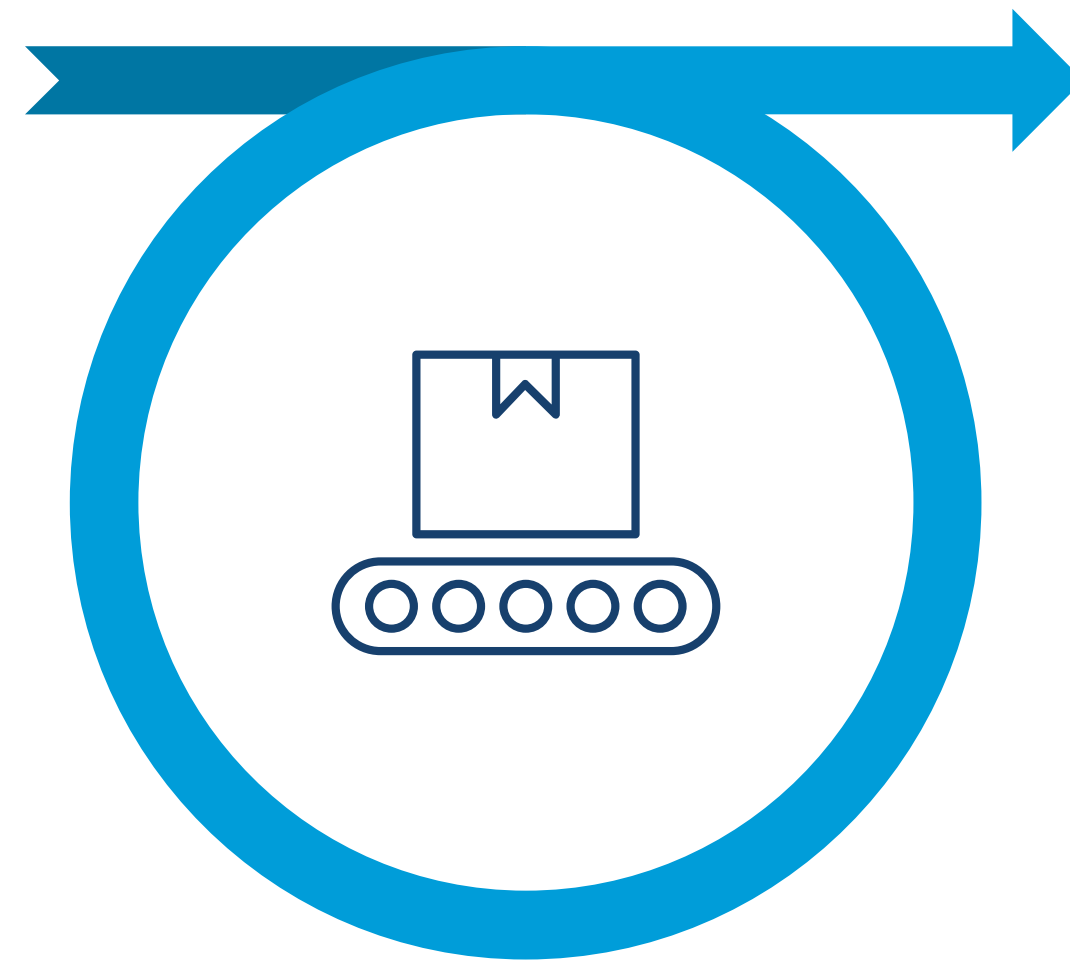
Information Required for **SARE** Contracting (Appendices)

Appendix	Information Required
Appendix A	System specifications
Appendix B	Solar meter location
Appendix C	Commercial terms
Appendix D	Description of site
Appendix E	Solar purchase price for 25 years (Attachment)
Appendix F	Owner's Consent Letter

SARE (Front page)

Agreement details

STEP 02



Contracting

Sign SARE contract with
customer and submit to TNBX

SUPPLY AGREEMENT – RENEWABLE ENERGY
VERSION 1.0

DATED DAY OF 2019

BETWEEN

TENAGA NASIONAL BERHAD
(COMPANY REGISTRATION NO. 200866-W)
("TNB")

AND

[•]
(COMPANY REGISTRATION NO: [•])
("SPS OWNER")

AND

[•]
(COMPANY REGISTRATION NO: [•])
("CONSUMER")



Date of agreement



TNB



Investor/Owner



Customer*

SUPPLY AGREEMENT – RENEWABLE ENERGY

***Note that the Customer name must be the same as the existing TNB supply contract name**

SARE (Page 1)

Agreement details

SUPPLY AGREEMENT – RENEWABLE ENERGY

SUPPLY AGREEMENT RENEWABLE ENERGY

THIS SUPPLY AGREEMENT RENEWABLE ENERGY is made on the day of 2019;

BETWEEN:

(1) **TENAGA NASIONAL BERHAD** (Company Registration No. 200866-W), a public limited liability company incorporated in Malaysia and having its registered office at Pejabat Setiausaha Syarikat, Tingkat 2, Ibu Pejabat Tenaga Nasional Berhad, No. 129, Jalan Bangsar, 59200 Kuala Lumpur, Wilayah Persekutuan (hereinafter referred to as "**TNB**") of the first part;

AND

(2) **[•]**. (Company Registration No. **[•]**), a private limited liability company incorporated in Malaysia and having its registered office at **[•]** (hereinafter referred to as the "**SPS Owner**") of the second part;

AND

(3) **[•]** (Company Registration No. **[•]**), a private limited liability company incorporated in Malaysia and having its registered office at **[•]** (hereinafter referred to as the "**Consumer**") of the last part;

(each, a **Party** and, collectively, the **Parties**).

WHEREAS:

(A) TNB is primarily involved in the business of generation, transmission and distribution of electricity and such other electricity and energy related businesses.

(B) TNB and the Consumer had entered into the electricity supply contract (Contract No. **[•]**) (Account No. **[•]**) dated **[•]** (hereinafter referred to as the "**Electricity Supply Contract**") for the normal supply of electricity to the Said Premises (as hereinafter defined).

(C) The SPS Owner proposes to design, construct, install, own, operate and maintain a solar photovoltaic energy generating system with a DC capacity of **[•]** kWp to be located on the Site at the Said Premises to generate and supply solar photovoltaic energy to the Consumer. The Consumer is desirous of purchasing and accepting the solar photovoltaic energy as may be generated by the Solar PV System.

(D) The Parties hereby agree to enter into this Agreement to record their rights and obligations in relation to the Net Electrical Output generated by the Solar PV System and delivered to and accepted by the Consumer in accordance with the terms and conditions set out in this Agreement.



Date of agreement



TNB



Investor/Owner



Customer*

BIL ELEKTRIK DAN INVOIS CUKAI

No. Kontrak : 12345

Deposit : RM125,076.85

No. Sijil NEM : COM12345678

Jenis Bacaan : **Bacaan Sebenar**

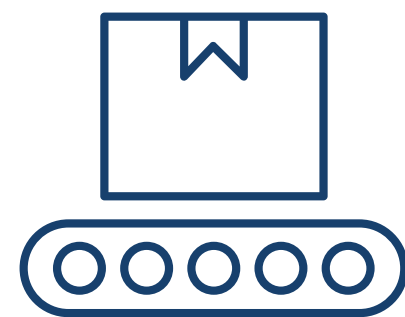
Contract date will be provided by TNB

Customer Sdn Bhd



Solar DC size

STEP 02



Contracting

Sign SARE contract with customer and submit to TNBX

***Note that the Customer name must be the same as the existing TNB supply contract name**

SARE (Page 3)

Agreement details

SUPPLY AGREEMENT – RENEWABLE ENERGY

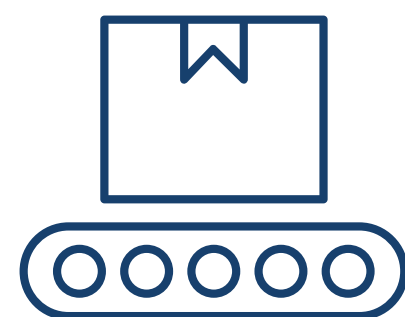
<i>Purchase Notice</i>	means a notice given by the Consumer pursuant to Clause 12.6(a) or a notice given by the SPS Owner pursuant to Clause 12.6(b);
<i>Ringgit Malaysia or RM</i>	means the lawful currency of Malaysia;
<i>Said Premises</i>	means the premises owned and occupied by the Consumer erected on the piece of land held under [•] bearing the postal address of [•];
<i>Site</i>	means the rooftop of the Said Premises upon which the Solar PV System is to be located, as more specifically described in Appendix D;
<i>Solar Energy Meter</i>	means the Solar Energy Meter and devices as further described in Appendix B installed within the Said Premises and owned by TNB for the measurement of Net Electrical Output;
<i>Solar Energy Payment</i>	means a payment determined in accordance with Appendix C to be made by the Consumer to TNB for the Net Electrical Output generated and delivered from the Solar PV System;
<i>Solar Energy Rate</i>	Means the rate as described at Appendix C ;
<i>Solar PV System</i>	means the solar photovoltaic energy generating system located on the Site at the Said Premises with a DC capacity of [•] kWp and ancillary equipment and facilities as illustrated in the diagram as attached Appendix A;
<i>SPS Owner Licence</i>	means the licence to be obtained by the SPS Owner in accordance with and if required by the applicable Law; and
<i>Term</i>	means the period of this Agreement as specified in Clause 2.1.

Interpretation

Unless the context of this Agreement otherwise requires:

- (a) words of any gender include the other gender;
- (b) words using the singular or plural number also include the plural or singular number, respectively;
- (c) the terms "hereof", "herein", "hereunder", "hereby", "hereto" and similar words refer to this entire Agreement and not any particular Clause, Exhibit, Appendix or any other subdivision of this Agreement;

STEP 02



Contracting

Sign SARE contract with customer and submit to TNBX



Customer's premise



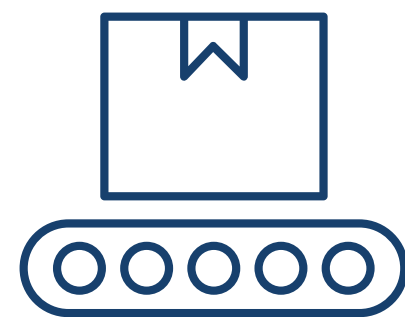
Solar DC size

SARE (page 25 – Attention page)

Agreement details

SUPPLY AGREEMENT – RENEWABLE ENERGY

STEP 02



Contracting

Sign SARE contract with
customer and submit to TNBX

(b) The address for the delivery of notices and bills to each Party and the respective telephone and facsimile numbers are as follows:

(i) For TNB:

Chief Retail Officer
Tenaga Nasional Berhad
Aras 8, Wisma Averis, Avenue 5
Tower 2, Bangsar South City
Off Jalan Kerinchi
59200 Kuala Lumpur
Wilayah Persekutuan

Attention: [•]
Telephone: [•]
Facsimile: [•]

(ii) For the SPS Owner:

[•]
[•]
[•]
[•]

Attention: [•]
Telephone: [•]
Facsimile: [•]

(iii) For the Consumer:

[•]
[•]
[•]
[•]

Attention: [•]
Telephone: [•]
Facsimile: [•]

(c) If a Party changes its notice details as set out in Clause 16.3(b), such Party shall provide the other Parties with prompt notice of any such changes prior to effecting the same.



Investor/Owner

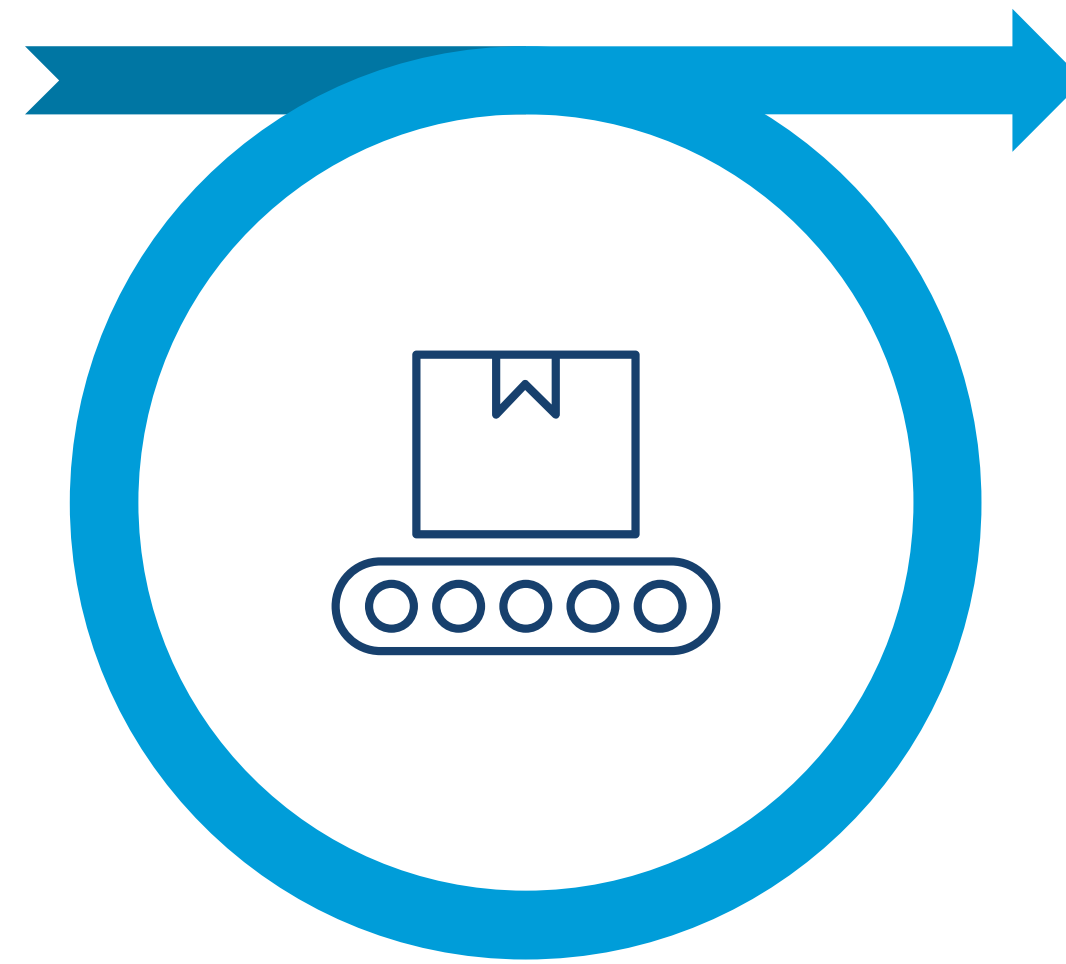


Customer*

SARE (Page 30 – Signing page)

Agreement details

STEP 02



Contracting

Sign SARE contract with
customer and submit to TNBX

SUPPLY AGREEMENT – RENEWABLE ENERGY

EXECUTION PAGE

IN WITNESS WHEREOF, the Parties have caused this Agreement to be duly executed on the day and year first above written.

TNB

Signed for and on behalf of
TENAGA NASIONAL BERHAD
(COMPANY NO. 200866-W)

in the presence of:

Name:
Title:
Date:

Name:
Title:
Date:

SPS OWNER

Signed for and on behalf of
[*].
(COMPANY NO. [*])

in the presence of:

Name:
Title:
Date:

Name:
Title:
Date:

CONSUMER

Signed for and on behalf of
[*].
(COMPANY NO. [*])

in the presence of:

Name:
Title:
Date:

Name:
Title:
Date:



TNB



Investor/Owner



Customer*

***Note that the Customer name must be the same as the existing TNB supply contract name**

SARE (Appendix A – System specifications)

Agreement details

SUPPLY AGREEMENT – RENEWABLE ENERGY

APPENDIX A

Technical Requirements of Solar PV System

A.1 GENERAL DESCRIPTION

The solar PV system is a [•] kWac photovoltaic (PV) System with the installed capacity of [•] kWdc. The solar PV system is located at [•], [•]. The PV modules are roof mounted with fixed tilt and are connected in series to form strings. The strings are subsequently feed into inverters. The direct current (DC) power produced by the PV modules is converted into Alternating Current (AC) by the inverters.

A.2 MAIN EQUIPMENT DESCRIPTIONS

A.2.1 Photovoltaic Modules

Photovoltaic modules with the following specification, or equivalent, shall be installed in the solar PV system:

Item	PV Module
Manufacturer	JA Solar / Canadian Solar / Jinko Solar
Model Type	Crystalline based modules
Certifications and Standards	Refer to item 4.
Power Tolerance (W)	≥ +0 W
System Voltage	1000 V or 1500 V
Module Efficiency (%)	≥ 16%
Min Nominal Power at STC (PMPP) per module	≥ 300 W
Type of photovoltaic module mounting (fixed or with tracking)	Fixed roof mounted

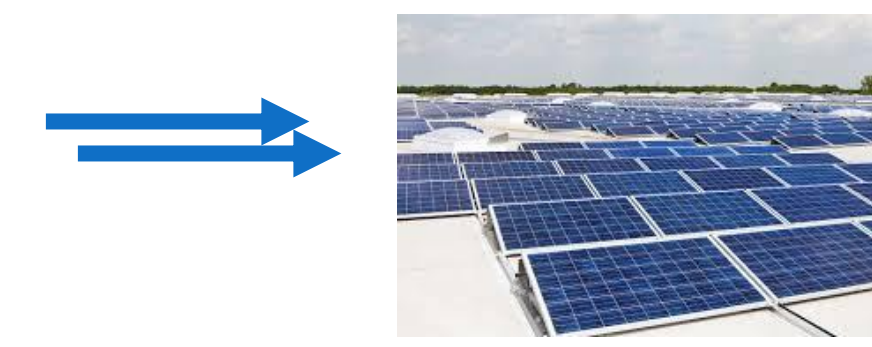
A.2.2 Inverter

Inverter with the following specification, or equivalent, shall be installed in the solar PV system:

Item	Inverter
Manufacturer	SMA / Huawei / Sungrow
Model Type	String
Rated frequency	50 Hz
Rated Power	230 V / 400 V
Connection Phases	3 phase
Certifications and standards	Refer to item 4.
Protection Rating	IP 65
Efficiency (%)	≥ 97.5%
Anti – islanding Protection	Yes

A.2.3
Operating

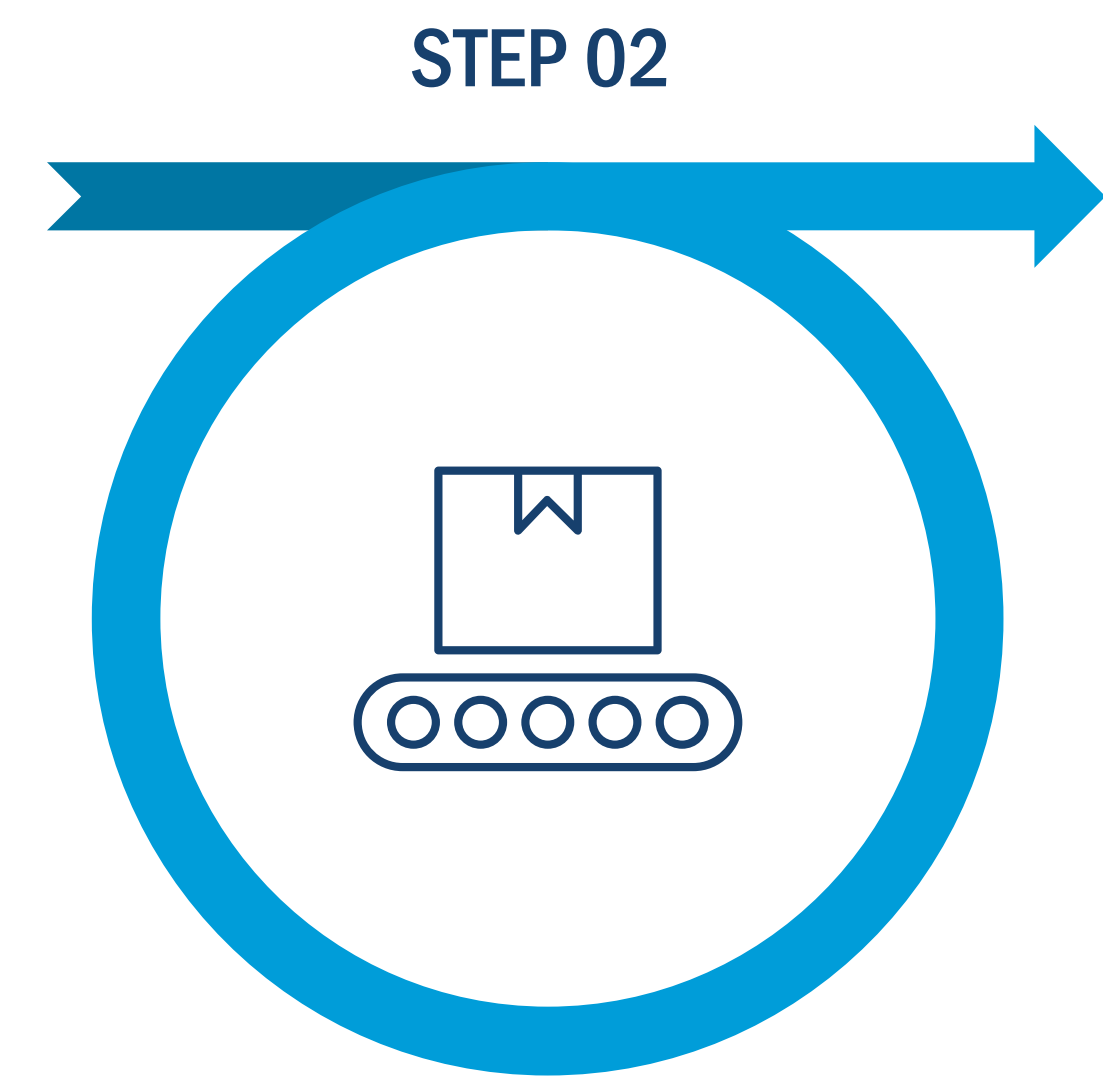
Requirements



Solar DC and AC size
Solar location



Solar specifications



Contracting

Sign SARE contract with customer and submit to TNBX

SARE (Appendix B – Solar meter)

Agreement details

SUPPLY AGREEMENT – RENEWABLE ENERGY

APPENDIX B

Description of Solar Energy Meter

B1. Metering Location & Arrangement

The Net Energy Output (kWh) delivered to the Consumer shall be measured by the Solar Energy Meter. The Solar Energy Meter shall be located at [•]. The point of metering shall be connected to the Consumer's distribution board.

B2. Installation of Metering System

As part of the design of Solar PV System, the Solar Energy Meter shall be verified upon commissioning by a qualified calibration institution and shall be procured and installed by The SPS Owner.

B3. Meter Reading

B3.1 In order to verify the quantity of electrical energy delivered to Consumer in each Billing Period, a half (1/2) hourly reading shall be obtained.

B3.2 The Consumer shall at all times gives TNB/SPS Owner all access to the location where the Solar Energy Meter is installed for witnessing of meter testing, verification of test result and meter readings at regular schedules agreed by both parties. The metering location shall only be accessed by TNB/SPS Owner with the presence of Consumer's representatives.

B4. Sealing

After verification of the meter, TNB/SPS Owner shall seal the Solar Energy Meter as per current TNB's Practice.

B5. Metering Room

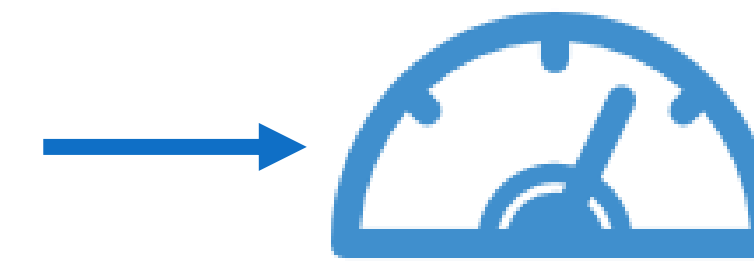
The Solar Energy Meter shall be installed at a mutually agreed location. The specification of the location of the meter shall be in accordance with TNB Electricity Supply Application Handbook (ESAH).

B6. Meter Inspection and Testing

The Solar Energy Meter shall be tested by TNB at a regular schedule determined by TNB in accordance with Prudent Utility Practices. The costs and expense for any additional inspections and tests shall be borne by the requestor.

B7. Custody of Solar Energy Meter

The metering equipment shall be the rights of TNB throughout the contracted period.

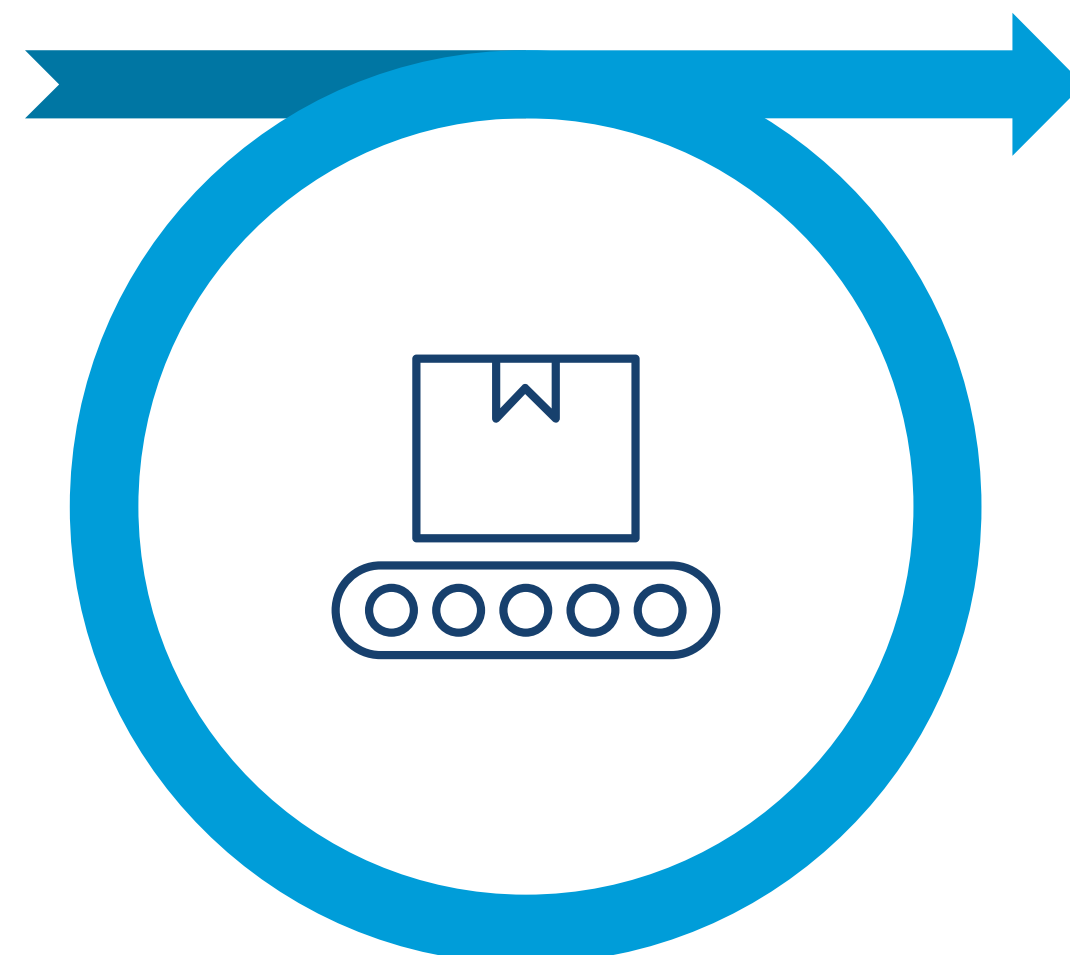


**Meter 2
Solar Energy Meter
location**

Salient points:

- 1. Solar meter is of TNB's standard, hence TNB will assist any dispute on metering between AO & Prosumer.**
- 2. TNB is empowered by SARE to disconnect either Meter 1 or Meter 2**

STEP 02



Contracting

Sign SARE contract with customer and submit to TNBX

SARE (Appendix C – Commercial terms)

Agreement details

APPENDIX C

Calculation of Solar Energy Payment

C1.0 Definitions

All capitalised terms shall have the meanings given to them in Clause 1.1 of this Agreement except as otherwise defined herein.

C1.1 Calculations of Solar Energy Payments

The Solar Energy Payments under this Agreement shall be calculated in accordance with the terms of this Appendix C. This Appendix C shall be read in conjunction with and subject to the provisions of Clauses 4 and 5 of this Agreement.

C1.2 Energy Payment

(A) Subject to paragraph C1.2(B) below, the Solar Energy Payment for Net Electrical Output delivered in each Billing Period shall be calculated as follows:

SOLAR ENERGY PAYMENT	SEP = NEO x SER
-----------------------------	------------------------

where:

SEP = the Solar Energy Payment (in RM) in such Billing Period;

SER = the Solar Energy Rate (at RM [•]/kWh); and

NEO = the Net Electrical Output (in kWh) delivered in such Billing Period.

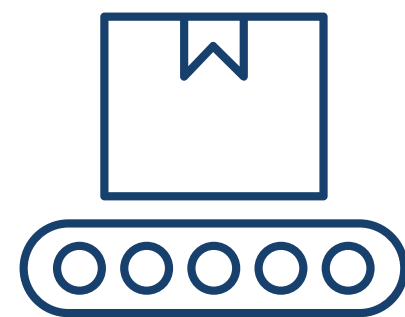
(B) If the Solar Energy Payment relates to a Billing Period which does not comprise a full calendar month, the Consumer agrees that the Solar Energy Payment for such Billing Period shall be determined in accordance with C1.2(A) above.

(C) The Minimum Solar Energy Payment = RM [•]

C1.3 Environmental Attributes

The environmental attributes from the Solar PV System shall be solely for the benefit of the [•].

STEP 02



Contracting

Sign SARE contract with customer and submit to TNBX



SEP price (after SARE)

Minimum Solar Energy Payment

Let say in a particular month the solar meter registered RM400 solar energy generated:

- a. If min set = RM 0, the bill issued is RM 400
- b. If min set = RM 800 (example), the bill issued is RM 800



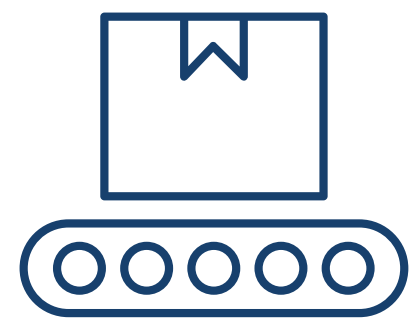
Carbon Credit Owners

We also recommend that AO and Prosumer to state clearly who owns the carbon credits and spells out in the contract

SARE (Appendix D – Description of site)

Agreement details

STEP 02



Contracting

Sign SARE contract with
customer and submit to TNBX



SARE (Appendix E Attachment – Buyout table)

Agreement details

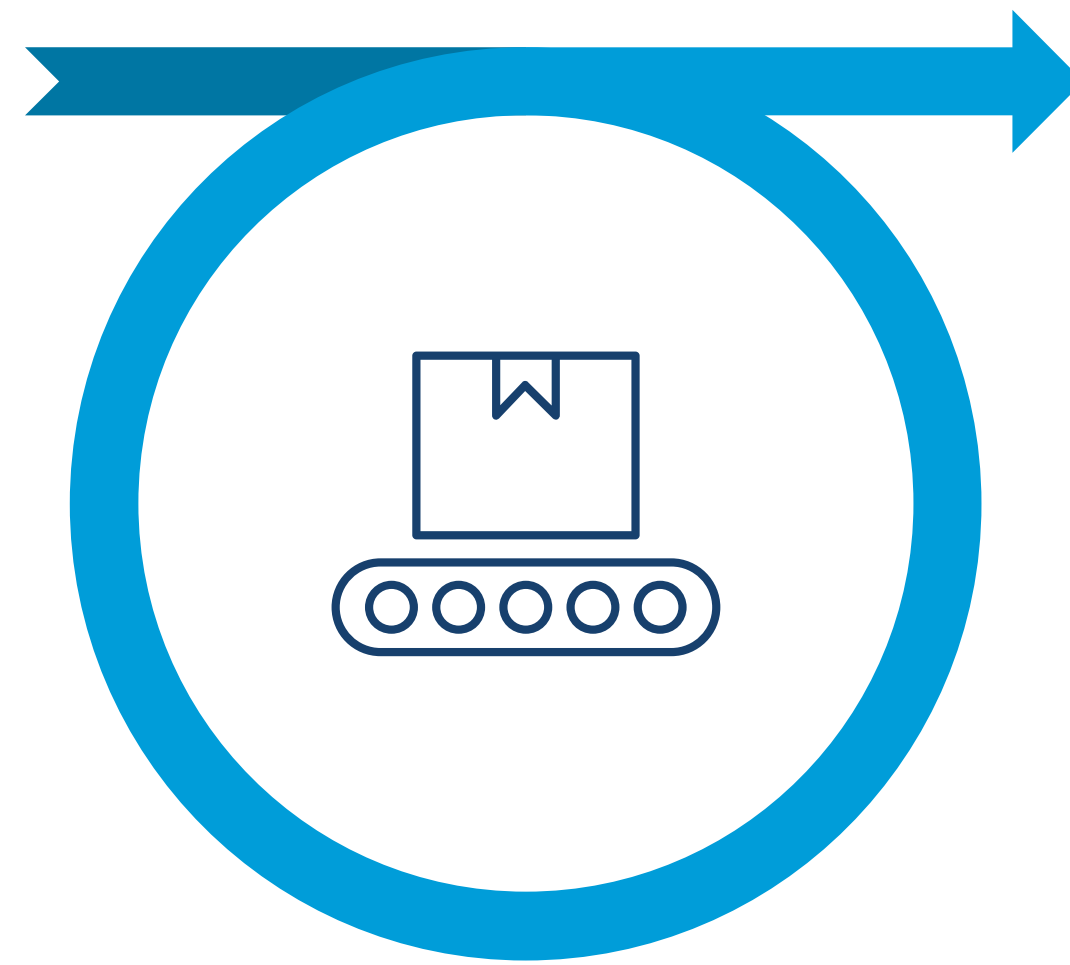
Attachment A to Appendix E

Determination of Said Purchase Price

- (a) The Said Purchase Price shall be determined by reference to the following table:

Assumed Calculation Date	Value of the Said Purchase Price as at the Assumed Calculation Date (in RM)
Commencement Date	NA
1 st CD Anniversary Date	
2 nd CD Anniversary Date	
3 rd CD Anniversary Date	
4 th CD Anniversary Date	
5 th CD Anniversary Date	
6 th CD Anniversary Date	
7 th CD Anniversary Date	
8 th CD Anniversary Date	
9 th CD Anniversary Date	
10 th CD Anniversary Date	
11 th CD Anniversary Date	
12 th CD Anniversary Date	
13 th CD Anniversary Date	
14 th CD Anniversary Date	
15 th CD Anniversary Date	
16 th CD Anniversary Date	
17 th CD Anniversary Date	
18 th CD Anniversary Date	
19 th CD Anniversary Date	
20 th CD Anniversary Date	
21 st CD Anniversary Date	
22 nd CD Anniversary Date	
23 rd CD Anniversary Date	
24 th CD Anniversary Date	
25 th CD Anniversary Date	

STEP 02



Contracting

Sign SARE contract with customer and submit to TNBX

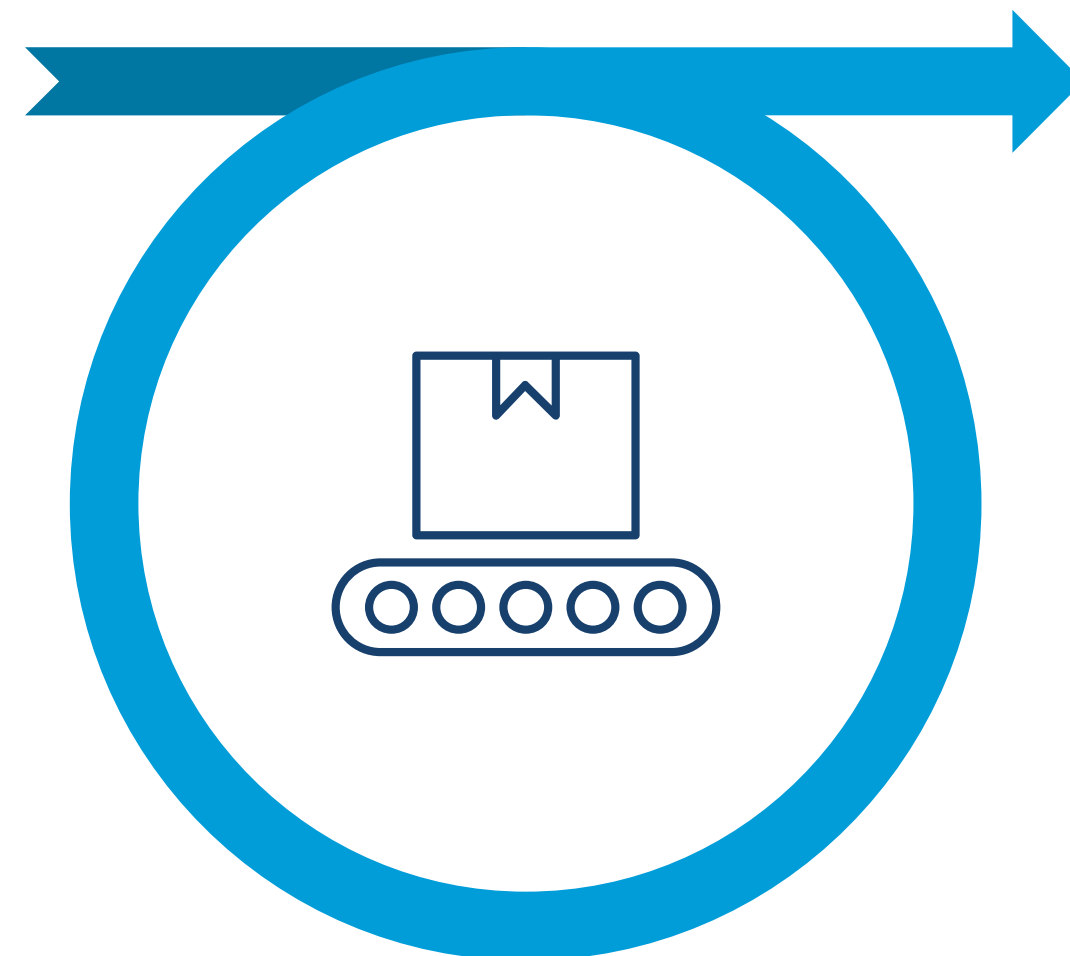
SARE (Appendix F– Owner’s Consent Letter)

Agreement details

APPENDIX F

OWNER’S CONSENT LETTER

STEP 02



Contracting

Sign SARE contract with
customer and submit to TNBX

To:

SPS Owner

[SPS Owner’s Address [•]]

Dear Sir,

RE : CONSENT LETTER TO SPS OWNER TO INSTALL SOLAR PV SYSTEM AND SOLAR ENERGY METER AT THE SAID PREMISES AND THE SITE LOCATED AT [•]

Pursuant to the above, I/we [*insert name, and NRIC or Company Number] *am/are the legal and beneficial owner of the Said Premises and the Site located at [•].

*I/We have entered into a *tenancy agreement/lease agreement with [insert consumer’s name] (“the Consumer”) for a term of [•] years expiring on [•]. For the purpose of this Agreement, *I/We hereby agree and consent to the installation of the Solar PV System at the Said Premises and the Site for the purpose of generating renewable energy for the consumption of the Consumer.

Signed by

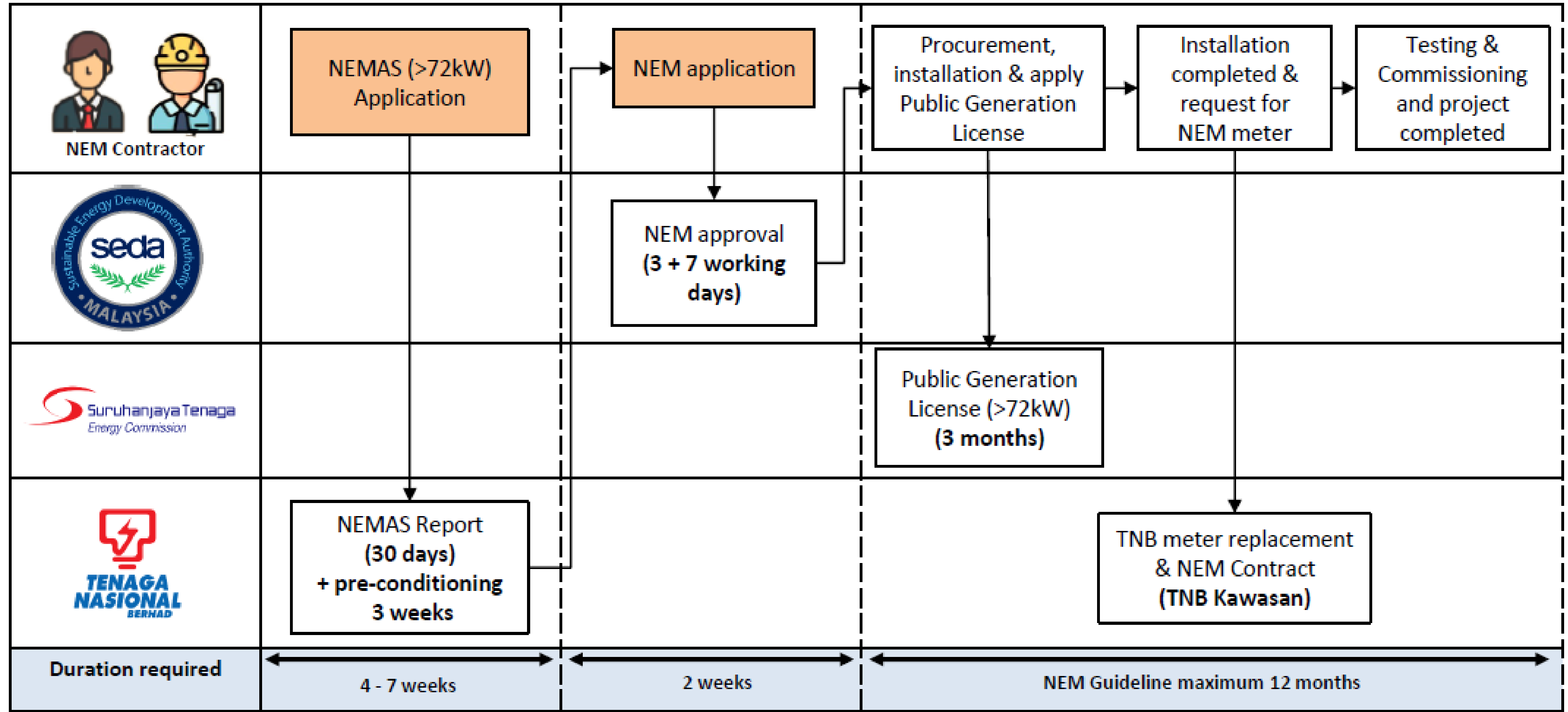
.....
[Name of Owner [•]]
[NRIC No of Owner [•]]



NEM Application

SEDA's NEM Application Process

High level workflow



New NEMAS fees

NEMAS fee as approved by Suruhanjaya Tenaga

Installed Capacity	Study Required	Fee of Study (RM)
1-72 kW	No	-
> 72 kW – 180 kW	Yes	1,000
> 180 kW – 425 kW	Yes	5,000
> 425 kW – 1 MW	Yes	8,000
> 1 MW – 2 MW	Yes	15,000
> 2 MW – 5 MW	Yes	20,000
> 5 MW – 10 MW	Yes	30,000
> 10 MW – 30 MW	Yes	40,000



THANK YOU

Get in touch with us:

TNBX@tnb.com.my

Level 13, Wisma TNB Jalan Timur, PJ Selangor