



WHA Energy Trading Platform – ERC Sandbox

Transitioning to smart renewable energy



21 July 2025

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#1 Logistics Developer in Thailand
with over 3.09 million square meters
of Ready-built and Built-to-Suit
Warehouses and Facilities for rent



A pioneer in Green Logistics
360 Leased Vehicles (including both
vehicles and chassis) and 38 Chargers
Installed

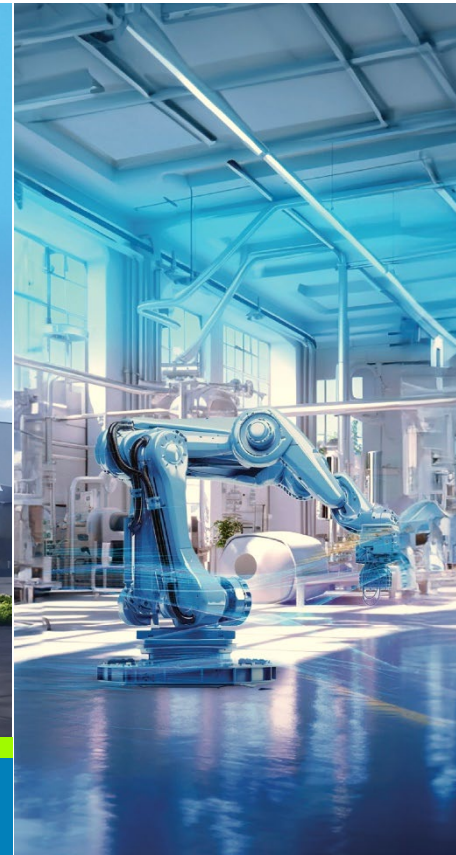


MOBILIX

Powered by
WHA
GROUP



#1 Industrial Estate Developer in Thailand
13 industrial areas with total area of
79,395 rais (1,000+ Customers/)



#1 Integrated industrial Utilities and Energy Provider in Thailand
Utilities Sales & Management about 40 Million Cubic
Meter and Secured PPA Equity MW total 980 MW

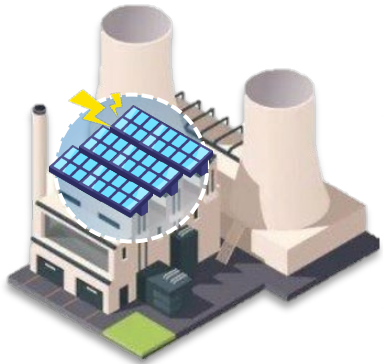


Group Spearhead for the Upcoming
New Digital Economy
> 40 Digital Transformation Projects
> 12 AI Transformation Projects

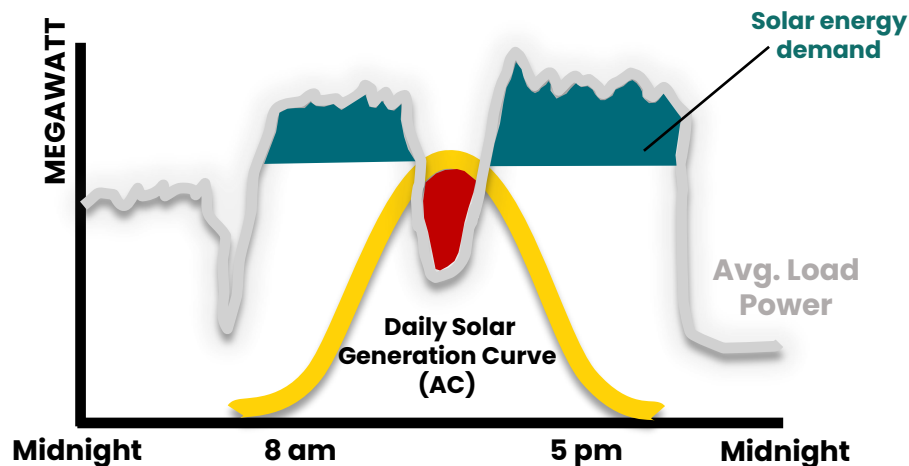


Renewable Energy Limitation

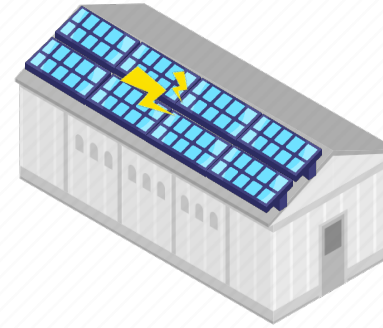
Factories



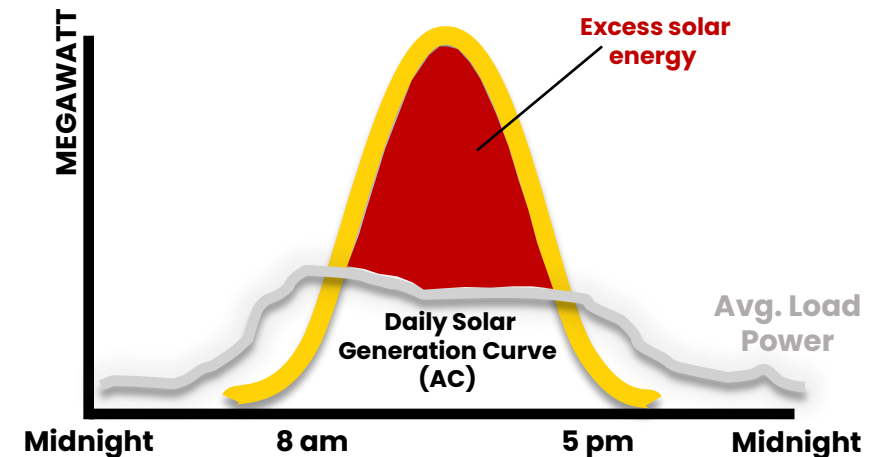
- High energy consumption, but **limit space** for solar installation
- Opportunity loss for renewable energy usage



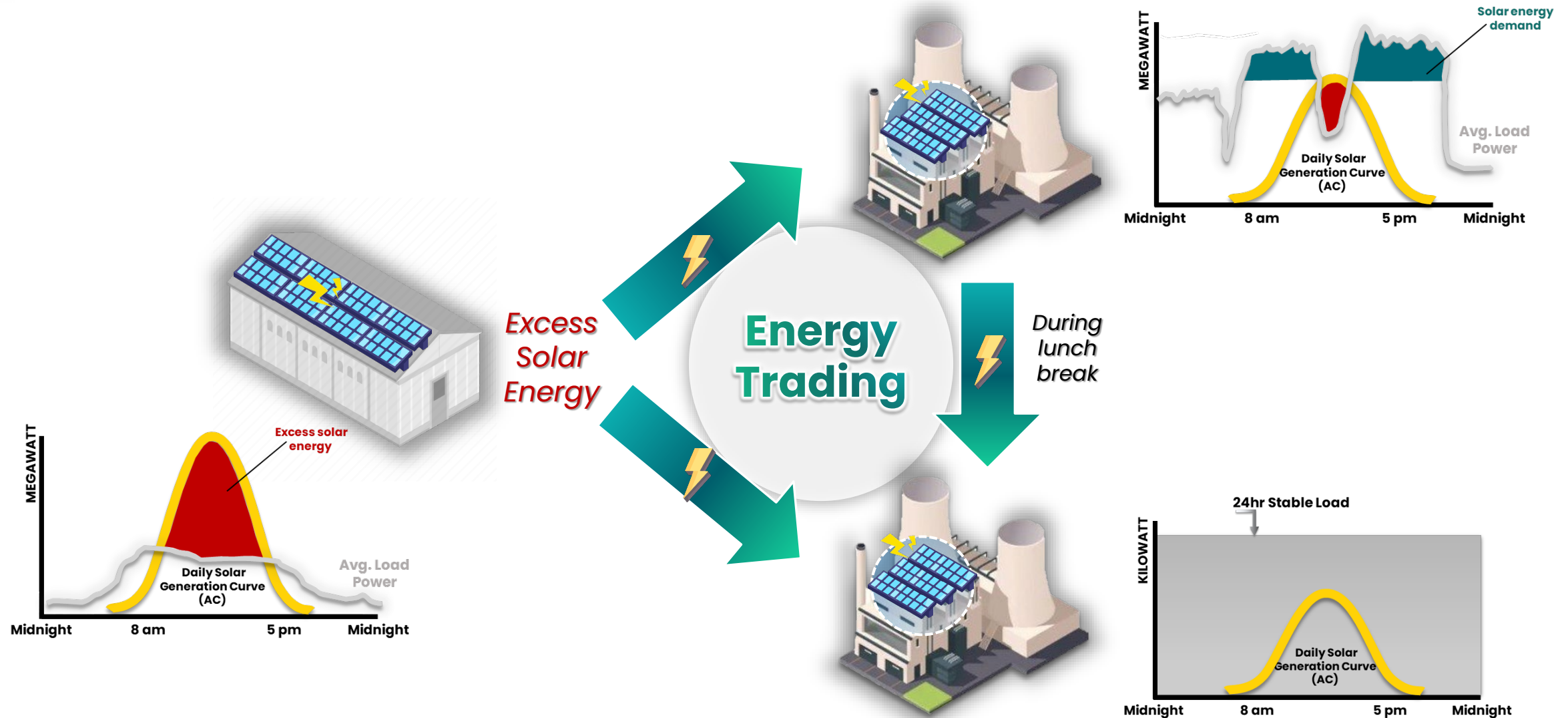
Warehouses

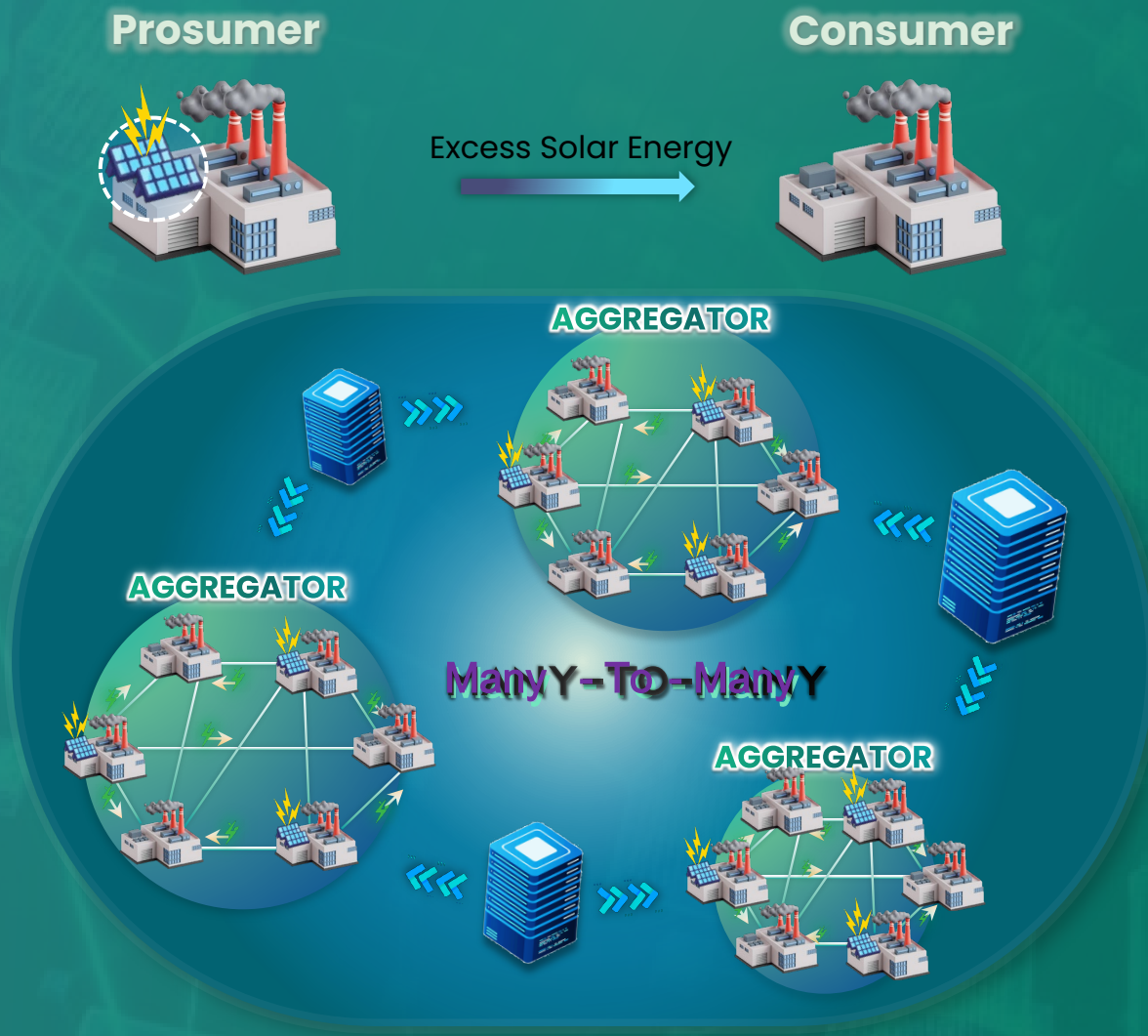


- Large solar installation space, but **limit energy consumption**
- Opportunity loss for rooftop space utilization



What If Energy Trading Is Possible?





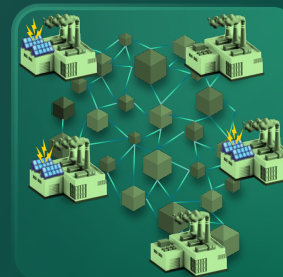
- **P2P Energy Trading** could be solution that prosumers and consumers can transfer electricity via grid distribution/transmission line.
- Generators and Loads will be aggregated by **Aggregator** who has responsibility for **market management** to ensure efficiency and reliability.
- This mechanism could **leverage excess energy** from one to another and **maximize renewable energy usages** for sustainability.



Joint Venture between :



“RENEX has passed the Connectivity Testing with PEA's Platform”



Fully Support **Many-to-Many** Trading Scheme

and other schemes e.g., 1-to-Many, Many-to-1



Two-sided Auction Available

Buyers purchase energy at their preferred price and Sellers receive extra revenue for their excess energy



Blockchain Technology

Systematic auction management with traceable transaction



100% Market Clearance

All excess solar energy will be sold to consumers through this trading mechanism



Participants



4 Prosumers, Max Supply 2 MW *Solar Rooftop*

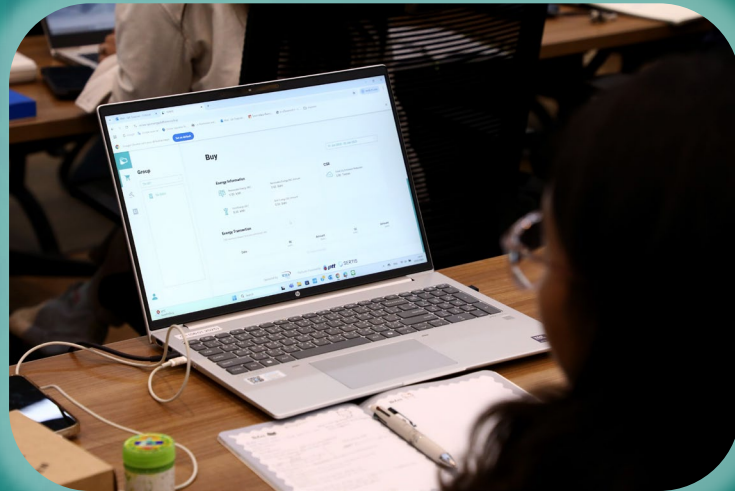


30+ Consumers, Max Demand 20 MW *Industrial Customers*

Key Highlights

- Apart from energy, **I-REC and Carbon Credits** are also available for trading
- Trading across 2 markets via aggregator
- Solve all problems of industrial use case and energy transaction

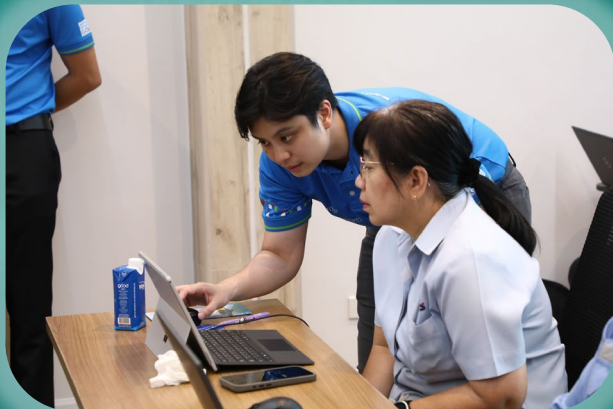
RENEX Energy Trading Platform Seminar and Workshop



More than **100 participants**



Successfully Testing with Industrial Users



- Preparation platform
- Preparation platform participants and market (Price, behavior)
- Preparation operation management
- Regulations feedback

Quick Glance At The Platform



Group

Group 1

Meter 001

Meter 002

Meter 003

Meter 004

Buy

8 Aug 2021 - 14 Aug 2021

Your energy bought in 09 Oct 2021 - 09 Nov 2021

Last updated on 22 Oct 2021 | 13:12:05

Meter name

Group name

Contract No.

Meter 001

Group 01

S48190482

Summary

Total energy

1,824.007 kWh

Total amount

1,824.007 Baht

Total saving (compare to grid price)

1,824.007 Baht

Energy information

Renewable energy (RE)

12,840.000 kWh

Renewable energy (RE) amount

12,840.00 Baht

Grid energy (GE)

12,840.000 kWh

Grid energy (RE) amount

2,840.00 Baht

CSR

Total CO2 emission reduction

40.00 Tonnes

Energy transaction

The numbers shown here are estimated only.

Time	RE (kWh)	Unit price (Baht)	Amount (Baht)	GE (kWh)	GE Unit price (Baht)	Amount (Baht)
12:01 - 13:00	500.000	2.85	1,425.00	300.00	3.25	975.00
13:01 - 14:00	500.000	2.85	1,425.00	300.00	3.25	975.00
14:01 - 15:00	500.000	2.85	1,425.00	300.00	3.25	975.00
15:01 - 16:00	500.000	2.85	1,425.00	300.00	3.25	975.00

Operated By

WHA

Platform Powered By

ptt

SERTIS

Summary

- Show energy and price
- Show energy sources and CO2 emission reduction
- Show summary of energy consumption and generation of each hour

Invoice

Company Logo

Aggregator Name

Tax ID 0108811000080

597/5 Sukhumvit Rd. Klong Tun Nuea

Wattana Bangkok 10110

Phone 024671620

Branch Code/Name

000000/Head Office

Invoice No.

B-IV201912000012

Contract Type

Buy

Contract No.

CT20191200004

Period

15/11/2019 - 14/12/2019

Date of Issue

15/12/2019

Due Date

01/01/2020

Bill to:

Buyer Company Name

Tax ID 0108811000072

111/909 Sathon Rd. The Bangkok, Bth Fl.

Yan Nawa, Sathon, Bangkok 10120

Phone 028977210

Customer ID

TN201901000001

Branch Code/Name

350000/Sukhumvit 24

Total Amount

21,017.20 Tokens

View Detail

Renewable Energy Consumption

No.	Description	Quantity (kWh)	Amount (Tokens)
1	Renewable Energy (On Peak)	3,000.000	8,340.00
2	Renewable Energy (Off Peak)	300.000	900.00
Sub Total			9,240.00
RE Service Fee (0.3 Tokens/kWh)			990.00
Total Amount			10,230.00

Grid Energy Consumption

No.	Description	Quantity (kWh)	Amount (Tokens)
3	Grid Energy (On Peak)	2,000.000	6,640.00
4	Grid Energy (Off Peak)	200.000	800.00
Total Amount			7,440.00
Demand Charge			2,000.00
Sub Total			19,670.00
Vat 7%			1,376.90
Withholding Tax 3%			29.70
Grand Total Amount			21,017.20

Remark: Withholding tax withheld from RE Service Fee.

Invoice

- Show all details of energy consumption, Total amount, seller and buyer

ERC Sandbox Benefits



Energy Trading Platform in
Real-World Scenarios



Explore best solutions for
future energy marketplace



Customer-centric
More investments by increasing green energy sources



Resources utilization
Create values from excess energy for one another

Next Steps..



**De-regulation and permission
for actual trading**



**Complete TPA Code and
wheeling charge**



Thank you



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