

Mekong Environmental  
Resilience Week

14 September 2023

# Parallel Session D: Energy Security and Transition to Renewables

Eastin Grand Hotel Sathorn  
Bangkok, Thailand



# Parallel Session D: Energy Security and Transition to Renewables

Mekong Environmental  
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**Dr Puree Sirasoontorn**  
Associate Professor, Thammasat  
University  
MODERATOR



**Mr Natharoun Ngo Son**  
Country Director, EnergyLab  
Cambodia



**Ms Hanh Le**  
Founder/CEO, Empacte



**Mr Dimas Fauzi**  
Regional Coordinator and Program Management  
Senior Officer, Southeast Asia Energy Transition  
Partnership, UNOPS



**Prof Oulavanh Sinsamphanh**  
Lecturer, National University of  
Laos



**Dr Lamphone Dimanvong**  
Head of Division, Hydropower Reservoir  
Management Division, Department of  
Energy Policy and Planning, Ministry of  
Energy and Mines





ENERGY  
TRANSITION  
PARTNERSHIP

# Mekong Environmental Resilience Week 2023

Bangkok, Thailand  
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The ETP brings together a range of partners focused on supporting the energy transition in Southeast Asia including:



Environment and  
Climate Change Canada  
Environnement et  
Changement climatique Canada



Australian Government  
Department of Climate Change, Energy,  
the Environment and Water



CHILDREN'S  
INVESTMENT FUND  
FOUNDATION





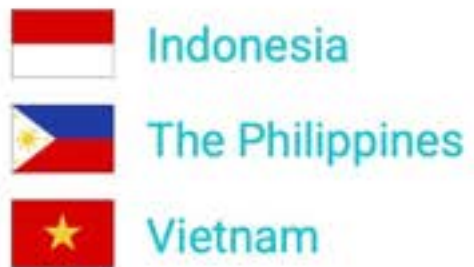
History



Fund Manager

15  
Years  
2020-2035

Duration of the Partnership



Countries of Operations



Organization





## Policy inconsistency with national and international climate commitments

While countries and international communities have set ambitious climate targets, policies are not aligned with these goals where dependency on fossil fuels is high.



## High risks of renewable energy and energy efficiency investments

Investment in renewable energy and energy efficiency is risky due to various reasons, such as due to the lack of market competition and regulatory uncertainty.



## Grid infrastructure is not ready to take up intermittent renewable energy supplies

Transitioning towards renewable energy involves modern energy systems integration, but the power grids might not be able to accommodate energy intermittency.



## Lack of awareness and capacity to shift towards low carbon energy systems

Energy transition could be a new concept that might signal uncertainties to actors and stakeholders, deterring them from taking part in advancing energy transition.



## Needs-based and bottom up approach

Reflecting the needs of the stakeholders through consultations and direct requests.



## Continuous engagement

Regular interaction with stakeholders to materialize partnerships and build trusts.



## Introducing proof of concept

To give an idea on the steps needed to undertake transition and the potential implications.



## International best practices

Identifying what works and does not from the actual implementation elsewhere and adopt them.



# Thank you.

Join ETP and be part of  
shaping a clean tomorrow

Sumali sa ETP at maging bahagi ng paghubog  
sa isang malinis ng kinabukasan • Bergabunglah  
dengan ETP dan menjadi bagian untuk membangun  
masa depan yang lebih bersih • Tham gia  
ETP và cùng kiến tạo một ngày mai trong lành

[www.energytransitionpartnership.org](http://www.energytransitionpartnership.org)





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# Sustainable Finance for Energy Transition

Building Climate Resilience in the Mekong  
Region: Bridging Science, Policy, and Practice  
Eastin Grand Hotel Sathorn Bangkok, Thailand





# Sustainable finance recognized as a key instrument to reach these goals & has grown exponentially in ASEAN



Active policy developments in recent years including taxonomies, disclosure requirements, incentives for issuance...



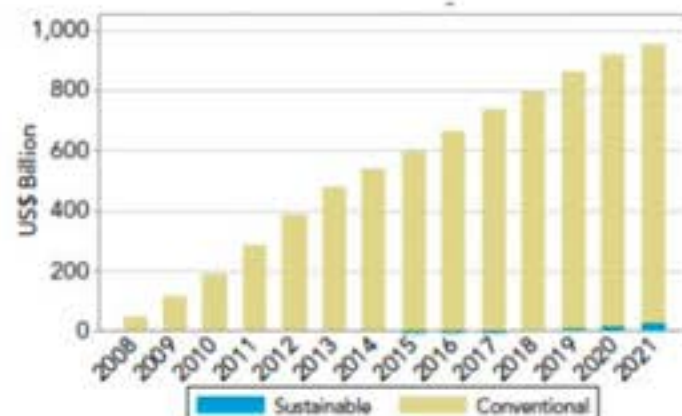
Sustainable debt markets have grown significantly in ASEAN , mirroring the global trend

- Total **global** outstanding sustainable debt grew from **USD 23.8 billion** in 2013 to **USD 2.26 trillion** in 2021.
- Sustainable debt in key emerging **ASEAN** markets increased roughly by 200% on average between 2019-2021, with issuances of **USD 6.75 billion** in 2021, bringing the total outstanding sustainable debt to **USD 24 billion**.

# However, ASEAN sustainable debt market is still **small....**



... compared to the region's conventional debt market...



Source: World Bank (2022)

In ASEAN, sustainable debt represents **2.5%** of total conventional debt market vs **3.3%** global average and 5-16% in top 20 economies.

... compared to the global sustainable debt market...

ASEAN emerging markets take up **1%** of total outstanding sustainable debt globally.

... in the **billions**, **NOT the trillions** as needed for the annual climate investments

**USD 24 billion**

ASEAN outstanding sustainable debt market (2021)

**vs.**

**USD 3.3 - 4.5 trillion**

Annual SDG-related financing requirements for developing countries (UNCTAD)

# Thank you!

Hanh Le

Founder of EMPACTE

Contact: [hanh.le@empacte.co](mailto:hanh.le@empacte.co)





# Outlook of Hydropower Development in Laos PDR

Ministry of Energy and Mines, Department of Energy Policy and Planning( Laos PDR)

Mr. Lamphone DIMANIVONG

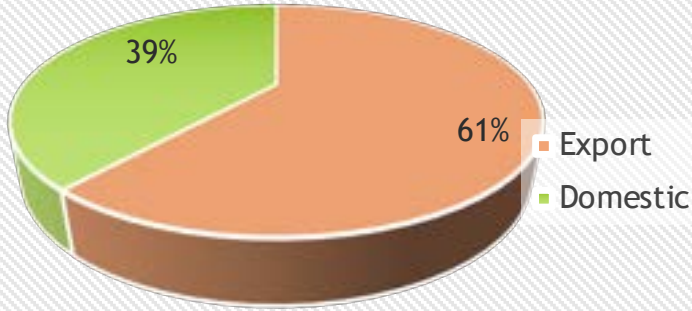
# Existing Electricity Generation Sources in 2022.



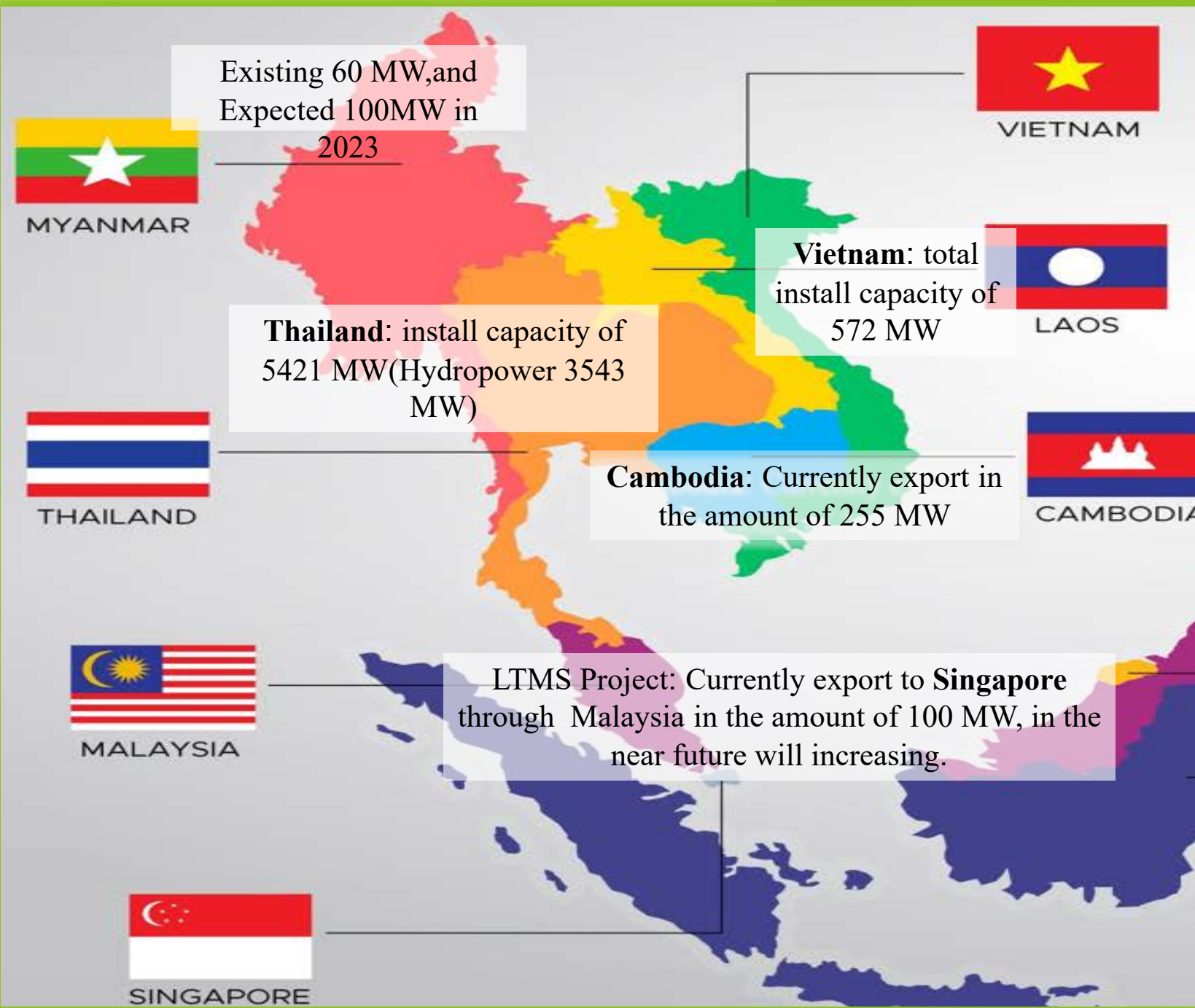
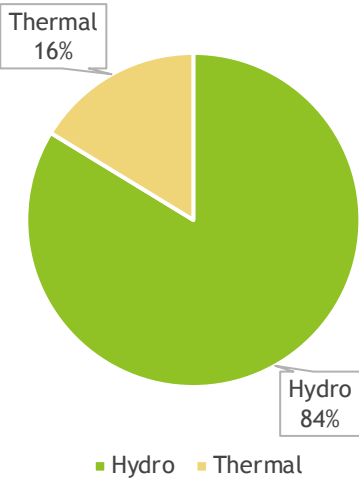
Type	Amount	Install Capacity(MW)	GWh
Hydropower	81	9615.1	45,703.20
Coal Thermal	1	1,878	12,200
Solar	7	56	94
Biomass	4	112	702.7
<b>Total</b>	<b>93</b>	<b>11,661</b>	<b>58,701</b>

# Export Status.

Export and Domestic(MW)



Export





# Thanks for your attention!

Lamphone DIMANIVONG  
[dimanivong@gmail.com](mailto:dimanivong@gmail.com)  
Tel: 85620 22239198

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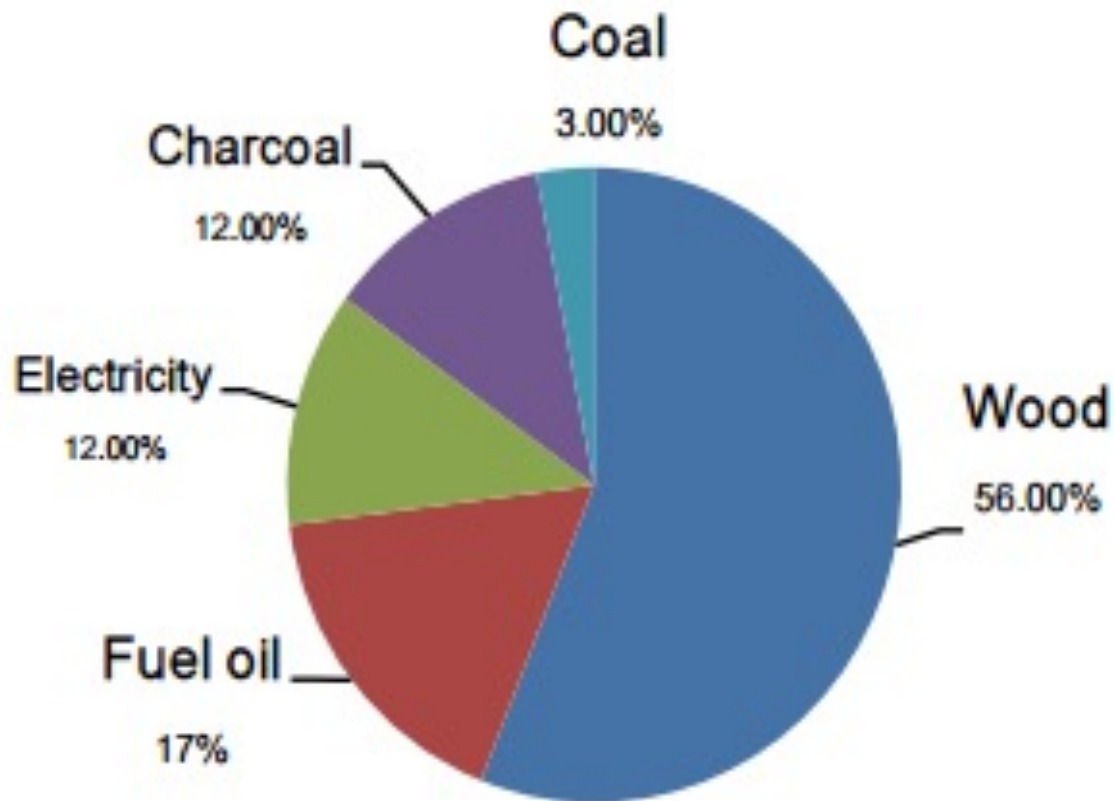
# Energy Security and Transition to Renewables

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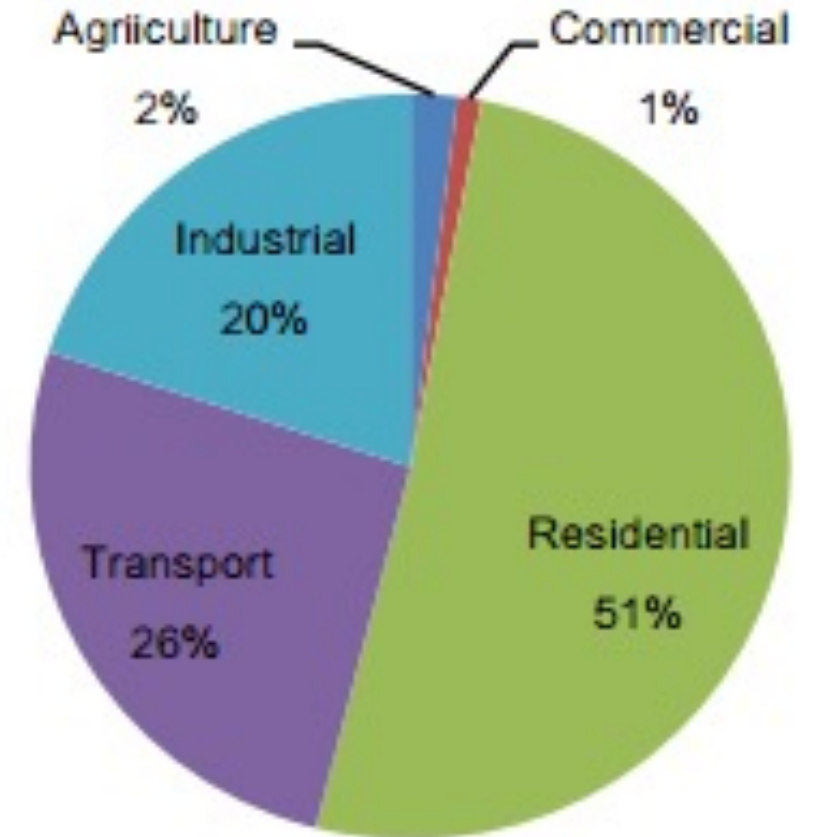


# 1. Energy Sector in Lao PDR

Energy consumption by type



Energy consumption by sectors





# 3. Renewable Energy Road Maps..2025

## Targets for 2025

The Government aims to increase the share of renewable to 30% of the total energy consumption in 2025. such as **Biomass, hydropower, solar energy** In some part of the country there are some potential of **wind and geothermal energy**



Biomass energy



Hydro energy



Wind energy



Wide observation  
of the Nature



Geothermal energy

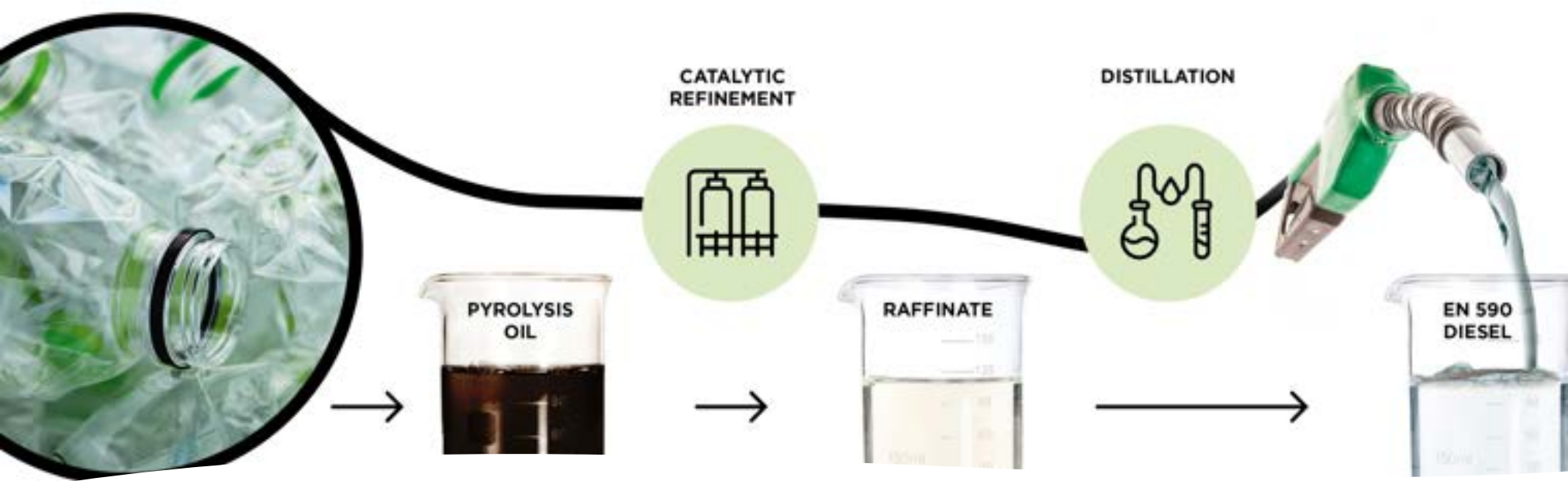


Solar energy



Tidal energy

- Biodiesel;
- Bio ethanol;
- Small hydropower;
- Solar energy;
- Biogas;
- Biomass;
- Wind energy;
- Other alternative sources of energy for transport.



## sciences and Policy Barrier

- Supporting funding to research support, Laboratory, and experiment, phototype,
- on alternative Renewable Energy resources such as: The pyrolysis, smart solar farm, Bio-Energy, waste to Energy and innovation
- PPP with relevance sectors
- Internal collaboration, research institute, University, private company Lab





100 T of RDF could produce 2 MW of Electricity



RDF3 size

RDF: Refuse-derived fuel

Waste to Energy



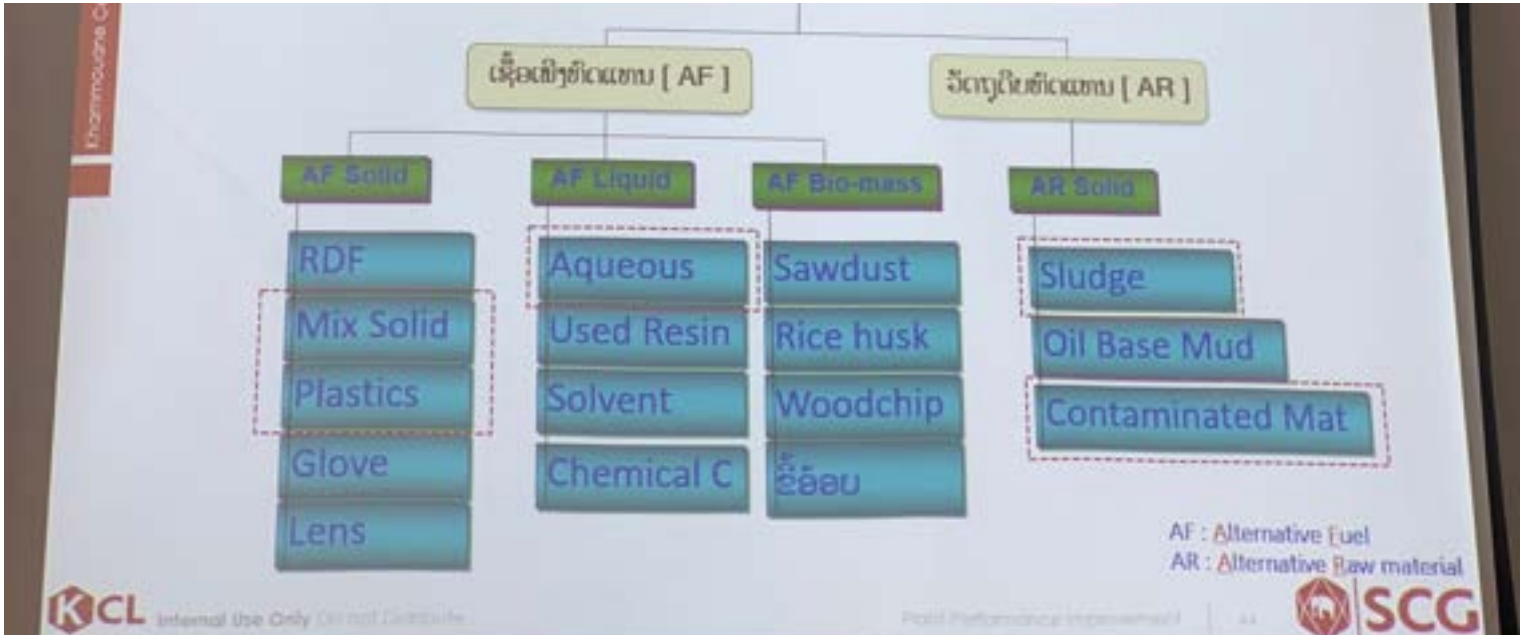




## Case study: Khammuan Landfill

- Landfill 80 ha new established in Khammaun province
- Waste separation machine to provide RDF products to KCL-SCG (on preparation)
- Recycle waste management and sorting for valuable waste





- Biomass fuel from Rice hast, woodchip, saw dust and RDF total energy generate from waste to energy support KCL-SCG in total 15.37% of total capacity of fuel to produce 4500-5000T of cement per day



Thank you!

