IETA-ICTSD Article 6 Business Dialogue

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Experiences from the JCM and Implications to Article 6.4 Mechanism

Tatsushi Hemmi

Chief analyst Environment and Energy Dept.

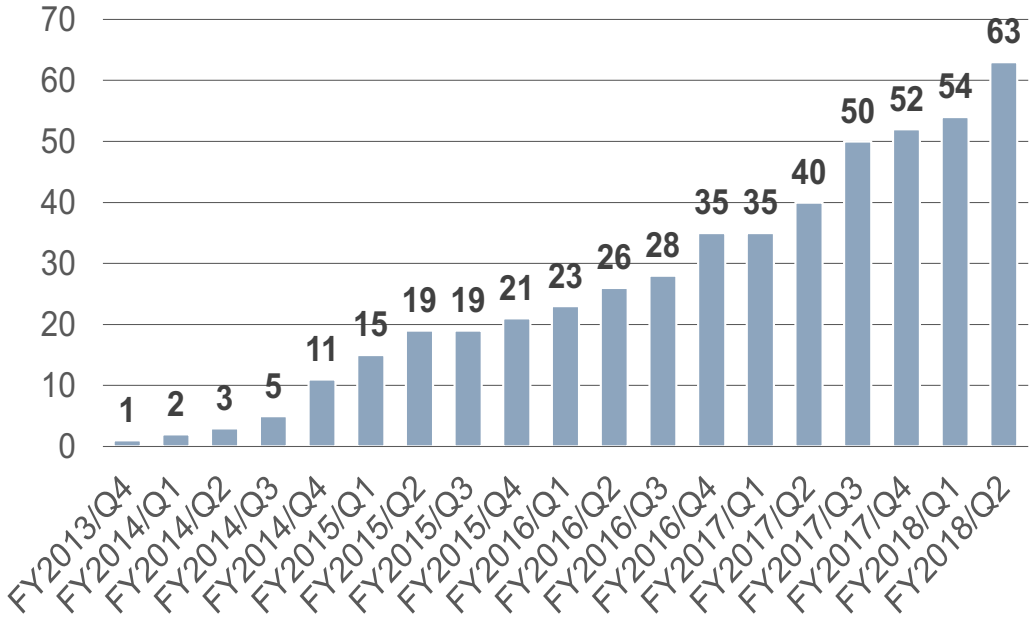
Mitsubishi UFJ Research and Consulting
A member of MUFG, a global financial group

JCM in numbers

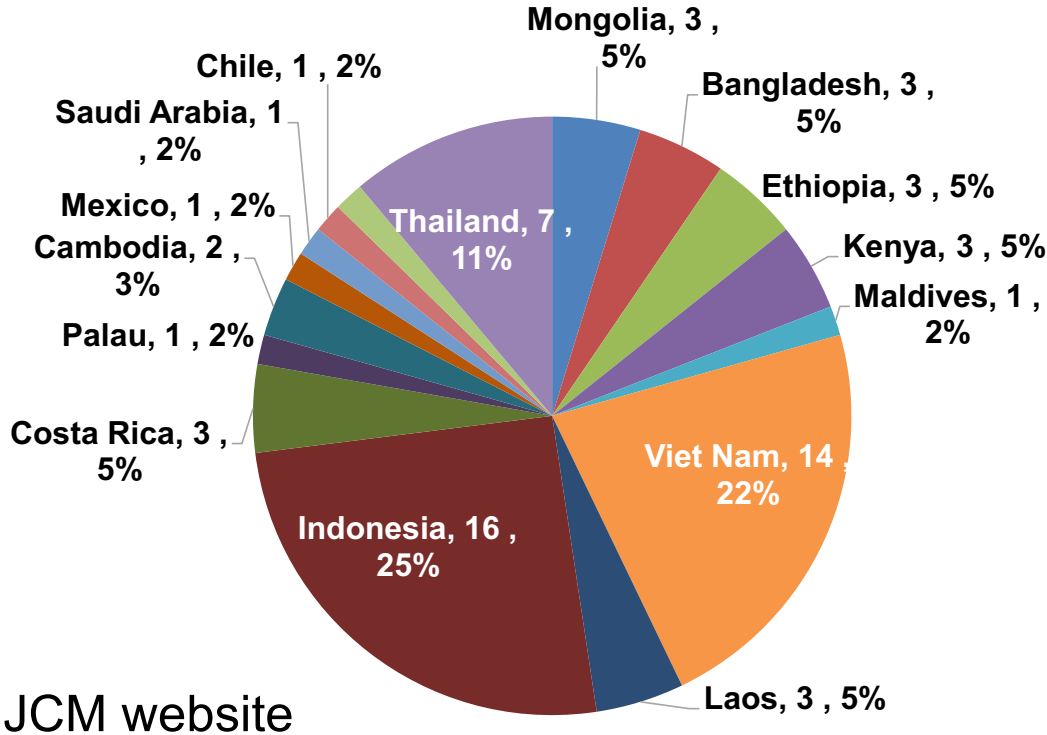
JCM in Numbers – Approved Methodologies

63 methodologies in 16 countries

- Since 2014, number of approved methodologies have increased significantly.



- Indonesia, Vietnam and Thailand dominate majority, while other partner countries have started to pick up



Source: JCM website

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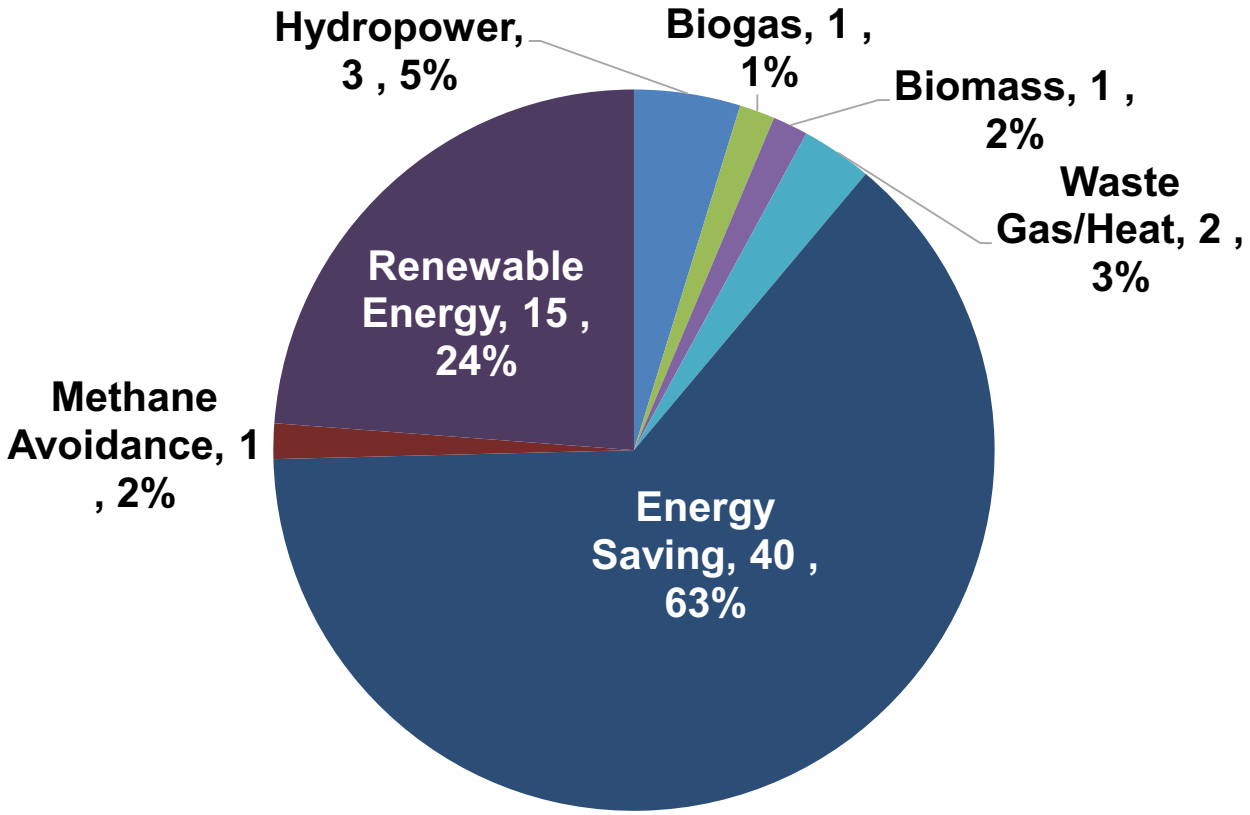
JCM in Numbers – Approved Methodologies

Methodologies in JCM

- Energy Saving: 63%
- Renewable Energy: 24%

These 2 types have a large share in the JCM methodology category



Source: JCM website

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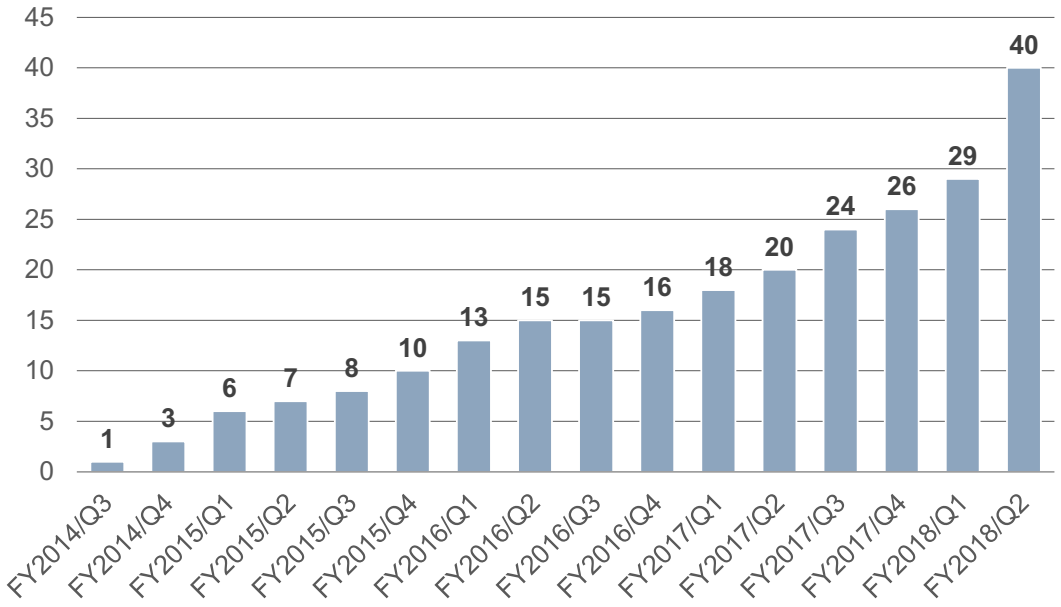
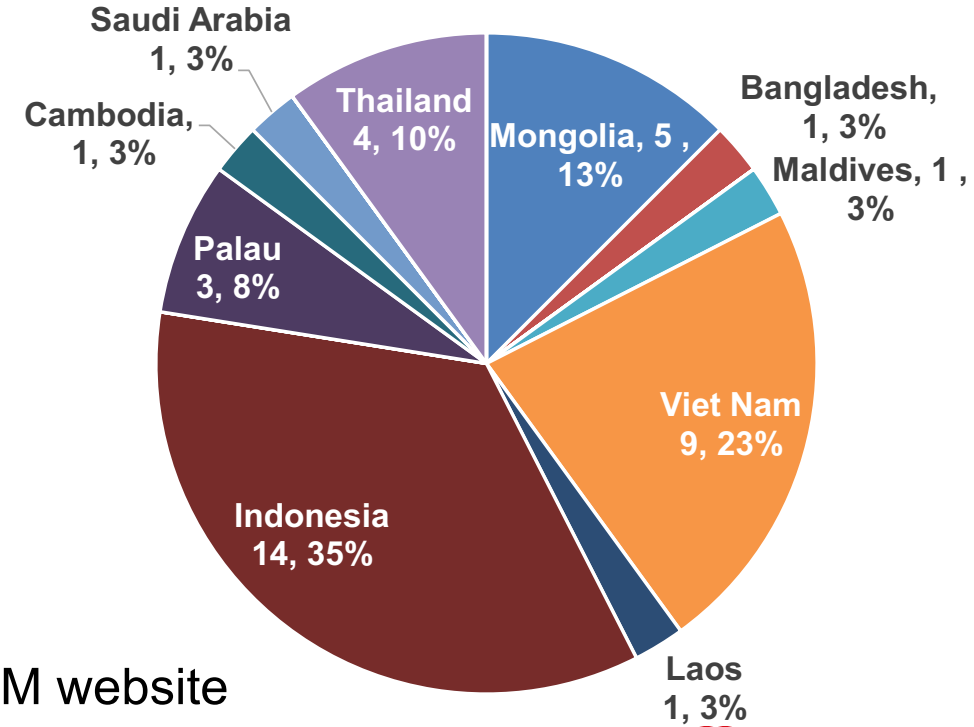
JCM in Numbers – Registered Projects

40 projects in 10 countries

- Since 2015, number of registered projects has reached more than 40



- Indonesia and Viet Nam have a large share, while many PJs are in the pipeline in other partner countries



Source: JCM website

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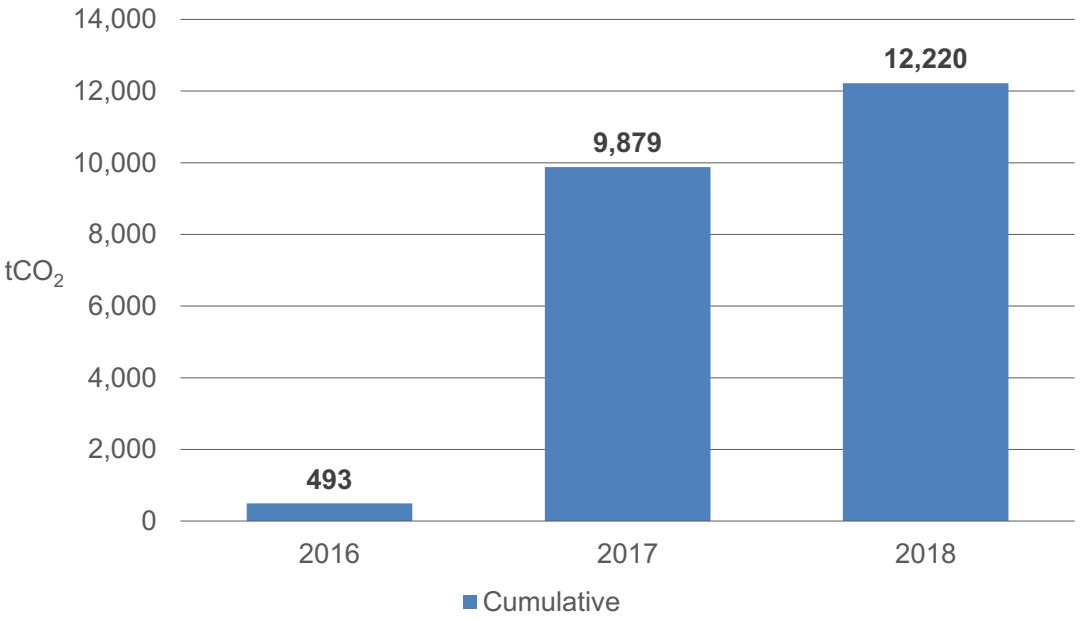
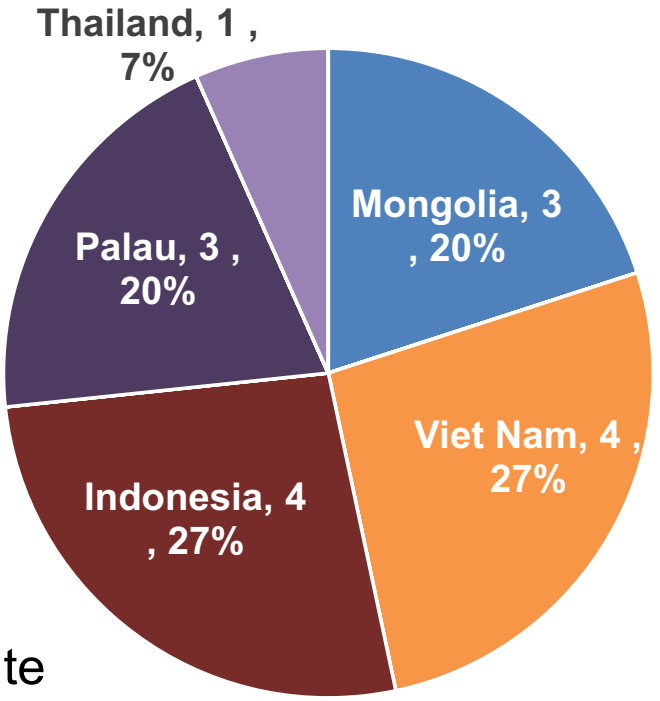
JCM in Numbers – Issued Credits

Over 10,000 t-CO_2 in 5 countries

- So far, over 10,000 t-CO_2 of credits have been issued in 5 countries
- Credits have been issued in 5 countries so far, but more to be expected as the number of registered projects increased





Source: JCM website

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Implications to Article 6.4 from the experience of the JCM

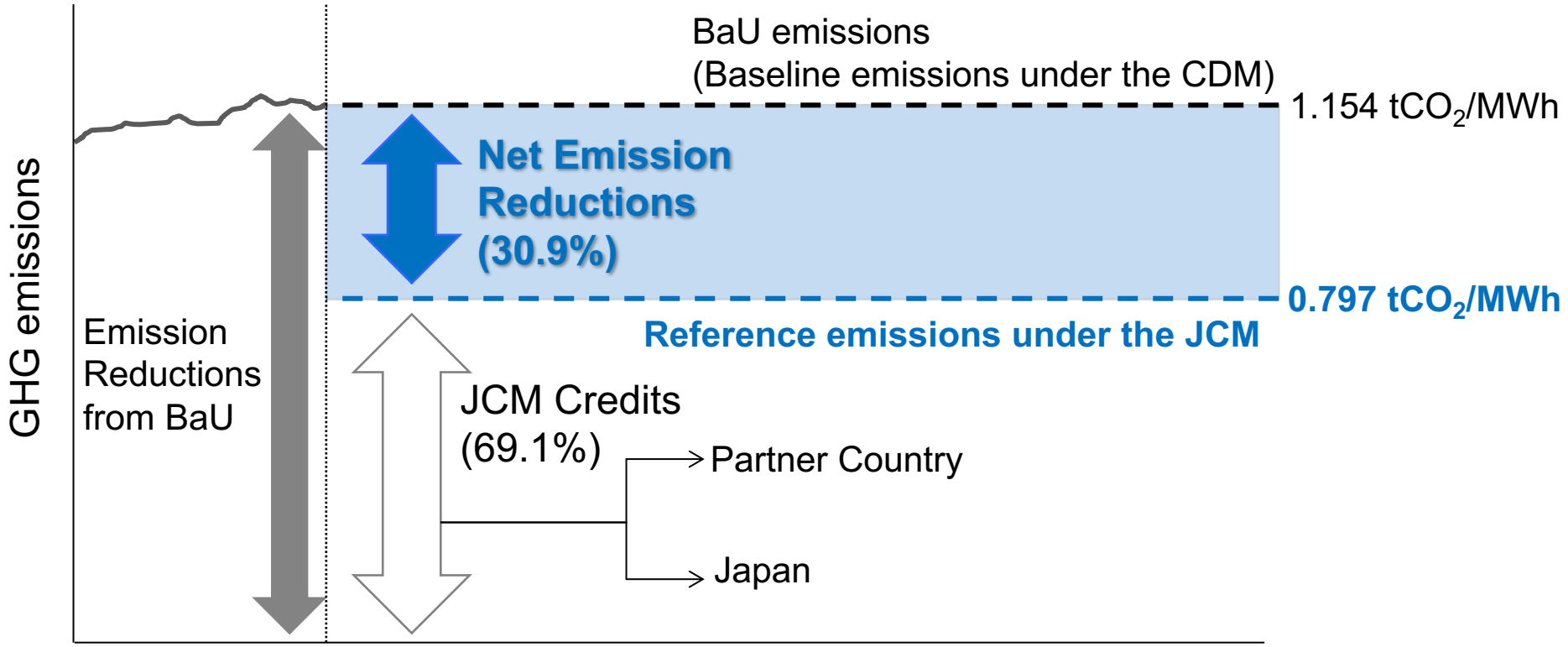
Application to Overall Mitigation in Global Emissions

- Article 6.4 mechanism shall aim "to deliver an overall mitigation in global emissions (OMGE)"
- The JCM introduced a concept similar to OMGE called Net Emission Reductions (NER) which:
  - Are achieved via design of JCM methodologies
    - Reference emissions ➔ more conservative than BaU emissions
  - Contribute to additional emission reductions

Solar PV System

MN_AM003_ver01.0 “Installation of Solar PV System”

	Emission factor	
BaU	1.154 tCO_2/MWh	(Grid emission factor published by Mongolian government)
Reference	**0.797** tCO_2/MWh	(The most efficient coal-fired plant supplying power to the national grid)



Solar PV System: How to ensure NER

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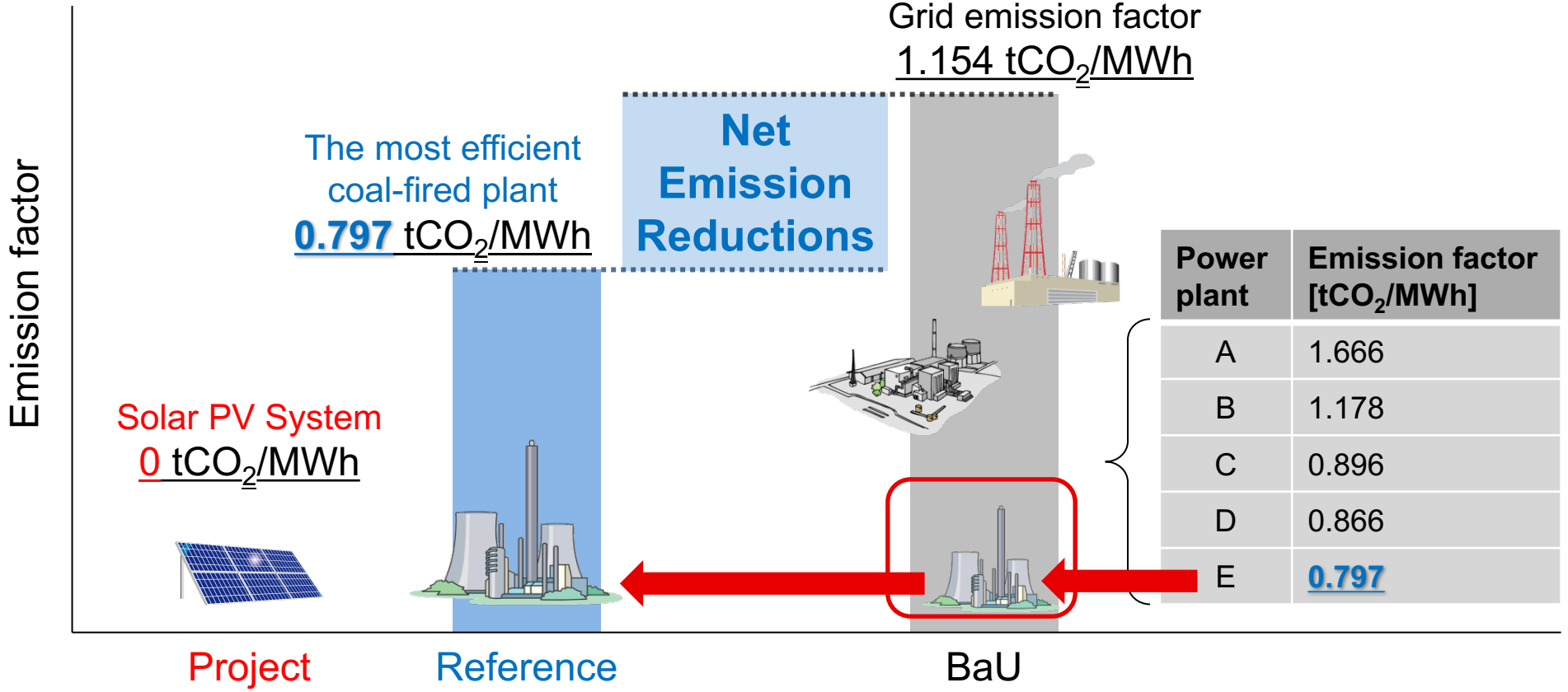
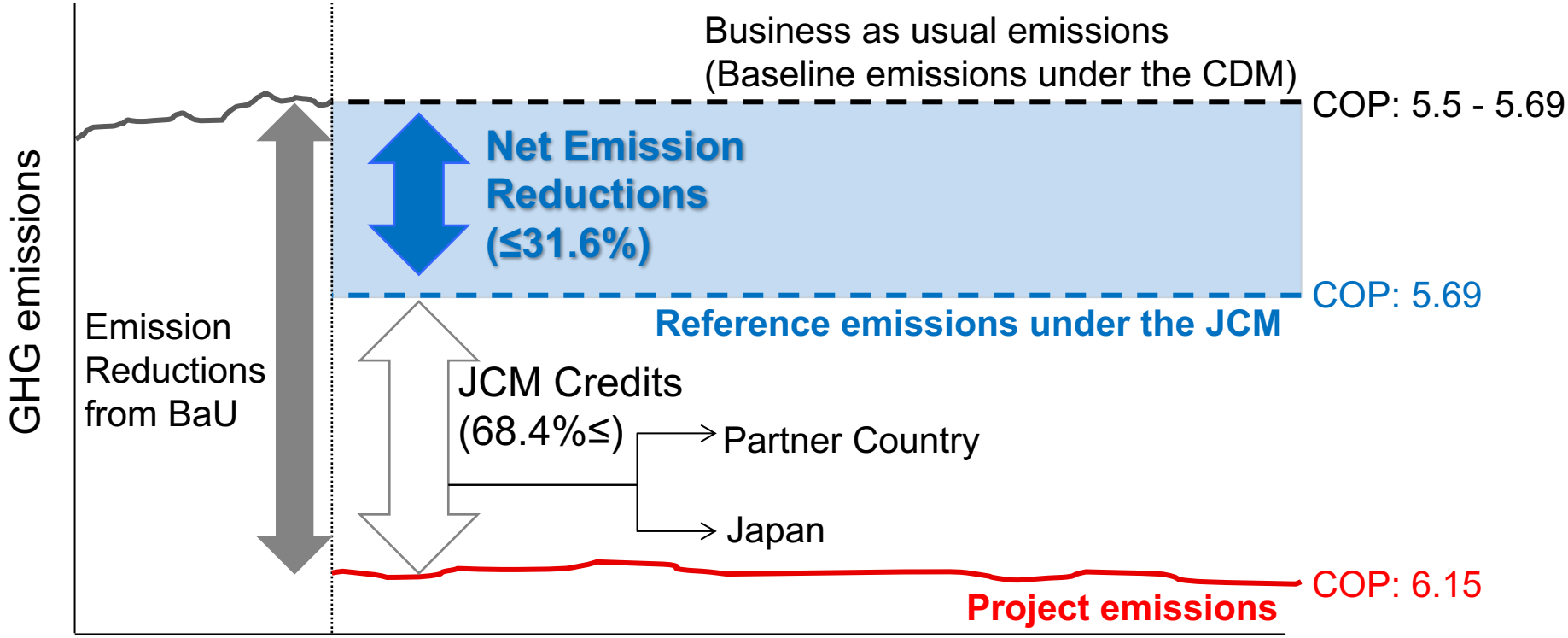


Power plant	Emission factor [tCO_2/MWh]
A	1.666
B	1.178
C	0.896
D	0.866
E	**0.797**

Chiller

TH_AM003_ver01.0 “Energy Saving by Introduction of High Efficiency Inverter Type Centrifugal Chiller”

	Coefficient of performance (COP)	
BaU	5.5 - 5.69	(COP values of inverter type centrifugal chiller in Thai market)
Reference	5.69	(The most efficient COP value in Thai market)

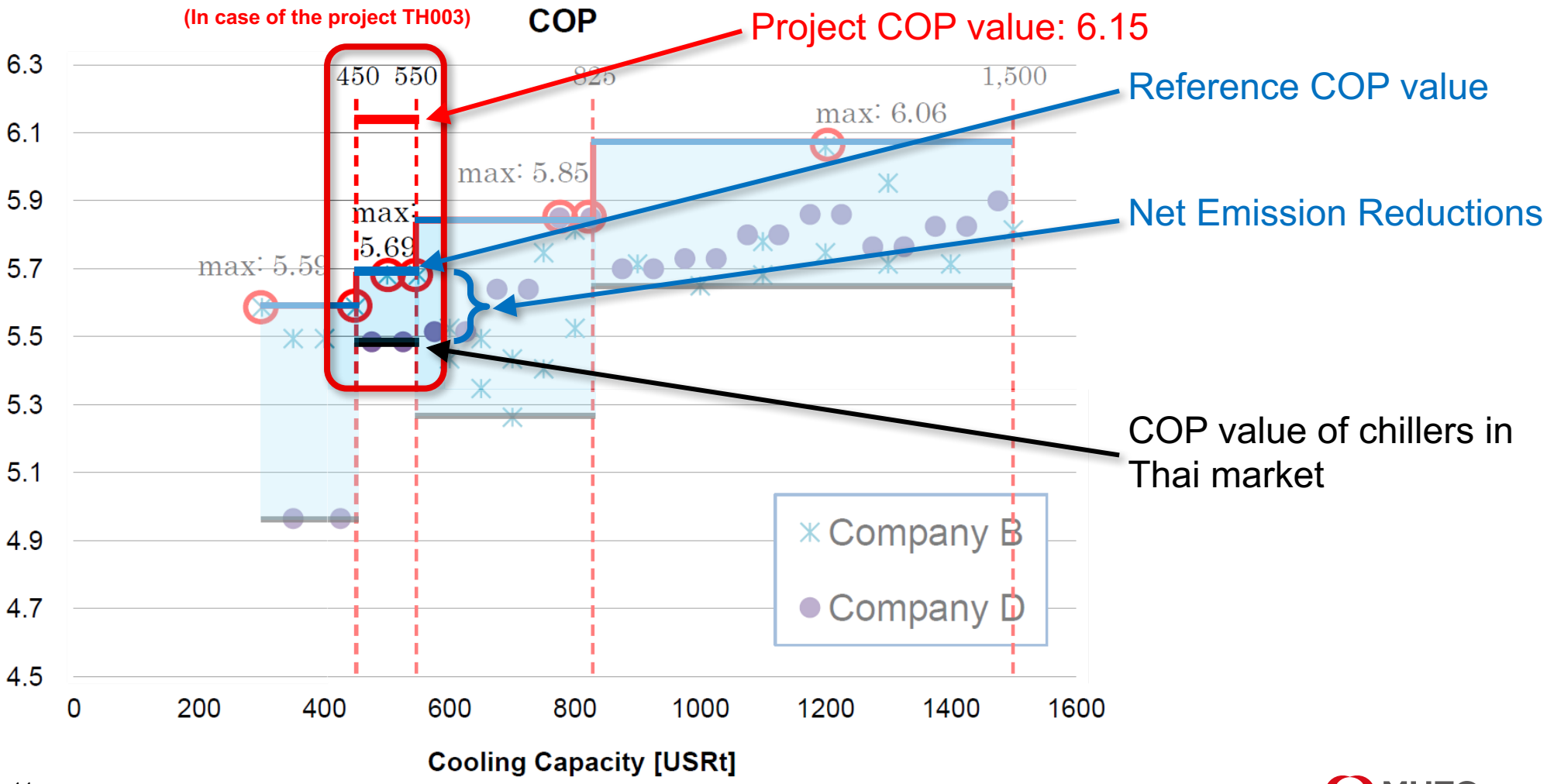


NOTE: Values applied above are based on the project TH003 “Installation of High Efficiency Air Conditioning System and Chillers in Semiconductor Factory”

Chiller: How to ensure NER

TH_AM003_ver01.0 “Energy Saving by Introduction of High Efficiency Inverter Type Centrifugal Chiller”

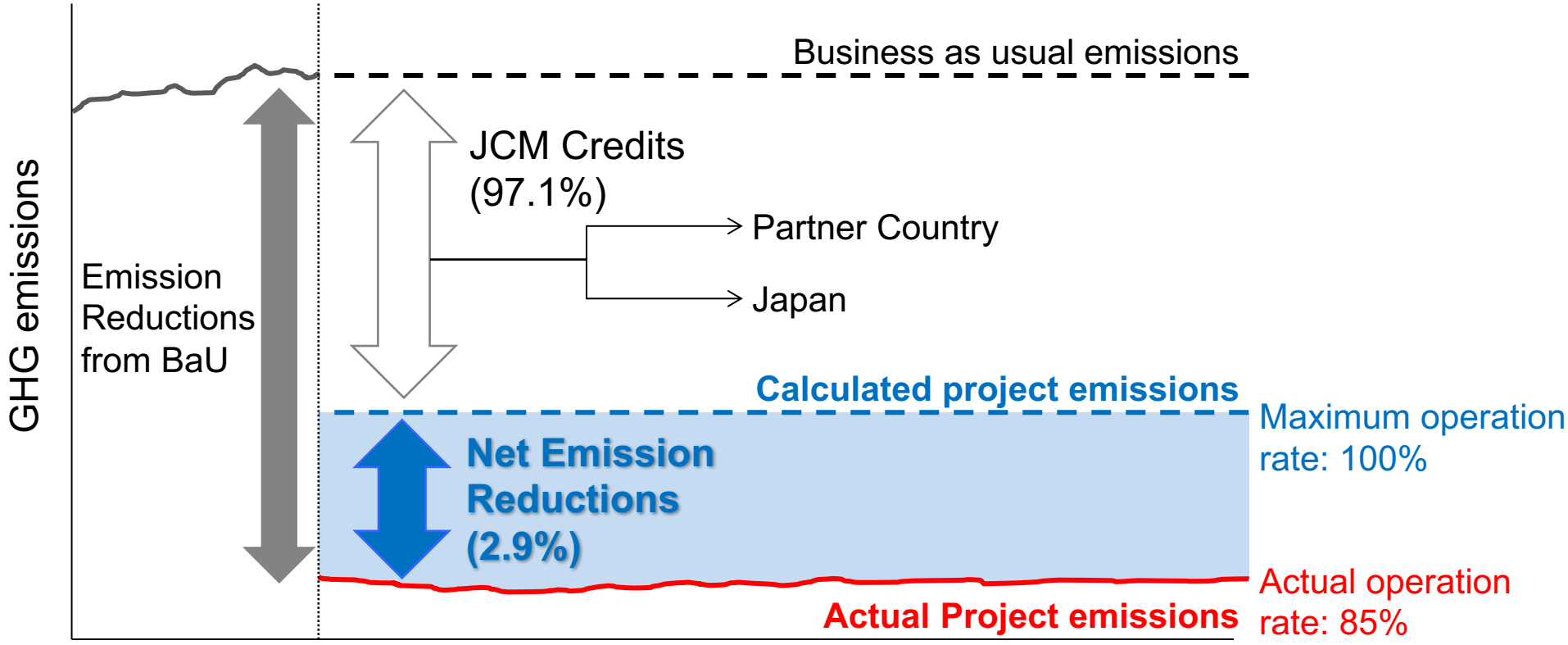
- BaU: COP values of chillers in Thai market
- Reference: The efficient COP value in Thai market



Waste Heat Recovery

ID_AM001_ver01.0 “Power Generation by Waste Heat Recovery in Cement Industry”

	Operation rate of auxiliary equipment	
Calculated project emissions	100%	(Maximum value)
Actual project emissions	85%	(Actual value: assumption from feasibility study)



NOTE: Values applied above are based on the project ID013 “Power generation by waste heat recovery in the PT Semen Indonesia (Persero) Tbk factory in Tuban” and its feasibility study

Waste Heat Recovery: How to ensure NER

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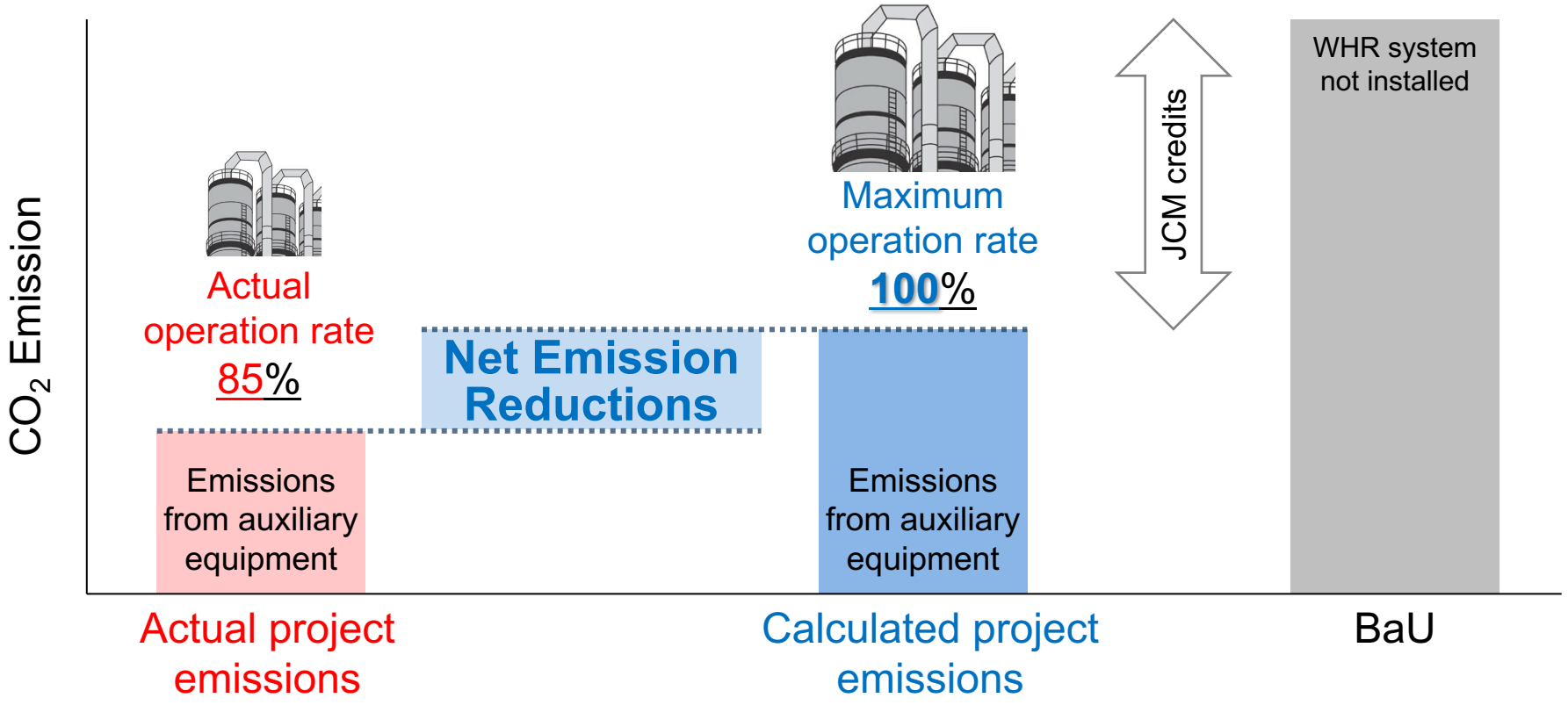

Summary

- Under the JCM, the number of approved methodologies, registered projects and credit issuances has increased significantly
  ⇒ These numbers are expected to increase as 130 projects in the pipeline are to be realized in the near future
- Under the JCM, Net Emission Reductions (NERs) are ensured through the difference between conservative reference emissions and BaU emissions
  ⇒ NERs which are not credited will remain in a partner country thus contributing to emission reductions of the said country and the achievement of its NDC
  ⇒ NERs could function as Overall Mitigation in Global Emissions
- The concept of NERs are already embedded in 63 approved methodologies and could be perceived as a practical example of an option for the design of overall mitigation under Art. 6.4