Analysis for Article 6

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Result of the Article 6 in COP25

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6.2 (Accounting guidance)

- ITMOs metrics (including 6.4ER)
- Method of Corresponding Adjustment (CA) （trajectory / annual average ）
- inside / outside of NDC, Application of CA for CORSIA
- Reporting, review, tracking (A6 database）
- **Ambition in mitigation and adaptation actions**
  （cancelation of ITMOs＋contribute resources to adaptation＋shall report）

Work program
- Non GHG metrics
- Other methods of CA
- A6 reporting format
- A6 review guidance

6.4 (Mechanism established by Article 6)

- **64 baseline approach**
- Supervisory Body (Rule of procedure, Governance）
- **Timing of applying CA will be decided in the CMA.3**
- SOP （2% of 6.4ERs at issuance）
- OMGE (mandatory cancellation, more than 2%)
- **Detail of CER transition will be decided in the CMA.3**

Work program
- Timing of applying CA
- Methodologies
  （baseline, additionality）
- Transition of CDM projects
- Transition of CERs

6.8 (Non-market approach）

- Work program until 2025 (Work Shop, Submissions, Technical papers)
- Coordination of NMA forum (convened by the Chairs of the SBSTA)

Pre2020: Result of analysis

Maximum supply potential of pre-2020 CERs (from registered PAs and PoAs)

Project registration year (Mt-CO2)			Starting year of first crediting period (Mt-CO2)		
Registration Year	Issued	Potential	Starting Year	Issued	Potential
2013	14.4	376.9	2013	81.7	1,651.6
2014	7.4	164.0	2014	20.4	700.3
2015	5.5	96.4	2015	8.4	332.8
2016	1.8	45.8	2016	2.1	147.8
2017	0.3	21.0	2017	0.6	57.8
2018	0.0	12.8	2018	0.0	35.9
2019	0.0	4.9	2019	0.0	19.2
2020	0	0.0	2020	0	0.5

※ cumulative numbers

Project registration year (Mt-CO2)			Starting year of first crediting period (Mt-CO2)		
Registration Year	Issued	Potential	Starting Year	Issued	Potential
2013	14.4	341.3	2013	81.7	1,474.8
2014	7.4	152.0	2014	20.4	628.9
2015	5.5	91.9	2015	8.4	302.1
2016	1.8	46.9	2016	2.1	137.6
2017	0.3	24.9	2017	0.6	57.6
2018	0.0	17.6	2018	0.0	38.1
2019	0.0	10.5	2019	0.0	23.2
2020	0	6.2	2020	0	6.7

※ cumulative numbers

Potential supply of Pre-2020 CERs (IGES): <https://www.iges.or.jp/jp/pub/cdm-potential-supply-pre2020cers/en>

Pre2020: Methodology

Methodology of this report is basically based on a report published by SEI (2017) and NEW CLIMATE INSTITUTE (2017).

1. **Project implementation status and operation status : Reduction rate : 6.8%**
   = (Reduction of supply potential of CERs due to "Non-implementation of projects" + Reduction of supply potential of CERs due to "Non-continuation of GHG abatement") / Ex-ante estimates of emission reductions in PDD

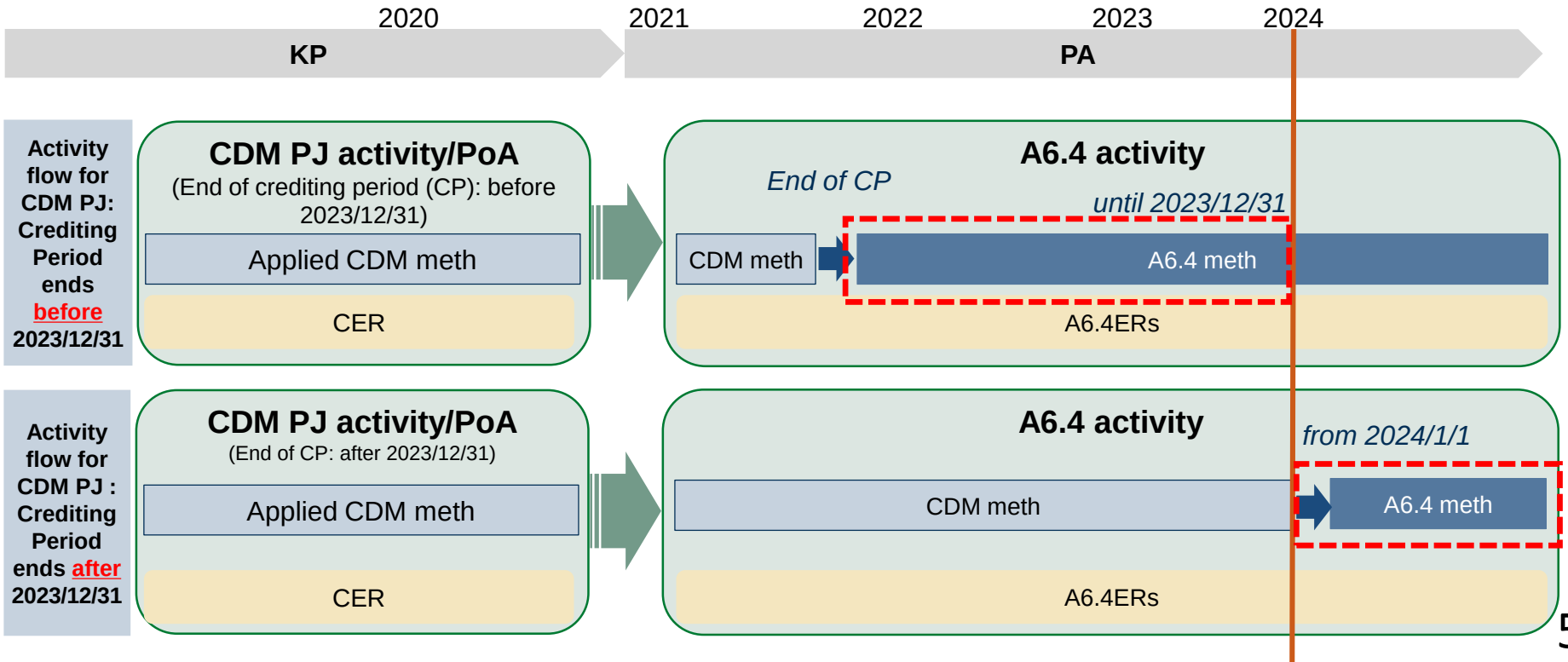
2. **Impact of missing data on monitoring : Reduction rate : 4.3%**
   = Reduction of supply potential of CERs due to lack of "availability of data to monitor emission reductions" / Ex-ante estimates of emission reductions in PDD

3. **Factors affecting credit issuance of registered projects**
   : Reduction rate : Credit issuance rate for each project types
   (※average issuance rate : 88.4%(PAs), 32.8%)(PoA))
   = The amount of credits issued / Total estimated emission reductions (PDD value) in the monitoring period

4. **Estimation of additional supply potential from project pipeline :**
   under CC : 144,760 (t-CO2) (10 projects)
   under VA : 5,560,508 (t-CO2) (61 projects)
   10 projects during CC and 61 projects during VA will be included in the analysis, because less than 1% of the CDM projects have been registered more than 4 years after the start of VA.
   (※Number of projects registered (in 2018 : 7 PAs / 9PoAs , in 2019 : 18 PAs / 10PoAs))

64 baseline / CDM project transition: Timelines

- A6.4ERs may be issued for emission reductions achieved on or after 1 January 2021.
- Methodologies applied for projects its Crediting Period (CP) ends before 2023/12/31 need to be updated before the renewal of the CP.
- After 2023/12/31, all methodologies applied for projects its Crediting Period (CP) ends after 2023/12/31 need to be updated.
- This schedule can be changed because of the postponement of COP26.



64 baseline / CDM project transition: Analyzing CDM methodologies (PAs)

Methodology ID	Methodology (Top 10)	Number of projects		Expected ERs (Mt-CO2)	ERs(%)	Accumulate (%)
		CP end before 2023/12/31	CP end after 2024/1/1			
ACM0002	Grid-connected electricity generation from renewable sources	570	225	392	50.2%	50.2%
AM0029	Grid Connected Electricity Generation Plants using Natural Gas	18	6	67	8.5%	58.7%
ACM0001	Flaring or use of landfill gas	51	11	27	3.4%	62.1%
AMS-I.D.	Grid Connected Renewable Electricity Generation	630	115	27	3.4%	65.5%
ACM0012	GHG emission reductions from waste energy recovery projects	100	16	27	3.4%	68.9%
AM0023	Leak detection and repair in gas production, processing, transmission, storage and distribution systems and in refinery facilities	8	2	25	3.2%	72.1%
ACM0008	Abatement of methane from coal mines	33	2	25	3.2%	75.3%
ACM0013	Construction and operation of new grid connected fossil fuel fired power plants using a less GHG intensive technology	4	1	18	2.3%	77.6%
AM0021	decomposition of N2O from existing adipic acid production plants	2	0	16	2.0%	79.6%
AM0009	Recovery and utilization of gas from oil fields that would otherwise be flared or vented	9	4	14	1.8%	81.1%

64 baseline / CDM project transition: Analyzing CDM methodologies (PoA)

Methodology ID	Methodology (Top 10)	Number of projects (CPA)		Expected ERs (Mt-CO2)	ERs(%)	Accumulate (%)
		CP end before 2023/12/31	CP end after 2024/1/1			
AMS-II.G.	Energy efficiency measures in thermal applications of non-renewable biomass	104	342	231	43.6%	43.6%
AMS-I.E.	Switch from non-renewable biomass for thermal applications by the user	9	80	79	14.9%	58.5%
ACM0002	Grid-connected electricity generation from renewable sources	53	83	73	13.8%	72.4%
AMS-III.AV.	Low greenhouse gas emitting safe drinking water production systems	16	117	33	6.3%	78.6%
AMS-I.A.	Electricity generation by the user	1	18	19	3.7%	82.3%
AMS-III.D.	Methane recovery in animal manure management systems	5	1091	15	2.9%	85.2%
ACM0001	Flaring or use of landfill gas	4	4	15	2.9%	88.1%
ACM0016	Mass Rapid Transit Projects	0	4	14	2.8%	90.9%
AMS-I.D.	Grid Connected Renewable Electricity Generation	40	73	10	2.0%	92.9%
AMS-I.C.	Thermal energy production with or without electricity	108	50	7	1.4%	94.3.%

Application of A64 baseline approaches : ACM0002 and AMS-I.D.

<Applicable projects>

- Installation of a greenfield plant
- Involving a capacity addition, retrofit, rehabilitation and replacement in/of an existing plant(s)

<Baseline emission sources>

- CO2 emissions from electricity generation

Applied approach		Baseline emissions
CDM	(a) Actual or historical emissions, or (b) Economically attractive technology	$BE = EG \times EF$ ● The baseline emissions are calculated as above. ● A Combined Margin (CM) is applied to the emission factor for electricity as described in "TOOL07: Tool to calculate the emission factor for an electricity system".
A64	Best available technology	● Determine the best available technology (e.g., high-efficient combined cycle gas turbine) at host country level. ● Determine an emission factor based on the BAT and use it for the calculation of baseline emissions.
	Benchmark	● Determine a benchmark emission factor at host country level and use it for the calculation of baseline emissions.
	Performance-based (3)	● Calculate a performance-based emission factor in a certain year using the most recent three years data. ● Use the lowest carbon-intensive emission factor among the three years for the calculation of baseline emissions.
	Projected or historical emissions	● A Combined Margin (CM) is applied to the emission factor for electricity as described in "TOOL07: Tool to calculate the updated emission factor for an electricity system".