

Validation of CDM Projects

Real life examples of what a DOE looks for

Jonathan Avis, CDM Business Manager
ERM Certification and Verification Services
2nd Floor, Exchequer Court
33 St Mary Axe
London EC3A 8AA
Telephone: +44 (0)7500 553 639
E-Mail: jonathan.avis@ermcvs.com



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- Basis of validation: the Project Design Document
- The rules: CDM Verification and Validation Manual
- Pitfalls



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What is Validation?

The Purpose of validation is to **ensure a thorough, independent assessment of proposed project activities** submitted for registration as a proposed CDM project activity **against the applicable CDM requirements**
[CDM Validation and Verification Manual; para 26]



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The role of a validator

The role of a validator is very different to the role of a consultant



Consultant	Validator
Partners the project developer	Independent 3 rd party auditor
Aims to get the CDM project registered and issued with CERs	Required to vet the project against CDM rules
Advises and helps the client	Cannot offer any advice or consulting
Develops documentation	Audits documentation
Often incentivised to maximise credit generation	Must uphold the principle of conservativeness. Liable for any excess issued CERs

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Validator responsibilities

CDM is a *rules based mechanism* – DOE's responsibility is to ensure the rules are complied with - have to *prove compliance*, not just identify any non-compliances

Compliance

- Assessment of completeness and eligibility /conformity of project design documents
- Check the assumptions of the PDD and give an opinion as to their adherence with the CDM Modalities and Procedures

Engagement

- To ensure stakeholder comments have been incorporated into the PDD
- Inclusion of a "global stakeholder process" for further comments on validation requirements

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How do DOEs do this?

Document review:

- Completeness of documentation
- Content of documentation
 - correct? credible? understandable?
- Document trails - source data
- Cross checks - 3rd party sources



Interviews:

- Cross check documentation against staff experience on site
- Key staff e.g. project manager, financial director, monitoring manager will be interviewed

Research:

- In addition to documentation provided by the PPs, DOEs do their own research
- Internet reference sources
- Email and telephone follow-up

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Site visits

- Interviews to discuss the project
- Plant walk through, confirmation of project description & technology
- Review of detailed aspects of the PDD
 - project description,
 - baseline,
 - additionality,
 - emission reductions,
 - monitoring plan,
 - sust. development
 - stakeholder consultation
- Document review
 - Feasibility study
 - EIA
 - Permits & approvals
 - Site Plan, etc
- Closing meeting



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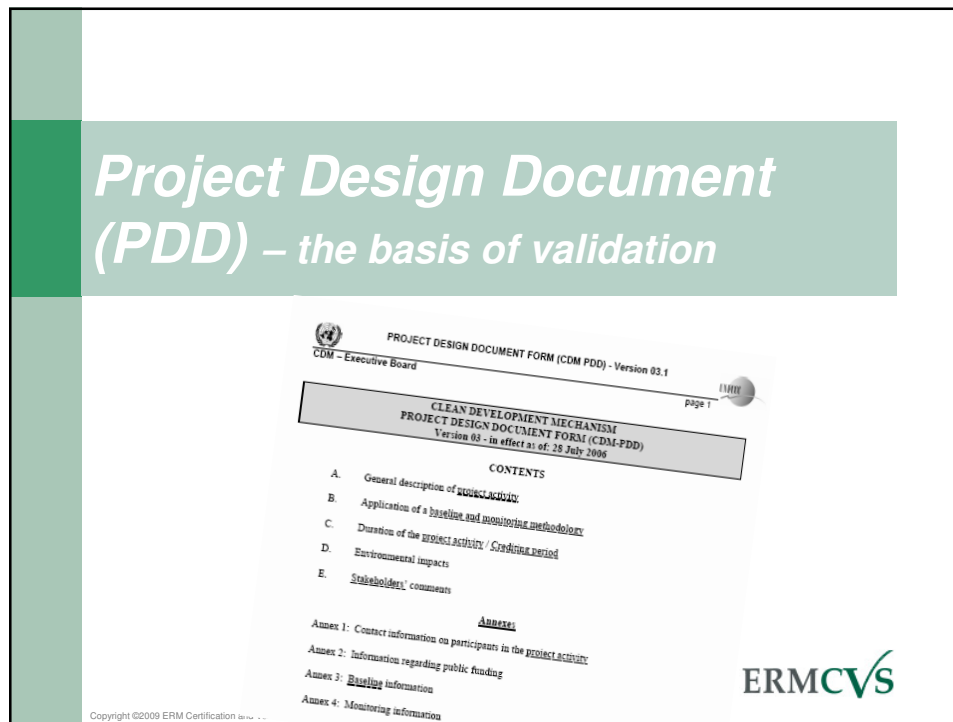
The 'ideal' validation

- **Process:**
 - arrangements made at least 3 months in advance
 - ALL documentation available on day 1
 - Thorough desk review before site visit
 - All relevant EB procedures have been followed e.g. local stakeholder consultation, notification of prior consideration of CDM, methodology revisions/deviations approved
 - In depth site visit (2-3 days) with discussion (& resolution) of non-conformities on site
 - Rapid responses to requests for documents, CAR and CL responses etc
 - LoAs already issued and MoC signed
- **Compliance:**
 - Project is fully compliant with methodology & tools
 - PDD is completed properly
 - All information is backed up by sound (i.e. 3rd party) evidence

The CDM rules are clearly published, so if the project is sound, a good CDM consultant should be able to spot (and resolve) and issues likely to be raised by the DOE before the project even starts validation. Most validation delays are caused by non-compliant projects, or poor documentation.

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Project Design Document (PDD) – the basis of validation



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PDD Content

PDD is essentially the CDM 'feasibility study'. It is the most important document in CDM process. It includes:

- Project description
- Additionality
- Choice of methodology
- Description of baseline
- Calculation of ERs
- Monitoring plan
- Crediting Period dates
- Analysis of environmental and social impacts
- Local stakeholder comments
- Supporting documents associated with the PDD include emission reduction and investment analysis spreadsheets

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What a DOE looks for: PDDs

- Compliance: most important that the CDM rules are *fully* complied with. The EB shows very little flexibility
 - Methodology, including applicability criteria and ER equations
 - Additionality, e.g. additionality tool, investment analysis guidelines
 - Monitoring requirements – can be highly specific
- Detail: detailed description of baseline and project scenarios, including equipment, processes, details of any existing (baseline) facilities
 - The Guidelines for developing the PDD contain detailed requirements for PDD content
 - Projects taking place in existing facilities are more complex and require more detailed description
- Evidence: for all statements/claims made in PDD
- Formatting: strict adherence to UNFCCC templates; all sections completely filled; clear referencing; clear, concise language, consistency

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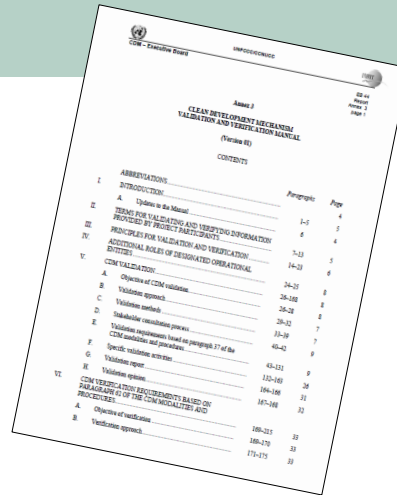
Challenges of PDD development causing problems at validation

- > Inconsistency between information in PDD and documents/site visit
- > Non-availability of key documents
- > Mistakes in calculation of ERs or investment analysis
- > Information in PDD not supported by evidence
- > Methodology applicability criteria not 100% met -> request for deviation/new meth
- > Frequent changes to methodologies or tools -> Redo PDDs
- > Technical -> how to estimate emission reductions
- > Data Gathering -> Either non-existent, poor, unreliable or hard to find
- > Cooperation between project developer & consultants -> different priorities or limited understanding of CDM
- > Evolving document -> Need to be careful with info management, doc versions, changes in rules, consistency within document, formats, etc.

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CDM Validation & Verification Standard

ERM Certification and Verification Services
 2nd Floor Exchequer Court
 33 St Mary Axe
 London EC3A 8AA



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VVS Validation Requirements (1)

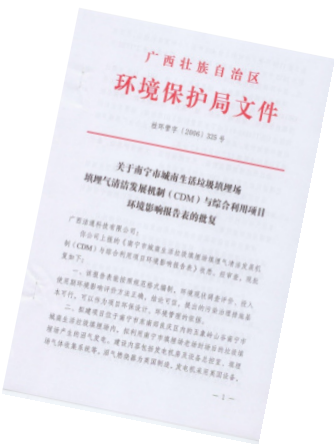
- 1. Approval**
 - by all Parties
- 2. Participation**
 - properly listed
 - approved by Party
- 3. Project Design Document**
 - based on latest template
- 4. Project Description**
 - clear description
 - complete and accurate
- 5. Baseline and monitoring methodologies**
 - approved methodology
 - applicability of methodology to the project (b)
 - Boundary (c)
 - Baseline identification (d)
 - Algorithms/formulae used to determine emission reductions (e)
- 6. Additionality**
 - prior consideration (a)
 - identification of alternatives (b)
 - investment analysis (c)
 - barrier analysis (d)
 - common practice analysis (e)

See VVM: V CDM Validation, E. Validation requirements based on paragraph 37 of the CDM modalities and procedures, para. 43-131

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VVS Validation Requirements (2)

- 7. Monitoring Plan**
 - based on approved methodology
 - applicable to the project activity
- 8. Sustainable Development**
 - assists host Party in its sustainable development
- 9. Local Stakeholder Consultation**
 - invited to comment
 - considered in PDD
- 10. Environmental Impacts**
 - analysis of environmental impacts



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Additionality

Marrakesh Accords, Para. 43:

“A CDM project activity is additional if anthropogenic emissions of greenhouse gases by sources are reduced below those that would have occurred in the absence of the registered CDM project activity”

- The important thing is what would have happened in the absence of CDM funding
- Prove that the project would not be built now, and for the whole crediting period
- Prove what the ‘business as usual’ or baseline scenario would be
 - Additionality requires trying to predict what would happen in the hypothetical scenario where the CDM didn’t exist
 - Trying to prove a negative – i.e. that the project would NOT get built

VVM: CDM is designed to achieve “real, measurable additional emission reductions”

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Methods to determine additionality

How can additionality be proven?



(Non) Profitability



Barriers



CDM Consideration

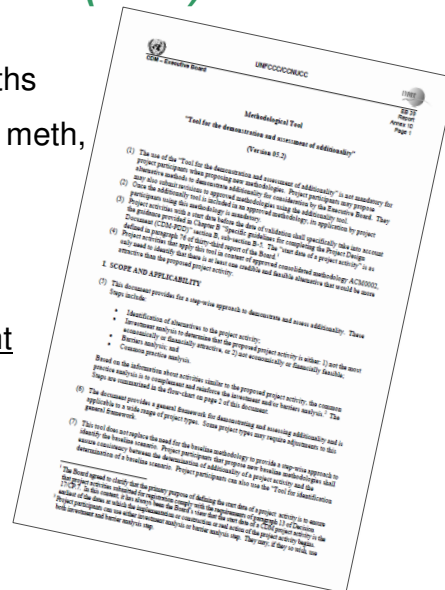


Common Practice

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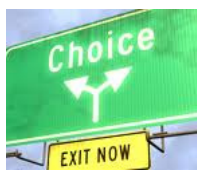
The Additionality Tool (v 5.2)

- Applied in most LS meths
- If it is referenced in the meth, it MUST be used
- Step-by-step approach
- Also contains detailed guidance on investment analysis



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Baseline identification

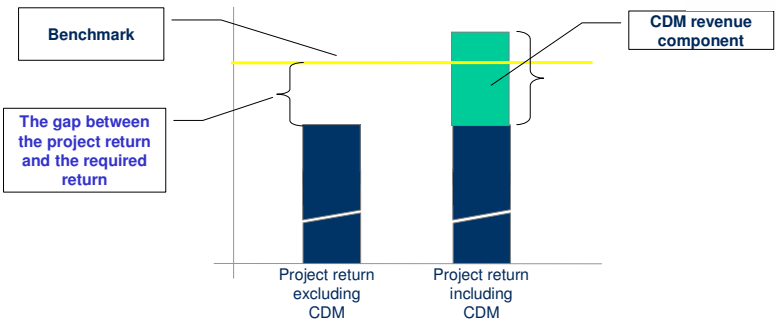


Baseline identification

- The baseline should be clearly identified and described
- The baseline is the 'scenario that reasonably represents the anthropogenic emissions by sources of GHGs that would occur in the absence of the proposed CDM project activity'
- The procedures from the meth / tools must be followed
- Assumptions, calculations & rationales used must be validated & information cross checked

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Investment Analysis



The CDM revenue component increases the Internal Rate of Return (IRR) of the project making it viable

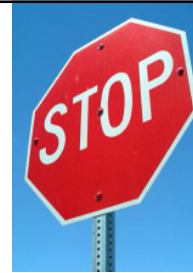
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INTRODUCTION TO CDM

Step 3: Barrier Analysis (1)

Sub-step 3 (a): identify barriers:

- Barriers must prevent the project activity, but allow at least one of the alternatives. Barriers must be serious and preventative, and 'realistic & credible'
- The CDM must alleviate / overcome the barriers



Investment barriers

- Lack of access to finance; previous projects have only take place due to financial support e.g. grants that is no longer available

Technological barriers

- Lacks of skills / knowledge; lack of infrastructure; risk of technological failure; technology is 'not available in the region'

Barriers due to prevailing practice

- The project is the 'first of its kind' (EB guidance under development)

'Other barriers'

- e.g. as given in the methodology

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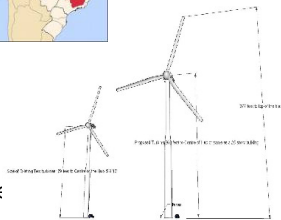
Step 4: Common Practice Analysis (1)

Credibility check to complement the other steps



Sub-step 4 (a): Analyse other activities similar to the proposed project activity

- Define the **region** for analysis
- Define '**similar**'
 - Technology
 - scale
 - market conditions
- List all similar projects
- Only operational projects need be
- Registered CDM projects are excluded
- If data is not available on some existing projects, that is allowed (if justified)



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Additionality: What DOEs Look For

- Additionality is the no.1 concern for the EB and the main reason why projects get rejected
- It is a controversial topic with significant media criticism
- Additionality will be very heavily scrutinised at validation
- The DOE will assess and verify the reliability and credibility of all data, assumptions, and documentation provided by PPs to support additionality. DOEs will critically assess the evidence, using local, sectoral and financial expertise.



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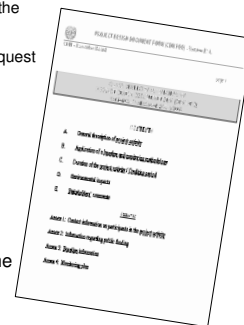
Methodology, applicability, project boundary and baseline identification:

Methodology & methodology applicability

- An approved meth must be used
- The meth must be applicable to the project
 - All applicability conditions of the meth and tools must be met. Each must be addressed separately
 - The project is not expected to result in emissions other than those allowed by the meth. Any other project emission sources that are not identified in the meth which are greater than 1% of emissions reductions must also be addressed
 - If the DOE cannot decide whether the meth is applicable, the DOE (with the PP) must raise a clarification to the EB
 - If the meth is not applicable to the project, the DOE (with the PP) may request a revision
- The meth must be correctly applied
 - All relevant aspects of the meth must be applied in the PDD

Project boundary

- must be correctly described in the PDD
- matches the methodology. All sources are covered.
- If other emissions sources exist that are not covered by the meth, the DOE shall request clarification / deviation



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Methodology, applicability, project boundary and baseline identification:

Baseline identification

- The baseline should be clearly identified and described
- The baseline is the 'scenario that reasonably represents the anthropogenic emissions by sources of GHGs that would occur in the absence of the proposed CDM project activity'
- The procedure from the meth / tools must be followed
- All reasonable scenarios must be considered
- Assumptions, calculations & rationales used must be validated & information cross checked
- Relevant policies & regulations must be considered



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Additionality: CDM consideration & baseline alternatives assessment

Additionality (in general):

- DOEs must verify the reliability and credibility of all data, rationales, assumptions, justifications and documentation
- The VVS requires 'local knowledge and sectoral and financial expertise' to be used.
- Requirements in relevant tools & the methodology must be followed
- The validation report must show how the DOE has ensured that documents etc are authentic

CDM Consideration:

- CDM must be considered before the project start date
- Start date must be in accordance with the Glossary of CDM Terms
- Projects starting after 2nd August 2008 must notify the UNFCCC or DNA
- Projects starting before this date shall show 'serious consideration' of CDM and evidence of continuing actions to secure CDM

Baseline alternatives assessment:

- All credible alternatives must be assessed
- The options must include the project undertaken without CDM

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Investment analysis



- Prove the project activity is not economically or financially attractive
- Comply with guidance on the assessment of investment analysis
- The VVS requires DOEs to cross check input parameters against third party sources, and also to review Feasibility Studies *and* financial reports
- Calculations must be assessed
- Benchmark must be reasonable and justified with evidence. The VVS states that the DOE must check the benchmark by 'for example' assessing previous investment decisions.
- Sensitivity analysis must be fully justified
- The manual also reiterates guidance relating to Feasibility Studies: that the FSR must have been the basis of the decision to proceed with the project – i.e. the period of time between the FSR completion and investment decision is short; that 'the values used in the PDD are fully consistent with the FSR and that where inconsistencies occur the DOE should validate the appropriateness of the values'; and that the DOE must use 'local or sectoral knowledge' to cross check the input values.
- DOEs must determine whether barriers are real and may consult with independent experts or other sources of data – we should not just rely on what the project proponents tell us.

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Barrier analysis & Common Practice

Barrier Analysis

- Barriers exist that prevent the project but not the alternative(s)
- Issues having a direct impact on financial returns should not be considered
- DOEs must determine whether barriers are real and may consult with independent experts or other sources of data – we should not just rely on what the project proponents tell us.

Common Practice Analysis

- Must be undertaken for large scale projects that are not proven to be 'first of its kind'
- Geographical scope must be justified
- Similar and operation projects must be considered
- Distinctions between other projects and the proposed CDM project must be clearly justified
- Are these 'widely observed and commonly carried out'

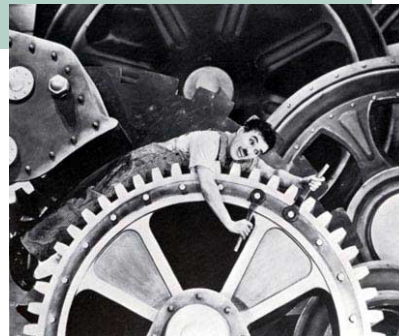
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Monitoring plan

- The VVS emphasises in several parts (Paras 170, 176, 187, 188, 195, 197) that the DOE has to check that monitoring is carried out as per the registered monitoring plan. Since only revisions of the monitoring plan for changes made on site *after* the registration of the project are allowed (Para 203), the PDD must be 100% accurate at registration.
- The DOE must also check that 'the means of implementation of the monitoring plan, including the data management and QA and QC procedures, are sufficient to ensure ERs...can be verified' (Para 121). We should look at the quality assurance aspects of the monitoring system.
- The VVS places a requirement on the DOE to ensure that the monitoring plan is actually *feasible*. (Para 121). We must ensure that the monitoring plan is feasible, but not necessarily that it is actually working already at the time of validation (it can be feasible in theory, but not implemented yet, and that should still be acceptable).
- The VVS does also say that the validator may raise a forward action request (FAR) to highlight issues 'that require review during the first verification', but that these should 'not relate to the CDM requirements for registration'. (Para 37)

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Validation Pitfalls



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Key pitfalls – Frequency more than 20%

Delay more than 1 week	Delay more than 1 month
<ul style="list-style-type: none"> • Lack of logic and consistency in PDD • Incomplete / insufficient PDDs • Deviations from selected calculation methodology not justified sufficiently or incorrect formulas applied • Compliance with local legal requirements not covered sufficiently • Insufficient information on the stakeholder consultation process 	<ul style="list-style-type: none"> • Evidence of EIA and/or required construction/operating permits/approvals not provided • Letter of Approval insufficient or delayed • Lack of verifiable data, references (often unjustified)

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Key pitfalls – Frequency less than 20%

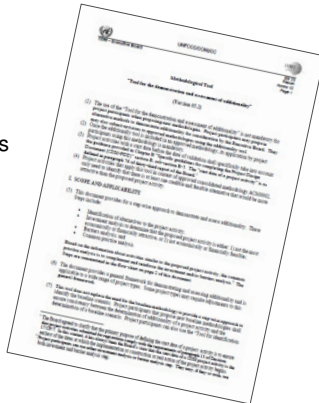
Delay more than 1 week	Delay more than 1 month
<ul style="list-style-type: none"> • Project participants not identified clearly • The modalities of communication with the Executive Board in terms of CERs issuance and allocation instructions not stated clearly, or not signed by all project participants. • Insufficient description of the technology • Insufficient explanation of baseline scenarios • Insufficient explanation of project additionality • Baseline information not sufficiently supported by evidence and/or not referenced sufficiently • Major risks to the baseline not identified/described • The project boundaries not defined clearly • Project and/or crediting start date unclear • Deviations from monitoring methodology not justified sufficiently • Monitoring and project management procedures not defined 	<ul style="list-style-type: none"> • Small-scale selected for a large-scale project • No written confirmation that funding will not result in a diversion of official development assistance • Non-compliance with the applicability conditions of the applied baseline methodology or methodology compliance not explained sufficiently

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Validation case study exercise – Additionality



- Additionality is the most challenging aspect of PDD development and validation
- In your groups, please review the additionality sections of the PDD provided (section B.5)
- Make a list of additional documents/evidence sources the DOE could ask for to cross check additionality
- Make a draft list of issues / concerns regarding how this PDD demonstrates additionality



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Thank You

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